IMPORTANT NOTICE

THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) "QUALIFIED INSTITUTIONAL BUYERS" ("QIBS") (AS DEFINED IN RULE 144A ("RULE 144A") UNDER THE US SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT")), OR (2) NON-US PERSONS IN OFFSHORE TRANSACTIONS IN RELIANCE ON REGULATION S UNDER THE SECURITIES ACT ("REGULATION S").

IMPORTANT: You must read the following disclaimer before continuing. The following disclaimer applies to the attached offering circular (the "Offering Circular") following this page, whether received by e-mail or other electronic communication, and you are therefore advised to read this carefully before reading, accessing or making any other use of the Offering Circular.

In accessing the Offering Circular, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from Vedanta Resources Finance II Plc (the "Issuer") and Vedanta Resources Limited (the "Company") or from us as a result of such access.

None of Credit Suisse (Hong Kong) Limited, J.P. Morgan Securities plc and Standard Chartered Bank as joint global coordinators, joint lead managers and joint bookrunners (collectively, the "Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners") or any person who controls any of them or any of their respective affiliates, directors, officers, employees, agents, representatives or advisers accepts any liability whatsoever for any loss howsoever arising from any use of this e-mail or the attached Offering Circular or their respective contents or otherwise arising in connection therewith.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES HAVE NOT BEEN, AND WILL NOT BE REGISTERED UNDER THE SECURITIES ACT, OR WITH ANY OTHER SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND ANY APPLICABLE STATE OR LOCAL SECURITIES LAWS. THE SECURITIES MAY ONLY BE OFFERED, SOLD OR OTHERWISE TRANSFERRED IN THE UNITED STATES OR TO US PERSONS (AS DEFINED IN REGULATION S) THAT ARE QIBS IN RELIANCE ON THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT PROVIDED BY RULE 144A. ANY INVESTMENT DECISION SHOULD BE MADE ON THE BASIS OF THE FINAL TERMS AND CONDITIONS OF THE SECURITIES AND THE INFORMATION CONTAINED IN THE FINAL OFFERING CIRCULAR. IF YOU DO NOT AGREE TO THE TERMS CONTAINED IN THIS NOTICE, YOU SHOULD NOT OPEN THE ATTACHED PRELIMINARY OFFERING CIRCULAR AND SHOULD DELETE THIS E-MAIL. THIS E-MAIL AND ITS ATTACHMENTS ARE PERSONAL TO YOU, ARE CONFIDENTIAL AND MAY ONLY BE READ BY THE ADDRESSEE AND MAY NOT BE REPRODUCED OR REDISTRIBUTED ELECTRONICALLY OR OTHERWISE TO ANY OTHER PERSON.

Confirmation of Your Representation: The attached Offering Circular is being sent at your request and by accepting the e-mail and accessing the attached Offering Circular, you shall be deemed to have represented to the Issuer, the Company, the Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners that (1) you and any customer you represent are either (a) a QIB or (b) not a US person and that the e-mail address that you have given and to which this e-mail has been delivered is not located in the United States, its territories, its possessions and other areas subject to its jurisdiction; and its possessions include Puerto Rico, the US Virgin Islands, Guam, American Samoa, Wake Island and the Northern Mariana Islands and, to the extent you purchase the securities described in the attached Offering Circular, you will be doing so in offshore transactions in reliance on Regulation S; and (2) you consent to delivery of the attached Offering Circular and any amendments or supplements thereto by electronic transmission.

You are reminded that the attached Offering Circular has been delivered to you on the basis that you are a person into whose possession the attached Offering Circular may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located. If this is not the case, you must delete this e-mail in which the Offering Circular is attached and destroy any printed copies of the Offering Circular. You may not, nor are you authorised to, deliver or forward the Offering Circular, electronically or otherwise, or disclose the contents of the Offering Circular, to any other person.

The materials relating to the offering do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law and access has been limited so that it shall not constitute a general advertisement or solicitation in the United States or elsewhere. No action has been or will be taken in any jurisdiction by the Issuer, the Company, the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners that would, or is intended to, permit a public offering of the securities, or possession or distribution of the Offering Circular (in preliminary, proof or final form) or any other offering or publicity material relating to the securities, in any country or jurisdiction where action for that purpose is required. If a jurisdiction requires that the offering be made by a licensed broker or dealer and any of the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners or any affiliate of any of the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by such Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners or such affiliate on behalf of the Issuer in such jurisdiction.

This communication is directed only at persons who (a) are outside the United Kingdom or (b) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Financial Promotion Order") or (c) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations, etc.") of the Financial Promotion Order (all such persons together being referred to as "relevant persons"). This communication must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which the Offering Circular relates is available only to relevant persons and will be engaged in only with relevant persons.

The attached Offering Circular has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently none of the Issuer, the Company, the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners or any person who controls them or any director, officer, employee or agent of them or affiliate of any such person accepts any liability or responsibility whatsoever in respect of any difference between the Offering Circular distributed to you in electronic format and the hard copy version available to you on request from the Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners.

THE ATTACHED OFFERING CIRCULAR MAY NOT BE DOWNLOADED, FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY DOWNLOADING, FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS ELECTRONIC TRANSMISSION AND THE ATTACHED PRELIMINARY OFFERING CIRCULAR IN WHOLE OR IN PART IS UNAUTHORISED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS. IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORISED AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED IN THE ATTACHED OFFERING CIRCULAR.

You are responsible for protecting against viruses and other destructive items. Your use of this e-mail is at your own risk and it is your responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

STRICTLY CONFIDENTIAL

$400,000,000 8.00% Bonds due 2023

$600,000,000 9.25% Bonds due 2026

Issued by

VEDANTA RESOURCES FINANCE II PLC

(incorporated with limited liability in England and Wales)

A subsidiary of

VEDANTA RESOURCES LIMITED

(incorporated with limited liability in England and Wales)

This is an offering of $400,000,000 8.00% bonds due 2023 (the "2023 Bonds") and $600,000,000 9.25% bonds due 2026 (the "2026 Bonds"), and together with the 2023 Bonds, the "Bonds" by Vedanta Resources Finance II Plc (the "Issuer"). The Bonds will be unconditionally guaranteed (the "Guarantee") by Vedanta Resources Limited (the "Company" or "Vedanta" or the "Guarantor").

The 2023 Bonds will bear interest at the rate of 8.00% per annum, payable semi-annually in arrear on 23 April and 23 October of each year, commencing on 23 October 2019. The 2026 Bonds will bear interest at the rate of 9.25% per annum, payable semi-annually in arrear on 23 April and 23 October of each year, commencing on 23 October 2019. Payments on the Bonds will be made without deduction for or on account of taxes of the United Kingdom to the extent described under "Terms and Conditions of the Bonds — Taxation".

The 2023 Bonds will mature on 23 April 2023 and the 2026 Bonds will mature on 23 April 2026.

At any time and from time to time prior to 23 April 2023, the Bonds of any series may be redeemed, in whole or in part, at the option of the Issuer, at a redemption price equal to the principal amount of the Bonds of that series, plus the Applicable Premium, plus accrued and unpaid interest, if any, to (but excluding) the applicable redemption date. At any time and from time to time after 23 April 2023, the 2026 Bonds may be redeemed, in whole or in part, at the option of the Issuer at the redemption prices specified under "Terms and Conditions of the Bonds — Redemption and Purchase — Redemption at the option of the Issuer" plus accrued and unpaid interest, if any, to (but excluding) the applicable redemption date. The Bonds of any series may be redeemed at the option of the Issuer in whole, but not in part, at a redemption price equal to the principal amount of the Bonds of that series, together with accrued and unpaid interest, if any, to (but excluding) the applicable redemption date, in the event of certain changes affecting taxes of the United Kingdom. Upon the occurrence of a Change of Control Triggering Event (as defined herein), the Issuer must make an offer to purchase all of the Bonds outstanding at a purchase price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to (but excluding) the applicable purchase date. See "Terms and Conditions of the Bonds — Redemption and Purchase".

2023 Bonds Issue Price: 100%

2026 Bonds Issue Price: 100%

The Bonds and the Guarantee have not been and will not be registered under the United States Securities Act of 1933 (the "Securities Act") and are being offered in the United States only to qualified institutional buyers ("QIBs") in reliance on Rule 144A under the Securities Act ("Rule 144A") and to non-US persons outside the United States in reliance on Regulation S under the Securities Act ("Regulation S"). The Bonds which are being offered and sold outside the United States to non-US persons (as defined in Regulation S) in reliance on Regulation S (the "Regulation S Bonds") will each be initially represented by unrestricted global certificates in registered form (the "Unrestricted Global Certificates"). The Bonds which are being offered and sold in the United States to QIBs in reliance on Rule 144A (the "Rule 144A Bonds") will bear the Securities Act Legend (as defined in the trust deed to be dated on or about 23 April 2019 (the "Trust Deed") and will each be initially represented by restricted global certificates in registered form (the "Restricted Global Certificates" and, together with the Unrestricted Global Certificates, the "Global Certificates"). The Unrestricted Global Certificates will be deposited with a custodian for, and registered in the name of, a nominee of Cede & Co., as nominee of The Depository Trust Company ("DTC") for the accounts of Euroclear Bank SA/NV ("Euroclear") and Clearstream Banking, S.A. ("Clearstream"), and the Restricted Global Certificates will be deposited with a custodian for, and registered in the name of, Cede & Co., as nominee of DTC, on the Closing Date. Beneficial interests in the Global Certificates will be shown on, and transfers thereof will be effected only through, records maintained by DTC and its account holders. Prospective purchasers are hereby notified that sellers of the Bonds and the Guarantee may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by Rule 144A. For a description of these and certain further restrictions on offers, sales and transfers of the Bonds and the Guarantee and distribution of this Offering Circular, see "Plan of Distribution" and "Transfer Restrictions". It is expected that delivery of the Bonds will be made against payment through the facilities of DTC on or about 23 April 2019 (the "Closing Date"), which is the seventh business day after the date of this Offering Circular.

The Issuer has obtained in-principle approval for the listing and quotation of the Bonds on the Official List of the Singapore Exchange Securities Trading Limited (the "SGX-ST"). The SGX-ST assumes no responsibility for the correctness of any of the statements made or opinions expressed or information contained in this Offering Circular. Admission for the listing and quotation of the Bonds on the SGX-ST is not to be taken as an indication of the merits of the offering, the Issuer, the Company or the Bonds. The Bonds will be traded on the SGX-ST in a minimum board lot size of $200,000 or its equivalent for so long as the Bonds are listed on the SGX-ST. Currently, there is no public market for the Bonds.

Investing in the Bonds involves risks. For a discussion of certain factors to be considered in connection with an investment in the Bonds, see "Risk Factors" beginning on page 13.

The Company has corporate credit ratings of "Ba3" (with a negative outlook) from Moody's Investors Service, Inc. ("Moody's") and "B+" (with a negative outlook) from S&P Global Ratings, a division of S&P Global, Inc. ("S&P"). The Bonds are expected, on the Closing Date, to be rated "B2" by Moody's and "B+" by S&P. A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time by the assigning rating organisation.

Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners (in alphabetical order)

Credit Suisse **J.P Morgan** **Standard Chartered Bank**

Offering Circular dated 11 April 2019

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NOTICE TO INVESTORS

This Offering Circular does not constitute an offer of, or an invitation by or on behalf of the Issuer, the Company or Credit Suisse (Hong Kong) Limited, J.P. Morgan Securities plc and Standard Chartered Bank as joint global coordinators, joint lead managers and joint bookrunners (collectively, the "Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners") to subscribe for or purchase, any of the Bonds. The distribution of this Offering Circular and the offering of the Bonds in certain jurisdictions may be restricted by law. Persons into whose possession this Offering Circular comes are required by the Issuer, the Company, the Joint Global Coordinators and Joint Lead Managers and the Joint Bookrunners to inform themselves about and observe any such restrictions. This Offering Circular does not constitute, and may not be used for or in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorised or to any person to whom it is unlawful to make such offer or solicitation.

For a description of certain further restrictions on offers and sales of the Bonds and distribution of this Offering Circular, see "Plan of Distribution" and "Transfer Restrictions".

No person is authorised to give any information or to make any representation not contained in this Offering Circular and any information or representation not so contained must not be relied upon as having been authorised by or on behalf of the Issuer, the Company or the Joint Global Coordinators and Joint Lead Managers or the Joint Bookrunners. The delivery of this Offering Circular or the offering, sale and delivery of the Bonds at any time does not imply that the information contained in this Offering Circular is correct at any time subsequent to its date.

To the fullest extent permitted by law, none of the Joint Global Coordinators and Joint Lead Managers, the Joint Bookrunners, the Trustee, the Principal Agent and the Registrar (each as defined herein) accept any responsibility for the accuracy and completeness of the contents of this Offering Circular or for any statement, made or purported to be made by the Joint Global Coordinators and Joint Lead Managers, the Joint Bookrunners, the Trustee, the Principal Agent or the Registrar or on its or their behalf in connection with the Issuer or the issue and offering of the Bonds. The Joint Global Coordinators and Joint Lead Managers, the Joint Bookrunners, the Trustee, the Principal Agent and the Registrar accordingly disclaim all and any liability whether arising in tort or contract or otherwise which it might otherwise have in respect of this Offering Circular or any such statement.

This Offering Circular should not be considered as a recommendation by the Issuer, the Company or the Joint Global Coordinators and Joint Lead Managers or the Joint Bookrunners, that any recipient of this Offering Circular should purchase any of the Bonds. Each investor contemplating a purchase of the Bonds should make its own independent investigation of the Issuer's, the Company's financial condition and affairs and its own appraisal of the Issuer's or the Company's creditworthiness.

Investors may not reproduce or distribute this Offering Circular, in whole or in part, and investors may not disclose any of the contents of this Offering Circular or use any information herein for any purpose other than considering an investment in the Bonds. Investors agree to the foregoing by accepting delivery of this Offering Circular.

If a jurisdiction requires that the offering be made by a licensed broker or dealer and any of the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners or any affiliate of any of the Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by such Joint Global Coordinators, Joint Lead Managers or Joint Bookrunners or such affiliate on behalf of the Issuer in such jurisdiction.

Singapore SFA Product Classification: In connection with Section 309B of the Securities and Futures Act (Chapter 289) of Singapore (the "SFA") and the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the "CMP Regulations 2018"), the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Bonds are 'prescribed capital markets products' (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Market data and certain industry forecasts (where applicable) used throughout this Offering Circular have been obtained from internal surveys, market research, publicly available information and industry publications. Industry publications generally state that the information that they contain has been obtained from sources believed to be reliable but that the accuracy and completeness of that information is not guaranteed. Similarly, internal surveys, industry forecasts and market research, while believed to be reliable, have not been independently verified, and none of the Issuer, the Company, the Joint Global Coordinators and Joint Lead Managers or the Joint Bookrunners make any representation as to the accuracy of the statement.

STABILISATION

In connection with this offering, Standard Chartered Bank will act as the stabilising manager (the "Stabilising Manager") and it or any of its affiliates (or persons acting on behalf of the Stabilising Manager), may, to the extent permitted by applicable laws and regulations, over-allot or effect transactions with a view to supporting the market price of the Bonds at a level higher than that which might otherwise prevail for a limited time after the issue date of the Bonds. However, there is no assurance that the Stabilising Manager or any of its affiliates (or persons acting on behalf of the Stabilising Manager) will undertake any stabilising action. Any stabilising action may begin on or after the date on which adequate public disclosure of the terms of the offer of the Bonds is made and, if begun, may be ended at any time, but it must end no later than the earlier of 30 days after the issue date of the Bonds and 60 days after the date of the allotment of the Bonds. Any stabilisation action must be conducted by the Stabilising Manager or any of its affiliates (or persons acting on behalf of the Stabilising Manager) in accordance with all applicable laws and rules.

NOTICE TO UK INVESTORS

This Offering Circular is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the "FSMA")) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This Offering Circular is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

MiFID II product governance/Professional investors and ECPs only target market — Solely for the purposes of each manufacturer's product approval process, the target market assessment in respect of the Bonds has led to the conclusion that: (i) the target market for the Bonds is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the Bonds to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Bonds (a "distributor") should take into consideration the manufacturers' target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Bonds (by either adopting or refining the manufacturers' target market assessment) and determining appropriate distribution channels.

PRIIPs REGULATION/PROHIBITION OF SALES TO EEA RETAIL INVESTORS — The Bonds are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("EEA"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or (ii) a customer within the meaning of Directive 2002/92/EC ("IMD"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently, no key information document required by Regulation (EU) No 1286/2014, as amended (the "PRIIPs Regulation") for offering or selling the Bonds or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Bonds or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPS Regulation.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED STATES

The Bonds and the Guarantee have not been and will not be registered under the Securities Act, or with any securities regulatory authority of any state or other jurisdiction in the United States, and may not be offered, sold, pledged or otherwise transferred except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable state securities laws.

In connection with the Bonds and the Guarantee being offered in the United States to QIBs in reliance on the exemption from registration provided by Rule 144A, this Offering Circular is being furnished in the United States on a confidential basis solely for the purpose of enabling prospective investors to consider the purchase of the Bonds. Its use for any other purpose in the United States is not authorised.

The Bonds and the Guarantee have not been approved or disapproved by the United States Securities and Exchange Commission (the "Commission"), any state securities commission in the United States or any other US regulatory authority, nor have any of the foregoing authorities passed upon or endorsed the merits of this offering or the accuracy or adequacy of this Offering Circular. Any representation to the contrary is a criminal offence in the United States.

AVAILABLE INFORMATION

For so long as any of the Bonds and the Guarantee remain outstanding and are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act, the Issuer will, during any period in which the Issuer is neither subject to Section 13 or Section 15(d) of the US Securities Exchange Act of 1934 (the "Exchange Act") nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder, provide to any holder or beneficial owner of such restricted securities or to any prospective purchaser of such restricted securities designated by such holder or beneficial owner or to the Trustee for delivery to such holder, beneficial owner or prospective purchaser, in each case upon the request of such holder, beneficial owner, prospective purchaser or Trustee, the information required to be provided by Rule 144A(d)(4) under the Securities Act.

ENFORCEABILITY OF JUDGMENTS

The Company and the Issuer are incorporated with limited liability under the laws of England and Wales. A substantial number of the Directors (as defined herein) or executive officers of the Company and Issuer, and all or a significant portion of the assets of such persons may be, and a substantial portion of the assets of the Company and the Issuer are, located outside the United States. As a result, it may not be possible for investors to effect service of process within the United States upon the Company and the Issuer or such persons or to enforce against any of them in the United States judgments obtained in US courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state or territory within the United States.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Offering Circular contains "forward-looking statements" that are based on the Company's current expectations, assumptions, estimates and projections about the Company and its industry. These forward-looking statements are subject to various risks and uncertainties. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "anticipate", "believe", "estimate", "expect", "intend", "will", "project", "seek", "should" and similar expressions. These statements include, but not limited to, the discussions of the Company's business strategy and expectations concerning its market position, future operations, margins, profitability, liquidity and capital resources. Such forward-looking statements involve risks and uncertainties, and that, although the Company believes that the assumptions on which such forward-looking statements are based are reasonable, any of those assumptions could prove to be inaccurate and, as a result, the forward-looking statements based on those assumptions could be materially incorrect. Factors which could cause these assumptions to be incorrect include:

- A decline or volatility in the prices or demand for oil and gas, zinc, copper, iron ore or aluminium or an increase in the supply of oil and gas, zinc, copper, iron ore or aluminium;
- Reliance on third party contractors and providers of equipment which may not be readily available and whose costs may increase;
- Decline in demand for iron ore in China, exports which are significant for Vedanta's iron ore business;
- Ability to successfully consummate and integrate strategic acquisitions;
- Regulatory, legislative and judicial developments and future regulatory actions and conditions in Vedanta's operating areas;
- Political or economic instability in the regions which Vedanta operates;
- Terrorist attacks and other acts of violence, natural disasters and other environmental conditions and outbreaks of infectious diseases and other public health concerns in the regions in which Vedanta operates;
- Vedanta's ability to retain its senior management team and hire and retain sufficiently skilled labour to support its operations;
- Vedanta's dependence on obtaining and maintaining mining leases to mining sites;
- General risks related to Vedanta's commercial power business;
- The outcome of any pending or threatened litigation in which Vedanta is involved;
- The continuation of tax holidays, exemptions and deferred tax schemes currently enjoyed by Vedanta;
- Changes in tariffs, royalties, custom duties and government assistance;
- Interruptions in the availability of exploration, production or supply equipment or infrastructure and/or increased costs;
- Construction of pipelines and terminals may take longer than planned, may not work as intended and the cost of construction may be greater than forecast;

- Unavailability or increased costs of raw materials for Vedanta's products;
- Vedanta's economically recoverable lead-zinc ore, copper ore, iron ore, or bauxite reserves being lower than estimated;
- Worldwide economic and business conditions;
- Compliance with extensive environmental and health and safety regulations;
- Currency fluctuations; and
- Ability to maintain good relations with trade unions and avoid strikes and lock-outs.

These and other factors are more fully discussed in "Risk Factors", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Offering Circular. In light of these and other uncertainties, you should not conclude that the Company will necessarily achieve any plans, objectives or projected results referred to in any of the forward-looking statements. Except as required by law, the Company does not undertake to release revisions of any of these forward-looking statements to reflect future events or circumstances.

PRESENTATION OF INFORMATION

Certain Conventions

The Company conducts its businesses through a consolidated group of companies that it has ownership interests in. See "Business — History and Development" for more information on these companies and their relationships to the Company. Unless otherwise stated in this Offering Circular or unless the context otherwise requires, references in this Offering Circular to the "Company" refer to Vedanta Resources Limited and "Vedanta" or the "consolidated group of companies" or the "Group", mean Vedanta Resources Limited, its consolidated subsidiaries and its predecessors, collectively including Konkola Copper Mines plc ("KCM"), Vedanta Limited ("Vedanta Limited", and its subsidiaries together with Vedanta Limited, the "Vedanta Limited Group"), Bharat Aluminium Company Limited ("BALCO"), Monte Cello BV ("Monte Cello"), Copper Mines of Tasmania Pty Ltd ("CMT"), Thalanga Copper Mines Pty Ltd ("TCM"), Hindustan Zinc Limited ("HZL"), MALCO Energy Limited ("MEL"), Sesa Resources Limited ("SRL"), Western Cluster Limited ("WCL"), THL Zinc Namibia Holdings Limited and its subsidiaries ("Skorpion"), Vedanta Lisheen Holdings Limited and its subsidiaries ("Lisheen"), Vedanta Star Limited ("VSL"), Electrosteel Steels Limited ("ESL"), Talwandi Sabo Power Limited ("TSPL") and Black Mountain Mining Pty Ltd ("Black Mountain Mining"). Subsequent to the receipt of all substantive approvals for the merger of Cairn India Limited with Vedanta Limited on 27 March 2017, the merger was accounted for in fiscal year 2017.

Cairn India Limited ceased to be a separate legal entity with effect from 11 April 2017 and all erstwhile subsidiaries of Cairn India became subsidiaries of Vedanta Limited.

All references to "Executive Directors" in this Offering Circular are to Messrs. Anil Agarwal, Navin Agarwal and Srinivasan Venkatakrishnan. All references to "Non-Executive Directors" in this Offering Circular are to Messrs. Geoffrey Green, Deepak Parekh, Ravi Rajagopal, Edward Story and Katya (Ekaterina) Zotova. All references to "Directors" in this Offering Circular are to the Executive Directors and Non-Executive Directors of the Company.

All references to "management" are to the Company's Directors, the executive officers and other significant employees of the Company, unless the context otherwise requires, on the date of this Offering Circular, and statements in this Offering Circular as to beliefs, expectations, estimates and opinions of the Company or management are those of the Company's management.

In this Offering Circular, references to "copper business" are to the business of Vedanta comprising the copper operations as further described in "Business — Description of the Businesses — Copper Business"; references to "zinc business" and "zinc-lead" are to the business of Vedanta comprising the zinc operations as further described in "Business — Description of the Businesses — Zinc Business"; references to "aluminium business" are to the business of Vedanta comprising the aluminium operations as further described in "Business — Description of the Businesses — Aluminium Business"; references to "iron ore business" are to the business of Vedanta comprising the iron ore operations as further described in "Business — Description of the Businesses — Iron Ore Business"; references to "commercial power generation business" or "power business" are to the business of Vedanta comprising the power operations as further described in "Business — Description of the Businesses — Commercial Power Generation Business"; and references to "oil and gas business" are to the business of Vedanta comprising the oil and gas operations as further described in "Business — Description of the Businesses — Oil and Gas Business".

In this Offering Circular, references to The London Metal Exchange Limited ("LME") price of copper, zinc or aluminium are to the cash seller and settlement price on the LME for copper, zinc or aluminium for the period indicated. References to "primary market share" in this Offering Circular are to the market that includes sales by producers of metal from copper and zinc, as applicable, and do not include sales by producers of recycled metal or imports.

IsaSmelt(TM) and IsaProcess(TM) are trademarks of Glencore Plc. Ausmelt(TM) is a trademark of Ausmelt Limited ISP(TM) is a trademark of Imperial Smelting Process Ltd.

Presentation of Financial Information

The consolidated audited financial statements of the Company as of and for the fiscal year ended 31 March 2016 (the "Fiscal Year 2016 Financial Statements"), as of and for fiscal year ended 31 March 2017 (the "Fiscal Year 2017 Financial Statements") and as of and for fiscal year ended 31 March 2018 (the "Fiscal Year 2018 Financial Statements" and together with the Fiscal Year 2016 Financial Statements and the Fiscal Year 2017 Financial Statements, the "Annual Financial Statements"), included elsewhere in this Offering Circular, have been prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union ("EU"). The consolidated financial information for the Company as of and for fiscal years ended 31 March 2016, 2017 and 2018, included elsewhere in this Offering Circular has been derived from the Annual Financial Statements. The unaudited interim condensed consolidated financial information of the Company as of and for the nine months ended 31 December 2017 and 2018, included elsewhere in this Offering Circular, has been derived from the unaudited interim condensed consolidated financial statements for the Company as of and for the nine months ended 31 December 2018 (the "Unaudited Interim Condensed Financial Statements") prepared in accordance with IAS 34, *Interim Financial Reporting*.

During the nine months ended 31 December 2018 the Company has revised the presentation of forward premiums on derivative instruments to present it along with the mark-to-market gain/loss on these instruments as these more appropriately reflect the substance of the forward premiums on derivative transactions. As a result of the change these premiums have been reclassified from finance costs to cost of sales and other gains and losses. The comparative amounts for the nine months ended 31 December 2017 have been reclassified. The Annual Financial Statements included elsewhere in this Offering Circular are based on the financial statements as approved at the respective meeting of the Board and have not been revised for this change.

Certain amounts disclosed as of or for the year ended 31 March 2017 are restated figures as reported in the fiscal year 2018 annual report, rather than the amounts published in the fiscal year 2017 annual report.

Certain comparative financial data for the fiscal year ended 31 March 2018 presented in the Unaudited Interim Condensed Financial Statements were reclassified from their previous presentation in the Fiscal year 2018 Financial Statements to conform to the presentation of the Unaudited Interim Condensed Financial Statements.

Rounding adjustments have been made in calculating some of the information included in this Offering Circular. As a result, amounts shown as totals in some tables may not be exact arithmetic aggregations of the figures that precede them.

References to a particular "fiscal" year are to a financial year ended or ending 31 March of that year. References to a year other than a "fiscal" year are to the calendar year ended 31 December.

Currencies and Conversions

In this Offering Circular, references to "US" or the "United States" are to the United States of America, its territories and its possessions. References to "UK" are to the United Kingdom; references to "India" are to the Republic of India; references to "Australia" are to the Commonwealth of Australia; references to "Zambia" are to the Republic of Zambia; references to "South Africa" are to the Republic of South Africa; references to "EU" are to the European Union as established by the Treaty on European Union; references to "$", "dollars" or US$ or "US dollars" are to the legal currency of the United States; references to "GBP" or "£" are to the legal currency of the United Kingdom; references to "₹", "Rupees" or "Indian Rupees" are to the legal currency of India; references to "AUD", "Australian dollars" or "A$" are to the legal currency of Australia; references to "ZAR", "South African Rands" are to the legal currency of South Africa; and references to "Zambian Kwacha" or "ZMW" are to the legal currency of Zambia. References to "¢" are to US cents and references to "lb" are to the imperial pounds (mass) equivalent to 0.4536 kilograms. References to "tonnes" are to metric tonnes, a unit of mass equivalent to 1,000 kilograms or 2,204.6 lb. In respect of Vedanta Limited's iron ore operations, references to "tonnes" are to dry metric tonnes and for wet metric tonnes. References to "m^3" are to cubic metres, references to "km" are to kilometres and references to "km^2" are to square kilometres.

Unless otherwise indicated, the financial information contained in this Offering Circular has been expressed in US dollars. The exchange rate between Zambian Kwachas and US dollars and South African Rands and US dollars are based on the spot rate provided by Bloomberg as of 31 December 2018, which was ZMW 11.96 = $1.00, and ZAR 12.38 = $1.00 respectively. The US dollar equivalent information presented in this Offering Circular for Indian Rupees has been calculated based on the exchange rates certified by the Reserve Bank of India ("RBI Reference Rate") as of 31 December 2018, which was ₹69.79= $1.00. The US dollar equivalent information presented in this Offering Circular for GBP has been calculated based on the rate provided by Bloomberg as of 31 December 2018. The exchange rates presented in this Offering Circular for each period may have differed from the exchange rates used in the preparation of financial statements included elsewhere in this Offering Circular. See "Exchange Rates".

Non-IFRS Measures

This Offering Circular includes the presentation of certain measures that are not defined by IFRS, including Vedanta EBITDA, cash costs per units, and Special Items (each as defined below). These measures have been included for the reasons described below. However, these measures are not measures of financial performance or cash flows under IFRS and may not be comparable to similarly titled measures of other companies because they are not uniformly defined. These measures should not be considered in isolation or as a substitute by investors as an alternative to Vedanta's operating results, operating profit or profit on ordinary activities before taxation, or as an alternative to cash flow from operating, investing or financing activities. Vedanta's management believes this information, along with comparable IFRS measures, is useful to investors because it provides a basis for measuring Vedanta's operating performance. Vedanta's management uses these financial measures, along with the most directly comparable IFRS financial measures, in evaluating Vedanta's operating performance and value creation. Non-IFRS financial measures should not be considered in isolation from, or as a substitute for, financial information presented in compliance with IFRS. Non-IFRS financial measures as reported by Vedanta may not be comparable to similarly titled amounts reported by other companies.

Because of these limitations, the non-IFRS measures should also not be considered as measures of discretionary cash available to Vedanta to invest in the growth of its business or as measures of cash that will be available to Vedanta to meet its obligations. Potential investors should compensate for these limitations by relying primarily on Vedanta's IFRS results and using these non-IFRS measures only to supplement the evaluation of Vedanta's performance. Please see "Summary Consolidated Financial Information", "Selected Consolidated Financial Information", and the Annual Financial Statements and Unaudited Interim Condensed Financial Statements and the related notes included elsewhere in this Offering Circular.

Furthermore, the non-IFRS measures included in this Offering Circular would also be considered a non-GAAP financial measure in the United States.

Vedanta EBITDA

Vedanta EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax. EBITDA is widely used by securities analysts, investors and other interested parties to evaluate the profitability of companies. Vedanta EBITDA eliminates potential differences in performance caused by variations in capital structures (affecting net finance costs), tax positions (such as the availability of net operating losses against which to relieve taxable profits), the cost and age of tangible assets (affecting relative depreciation expense) and the extent to which intangible assets are identifiable (affecting relative amortisation expense).

Vedanta EBITDA based measures have important limitations as an analytical tool, and you should not consider them in isolation or as substitutes for analysis of the results of operations.

Some of these limitations are:

- They do not reflect the impact of significant interest expense or the cash requirements necessary to service interest or principal payments in respect of any borrowings, which could further increase if Vedanta incurs more debt.

- They do not reflect the impact of income tax expense on Vedanta's operating performance.

- They do not reflect the impact of depreciation of assets on Vedanta's performance. The assets of Vedanta's business that are being depreciated will have to be replaced in the future and such depreciation expense may approximate the cost to replace these assets in the future. By excluding this expense from Vedanta EBITDA-based measures, these measures do not reflect Vedanta's future cash requirements for these replacements.

- They do not reflect Vedanta's cash expenditures or future requirements for capital expenditure or contractual commitments.

- They do not reflect changes in or cash requirements for Vedanta's working capital needs.

Vedanta EBITDA, as defined by Vedanta, represents Vedanta EBITDA before additional specific items that are considered to hinder comparison of the trading performance of Vedanta's businesses either year-on-year or with other businesses. Vedanta EBITDA is the measure used by the Board to assess the trading performance of Vedanta's businesses and is therefore the measure of segment profit that is presented under IFRS. Vedanta EBITDA is also presented on a consolidated basis because management believes it is important to consider Vedanta's profitability on a basis consistent with that of Vedanta's operating segments.

Vedanta EBITDA may not be comparable to similarly titled measures reported by other companies due to potential inconsistencies in the method of calculation. Vedanta has included its Vedanta EBITDA because it believes it is an indicative measure of its operating performance and is used by investors and analysts to evaluate companies in the same industry. Vedanta EBITDA should be considered in addition to, and not as a substitute for, other measures of financial performance and liquidity reported in accordance with IFRS. Vedanta believes that the inclusion of supplementary adjustments applied in its presentation of Vedanta EBITDA are appropriate because Vedanta believes it is a more indicative measure of the its baseline performance as it excludes certain charges that Vedanta's management considers to be outside of its core operating results. In addition, Vedanta EBITDA is among the primary indicators that Vedanta's management uses as a basis for planning and forecasting of future periods.

Cash Costs per Unit

Cost of production as reported for Vedanta's metal products includes an off-set for any amounts Vedanta receives upon the sale of the by-products from the refining or smelting processes. The cost of production is divided by the daily average exchange rate for the year to calculate the US dollar cost of production per lb or tonne of metal as reported.

Special Items

Special items are those items that management considers, by virtue of their size or incidence (including but not limited to impairment charges and acquisition and restructuring related costs), should be disclosed separately to ensure that the financial information allows an understanding of the underlying performance of the business in the year, so as to facilitate comparison with prior periods.

Also tax charges related to Special items and certain one-time tax effects are considered Special. Such items are material by nature or amount to the year's result and require separate disclosure in accordance with International Accounting Standards ("IAS") 1 paragraph 97. The determination as to which items should be disclosed separately requires a degree of judgement. Special Items are disclosed in the Annual Financial Statements as well as the Unaudited Interim Condensed Financial Statements; please refer to Note 5 in the Annual Financial Statements and Note 4 in the Unaudited Interim Condensed Financial Statements.

Net Debt/Capitalisation (%)

Net Debt/Capitalisation (%) is calculated as Vedanta's Debt minus Cash and Cash Equivalents minus Liquid Investments, as a percentage of the total capitalisation of Vedanta. Total capitalisation of Vedanta is calculated as shareholder's equity including non-controlling interests and net debt.

Interest Coverage Ratio

Interest coverage ratio is calculated as the number of times Vedanta EBITDA covers the total interest expense of Vedanta.

Net Debt over Vedanta EBITDA

Net Debt over Vedanta EBITDA is calculated as Vedanta's Debt minus Cash and Cash Equivalents minus Liquid Investments, divided by Vedanta EBITDA.

Debt/Vedanta EBITDA

Debt/Vedanta EBITDA is calculated as Vedanta's total borrowings divided by Vedanta EBITDA.

Adjusted Revenue

Total Revenue as per financial statements less revenue of custom smelting operations at our copper and zinc business.

Adjusted EBITDA

Total Vedanta EBITDA less EBITDA of custom smelting operations at our copper and zinc business.

Adjusted Vedanta EBITDA margin

Adjusted EBITDA divided by Adjusted Revenue.

Return on Capital Employed (ROCE)

Operating profit before special items net of tax outflow, as a ratio of average capital employed.

Free Cash flow Post Capex (FCF)

Net Cash flow from operating activities.

Less: purchases of property, plant and equipment and intangibles less proceeds on disposal of property, plant and equipment.

Add: Dividend paid and dividend distribution tax paid.

Add/less: Other non-cash adjustments.

Capital Employed

Net assets before Net (Debt)/Cash.

Operating Margin Before Special items

Operating profit/(loss) before special items divided by total Revenue.

Basis of Presentation of Reserves and Resources

Ore Reserves and Mineral Resources

The reported reserves are defined as being either "Ore Reserves" if reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition, prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (the "JORC Code") or "Mineral Reserves" if reported in accordance with the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves which sets out minimum standards, recommendations and guidelines for public reporting of exploration results, Mineral Resources and Mineral Reserves in South Africa (the "SAMREC Code"). The meanings and definitions are the same. For convenience, Vedanta has standardised the term Ore Reserves. The reported mineral resources are defined as "Mineral Resources" if reported in accordance with the JORC Code (2012) or in accordance with the SAMREC Code.

The reported Ore Reserves of each project, and Mineral Resources for certain projects, are derived following a systematic evaluation of geological data and a series of technical and economic studies by Vedanta's geologists and engineers. The results and procedures used in the majority of these studies have been periodically reviewed by independent consultants.

- The Mineral Resources and Ore Reserves of KCM's Konkola, Nchanga and Nampundwe mines were audited as of 31 March 2018, by SRK Consulting (South Africa) (Pty) Ltd and are reported in accordance with the terms and definitions of the SAMREC Code (2016). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources of CMT's copper mines are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of HZL's mines were audited as of 31 March 2018 by SRK Consulting (UK) Limited and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of Black Mountain Mining's Black Mountain mine are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the SAMREC Code (2016). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of Black Mountain Mining's Gamsberg mines are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the SAMREC Code (2016). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Ore Reserves of Skorpion were audited by AMC Consultants Ltd., as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources of Scorpion are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012).

- The Mineral Resources and Ore Reserves of BALCO's mines were audited by Geo Solutions Private Limited as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of the iron ore mines of Vedanta Limited and its subsidiary, SRL, are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012).

The estimation of the quantity and quality of the mineral occurrence is defined in two stages. In the first stage, the location, quantity, grade, geological characteristics and continuity of Mineral Resources are interpreted and estimated from specific geological evidence and knowledge. The geological evidence is gathered from exploration, sampling and testing information through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. See Annex B — "Mineral Resources (exclusive reporting basis)". Furthermore all Mineral Resources are reported on an exclusive basis where for the avoidance of doubt, the Mineral Resources exclude those Measured and Indicated Mineral Resources which have been modified to derive Ore Reserves. The definitions of the terms relied on for both the SAMREC Code (2016) and the JORC Code (2012) are included in the glossary to this Offering Circular. The effective date of the audits are 31 March 2018, as such all consultants confirm that they have not reviewed any additional technical information subsequent to this effective date whether with respect to material changes or otherwise.

The Offering Circular references various production expansion projections currently proposed by the Company, and in addition, associated capital expenditures. The Ore Reserve audits as completed by SRK UK or all consultants have been assessed in the context of current production levels and as such any expansion or associated capital expenditures have not been audited by all consultants.

All Mineral Resources and Ore Reserves are reported on a 100% basis and as such do not reflect the quantum which would be attributable to the Company based on its equity interest. This Offering Circular includes technical information, which requires subsequent calculations to derive subtotals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce a margin of error. Where such errors occur, the Company does not consider them to be material.

The SAMREC Code (2016) and the JORC Code (2012) specifies that reporting of Mineral Resources and Ore Reserves must be accompanied by additional supplemental information as stipulated by Table 1 of the JORC Code (2012). The Company intends, at a later date, to include a summary of the appropriate supplemental information on the Company's website to ensure full compliance with the relevant reporting Codes.

In the second stage, the "Ore Reserve" is defined. An "Ore Reserve" is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate that at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

Although the Company provides certain life of mine estimates on the basis of Ore Reserves and Mineral Resources, investors are cautioned to use the life of mine estimates based solely on Ore Reserves in Annex A — "Life of Mines" as the base case for any assessment of the life of a mine.

SRK UK noted that the geological information at Rampura Agucha, Sindesar Khurd, Rajpura Dariba and Kayad is modelled using commercial geological modelling software and the information at the Zawar Group mines is modelled using a combination of geological modelling software and on paper based sections.

SRK SA noted that the geological information at the Konkola copper mine is modelled using the GEMS Software, the Nchanga open-pit copper mine is modelled on Datamine resource models, the Nchanga underground copper mines are modelled on block and computerised analysis (Dynamic Ore Reserves System II) and the Nampundwe underground pyrite mine is modelled manually on paper based sections.

In addition to the Ore Reserves, the Company has identified further mineral deposits as either extensions of or additions to its existing operations that are subject to ongoing exploration and evaluation.

Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Mining Operations

There are differences in reporting regimes for reserve estimates between the JORC Code (2012) and SAMREC Code on the one hand, each of which are used by Vedanta, and the United States reporting regime under the requirements as adopted by the SEC in its Industry Guide 7 — Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations ("Industry Guide 7") on the other hand. The principal difference is the absence under Industry Guide 7 of any provision for the reporting of estimates other than proved (measured) or probable (indicated) reserves. There is, therefore, no equivalent for "resources" or "Mineral Resources" under the SEC's Industry Guide 7.

The SEC has applied the following reporting definitions to reserves under Industry Guide 7:

A "reserve" is "that part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination. Reserves are customarily stated in terms of "ore" when dealing with metalliferous minerals; when other materials such as coal, oil, shale, tar, sands, limestones, etc. are involved, an appropriate term such as "recoverable coal" may be substituted."

"**Proven (measured) reserves**" are "reserves for which:

(a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and

(b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established."

"**Probable (indicated) reserves**" are "reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation."

This Offering Circular, including Annex A — "Life of Mines", uses the term "resources", which are comprised of "measured," "indicated" and "inferred" Mineral Resources. United States investors are advised that while such terms are recognised by some investors, the SEC does not recognise them. "Inferred" Mineral Resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an "inferred" Mineral Resource will ever be upgraded to a higher category. Under SEC rules, estimates of "inferred" Mineral Resources may not form the basis of feasibility or other economic studies. Investors should not assume that all or any part of "measured" or "indicated" resources will ever be converted into Ore Reserves. Investors are also cautioned not to assume that all or any part of an "inferred" Mineral Resource exists or is economically or legally mineable.

UNITED STATES INVESTORS ARE ADVISED THAT THE REPORTING OF MINERAL RESOURCES IN THIS OFFERING CIRCULAR IS ACCORDINGLY NOT COMPLIANT WITH INDUSTRY GUIDE 7.

Oil, Condensate and Marketable Gas Reserves and Contingent Resources

Estimates of proved, probable, and possible reserves and Contingent resources as of 31 March 2018 of Vedanta Limited have been prepared according to the Petroleum Resources Management System ("PRMS") approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers.

Estimates of proved, probable, and possible reserves and Contingent resources as of 31 October 2018 of Vedanta Limited have been prepared according to the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The PRMS standard is a referenced standard in published guidance notes of the London Stock Exchange. The proved, probable, and possible oil, condensate, and marketable gas Reserves and the Contingent Resources were independently estimated by DeGolyer and MacNaughton as of 31 March 2018, and proved, probable, and possible oil, condensate, and marketable gas Reserves and the Contingent Resources at the Company's oil and gas assets in Rajasthan were independently estimated by DeGolyer and MacNaughton as of 31 October 2018.

The Contingent Resources estimated herein are those volumes of oil or gas that are potentially recoverable from known accumulations but which are not currently considered to be commercially recoverable because development is either pending or is under evaluation or is currently not considered viable under existing technical/commercial conditions. Because of the uncertainty of commerciality and the lack of sufficient exploration drilling, the Resources estimated herein cannot be classified as Reserves. The Resources estimates herein are provided as a means of comparison to other resources and do not provide a means of direct comparison to Reserves.

The Company retained DeGolyer and MacNaughton to conduct independent reviews of the proved, probable, and possible oil, condensate, and marketable gas Reserves and the Contingent Resources as of 31 March 2018, and for the proved, probable, and possible oil, condensate, and marketable gas Reserves and the Contingent Resources at the Company's oil and gas assets in Rajasthan as of 31 October 2018.

Reserves and Production

In this Offering Circular, unless expressly stated otherwise, references to reserves and production are to total reserves and total production, respectively. For example, total Ore Reserves and total production mean that part of the Ore Reserves from a mine and that part of the production at mines and operations, respectively, that subsidiaries of the Company have an interest in or rights to.

The Company does not wholly own certain of its subsidiaries and therefore total reserves and total production include reserves and production, respectively, attributable to third-party interests in controlled subsidiaries. Rounding adjustments have been made in calculating some of the reserves and production information included in this Offering Circular. As a result, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that precede them.

Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Oil and Gas Programmes

There are principal differences between the reporting regimes under the PRMS approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation and in the United States under the requirements as adopted by the SEC in its Industry Guide 4 — Prospectus Relating to Interests in Oil and Gas Programmes and Subpart 1200 of Regulation S-K (together "Industry Guide 4").

Evaluations of oil and gas reserves involve various uncertainties and require exploration and production companies to make extensive judgments as to future events based upon the information available. The crude oil and natural gas reserves data are estimates based primarily on internal technical analyses using standard industry practices. Such estimates reflect Vedanta's best judgment at the time of their preparation, based on geological and geophysical analyses and appraisal work (which are dynamic processes), and may differ from previous estimates. Reserves estimates are subject to various uncertainties, including those relating to the physical characteristics of crude oil and natural gas fields. These physical characteristics are difficult to estimate and, as a result, actual production may be materially different from current estimates of reserves. Factors affecting Vedanta's reserve estimates include: the outcome of new production or drilling activities; assumptions regarding future performance of wells and surface facilities; the results of field reviews; an ability to acquire new reserves from discoveries or extensions of existing fields; an ability to apply improved recovery techniques; and changed economic conditions.

UNITED STATES INVESTORS ARE ADVISED THAT THE REPORTING REGIMES USED IN THIS OFFERING CIRCULAR ARE ACCORDINGLY NOT COMPLIANT WITH INDUSTRY GUIDE 4.

SUMMARY

This summary highlights information contained elsewhere in this Offering Circular and does not contain all of the information that you should consider before investing in the Bonds. You should read this entire document, including "Risk Factors" and the financial statements included elsewhere in this Offering Circular, before making an investment decision. This Offering Circular includes forward-looking statements that involve risks and uncertainties. See "Special Note regarding Forward-Looking Statements" for further information.

Business Overview

Vedanta is a globally diversified metals and mining, oil and gas and power generation company. Its businesses are principally located in India. India is one of the fastest growing large economies in the world with a 7.3% increase in GDP during fiscal year 2018 (at constant fiscal 2012 prices), according to the Central Statistical Organisation of the GoI's Ministry of Statistics and Programme Implementation. Vedanta also has operations in Zambia, Namibia, South Africa, UAE, Japan, South Korea, and Taiwan, and a workforce of over 70,000 people worldwide. Vedanta is primarily engaged in oil and gas, zinc, copper, iron ore, lead, silver, steel, aluminium and commercial power generation businesses, and is developing a port operation business and infrastructure assets. Vedanta experienced significant growth in recent years through the expansion of projects for its oil and gas, copper, zinc, aluminium and iron ore businesses and recently acquired a steel products business through acquisition of Electrosteel Steels Limited ("ESL"). Vedanta believes its experience in operating and expanding its businesses in India will allow it to capitalise on attractive growth opportunities arising from India's large mineral reserves, relatively low cost of operations and large and inexpensive labour and talent pools.

For fiscal years 2016, 2017 and 2018, and for the nine months ended 31 December 2018 Vedanta reported total revenue of $10,738 million, $11,520 million, $15,359 million and $10,602 million respectively, and Vedanta EBITDA of $2,336 million, $3,191 million, $4,051 million and $2,517 million, respectively.

Competitive Strengths

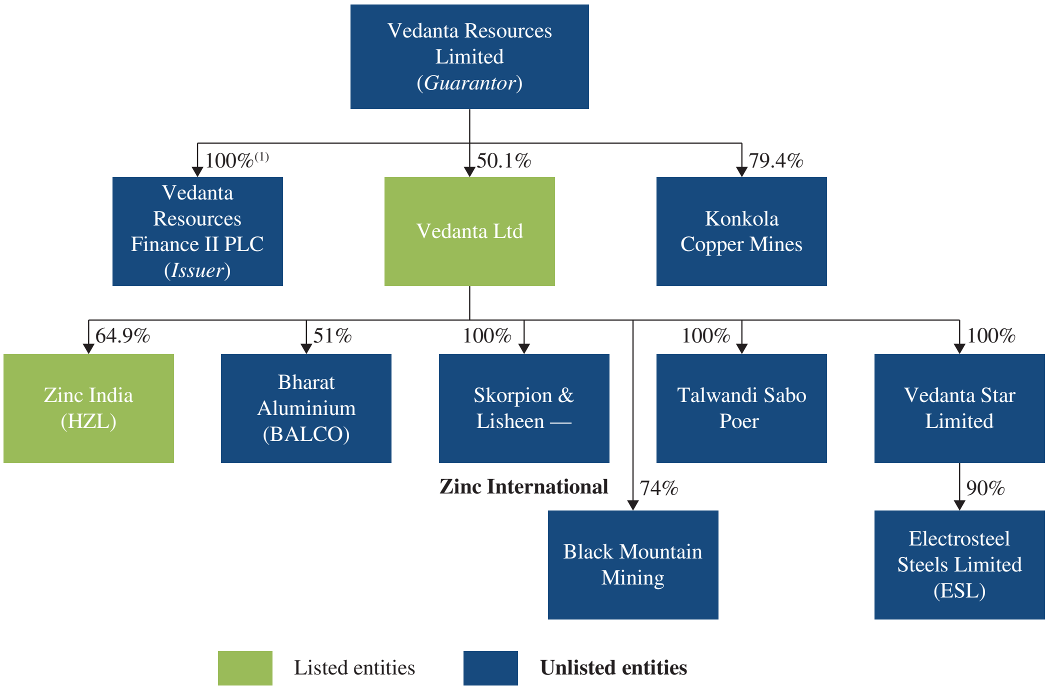
- Large Diversified Asset Base with an Attractive Commodity Mix
- Ideally Positioned to Capitalise on Favourable Geographic Presence
- Well invested assets driving cash flow growth.
- Operational excellence and technology driving efficiency and sustainability.
- Strong financial profile.
- Proven track record.

Strategy

- Operational excellence and growth opportunities.
- Optimise capital allocation and maintain strong balance sheet.
- Protect and preserve its license to operate.
- Augment its reserves and resources base.

Corporate Structure

The following corporate structure as of 31 December 2018 with the exception of Vedanta Resources Finance II Plc (the Issuer) which was incorporated on 20 March 2019. Vedanta owns other subsidiaries that are not material and are not shown in the chart below:



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(1) The Issuer is a wholly owned subsidiary of Vedanta Resources Holdings Limited, which is a wholly owned subsidiary of the Guarantor.

About the Issuer

The Issuer, Vedanta Resources Finance II Plc, is a company incorporated in England and Wales on 20 March 2019. The registered office of the Issuer is at 5 Floor, 6 Andrew Street, London, United Kingdom, EC4A3AE, and the telephone number is +44 (20) 7499-5900.

About the Company

The Company was incorporated and registered in England and Wales as a private company limited by shares under the name Angelchange Limited on 22 April 2003 with the registration number, 04740415. On 20 November 2003, the Company re-registered as a public limited company under the United Kingdom Companies Act 1985 and changed its name to Vedanta Resources plc. On 2 October 2018, the Company delisted from the London Stock Exchange ("LSE") and re-registered as a private limited company and changed its name to Vedanta Resources Limited. The principal legislation under which the Company operates is the Companies Act, 2006 (the "Companies Act").

The registered office of the Company is 5th floor, 6 Andrew Street, London, EC4A 3AE. The head office of the Company is at 30 Berkeley Square, London W1J 6EX, telephone number +44 (020) 7499-5900. The Company's website address is www.vedantaresources.com. **Information on the Company's website does not constitute a part of this Offering Circular.**

Recent Developments

Declaration of second interim dividend of $97.5 million by Vedanta Limited

On 6 March 2019, Vedanta Limited declared an interim dividend of $97.5 million, and the dividend was paid on 14 March 2019.

Appointment of Mr. Venkatakrishnan as a full-time director, Chief executive officer ("CEO") and key managerial personnel of Vedanta Limited

Vedanta Limited's Board on 31 January 2019, approved the appointment of Mr. Venkatakrishnan as a whole-time director (additional director), CEO and key managerial personnel of Vedanta Limited with effect from 1 March 2019 up to 31 August 2021.

Change in ratings outlook

In February 2019, CRISIL Limited and India Ratings and Research Limited, revised Vedanta Limited's ratings to "Stable" from "Positive" while affirming the ratings at "AA" due to softening in the commodity prices.

Moodys revised the outlook on ratings for Vedanta Resources Limited to Negative from Stable while affirming the corporate family rating at Ba3 in February 2019, due to weaker earnings on account of downside risk to commodity prices.

Similarly, S&P affirmed the ratings at B+ while revising the Outlook to Negative in March 2019 on account of weaker operating performance due to commodity slowdown which along with higher debt could keep its metrics weaker than required for current rating levels.

Update on the litigation regarding the consent to operate ("CTO") the Tuticorin copper smelter

Vedanta Limited's application for the renewal of the CTO for the Tuticorin copper smelter was rejected by Tamil Nadu Pollution Control Board ("TNPCB") and the Tamil Nadu Government in 2018. However, in December 2018, the National Green Tribunal ("NGT") agreed with Vedanta Limited and directed TNPCB and the state government of Tamil Nadu to renew the CTO. In February 2019, the Supreme Court of India, in response to an appeal against the NGT said order, set aside the NGT order mostly on procedural grounds and directed Vedanta Limited to first approach the High Court of Madras against the orders of TNPCB and the State Government of Tamil Nadu and seek interim relief considering that Vedanta Limited's plant has been shut down since April 2018. Supreme Court of India has also permitted Vedanta Limited to apply before the Chief Justice of the High Court for expeditious hearing. The litigation is ongoing before the Madras High Court. See "Litigation — Proceedings related to the existing copper smelting plant and the proposed expansion at the Tuticorin copper smelter" for more details on this litigation.

Proposed Merger of VSL with ESL

In 2018, Vedanta Limited's wholly owned subsidiary, VSL acquired ESL under the Insolvency and Bankruptcy Code, 2016 of India (the "Bankruptcy Code"). An application to merge VSL with ESL was filed with the National Company Law Tribunal ("NCLT") on 8 January 2019 and both companies are in the process of complying with the directions of the NCLT. The merger is pending and is expected to be completed in the first quarter of fiscal year 2020.

Allocation of additional oil blocks under Discovered Small Field II ("DSF-II") Policy

Vedanta Limited was awarded two new onshore oil blocks, Hazarigaon in Assam and Kaza in KhareGaon, under the DSF-II policy auctions conducted by the GoI in March 2019.

Additional coal linkage through tranche — IV coal auctions

Vedanta Limited had won additional coal linkage of 3.2 mt in the Tranche-IV auctions, and the supply for the same started in March 2019. This additional coal linkage is expected to improve Vedanta Limited's coal security significantly.

Participation in aluminium tenders

The Odisha High Court on 27 March 2019 allowed Vedanta Limited's Jharsuguda smelter to participate in alumina tenders floated by National Aluminium Company Limited ("NALCO"), which could likely reduce logistics costs for the aluminium business.

Vedanta makes oil discovery in Krishna-Godavari Block

In March 2019, Vedanta informed the Directorate General of Hydrocarbons and Ministry of Petroleum and Natural Gas of an oil discovery in the second exploratory well H2, located in the block KG-OSN-2009/3, Krishna-Godavari Basin, East Coast of India. Vedanta holds 100 per cent participating interest in the block.

Production Releases for fiscal year ended 31 March 2019

On 3 April 2019, Vedanta announced its unaudited production results for the fiscal year ended 31 March 2019. The detailed production release is included as Annex D in this Offering Circular.

SUMMARY OF THE OFFERING

The following is a general summary and should not be relied on as a complete description of the Terms and Conditions of the Bonds (the "Conditions"). This summary is derived from, and should be read in conjunction with, the full text of the Conditions and the Trust Deed constituting the Bonds, which prevail to the extent of any inconsistency with the terms set out in this summary. Capitalised terms used herein and not otherwise defined have the respective meanings given to such terms in the relevant Conditions.

Issuer	Vedanta Resources Finance II Plc
Guarantor	Vedanta Resources Limited
Issue	\$400,000,000 8.00% Bonds due 2023 and \$600,000,000 9.25% Bonds due 2026.
Maturity Date	The 2023 Bonds will mature on 23 April 2023 and the 2026 Bonds will mature on 23 April 2026.
Guarantee	The Guarantor will unconditionally guarantee the due and punctual payment of the principal and premium, if any, and interest on, and all other amounts payable under, the Bonds.
Issue Price	The 2023 Bonds will be issued at 100% of their principal amount, plus accrued interest, if any, on the Closing Date and the 2026 Bonds will be issued at 100% of their principal amount, plus accrued interest, if any, on the Closing Date.
Interest and Payment Dates	The 2023 Bonds will bear interest at the rate of 8.00% per annum and the 2026 Bonds will bear interest at the rate of 9.25% per annum. The 2023 Bonds will bear interest from the Closing Date, payable semi-annually in arrear on 23 April and 23 October of each year, commencing on 23 October 2019 and the 2026 Bonds will bear interest from the Closing Date, payable semi-annually in arrear on 23 April and 23 October of each year, commencing on 23 October 2019.
Status of the Bonds and the Guarantee	The Bonds of each series constitute senior, unsubordinated, direct, unconditional and (subject to Condition 3(a)) unsecured obligations of the Issuer and shall at all times rank pari passu and without any preference among themselves. The payment obligations of the Issuer under the Bonds shall, save for such exceptions as may be provided by applicable legislation and subject to Condition 3(a), at all times rank at least equally with all of its other present and future unsecured and unsubordinated obligations. The Guarantee will be structurally subordinated to claims of holders of debt securities and other creditors of subsidiaries of the Guarantor. See "Risk Factors — Risks Relating to the Bonds — The Company's obligations under the Guarantee will be structurally subordinated to the debt held by the Company's subsidiaries".

Use of Proceeds	The net proceeds from this offering, after deduction of underwriting fees, discounts and commissions and other estimated expenses associated with this offering, are expected to be approximately $992 million. The Issuer intends to onlend the net proceeds to the Company which intends to use the proceeds primarily to repay existing indebtedness of the Company and any remaining proceeds for working capital requirements including meeting interest liabilities of the Company and for supporting subsidiaries of the Company. The net proceeds from this offering shall be used in accordance with applicable laws. See "Use of Proceeds" for further details. Certain of the Joint Bookrunners and/or their affiliates have and will continue to have additional relationships with the Company as described in "Plan of Distribution". In particular, certain of the Joint Bookrunners and/or their affiliates act as arrangers and lenders under loan facilities and may receive a portion of the proceeds of the offering of the Bonds in connection with the repayment thereof. See "Use of Proceeds."
Optional Redemption..........	At any time and from time to time prior to 23 April 2023, the Bonds of any series may be redeemed, in whole or in part, at the option of the Issuer at a redemption price equal to 100% of the principal amount of the Bonds of that series being redeemed, plus the Applicable Premium, plus accrued and unpaid interest, if any, to (but excluding) the applicable redemption date. At any time and from time to time on or after 23 April 2023, the 2026 Bonds may be redeemed, in whole or in part, at the option of the Issuer at the following redemption prices (expressed as percentages of the principal amount of the 2026 Bonds at maturity) plus accrued and unpaid interest, if any, to (but excluding) the redemption date:

Twelve-Month Period Commencing on 23 April in	Redemption Price
2023	104.6250%
2024..	102.3125%
2025..	100%

See "Terms and Conditions of the Bonds — Redemption and Purchase".

Repurchase of Bonds upon a Change of Control Triggering Event	Upon the occurrence of a Change of Control Triggering Event (as defined in the Conditions), the Issuer must make an offer to purchase all of the Bonds outstanding at a purchase price equal to 101% of their principal amount plus accrued and unpaid interest, if any, to (but excluding) the purchase date.
Redemption for Taxation	The Bonds of any series may be redeemed at the option of the Issuer at any time in whole, but not in part, at a redemption price equal to the principal amount of the Bonds of that series, together with accrued and unpaid interest, if any, to (but excluding) the redemption date in the event of certain changes affecting taxes of the United Kingdom or any authority thereof or therein having power to tax.

Covenants.............................. Each of the Guarantor and the Issuer has agreed to comply with certain covenants limiting its ability and the ability of certain of the Guarantor's subsidiaries to, among other things, create any security interests over assets, create any restrictions on the ability of certain subsidiaries to pay dividends, incur additional borrowings, distribute proceeds from certain asset sales or sell its ownership interest in certain subsidiaries and has agreed to certain other covenants. See "Terms and Conditions of the Bonds — Covenants".

These covenants are subject to important exceptions and qualifications. In addition, each of the Guarantor, the Issuer and certain of the Guarantor's subsidiaries will not be subject to certain covenants which limit their ability to incur additional borrowings and distribute proceeds from certain asset sales, at any time after the Bonds achieve investment grade ratings from any two of Moody's, S&P and Fitch. See "Terms and Conditions of the Bonds — Covenants — Covenant Suspension".

Selling Restrictions.............. There are restrictions on the offer, sale and/or transfer of the Bonds in certain jurisdictions. For a description of the selling restrictions on offers, sales and transfers of the Bonds, see "Plan of Distribution" and "Transfer Restrictions".

Form and Denomination of the Bonds.......................... The Bonds will be issued in registered form in the denomination of $200,000 each and in integral multiples of $1,000 in excess thereof. Upon issue, the Regulation S Bonds of each series will be represented by Unrestricted Global Certificates and the Rule 144A Bonds of each series will be represented by Restricted Global Certificates, each in registered form. On the Closing Date, the Unrestricted Global Certificate will be deposited with a custodian for, and registered in the name of Cede & Co., as nominee of DTC for the accounts of Euroclear and Clearstream and the Restricted Global Certificates will be deposited with a custodian for, and registered in the name of Cede & Co., as nominee of DTC.

Listing .... The Issuer has obtained in-principle approval for the listing of the Bonds on the SGX-ST.

The Bonds will trade on the SGX-ST in a minimum board lot size of $200,000 so long as any of the Bonds remain listed on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or information contained in this Offering Circular. Admission for the listing and quotation of the Bonds on the SGX-ST is not to be taken as an indication of the merits of the offering, the Guarantor, the Issuer, the Bonds or the Guarantee.

Further Issues...................... The Issuer may from time to time, without the consent of the Bondholders, create and issue further securities either having the same terms and conditions as the Bonds of any series in all respects (or in all respects except for the first payment of interest on them) so that such further issue shall be consolidated and form a single series with the Bonds of that series or upon such terms as the Issuer may determine at the time of their issue. See "Terms and Conditions of the Bonds — Further Issues".

Governing Law	The Bonds and the Trust Deed, and all non-contractual matters arising from or connected with the Bonds and the Trust Deed, will be governed by and construed in accordance with English law.
Trustee.................................	Citicorp International Limited.
Principal Paying Agent	Citibank, N.A., London Branch.
Registrar and Transfer Agent................................	Citibank, N.A., London Branch.
Global Certificates...............	For as long as the Bonds are represented by the Global Certificates, payments of principal and interest in respect of the Bonds will be made without presentation or if no further payment is made in respect of the Bonds against presentation and surrender of the Global Certificates to or to the order of the Principal Agent (as defined below) for such purpose. While the Bonds are represented by the Global Certificates, they will be transferable only in accordance with the rules and procedures for the time being of the relevant clearing system. Except as described herein, individual certificates will not be issued in exchange for interests in the Global Certificates.
Rating of the Bonds.............	The Company has corporate credit ratings of "Ba3" with a negative outlook by Moody's and "B+" with a negative outlook by S&P. Currently, the long-term debt rating by Moody's is "B2." The Bonds are expected, on the Closing Date, to be rated "B2" by Moody's and "B+" by S&P. A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time by the assigning rating organisation.
Trust Deed	The Bonds will be issued under the Trust Deed to be dated on or about the Closing Date between the Issuer, the Guarantor and the Trustee.
Withholding Tax	All payments of principal and interest in respect of the Bonds shall be made free and clear of any withholding or deduction unless required by law. If any such withholding or deduction is required by the United Kingdom, or any authority therein or thereof having power to tax, subject to certain exceptions, the Issuer or the Guarantor will be required to pay certain additional amounts in respect of such withholding or deduction. See "Terms and Conditions of the Bonds — Taxation".
Events of Default	For a description of certain events that will permit the Bonds of any series to become immediately due and payable at their principal amount, together with accrued interest, see "Terms and Conditions of the Bonds — Events of Default".

Lock-up Agreement	Neither the Guarantor nor the Issuer, nor any person acting on their behalf, will, from the date of this Offering Circular until the date 30 days after the date of this Offering Circular, without the prior written consent of the Joint Bookrunners, issue, offer, sell, contract to sell, pledge or otherwise dispose of (or publicly announce any such issuance, offer, sale or disposal) nonequity-linked debt securities issued or guaranteed (other than guarantees in respect of Indian rupee denominated nonequity linked debt securities) by the Guarantor or the Issuer and having a maturity of more than one year from the date of issue, subject to certain exceptions. See "Plan of Distribution".
Extended Settlement............	It is expected that delivery of the Bonds will be made against payment through the facilities of the DTC on or about 23 April 2019, which is the seventh business day after the date of this Offering Circular. See "Plan of Distribution".
Legal Entity Identifier/LEI..	8945002DGA3BBXO3N634

	2026 Bonds	**2023 Bonds**
CUSIP	Regulation S Bonds: G9T27HAA2	Regulation S Bonds: 92243X AB7
	Rule 144A Bonds: 92243XAA9	Rule 144A Bonds: G9T27H AB0
ISIN	Regulation S Bonds: USG9T27HAA24	Regulation S Bonds: USG9T27HAB07
	Rule 144A Bonds: US92243XAA90	Rule 144A Bonds: US92243XAB73
Common Codes	Regulation S Bonds: 198421677	Regulation S Bonds: 198421375
	Rule 144A Bonds: 198421413	Rule 144A Bonds: 198421332

Prospective purchasers should refer to the section entitled "Risk Factors" for a discussion of certain risks involved in investing in the Bonds.

SUMMARY CONSOLIDATED FINANCIAL INFORMATION

The following tables present the summary historical consolidated financial information for the Company for the periods ended and at the dates indicated below. The summary historical consolidated financial information as of and for fiscal years ended 2017 and 2018 has been derived from the Annual Financial Statements included elsewhere in this Offering Circular. The financial information as of and for fiscal year ended 31 March 2016 has been extracted from the comparative financial information included in the audited Fiscal year 2017 Financial Statements. The Company's Annual Financial Statements have been prepared and presented in accordance with IFRS as adopted by the EU. The summary financial information as of and for the nine months ended 31 December 2017 and 2018 has been derived from the Unaudited Interim Condensed Financial Statements for the nine months ended 31 December 2018 included elsewhere in this Offering Circular. The Company's Unaudited Interim Condensed Financial Statements have been prepared in accordance with IAS 34, Interim Financial Reporting.

You should read the following information in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", the "Annual Financial Statements" and "Unaudited Interim Condensed Financial Statements" and the notes thereto included elsewhere in this Offering Circular.

Consolidated Income Statement

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Continuing operations					
Revenue	10,737.9	11,520.1	15,358.7	10,830.7	10,601.8
Cost of sales	(9,241.1)	(8,789.2)	(11,940.5)	(8,449.5)	(8,681.8)
Gross profit	**1,496.8**	**2,730.9**	**3,418.2**	**2,381.2**	**1,920.0**
Other operating income	101.7	73.4	89.2	53.6	112.7
Distribution costs	(223.8)	(274.9)	(276.5)	(194.0)	(209.9)
Administrative expenses	(493.5)	(368.8)	(417.3)	(291.0)	(396.4)
Special items	(5,210.1)	(17.3)	649.9	(772.1)	38.1
Operating (loss)/profit	**(4,328.9)**	**2,143.3**	**3,463.5**	**1,177.7**	**1,464.5**
Investment revenues	697.8	642.6	465.1	341.8	275.6
Finance costs	(1,280.4)	(1,382.2)	(1,450.8)	(1,064.0)	(948.3)
Other gains and losses (net)	(72.5)	(23.8)	4.3	(15.9)	(65.7)
(Loss)/Profit before taxation	**(4,984.0)**	**1,379.9**	**2,482.1**	**439.6**	**726.1**
Tax credit/(charge) — special items	1,737.4	(4.9)	(338.5)	220.3	(16.3)
Tax expense — others	(255.5)	(495.4)	(674.7)	(387.3)	(542.1)
(Loss)/Profit for the year/period	**(3,502.1)**	**879.6**	**1,468.9**	**272.6**	**167.7**
Attributable to:					
Equity holders of the parent	(1,837.4)	(22.7)	235.6	(257.4)	(259.7)
Non-controlling interests	(1,664.7)	902.3	1,233.3	530.0	427.4
(Loss)/Profit for the year/period	**(3,502.1)**	**879.6**	**1,468.9**	**272.6**	**167.7**
VEDANTA EBITDA[(1)]	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**

(1) Vedanta EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax. The Vedanta EBITDA may not be comparable to similarly titled measures reported by other companies due to potential inconsistencies in the method of calculation. The Company has included its Vedanta EBITDA

because the Company believes it is an indicative measure of the Company's operating performance and is used by investors and analysts to evaluate companies in the same industry. The Vedanta EBITDA should be considered in addition to, and not as a substitute for, other measures of financial performance and liquidity reported in accordance with IFRS. The Company believes that the inclusion of supplementary adjustments applied in the Company's presentation of Vedanta EBITDA are appropriate because the Company believes it is a more indicative measure of the Company's baseline performance as it excludes certain charges that the Company's management considers to be outside of its core operating results. In addition, the Company's Vedanta EBITDA is among the primary indicators that the Company's management uses as a basis for planning and forecasting of future periods. The following table reconciles profit/loss for the year/period to Vedanta EBITDA.

	Fiscal year Ended 31 March			**Nine months ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
(Loss)/Profit for the year/period	(3,502.1)	879.6	1,468.9	272.6	167.7
Adjusted for:					
Net tax (credit)/charge	(1,481.9)	500.3	1,013.2	167.0	558.4
Other gains & (losses) (net)	72.5	23.8	(4.3)	15.9	65.7
Finance costs	1,280.4	1,382.2	1,450.8	1,064.0	948.3
Investment revenues	(697.8)	(642.6)	(465.1)	(341.8)	(275.6)
Special Items*	5,210.1	17.3	(683.0)	726.3	(38.1)
Depreciation and amortization	1,455.2	1,030.5	1,270.7	794.2	1,090.9
VEDANTA EBITDA	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**

* Special Items are defined in Note 5 to the Annual Financial Statements and Note 4 to the Unaudited Interim Condensed Financial Statements. Special items include non-cash impairment charges relating to the oil and gas and iron ore assets, the iron ore business relating to the Liberian assets, Bellary assets in the iron ore business, the copper mine of Tasmania, voluntary retirement schemes across the Vedanta group, reversal of provision of District Mineral Fund, charges pursuant to adverse arbitration orders and acquisition expenses.

Consolidated Balance Sheet Data

	As at 31 March			**As at 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Cash and cash equivalents	428.3	1,682.2	798.7	333.8	707.2
Liquid investments	8,508.2	8,043.0	4,807.8	5,707.0	3,640.3
Total assets	30,319.3	31,503.4	29,238.4	29,036.6	28,768.2
Short-term borrowings	(3,726.6)	(7,658.5)	(5,460.3)	(5,094.6)	(5,497.9)
Medium and long-term borrowings	(11,949.5)	(10,570.2)	(9,733.5)	(10,249.4)	(11,004.1)
Convertible bonds*	(587.2)	—	—	—	—
Total equity	**6,852.4**	**6,014.6**	**6,540.3**	**6,190.5**	**5,004.9**

* Includes the current and non-current portion.

Consolidated Cash Flow Data

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Net cash from/(used in) operating activities	2,401.7	1,457.6	1,494.3	775.3	(44.8)
Net cash (used)/from investing activities	(1,862.3)	72.8	2,213.2	1,765.0	(872.0)
Net cash (used in)/from financing activities	(446.8)	(343.2)	(4,607.1)	(3,907.0)	901.0
Purchases of property, plant and equipment and intangibles	(872.4)	(873.9)	(1,104.3)	(654.6)	(1,014.7)

RISK FACTORS

This Offering Circular contains forward-looking statements that involve risks and uncertainties. Vedanta's actual results could differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including those described in the following risk factors and elsewhere in this Offering Circular. You should consider the following risk factors carefully in evaluating Vedanta and its business before investing in the Bonds. If any of the following risks actually occur, Vedanta's business, financial condition and results of operations could suffer, the trading price of the Bonds could decline and you may lose all or part of your investment.

Risks Relating to Business

Commodity prices and the copper treatment and refinery charges or TcRc may be volatile, which may have a material adverse effect on Vedanta's revenue, results of operations and financial condition.

Historically, the international commodity prices for oil and gas, zinc, copper, iron ore and aluminium, and the prevailing market TcRc rate for copper have been volatile and subject to wide fluctuations in response to relatively minor changes in the supply of, and demand for, such commodities, market uncertainties, the overall performance of world or regional economies, the related cyclicality in industries Vedanta directly serves and a variety of other factors beyond the control of Vedanta. Commodity prices and the market TcRc rate for copper may continue to be volatile and subject to wide fluctuations in the future for a variety of reasons.

For example, between fiscal year 2016 and fiscal year 2018, the average prices of zinc, lead, silver, Brent, aluminium and copper increased by 67%, 35%, 11%, 21%, 29% and 24%, respectively. Historically, international prices for crude oil and natural gas have fluctuated as a result of many macro-economic, geo-political and regional factors.

The units of power generated by Vedanta's commercial power generation business are also subject to price volatility. A decline in the prices Vedanta receives for its oil, gas, zinc lead, copper, iron ores or aluminium, or for its power, or in the market TcRc rate for copper would adversely affect Vedanta's revenue and results of operations, and a sustained drop would have a material adverse effect on its revenue, results of operations and financial condition.

Similarly, for the portion of Vedanta's alumina requirements sourced internally, Vedanta's profitability is dependent upon the LME price of aluminium, less the cost of production, which includes the cost of mining bauxite, the refining of bauxite into alumina, transportation of bauxite and alumina and smelting of alumina into aluminium. Further, the units of power generated by Vedanta's commercial power generation business are also subject to price volatility.

The crude oil produced at Block RJ-ON-90/1 (the "Rajasthan Block") is benchmarked to Bonny Light, an international low sulphur crude oil published in Platt's Crude Oil Market Wire on a daily basis. The pricing formula also adjusts for differences in yield and quality. Any change in the prices of Bonny light would impact the revenue from Vedanta's oil and gas business.

The implied price realisation of crude oil generally lies between 8% to 13% discount to Dated Brent for Rajasthan and 3% to 6% to Dated Brent for Cambay, due to the prevailing oil market conditions. Movements in discount affect Vedanta's revenue realisation and any increase in quality differentials may adversely impact Vedanta's revenues and profits.

Vedanta's businesses currently depend upon third party suppliers for a substantial portion of its raw material requirements and their segment results and segment margins depend upon the market prices for such raw materials.

Vedanta sources a majority of its copper concentrate and a substantial proportion of its alumina requirements for its copper and aluminium businesses, respectively, from third parties. For example, in fiscal year 2018, Vedanta sourced the entirety of its copper concentrate and 64% of its alumina requirements from third parties. For the portion of Vedanta's aluminium business where the required alumina is sourced internally, profitability is dependent upon the LME price of aluminium less the cost of production, which includes the costs of bauxite mining at BALCO's mines, the refining of bauxite into alumina at Vedanta Limited's refinery and the smelting of alumina into aluminium. For the portion of Vedanta's alumina requirements sourced from third parties, its profitability is dependent upon the LME price of aluminium, less the cost of the sourced alumina and the cost of smelting. During fiscal year 2018, 68% of BALCO's alumina requirement and 62% of Vedanta Limited's alumina requirement came from third parties.

As a result, Vedanta EBITDA and segment margins of Vedanta's copper and aluminium businesses depend upon its ability to obtain the required copper concentrate and alumina at prices that are low relative to the market prices of the copper and aluminium products that it sells. The market prices of the copper concentrate and alumina that Vedanta purchases from third parties and the market prices of the copper and aluminium metals that it sells have experienced volatility in the past, and any increases in the market price of the raw material relative to the market prices of the metal that Vedanta sells would adversely affect the segment results and segment margins of Vedanta's copper and aluminium businesses, which could have a material and adverse effect on its business, financial condition, results of operations and prospects.

The primary raw material for Vedanta's commercial power operations is coal, which is subject to the GoI's coal allocation policies. Vedanta also relies on imported sources to meet part of its coal requirements. Vedanta could experience a shortfall in the quantity of coal against its linkage or receive lower quality coal, which can result in increased costs.

Further, in common with many exploration and production companies, Vedanta and the operators of assets often contract or lease services and equipment from third party providers. Such services and equipment can be scarce and may not be readily available at the times and places required. In addition, the costs of third party services and equipment have increased significantly over recent years and may continue to rise. Scarcity of services and equipment and increased prices may in particular result from any significant increase in regional exploration and development activities, which in turn may be the consequence of increased or continued high hydrocarbon or mineral prices. The scarcity of such services and equipment, as well as their potentially high costs, could delay, restrict or lower the profitability and viability of projects which may have a material adverse effect on Vedanta's businesses, prospects, financial condition or results of operations.

As a holding company, the Company's financial condition is entirely dependent on the financial condition, including cash available for distribution, and operating results of its subsidiaries.

The Company's results of operations and financial condition are entirely dependent on the financial condition and operating results of its subsidiaries. The Company's ability to pay interest and principal on the Bonds will depend upon the level of distributions, interest payments and loan repayments, if any, received from its operating subsidiaries and associated undertakings, any amounts received on asset disposals and the level of cash balances. Certain of the Company's operating subsidiaries and associated undertakings are and may, from time to time, be subject to restrictions on their ability to make distributions and loans including as a result of restrictive covenants in loan agreements, foreign exchange and other regulatory restrictions and agreements with the other shareholders of such subsidiaries or associated undertakings. The Company's net leverage ratios described in this Offering Circular, including Net Debt/Capitalisation and Net Debt over Vedanta EBITDA, are reported on a consolidated basis and do not take into account such restrictions on the Company's ability to access cash at its subsidiaries or the Company's economic percentage holding in its subsidiaries and should therefore not be exclusively relied upon as measures of the Company's ability to repay debt. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources".

In addition, all dividends paid by Indian companies are currently subject to dividend distribution tax at a rate of 15% (plus a surcharge of 12.0% and education cess at the rate of 4%), payable by the company paying the dividend, which results into an effective tax rate of 20.56% on the net dividend paid. The credit of dividend distribution tax paid by the Indian company may not be available for the credit under the Indo-UK Double Taxation Avoidance Agreement. There can be no assurance that the GoI will not further increase the surcharges or dividend taxes it imposes or reintroduce withholding tax on dividends declared, distributed or paid. There can be no assurance that such restrictions and taxes will not have a material adverse effect on Vedanta's results of operations or financial condition or on Vedanta's ability to make payments of interest and principal on the Bonds.

There is no certainty that the PSC relating to Vedanta's oil and gas business, participating interest in the Rajasthan Block will be renewed or that any renewal will be on favourable terms, which could have a material adverse effect on Vedanta's businesses, operating results or financial condition.

Vedanta's current reserves and production are significantly dependent on the Rajasthan block in India. The current production sharing contract for the block is valid until May 2020. In 2018, under the Pre-New Exploration Licensing Policy ("Pre-NELP Extension Policy") and the New Exploration Licensing Policy ("Pre-NELP and NELP Policy"), the GoI approved a ten-year extension of the production sharing contract for the Rajasthan block. However, the applicability of the Pre-NELP Extension Policy to the Rajastan block is under litigation. An adverse order against Vedanta Limited could result in a substantial loss of value and could have a material adverse effect on Vedanta's results of operations and financial condition. Estimates of reserves and values provided herein are based only on the production that is estimated to be recoverable before the expiration date of the production sharing contract.

Vedanta Limited's oil and gas PSCs do not permit it to export crude oil, which could restrict its ability to monetise its reserves, and the sale of crude oil by Vedanta Limited is subject to risks that arise from various arrangements with third parties which could have a material adverse effect on Vedanta's business, operating results or financial condition.

The majority of Vedanta Limited's oil and gas production is sourced from its interests in a limited number of production sharing contracts or concessions. Disputes or interruption in any one production sharing contract or concession could have a material adverse impact upon its businesses and financial condition. Particularly, under the terms of the production sharing contracts, Vedanta Limited is obliged to sell its entitlement to crude oil in the domestic market until such time as the total availability of the crude oil and condensate from all domestic petroleum production activities meets the total national demand and India achieves self-sufficiency and is not permitted to export crude oil under the production sharing contracts until such time. There is currently a mismatch between the demand and supply of crude oil in India, with demand outweighing the domestic production of crude oil. This mismatch is expected to continue in the long term. Further, in the event that Vedanta Limited's Indian blocks yield crude oil that is not suitable for processing by refineries in India, it may be difficult for us to monetize such domestic crude oil reserves. This could have a material adverse effect on Vedanta Limited's business as a whole, financial condition and results of operations. Vedanta Limited's application for exporting crude oil was denied by the GoI and Vedanta Limited challenged this decision before the High Court of Delhi, which is still pending in appeal before the division bench of the High Court of Delhi. See "Business — Litigation — Writ petition filed in the Delhi High Court by Vedanta Limited relating to export of crude oil from RJ Block" for further information.

Vedanta is subject to the risk of delayed off-takes or payment for delivered production volumes or counterparty default. Stoppage of off-take or supply could result if the buyers fail to take delivery of volumes anticipated by these sales agreements. Additionally, two private buyers accounted for 47.6% of the total sales of the oil and gas business in Rajasthan in fiscal year 2018. Any unforeseen disruption at these buyer's facilities would affect sales volume and therefore revenue generation. Any of these could have a material adverse effect on Vedanta Limited's business, operating results, financial condition and/or prospects.

Vedanta Limited has entered into agreements with a number of other contractual counterparties in relation to the sale and supply of their respective hydrocarbon production volumes and is, therefore, subject to the risk of delayed off takes or payment for delivered production volumes or counterparty default. In certain cases, the relevant counterparty, either legally or as a result of geographic, infrastructure or other constraints or factors, is in practice the sole potential purchaser of the relevant production output. This is particularly the case for sales of gas which rely upon the availability or construction of transmission and other infrastructure facilities, enabling the supply of gas produced to be supplied to end users. The absence of competitors for the transmission or purchase of gas produced by Vedanta may expose it to off-take and production delays, adverse pricing or other contractual terms or may restrict the availability of transmission or other necessary infrastructure. Such delays or defaults or adverse pricing or other contractual terms or restricted infrastructure availability could have a material adverse effect on the Vedanta's respective businesses, prospects, financial condition or results of operations.

Vedanta is subject to covenants under its credit facilities including term loans and working capital facilities that limit its flexibility in managing its business.

Vedanta's financing agreements contain certain restrictive covenants and events of default that limit its ability to undertake certain types of transactions or ability to expand, any of which could adversely affect its business. These covenants require Vedanta to maintain certain financial ratios and in certain cases, obtain the prior consent of its lenders for various activities, including, among others,

- any change in its capital structure,
- issue of equity, preferential capital or debentures,
- raising any loans and deposits from the public,
- undertaking any new project,
- effecting any scheme of acquisition, merger, amalgamation or reconstitution,
- implementing a new scheme of expansion or creation of a subsidiary.

Vedanta's future borrowings may also contain similar restrictive provisions. Low commodity prices may adversely impact Vedanta's profitability and therefore its ability to meet the financial covenants and ratios. There can be no guarantee that at such time that the Company would be able to obtain waivers/relaxations from existing and future lenders commensurate with the then prevailing commodity pricing environment. If Vedanta fails to meet its debt service obligations or covenants (or receive approvals from its lenders to undertake certain transactions) provided under the financing agreements, the relevant lenders could declare Vedanta to be in default under the terms of its agreements, accelerate the maturity of its obligations or take over the financed project or other security made available to the lenders. However no consent is required for this offering. Vedanta cannot assure you that, in the event of any such acceleration, it will have sufficient resources to repay borrowings. In such an event, Vedanta may be forced to renegotiate its financing agreements with its lenders on terms that may not be favourable to Vedanta.

Vedanta depends on the experience and management skill of certain of its key employees. In addition, certain key employees may have claims pending against them from prior employment which, if adversely determined, may impact Vedanta's reputation.

Vedanta's efforts to continue its growth will place significant demands on its management and other resources, and Vedanta will be required to continue to improve operational, financial and other internal controls, both in and outside India across all locations. Vedanta's ability to maintain and grow its existing business and integrate new businesses will depend on its ability to maintain the necessary management resources and on its ability to attract, train and retain personnel with skills that enable it to keep pace with growing demands and evolving industry standards. Vedanta is in particular dependent to a large degree on the continued service and performance of the senior management team of Vedanta and other key team members in its business units. These key personnel possess technical and business capabilities that are difficult to replace. The loss or diminution in the services of Vedanta's executive management or other key team members, or its failure otherwise to maintain the necessary management and other resources and grow its business, could have a material adverse effect on its business, results of operations, financial condition and prospects. In addition, as Vedanta's business develops and expands, Vedanta believes that its future success will depend on its ability to attract and retain highly skilled and qualified personnel, which is not guaranteed.

Mining, metal refining, metal smelting and fabrication operations and oil and gas extraction, require a skilled and experienced labour force. If Vedanta experiences a shortage of skilled and experienced labour, its labour productivity could decrease and costs could increase, Vedanta's operations may be interrupted or it may be unable to maintain its current production or increase its production as otherwise planned, which could have a material adverse effect on Vedanta's results of operations, financial condition and business prospects.

In addition, certain key employees of Vedanta may have claims pending against them from their prior employment. None of these claims relate to any activity by any of these employees in their engagement with Vedanta. While these claims have no impact on Vedanta, an adverse outcome of these claims against any of the key employees may impact Vedanta's reputation.

Material changes in the regulations that govern Vedanta and its businesses, or the interpretation of recent legislation, could have a material adverse effect on its business, financial condition and result of operations.

Mining is subject to a complex and comprehensive set of laws and regulatory requirements. See "Business — Indian Regulatory Matters — Mining Laws". These laws and regulatory requirements are subject to change. For example, the Mines (Amendment) Bill, 2011 ("Mines Bill") proposes several amendments to the Mines Act, 1952, including significant enhancement to the monetary penalties and terms of imprisonment for violations under the Mines Act, 1952. The Mines and Minerals (Development and Regulation) Amendment Act, 2016 received presidential assent on 6 May 2016 and amended the Mines and Minerals (Development and Regulation) Act, 1957. The amendments permit the transfer of captive mine leases (granted before 12 January 2015) without having to go through an auction process and also allow the dumping of waste outside of the mining area by including dumping sites within the definition of lease area. Further, the National Mineral Policy of 2019, which replaced the erstwhile National Mineral Policy 2008, introduces incentives to enhance mergers and acquisitions in the mining sector. If Vedanta is affected, directly or indirectly, by the application or interpretation of any such statute, as and when notified, including any enforcement proceedings initiated under it and any adverse publicity that may be generated due to prosecution, it may have a material adverse effect on its business, financial condition and result of operations.

In addition, Vedanta Limited is subject to complex and comprehensive oil and gas regulations in India. New or changed regulations could require changes to the manner in which Vedanta Limited conducts its business, and result in an increase in compliance costs, which could have a material adverse effect on Vedanta's business, financial condition and results of operation.

For example, upon the expiry of oil and gas licences, contractors are generally required, under the terms of relevant licences or local law, to dismantle and remove equipment, cap or seal wells and generally make good production sites. There can, however, be no assurance that Vedanta will not in the future incur decommissioning charges in excess of those currently provided for, since local or national governments may require decommissioning to be carried out in circumstances where there is no express obligation to do so, particularly in case of future oil and gas licence renewals.

Goods and Service Tax ("GST") has been implemented with effect from 1 July 2017 and has replaced the indirect taxes on supply of goods (other than petroleum products) and services such as central excise duty, service tax, central sales tax, state value added tax ("VAT"), luxury tax and entertainment tax, which were being collected by the central and state governments. With GST, complexity in tax compliance caused by differing tax liabilities from state and central governments has been reduced since all tax returns and filing will be done through a single platform. However, GST is an evolving tax framework in India and any significant future amendments under GST may affect the overall tax efficiency, and may result in significant additional taxes becoming payable.

The provisions of Chapter X-A (sections 95 to 102) of the Income Tax Act, 1961, relating to General Anti-Avoidance Rules (GAAR) are applicable and came into effect on 1 April 2017. The GAAR provisions propose to identify any arrangement the primary purpose or one of the main purposes of which is to obtain a tax benefit, and satisfies at least one of the following tests (i) creates rights, or obligations, which are not ordinarily created between persons dealing at arm's length; (ii) results, directly or indirectly, in misuse, or abuse, of the provisions of the Income Tax Act, 1961; (iii) lacks commercial substance or is deemed to lack commercial substance, in whole or in part; or (iv) is entered into, or carried out, by means, or in a manner, that is not ordinarily engaged for bona fide purposes. If GAAR provisions are invoked, the tax authorities have wide powers, including denial of tax benefit or a benefit under a tax treaty. In the absence of any precedents on the subject, the impact of the application of these provisions is uncertain.

While interest payments made by Vedanta to its non-resident "associated enterprises" are eligible to be deducted as an expense when used by it for its business purpose, such payments are required to be in compliance with thin capitalisation norms as introduced by the Finance Act, 2017, in terms of which, Vedanta would not be permitted a deduction of interest exceeding 30% of the earnings before interest, taxes, depreciation and amortisation if the total amount of such interest exceeds INR 10 million per year. Such thin capitalisation norms would apply even where the debt is issued by an independent third party lender, but an "associated enterprise" provides an implicit or explicit guarantee to such lender.

If the interest is not eligible for deduction in a particular year, the same can be carried forward for 8 years and the same shall be allowed to the extent of maximum allowable interest expenditure for the relevant year.

The costs, liabilities and requirements associated with complying with existing and future laws and regulations, within India or in other jurisdictions may also be substantial and time-consuming and may delay the commencement or continuation of exploration, oil and gas, mining or production activities, which could also have a material adverse effect on Vedanta's results of operation and financial condition.

Vedanta's operations are subject to extensive governmental, health and safety and environmental regulations, which require it to obtain and comply with the terms of various approvals, licenses and permits. Any failure to obtain, renew or comply with the terms of such approvals, licenses and permits in a timely manner may have a material adverse effect on its results of operations and financial condition.

Numerous governmental permits, approvals and leases are required for Vedanta's operations as the industries in which it operates and seeks to operate are subject to numerous laws and extensive regulation by national, state and local authorities in jurisdictions including India, Zambia, Namibia, South Africa and UAE and any other jurisdictions where Vedanta may operate in the future. Vedanta's operations are also subject to laws and regulations relating to employment, the protection of the health and safety of employees as well as the environment, including conservation and climate change. For instance, Vedanta is required to obtain various environmental and labour-related approvals in connection with its operations in India, including clearances from the Ministry of Environment and Forest (the "MoEF"), GoI and from the relevant Pollution Control Boards in the various states in India in which Vedanta operates, and registration under the Factories Act, 1948 of India (the "Factories Act") in order to establish and operate its facilities. Certain of such approvals are valid for stipulated periods of time and require periodic renewals. See "Business — Indian Regulatory Matters" for more information.

Further, Vedanta's exploration, oil and gas and mining activities depend on the grant, renewal or continuance in force of various exploration and production licenses and contracts and other regulatory approvals that are valid for a specific period of time. In addition, such licenses and contracts contain various obligations and restrictions, including restrictions on assignment or any other form of transfer of a mining lease or on the employment of a person who is not an Indian national. For instance, in connection with Vedanta's mining operations in India, mining leases are typically granted for a period of 20 to 30 years and stipulate conditions including approved limits on extraction. Similarly, in connection with Vedanta's oil and natural gas operations in India, Vedanta Limited is required to enter into a PSC and obtain an exploration licence, which typically extends seven or eight years, following the award of a block before it can commence exploration activities, and, if exploration is successful, Vedanta Limited is then required to procure a petroleum mining lease from the relevant government authority, which typically extends for 20 years, in order to conduct extraction operations for oil and natural gas.

Government approval is also required, generally, for the continuation of mining as well as oil and gas exploration and production activities in India and other jurisdictions, and such approval can be revoked for a variety of circumstances by the GoI, Indian courts or other authorities. Any general suspension of mining activities by the government of a jurisdiction containing mining operations of Vedanta could have the effect of closing or limiting production from its operations. For example, revenue from Vedanta's iron ore business declined from $1,688.9 million in fiscal year 2012 (pre ban period) to $296 million in the nine months ended 31 December 2018 due to suspension of mining activities in Goa. The suspension orders were withdrawn by the state government of Goa in 2015 and operations recommenced. However, the Supreme Court of India in 2018 set aside the state government of Goa's orders and directed all lease holders operating under a second renewal to stop all mining operations until new mining leases and new environmental clearances are granted. Vedanta's mines in Goa were impacted as a result of this judgement of the Supreme Court of India. Vedanta recognised an impairment of assets in fiscal year 2018 (primarily with respect to mining reserves) as a result of these closures in an amount equal to $533.9 million net of tax ($758.5 million pre-tax). Vedanta's operations in Goa represent only a small portion of its consolidated revenue, and represented approximately 1% of its revenue for the nine months ended 31 December 2017. Further, the closure of mines in Goa will not impact operations at Vedanta's value-added business and in Karnataka.

Even after receiving appropriate orders for continuation of mining operations in Goa, Vedanta's iron ore business will remain largely dependent on export sales of iron ore to China. For instance, in fiscal year 2017, 100% of sales to external customers for Goa was from exports to customers in China. As a result, the performance and growth of Vedanta's iron ore business is necessarily dependent on the health of the Chinese economy, which may be materially and adversely affected by political instability or regional conflicts, economic slowdown elsewhere in the world or otherwise. In addition, any worsening of international relations between India and China, any negative changes in Chinese regulatory or trade policies relating to the import of iron ore or other limitations, restrictions or negative changes in Vedanta's ability to export iron ore to China, could have a material adverse effect on its business, financial condition, results of operations and prospects. For further details see "Business — Description of the Business — Iron Ore Business".

Furthermore, regulation of greenhouse gas emissions in the jurisdictions of Vedanta's major customers and in relation to international shipping could also have an adverse effect on the demand for Vedanta's products. Vedanta's smelting and mineral processing operations are energy intensive and depend heavily on fossil fuels. Increasing regulation of climate change issues such as greenhouse gas emissions, including the progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets, may raise energy costs and costs of production over the next decade.

Vedanta's global presence exposes it to a number of jurisdictions in which regulations or laws have been or are being considered to limit or reduce emissions. These changes can result in increased cost of fossil fuels, imposition of levies for emissions in excess of certain permitted levels and increased administrative costs for monitoring and reporting. Increasing regulation of greenhouse gas emissions, including the progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets, can result in increased costs and reduced demand growth.

Failure by Vedanta to comply with applicable laws, regulations or recognised international standards, or to obtain or renew the necessary permits, approvals and leases may result in the loss of the right to operate its facilities or continue its operations, the imposition of significant administrative liabilities, or costly compliance procedures, or other enforcement measures that could have the effect of closing or limiting production from its operations. For example, in 2013, TNPCB ordered the closure of the copper smelter in Tuticorin due to complaints of noxious gas leaks by residents. However, Vedanta has been applying for the renewal for its CTO annually for the Tuticorin copper smelter and in 2018, its application for the renewal of the CTO was rejected by TNPCB and the Tamil Nadu Government. The Madras High Court agreed with the state government orders and ordered the closure of the Tuticorin copper smelter. In December 2018, in response to an appeal by Vedanta Limited, the NGT agreed with Vedanta and directed TNPCB and the state government of Tamil Nadu to renew the CTO. In February 2019, the Supreme Court of India, in response to an appeal against the NGT order, set aside the NGT order on the grounds of maintainability and directed Vedanta Limited to first approach the High Court of Madras against the orders of TNPCB and the Government of Tamil Nadu. The litigation is ongoing and the next hearing before the Madras High Court is scheduled on 23 April 2019. See "Litigation — Proceedings related to the existing copper smelting plant and the proposed expansion at the Tuticorin copper smelter" for more details on this litigation.

Prolonged shutdown of Vedanta's copper smelter at Tuticorin could be credit negative and marginally increase its leverage. In addition, if Vedanta were to fail to meet environmental requirements or to have a major accident or disaster, it may also be subject to administrative, civil and criminal proceedings by governmental authorities, as well as civil proceedings by environmental groups and other individuals, which could result in substantial fines, penalties and damages against it as well as orders that could limit or halt or even cause closure of its operations, any of which could have a material adverse effect on its business, results of operations and financial condition. See "Business — Litigation — Writ petitions filed against Vedanta alleging violation of certain air, water and hazardous waste management regulations at Vedanta's Tuticorin plant". Similarly, ESL's consent to operate the steel plant is subject to the decision the Jharkhand High Court against the orders issued by the Jharkhand State Pollution Control Board ("JSPCB") of rejecting ESL's application for the renewal of its CTO, which expired in December 2017.

In addition, in 2015, Zambian villagers filed a class action suit against KCM in Zambia, for alleged release of pollutants and causing environmental damage. See "Business — Litigation Class actions against KCM on behalf of Zambian nationals" for further details. Furthermore, in 2017 the thermal power plant at Talwandi Sabo was fined ₹500,000 as a result of blowing ash that damaged nearby cotton crops. The plant was also directed to compensate farmers who had suffered losses and to submit a surety amount of ₹3 million as an assurance against future pollution. The compensation was duly paid to the farmers and there has been no further directions have been received from the Punjab Pollution Control Board. TSPL has taken measures to prevent such incidents in the future such as installation of additional ash disposal pump, maintenance of ash level in silo of 5 m out of 14 m, an auto alarm system in silo when silo level reaches 8m and ash conveying stops at 10 m as well as an installation sparkling system at silo.

Vedanta experienced an ash pond rupture in Odisha in September 2017, resulting in 4,224,000 tonnes of ash being spilled into the Bhenden River. As a result, relevant authorities shut five out of the 11 thermal power plants. As a result, Vedanta had to purchase 200Mw power from the state electricity grid and incurred a cost of $0.9 million as of 31 December 2017. Recovery of the ash spilled over, strengthening of the ash pond and rehabilitation of the affected village is being discussed with authorities and necessary actions are being taken in alignment with all parties concerned.

Vedanta is exposed to the political, legal, regulatory and social risks of the countries in which it operates.

Vedanta has operations in India, Zambia, Namibia, South Africa, UAE, Japan, South Korea, and Taiwan. Vedanta is exposed to the political, economic, legal, regulatory and social risks of the countries in which it operates or intends to operate. These risks potentially include expropriation (including "creeping" expropriation) and nationalisation of property, instability in political, economic or financial systems, uncertainty arising from underdeveloped legal and regulatory systems, corruption, civil strife or labour unrest, acts of war, armed conflict, terrorism, outbreaks of infectious diseases, prohibitions, limitations or price controls on hydrocarbon exports and limitations or the imposition of tariffs or duties on imports of certain goods.

For example, in consideration of the suspension of exploration in Liberia, low iron ore prices, geopolitical factors and no plans for any substantive expenditure resulting in continued uncertainty in the project, an impairment charge of $227.5 million was recognised for Vedanta in fiscal year 2016.

Countries in which Vedanta has operations or intends to have operations have transportation, telecommunications and financial services infrastructures that may present logistical challenges not associated with doing business in more developed locales. Furthermore, Vedanta may have difficulty ascertaining its legal obligations and enforcing any rights it may have. Political, legal and commercial instability or community disputes in the countries and territories in which Vedanta operates could affect the viability of its operations. Some of Vedanta's current and potential operations are located in or near communities that may regard such operations as having a detrimental effect on their environmental, economic or social circumstances.

The consequences of community reaction, including on social media, could also have a material adverse impact on the cost, profitability, ability to finance or even the viability of an operation. Such events could lead to disputes with national or local governments or with local communities and give rise to material reputational damage. For instance, community protests were recently organized to protest the expansion of Vedanta's copper plant in Tamil Nadu, and there is no certainty regarding the potential impact of such protests. Vedanta's Lanjigarh refinery has also faced protests from local communities demanding employment, resulting in two fatalities. If Vedanta's operations are delayed or shut down as a result of political and community instability, its revenue growth may be constrained and the long-term value of its business could be adversely impacted.

Once Vedanta has established operations in a particular country, it may be expensive and logistically burdensome to discontinue such operations should economic, political, physical or other conditions subsequently deteriorate. All of these factors could have a material adverse effect on Vedanta's businesses, results of operations, financial condition or prospects.

Vedanta may face numerous protective trade restrictions, including anti-dumping laws, countervailing duties and tariffs, which could adversely affect its financial condition and results of operations.

Protectionist measures, including anti-dumping laws, countervailing duties and tariffs and government subsidisation adopted or currently contemplated by governments in some of Vedanta's export markets could adversely affect Vedanta's sales. Anti-dumping duty proceedings or any resulting penalties or any other form of import restrictions may limit Vedanta's access to export markets for its products, and in the future additional markets could be closed to Vedanta as a result of similar proceedings, thereby adversely impacting its sales and/or limiting its opportunities for growth.

In addition, Vedanta is subject to the general risk of doing business overseas and may therefore be affected by global trade wars. For example, there is global economic uncertainty following the recent announcement by the United States to levy certain import tariffs on certain Chinese goods.

If Vedanta's planned expansions and new projects are delayed, Vedanta's results of operation and financial condition may be materially and adversely affected.

Vedanta and its subsidiaries have, over the past few years initiated expansion plans for its existing operations and planned greenfield projects, which may involve significant capital expenditure. Although several of these initiatives have been completed, substantial work remains. The timing, implementation and cost of such expansions are subject to a number of risks, including the failure to obtain necessary leases, licences, permits, consents and approvals, or funding for the expansions.

For example, Vedanta does not currently have all of the leases, licences, permits, consents and approvals that are or will be required for its planned expansions and new projects. There can be no assurance that Vedanta or its subsidiaries will be able to obtain or renew all necessary leases, licenses, permits, consents and approvals in a timely manner. For example, as environmental approvals were challenged before NGT, the expansion plans of Vedanta's alumina refinery at Lanjigarh were affected. The matter is still pending before the NGT; however, the grant of the clearances and approvals haven't been stayed by the NGT. In addition, MoEF has rejected Vedanta's forest clearance application in 2010 and 2014 and mining operations in Niyamgiri Hills have been suspended. Vedanta has started getting supplies under linkage policy of State Government of Orissa from Orissa Mining Corporation and is currently in discussions with government authorities to have higher quantum linkages for bauxite.

Similarly, Vedanta is currently undertaking exploration programs in its Rajasthan and other oil blocks and any delays in this exploration program or shortfall in achieving the necessary output levels could materially and adversely affect Vedanta's operations and financial condition. In fiscal year 2013, HZL announced an expansion of zinc-lead mine capacity to 1.2 mtpa, which involved the sinking of underground shafts and developing underground mines. Benefits from these growth projects started in fiscal year 2016, even though project activities will continue until fiscal year 2020. Any delays in the execution of the expansion plans or any shortfall in achievement of the expansion objectives may adversely affect Vedanta's business, financial condition and results of operations. See "Business — Zinc Business" for further details.

Furthermore, the GoI is contemplating a proposal to demarcate certain forest areas in India, based on the permissibility of using such land for mining purposes. The identification of designated areas where mining activities will, or will not, be permitted will be based on mapping forest and coal reserves as well as field-level studies. While this proposal remains in discussion, the MoEF has denied the grant of environmental and forest diversion clearances applied for in certain areas identified as restricted areas. In the event the proposal is implemented, Vedanta's current and any future mining activities and related expansion plans and new projects may be affected, which would adversely affect Vedanta's business prospects and results of operations or otherwise hinder its borrowing capabilities.

Any delay in completing planned expansions, revocation of existing clearances, failure to obtain or renew regulatory approvals, non-compliance with applicable regulations or conditions stipulated in the approvals obtained, suspension of current projects, or cost overruns or operational difficulties once the projects are commissioned may have a material adverse effect on Vedanta's business, results of operations or financial condition. Any delay in completing planned expansions could have a material adverse effect on Vedanta's credit rating, which may increase its borrowing costs.

Vedanta's future expansions and acquisitions and its ability to refinance its existing indebtedness are dependent upon its ability to obtain funding.

Vedanta will require capital, in the form of debt or equity for, among other purposes, refinancing its existing indebtedness, expanding its operations, making acquisitions, managing acquired assets, acquiring new equipment, maintaining the condition of its existing equipment and maintaining compliance with environmental laws and regulations. To the extent that cash generated internally and cash available under Vedanta's existing credit facilities may not be sufficient to fund Vedanta's capital requirements, Vedanta may require additional debt or equity financing, which may not be available on favourable terms, or at all. Vedanta evaluates acquisition opportunities in the course of its business and such acquisitions could be of a material nature. Vedanta has submitted a bid for a steel asset in Gujarat, India, and such acquisition or any other potential acquisition could be dependent on Vedanta's ability to obtain funding, which may result in an increase in its finance charges and financial leverage. More generally, future debt financing, if available, may result in increased finance charges, increased financial leverage, decreased income available to fund further acquisitions and expansions and the imposition of restrictive covenants on Vedanta's businesses and operations.

Reorganisation of 2013 has been challenged before the courts in India and Vedanta may not be able to benefit from it.

At the time of announcing the reorganisation in 2013, Vedanta estimated tax efficiencies arising from the transaction. The expected efficiencies may not be realised or may be materially lower than estimated and the extent to which any of the other benefits will actually be achieved, if at all, or the timing of any such benefits, cannot be predicted with certainty. If Vedanta Limited is prevented from taking advantage of the anticipated tax efficiencies, there could be a material adverse effect on Vedanta's business, financial condition or results of operations. Further, subsequent to the effectiveness of the Amalgamation and Re-organisation Scheme, a special leave petition challenging the orders of the High Court of Bombay at Goa was filed before the Supreme Court of India by the Commissioner of Income Tax, Goa and the Ministry of Corporate Affairs in July 2013 and April 2014, respectively. Further, a creditor and a shareholder challenged the Amalgamation and Re-organisation Scheme in the High Court of Madras in September 2013. The case is pending, and the next date of hearing is scheduled on 15 April 2019. See "Business — Litigation — The Amalgamation and Re-organisation Scheme has been challenged by the Indian tax authorities and others" for further information.

There is no assurance that the special leave petitions will be determined in Vedanta Limited's favour, and accordingly, there is no assurance that the Courts will negate the effectiveness of the reorganisation. In such circumstance, Vedanta may not be able to achieve financial, operational, strategic and other potential benefits from the consolidation pursuant to the reorganisation.

Third party interests in Vedanta's subsidiary companies and restrictions due to stock exchange listings of Vedanta's subsidiary companies will restrict Vedanta's ability to deal freely with its subsidiaries which may have a material adverse effect on its results of operations and financial condition.

Vedanta does not wholly own any of its operating subsidiaries, although it holds majority stakes in all of its subsidiary businesses. Although Vedanta has direct or indirect management control of Vedanta Limited, BALCO, HZL, KCM and Black Mountain Mining, each of these companies have other shareholders who, in some cases, hold substantial interests. As a result of the non-controlling interests in the Vedanta's subsidiaries and affiliates and the Indian stock exchanges and/or NYSE listings of Vedanta Limited and HZL, these subsidiaries may be subject to additional legal or regulatory requirements, or Vedanta may be prevented from taking certain courses of action without the prior approval of a particular or a specified percentage of shareholders and/or regulatory bodies (under shareholders' agreements, relationship agreements or by operation of law). The existence of minority or other interests in, and stock exchange listings of, Vedanta's subsidiaries may limit its ability to increase its equity interests in these subsidiaries, combine similar operations, utilise synergies that may exist between the operations of different subsidiaries, move funds among the different parts of its businesses or reorganise the structure of Vedanta's business in a tax efficient manner, which may have a material adverse effect on its results of operations and financial condition.

ONGC amongst others is Vedanta's joint venture partner with respect to all operating assets of Vedanta's oil and gas business, and Vedanta Limited operates all of its oil and gas assets except KGONN-2003/1. Accordingly, any mismanagement of an oil and gas asset by Vedanta Limited may give rise to liabilities to its joint operation partners in respect of such asset. There is also a risk that other parties with interests in Vedanta's assets may elect not to participate in certain activities relating to those assets which require such party's consent. In such circumstances, it may not be possible for such activities to be undertaken by Vedanta alone or in conjunction with other participants at the desired time or at all. In addition, other joint operation partners may default in their obligations to fund capital or other funding obligations in relation to the assets. In certain circumstances, Vedanta may be required under the terms of the relevant operating agreement to contribute all or part of any such funding shortfall, which could adversely impact Vedanta's business, financial condition or results of operations.

Vedanta is exposed to competitive pressures in the various businesses in which it operates.

The mines and minerals, commercial power generation, and oil and gas industries are highly competitive. Vedanta will continue to compete with other industry participants in the search for and acquisition of mineral and oil and gas assets and licences. Competitors include companies with, in many cases, greater financial resources, local contacts, staff and facilities than those of Vedanta.

Competition for exploration and production licences as well as for other investment or acquisition opportunities may increase in the future. This may lead to increased costs in the carrying out of Vedanta's activities, reduced available growth opportunities and may have a material adverse effect on its businesses, financial condition, results of operations and prospects.

Currency fluctuations among the Indian Rupee, other currencies and the US dollar could have a material adverse effect on Vedanta's results of operations.

Although substantially all of Vedanta's revenue is tied to commodity prices that are typically priced by reference to the US dollar, most of its expenses are incurred and paid in Indian Rupees and, to a lesser extent, in South African Rands, Zambian Kwachas, Namibian dollars and Liberian dollars. In addition, in fiscal year 2018, 54%, of Vedanta's revenue was derived from commodities that were sold to customers within India. The exchange rates between the Indian Rupee and the US dollar and between other currencies and the US dollar have changed substantially in recent years and may fluctuate substantially in the future. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Exchange Rate Risk" for further details. Vedanta's results of operations or financial condition could be adversely affected if the US dollar depreciates against the Indian Rupee or other currencies. Vedanta seeks to mitigate the impact of short-term movements in currency on its businesses by hedging its short-term exposures progressively based on their maturity. However, large or prolonged movements in exchange rates may have a material adverse effect on Vedanta's results of operations and financial condition.

Any business acquisitions by Vedanta entail significant risks.

Vedanta may continue to pursue acquisitions to expand its business. There can be no assurance that Vedanta will be able to identify suitable acquisition, strategic investment or joint venture opportunities, obtain the financing necessary to complete and support such acquisitions, investments or joint ventures, integrate such businesses, investments or joint ventures or that any business acquired will be profitable. If Vedanta's Indian subsidiaries attempt to acquire non-Indian companies, they may not be able to satisfy certain Indian regulatory requirements for such acquisitions and may need to obtain prior approval of the RBI, which they may not be able to obtain. The funding of such acquisitions by Vedanta may require certain approvals from regulatory authorities in India.

In addition, acquisitions and investments involve a number of risks, including possible adverse effects on Vedanta's operating results, diversion of management's attention, loss of goodwill on account of change in ownership, failure to retain key personnel, risks associated with unanticipated events or liabilities, including environmental liabilities, and difficulties in the assimilation of the operations, technologies, systems, services and products of the acquired businesses or investments. Any failure to achieve successful integration of such acquisitions or investments could have a material adverse effect on Vedanta's business, results of operations or financial condition.

Vedanta's insurance coverage may prove inadequate to satisfy future claims against it.

Vedanta maintains insurance which it believes is typical in the respective industries in which it operates and in amounts which it believes to be commercially appropriate. Nevertheless, Vedanta may become subject to liabilities, including liabilities for pollution or other hazards, against which it has not insured adequately or at all, or cannot insure. Vedanta's insurance policies contain certain customary exclusions and limitations on coverage which may result in its claims not being honoured to the full extent of the losses or damages it has suffered. In addition, Vedanta's operating entities in India can only seek insurance from domestic insurance companies or foreign insurance companies operating in joint ventures with Indian companies and these insurance policies may not continue to be available at economically acceptable premiums. The occurrence of a significant adverse event, the risks of which are not fully covered or honoured by such insurers, could have a material adverse effect on Vedanta's results of operations or financial condition.

Defects in title or loss of any leasehold interests in Vedanta's properties could limit its ability to conduct operations on such properties or result in significant unanticipated costs.

Vedanta's ability to mine the land on which it has been granted mining lease rights and to make use of its other industrial and office premises is dependent on its acquisition of surface rights. Surface rights and title to land are required to be negotiated separately with landowners, although there is no guarantee that these rights will be granted. Any delay outside of the ordinary course of business in obtaining or inability to obtain or any challenge to its title or leasehold rights to surface rights could negatively affect its financial condition and results of operations.

In addition, there may be certain irregularities in title in relation to some of Vedanta's owned and leased properties. For example, some of the agreements for such arrangements may not have been duly executed and/or adequately stamped or registered in the land records of the local authorities or the lease deeds may have expired and not yet been renewed. Since registration of land title in India is not centralised and has not been fully computerised, the title to land may be defective as a result of a failure on Vedanta's part, or on the part of a prior transferee, to obtain the consent of all such persons or duly complete stamping and registration requirements. The uncertainty of title to land may impede the processes of acquisition, independent verification and transfer of title, and any disputes in respect of land title that Vedanta may become party to may take several years and considerable expense to resolve if they become the subject of court proceedings. Further, certain of these properties may not have been constructed or developed in accordance with local planning and building laws and other statutory requirements, or it may be alleged that such irregularities exist in the construction and development of the built up properties. For example BALCO has 1,804.67 acres of government land out of which 1,751 acres is situated in forest land which was given on lease by the state government. The lease deed has not been executed as on date as a petition was filed in the Supreme Court of India against BALCO in relation to the alleged encroachment of land on which the Korba smelter is situated. Any such dispute, proceedings or irregularities may have an impact on the operations of Vedanta. The next date of hearing is fixed for 12 April 2019. See "Business — Litigation — BALCO is involved in litigation in relation to the illegal felling of trees situated on forest land" for further details.

Vedanta could be subject to weaknesses, disruptions, failures or infiltrations of, or inadequacies in, its information technology systems.

Vedanta is dependent on the capacity and reliability of the communications, information and technology systems supporting its operations. Vedanta is exposed to operational risks, such as data entry or operational errors or interruptions of its financial, accounting, compliance and other data processing systems, whether caused by the failure to prevent or mitigate data losses and other security breaches, or other cyber security threats or attacks, fire or other disaster and power or telecommunications failure, which could result in a disruption of its business, liability to third parties, regulatory intervention, or reputational damage, and thus have a material adverse effect on its business.

Although Vedanta has back-up systems and cyber security measures in place, its back-up procedures, cyber defences and capabilities in the event of a failure, interruption, or breach of security may not be adequate. Insurance and other safeguards Vedanta uses may not be available or may only partially reimburse it for losses related to operational failures or cyber-attacks.

As Vedanta grows and its reliance on information technology and systems increases, protecting systems from cyber security attacks and threats may become increasingly challenging and costly. Vedanta may be unable to prevent or address, any disruption to the operation of its information technology systems in a timely manner, or upgrade its information technology or communications systems. Any such failure could result in its inability to perform, or result in prolonged delays in the performance of, critical business and operational functions, the loss of key business information and data, or a failure to comply with regulatory requirements.

Operating Risks

Vedanta's oil and gas business is substantially dependent upon its Rajasthan oil and gas fields, and any interruption in the operations at those fields could have a material adverse effect on Vedanta's results of operations and financial condition.

Vedanta's results of operations have been and are expected to continue to be substantially dependent on the reserves, production and the cost of production at certain of its key assets, and any interruption in the operations, exploration and development activities at those assets for any reason could have a material adverse effect on the results of operations and financial condition. For example, the Rajasthan block produced 93.2% of Vedanta's average daily net operated production from the oil and gas business in fiscal year 2018, and oil and gas from the Rajasthan block constituted 94.4% of Vedanta's net aggregate proved plus probable oil and gas reserves and 2C resources on a barrel of oil equivalent basis as of 31 March 2018. Vedanta's ongoing capital expenditure program has focused on development and exploration activities across all the assets with 74% of the capital expenditure for fiscal year 2018 having been invested in the Rajasthan block. Vedanta's results of operations have been and are expected to continue to be substantially dependent on the reserves and production of the Rajasthan Block, and any interruption in the operations or exploration and development activities at those oil and gas fields for any reason could have a material adverse effect on Vedanta's results of operations and financial condition.

Vedanta's oil and gas business involves joint venture partnerships under the PSC framework. Difference of opinion between partners and regulator may occur on cost recovery and other PSC provisions which may impact the financial position of the Company.

The operating blocks of Vedanta's oil and gas vertical operates under the Production Sharing Contract (PSC) regime. These operating blocks have joint ventures partners.

Pursuant to the provisions of Joint Operating Agreement, our joint venture partner in Rajasthan has an obligation to pay the cash calls raised for the smooth functioning of the petroleum operations. However, the Joint Venture Partner has withheld payment of certain cash calls. In addition, the payments are being settled at exchange rates per its own benefit.

Apart from above, the issue of Cost Oil Finalization has to be finalized by 25 October 2019 as one of the conditions of PSC extension. Our joint venture partner has been taking positions which are contrary to our application and interpretation of Operating Agreement (OA), Production Sharing Contract (PSC) and certain office memorandum/notifications (OM) issued by the GoI. As per the provisions of OA and PSC, Vedanta Limited, as Operator, has served a Notice of Arbitration to our Joint Venture Partner dated 1 March 2019.

The Director General of Hydrocarbons ('DGH') has objected to certain costs being claimed by the Company as part of its cost oil computation and has thus demanded an additional sum of $808 million on account of government's share of profit oil for earlier years. The Company has appropriately responded to DGH and believes that it has sufficient and reasonable basis for having claimed such costs and does not expect any material adjustment to these financial statements.

Vedanta's oil and gas operations may be subject to operating risks which may have a material adverse effect on the financial condition or results of operations of Vedanta.

Vedanta has in place operating and maintenance procedures to maintain the integrity of its production facilities but there is a risk that unplanned events, inadequate application of these procedures or higher levels of corrosion than expected could cause disruption to production, which would have an adverse impact on oil sales, which ultimately could materially and adversely affect the financial condition and/or operating results of Vedanta.

The waxy nature of the crude oil requires Vedanta to use hot water injection as the recovery technique at these fields and ensure that the crude oil is transported through the main 24 inch insulated oil pipeline which maintain the required temperature of the crude oil. If the temperature of the injection water is not maintained at the required level, the required injection rate may not be able to be maintained, therefore the overall field production rate and ultimate recovery may be adversely impacted. Similarly, if the specialised heating system does not perform as expected and/or there are problems associated with the performance of the heating stations and/or there are problems supplying fuel to the power generation systems at these heating stations, the temperature of the crude oil may not be maintained at the required temperature, which would have an adverse impact on the rates at which oil can be transported through the pipeline network. Any reduction in its crude oil production and/or estimates of ultimate recovery may have a material adverse effect on Vedanta's business, results of operations and financial condition.

Currently, the power generation and heating requirements are being supplied by a power plant that has been installed and commissioned at the Mangala processing terminal ("MPT"). The power plant has been designed to use associated natural gas from the Mangala field supplemented as required by natural gas from the Raageshwari Deep gas field which is located in the Rajasthan Block approximately 80 km from the MPT. Further, this has been augmented by alternative energy source in form of grid power supply of 14 MW capacity. Sustained failure of power systems due to unavailability of fuel supply and/or grid power availability could lead to operations disruption, having a material adverse effect on Vedanta's results of operations and financial condition.

Vedanta is using hot water injection to maintain reservoir pressure and to optimise crude oil recovery at the Mangala, Bhagyam and Aishwariya fields. The source water for these fields is being, and will continue to be, provided from water production wells drilled in the Thumbli saline aquifer in the Barmer basin and connected to the MPT.

Extraction of saline water also requires the approval of the relevant authority. There can be no assurance that the estimated impact of the expected water extraction from the Thumbli groundwater flow is accurate. A failure to extract and transport the required amount of water during the production life of the existing and currently planned developments, or an inaccurate prediction of the impact on the groundwater flow of Vedanta's activities, or revocation of the authorities' approval to extract saline water, may require us to access alternative water sources resulting in increased capital expenditure.

In addition, there can be no assurance that the local community will not seek to hold Vedanta Limited responsible for any invasion of the fresh water supply by saline groundwater from the aquifer. Although the appropriate authority has given its consent for the extraction of saline groundwater from Thumbli, it is possible that will be perceived by the local Barmer community to be directly or indirectly responsible for any shortage of fresh water or deterioration in water quality. In such an event, local authorities, who have given permission to use the saline groundwater, may require us to access alternative water sources, which could impose additional cost and logistical/operational challenges, thereby having a material adverse effect on Vedanta's business, operating results and financial condition.

The field development plans for the Northern Fields assume, or are expected to assume, the use of enhanced oil recovery or enhanced oil recovery techniques to extract an additional incremental percentage of the estimated oil in place in the reservoirs. Enhanced oil recovery screening studies of the Northern Fields have concluded that polymer flooding or alkaline surfactant polymer or ASP flooding, two common enhanced oil recovery techniques, are the preferred enhanced oil recovery options. Risks associated with the project include inadequate processing of produced fluids thereby impacting performance of surface facilities and continuous sourcing of polymer for ongoing operations. Further, if the polymer is not maintained at the correct temperature in the reservoir and the desired viscosity, then it may degrade and not function correctly, thereby reducing the incremental amount of crude oil that is expected to be recovered. There is also a risk that the polymer handling facilities at the surface may perform at lower efficiency than designed, which may lead to degradation of the polymer and ultimately its higher consumption. All of these factors could have a material adverse effect on Vedanta's business, results of operations, financial condition or prospects.

The MPT facilities, which are designed to separate oil, gas, and water in the produced fluid, may not function as designed over the producing life of the fields whose production is processed at the MPT facilities. This may result in the crude oil not meeting pipeline export specifications, which may mean that any such crude oil either cannot be sold or will be sold at a significant discount to the agreed crude oil sales price, which could have a material adverse effect on Vedanta's business, operating results and financial condition.

Future production from Vedanta's assets may vary from the forecast.

Vedanta estimates the annual metal production and the mine life through a detailed mine plan for both open pit and underground mines and the oil and gas production rates and field life through the field development plans. These mine plans and field development plans are prepared based on Vedanta's estimates of future mine and field performance. Future performance is subject to a number of risks including geological conditions being more complex than originally predicted, ore grade being different from estimates, future producer or injector well performance, plant operating efficiencies being less than originally forecast, inadequate power, water or utility supplies, and other constraints. Vedanta's zinc and lead mining operations in India are currently transitioning from open pit mining operations to underground mining operations. Difficulties in managing this transition may result in challenges in achieving stated business milestones. Any material fall in production from the current production level or from the estimates due to some or all of the risks detailed above may adversely impact Vedanta's business, financial condition or results of operations.

Plateau production rates from the Rajasthan fields may be less than forecast. The estimates of production rates and field life contained in the field development plans for the Mangala, Bhagyam, Aishwariya, Raageshwari, Saraswati, NI and NE fields which were submitted to, and approved by, the Rajasthan Block PSC management committee are based on Vedanta's estimates of future field performance. Where any estimates of future production rates are in excess of the existing approved field plateau production rates, the consent of the joint venture partner, the appropriate regulatory authorities and the GoI will be required before any of the fields can be produced at these enhanced estimates of future production rates. In the event consent of the joint venture partner is delayed or not obtained, production would be limited to the rate set out in the FDP, which would have a detrimental impact on Vedanta's operating results. Future field performance is subject to a number of risks that are beyond the control of Vedanta. See "— There are uncertainties inherent in estimating Vedanta's Ore Reserves and Mineral Resources and oil, condensate and sales-gas reserves, and if the actual amounts of such reserves and resources are less than estimated, its results of operations and financial condition may be materially and adversely affected".

Vedanta's zinc business is substantially dependent upon its Rampura Agucha lead-zinc mine, and any interruption in the operations at that mine could have a material adverse effect on Vedanta's results of operations and financial condition.

The Rampura Agucha lead-zinc mine produced 47% of HZL's total mined metal in concentrate produced in fiscal year 2018 and its zinc and lead metal content constituted 44% of the aggregate Proved and Probable Ore Reserves of HZL as of 31 March 2018. Vedanta's India zinc business provided 47% of its Vedanta EBITDA in fiscal year 2018. Vedanta's results of operations have been and are expected to continue to be substantially dependent on the Ore Reserves and low cost of production of the Rampura Agucha mine, and any interruption in the operations at that mine for any reason could have a material adverse effect on Vedanta's results of operations and financial condition.

There are uncertainties inherent in estimating Vedanta's Ore Reserves and Mineral Resources and oil, condensate and sales-gas reserves, and if the actual amounts of such reserves and resources are less than estimated, its results of operations and financial condition may be materially and adversely affected.

There are uncertainties inherent in estimating the quantity of Ore Reserves and Mineral Resources and in projecting future rates of production, including factors beyond the control of Vedanta. Estimating the amount of Ore Reserves and Mineral Resources is a subjective process, and the accuracy of any estimate is a function of the quality of available data and engineering and geological interpretation and judgment. Estimates of different Competent Persons/Experts may vary, and results of exploration, mining and production subsequent to the date of an estimate may lead to revision of estimates. For example, fluctuations in the market price of ore and other commodities, reduced recovery rates or increased production costs due to inflation or other factors may render Proven and Probable Ore Reserves containing relatively lower grades of mineralisation uneconomic to exploit and may ultimately result in a restatement of Ore Reserves. If the assumptions upon which estimates of Ore Reserves or Resources have been based prove to be incorrect, or if Ore Reserve estimates differ materially from mineral quantities or grades that Vedanta may actually recover, estimates of mine or field life may prove inaccurate and market price fluctuations and changes in operating and capital costs may render certain Ore Reserves, mineral deposits or oil and gas deposits uneconomical to extract.

For example, there are differences between Vedanta Limited's estimates of its reserves and contingent resources and the estimates of DeGolyer and MacNaughton, independent petroleum engineering consultants, due to their different methodologies. Please see "Business — Description of the Businesses — Oil and Gas Business — DeGolyer and MacNaughton's Estimates of Reserves" for further details.

This Offering Circular, including Annex A — "Life of Mines" and Annex B — "Mineral Resources (exclusive reporting basis)", uses the term "resources," which are comprised of "measured," "indicated" and "inferred" Mineral Resources. See Annex B — "Mineral Resources (exclusive reporting basis)". United States investors are advised that while such terms are recognised by some investors, the SEC does not recognise them. There is a great amount of uncertainty as to the existence of "inferred" Mineral Resources and uncertainty as to their technical, economic and legal feasibility. It cannot be assumed that all or any part of an "inferred" Mineral Resource will ever be upgraded to a higher category. Under SEC rules, estimates of "inferred" Mineral Resources may not form the basis of feasibility or other economic studies. Investors should not assume that all or any part of "measured" or "indicated" Mineral Resources will ever be converted into Ore Reserves and are also cautioned not to assume that all or any part of an "inferred" Mineral Resource exists or is economically or legally mineable. See "Presentation of Information — Basis of Presentation of Reserves and Resources — Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Mining Operations".

As a result, the Ore Reserves and Mineral Resources data contained in this Offering Circular are subject to material assumptions and uncertainties. In the event that any of these assumptions and estimates turns out to be incorrect, Vedanta may need to revise its estimates downwards and this may adversely affect its business plans and the total value of its asset base, which could increase its costs and decrease profitability. If this occurs, Vedanta's results of operations and financial condition may be materially and adversely affected.

In addition, Annex B — "Mineral Resources (exclusive reporting basis)" contains management's life of mine estimates based on Mineral Resource plus Ore Reserves and current production rates. The reporting methodology for Mineral Resources differs from that of Ore Reserves under international reporting codes as certain factors (termed "Modifying Factors", such as mining losses and dilution) are included in the reporting of Ore Reserves, whereas Mineral Resources are reported on an in-situ basis. Accordingly, the two numbers are not added together under international reporting codes such as JORC (2012) and SAMREC (2016). Consequently, considerable caution should be exercised when considering life of mine estimates based on Mineral Resource plus Ore Reserves. Life of mine estimates which include Mineral Resources have been undertaken by Vedanta and have not been subject to review by the Independent Consultants named in the Offering Circular. See "Presentation of Information — Basis of Presentation of Reserves and Resources — Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Mining Operations".

Although Vedanta provides certain life of mine estimates on the basis of Ore Reserves and Mineral Resources, investors are cautioned to use the life of mine estimates based solely on Ore Reserves in Annex A — "Life of Mines" as the base case for any assessment of the life of a mine.

KCM faces operating challenges.

KCM faces operating challenges with respect to reducing its cost of production and increasing its production due to various factors. While Vedanta is taking various actions to turnaround KCM's operations, there is no certainty that KCM operations would turnaround positively. In case Vedanta is not able to turnaround operations at KCM, it may have an adverse effect on Vedanta's results of operation and financial condition.

Litigation

In addition to the risks discussed in this section, please see "Business — Litigation" for additional details regarding litigation matters involving Vedanta.

Vedanta is involved in several litigation matters, both civil and criminal in nature, which could together have a material adverse effect on its business, results of operations, financial condition and prospects.

Vedanta is involved in several legal and regulatory proceedings, including criminal matters, property disputes, labour disputes, alleged violations of environmental and tax laws, alleged violation of the provisions of the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 ("Indian Takeover Code"), and alleged price manipulation of Vedanta Limited's equity shares on the Indian stock exchanges. Claims because of disputes concerning income tax, amounted to $1,859.4 million, of which $20.6 million was recorded as current liabilities, as of 31 December 2018. Other claims relating to matters such as sales tax, excise tax and electricity duty and third-party claimants amounted to $1,214.4 million as of 31 December 2018.

Further, certain subsidiaries of Vedanta are eligible for certain tax exemptions, incentives and benefits under local tax legislations due to the t nature of their business operations. Whilst the respective subsidiaries of Vedanta claim for such tax benefits, incentives and exemptions, as applicable, the tax authorities in several cases dispute and disallow such claims, which typically leads to tax litigation between respective subsidiary of Vedanta and the tax authorities ("Disputes"). Vedanta cannot assure that it will able to successfully defend such disputes, and any disallowance of claim amount in the final outcome of a dispute may adversely affect Vedanta's financial performance and position.

Vedanta Limited has received a tax demand from the Indian tax authorities for not withholding tax on payments made while acquiring a subsidiary which, if payable, could have a material adverse effect on Vedanta Limited's businesses, operating results, financial condition and/or prospects.

In March 2015, Vedanta Limited received a notice from the tax authorities alleging failure by Vedanta Limited to withhold tax on the consideration paid to Cairn UK Holdings Limited ("CUHL"), its then holding company, in the financial year ended 31 March 2007 in connection with a purchase of shares. The relevant purchase of shares relates to the acquisition of the shares of Cairn India Holdings Limited ("CIHL"), a 100% subsidiary as of 31 December 2017 of Vedanta Limited, from CUHL during the financial year ended 31 March 2007, which was part of a group reorganisation by the then ultimate parent company, Cairn Energy plc ("Cairn Energy").

Based upon the retrospective amendment(s) made in the year 2012 by inserting explanation 5 of section 9(1)(i) of the Income Tax Act 1961 of India (the "Income Tax Act"), the tax authorities, by an order dated 11 March 2015, have raised a demand of approximately INR 204,947 million ($3,160.3 million) (comprising tax of approximately INR 102,474 million ($1,580.2 million) and interest of an equivalent amount) for not withholding tax on the consideration paid to CUHL in connection with the acquisition of shares of CIHL. The tax authorities have stated in the order that a short term capital gain of INR 245,035 million ($3,778.5 million) accrued to CUHL on the transfer of the shares of CIHL to Vedanta Limited in the financial year ended 31 March 2007, on which tax should have been withheld by Vedanta Limited. Vedanta Limited understands that a tax demand has also been raised by the Tax Authorities on CUHL with respect to taxability of alleged capital gain earned by CUHL.

On 27 March 2015, Vedanta filed a notice of claim against the GoI under the UK-India bilateral investment treaty (the "BIT") in order to protect its legal position and Shareholder interests. Vedanta is of the opinion that it has a good case to defend as per provisions of BIT, the benefit of which would ultimately accrue to Vedanta Limited. Vedanta filed its Statement of Claim (SOC) on 22 June 2016 under the BIT, and a hearing to determine case on its merits is scheduled for May 2019.

In the opinion of Vedanta, there should be no liability on Vedanta Limited on account of not withholding the taxes in the financial year ended 31 March 2007 based on provisions of law prevailing at the time of transaction as the aforesaid retrospective amendment has cast an obligation on Vedanta Limited to deduct tax by having to predict and anticipate that the retrospective amendment will be made by legislature on a future date. Vedanta Limited has approached the Honourable Delhi High Court against the order referred to above and has also filed an appeal before the Commissioner of Income Tax (Appeals) to defend its position. Relief was not granted by order of the Commission of Income Tax (Appeals) and Vedanta Limited has filed an appeal against such order of the ITAT. The writ petition filed before Delhi High Court is listed for hearing on 6 August 2019. See "Business — Litigation — Vedanta Limited received a show cause notice from the Indian tax authorities for not withholding tax on payments made while acquiring a subsidiary" for further details.

In the event that these liabilities materialise as a result of legal proceedings being determined against Vedanta Limited, Vedanta Limited's financial condition may be adversely affected.

The GoI has disputed Vedanta Limited's exercise of the call option to purchase its remaining 29.5% ownership interest in HZL.

Arbitration is on-going in relation to a dispute between the GoI and Vedanta Limited, with respect to Vedanta Limited's exercise of its second call option to acquire the remaining shares in HZL held by the GoI, pursuant to the shareholders' agreement between the parties. The GoI has refused to act upon the second call option, stating that Vedanta Limited's second call option violates the provisions of the Indian Companies Act, 1956, by restricting the right of the GoI to transfer its shares. In a related proceeding, the Supreme Court of India on 19 January 2016 ordered the status quo be maintained with respect to the proposed disinvestment of government interest in HZL until further orders are passed by the court. Further, the arbitral proceeds have been delayed substantially as one of the members of the arbitral tribunal has been suffering from a grave illness. See "Business — Litigation — Vedanta Limited has commenced proceedings against the GoI, which has disputed Vedanta Limited's exercise of the call option to purchase its remaining 29.5% ownership interest in HZL" for further details.

The arbitral proceedings might not result in a favourable outcome for Vedanta Limited. In such an event, Vedanta Limited may be delayed in its purchase of, or may be unable to purchase, the GoI's remaining 29.5% interest in HZL or may be required to pay a purchase price in excess of the market value or fair value of those shares, which may have a material adverse effect on Vedanta's operational flexibility, results of operations and financial condition.

The GoI has disputed Vedanta Limited's exercise of the call option to purchase its remaining 49.0% ownership interest in BALCO.

There are certain proceedings that are currently ongoing with respect to the exercise of a call option to acquire the remaining shares of BALCO held by the GoI, in accordance with the terms of the shareholders' agreement between the GoI and us. The amount claimed under this proceeding is presently unquantifiable. The arbitration tribunal formed under the directions of the High Court of Delhi declared an award rejecting BALCO's claim regarding the exercise of the option on 25 January 2011. According to the award, certain clauses of the shareholders' agreement were held to be void, ineffective and inoperative as being in violation of sub section (2) of Section 111A of the Companies Act, 1956. Vedanta Limited filed an application before the High Court of Delhi to set aside this award under Section 34 of the Arbitration and Conciliation Act, 1996. The High Court of Delhi passed orders dated 3 July 2018 and 19 November 2018. See "Business — Litigation — Vedanta Limited has commenced proceedings against the GoI which has disputed Vedanta Limited's exercise of the call option to purchase it remaining 49.0% ownership interest in BALCO", for further details.

There is no assurance that the outcome of the challenge of the award will be in the favour of Vedanta. In such an event, Vedanta may be unable to purchase the GoI's remaining 49.0% interest in BALCO or may be required to pay a higher purchase price, should it decide to consummate such purchase, which may have a material adverse effect on Vedanta's business, financial condition and results of operations.

The Securities and Exchange Board of India ("SEBI") has brought proceedings alleging that Vedanta has violated regulations prohibiting fraudulent and unfair trading practices.

In 2001, SEBI brought certain proceedings relating to alleged violations by Vedanta Limited of regulations prohibiting fraudulent and unfair trading practices. See "Business — Litigation — Appeal proceedings in the High Court of Bombay brought by SEBI to overrule a decision by the Securities Appellate Tribunal of India that Vedanta Limited has not violated regulations prohibiting fraudulent and unfair trading practices."

In addition to the civil proceedings, SEBI also initiated criminal proceedings in 2001 before the Court of the Metropolitan Magistrate, Mumbai, against Vedanta Limited, Vedanta's Executive Chairman, Mr. Anil Agarwal, Vedanta Limited's Director of Finance, Mr. Tarun Jain, and the chief financial officer of MEL at the time of the alleged price manipulation. When SEBI's order was overturned in October 2001, Vedanta Limited filed a petition before the High Court of Bombay to defend those criminal proceedings on the grounds that the Securities Appellate Tribunal of India had overruled SEBI's order on price manipulation. An order has been passed by the High Court of Bombay in Vedanta Limited's (then Sterlite) favour, granting an interim stay of the criminal proceedings.

If any of the above matters are held against Vedanta Limited, it may be prohibited from accessing the Indian capital market for a specified period of time and/or may become liable to pay penalties. If Vedanta Limited and the individuals named in the criminal proceedings do not prevail, Vedanta's business and operations may be materially and adversely affected.

The GoI may allege a breach of a covenant by Vedanta and seek to exercise a put or call right with respect to shares of HZL, which may result in substantial litigation and serious financial harm to Vedanta's business, results of operations, financial condition and prospects.

Under the terms of the shareholders' agreement between the GoI and erstwhile Sterlite Industries (India) Ltd., Vedanta Limited agreed that it would ensure that HZL would implement one mmtpa greenfield zinc smelter plant at Kapasan in the state of Rajasthan (the "Kapasan Project"), within 5 years from 11 April 2002.

In 2003, HZL notified the GoI that the Kapasan Project would not be undertaken and that a report of an independent expert may not be required. While Vedanta Limited has not received any notice of breach under the provisions of the abovementioned shareholders' agreement with respect to HZL, the GoI may claim that Vedanta Limited has breached the covenant related to the Kapasan Project as mentioned in the shareholders' agreement triggering an event of default. The GoI, under the terms of the shareholders' agreement, may become entitled to the right, which is exercisable at any time within 90 days from the day it became aware of such event of default, to either sell any or all of the shares of HZL held by the GoI to Vedanta Limited at a price equivalent to 150.0% of the market value of such shares, or purchase any or all of the shares of HZL held by us at a price equivalent to 50.0% of the market value of such shares.

If the GoI were to assert that an event of default occurred under the shareholders' agreement and seek to exercise a put or call right with respect to shares of HZL, Vedanta Limited may face expensive and time-consuming litigation over the matter, uncertainty as to the future of Vedanta Limited's zinc business, an inability to enforce Vedanta's call option to acquire the GoI's remaining 29.5% ownership interest in HZL and the possibility of serious financial harm if HZL were unsuccessful in litigation, any of which may have a material adverse effect on Vedanta's business, results of operations, financial condition and prospects. See "Material Contracts — HZL call option" for further details.

Tax Risks

Vedanta may be liable for additional taxes if the tax holidays, exemptions and tax deferral schemes which it currently benefits from expire without renewal, or if tax laws change.

Vedanta currently benefits from significant tax holidays, exemptions and tax deferral schemes, which apply for limited periods. For example, HZL's captive power plant at Dariba, Chanderiya, and Zawar benefits from tax exemptions on the profits generated from transfers of power to HZL's other units, which are expected to generate substantial savings. Vedanta Limited also has wind mills located in states such as Gujarat, Karnataka, Tamil Nadu, Maharashtra and Rajasthan and melting and casting plants at Pantnagar which are also eligible for tax exemption.

There can be no assurance that these and other tax holidays or exemptions will be renewed when they expire or that any application Vedanta makes for new tax holidays or exemptions will be successful. The expiry or loss of existing tax holidays, exemptions and tax deferral schemes or the failure to obtain new tax holidays, exemptions or tax deferral schemes will likely increase Vedanta's tax obligations, which could have a material adverse effect on its results of operation or financial condition.

In addition, Vedanta Limited is subject to a Minimum Alternate Tax ("MAT") which sets a minimum amount of tax that must be paid each year based on Vedanta Limited's book profits. The effective MAT rate is 21.5%, after applying surcharge and education cess, for Indian companies (the Finance Act, 2018 increased the rate of cess for the year commencing on 1 April 2018 and onwards, from 3% to 4% which resulted in an effective MAT rate of 21.5%). The MAT prevents Vedanta Limited from taking full advantage of any tax holidays, exemptions or tax deferral schemes that may be available to Vedanta Limited.

Vedanta/its other non-Indian subsidiaries could be considered as Indian tax residents and be taxable in India on their global profits if their 'place of effective management' is in India in the relevant year.

Changes in tax laws could also result in additional taxes payable by Vedanta. Vedanta pays royalties and cess in relation to Vedanta's oil and gas business, to the state governments and the central government in India at rates determined by the respective governments, linked to the volume/value of oil that Vedanta produces. Any adverse changes in these fiscal terms may have an adverse effect on Vedanta's costs, results of operations and financial condition. Cess earlier being levied on volume was adversely affecting the net realisation in a declining oil price scenario. In the budget of fiscal year 2016, levy of cess was made ad valorem basis which will have an adverse impact on Vedanta with increase in prices.

Industry Risks

If Vedanta cannot secure additional Reserves of oil and gas, copper, zinc, bauxite and iron ore that can be mined at competitive costs or cannot mine ore existing Ore Reserves at competitive costs, its profitability and operating margins could decline.

If Vedanta's existing copper, zinc and bauxite Ore Reserves cannot be mined at competitive costs or if Vedanta cannot secure additional reserves that can be mined at competitive costs, Vedanta may become more dependent upon third parties for copper concentrate, zinc concentrate and alumina. If Vedanta's existing iron Ore Reserves cannot be mined at competitive costs, the Vedanta iron ore business may become unprofitable. Because Vedanta's Ore Reserves decline as it mines the ore, Vedanta's future segment results and segment margins depend upon its ability to access Ore Reserves with geological characteristics that allow mining at competitive costs. Replacement reserves may not be available when required or, if available, may not be of a quality capable of being mined at costs comparable to the existing or exhausted mines.

Vedanta may not be able to accurately assess the geological characteristics of any Ore Reserves that it acquires, which may adversely affect its results of operations and financial condition. Because the value of Ore Reserves depends on that part of its mineral deposits that are economically and legally exploitable at the time of the reserve calculation, a decrease in metal prices may result in a reduction in the value of Ore Reserves that Vedanta obtains as less of the mineral deposits contained therein would be economically exploitable at the lower prices. Exhaustion of reserves at particular mines may also have an adverse effect on Vedanta's operating results that is disproportionate to the percentage of overall production represented by such mines. Further, with the depletion of reserves, Vedanta may face higher unit extraction costs per mine.

Vedanta's ability to obtain additional reserves in the future could be limited by restrictions under Vedanta's existing or future debt agreements, competition from its competitors, lack of suitable acquisition candidates, government regulatory and licencing restrictions, difficulties in obtaining mining leases and surface rights or the inability to acquire such properties on commercially reasonable terms, or at all. In addition, Vedanta is subject to various government limitations on its ability to mine. To increase production from Vedanta's existing copper, bauxite, lead-zinc and iron ore mines, it must apply for governmental approvals which it may not be able to obtain in a timely manner, or at all.

Changes in tariffs, royalties, customs duties and government assistance may reduce the domestic premium that Vedanta receives, which would adversely affect its profitability and results of operations.

Copper, zinc and aluminium are sold in the Indian market at a premium to the international market prices of these metals due to tariffs payable on the import of such metals. Between March 2003 and February 2011, basic customs duties on imported copper, zinc, lead and aluminium decreased cumulatively from 25.0% to 5.0%, and have remained at 5.0% since February 2011. With effect from 1 March 2016 basic custom duty on imported aluminium increased to 7.5%. The GoI may reduce customs duties further in the future, although the timing and extent of such reductions cannot be predicted. As Vedanta sells the majority of the commodities it produces in India, any further reduction in Indian tariffs on imports will decrease the premiums it receives in respect of those sales. Vedanta's profitability depends in part on the continuation of import duties, any reduction of which would have a material adverse effect on its results of operations and financial condition.

Vedanta pays royalties to the state governments of Chhattisgarh, Rajasthan, Goa and Karnataka based on the extraction of bauxite, lead-zinc and Iron ore. Most significant of these is the royalty that HZL is required to pay to the state government of Rajasthan, where all of HZL's mines are located, at a rate of 10.0%, with effect from 1 September 2014 (the rate was 8.4% from 13 August 2009 to 31 August 2014) of the zinc LME price payable on the zinc metal contained in the concentrate produced, 14.5% (the rate was 12.7% from 13 August 2009 to 31 August 2014) of the lead LME price payable on the lead metal contained in the concentrate produced and at a rate of 7.0% of silver LME price chargeable on silver-metal produced. Any upward revision to the royalty rates being charged currently may adversely affect Vedanta Limited's profitability. Additionally, the Department of Mines and Geology of the State of Rajasthan has raised additional demands for payment through several show cause notices to HZL for mining minerals associated with lead and zinc such as cadmium and silver.

Similarly, Vedanta Limited pays royalties and cess to the state governments and the Central government in India at rates determined by the respective governments, linked to the volume or value of oil produced. Any adverse changes in these fiscal terms may adversely affect its profitability. Cess earlier being levied on volume was adversely affecting the net realization in a declining oil price scenario. In the recent budget, levy of cess was made on an ad valorem basis. Vedanta also pays royalties to the government from Vedanta's Zinc International business. In Vedanta's iron ore business in Karnataka, royalty/Special Purpose Vehicle contribution at 15% is borne by buyer. Changes in tax laws could also result in additional taxes payable by us.

Towards end of fiscal year 2015, the MMDRA is notified which brings greater transparency in granting of mineral concessions through an e-auction process. It also removes certain uncertainties relating to automatic renewals of mine leases for future periods. However, for existing mining leases, it notifies an amount not exceeding royalty, to be contributed to District Mineral Foundation or DMF for the benefit of people affected by mining and an additional amount equivalent to 2% of royalty to National Mineral Exploration Trust. DMF contribution has now been notified at 30% of the base royalty rate in September 2015. Indian exports of copper, alumina, aluminium and zinc receive assistance premiums from the GoI, which have been reduced since fiscal year 2002 and may be further reduced in the future. Any reduction in these premiums will decrease the revenue Vedanta receives from export sales and may have a material adverse effect on its results of operations or financial condition.

There are general risks relating to the operation of Vedanta's commercial power generation business.

Vedanta has been building and managing captive power plants in India since 1997, some of which sell their surplus power on the market to third parties. In addition to these captive power plants, Vedanta also owns and operates several commercial power plants, the largest of which is Vedanta Limited's 2,400 MW thermal coal-based power plant in Jharsuguda.

Operating power plants on a stand-alone basis involves many operational risks which are unique to the commercial power generation business as compared to Vedanta's other businesses, including the following:

Dependence on third parties. Third parties must be hired for the construction, delivery and commissioning of power facilities, the supply and testing of equipment and transmission and the distribution of any electricity Vedanta generates and there are associated risks. For instance, contractors hired may not be able to complete construction and installation on time, within budget, or to the specifications in the contracts with them, or such contractors may otherwise cause delays in meeting project milestones or achieving commercial operation by the scheduled completion date, which could in turn cause forecast budgets to be exceeded or result in delayed payment by customers, invoke liquidated damages or penalty clauses or performance guarantees or result in termination of contracts. In addition, as a result of increased industrial development in India in recent years, the demand for contractors with specialist design, engineering and project management skills and services has increased, resulting in a shortage of and increasing costs of services of such contractors. There can be no assurance that such skilled and experienced contractors will continue to be available at reasonable rates, and Vedanta may be exposed to risks relating to the cost and quality of their services, equipment and supplies.

Dependence on coal. Vedanta may not receive the coal block allocations that it expects or, may not be allowed to use such allocations for its commercial power generation business. Any coal block allocations that Vedanta receives may not be sufficient for its planned operations and Vedanta may not be successful in procuring sufficient supply of coal at economically attractive prices, or at all. Moreover, the coal block allocation letters contain certain restrictive covenants which Vedanta is subject to, including specified end use and submission of mining plans within a certain specified period. Vedanta also could experience a shortfall in the quantity of coal against its linkage or receive lower quality coal, which can result in increased costs.

Power purchase agreements. The power purchase agreements ("PPAs") and other agreements that Vedanta has entered into, or may enter into, may require it to guarantee certain minimum performance standards, such as plant availability and generation capacity, to the power purchasers. If Vedanta's facilities do not meet the required performance standards, the power purchasers may not reimburse Vedanta for any increased costs arising as a result of its plants' failure to operate within the agreed norms, which may in turn have a material adverse effect on Vedanta's results of operations and financial condition.

Regulatory compliance. Power generation in India is a comprehensively regulated industry. See "Business — Indian Regulatory Matters — Power Sector" for more details. In particular, national and State regulatory bodies and other statutory and government mandated authorities may from time to time impose minimum performance standards upon Indian power generation facilities (including Vedanta's facilities). Failure to meet these requirements could expose facility operators to the risk of financial penalties, the quantum of which will depend on the severity of non-compliance and, in severe cases of non-compliance, involve plant shut downs. For example, the Ministry of Environment and Forests on 7 December 2015 prescribed norms to reduce pollution from thermal power plants through flue gas desulphurization ("FGD") and alterations to stack height. This requires additional capital expenditure towards complying with these revised pollution guidelines without improving the cost efficiencies.

Any of the above results could have a material and adverse effect on Vedanta's business, financial condition and results of operations.

Vedanta's metals and mining operations are subject to operating risks common to the industries in which they operate that could result in decreased production, increased cost of production and increased cost of or disruptions in transportation, which could adversely affect its business, results of operations and financial condition.

The success of each of Vedanta's businesses is subject to operating conditions and events common to the industry in which it operates which are beyond its control that could, among other things, increase its mining, transportation or production costs, disrupt or halt operations at its mines and production facilities permanently or for varying lengths of time, or interrupt the transportation of Vedanta's products to its customers. These conditions and events include:

Disruptions in mining, drilling and production due to equipment failures, unexpected maintenance problems and other interruptions. All of Vedanta's operations are vulnerable to disruptions. Metal processing plants are especially vulnerable to interruptions, particularly where an event causes a stoppage which necessitates a shut down in operations. Stoppages in certain types of Vedanta's smelters, even if lasting only a few hours, can cause the contents of furnaces or cells to solidify, resulting in a plant closure for a significant period and necessitating expensive repairs, any of which could materially and adversely affect its results of operations or financial condition. For example, Vedanta aluminium smelters have suffered due to a pot failure incident during fiscal year 2017 resulting in part stoppage of smelter and cost of repairs. Drilling may involve unprofitable efforts, not only with respect to dry wells, but also with respect to wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs.

Availability of raw materials for energy requirements. Any shortage of or increase in the prices of the raw materials needed to satisfy Vedanta's energy requirements may interrupt its operations or increase its cost of production. Vedanta is particularly dependent on coal which is used in many of its captive power plants. Vedanta's aluminium business, which has high energy consumption due to the energy intensive nature of aluminium smelting, is significantly dependent on receiving allocations from Coal India, the government owned coal monopoly in India.

Availability of water. The mining operations of Vedanta's zinc and aluminium businesses and its captive power plants depend upon the supply of a significant amount of water. There is no assurance that the water required for these operations will continue to be available for Vedanta in sufficient quantities or that the cost of water will not increase.

Disruptions to or increased costs of transport services. Vedanta depends upon seaborne freight, inland water transport, rail, trucking, overland conveyor and other systems to transport bauxite, alumina, zinc concentrate, copper concentrate, iron ore, oil, natural gas, metallurgical coke, pig iron, coking coal and other supplies to its operations and to deliver its products to customers. Any disruption to or increase in the cost of these transport services, including as a result of fuel cost increases, interruptions that decrease the availability of these transport services or increases in demand for transport services from Vedanta's competitors or from other businesses, or any failure of these transport services to be expanded in a timely manner to support an expansion of Vedanta's operations, could have a material adverse effect on its business, results of operations and financial condition.

Accidents at mines, smelters, refineries, cargo terminals and related facilities, including as a result of the occurrence of natural disasters. Any accidents or explosions, including as a result of the occurrence of natural disasters, causing personal injury, property damage or environmental damage at or to Vedanta's mines, smelters, refineries, cargo terminals and related facilities may result in significant losses, expensive litigation, imposition of penalties and sanctions or suspension or revocation of permits and licences. Risks associated with open-pit mining operations include flooding of the open-pit and collapses of the open-pit wall. Risks associated with underground mining operations include underground fires and explosions (including those caused by flammable gas), cave-ins or ground falls, discharges of gases or toxic chemicals, flooding, sinkhole formation and ground subsidence. Injuries to and deaths of workers at Vedanta's mines and facilities have occurred in the past and may occur in the future.

Strikes and industrial actions or disputes. The majority of Vedanta's workforce is unionised. Strikes and industrial actions or disputes have occurred in the past and may occur in the future, which may lead to business interruptions and halts in production for Vedanta.

Additionally, while Vedanta has in place operating and maintenance procedures to maintain the integrity of its production facilities, unplanned events, such as theft and industrial damage could adversely affect operations.

Tailings dam failure. A release of waste material from tailings dams of any of Vedanta's production facilities may lead to loss of life, injuries, environmental damage, reputational damage, financial costs and production impacts. Tailings dam failure is considered to be a catastrophic risk, which is a very high severity but very low frequency event that must be treated with the highest priority. The occurrence of any one or more of these conditions or events could have a material adverse effect on Vedanta's business, results of operations and financial condition.

Oil and gas exploration and production operations by Vedanta Limited or operators of assets in which it has an interest will involve risks normally incidental to such activities, such as natural disasters and geological uncertainties, over which Vedanta has no control.

Oil and gas exploration and production operations by Vedanta Limited or operators of assets in which it has an interest will involve risks normally incidental to such activities, including blowouts, oil spills, gas leaks, explosions, fires, equipment damage or failure, natural disasters, unexploded ordinance, geological uncertainties, unusual or unexpected rock formations and abnormal pressures. Offshore operations are also subject to natural disasters as well as to hazards inherent in marine operations and damage to pipelines, platforms, facilities and sub-sea facilities from trawlers, anchors and vessels. Vedanta Limited's producing fields are located in areas that can be subject to extreme weather conditions, flooding, earthquake and other natural disasters.

Additionally, Vedanta Limited or the operators of assets in which it has an interest may face interruptions or delays in the availability of equipment or infrastructure, including seismic survey vessels, rigs, pipelines and storage tanks, on which oil and gas exploration and production activities are dependent. Such interruptions or delays could result in disruptions to exploration activities, production, oil and gas off-take arrangements, increased costs, and may have a material adverse effect on Vedanta's businesses, prospects, financial condition or results of operations.

The occurrence of any of these events could result in environmental damage, injury to persons and loss of life, production delays, failure to produce oil or gas in commercial quantities or an inability to exploit fully discovered reserves.

Consequent delays to seismic, drilling or production activities and declines from normal field operating conditions can be expected to lead to increased costs or adversely affect revenue and cash flow levels to varying degrees. The majority of Vedanta Limited's oil and gas production is sourced from its interests in a limited number of PSCs or concessions. Problems in any one PSC or concession could have a material adverse impact upon Vedanta's businesses and financial condition.

Oil and gas exploration activities are capital intensive and inherently uncertain in their outcome.

Oil and gas exploration activities are capital intensive and inherently uncertain in their outcome. There is a risk that Vedanta or the operators of assets in which it has an interest will undertake exploration activities and incur significant costs in so doing with no assurance that such expenditure will result in the discovery of hydrocarbons, whether or not in commercially viable quantities.

There are particular risks and hazards associated with underground mining.

Hazards associated with Vedanta's underground mining operations include underground fires and explosions, including those caused by flammable gas, cave-ins or ground falls, discharges of gases and toxic chemicals, flooding, sinkhole formation and ground subsidence and other accidents and conditions resulting from drilling and removing and processing material from an underground mine. If any of these hazards or accidents result in significant injury to employees and damage to equipment or other property, Vedanta may experience unexpected production delays, increased production costs, and increased capital expenditures to repair or replace equipment or property, as well as claims from affected employees and environmental and other authorities for any alleged breaches of applicable laws or regulations. Disruptions to mining, delays and costs on account of such hazards or accidents could have a material adverse effect on Vedanta's business, financial condition and results of operations.

The results of appraising discoveries and estimating Ore Reserves are uncertain.

The results of appraising discoveries are uncertain, which may result in reductions in projected reserves and production declines and may involve unprofitable efforts, not only from dry wells, but also from wells that are productive but uneconomic to develop. Furthermore, as Vedanta's Ore Reserves decline as it mines the ore, Vedanta's future segment results and segment margins depend upon its ability to access Ore Reserves with geological characteristics that allow mining at competitive costs and replacement reserves may not be available when required. Appraisal and development activities may be subject to delays in obtaining governmental approvals or consents, shut-ins of connected wells, insufficient storage or transportation capacity or exhaustion and depletion of reserves or other geological and mechanical conditions all of which may result in a material increase of Vedanta's costs of operations or delay anticipated revenues.

Adverse changes in general economic, political and market conditions in the Middle East and North Africa region may affect global conditions.

Wars, acts of terrorism and uncertain political or economic prospects or instability in the Middle East and North Africa or MENA may adversely impact global financial markets and an increase in the price of crude oil. Recent protests in North Africa and the Middle East may continue and broaden across the MENA region and lead to significant political uncertainties in a number of countries.

Vedanta may incur significant costs or loss of reputation in case of leakage of business sensitive information.

Like many other global organisations, Vedanta's reliance on computers and network technology is increasing. These systems could be subject to security breaches resulting in theft, disclosure or corruption of key/strategic information. Any significant breach or failure of Company's digital infrastructure and/or cyber security attacks due to negligence or IT security failure or any other reason could result in misappropriation of funds, loss or misuse of data or sensitive information, disruption to business, damage to assets, legal or regulatory breaches and potentially legal liability. A cyber security breach could result in significant costs and/or reputational consequences.

Risks Relating to Investments in India

A substantial portion of Vedanta's assets and operations are located in India and Vedanta is subject to regulatory, economic, social and political uncertainties in India.

A substantial portion of Vedanta's assets and employees are located in India, and Vedanta intends to continue to develop and expand its facilities in India. Consequently, Vedanta's financial performance will be affected by changes in exchange rates and controls, interest rates, commodity prices, subsidies and controls, changes in government policies, including taxation policies, social and civil unrest and other political, social and economic developments in or affecting India.

The GoI exercises significant influence over many aspects of the Indian economy. Since 1991, successive Indian governments have pursued policies of economic liberalisation, including by significantly relaxing restrictions on the private sector. Nevertheless, the role of the Indian central and state governments in the Indian economy as producers, consumers and regulators has remained significant and these liberalisation policies might not continue. The rate of economic liberalisation could change, and specific laws and policies affecting natural resources companies, foreign investments, currency exchange rates and other matters affecting investment in India could change as well. For instance, the currency demonetization of ₹500 and ₹1,000 notes in November 2016, has reduced the liquidity in the Indian economy which has significant reliance on cash. These factors had resulted in reduction of purchasing power, and alteration in consumption patterns of the economy in general. While the comprehensive and long-term impact of this currency demonetisation measure cannot be ascertained at the moment, there has been a slowdown in the economic activities in India from which the Indian economy is recovering. Given the demonetisation impacts a majority quantity of the cash currency in circulation, such a slowdown can adversely affect the Indian economy, in turn affecting the operations of Vedanta's business in India.

As the domestic Indian market constitutes a significant source of Vedanta's revenue, a downturn in the rate of economic growth in India will be detrimental to Vedanta's results of operations.

In fiscal year 2018, 54% of Vedanta's revenue was derived from commodities that were sold within India. The performance and growth of Vedanta's businesses are necessarily dependent on the health of the Indian economy which may be materially and adversely affected by political instability or regional conflicts, economic slowdown elsewhere in the world. The Indian economy also remains largely driven by the performance of the agriculture sector which depends on the quality of the monsoon which is difficult to predict. The Indian economy has grown significantly over the past few years. Past slowdowns in the Indian economy have harmed manufacturing industries, including companies engaged in the copper, zinc, aluminium and iron ore sectors, as well as customers of manufacturing industries due to a reduction in demand for industrial production. Any slowdown in the Indian economy could have a material adverse effect on demand for the commodities that Vedanta produces and, as a result, on its financial condition and results of operations.

Terrorist attacks and other acts of violence involving India or neighbouring countries could adversely affect Vedanta's operations directly, or may result in a more general loss of customer confidence and reduced investment in these countries that reduces demand for Vedanta's products, which would have a material adverse effect on Vedanta's business, results of operations, financial condition and cash flows.

Terrorist attacks and other acts of violence or war involving India or other neighbouring countries may adversely affect the Indian markets and the worldwide financial markets. The occurrence of any of these events may result in a loss of business confidence, which could potentially lead to economic recession and generally have a material adverse effect on Vedanta's businesses, results of operations, financial condition and cash flows. In addition, any deterioration in international relations may result in investor concern regarding regional stability which could adversely affect the price of the Bonds.

South Asia has also experienced instances of civil unrest and hostilities among neighbouring countries from time to time, especially between India and Pakistan. Such activity or terrorist attacks could adversely affect the Indian economy by disrupting communications and making travel more difficult. Resulting political tensions could create a greater perception that investments in Indian companies involve a high degree of risk. Furthermore, if India were to become engaged in armed hostilities, particularly hostilities that were protracted or involved the threat or use of nuclear weapons, Vedanta might not be able to continue its operations.

If natural disasters or environmental conditions in India, including floods and earthquakes, affect Vedanta's mining and production facilities, its revenues could decline.

Vedanta's mines and production facilities are spread across India, and Vedanta's sales force is spread throughout the country. Natural calamities such as floods, rains, heavy downpours (such as heavy downpours in Tuticorin in 2008 which caused the closure of Vedanta's Tuticorin facilities for two to three days, as well as the rains in Mumbai and other parts of the State of Maharashtra in 2005 and other states in 2006) and earthquakes could disrupt Vedanta's mining and production activities and distribution chains and damage Vedanta's storage facilities. Unusually heavy rains during the monsoon season in 2006 and 2013 in the states of Rajasthan and Gujarat triggered floods and caused destruction in these states. The area in which the Mangala field is located experienced flooding which directly affected existing well-sites and roads. Other regions in India have also experienced floods, earthquakes, tsunamis and droughts in recent years.

Substantially all of Vedanta's facilities and employees are located in India and could be affected by natural disasters. For example, the pipeline to transport crude oil from the northern fields of the Rajasthan block to Salaya, and thereafter to the Bhogat terminal in Gujarat, passes near Bhuj, which was the epicentre of an earthquake measuring 6.9 on the Richter scale in 2001 and that resulted in the deaths of approximately 30,000 people as well as damage to the infrastructure in the region. Although Vedanta's Rajasthan block crude oil production plans assume that the proposed pipeline will withstand damage from fire, earthquakes, floods, storms and similar events, the pipeline might not withstand damage from such events. In addition, if there were a drought or general water shortage in India or any part of India where Vedanta's operations are located, the GoI or local, state or other authorities may restrict water supplies to Vedanta and other industrial operations in order to maintain water supplies for drinking and other public necessities, which would cause Vedanta to reduce or cease operations. Vedanta's business and operating activities could be disrupted if it does not respond, or are perceived not to respond, in an appropriate manner to any major crisis or if it is not able to restore or replace critical operational capacity.

In addition, all three units at TSPL were closed for 65 days during the first quarter of fiscal year 2018 due to fire in the coal conveyor; operations were resumed in June 2017. The Jharsuguda-I smelter suffered a pot outage incident in April 2017 which impacted 228 pots out of a total 608 pots. This smelter is now fully ramped up. Any such incidents or outages in the future could have a material adverse effect on the Company's operations and financial condition.

If India's inflation worsens or the prices of coal, oil or other raw materials continue to rise, Vedanta may not be able to pass the resulting increased costs to its customers and this may have a material adverse effect on Vedanta's profitability or cause Vedanta to suffer operating losses.

India has experienced significant price inflation in the past. In addition, international prices of crude oil and natural gas have recently experienced significant volatility. Inflation, increased transportation costs and an increase in energy prices generally, which may be caused by a rise in the price of oil, or an increase in the price of thermal coking coal in particular, could cause Vedanta's costs for raw material inputs required for production of Vedanta's products to increase, which may have a material adverse effect on its results of operations and financial condition if Vedanta cannot pass these added costs on to customers.

Labour laws in India may adversely affect Vedanta's profitability.

India has stringent labour legislation that protects the interests of workers, including legislation that sets forth detailed procedures for industrial dispute resolution and employee compensation for injury or death sustained in the course of employment, and imposes financial obligations on employers upon employee layoffs. This may make it difficult for Vedanta to maintain flexible human resource policies, discharge employees or downsize, which may have a material adverse effect on Vedanta's business, financial condition and results of operations.

Restrictions on foreign investment in India may prevent Vedanta from making future acquisitions or investments in India, which may have a material adverse effect on Vedanta's results of operations, financial condition and cash flows.

India regulates ownership of Indian companies by foreigners, as well as external commercial borrowing by Indian companies, although restrictions on foreign investment and external commercial borrowing have been relaxed significantly in recent years. These regulations and restrictions may apply to acquisitions by Vedanta, or other members of Vedanta who are not resident in India, of shares in Indian companies or the provision of funding by Vedanta or any other non-Indian resident entity to Indian companies. There can be no assurance that Vedanta will be able to obtain any required approvals for future acquisitions or investments in India, or that Vedanta will be able to obtain such approvals on satisfactory terms.

A slowdown in economic growth in India and other countries in which Vedanta operates could cause its business to suffer.

The Indian securities market and the Indian economy are influenced by economic and market conditions in other countries. Although economic conditions are different in each country, investors' reactions to developments in one country can have adverse effect on the securities of companies in other countries, including India. A loss of investor confidence in the financial systems of other emerging markets may cause volatility in Indian financial markets and, indirectly, in the Indian economy in general. Any worldwide financial instability could also have a negative impact on the Indian economy, including the movement of exchange rates and interest rates in India. Any slowdown in the Indian economy, or future volatility in global commodity prices, could adversely affect the growth of Vedanta's India business.

The Indian economy and financial markets are also significantly influenced by worldwide economic, financial and market conditions. Any financial turmoil, especially in the United States, United Kingdom, Europe or China, may have a negative impact on the Indian economy. Although economic conditions differ in each country, investors' reactions to any significant developments in one country can have adverse effects on the financial and market conditions in other countries. A loss in investor confidence in the financial systems, particularly in other emerging markets, may cause increased volatility in Indian financial markets.

For instance, on 23 June 2016, the United Kingdom held a referendum on its membership of the European Union and voted to leave (Brexit). There is significant uncertainty at this stage as to the impact of Brexit on general economic conditions in the United Kingdom and the European Union and any consequential impact on global financial markets. For example, Brexit could give rise to increased volatility in foreign exchange rate movements and the value of equity and debt investments. A lack of clarity over the process for managing the exit and uncertainties surrounding the economic impact could lead to a further slowdown and instability in financial markets. This and any prolonged financial crisis may have an adverse impact on the Indian economy, thereby resulting in a material adverse effect on Vedanta's business, financial condition and results of operations.

Vedanta may be affected by competition law in India and any adverse application or interpretation of the Competition Act could adversely affect its business.

The Competition Act, 2002, as amended (the "Competition Act"), regulates practices having an appreciable adverse effect on competition in the relevant market in India. Under the Competition Act, any formal or informal arrangement, understanding or action in concert, which causes or is likely to cause an appreciable adverse effect on competition is considered void and results in the imposition of substantial monetary penalties. Further, any agreement among competitors which, directly or indirectly, involves the determination of purchase or sale prices, limits or controls production, supply, markets, technical development, investment or provision of services, shares the market or source of production or provision of services by way of allocation of geographical area, type of goods or services or number of clients in the relevant market or, directly or indirectly, results in bid-rigging or collusive bidding is presumed to have an appreciable adverse effect on competition. The Competition Act also prohibits abuse of a dominant position by any enterprise. The Competition Commission of India (the "CCI"), has extra-territorial powers and can investigate any agreements, abusive conduct or combination occurring outside India if such agreement, conduct or combination has an appreciable adverse effect on competition in India. The Indian operations of Vedanta are currently not subject to any outstanding proceedings under the Competition Act. However, if the Indian operation of Vedanta is affected, directly or indirectly, by the application or interpretation of any provision of the Competition Act, or any enforcement proceedings initiated by the CCI, or any adverse publicity that may be generated due to scrutiny or prosecution by the CCI or if any prohibition or substantial penalties are levied under the Competition Act, it would adversely affect Vedanta's business, cash flows and results of operation.

The filing of an insolvency petition under the new bankruptcy code in India by the creditors of the Indian subsidiaries of Vedanta may affect the Company's revenues and financial condition.

The Insolvency and Bankruptcy Code, 2016, as amended ("Bankruptcy Code") was notified on 5 August 2016. The Bankruptcy Code encompassing all companies, partnerships and individuals (other than financial firms) allows creditors to assess the viability of a debtor as a business decision, and agree upon a plan for its revival or a speedy time bound liquidation. The Bankruptcy Code creates a new institutional framework, consisting of a regulator, insolvency professionals, information utilities and adjudicatory mechanisms, which will facilitate a formal and quicker insolvency resolution and liquidation process. Under the Bankruptcy Code, any financial or operational creditor may approach the national company law tribunal (NCLT) to initiate a corporate insolvency resolution process against a debtor upon default in repayment of at least ₹100,000 equivalent to approximately $1550. On receipt of an application from a creditor, the NCLT is required to either admit or reject the application within a period of 14 days from the date of the application. In the event the application is admitted, an interim resolution professional is appointed for managing the affairs of the debtor and a moratorium is declared for a period of 180 days prohibiting, inter alia, institution/continuation of suits against the debtor and transfer/disposal of assets of the debtor. The committee of creditors formed by the interim resolution professional is required to formulate a resolution plan to be approved by the NCLT. If no resolution plan is agreed by the creditors or if the NCLT rejects the resolution plan, liquidation proceedings are commenced against the debtor. If the Bankruptcy Code provisions are invoked against any of the Company's material subsidiaries by any of its creditors, it may adversely and materially affect the Company's revenues and financial conditions.

Risks Relating to the Guarantee and the Bonds

The Company's obligation under the Guarantee will be structurally subordinated to the debt held by the Company's subsidiaries.

The Issuer is a wholly-owned subsidiary of the Company formed for the principal purpose of issuing the Bonds. The Issuer intends to lend the net proceeds from the issue of the Bonds to the Company and/or its subsidiaries. The Issuer does not and will not have any assets other than such loans and its ability to make payments under the Bonds will depend on its receipt of timely payments under such loans. In the event that the Company and its subsidiaries do not make such payments due to limitation in such loans or other agreements, lack of available cash flow or other factors, the Issuer's ability to make payments under the Bonds may be adversely affected.

The Company's operations are principally conducted through its subsidiaries. Accordingly, the Company is, and after the issuance of the Guarantee will continue to be, dependent on its subsidiaries' operations and cash flows to service its indebtedness, including the Guarantee. The Guarantee will be structurally subordinated to the claims of all holders of debt securities and other creditors, including trade creditors, of its subsidiaries, and to all of its secured creditors. In the event of an insolvency, bankruptcy, liquidation, reorganisation, dissolution or winding-up of the business of any subsidiary of the Company, creditors of such subsidiary will generally have the right to be paid in full before any distribution is made to the Company.

In this regard, it should be noted that subsidiaries of the Company, including Vedanta Limited, BALCO, HZL, TSPL, CIHL, VGCB, FGF and KCM have raised debt, which is currently outstanding and repayable over the term of the Bonds. Moreover, some of this debt is secured by a first charge on assets and properties of the respective companies and/or a first charge on current assets including stocks and book debts, which may adversely affect the Company's ability to pay the holders of the bonds (the "Bondholders"). As of 31 December 2018, Vedanta had total debt of $16,502 million of which $10,220 million existed at the Company's subsidiaries.

A downgrade in Vedanta's credit ratings or the ratings assigned to the Bonds may adversely affect Vedanta's ability to access capital.

Vedanta's current issuer rating is "B+" with a negative outlook by S&P and "Ba3" with a negative outlook by Moody's. Currently, the long-term debt rating by Moody's is "B2". A downgrade may adversely affect Vedanta's ability to access capital and would likely result in more stringent covenants and higher interest rates under the terms of any new indebtedness.

In addition, the Bonds are expected, on the Closing Date, to be rated "B2" by Moody's and "B+" by S&P. These ratings of the Bonds may be reviewed and changed at any time by one or more of these agencies, and they may be lowered or withdrawn entirely in the future. A suspension, reduction or withdrawal at any time of the ratings assigned to the Bonds may adversely affect the market price of the Bonds.

The Issuer may not be able to repurchase the Bonds upon a Change of Control Triggering Event.

The Issuer must offer to purchase the Bonds upon the occurrence of a Change of Control Triggering Event at a purchase price equal to 101% of the principal amount plus accrued and unpaid interest. See "Terms and Conditions of the Bonds".

The source of funds for any such purchase would be the Issuer's or as the case may be, the Company's available cash or third-party financing. However, the Issuer, or as the case may be, the Company may not have enough available funds at the time of the occurrence of any Change of Control Triggering Event to make purchases of outstanding Bonds. The Issuer's, or as the case may be, the Company's failure to make the offer to purchase or purchase the outstanding Bonds would constitute an

Event of Default under the Bonds. The Event of Default may, in turn, constitute an event of default under other indebtedness, any of which could cause the related debt to be accelerated after any applicable notice or grace periods. If the Issuer's or the Company's other debt were to be accelerated, the Issuer or the Company may not have sufficient funds to purchase the Bonds and repay the debt.

There is no existing market for the Bonds.

There can be no assurance regarding the future development of a market for the Bonds, or the ability of Bondholders to sell their Bonds, or the price at which such holders may be able to sell their Bonds. If a market for the Bonds were to develop, the Bonds could trade at prices that may be higher or lower than the initial issue price depending on many factors, including prevailing interest rates, the Company's operating results, the market for similar securities, and the rating of the Bonds or the Company given by rating agencies.

The Bonds will be a new issue of securities with no existing trading market. The Issuer will apply to list the Bonds on the official list of the SGX-ST. However, the Issuer cannot make any assurances that the Bonds will ultimately be listed on the exchange or that a liquid trading market will develop for the Bonds.

The market price of the Bonds may be volatile.

The market price of the Bonds could be subject to wide fluctuations in response to numerous factors, many of which are beyond the control of the Company and the Issuer. These factors include, among other things, actual or anticipated variations in operating results, earnings releases by the Company and its competitors, changes in financial estimates by securities analysts, market conditions in the industry and the general state of the securities markets, governmental legislation or regulation, currency and exchange rate fluctuations, interest rates, the rating of the Bonds or the Company given by the rating agencies, as well as general economic and market conditions, such as recessions.

The Bonds may not be a suitable investment for all investors.

Each potential investor in the Bonds must determine the suitability of that investment in light of its own circumstances. In particular, each potential investor should:

- have sufficient knowledge and experience to make a meaningful evaluation of the Bonds, the merits and risks of investing in the Bonds and the information contained in this Offering Circular;

- have access to, and knowledge of, appropriate analytical tools to evaluate, in the context of its particular financial situation, an investment in the Bonds and the impact such investment will have on its overall investment portfolio;

- have sufficient financial resources and liquidity to bear all of the risk of an investment in the Bonds, including where the currency for principal or interest payments is different from the potential investor's currency;

- understand thoroughly the terms of the Bonds and be familiar with the behaviour of any relevant financial markets; and

- be able to evaluate (either alone or with the help of a financial adviser) possible scenarios for economic, interest rate and other factors that may affect its investment and its ability to bear the applicable risks.

A potential investor should not invest in the Bonds, which are complex financial instruments, unless it has the expertise (either alone or with a financial adviser) to evaluate how the Bonds will perform under changing conditions, the resulting effects on the value of the Bonds and the impact this investment will have on the potential investor's overall investment portfolio.

Early redemption may adversely affect the Bondholders' return on the Bonds.

The Bonds may be redeemed in whole or in part, at the option of the Issuer at any time. This feature of the Bonds may limit their market value. The market value of the Bonds generally will not rise substantially above the price at which they can be redeemed. The Issuer may be expected to exercise its option to redeem the Bonds when its cost of borrowing is lower than the interest rate on the Bonds.

Further, in the event that the Issuer or the Guarantor would be obliged to pay additional amounts in respect of any Bonds due to any withholding or deduction for or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or on behalf of the United Kingdom or any authority therein or thereof having power to tax, the Issuer may redeem in whole, but not in part, the Bonds of any series in accordance with the Conditions. In either of these circumstances, an investor may not be able to reinvest the redemption proceeds in a comparable security with an effective rate equal to that of the Bonds.

Risks relating to change of law.

The Conditions of the Bonds will be based on English law as of the date of this Offering Circular. No assurance can be given as to the impact of any possible judicial decision or change to English law or any administrative practice thereof after the date of this Offering Circular.

Developments in other markets may adversely affect the market price of the Bonds.

The market price of the Bonds may be adversely affected by declines in the international financial markets and world economic conditions. Global financial markets, to varying degrees, are influenced by economic and market conditions in other markets. Although economic conditions are different in each country, investors' reactions to developments in one country can affect the securities markets and the securities of issuers in other countries. If adverse developments occur in the international financial markets in the future, the market price of the Bonds could be adversely affected.

No voting rights.

Bondholders do not have any right to vote at any shareholders' meetings of the Company or the Issuer Consequently, Bondholders cannot influence any decisions by the Board or any decisions by shareholders concerning the Company's or the Issuer's capital structure, including the declaration of dividends in respect of the Company's or the Issuer's ordinary shares.

Bondholders are bound by decisions of defined majorities in respect of any modification, waivers and substitution.

The Conditions of the Bonds contain provisions for calling meetings of Bondholders to consider matters affecting their interests generally. These provisions permit defined majorities to bind all Bondholders, including Bondholders who did not attend and vote at the relevant meeting and Bondholders who voted in a manner contrary to the majority.

Interest rate risks.

The Bonds are fixed interest rate securities. Subsequent changes in market interest rates may adversely affect the value of the Bonds.

Credit ratings may not reflect all risks.

One or more independent credit rating agencies may assign credit ratings to the Bonds or the Company's senior unsecured indebtedness. The ratings may not reflect the potential impact of all risks related to structure, market, additional factors discussed above, and other factors that may affect the value of the Bonds. A credit rating is not a recommendation to buy, sell or hold Bonds and may be revised or withdrawn by the rating agency at any time. For example, Moodys revised the outlook on ratings for Vedanta Resources Limited to Negative from Stable while affirming the corporate family rating at Ba3 in February 2019, as weaker earnings were expected on account of downside risk to commodity prices and increased risk of movement of funds outside the Company. Similarly, S&P affirmed the ratings at B+ while revising the Outlook to Negative in March 2019 on account of weaker operating performance due to commodity slowdown which along with higher debt due to ESL acquisition and debt for privatisation of Vedanta Resources Limited could keep its metrics weaker than required for current rating levels.

The Trustee may not take action on behalf of the Bondholders.

The Conditions and the terms of the Trust Deed provide that, in certain circumstances, the Trustee may take action on behalf of the Bondholders, but only if the Trustee is indemnified and/or secured (including by way of payment in advance) to its satisfaction. It may not, depending on the particular circumstances at the relevant time, be possible for the Trustee to take certain actions in relation to the Bonds and accordingly, in such circumstances, the Trustee will be unable to take such actions, notwithstanding the provision for an indemnity and/or security to it and, as a result and if possible, it will be up to the Bondholders to take such action directly.

Holders of Bonds held through DTC, Euroclear and Clearstream, Luxembourg must rely on procedures of those clearing systems to effect transfers of Bonds, receive payments in respect of Bonds and vote at meetings of Bondholders.

Bonds will be represented on issue by one or more Global Certificates that may be deposited with a nominee for DTC. Except in the circumstances described in each Global Certificate, investors will not be entitled to receive Bonds in definitive form. Each of DTC, Euroclear and Clearstream, Luxembourg and their respective direct and indirect participants will maintain records of the beneficial interests in each Global Certificate held through it. While the Bonds are represented by a Global Certificate, investors will be able to trade their beneficial interests only through the relevant clearing systems and their respective participants.

While the Bonds are represented by Global Certificates, the Company and the Issuer will discharge its payment obligation under the Bonds by making payments through the relevant clearing systems. A holder of a beneficial interest in a Global Certificate must rely on the procedures of the relevant clearing system and its participants to receive payments under the Bonds. The Company and the Issuer have no responsibility or liability for the records relating to, or payments made in respect of, beneficial interests in any Global Certificate. Holders of beneficial interests in a Global Certificate will not have a direct right to vote in respect of the Bonds so represented. Instead, such holders will be permitted to act only to the extent that they are enabled by the relevant clearing system and its participants to appoint appropriate proxies. If definitive Bonds are issued, holders should be aware that definitive Bonds that have a denomination that is not an integral multiple of the minimum specified denomination may be illiquid and difficult to trade.

USE OF PROCEEDS

The net proceeds from this offering, after deduction of underwriting fees, discounts and commissions and other estimated expenses associated with this offering, are expected to be approximately $992 million. The Issuer intends to onlend the net proceeds to the Company which intends to use the proceeds primarily to repay existing indebtedness of the Company and any remaining proceeds for working capital requirements including meeting interest liabilities of the Company and for supporting subsidiaries of the Company. The net proceeds from this offering shall be used in accordance with applicable laws.

Certain of the Joint Bookrunners and/or their affiliates have and will continue to have additional relationships with the Company as described in "Plan of Distribution". In particular, certain of the Joint Bookrunners and/or their affiliates act as arrangers and lenders under loan facilities and may receive a portion of the proceeds of the offering of the Bonds in connection with the repayment thereof.

CAPITALISATION AND INDEBTEDNESS

The following table sets out the consolidated cash and cash equivalents and liquid investments, capitalisation and indebtedness of the Company as of 31 December 2018:

(1) on a historical basis; and

(2) as adjusted to give effect to the issuance of the Bonds after deduction of underwriting fees, discounts and commissions and other estimated expenses associated with this offering and the repayment of certain of the Company's existing indebtedness with a portion of the proceeds with this Offering. See "Use of Proceeds" for further details.

This table should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", "Use of Proceeds" and the Unaudited Interim Condensed Financial Statements as at 31 December 2018, the related notes and other financial information contained elsewhere in this Offering Circular.

	As of 31 December 2018	
	As Actual	**Adjusted**
	($ million)	
Cash and Cash Equivalents and Liquid Investments	**4,347.5**	**4,853.5**[(1)]
Structured investment net of related liabilities	228.4	228.4
Share Capital	28.5	28.5
Share premium	201.5	201.5
Treasury shares	—	—
Share based payment reserve	—	—
Hedging reserve	(93.1)	(93.1)
Other reserves	(129.5)	(129.5)
Retained earnings	(962.4)	(962.4)
Equity attributable to equity holders of the parent	(955.0)	(955.0)
Non-Controlling interests	5,959.9	5,959.9
Total Equity	**5,004.9**	**5,004.9**
Term loans — secured — (repayable < 1 year)	777.4	777.4
Term loans — unsecured — (repayable < 1 year)	478.8	160.8
Term loans — secured — (repayable > 1 year)	3,496.0	3,496.0
Term loans — unsecured — (repayable > 1 year)	2,474.7	2,306.7
Other borrowings and indebtedness — secured — (repayable < 1 year)	445.4	445.4
Other borrowings and indebtedness — unsecured — (repayable < 1 year)	3,796.2	3,796.2
Other borrowings and indebtedness — secured — (repayable > 1 year)	931.3	931.3
Other borrowings and indebtedness — unsecured — (repayable > 1 year)	4,102.2	4,102.2
Bonds offered hereby	—	1,000.0
Total Indebtedness	16,502.0	17,016.0
Total Capitalisation	**21,506.9**	**22,020.9**

(1) The Company intends to use the remaining net proceeds primarily to repay the Company's indebtedness of approximately $395 million incurred subsequent to December 31, 2018.

EXCHANGE RATES

Substantially all of Vedanta's revenue is denominated or paid with reference to US dollars and most of Vedanta's expenses are incurred and paid in Indian Rupees, South African Rand and Zambian Kwacha. The Company reports its financial results in US dollars. The exchange rates among the Indian Rupee and the US dollar have changed substantially in recent years and may fluctuate substantially in the future. The results of the Company's operations are affected as the Indian Rupee appreciates or depreciates against the US dollar and, as a result, any such appreciation or depreciation may affect the market price of the Bonds.

The following table sets forth, for the periods indicated, information concerning the exchange rates between Indian Rupees and US dollars based on the RBI Reference Rate for the periods indicated:

	Period End	Average(1)	High	Low
Fiscal Year:				
2014	60.10	60.50	68.36	53.74
2015	62.59	61.15	63.75	58.43
2016	66.33	65.46	68.78	62.16
2017	64.84	67.09	68.73	64.84
2018	65.04	64.45	65.76	63.35
Nine months ended 31 December 2017	63.93	64.49	65.76	63.63
Nine months ended 31 December 2018	69.79	69.68	74.39	64.93
Month:				
April 2018	66.78	65.64	66.83	64.93
May 2018	67.45	67.54	68.39	66.61
June 2018	68.58	67.79	68.94	67.02
July 2018	68.61	68.69	69.05	68.30
August 2018	70.93	69.55	70.93	68.36
September 2018	72.55	72.22	72.81	70.77
October 2018	73.99	73.63	74.39	72.80
November 2018	69.66	71.85	73.83	69.66
December 2018	69.79	70.73	72.04	69.79
January 2019	71.03	70.73	71.38	69.48
February 2019	71.20	71.22	71.75	70.55
March 2019	69.16	69.47	70.91	68.53
April 2019 (through 2 April 2019)	68.59	68.67	68.75	68.59

(1) Represents the average of the RBI Reference Rate on the last day of each month during the period for all fiscal years presented and the average of the RBI Reference Rates for all days during the period for all months presented.

Although the Company has translated selected Indian Rupee amounts in this Offering Circular into US dollars for convenience, this does not mean that the Indian Rupee amounts referred to represent US dollar amounts could have been or could be converted to US dollars at any particular rate, the rates stated above, or at all. Unless otherwise stated herein, all translations in this Offering Circular from Indian Rupee into US dollars are based on the RBI Reference Rate on 31 December 2018 which was ₹69.79 = $1.

The following table sets forth, for the periods indicated, information concerning the exchange rates between South African Rand and US dollars based on the Noon Buying Rate in New York City for cable transfers in South African Rand as certified by the Federal Reserve Bank of New York:

	Period End(1)(2)	Average(1)(2)	High	Low
Fiscal Year:				
2014	10.53	10.11	11.25	8.90
2015	12.14	11.06	12.47	10.30
2016	14.71	13.75	16.88	11.72
2017	13.41	14.07	15.87	12.44
2018	11.82	12.99	14.49	11.55
Nine months ended 31 December 2017	12.38	12.97	13.70	12.30
Nine months ended 31 December 2018	14.38	13.68	15.40	11.62
Month:				
April 2018	12.48	12.11	12.48	11.82
May 2018	12.68	12.54	12.72	12.27
June 2018	13.71	13.31	13.84	12.57
July 2018	13.10	13.37	13.89	13.10
August 2018	14.70	14.09	14.78	13.22
September 2018	14.16	14.75	15.47	14.05
October 2018	14.76	14.49	14.85	14.14
November 2018	13.84	14.09	14.51	13.65
December 2018	14.38	14.26	14.51	13.67
January 2019	13.29	13.82	14.41	13.29
February 2019	14.08	13.81	14.24	13.31
March 2019	14.50	14.39	14.58	14.16
April 2019 (through 2 April 2019)	14.16	14.20	14.23	14.16

(1) The Noon Buying Rate at each period end and the average Noon Buying Rate for each period may have differed from the exchange rates used in the preparation of financial statements included elsewhere in this Offering Circular.

(2) Represents the average of the RBI Reference Rate on the last day of each month during the period for all fiscal years presented and the average of the RBI Reference Rates for all days during the period for all months presented.

Although the Company has translated selected South African Rand amounts in this Offering Circular into US dollars for convenience, this does not mean that the South African Rand amounts referred to represent US dollar amounts or have been, could have been or could be converted to US dollars at any particular rate, the rates stated above, or at all. Unless otherwise stated herein, all translations in this Offering Circular from South African Rand to US dollars are based on the Noon Buying Rate on 31 December 2018 which was Rand 1 = $14.38.

The following table sets forth, for the periods indicated, information concerning the exchange rates between Zambian Kwachas and US dollars based on the spot rates provided by Bloomberg:

	Period End(1)	Average(1)(2)	High	Low
Fiscal Year:				
2014	6.39	6.16	7.04	5.47
2015	11.00	8.65	14.25	6.38
2016	9.88	10.34	11.39	9.26
2017	9.67	9.94	11.00	9.26
2018	9.75	10.96	12.31	9.43
Nine months ended 31 December 2017	9.98	9.46	10.38	8.77
Nine months ended 31 December 2018	11.96	10.73	12.45	9.39
Month:				
April 2018	9.86	9.55	9.86	9.39
May 2018	10.33	10.14	10.41	9.91
June 2018	10.0	10.1	10.35	9.93
July 2018	9.99	9.92	10.05	9.77
August 2018	10.30	10.12	10.30	9.94
September 2018	12.27	11.0	12.27	10.29
October 2018	11.81	11.91	12.45	11.52
November 2018	12.03	11.88	12.03	11.66
December 2018	11.96	11.95	12.05	11.85
January 2019	11.96	11.96	12.02	11.93
February 2019	12.06	11.93	12.06	11.84
March 2019	12.12	12.03	12.12	11.97
April 2019 (through 3 April 2019)	12.14	12.13	12.14	12.13

(1) The last price at each period end and the average last price for each period may have differed from the exchange rates used in the preparation of financial statements included elsewhere in this Offering Circular.

(2) Represents the average of the last price on the last day of each month during the period for all fiscal years presented and the average of the last price for all days during the period for all months presented.

Although the Company has translated selected Zambian kwacha amounts in this Offering Circular into US dollars for convenience, this does not mean that the Zambian kwacha amounts referred to represent US dollar amounts or have been, could have been or could be converted to US dollars at any particular rate, the rates stated above, or at all. Unless otherwise stated herein, all translations in this Offering Circular from Zambian kwachas to US dollars are based on the spot rates provided by Bloomberg on 31 December 2018, which was ZMW 11.96 per $1.00.

SELECTED CONSOLIDATED FINANCIAL INFORMATION

The following tables present the selected historical consolidated financial information for the Company for the periods ended and at the dates indicated below. The selected historical consolidated financial information as of and for fiscal years ended 2016, 2017 and 2018 has been derived from the consolidated Annual Financial Statements included elsewhere in this Offering Circular. The Company's annual consolidated financial statements have been prepared and presented in accordance with IFRS as adopted by the EU. The selected financial information as of and for the nine months ended 31 December 2017 and 2018 has been derived from the unaudited Interim Condensed Financial Statements for the nine months ended 31 December 2018 included elsewhere in this Offering Circular. The Company's unaudited condensed consolidated financial statements have been prepared in accordance with IAS 34, Interim Financial Reporting.

You should read the following information in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", the Annual Financial Statements and Unaudited Interim Condensed Financial Statements and the notes thereto included elsewhere in this Offering Circular.

Consolidated Income Statement

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Continuing operations					
Revenue	10,737.9	11,520.1	15,358.7	10,830.7	10,601.8
Cost of sales	(9,241.1)	(8,789.2)	(11,940.5)	(8,449.5)	(8,681.8)
Gross profit	**1,496.8**	**2,730.9**	**3,418.2**	**2,381.2**	**1,920.0**
Other operating income	101.7	73.4	89.2	53.6	112.7
Distribution costs	(223.8)	(274.9)	(276.5)	(194.0)	(209.9)
Administrative expenses	(493.5)	(368.8)	(417.3)	(291.0)	(396.4)
Special items	(5,210.1)	(17.3)	649.9	(772.1)	38.1
Operating (loss)/profit	**(4,328.9)**	**2,143.3**	**3,463.5**	**1,177.7**	**1,464.5**
Investment revenues	697.8	642.6	465.1	341.8	275.6
Finance costs	(1,280.4)	(1,382.2)	(1,450.8)	(1,064.0)	(948.3)
Other (losses)/gains (net)	(72.5)	(23.8)	4.3	(15.9)	(65.7)
(Loss)/Profit before taxation	**(4,984.0)**	**1,379.9**	**2,482.1**	**439.6**	**726.1**
Tax credit/(charge) — special items	1,737.4	(4.9)	(338.5)	220.3	(16.3)
Tax expense — others	(255.5)	(495.4)	(674.7)	(387.3)	(542.1)
(Loss)/profit for the year/period	**(3,502.1)**	**879.6**	**1,468.9**	**272.6**	**167.7**
Attributable to:					
Equity holders of the parent	(1,837.4)	(22.7)	235.6	(257.4)	(259.7)
Non-controlling interests	(1,664.7)	902.3	1,233.3	530.0	427.4
(Loss)/Profit for the year/period	**(3,502.1)**	**879.6**	**1,468.9**	**272.6**	**167.7**
Basic earnings per ordinary shares (US cents per share)	**(665.8)**	**(8.2)**	**84.8**	**(92.9)**	**—**
Diluted earnings per ordinary shares (US cents per share)	**(665.8)**	**(8.2)**	**82.8**	**(92.9)**	**—**

Consolidated Balance Sheet

	As of 31 March			As of 31 December
	2016	2017	2018	2018
	($ million)			
<u>**ASSETS**</u>				
NON-CURRENT ASSETS				
Goodwill	16.6	16.6	12.2	12.2
Intangible assets	92.2	95.6	123.1	108.8
Property, plant and equipment	16,647.8	16,806.1	17,784.3	17,603.3
Financial asset investments	6.5	10.7	24.5	592.5
Non-current tax assets	361.7	434.6	521.1	522.9
Other non-current assets	237.9	544.4	659.2	973.4
Financial instruments (derivatives)	0.8	0.6	—	—
Deferred tax assets	1,255.4	1,111.0	916.7	767.8
	18,618.9	**19,019.6**	**20,041.1**	**20,580.9**
CURRENT ASSETS				
Inventories	1,365.8	1,670.1	2,037.7	2,144.3
Trade and other receivable	1,344.3	1,084.8	1,526.9	1,649.9
Financial instruments (derivatives)	18.3	1.6	24.0	44.8
Current tax assets	35.5	2.1	2.2	0.8
Liquid investments	8,508.2	8,043.0	4,807.8	3,640.3
Cash and cash equivalents	428.3	1,682.2	798.7	707.2
	11,700.4	**12,483.8**	**9,197.3**	**8,187.3**
TOTAL ASSETS	**30,319.3**	**31,503.4**	**29,238.4**	**28,768.2**
LIABILITIES				
CURRENT LIABILITIES				
Short term borrowings	(3,726.6)	(7,658.5)	(5,460.3)	(5,497.9)
Convertible bonds	(587.2)	—	—	—
Trade and other payables	(5,876.1)	(6,223.4)	(6,077.5)	(5,699.3)
Financial instruments (derivatives)	(67.7)	(126.9)	(22.1)	(51.8)
Retirement benefits	(4.9)	(7.5)	(18.0)	(16.1)
Provisions	(132.1)	(17.5)	(22.1)	(16.5)
Current tax liabilities	(17.0)	(37.8)	(53.9)	(53.5)
	(10,411.6)	**(14,071.6)**	**(11,653.9)**	**(11,335.1)**
NET CURRENT ASSETS/(LIABILITIES)	**1,288.8**	**(1,587.8)**	**(2,456.6)**	**(3,147.8)**

	As of 31 March			As of 31 December
	2016	2017	2018	2018
	($ million)			
NON-CURRENT LIABILITIES				
Medium and long term borrowings	(11,949.5)	(10,570.2)	(9,733.5)	(11,004.1)
Convertible bonds	—	—	—	—
Trade and other payables	(223.5)	(68.5)	(118.0)	(207.7)
Financial instruments (derivatives)	(1.2)	(8.6)	(18.1)	(11.6)
Deferred tax liabilities	(620.2)	(371.1)	(748.5)	(773.6)
Retirement benefits	(61.6)	(59.6)	(62.4)	(63.7)
Provisions	(187.4)	(327.3)	(351.8)	(355.6)
Non-equity non-controlling interests	(11.9)	(11.9)	(11.9)	(11.9)
	(13,055.3)	**(11,417.2)**	**(11,044.2)**	**(12,428.2)**
TOTAL LIABILITIES	**(23,466.9)**	**(25,488.8)**	**(22,698.1)**	**(23,763.3)**
NET ASSETS	**6,852.4**	**6,014.6**	**6,540.3**	**5,004.9**
EQUITY				
Share capital	30.1	30.1	30.4	28.5
Share premium	201.5	201.5	201.5	201.5
Treasury shares	(557.2)	(557.9)	(558.3)	—
Share based payment reserve	29.9	28.2	13.3	—
Convertible bond reserve	6.0	—	—	—
Hedging reserve	(87.7)	(90.9)	(92.5)	(93.1)
Other reserves	(1.4)	140.5	155.2	(129.5)
Retained earnings	(334.0)	(160.0)	(78.8)	(962.4)
Equity attributable to equity holders of the parent	(712.8)	(408.5)	(329.2)	(955.0)
Non-controlling interests	7,565.2	6,423.1	6,869.5	5,959.9
TOTAL EQUITY	**6,852.4**	**6,014.6**	**6,540.3**	**5,004.9**

Consolidated Cash Flow Statement

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Operating activities					
(Loss)/Profit before taxation	(4,984.0)	1,379.9	2,482.1	439.6	726.1
Adjustments for:					
Depreciation and amortisation	1,455.2	1,030.5	1,270.7	794.2	1,090.9
Investment revenues	(697.8)	(642.6)	(465.1)	(341.8)	(275.6)
Finance costs	1,280.4	1,382.2	1,450.8	1,064.0	948.3
Other gains and (losses) (net)	72.5	23.8	(4.3)	15.9	65.7
Loss/(Profit) on disposal of property plant and equipment	1.5	5.2	(0.5)	0.7	7.2
Write-off of unsuccessful exploration costs	4.5	6.5	—	0.2	0.4
Share based payment charge	15.6	13.4	19.5	15.4	13.2
Impairment charge/(reversal)	5,187.0	17.3	(649.9)	772.1	(38.1)
Other non-cash items	2.7	3.5	10.0	—	(0.5)
Operating cash flows before movements in working capital	**2,337.6**	**3,219.7**	**4,113.3**	**2,760.3**	**2,537.6**
Decrease/(Increase) in inventories	163.7	(266.7)	(354.5)	(634.1)	(111.0)
Decrease/(Increase) in receivables	343.3	18.8	(606.5)	(670.4)	(545.8)
Increase in payables	657.4	522.3	261.7	667.0	(435.6)
Cash generated from operations	**3,502.0**	**3,494.1**	**3,414.0**	**2,122.8**	**1,445.2**
Dividends received	0.3	0.1	4.0	2.3	3.9
Interest income received	633.1	298.0	223.5	202.2	103.4
Interest paid	(1,268.4)	(1,417.5)	(1,415.6)	(1,028.4)	(1,007.9)
Income taxes paid	(354.7)	(778.7)	(567.2)	(359.2)	(476.5)
Dividends paid	(110.6)	(138.4)	(164.4)	(164.4)	(112.9)
Net cash from/(used in) operating activities	**2,401.7**	**1,457.6**	**1,494.3**	**775.3**	**(44.8)**
Purchases of property, plant, equipment and intangibles	(872.4)	(873.9)	(1,104.3)	(654.6)	(1,014.7)
Proceeds on disposal of property, plant and equipment	10.0	25.2	10.4	1.6	7.2
(Purchase)/Sale of liquid investments	(999.9)	921.5	3,441.5	2,552.1	1,123.8
Purchase of Financial Asset Investment	—	—	—	—	(200.0)
Acquisition of subsidiary	—	—	(134.4)	(134.1)	(788.3)
Net cash (used in)/from investing activities	**(1,862.3)**	**72.8**	**2,213.2**	**1,765.0**	**(872.0)**

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Cash flows from financing activities					
Issue of ordinary shares	0.1	0.0	0.3	0.3	0.4
Purchase of shares under DSBP scheme ...	(0.9)	(2.0)	(2.4)	(2.4)	—
Dividends paid to non-controlling interests of subsidiaries.......................	(325.5)	(1,393.3)	(1,414.4)	(664.0)	(982.0)
Acquisition of additional interests in subsidiaries/share buyback by subsidiary	—	(21.4)	(31.4)	(31.4)	(20.6)
Exercise of stock options in subsidiary	—	2.9	5.2	6.0	1.0
Sale of Treasury shares	—	—	—	—	18.6
(Decrease)/increase in short-term borrowings...	(1,022.1)	578.9	(3,859.2)	(4,299.9)	(709.8)
Buyback of non-convertible bond	—	—	(1,128.5)	(1,128.5)	—
Proceeds from medium and long-term borrowings...	2,383.2	2,146.4	3,640.2	3,363.8	2,970.6
Repayment of medium and long-term borrowings...	(958.0)	(1,064.4)	(1,816.9)	(1,150.9)	(377.2)
Buyback/Repayment of convertible bond..	(523.6)	(590.3)	—	—	—
Net cash (used in)/from financing activities	**(446.8)**	**(343.2)**	**(4,607.1)**	**(3,907.0)**	**901.0**
Net increase in cash and cash equivalents	92.6	1,187.20	**(899.6)**	(1,366.7)	**(15.8)**
Effect of foreign exchange rate changes...	(18.0)	66.7	16.1	18.3	(75.7)
Cash and cash equivalents at beginning of year/period	353.7	428.3	1,682.2	1,682.2	798.7
Cash and cash equivalents at end of year/period	**428.3**	**1,682.2**	**798.7**	**333.8**	**707.2**

* Proceeds from redemption/purchase of liquid investments as well as proceeds from and repayment of short term borrowings have been presented on a net basis.

Consolidated Business Segments Data

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
External revenues:					
Oil and gas	1,322.3	1,222.7	1,479.6	1,052.4	1,441.9
Zinc					
— India	2,111.0	2,521.9	3,368.7	2,407.6	2,203.7
— International	391.5	332.4	534.7	406.9	249.1
Copper					
— India/Australia	3,196.8	3,131.4	3,832.3	2,663.9	1,138.9
— Zambia	966.7	830.1	1,181.3	918.7	818.2
Iron ore	341.8	609.3	483.4	317.7	295.3
Aluminium	1,692.3	2,037.1	3,583.7	2,472.2	3,296.7
Power	691.7	822.6	853.6	579.8	698.0
Others	23.8	12.6	41.4	11.5	460.1
Total	**10,737.9**	**11,520.1**	**15,358.7**	**10,830.7**	**10,601.8**
Vedanta EBITDA[1]					
Oil and gas	570.4	597.2	849.1	609.7	845.0
Zinc					
— India	995.0	1,423.2	1,902.8	1,336.4	1,122.4
— International	68.1	138.3	219.5	179.9	44.0
Copper					
— India/Australia	336.6	252.2	200.6	109.6	(23.9)
— Zambia	(17.9)	5.9	73.2	35.1	(44.2)
Iron ore	73.4	194.2	57.3	22.0	56.4
Aluminium	106.7	344.2	452.4	219.0	259.5
Power	196.3	244.8	258.9	166.1	167.4
Others	7.8	(8.9)	37.4	20.4	90.7
Total	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**
Other Data and Ratios					
Net Debt/Capitalisation (%)	51.7%	58.6%	59.4%	60.0%	70.4%
Interest Coverage Ratio (Times)	4.0	4.3	4.1	3.7	3.7
Net Debt/Vedanta EBITDA[1] Times	3.1	2.7	2.4	2.5	3.1
Debt/Vedanta EBITDA[1] (Time)	7.0	5.7	3.8	4.1	4.3

(1) Vedanta EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax. The Vedanta EBITDA may not be comparable to similarly titled measures reported by other companies due to potential inconsistencies in the method of calculation. The Company has included its Vedanta EBITDA because the Company believes it is an indicative measure of the Company's operating performance and is used by investors and analysts to evaluate companies in the same industry. The Vedanta EBITDA should be considered in addition to, and not as a substitute for, other measures of financial performance and liquidity reported in accordance with IFRS. The Company believes that the inclusion of supplementary adjustments applied in the Company's presentation of Vedanta EBITDA are appropriate because the Company believes it is a more indicative measure of the Company's baseline performance as it excludes certain charges that the Company's management considers to be outside of its core operating results. In addition, the Company's Vedanta EBITDA is among the primary indicators that the Company's management uses as a basis for planning and forecasting of future periods. The following table reconciles profit/loss for the year/period to Vedanta EBITDA.

	Fiscal year Ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
(Loss)/Profit for the year/period	(3,502.1)	879.6	1,468.9	272.6	167.7
Adjusted for:					
Net tax (credit)/expense	(1,481.9)	500.3	1,013.2	167.0	558.4
Other gains and losses (net)	72.5	23.8	(4.3)	15.9	65.7
Finance costs	1,280.4	1,382.2	1,450.8	1,064.0	948.3
Investment revenues	(697.8)	(642.6)	(465.1)	(341.8)	(275.6)
Special Items(1)	5,210.1	17.3	(683.0)	726.3	(38.1)
Depreciation and amortization	1,455.2	1,030.5	1,270.7	794.2	1,090.9
VEDANTA EBITDA	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**

(1) Special Items are defined in Note 5 to the Annual Financial Statements and Note 4 to the Unaudited Interim Condensed Financial Statements. Special items include non-cash impairment charges relating to the oil and gas and iron ore assets, the iron ore business relating to the Liberian assets, Bellary assets in the iron ore business, the copper mine of Tasmania, voluntary retirement schemes across the Vedanta group, reversal of provision of District Mineral Fund, charges pursuant to adverse arbitration orders, reversal of interest provision and acquisition expenses.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of the financial condition and results of operations of Vedanta should be read in conjunction with the Annual Financial Statements and Unaudited Interim Condensed Financial Statements herein and with the information relating to the business of Vedanta included elsewhere in this Offering Circular. This discussion involves forward-looking statements that reflect the current view of management and involve risks and uncertainties. The actual results of Vedanta could differ materially from those contained in any forward-looking statements as a result of factors discussed below and elsewhere in this Offering Circular, particularly in "Risk Factors." Investors should read the whole of this Offering Circular and not rely just on summarised information.

The Annual Financial Statements for Vedanta have been prepared in accordance with IFRS as adopted by the European Union. The Unaudited Interim Condensed Financial Statements for Vedanta have been prepared in accordance with International Accounting Standard 34, "Interim Financial Reporting", as adopted by the European Union.

Introduction

Overview

Vedanta is a globally diversified metals and mining, oil and gas and power generation company. Its businesses are principally located in India. India is one of the fastest growing large economies in the world with a 7.3% increase in GDP during fiscal year 2018 (at constant fiscal 2012 prices), according to the Central Statistical Organisation of the GoI's Ministry of Statistics and Programme Implementation. Vedanta also has operations in Zambia, Namibia, South Africa, UAE, Japan, South Korea, and Taiwan, and a workforce of over 70,000 people worldwide. Vedanta is primarily engaged in oil and gas, zinc, copper, iron ore, lead, silver, steel, aluminium and commercial power generation businesses, and is developing a port operation business and infrastructure assets. Vedanta experienced significant growth in recent years through the expansion of projects for its oil and gas, copper, zinc, aluminium and iron ore businesses and recently acquired a steel business through acquisition of ESL. Vedanta believes its experience in operating and expanding its businesses in India will allow it to capitalise on attractive growth opportunities arising from India's large mineral reserves, relatively low cost of operations and large and inexpensive labour and talent pools.

Vedanta has the ability to manage and increase the dividend payments from the operating subsidiaries it controls when there are sufficient distributable reserves. For fiscal year 2018, HZL declared a dividend of ₹33,800 million ($524 million), and Vedanta Limited declared a dividend of ₹78,810 million ($1,223 million), all of which exclude taxes on dividends.

Vedanta's Operating profit was at $3,463.5 million in fiscal year 2018 compared to $2,143.3 million in fiscal year 2017. Revenue and operating profit before special items increased from $11,520.1 million and $2,160.6 million, respectively, in fiscal year 2017, to $15,358.7 million and $2,780.5 million, respectively, in fiscal year 2018. The increase was primarily driven by improved commodity prices, increase in production volumes of Zinc and Copper in India and Aluminium, which was partially offset by lower production volumes of iron ore in Goa.

Vedanta EBITDA increased from $2,336.4 million in fiscal year 2016 to $3,191.1 million in fiscal year 2017 and to $4,051.2 million in fiscal year 2018. The following table sets out the Vedanta EBITDA for each of Vedanta's business segments.

	Fiscal year Ended 31 March			Nine Months Ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Vedanta EBITDA[1]:					
Oil and gas business	570.4	597.2	849.1	609.7	845.0
Zinc					
— India	995.0	1,423.2	1,902.8	1,336.4	1,122.4
— International	68.1	138.3	219.5	179.9	44.0
Copper					
— India and Australia	336.6	252.2	200.6	109.6	(23.9)
— Zambia	(17.9)	5.9	73.2	35.1	(44.2)
Iron ore	73.4	194.2	57.3	22.0	56.4
Aluminium	106.7	344.2	452.4	219.0	259.5
Commercial power generation	196.3	244.8	258.9	166.1	167.4
Others	7.8	(8.9)	(37.4)	20.4	90.7
Total	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**

(1) Vedanta EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax. Vedanta EBITDA may not be comparable to similarly titled measures reported by other companies due to potential inconsistencies in the method of calculation. Vedanta EBITDA has been included because Vedanta believes it is an indicative measure of its operating performance and is used by investors and analysts to evaluate companies in the industry. Vedanta EBITDA should be considered in addition to, and not as a substitute for, other measures of financial performance and liquidity reported in accordance with IFRS. Vedanta believes that the inclusion of supplementary adjustments applied in its presentation of Vedanta EBITDA.

	Fiscal year Ended 31 March			Nine Months Ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Profit for the year/period	(3,502.1)	879.6	1,468.9	272.6	167.7
Adjusted for:					
Tax expense	(1,481.9)	500.3	1,013.2	167.0	558.4
Other gains and losses (net)	72.5	23.8	(4.3)	15.9	65.7
Finance costs	1,280.4	1,382.2	1,450.8	1,064.0	948.3
Investment revenue	(697.8)	(642.6)	(465.1)	(341.8)	(275.6)
Special Items[1]	5,210.1	17.3	(683.0)	726.3	(38.1)
Depreciation and amortization	1,455.2	1,030.5	1,270.7	794.2	1,090.9
Vedanta EBITDA	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**

(1) Special Items are defined in Note 5 to the Annual Financial Statements and Note 4 to the Unaudited Interim Condensed Financial Statements. Special items include non-cash impairment charges relating to the oil and gas and iron ore assets, the iron ore business relating to the Liberian assets, Bellary assets in the iron ore business, the copper mine of Tasmania, voluntary retirement schemes across the Vedanta group, reversal of provision of District Mineral Fund, charges pursuant to adverse arbitration orders and acquisition expenses.

Oil and gas

Vedanta's oil and gas business is owned and operated by Vedanta Limited, which is one of the largest independent oil and gas exploration and production companies and the largest private sector producer of crude oil in India. Vedanta's oil and gas business has a diversified asset base with six production and exploration blocks, one in Rajasthan, one on the west coast of India, three on the east coast of India and one in South Africa.

Revenue from Vedanta's oil and gas business increased from $1,222.7 million in fiscal year 2017 to $1,479.6 million in fiscal year 2018 mainly due to an improvement in Brent prices, which was partially offset by decrease in production volumes. Gross oil and gas production was 74.6 mboe, 69.3 mboe and 67.7 mboe, and working interest production was 46.9 mboe, 44.2 mboe and 43.3 mboe, respectively in the fiscal years 2016, 2017 and 2018. The production volumes of oil and gas decreased in fiscal year 2018 primarily due to natural field decline, which was partially offset by an increase in the volume from the infill wells in Mangala and Cambay.

Zinc

Vedanta's zinc business is divided into two segments, (i) the fully integrated India zinc business, comprising HZL's mining and production operations, and (ii) the international zinc business, also referred to as "Zinc International," comprising mainly mining operations in Namibia and South Africa.

Vedanta's total refined zinc and lead metal production increased from 896,424 tonnes in fiscal year 2017 to 1,043,487 tonnes in fiscal year 2018. Revenue of Vedanta's zinc business increased from $2,857.4 million in fiscal year 2017 to $3,903.3 million in fiscal year 2018, mainly driven by improved LME prices of zinc and lead, and an increase in production volumes. The LME price for zinc increased from $2,368 per tonne in fiscal year 2017 to $3,057 per tonne in fiscal year 2018, and the LME price for lead increased from $2,005 per tonne in fiscal year 2017 to $2,379 per tonne in fiscal year 2018.

India Zinc Business

Vedanta's fully integrated India zinc business is owned and operated by HZL. As of 31 December 2018, Vedanta controls HZL through its 50.1% ownership interest in Vedanta Limited, which owns 64.9% of the share capital in HZL. The GoI and intuitional and public shareholders hold the remaining 29.5% and 5.6% of HZL's share capital, respectively. HZL's business includes five zinc-lead mines, one rock phosphate mine, four hydro metallurgical zinc smelters, two lead smelters, one pyro metallurgical zinc-lead smelter, eight sulphuric acid plants, one silver refinery and six captive power plants in Rajasthan, India. Additionally, HZL has processing and refining facilities for zinc in Haridwar and for zinc, lead and silver at Pantnagar, both in the State of Uttarakhand, India.

Vedanta's India zinc total metal production increased from 810,996 tonnes in fiscal year 2017 to 959,272 tonnes in fiscal year 2018 owing to the consistent availability of metal concentrate throughout the year and higher smelter efficiencies. Revenue of Vedanta's India zinc business increased from $2,525.0 million in fiscal year 2017 to $3,368.7 million in fiscal year 2018 due to improved LME prices of zinc, lead and an increase in production volumes.

International Zinc Business

As of 31 December 2018, Vedanta's international zinc business comprises (i) 100% ownership by Vedanta Limited of Skorpion, which owns the Skorpion mine and refinery in Namibia, (ii) 74% stake ownership by Vedanta Limited in Black Mountain Mining, which owns the Black Mountain mine and the Gamsberg project, in South Africa, and (iii) 100% ownership by Vedanta Limited of Lisheen, which owns the Lisheen mine in Ireland. The mine in Ireland is no longer in operation due to its closure in December 2015.

Vedanta's international zinc total metal production increased from 155,905 tonnes in fiscal year 2017 to 156,504 tonnes in fiscal year 2018 primarily due to higher grades and recoveries at the Black Mountain Mine, which were partially offset by a plant maintenance shutdown at Skorpion in the first quarter of fiscal year 2018, and lower levels of ex-pit ore. Revenue from the international zinc business increased to $534.7 million in fiscal year 2018 from $332.4 million in fiscal year 2017 mainly due to higher sales volumes and improved LME prices.

Copper

Overview

Vedanta's copper business comprises three major operations divided into two segments, namely (i) the India and Australia copper business, comprising Vedanta Limited's custom smelting operations in India and UAE and CMT's mining operations in Australia, which is currently suspended and is under care and maintenance since July 2014, and (ii) the Zambia copper business, comprising KCM's mining and smelting operations in Zambia. Vedanta's primary products in these business segments are copper cathodes and copper rods.

Vedanta's total copper cathode production has increased from 582,567 tonnes in fiscal year 2017 to 598,504 tonnes in fiscal year 2018, representing an annual growth rate of 2.7%, and its total copper rod production decreased from 207,530 tonnes in fiscal year 2017 to 202,539 tonnes in fiscal year 2018. Revenue of Vedanta's total copper business increased from $4,008.0 million in fiscal year 2017 to $5,115.7 million in fiscal year 2018, due to an increase in copper prices and an increase in production volumes of copper cathode.

India and Australia Copper Business

In India, Vedanta Limited is one of only two custom copper smelters with a primary market share of 33% by sales volume in fiscal year 2018 according to the International Copper Association, India. Vedanta Limited's copper operations include a smelter, refinery, phosphoric acid plant, sulphuric acid plant, copper rod plant and three captive power plants at Tuticorin in southern India, a refinery and two copper rod plants at Silvassa in western India, a precious metal refinery that produces gold and silver, a doré anode plant, and a copper rod plant at Fujairah, UAE.

Vedanta Limited's operations at Tuticorin, India are currently suspended due to ongoing litigation regarding the renewal of the CTO. On 29 March 2013, the TNPCB ordered the closure of the copper smelter at Tuticorin due to complaints about a noxious gas leak by local residents. On 1 April 2013, Vedanta Limited (then Sterlite) filed a petition before the NGT challenging the order of the TNPCB on the basis that the plant's emissions were within permissible limits. TNPCB through an order on 9 April 2018 rejected Vedanta Limited's CTO the Tuticorin copper plant and issued a direction to suspend production and disconnect electric supply at the plant. In May 2018, TNPCB, at the direction of the Government of Tamil Nadu directed Vedanta Limited to permanently close and seal the Tuticorin copper plant. In response to Vedanta Limited's appeal to the NGT against the aforementioned orders, the NGT set aside the impugned orders and directed TNPCB to renew the CTO in December 2018. However, the Supreme Court of India set aside NGT's orders on the grounds of maintainability in February 2019 and directed Vedanta Limited to file a writ petition before the Madras High Court challenging the impugned orders and seek interim relief. Vedanta Limited filed the writ petitions before the Madras High Court on 22 February 2019 and the next hearing is scheduled on 23 April 2019. See "Litigation — Proceedings related to the existing copper smelting plant and the proposed expansion at the Tuticorin plant" for more details on this litigation.

Vedanta Limited's wholly owned subsidiary, CMT, owns a copper mine in Tasmania, Australia, which is suspended and is under care and maintenance since July 2014.

Zambia Copper Business

KCM is largely an integrated copper producer with various facilities at Konkola, Nchanga, Nkana and Nampundwe, Zambia including mines, concentrators, smelters, acid plants, a tailings leach plant ("TLP") and a refinery. As of 31 December 2018, Vedanta owned 79.4% of the share capital of KCM. The remaining 20.6% was owned by ZCCM Investments Holdings Plc, a Lusaka and Euronext listed company which is 77.53% owned by the Zambian Government and 22.47% publicly held.

Iron Ore

Vedanta's iron ore business is owned and operated by Vedanta Limited. Vedanta is engaged in the exploration, mining and processing of iron ore in India. In addition, it manufactures pig iron and metallurgical coke, and operates two waste heat recovery plants of 30 MW each in Goa. Vedanta Limited's mining operations are carried out in Goa and Karnataka, India. On 7 February 2018 the Supreme Court of India passed a final order setting aside the second renewal of the mining leases granted by the State of Goa. The Supreme Court of India directed that all lease holders operating under a second renewal to stop all mining operations with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environment clearances are granted under the Mines and Minerals (Development and Regulation) ("MMDR") Act. Vedanta's mines in the state of Goa were impacted as a result of this order and operations at the mines in Goa are suspended.

Vedanta also owns iron ore assets in Liberia, comprising Western Cluster Limited. The Ebola epidemic in Liberia resulted in stoppage of drilling and exploration work for iron ore during fiscal year 2015 and the staff had to be evacuated. In consideration of the suspension of exploration in Liberia, low iron ore prices, geo-political factors and no plans for any substantive expenditure resulting in continued uncertainty in the project, an impairment charge of $227.5 million was recognised in fiscal year 2016.

Vedanta's total saleable iron ore production was 5.2 million dmt in fiscal year 2016, 10.9 million dmt in fiscal year 2017 and 7.1 million dmt in fiscal year 2018. Revenue decreased from $615.4 million in fiscal year 2017 to $487.5 million in fiscal year 2018 primarily due to decrease in sales volumes and low realisations of iron ore in Goa and lower volumes of pig iron, which was partially offset by higher realisations in the iron ore in Karnataka. Operations at Goa recommenced in 2016 subsequent to the withdrawal of the suspension order by state governments in 2015. As a result of the mining suspension in Goa, Vedanta recognised an impairment of assets in its fiscal year 2018, primarily for mining reserves, and $533.9 million net of tax ($758.5 million before tax).

Aluminium

Vedanta's aluminium business is in Chhattisgarh and Odisha. Vedanta operates the business in the state of Chhattisgarh through BALCO, and aluminium operations in Odisha is a division of Vedanta Limited. Vedanta's primary products in this business segment are aluminium ingots, wire rods, billet and rolled products.

BALCO's operations include two bauxite mines, four captive power plants after the conversion of the 300 MW from independent power plant ("IPP") to captive power plant ("CPP") in January 2019 and, smelting and fabrication facilities in central India. Vedanta Limited's operations include two aluminium smelters and two captive power plants at Jharsuguda and an alumina refinery and a captive power plant at Lanjigarh in Odisha in eastern India.

Currently, Lanjigarh has a capacity of two mtpa along with a 90 MW co-generation power plant. On 20 November 2015, the MoEF granted environmental clearance for the expansion of the alumina refinery up to four mtpa and environmental clearance up to six mtpa will be received as an amendment to existing environmental clearance after the completion of the land acquisition of the balance area of 666.03 hectares. Further, consent to establish six mtpa and consent to operate two mtpa have also been obtained. However, the environmental clearance for the expansion of the alumina refinery at Lanjigarh was challenged by an individual, Prafulla Samantra, before the NGT, where the MoEF, the Odisha State Pollution Control Board and Vedanta Limited have been made parties, in November 2015. The Worley Parsons report on expansion was completed in August 2018 and as per the recommendations Vedanta is progressing with expansion schedule. Vedanta updated the Board about the progress in October 2018 Board meeting and got in principal approval on the proposal. The expansion will be done in two phases — the first phase will involve an expansion of approximately two to four mtpa and the second phase will involve an expansion of approximately four to six mtpa.

Vedanta's total aluminium production increased from 1,213,402 tonnes of aluminium in fiscal year 2017 to 1,675,093 tonnes in fiscal year 2018, representing an annual growth rate of 38.0%. Revenues from Vedanta's aluminium business increased from $2,040.0 million in fiscal year 2017 to $3,587.6 million in fiscal year 2018, due to an increase in LME prices of aluminium and an increase in production volumes.

Commercial Power Generation

Vedanta's commercial power generation business in India is comprised of the operations of Vedanta Limited, TSPL, BALCO, MEL and wind power plants operated by HZL.

Vedanta owns and operates several commercial power plants, namely Vedanta Limited's 600 MW coal-based thermal power plant in Jharsuguda, MEL's 106.5 MW coal-based thermal power plant in Mettur Dam, HZL's wind power plants in Gujarat, Karnataka, Maharashtra, Tamil Nadu and Rajasthan aggregating 274.2 MW, BALCO'S 300 MW CPP (which was converted from IPP to CPP in January 2019) and TSPL's 1,980 MW coal-based thermal power plant at Talwandi Sabo.

The three units of 600 MW each of coal-based thermal power plants in Jharsuguda have been converted from commercial power plants to CPPs from 1 April 2016 and is now part of the aluminium business. MEL has been under care and maintenance since May 2017 due to lower demand in southern India. TSPL has entered into a PPAs with Punjab State Electricity Board ("PSEB") for the sale of electricity generated at the TSPL power plants and TSPL receives a tariff based on the plant's availability.

Sales of units of power decreased from 12,916 million units in fiscal year 2017 to 11,041 million units of power in fiscal year 2018. The revenue from Vedanta's commercial power generation business increased from $835.9 million in fiscal year 2017 to $877.0 million in fiscal year 2018 mainly due to one-off revenue recognition of $35 million and $22 million at BALCO and at Jharsuguda IPP, respectively, which was partially offset by a decrease in power sales.

Factors Affecting Vedanta's Results of Operations

Vedanta's results of operations are primarily affected by commodity prices, costs of production and efficiency, production output and mix, government policy in India, South Africa and Zambia and exchange rates. Each of these key factors is discussed below.

Generally, the metals Vedanta sells in India are sold at a premium to the LME market price due to a number of factors, including the customs duties levied on imports by the GoI, the costs to transport metals to India and regional market conditions. See "— Indian Government Policy". As a result, Vedanta endeavours to sell as large a quantity of its products as possible in India.

Vedanta has historically engaged in hedging strategies to a limited extent to partially mitigate its exposure to fluctuations in commodity prices, as further described in "Market Risk Disclosure — Commodity Price Risk".

Commodity Prices

Vedanta's results of operations are significantly affected by the commodity prices of the natural resources that Vedanta produces, which are based on LME prices of metals produced, benchmark prices of oil, gas and iron ore and by the TcRc of Vedanta's copper business. While natural resource producers are unable to influence the commodity or benchmark prices directly, events such as changes in copper smelting or commodity production capacities, temporary price reductions or other attempts to capture market share by individual natural resources producers, including by Vedanta, may have an effect on market prices.

Moreover, the prices realised by Vedanta can, to some extent, be affected by the particular terms Vedanta is able to negotiate for the contractual arrangements it enters into with buyers. Price variations and market cycles have historically influenced and are expected to continue to influence, Vedanta's financial performance. During fiscal year 2018, firmer commodity prices positively impacted the revenue and operating profit of Vedanta.

Crude oil and natural gas

During the second half of fiscal year 2018 crude oil prices recovered, with Brent peaking at $71 per barrel in January 2018 for the first time since December 2018 The increase was supported by healthy crude demand during the winter season and consistency in OPEC-led output cuts. Brent crude oil averaged $58 per barrel, with a closing rate of $67 per barrel as at 29 March 2018.

The following table sets out the price of Dated Brent, an international benchmark oil blend, according to Platts, McGraw Hill Financial ("Platts"), for fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2017 and 2018

	Year Ended 31 March			**Nine Months Ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
			($ per barrel)		
Dated Brent	47.5	48.6	57.5	54.4	72.8

Zinc

The revenue of Vedanta's zinc business fluctuates based on the volume of sales and the LME price of zinc and lead and LBMA price for silver. Vedanta's India zinc business is fully integrated, so its profitability is dependent upon the difference between the LME price of zinc, lead and silver and the cost of production, which includes the costs of mining and smelting.

The following table sets out the daily average zinc, lead and silver LME prices for each of fiscal years 2016, 2017, 2018 and for the nine months ended 31 December 2017 and 2018:

	Year Ended 31 March			**Nine Months Ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
	($ per tonne, except for silver which is $/ounce)				
Zinc LME	1,829	2,368	3,057	2,935	2,756
Lead LME	1,768	2,005	2,379	2,331	2,150
Silver LBMA	15.2	17.8	16.9	16.9	15.4

Copper

The revenue of the copper India business fluctuates based on the volume of sales and the LME price of copper. Vedanta's copper India business is custom smelting and refining. As a result, Vedanta Limited's profitability is significantly dependent upon the market rate of the TcRc. Vedanta Limited purchases copper concentrate at an LME-linked copper price for the relevant quotation period less a TcRc that it negotiates with its suppliers, but which is influenced by the prevailing market rate for the TcRc. The market rate for the TcRc is significantly dependent upon the availability of copper concentrate, worldwide copper smelting capacity and transportation costs. The TcRc that Vedanta Limited is able to negotiate is also substantially influenced by the TcRc terms established by certain large Japanese custom smelters. The profitability of Vedanta's copper India business as to the portion of its copper business where it sources copper concentrate from third parties, which accounted for almost 100% of copper concentrate requirement, is thus dependent upon the amount by which the TcRc Vedanta Limited is able to negotiate exceeds its smelting and refining costs. The profitability of Vedanta's copper India operations is also affected by the prices it receives upon the sale of by-products, such as sulphuric acid and precious metals, which are generated during the copper smelting and refining process. The prices Vedanta receives for by-products can vary significantly, including as a result of changes in supply and demand and local market factors in the location the by-product is produced. See "Risk Factors — Risks Relating to Business — Vedanta's businesses currently depend upon third party suppliers for a substantial portion of its raw material requirements and their segment results and segment margins depend upon the market prices for such raw materials".

The following table sets out the average TcRc that Vedanta's Copper India business realised for each of fiscal years 2016, 2017 and 2018 and the nine months ended 31 December 2017 and 2018:

	Year Ended 31 March			**Nine Months Ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018***
			(US cents per lb)		
Copper TcRc	24.1	22.4	21.3	21.1	NA

* Tuticorin smelter was not in operation in nine months ended 31 December 2018.

The LME price of copper significantly affects the revenues and profitability of KCM's copper business as it is partially integrated.

The following table sets out the daily average copper LME price for each of fiscal years 2016, 2017 and 2018 and the nine months ended 31 December 2017 and 2018:

	Year Ended 31 March			**Nine Months Ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
			($ per tonne)		
Copper LME	5,211	5,152	6,451	6,280	6,378

Aluminium

The revenue of Vedanta's aluminium business fluctuates based on the volume of sales and the LME price of aluminium. In nine months ended 31 December 2018, 67% of BALCO's alumina requirement and 62% of Vedanta Limited's alumina requirement came from third parties, with the rest supplied by Vedanta's alumina refinery at Lanjigarh. For the portion of Vedanta's aluminium business where the required alumina is sourced internally, profitability is dependent upon the LME price of aluminium less the cost of production, which includes the costs of bauxite mining at BALCO's mines or cost of bauxite received from Odisha Mining Cooperation, the refining of bauxite into alumina at Vedanta's aluminium refinery and the smelting of alumina into aluminium. For the portion of the aluminium business where alumina is sourced from third parties, profitability is dependent upon the LME price of aluminium less the cost of the sourced alumina and the cost of smelting. See "Risk Factors — Risks Relating to Business — Vedanta's businesses currently depend upon third party suppliers for a substantial portion of its raw material requirements and their segment results and segment margins depend upon the market prices for such raw materials".

The following table sets out the daily average aluminium LME prices for each of fiscal years 2016, 2017 and 2018 and the nine months ended 31 December 2017 and 2018:

	Year Ended 31 March			Nine Months Ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ per tonne)		
Aluminium LME	1,590	1,688	2,046	2,009	2,094

Iron ore

The revenue of the iron ore business fluctuates based on the volume of sales and the market price of iron ore. The prices for iron ore are significantly dependent on the global and regional imbalances between the demand and supply of iron ore, worldwide steel-making capacity and transportation costs. Spot prices fluctuate based on short-term imbalances between demand and supply.

Production Costs and Efficiency

The results of operations of Vedanta are, to a significant degree, dependent upon its ability to efficiently run its operations and maintain low costs of production. Efficiencies relating to recovery of metal from ore, process improvements, by-product management and increasing productivity help drive costs down. Costs associated with mining and metal production include energy costs, ore extraction and processing costs at the captive mines, labour costs and other manufacturing expenses.

The cost of production also includes the cost of alumina for Vedanta's aluminium business. It does not include the cost of copper concentrate for Vedanta's copper business, though such cost is included in its cost of sales.

In the oil and gas business, production costs consist of expenditure incurred towards the production of crude oil and natural gas including statutory levies, such as cess, royalties and production payments payable pursuant to the PSCs as well as operational expenditures such as costs relating to repairs on, and maintenance of facilities, power generation and fuel for such facilities, water injection, insurance, and storage, transportation and freight of crude oil and natural gas, among others.

Energy cost is the most significant component of the cost of production of Vedanta's metal production businesses. Most of Vedanta's power requirements are met by captive power plants which are primarily coal-fuelled. Thermal coal, diesel fuel and fuel oil, which are used to operate Vedanta's power plants, and metallurgical coke, which is used in the zinc smelting process, are currently sourced from a combination of long-term and spot contracts. The aluminium business has high energy consumption due to the power-intensive nature of aluminium smelting. Coal is sourced from linkage coal, import and domestic purchase. Any change in coal prices or the mix of coal that is utilised, primarily whether the coal is sourced locally or imported, can affect the cost of generating power.

For the zinc and iron ore businesses and the portions of the copper Zambia and aluminium businesses where ore is sourced from Vedanta's own mines, ore extraction and processing costs affect the cost of production. In the zinc and iron ore businesses, the ore extraction and processing costs are approximately 25% to 35% of the overall cost of production.

In the aluminium business, alumina costs represent approximately one-third of the cost of production of aluminium. In addition, a significant cost of production in the zinc business is the royalty that HZL pays on the lead-zinc ore that is mined. The royalty is a function of the LME prices of zinc and lead. See "— Indian Government Policy — Taxes and royalties". In the iron ore business, the principal activities are ore extraction, processing and sales. The cost of transporting ore from the mines to the port and the ore extraction cost account for a majority of the total cost of production for Vedanta Limited.

In the commercial power generation business, production costs are mainly coal costs, and the coal is primarily sourced domestically.

Labour costs are principally a function of the number of employees and increases in compensation from time to time. Improvements in labour productivity in recent years have resulted in a decrease in the per-unit labour costs. The majority of BALCO's mining operations, a substantial portion of HZL's and Vedanta's iron ore mining operations, Vedanta Limited's oil and gas operations, a limited number of functions at Vedanta's copper, zinc and aluminium smelting operations and certain operations at Konkola Copper Mines and Tailing leaching plant at KCM, Zambia are outsourced to third-party contractors.

Other manufacturing expenses include, among other things, additional materials and consumables that are used in the production processes and routine maintenance to sustain ongoing operations. None of these represents a significant portion of Vedanta's costs of production.

Cost of production as reported for Vedanta's metal products includes an offset for any amounts Vedanta receives upon the sale of the by-products from the refining or smelting processes. The cost of production is divided by the daily average exchange rate for the year/period to calculate the US dollar cost of production per lb or tonne of metal as reported.

Production costs and costs per unit are also significantly affected by changes in production volumes and variable costs. Therefore, Vedanta's production levels and variable costs are key factors in determining its overall cost competitiveness.

Costs of production for each of fiscal years 2016, 2017 and 2018, and for the nine months ended 31 December 2017 and 2018 are reflected in the following table:

	Year Ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
Oil and gas (Opex) ($ per boe)	6.5	6.2	6.6	6.3	7.4
Zinc business (India) ($ per tonne)(1)(2)	1,045	1,154	1,365	1,361	1,382
Zinc business (International) ($ per tonne)(1)	1,431	1,417	1,603	1,495	2,131
Iron Ore ($ per tonne)	24.6	18.0	23.5	22.0	13.7
Copper India business (US cents per lb)(3)	3.2	5.2	5.7	6.1	NA
Copper Zambia business (US cents per lb)(1)	261.0	278.9	314.8	340.6	347.9
Aluminium business ($ per tonne)(4)	1,572	1,463	1,887	1,855	1,994

(1) Cash costs per unit for mining, smelting and refining operations (net of by-products).

(2) Includes royalties $241 per tonne, $324 per tonne, $389 per tonne, $367 per tonne and $357 per tonne in fiscal years 2016, 2017 and 2018 and the nine months ended 31 December 2017 and 31 December 2018, respectively.

(3) Cash costs per unit for smelting and refining operations (net of by-products).

(4) Cash costs per unit (net of by-products).

Production Volume and Mix

Production volume has a substantial effect on Vedanta's results of operations. Vedanta is generally able to sell all of the products it produces, so its revenue generally fluctuates as a result of changes in production volume. Production volume is dependent on production capacity, which has increased in recent years in the majority of Vedanta's businesses. For Vedanta's mining operations, production volume is also dependent upon the quality and consistency of the ore. Per unit production costs are also significantly affected by changes in production volume in that higher volumes of production generally reduce the per unit production costs. Therefore, production levels are a key factor in determining Vedanta's overall cost competitiveness. Vedanta has benefited from significant economies of scale as it has generally increased production volumes in recent years.

The following table summarises the production volumes for Vedanta's primary products in each of fiscal years 2016, 2017 and 2018 and the nine months ended 31 December 2017 and 31 December 2018:

		Year Ended 31 March			Nine Months Ended 31 December	
	Product	2016	2017	2018	2017	2018
		(Tonnes unless otherwise stated)				
Segment						
Oil and gas business	Oil and Gas — Gross (mboe)	74.6	69.3	67.7	50.6	52.1
	Oil and Gas — Working Interest (mboe)	46.9	44.2	43.3	32.3	33.1
Zinc business						
— HZL	Zinc	758,938	671,988	791,026	585,119	521,560
	Lead(1)	144,919	139,009	168,246	118,445	145,254
	Silver (m.oz)(2)	13.65	14.55	18.04	12.46	15.68
— Skorpion	Zinc	82,029	85,427	84,215	62,207	44,943
— Black Mountain Mining	Zinc in Concentrate	29,272	28,708	27,175	21,694	19,300
	Lead in Concentrate	34,114	41,770	45,113	37,412	26,990
— Lisheen	Zinc in Concentrate	71,825	—	—	—	—
	Lead in Concentrate	8,726	—	—	—	—
Copper business						
— Vedanta Limited	Copper	384,047	402,730	403,168	297,107	63,093*
— KCM	Copper	181,673	179,837	195,337	155,233	144,664
	Total copper	**565,720**	**582,567**	**598,504**	**452,340**	**207,757**
— Vedanta Limited	Copper rods	210,800	207,530	202,539	139,169	86,282
Iron ore business	Saleable ore (dry million tonnes)	5.2	10.9	7.1	5.4	3.5
Aluminium business						
— BALCO	Aluminium	331,618	427,079	569,051	426,792	427,809
— Vedanta Limited	Alumina	970,893	1,207,957	1,209,436	858,616	1,077,005
	Aluminium	591,725	786,323	1,106,042	771,461	1,049,990
	Total aluminium	**923,343**	**1,213,402**	**1,675,093**	**1,198,253**	**1,477,798**
Commercial power generation Business	Power sold (million units)	12,121	12,916	11,041	7,933	9,995

(1) Excludes lead contained in lead with a high content of silver (high silver lead) produced from the pyro metallurgical lead-zinc smelter for captive use, which was 6,657 tonnes, 5,285 tonnes, 6,946 tonnes, 5,376 tonnes and 5,131 tonnes in fiscal years 2016, 2017 and 2018, and nine months ended 31 December 2017 and 2018, respectively.

(2) Excludes silver contained in lead with high content of silver (high silver lead) produced from pyro metallurgical zinc-lead smelter for captive use which was 1.1 moz, 0.9 moz, 1.2 moz, 0.9 moz and 0.9 moz in fiscal years 2016, 2017 and 2018, and nine months ended 31 December 2017 and 2018, respectively.

Periodically, Vedanta's facilities are shut down for planned and unplanned repairs and maintenance which temporarily reduces production volume. In addition, the mix of products Vedanta produces can have a substantial impact on its results of operations as it has different margins in each of its segments, and within each segment its margins vary between the lower margins of primary metals and the higher margins of value-added products such as copper rods and aluminium rolled products. For example, copper cathodes are converted in the copper rod plant into copper rods, a value-added product which has a higher margin than copper cathodes. As copper rods have higher margins, Vedanta endeavours to sell as large a percentage of copper rods as possible. As the production volume of its various products fluctuates primarily based on market demand and production capacity for such products, the percentage of revenue from those products will also fluctuate between higher and lower margin products, which will in turn cause Vedanta's operating profit and operating margins to fluctuate.

Indian Government Policy

India customs duties

Vedanta sells its products in India at a premium to the LME price, due in part to the customs duties payable on imported products. Profitability is affected by the levels of customs duties as Vedanta prices its products sold in India generally on an import-parity basis.

Vedanta also pays a premium on certain raw materials that it imports or which are sourced locally but which are priced on an import-parity basis as a result of customs duties, with copper concentrate, coal, petroleum products, alumina, carbon and caustic soda being the primary examples.

The following table sets forth the customs duties that were applicable for the periods indicated:

	13 August 2013 to 29 February 2016	**1 March 2016 to Present**
Copper	5.0%	5.0%
Copper concentrate	2.5%	2.5%
Zinc	5.0%	5.0%
Lead	5.0%	5.0%
Silver	10.0%	10.0%
Aluminium	5.0%	7.5%
Steel	10.0%	10.0%

With effect from 2 February 2018, Vedanta is liable to pay an additional surcharge (Social Welfare Surcharge), presently at the rate of 10.0% of the total customs duty payable except for silver which is 3.0%. As Vedanta sells the majority of the commodities it produces in India, Vedanta's profitability is dependent to a certain extent on the continuation of import duties and any reduction may have a material adverse effect on its results of operations and financial condition.

India export duties

The GoI levies duty on the export from India of certain products mentioned under the second schedule of the Customs Tariff Act 1975, including iron ore and concentrates, at a specified rate (ad valorem on the Free on Board or FOB value of exports).

Effective from 30 December 2011, the GoI raised export duty on iron ore fines and lumps from 20.0% to 30.0%, ad valorem on the FOB value of exports. Effective from 30 April 2015, the export duty on iron ore fines with Fe content less than 58.0% is 10.0% and equal to or more than 58.0% iron, duty rate is 30.0% and for iron ore lumps is 30.0%. With effect from 1 March 2016, the export duty on iron ore lumps (below 58.0% Fe content) has been reduced from 30.0% to nil and iron ore fines (below 58.0% Fe content) has been reduced from 10.0% to nil.

Indian export incentives

The GoI provides a variety of export incentives to Indian companies. Indian exports of copper, zinc and aluminium receive assistance premia in the form of drawback from the GoI, which have been progressively reduced since 2002, consistent with similar reduction in custom duties. Export incentives do not outweigh the Indian market price premia. Accordingly, notwithstanding the export incentives, Vedanta endeavours to sell as large a quantity of its products as possible domestically.

In fiscal years 2016, 2017 and 2018, exports accounted for 25.0%, 27.0% and 29.0%, respectively, of Vedanta's India zinc business revenue. The following table sets out the export assistance premiums (all industry rates for duty drawbacks), as a percentage of the FOB value of exports, on zinc concentrate, zinc ingots, lead concentrate and lead ingot for the periods indicated:

	22 November 2014 to 14 November 2015	**15 November 2015 to date**
	(Percentage of FOB value of exports)	
Zinc concentrate	1.0%	Nil
Zinc ingots	1.9%	1.5%
Lead concentrate	1.0%	Nil
Lead Ingot	1.9%	2.4%

In fiscal years 2016, 2017 and 2018, exports accounted for 40.4%, 44.0% and 52.2 respectively, of Vedanta's Indian copper business revenue. The export assistance premiums, as a percentage of the FOB value of exports, on copper cathode and copper rods for the periods between 1 October 2011 to 20 September 2013 was 2.0% each. For the period from 21 September 2013 to 21 November 2014, the export assistance premiums (all India rates for duty drawbacks) for copper cathode and copper rods was 1.7% each which was revised to 1.9% effective from 22 November 2014 to date.

Further, with effect from 1 April 2015, the New Merchandise Exports from India Scheme was introduced in place of Market linked focus product scheme. In the new scheme, no export incentive has been notified for few copper products.

In fiscal years 2016, 2017 and 2018, exports accounted for 26%, 47% and 57% respectively, of Vedanta's aluminium business revenue. The following table sets out the export assistance premiums, as a percentage of the FOB value of exports, on aluminium ingots, aluminium rods and aluminium rolled products for the periods indicated:

	22 November 2014 to 14 November 2016	15 November 2016 to date
	(Percentage on FOB value of exports)	
Aluminium ingots	1.9%	1.0%
Aluminium Rods	1.9%	1.5%
Aluminium billets	1.9%	1.0%
Aluminium rolled products	1.9%	1.5%

The GoI may further reduce export incentives in the future, which may have a material adverse effect on Vedanta's results of operations and financial condition.

Taxes and royalties

Income tax on Indian companies is presently charged at a statutory rate of 30% (a 25% tax rate is applicable in certain cases), plus an applicable surcharge of 12% on the tax and has an additional tax by way of health and education cess of 4%, on the tax including surcharge, which results in an effective statutory tax rate of 34.94%. Presently, Vedanta's effective tax rate is lower than the statutory rate, benefiting from tax incentives on infrastructure projects in specific locations. Vedanta has in the past had an effective tax rate lower than the statutory rate, benefiting from tax incentives on infrastructure projects in specific locations and project in a specific economic zone.

Profits of companies in India are subject to either regular income tax or a MAT, whichever is greater. The effective MAT rate is currently 21.5%, after applying surcharge and education cess, for Indian companies. The excess of amounts paid as MAT over the regular income tax amount during the year may be carried forward and applied towards regular income taxes payable in any of the succeeding fifteen years subject to certain conditions.

The tax rates imposed on us in respect of dividends paid in prior periods have varied. According to the Finance Act, 2014, dividend distribution tax is to be levied on distributable surplus grossed up with dividend distribution tax. This has resulted in an increase in the dividend distribution tax of more than 20% from 17.0% in the earlier year. Further, the Finance Act 2015 has increased the surcharge from 10% to 12%, which resulted in effective tax rate of 20.4% with effect from fiscal year 2016. The Finance Act, 2018 increased the rate of cess from 3% to 4% which will result in an effective dividend distribution tax rate of 20.56% from 1 April 2018. As per provisions of Section 115O of the Income Tax Act, 1961, dividend distribution tax is payable by the company declaring or distributing or paying the dividends. Dividends from Vedanta's subsidiaries to Vedanta are also subject to this tax. However, as per exemption provisions contained in Section 10(34) of the Income Tax Act, 1961, Vedanta being a resident corporate of such subsidiary declaring dividends is not liable to pay income tax in India upon the receipt of any such dividends. Separately, when Vedanta further declares dividend then it is not liable to pay dividend distribution tax on the amount of dividends to the extent received from subsidiaries during the same financial year. Provisions of Section 115O of The Income Tax Act provide that if a company receives a dividend from any of its Indian subsidiaries (where the company holds more than 50% shares in the said subsidiary) during the year and such subsidiary has paid a tax on its dividends, then the dividend distributed by the parent company in the same year to the extent of dividend received from the Indian subsidiary shall not be subject to dividend distribution tax.

Previously Service tax was applicable at 14% with effect from 1 June 2015 until 1 July 2017. Further, an additional "Swacch Bharat Cess" at 0.5% with effect from 14 November 2015 and "Krishi Kalyan Cess" at 0.5% with effect from 1 June 2016 on the value of taxable services were applicable until 1 July 2017. Accordingly, the effective service tax rate until 1 July 2017 was payable at 15%.

Vedanta paid service tax in India as a service provider and service recipient.

Service Provider: Vedanta paid service tax as a service provider in the range of 12.36% to 15.0% during the period prior to 1 July 2017 under the following categories:

- Business Support Services;

- Oil Transfer Service;

- Port Service; and

- Management Consultant Service.

Service Recipient: Vedanta paid service tax as a service recipient under following categories:

- Foreign Service Providers: Indian subsidiaries are responsible for paying service tax directly to tax authorities in the case of receipt of service from foreign service providers who do not have any permanent establishment in India. In the case of service providers having a permanent establishment in India, they were responsible for recovering the applicable service taxes and paying them to tax authorities. Indian subsidiaries also paid service tax the as recipient of services on the company overheads payable to Vedanta;

- Service tax on fees payable to directors of company: Vedanta paid service tax on the fees payable to non-executive/independent directors of Indian companies. The fee includes director sitting fees and/or any commission payable to the directors;

- Other services: In case of services received from any goods transport agency and payments towards any sponsorship, Vedanta was responsible for paying service tax directly to tax authorities as per the applicable rates; and

- Domestic Service Providers: In case of certain services received from non-company domestic service providers, liability of payment of service tax was placed on the recipient of services with effect from 1 July 2012 under Notification No. 30/2012-Service Tax dated 20 June 2012 as per the applicable rates.

GST

With effect from 1 July 2017, the new "Goods and Services tax" has been implemented in India, which replaced the previous indirect tax regime, which resulted in the levy of multiple rate of federal and state taxes with respect to the operations undertaken by businesses. Transition to the GST regime was a tax reform, which is aimed at addressing anomalies and strengthening the concept of unified market. GST is a supply driven concept and applies on the supply of goods and services. Towards this end, most central and state levies (such as excise duty, service tax, countervailing duty, special additional duty, central sales tax, value added tax, entertainment tax and luxury tax) have been subsumed into GST. Therefore, the previously taxable events are replaced by a single taxable event of supply of goods and services under GST. Basic customs duty ("BCD") and related customs cess continue to be applicable on import of goods.

Taxes under GST apply as under:

- Central Goods and Services Tax and State Goods and Services Tax is simultaneously levied on intra-state supply of goods and services.

- Integrated Goods and Services Tax is levied on imports and inter-state supply of goods and services.

- In addition, compensation cess also applies on certain specified goods and services.

The general rate of GST on Vedanta's output supplies is 18.0%. However, supply of iron ore attracts GST at the rate of 5.0%, whereas silver attracts GST at 3.0%. Further, crude oil and natural gas will be subject to GST from the date to be notified by GST council and therefore, until the time GST council notifies inclusion of these products in GST, they would continue to attract existing indirect tax levies. Goods imported for the purposes of "petroleum operations" would be subject to Integrated Goods and Service Tax at 5.0%. BCD will continue to be exempt. Similar exemption notification has also been issued to tax inter-state and intra-state supplies of goods for petroleum operations at effective rate of 5.0%. Procurement of coal attracts GST compensation cess at ₹400 per ton in addition to GST rate of 5.0%. Effective 1 July 2017, CVD and SAD was subsumed in IGST which is applicable at the rates as mentioned in below table:

	Integrated Goods and Service Tax rate from 1 July 2017
Copper	18.0%
Copper concentrate	5.0%
Zinc	18.0%
Lead	18.0%
Silver	3.0%
Aluminium	18.0%
Iron Ore	5.0%
Steel	18.0%

Vedanta previously paid an excise duty of 12.5% with effect from 1 March 2015 to 30 June 2017 on all of Vedanta's domestic production intended for domestic sale. For the period from 17 March 2012 to 28 February 2015, the excise duty was 12% and an additional charge of 3.0% on the excise value. Prior to 1 July 2017 Vedanta charged the excise duty and additional charge to its domestic customers. Vedanta Limited paid excise duty on metallurgical coke at the rate 6.0% and on pig iron of 12.5%. HZL paid excise duty on silver at the rate of 8.5% effective from 1 March 2016 (8.0% prior to that) until 1 July 2017 and an additional charge of 3.0% on the excise duty has been eliminated with effect from 1 March 2015. Goods procured for the purposes of "Petroleum Operations" and which were exempt from customs duty were also exempt from excise duty under notification 12/2012-Central Excise dated 17 March 2012, Sr. No 336 provided conditions as given were satisfied, all goods supplied under international competitive bidding and were exempt from customs duty.

Vedanta is also subject to government royalties. It pays royalties to the State Governments of Chhattisgarh, Rajasthan, Goa and Karnataka in India based on its extraction of bauxite, lead-zinc ore and iron ore. Most significant of these is the royalty that HZL is currently required to pay to the State of Rajasthan, where all of HZL's mines are located, at a rate of 10% with effect from 1 September 2014 (the rate was 8.4% from 13 August 2009 to 31 August 2014) of the zinc LME price payable on the zinc metal contained in the concentrate produced, 14.5% (the rate was 12.7% from 13 August 2009 to 31 August 2014) of the lead LME price payable on the lead metal contained in the concentrate produced and at a rate of 7.0% of silver LME price chargeable on silver-metal produced. In addition, a further amount of royalty effective from 12 January 2015, for DMF at 30% of base royalty and NMET at 2% of base royalty, has been notified. The royalties paid by BALCO on the extraction of bauxite are not material to Vedanta's results of operations. Vedanta Limited pays royalties at 15% of pit mouth value ("PMV") declared by Indian Bureau of Mines on monthly basis for its iron ore business along with DMF at 30% of base royalty and NMET at 2% of base royalty as notified.

Royalty is also payable at Vedanta Limited to the state government of Rajasthan, Andhra Pradesh and Gujarat for the extraction of crude oil and natural gas. Vedanta Limited also pays cess to the GoI. Generally in respect of oil and gas operations, royalty and cess payments are made by the joint operation partners in proportion to their participating interest and are cost recoverable.

For the Rajasthan block, entire royalty payments are made by ONGC at the rate of 20% of wellhead value for crude oil and 10% of well-head value for natural gas and are cost recoverable. Until February 2016, cess is paid at the rate of ₹4500/MT for crude oil; pursuant to amendments in the Finance Act 2016, cess is paid at the rate of 20% ad-valorem from March 2016 onwards. National Calamity Contingent Duty (NCCD) is paid at the rate of ₹50/MT. Sales tax payments are made at the rate of 2% (central sales tax) on sale of both crude oil and natural gas.

For the Block PKGM-1 (the "Ravva Block"), royalty is ₹481/MT and cess is fixed at ₹900/MT on crude oil. Royalty on natural gas is 10% of well-head value of gas. Sales tax payments stand at 2% (central sales tax) or 5% (value added tax) on crude oil and 14.5% on natural gas.

For the Cambay block, the entire royalty and cess payments are made by ONGC and are not cost recoverable. However, after February 2018, Vedanta shares the incremental royalty applicable on Cambay Block infill production. NCCD is paid at the rate of ₹50/MT. Sales tax payments (central sales tax) are made at a rate of 2% on crude oil and 15% (value added tax) on natural gas.

For the Block KG-ONN/2003-1 (the "KGONN Block"), royalty is payable at the rate of 12.5% of the well head value for crude oil and 10% of well head value for natural gas and are cost recoverable. Sales tax payments stand at 2% (central sales tax) or 5% (value added tax) on crude oil and 14.5% on natural gas.

For all the above blocks, education surcharge was paid at 3% of applicable cess value, which has been discontinued as per Ministry of Finance circular with effect from December 2013.

Royalties in Zinc International business are as follows:

- 3.0% of sale value of the products for Skorpion; and

- 7.0% of turnover for BMM. The royalty rate applied on the turnover is 0.5% if the adjusted earnings before interest and tax ("adjusted EBIT") is negative, and in the event the adjusted EBIT is positive, the royalty rate applied on the turnover is 0.5% plus the rate computed at 100/9 times the adjusted EBIT upon turnover. In any event, the maximum royalty rate is capped at 7.0%.

Tax Incentives

There are several tax incentives available to companies operating in India, including the following:

- profits from newly established units in special economic zones and specified geographic locations are entitled to a tax holiday for a specified period;

- profits from newly constructed power plants (including for captive use) benefit from a tax holiday for a specified period;

- tax benefits on investments in mutual funds for holdings beyond 12 months and tax exemption on interest on specified public sector bonds subject to certain conditions; however, tax benefits on the disposal of mutual fund units for investments made on or after 1 April 2018 have been withdrawn following recent tax law changes.

Vedanta has benefited from these tax incentives. Such benefits have resulted in lower effective tax rates in some of its operating subsidiaries such as Vedanta Limited, BALCO, and HZL. Vedanta Limited, BALCO, and HZL have considerable investments in captive power plants enjoying tax exemptions, and HZL has also benefited from establishing wind energy generating projects. HZL also benefits from a tax holiday exemption with respect to its zinc processing and refining unit at Haridwar and its zinc, lead and silver processing and refining unit in Pantnagar in the State of Uttarakhand in northern India. In addition, a large part of Vedanta Limited's, Vedanta Limited's and HZL's investments of their surplus cash is in tax-efficient or tax-exempt instruments. The commercial power business also enjoys a tax exemption on their independent power plants for ten years from the commencement of their operations. The Vizag port is also subject to favourable tax treatment.

Zambian Government Policy

KCM's results of operations are significantly impacted by a number of Zambian and foreign governmental policies, including fiscal and economic policy, industrial policy, infrastructure spending policy, mining policy, direct and indirect taxes and export-import policy. Such governments may at any time effect a change in any of these policies, which may adversely affect KCM's results of operations.

KCM signed a Development Agreement with the Zambian Government in 2000 (the "Development Agreement"). The Development Agreement was subsequently amended in 2004. The Development Agreement provided for legislative and taxation certainty for an agreed period. The existence of the Development Agreement was provided for by the Mines and Minerals Act 1995 which was repealed on 1 April 2008.

The tax rate on profit generated out of integrated operations and custom smelting currently stands at 30% with tax rate on hedge at 35%.

The loss from integrated operations cannot be carried forward beyond ten subsequent years after the year in which the loss is incurred. The set off of loss in a particular year is allowed up to a maximum of fifty percent of the income of that year.

Tax deductions for mining capital expenditure are available at the rate of 25% on a straight line basis.

In addition, Amendments to The Zambia's Mines and Mineral Development Act 2015 were formalised on 6 June 2016 which provides for a 'sliding scale' royalty rate with effect from 1 June 2016. As per the Zambia's Mines and Mineral Development Act 2018, there is a 5.5% royalty at a copper LME of < \$4,500 per tonne, 6.5% royalty at a copper LME between \$4,500 and \$6,000 per tonne, 7.5% royalty at a copper LME between \$6,000 and \$7,500 per tonne, 8.5% royalty at a copper LME between \$7,500 and \$9,000 per tonne and 10% royalty at a copper LME > \$9,000 per tonne. These new royalty rates were effective from 1 January 2019.

Exchange Rates

Vedanta's financial statements are presented in US dollars. However, its operating costs are influenced by the currencies of those countries where Vedanta's mines, fields and plants are located. A majority of its mines, fields and plants are located in India and, hence, the Indian Rupee is the currency in which most of its costs are incurred and whose fluctuation against the US dollar may have a significant impact on its financial results. When the Indian Rupee depreciates against the US dollar, Vedanta's financial results can improve as its costs of production become lower relative to the price it can obtain for its products in the global marketplace, especially as compared to competitors with costs of production that are denominated in a currency that has not depreciated against the US dollar. Conversely, when the Indian Rupee appreciates against the US dollar, Vedanta's financial results can be negatively impacted. Vedanta also has capital expenditure and services denominated in currencies other than the Indian Rupee. For example, KCM's functional currency is the US dollar with its cost base having a mix of the Zambian Kwacha and the US dollar. See "Risk Factors — Risks Relating to Business — Currency fluctuations among the Indian Rupee and other currencies and the US dollar could have a material adverse effect on Vedanta's results of operations" for additional information.

Approximately 45% of Vedanta's borrowings are denominated in US dollars while a large portion of its cash and liquid investments are held in other currencies, mainly in Indian Rupees. Some financial assets and liabilities of its subsidiaries are not held in the functional currency of such subsidiaries. As a result, Vedanta is exposed to movements in the functional currency of those entities.

Vedanta's exposure to various currencies means that currency fluctuations may have a large impact on Vedanta financial results. It is subject to currency risks affecting the underlying cost bases in its operating subsidiaries, and also the translation of the cost of production, income statement and balance sheet (including non-US dollar denominated borrowings) in the consolidated financial statements, where the functional currency is not the US dollar.

Results of Operations

Overview

The following table sets out Vedanta's historical operating results for each of fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2017 and 31 December 2018:

	Year Ended 31 March			Nine Months Ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Revenue	10,737.9	11,520.1	15,358.7	10,830.7	10,601.8
Cost of sales	(9,241.1)	(8,789.2)	(11,940.5)	(8,449.5)	(8,681.8)
Gross Profits	1,496.8	2,730.9	3,418.2	2,381.2	1,920.0
Other operating income	101.7	73.4	89.2	53.6	112.7
Distribution costs	(223.8)	(274.9)	(276.5)	(194.0)	(209.9)
Administration expenses	(493.5)	(368.8)	(417.3)	(291.0)	(396.4)
Special Items	(5,210.1)	(17.3)	649.9	(772.1)	38.1
Operating profit/(loss)	**(4,328.9)**	**2,143.3**	**3,463.5**	**1,177.7**	**1,464.5**
Investment revenue	697.8	642.6	465.1	341.8	275.6
Finance costs	(1,280.4)	(1,382.2)	(1,450.8)	(1,064.0)	(948.3)
Other gains and losses (net)	(72.5)	(23.8)	4.3	(15.9)	(65.7)
Profit/(loss) before taxation	**(4,984.0)**	**1,379.9**	**2,482.1**	**439.6**	**726.1**
Tax credit/(expense) — special items	1,737.4	(4.9)	(338.5)	220.3	(16.3)
Tax expense — others	(255.5)	(495.4)	(674.7)	(387.3)	(542.1)
Profit/(Loss) for the year/period	**(3,502.1)**	**879.6**	**1,468.9**	**272.6**	**167.7**

Revenue by Geographic Location

Vedanta's operations are located in India, Zambia, Namibia, South Africa and UAE. The primary markets for its products are India, China, Far East Asia (others) and the Middle East. Vedanta endeavours to sell as large a quantity of its products as possible in India due to the Indian market premium that it receives on sales in India. The following table sets out Vedanta's revenue from each of its primary markets in each of fiscal years 2016, 2017 and 2018:

	Year Ended 31 March					
	2016	**%**	**2017**	**%**	**2018**	**%**
	($ in millions, except percentages)					
India	6,807.8	63%	6,712.1	58%	8,262.1	54%
China	747.8	7%	1,501.9	13%	2,184.7	14%
UAE/Middle East	1,075.1	10%	716.5	6%	620.5	4%
Others[(1)]	2,107.2	20%	2,589.6	23%	4,291.4	28%
Total	**10,737.9**	**100%**	**11,520.1**	**100%**	**15,358.7**	**100%**

(1) Others include the Europe, Africa, UK, Korea, Thailand, Singapore, Malaysia, Mauritius, Sri Lanka, Bangladesh, Nepal, Pakistan United States, Australia, New Zealand and a number of countries that are not classified in the other available categories.

Results of Operations: Nine Months Ended 31 December 2018 compared to Nine Months Ended 31 December 2017

Vedanta's revenue was $10,601.8 million in nine months ended 31 December 2018, a decrease of $229 million, or 2%, from $10,830.7 million in nine months ended 31 December 2017. The decrease was primarily driven by the shutdown of the Tuticorin copper plant in Tamil Nadu, which was partially offset by an increase in the production volume of aluminium, the acquisition of ESL and an improvement in commodity prices. The revenue for the nine months ended 31 December 2018 considers the application of IFRS 15. However, no adjustments were required as a result of this implementation and therefore revenue for the nine months ended 31 December 2018 and 2017 is fully comparable.

Vedanta's zinc business contributed 23%, aluminium 31%, copper 19%, oil and gas 14%, power 7% and iron ore 3% to the total revenue in nine months ended 31 December 2018.

Oil and Gas

Revenue from the oil and gas business was $1,441.9 million in nine months ended 31 December 2018, an increase of $389.5 million, or 37%, from $1,052.4 million in nine months ended 31 December 2017. The increase in revenue was mainly contributed by higher Brent prices. Specifically, the daily average crude price increased from $54.4 per boe, in nine months ended 31 December 2017 to $72.8 per boe in nine months ended 31 December 2018, an increase of 33.9%.

Zinc (India)

Revenue from the zinc business was $2,203.7 million in nine months ended 31 December 2018, a decrease of $203.9 million, or 8.5%, from $2,407.6 million in nine months ended 31 December 2017. This decrease was primarily driven by lower commodity prices, a decrease in production volumes of zinc, which was partially offset by an increase in the production volumes of lead and silver. Specifically:

- Zinc ingot production decreased from 585,119 tonnes in nine months ended 31 December 2017 to 521,560 tonnes in nine months ended 31 December 2018, a decrease of 11%. The decrease was on account of transition from open pit mining to underground mining, although production from underground mines increased year-on-year. Zinc ingot sales also decreased as a result of lower production, from 583,089 tonnes in nine months ended 31 December 2017 to 517,080 tonnes in nine months ended 31 December 2018, a decrease of 11%.

- Zinc ingot sales in the domestic market decreased from 382,875 tonnes in nine months ended 31 December 2017 to 375,180 tonnes in nine months ended 31 December 2018, a decrease of 2%. The domestic sales as a percentage of total sales increased from 66% in nine months ended 31 December 2017 to 73% in nine months ended 31 December 2018. The export sales decreased from 200,215 tonnes of zinc in nine months ended 31 December 2017 to 141,900 tonnes of zinc in nine months ended 31 December 2018, a decrease of 29%.

- The daily average zinc cash settlement price on the LME decreased from $2,935 per tonne in nine months ended 31 December 2017 to $2,756 per tonne in nine months ended 31 December 2018, a decrease of 6.1%.

- Lead ingot production increased from 118,445 tonnes in nine months ended 31 December 2017 to 145,254 tonnes in nine months ended 31 December 2018, an increase of 23%. Lead ingot sales increased from 118,944 tonnes in nine months ended 31 December 2017 to 145,380 tonnes in nine months ended 31 December 2018, an increase of 22%, was in line of increase in production.

- The daily average lead cash settlement price on the LME decreased from $2,331 per tonne in nine months ended 31 December 2017 to $2,150 per tonne in nine months ended 31 December 2018, a decrease of 7.8%.

- Silver ingot production increased from 387,485 kilograms in nine months ended 31 December 2017 to 487,840 kilograms in nine months ended 31 December 2018, an increase of 26% driven by higher grades and greater volumes from Sindesar Khurd mine. Sale of silver ingots increased from 388,705 kilograms in nine months ended 31 December 2017 to 480,442 kilograms in nine months ended 31 December 2018, an increase of 24% in line of silver production.

- The daily average silver London Bullion Market Association prices decreased from $16.9 per ounce in nine months ended 31 December 2017 to $15.4 per ounce in nine months ended 31 December 2018, a decrease of 9.3%

Zinc (International)

Revenue from the international zinc business was $249.1 million in the nine months ended 31 December 2018, a decrease of $157.8 million, or 38.8% from $406.9 million in the nine months ended 31 December 2017. The decrease in revenue was primarily due to the lower sales volume and lower LME prices. Specifically:

- Production of refined zinc metal at Skorpion decreased from 62,207 tonnes in nine months ended 31 December 2017 to 44,943 tonnes in nine months ended 31 December 2018, a decrease of 27.8%. This was due to planned maintenance shutdown in first quarter of fiscal year 2019 and lower than planned zinc grades.

- At BMM mines production of lead metal in concentrate decreased from 37,412 tonnes in nine months ended 31 December 2017 to 26,990 tonnes in nine months ended 31 December 2018, a decrease of 27.9% and zinc metal in concentrate decreased from 21,694 tonnes in nine months ended 31 December 2017 to 19,300 tonnes in nine months ended 31 December 2018, a decrease of 11.0%. This decrease was primarily due to planned prioritisation of mine development in the first half of fiscal year 2019 to provide for flexibility for ore mining and blending in second half of fiscal year 2019.

- The daily average zinc cash settlement price on the LME decreased from $2,935 per tonne in nine months ended 31 December 2017 to $2,756 per tonne in nine months ended 31 December 2018, a decrease of 6.1%.

- The daily average lead cash settlement price on the LME decreased from $2,331 per tonne in nine months ended 31 December 2017 to $2,150 per tonne in nine months ended 31 December 2018, a decrease of 7.8%.

Copper (India/Australia)

Revenue from the copper business in India was $1,138.9 million in nine months ended 31 December 2018, a decrease of $1,525.4 million, or 57.3%, from $2,664.3 million in nine months ended 31 December 2017. This decrease was primarily due to the shutdown of Tuticorin smelter in Tamil Nadu due to pending litigation on the renewal of the CTO. Vedanta continues to operate the Silvassa refinery and wire rod plant, enabling it to cater to domestic market.

Copper (Zambia)

Revenue from KCM in Zambia was $868.3 million in nine months ended 31 December 2018, a decrease of $106.5 million, or 10.9%, from $974.8 million in nine months ended 31 December 2017. The decrease was mainly due to a decrease in custom volumes, which was partially offset by an increase in integrated volume and commodity. Specifically,

- Copper mined metal production increased from 68,854 tonnes in nine months ended 31 December 2017 to 73,785 tonnes in nine months ended 31 December 2018, an increase of 7.2%. This was primarily on account of improved production from TLP due to consistent feed grades and higher copper recoveries as a result of improved pumps and plant availability, which was partially offset by lower volumes from Konkola mine due to a temporary shutdown on account of fatalities in the first half of fiscal year 2019.

- Custom production decreased from 90,167 tonnes in nine months ended 31 December 2017 to 72,780 tonnes in nine months ended 31 December 2018, a decrease of 19.3%. This decrease was mainly due to lower concentrate availability in the region following high demand.

- Copper sales decreased from 155,007 tonnes in nine months ended 31 December 2017 to 143,402 tonnes in nine months ended 31 December 2018, a decrease of 7.5%.

- The daily average copper LME price increased from $6,280 per tonne in nine months ended 31 December 2017 to $6,378 per tonne in nine months ended 31 December 2018, an increase of 1.6%.

Iron ore

Revenue from the iron ore business was $295.9 million in nine months ended 31 December 2018, a decrease of $25.3 million, or 7.9% from $321.2 million in nine months ended 31 December 2017. The decrease was primarily due closure of the mine at Goa, pursuant to the order of the Supreme Court of India and lower sales at the iron ore operations in Karnataka, which was partially offset by higher pig iron volumes. Specifically:

- Saleable iron ore production decreased from 5.43 million tonnes in the nine months ended 31 December 2017 to 3.49 million tonnes in nine months ended 31 December 2018.

- The production of pig iron was higher by 8% from 463,621 tonnes to 502,014 tonnes. Metallurgical coke production too rose from 324,141 to 357,793, or by 10% from nine months ended 31 December 2017 to nine months ended 31 December 2018, respectively.

Aluminium

Revenue from the aluminium business was $3,299.2 million in nine months ended 31 December 2018, an increase of $824.2 million, or 33.3%, from $2,475.0 million in nine months ended 31 December 2017. The increase was primarily due to volume ramp-up and higher LME prices of aluminium.

Specifically:

- Aluminium production increased from 1,198,253 tonnes in nine months ended 31 December 2017 to 1,477,798 tonnes in nine months ended 31 December 2018, an increase of 23.3%. Production of value added products marginally decreased from 42.2% in nine months ended 31 December 2017 to 40.8% in nine months ended 31 December 2018.

- Aluminium sales increased from 1,185,190 tonnes in nine months ended 31 December 2017 to 1,448,118 tonnes in nine months ended 31 December 2018, an increase of 22.2% in line with the increase in production. Sales of aluminium ingots increased from 653,253 tonnes in nine months ended 31 December 2017 to 839,202 tonnes in nine months ended 31 December 2018, an increase of 28.5%. Wire rod sales decreased from 266,213 tonnes in nine months ended 31 December 2017 to 261,313 tonnes in nine months ended 31 December 2018, and rolled product sales decreased from 18,934 tonnes in nine months ended 31 December 2017 to 17,336 tonnes in nine months ended 31 December 2018, a decrease of 8.4%. Billets sales increased from 213,916 tonnes in nine months ended 31 December 2017 to 305,467 tonnes in nine months ended 31 December 2018, representing an increase of 42.8%. Hot metal sales decreased from 32,874 tonnes during nine months ended 31 December 2017 to 24,800 tonnes in nine months ended 31 December 2018.

- Aluminium sales in the domestic Indian market decreased from 478,002 tonnes in nine months ended 31 December 2017 to 432,246 tonnes in nine months ended 31 December 2018, a decrease of 9.6%. Aluminium exports increased from 707,188 tonnes in nine months ended 31 December 2017 to 1,015,873 tonnes in nine months ended 31 December 2018. Higher overall sales were driven by ramp-up of volume at Jharsugudua-II smelter. Domestic sales as a percentage of total sales (excluding sales from special economic zones) decreased from 63.1% in nine months ended 31 December 2017 to 49.8% in nine months ended 31 December 2018.

- The daily average aluminium cash settlement price on the LME increased from $2,009 per tonne in nine months ended 31 December 2017 to $2,094 per tonne in nine months ended 31 December 2018, an increase of 4.2%.

Commercial Power Generation

Revenue from the commercial power generation business was $698.0 million in nine months ended 31 December 2018, an increase of $95.1 million, or 15.8% from $602.9 million in nine months ended 31 December 2017 primarily on account of higher sales at Talwandi Sabo power plant. Specifically:

- The Talwandi Sabo power plant had availability of 89% in nine months ended 31 December 2018, an increase of 68% in nine months ended 31 December 2017 because of a fire incident in April 2017 due to which plant was shut down for 65 days. The Talwandi Sabo power plant supplied 7,624 million units in nine months ended 31 December 2018 higher by 1,967 million units or 35% compared to 5,657 million units in the nine months ended 31 December 2017, to the PSEB. TSPL's Power Purchase Agreement with PSEB compensates according to the availability of the plant.

- The Jharsuguda 600 MW power plant operated at a lower PLF of 5.3% during nine months ended 31 December 2018, compared to PLF of 19.8% during nine months ended 31 December 2017. The PLF was lower due to technical reasons.

- The 600 MW BALCO IPP units (2x300MW) operated at a PLF of 51% in nine months ended 31 December 2018 compared to 46% in nine months ended 31 December 2017.

The average power realization increased from ₹2.79 per unit in nine months ended 31 December 2017 to ₹3.53 per unit in nine months ended 31 December 2018, an increase of 26.7% (excluding power from TSPL 1980 MW power plant). Realisation at TSPL based on availability increased from ₹3.56 per unit in nine months ended 31 December 2017 to ₹4.14 per unit in nine months ended 31 December 2018.

Cost of generation at the power business (excluding power from the TSPL 1980 MW power plant) increased from ₹2.14 per unit in nine months ended 31 December 2017 to ₹2.79 per unit in nine months ended 31 December 2018, an increase of 30.5% due to higher coal cost. Cost of generation at TSPL based on availability increased from ₹2.63 per unit in nine months ended 31 December 2017 to ₹3.13 per unit in nine months ended 31 December 2018.

Operating profit

Vedanta's operating profit was $1,464.5 million in nine months ended 31 December 2018 compared to $1,117.7 million in nine months ended 31 December 2017 an increase of $286.8 million or 24.4%. Vedanta's operating profit before special items was $1,426.4 million in nine months ended 31 December 2018, a decrease of $477.6 million, from an operating profit before special items of $1,904.0 million in nine months ended 31 December 2017. The special items for the nine months ended 31 December 2018 includes a reversal of non-cash impairment charge at the Oil and Gas business. The special items for nine months ended 31 December 2017 pertains to a $755.2 million impairment charge at the iron ore business pursuant to a Supreme Court of India order for cancellation of all mining leases at Goa, a $16.9 million write-off of an exploratory asset (Palar block) in the Oil and Gas business. The decrease in operating profit before special items is primarily driven by lower EBITDA primarily due to input commodity inflation. This was partially offset by an improvement in commodity prices and higher depreciation charge. Operating margin before special item decreased to 13.4% in nine months ended 31 December 2018 from 17.6% in nine months ended 31 December 2017.

Contributing factors to Vedanta's consolidated operating profit were as follows:

- Cost of sales increased to $8,681.8 million in nine months ended 31 December 2018 from $8,449.5 million in nine months ended 31 December 2017, an increase of $232.3 million, or 2.7%. The increase is primarily due to input commodity inflation.

- Other operating income increased to $112.7 million in nine months ended December 2018 from $53.6 million in nine months ended 31 December 2017, an increase of $59.1 million.

- Distribution expenses increased to $209.9 million in nine months ended 31 December 2018 from $194.0 million in nine months ended 31 December 2017, an increase of $15.9 million, or 8.2%. Distribution expense as a percentage of revenue increased to 2% in nine months ended 31 December 2018 from 1.8% in nine months ended 31 December 2017.

- Administration expenses increased to $396.4 million in nine months ended 31 December 2018 from $291.0 million in nine months ended 31 December 2017, an increase of $105.4 million, or 36.2%. Administration expenses as a percentage of revenue increased to 3.7% in nine months ended 31 December 2018 from 2.7% in nine months ended 31 December 2017.

Oil and Gas

The Vedanta EBITDA for the oil and gas business was $845.0 million in nine months ended 31 December 2018, an increase of $235.0 million, or 38.5%, from $609.7 million in nine months ended 31 December 2017. The increase in Vedanta EBITDA was primarily driven by improved crude prices. Crude price in nine months ended 31 December 2018 was $72.8 in comparison to $54.4 in nine months ended 31 December 2017. Rajasthan operating cost has been increased from $6.3 per barrel in nine months ended 31 December 2017 to $7.5 per barrel in nine months ended 31 December 2018, or 19.0%.

Zinc (India)

The Vedanta EBITDA for the India zinc business was $1,122.4 million in nine months ended 31 December 2018, a decrease of $214.0 million, or 16.0%, from $1,336.4 million in nine months ended 31 December 2017. The decrease was mainly on account of lower commodity prices and lower zinc volume, higher cost of production, partially offset by higher lead and zinc production. The cost of production of zinc including royalty increased (net of by-product revenue) from $1,361 per tonne in nine months ended 31 December 2017 to $1,382 per tonne in nine months ended 31 December 2018 and cost of production excluding royalty increased from $994 per tonne in nine months ended 31 December 2017 to $1,025 per tonne in nine months ended 31 December 2018 mainly due to input commodity inflation, lower volumes partially offset by Indian Rupee depreciation.

Zinc (International)

The Vedanta EBITDA for the international zinc business was $44.0 million in nine months ended 31 December 2018, a decrease of $135.9 million or 75.5%, from $179.9 million in nine months ended 31 December 2017. The decrease in Vedanta EBITDA was primarily driven by lower sales volumes, lower commodity prices and higher cost of production.

Copper (India/Australia)

The Vedanta EBITDA for the India copper business was $(23.9) million in nine months ended 31 December 2018, a decrease of $133.5 million, from $109.6 million in nine months ended 31 December 2017. The decrease in Vedanta EBITDA was primarily due to shutdown of the Tuticorin smelter.

Copper (Zambia)

KCM's Vedanta EBITDA was $(44.2) million in nine months ended 31 December 2018, a decrease of $79.3 million from $35.1 million in nine months ended 31 December 2017. The decrease in Vedanta EBITDA was mainly due to significant depreciation of Kwacha against US dollar, lower custom volumes and lower by-product credits.

Iron ore

The Vedanta EBITDA for the iron ore business was $56.4 million in nine months ended 31 December 2018, an increase of $34.4 million from $22.0 million in nine months ended 31 December 2017. The increase was primarily due to improved volumes and margins at the Pig Iron business.

Aluminium

The Vedanta EBITDA for the aluminium business was $259.5 million in nine months ended 31 December 2018, an increase of $40.5 million or 18.6%, from $219.0 million in nine months ended 31 December 2017. This was primarily due to ramp-up of capacities at Jharsuguda — II smelter, higher commodity prices partially offset by higher cost of production driven by input commodity inflation, disruptions in coal supply.

Commercial power generation

The Vedanta EBITDA for the commercial power generation business was $167.4 million in nine months ended 31 December 2018, a marginal increase of $1.3 million, or 0.8%, from $166.1 million in nine months ended 31 December 2017.

Investment revenue, finance costs and other gains/(losses)

Vedanta's investment revenue was $275.6 million in nine months ended 31 December 2018, a decrease of $66.2 million, or 19.3%, from $341.8 million in nine months ended 31 December 2017 primarily due to lower cash and liquid investment due to special dividend pay-outs and lower return on investments due to sharp rise in yields. The average post tax return on investment of Vedanta was 5.01% (6.03% in nine months ended 31 December 2017).

Vedanta's finance costs were $948.3 million in nine months ended 31 December 2018, a decrease of $115.7 million, or 10.9%, from $1,064.0 million in nine months ended 31 December 2017. This was due to higher capitalization of interest cost in comparison to last year, charges relating to bond buy back activity at Vedanta in May 2017 and August 2017 and benefit of rupee depreciation in nine months ended 31 December 2017. The same was partially offset by higher average debt and higher cost of borrowing. The average borrowing cost of Vedanta was 7.43% in nine months ended 31 December 2018 (7.14% in nine months ended 31 December 2017).

Other gains/(losses) (net) in nine months ended 31 December 2018 was $(65.7) million, compared to $(15.9) million in nine months ended 31 December 2017. This primarily includes the impact of Mark to Market (MTM) on foreign currency borrowings primarily at Vedanta's Indian businesses. The Indian rupee depreciated against the US Dollar during nine months ended 31 December 2018 by 7.3% (65.04 to 69.79), compared with a 1.4% appreciation in nine months ended 31 December 2017 (64.84 to 63.93).

Income tax expense and non-controlling interests

Income tax expense — others was $542.1 million in nine months ended 31 December 2018, an increase of $154.8 million, from $387.3 million in nine months ended 31 December 2017. The effective tax rate for nine months ended 31 December 2018 after excluding special item and dividend distribution tax was 56.5%, compared to 27% in nine months ended 31 December 2017 due to a change in the profit mix across the businesses, together with depreciation of the rupee impacting tax WDV of Oil and Gas assets, whose functional currency is USD. Further the tax charge for the nine months ended 31 December 2018 includes $121.0 million (31 December 2017: nil) representing reversal of deferred tax assets on carry forward losses not expected to be utilised during the statutory permitted period.

Income tax credit/(expense) special items in nine months ended 31 December 2018 were $(16.3) million compared to $220.3 million in nine months ended 31 December 2017.

The profit attributable to non-controlling interests in nine months ended 31 December 2018 was $427.4 million in comparison to $530.0 million in nine months ended 31 December 2017. The profits attributable to non-controlling interests without special items in nine months ended 31 December 2018 was $412.3 million in comparison to $788.5 million in nine months ended 31 December 2017.

Results of Operations: Fiscal Year 2018 compared to Fiscal Year 2017

Vedanta's revenue was $15,358.7 million in fiscal year 2018, an increase of $3,838.6 million, or 33.3%, from $11,520.1 million in fiscal year 2017. The increase was primarily driven by improved commodity prices, record volumes at Zinc India, Copper India and Aluminium partially offset by lower volumes in Goa.

Vedanta's copper business contributed 33.3%, zinc 25.4%, oil and gas 9.6%, iron ore 3.2%, aluminium 23.4% and power 5.7% to the total revenue in fiscal year 2018.

Oil and Gas

Revenue from the oil and gas business was $1,479.6 million in fiscal year 2018, an increase of $257.0 million, or 9.6%, from $1,222.7 million in fiscal year 2017. The increase in revenue was primarily contributed by improved Brent prices, which was partially offset by lower volumes due to natural decline. Specifically:

- The daily average oil and gas price realisation increased from $43.3 per boe, in fiscal year 2017 to $50.5 per boe, in fiscal year 2018, an increase of 16%;
- Working interest production decreased from 121,186 boepd in fiscal year 2017 to 118,620 boepd in fiscal year 2018, a decrease of 2,566 boepd or 2%.

Zinc (India)

Revenue from the zinc business was $3,368.7 million in fiscal year 2018, an increase of $843.7 million, or 33.4%, from $2,525.0 million in fiscal year 2017. This increase was primarily driven by higher LME prices of zinc, lead and record metal production volumes partially offset by sale of metal concentrate in fiscal year 2017.

Specifically:

- Zinc ingot production increased from 671,988 tonnes in fiscal year 2017 to 791,026 tonnes in fiscal year 2018, an increase of 17.7% on account of consistent availability of metal concentrate throughout the year and higher smelter efficiency. Zinc ingot sales also increased in line with the higher production, from 696,000 tonnes in fiscal year 2017 to 792,691 tonnes in fiscal year 2018, an increase of 13.9%.
- Zinc ingot sales in the domestic market increased from 472,824 tonnes in fiscal year 2017 to 514,511 tonnes in fiscal year 2018, an increase of 8.8%. The domestic sales as a percentage of total sales slightly decreased from 67.9% in fiscal year 2017 to 64.9% in fiscal year 2018. The export sales also increased from 223,176 tonnes of zinc in fiscal year 2017 to 278,180 tonnes of zinc in fiscal year 2018, an increase of 24.6%.

- The daily average zinc cash settlement price on the LME increased from $2,368 per tonne in fiscal year 2017 to $3,057 per tonne in fiscal year 2018, an increase of 29.1%.

- Lead ingot production increased from 139,009 tonnes in fiscal year 2017 to 168,246 tonnes in fiscal year 2018, an increase of 21.0%. Lead ingot sales increased from 138,253 tonnes in fiscal year 2017 to 168,766 tonnes in fiscal year 2018, an increase of 22.1%, in line with increased production.

- The daily average lead cash settlement price on the LME increased from $2,005 per tonne in fiscal year 2017 to $2,379 per tonne in fiscal year 2018, an increase of 18.7%.

- Silver ingot production increased from 452,543 kilograms in fiscal year 2017 to 561,259 kilograms in fiscal year 2018, an increase of 24.0% driven by higher grades and greater volumes from Sindesar Khurd mine. Sale of silver ingots increased from 448,891 kilograms in fiscal year 2017 to 557,539 kilograms in fiscal year 2018, an increase of 24.2% in line with silver production.

- The daily average silver London Bullion Market Association prices decreased from $17.8 per ounce in fiscal year 2017 to $16.9 per ounce in fiscal year 2018, a decrease of 5.0%

Zinc (International)

Revenue from the international zinc business was $534.7 million in the fiscal year 2018, an increase of $202.2 million, or 60.8%, from $332.4 million in the fiscal year 2017. The increase in revenue was primarily due to sales higher volumes and higher commodity prices. Specifically:

- Production of refined zinc metal at Skorpion decreased from 85,427 tonnes in fiscal year 2017 to 84,215 tonnes in fiscal year 2018, a decrease of 1.4%. This was primarily due to planned maintenance shutdown of the acid plant in the first quarter of fiscal year 2018 and early closure of Pit 103 due to geotechnical reasons.

- Sales from Black Mountain Mine of lead metal in concentrate increased from 32,891 tonnes in fiscal year 2017 to 52,930 tonnes in fiscal year 2018, an increase of 60.9% and sales of zinc metal in concentrate increased from 21,223 tonnes in fiscal year 2017 to 33,878 tonnes in fiscal year 2018, an increase of 59.6% due to inventories being carried from fiscal year 2017, while the production largely remain unchanged year over year.

- The daily average zinc cash settlement price on the LME increased from $2,368 per ton in fiscal year 2017 to $3,057 per ton in fiscal year 2018, an increase of 29.1%.

- The daily average Lead cash settlement price on the LME increased from $2,005 per ton in fiscal year 2017 to $2,379 per ton in fiscal year 2018, an increase of 18.7%.

Copper (India/Australia)

Revenue from the copper business in India and Australia was $3,832.7 million in the fiscal year 2018, an increase of $699.0 million, or 25.0%, from $3,133.7 million in the fiscal year 2017. This increase was primarily due to higher LME realisation for the period. Specifically:

- Copper cathode production increased from 402,730 tonnes in fiscal year 2017 to 403,168 tonnes in fiscal year 2018, an increase of 0.1%. In fiscal year 2018, record production through in-house technological upgrades and debottlenecking was achieved. The plant utilisation touched a record level of 95% throughout the fiscal year 2018. Copper cathode sales increased from 192,200 tonnes in fiscal year 2017 to 200,236 tonnes in fiscal year 2018, an increase of 4.2%.

- Production of copper rods decreased from 207,530 tonnes in fiscal year 2017 to 202,539 tonnes in fiscal year 2018, a decrease of 2.4%. Copper rod sales decreased from 207,073 tonnes in fiscal year 2017 to 202,676 tonnes in fiscal year 2018, a decrease of 2.1% in line with the decrease in production.

- Sales of copper in the Indian market decreased from 233,699 tonnes in fiscal year 2017 to 205,654 tonnes in fiscal year 2018, a decrease of 12.0%, and the exports increased from 165,575 tonnes in fiscal year 2017 to 197,258 tonnes in fiscal year 2018, an increase of 19.1%. Domestic sales as a percentage of total sales decreased from 58.5% in fiscal year 2017 to 51.0% in fiscal year 2018.

Copper (Zambia)

Revenue from KCM in Zambia was $1,283.0 million in fiscal year 2018, an increase of $408.8 million, or 46.8%, from $874.3 million in fiscal year 2017. The increase was primarily due to higher commodity prices and increase in custom volumes. Specifically,

- Copper mined metal production decreased from 94,130 tonnes in fiscal year 2017 to 90,848 tonnes in fiscal year 2018, a decrease of 3.5%. This was primarily driven by lower volumes at tailings leach plant due to lower feed grades, which was partially offset by higher volumes at Nchanga due to restart of the underground mines in June 2017 and higher production at Konkola driven by improved fleet availability and dewatering efficiency.

- Copper sales increased from 171,722 tonnes in fiscal year 2017 to 201,923 tonnes in fiscal year 2018, an increase of 17.6%.

- Custom Volumes increased from 84,094 tonnes in fiscal year 2017 to 111,042 tonnes in fiscal year 2018, an increase of 32%, this was primarily due to availability of concentrates.

- The daily average copper LME price increased from $5,152 per tonne in fiscal year 2017 to $6,451 per tonne in fiscal year 2018, an increase of 25.2%.

Iron ore

Revenue from the iron ore business was $487.5 million in fiscal year 2018, a decrease of $128.0 million, or 20.8%, from $615.4 million in fiscal year 2017. The decrease was primarily due to lower sales volumes and realisations at Iron Ore Goa, lower volume at Pig iron partially offset by higher realisations at Iron Ore Karnataka. Specifically:

- Saleable iron ore production decreased from 10.9 million tonnes in the fiscal year 2017 to 7.1 million tonnes in fiscal year 2018, a decrease of 3.8 million tonnes due to unfavourable pricing environment for Goa. During the year, Vedanta revisited the product strategy at Iron Ore Goa and produced higher quality ore through beneficiation and blending.

- The production of pig iron was lower by 8.8% from 708,342 tonnes to 645,828 tonnes whereas, metallurgical coke reduced from 481,218 to 442,785, or by 8.0% from fiscal year 2017 to fiscal year 2018, respectively.

Aluminium

Revenue from the aluminium business was $3,587.6 million in fiscal year 2018, an increase of $1,547.6 million, or 75.9%, from $2,040 million in fiscal year 2017. The increase was primarily due to volume ramp-up, and higher average LME prices of aluminium.

Specifically:

- Aluminium production increased from 1,213,402 tonnes in fiscal year 2017 to 1,675,093 tonnes in fiscal year 2018, an increase of 38.0%. A record annual production of 1.7 million tonnes of aluminium in fiscal year 2018, with an exit run-rate of c.2 million tonnes per annum in March 2018 was achieved. Production of value added products increased from 40.4% in fiscal year 2017 to 43.1% in fiscal year 2018.

- Aluminium sales increased from 1,209,415 tonnes in fiscal year 2017 to 1,672,423 tonnes in fiscal year 2018, an increase of 38.3% in line with the increase in production. Sales of aluminium ingots increased from 676,571 tonnes in fiscal year 2017 to 904,799 tonnes in fiscal year 2018, an increase of 33.7%. Wire rod sales increased from 323,437 tonnes in fiscal year 2017 to 380,878 tonnes in fiscal year 2018, and rolled product sales increased from 17,996 tonnes in fiscal year 2017 to 26,607 tonnes in fiscal year 2018, an increase of 47.8%. Billets sales increased from 144,871 tonnes in fiscal year 2017 to 315,883 tonnes in fiscal year 2018, representing an increase of 118%. Hot metal sales decreased from 46,541 tonnes during fiscal year 2017 to 44,257 tonnes in fiscal year 2018.

- Aluminium sales in the domestic Indian market increased from 599,873 tonnes in fiscal year 2017 to 673,920 tonnes in fiscal year 2018, an increase of 12.3%. Aluminium exports increased from 609,543 tonnes in fiscal year 2017 to 998,503 tonnes in fiscal year 2018 driven by ramp-up of volume at Jharsuguda-II smelter. Domestic sales as a percentage of total sales (excluding sales from SEZ) decreased from 62.9% in fiscal year 2017 to 62.8% in fiscal year 2018.

- The daily average aluminium cash settlement price on the LME increased from $1,688 per tonne in fiscal year 2017 to $2,046 per tonne in fiscal year 2018, an increase of 21.2%.

Commercial Power Generation

Revenue from the commercial power generation business was $877.0 million in the fiscal year 2018, an increase of $41.1 million, or 4.9% from $835.9 million in the fiscal year 2017. This is primarily due a one-off recognition in revenue of $35 million and $22 million at BALCO and Jharsuguda IPP respectively partially offset by lower sales volumes. Specifically:

- At the Talwandi Sabo power plant, the plant achieved higher sales in fiscal year 2018 as compared to fiscal year 2017 due to full operation of 1980 MW partially offset by a fire incident in the first quarter of fiscal year 2018. Plant recorded availability of 74% in fiscal year 2018 compared to 79% in fiscal year 2017. TSPL's Power Purchase Agreement with PSEB compensates according to the availability of the plant.

- The Jharsugada 600MW power plant operated at a lower Plant Load Factor (PLF) of 25% during fiscal year 2018, due to disruptions in coal supply in domestic market compared to PLF of 68% during fiscal year 2017.

- The 600 MW BALCO IPP units (2x300MW) operated at a PLF of 44% in fiscal year 2018, due to coal shortage and weak power market.

The average power realisation increased from ₹2.83 per unit in fiscal year 2017 to ₹2.88 per unit in fiscal year 2018, an increase of 1.9% (excluding power from TSPL 1980 MW power plant).

Cost of generation at the power business (excluding power from the TSPL 1980 MW power plant) increased from ₹2.10 per unit in fiscal years 2017 to ₹2.36 in fiscal year 2018, an increase of 12.1% due to higher coal costs.

Operating profit

Vedanta's operating profit was $3,463.5 million in fiscal year 2018 compared to $2,143.3 million in fiscal year 2017. Vedanta's operating profit before special items was $2,780.5 million in fiscal year 2018, an increase of $619.9 million, from an operating profit before special items of $2,160.6 million in fiscal year 2017. The special items for fiscal year 2018 includes $649.9 million includes reversal of previously recorded non-cash impairment charge relating to Oil and Gas business $1,464.5 million partially offset by impairment charge at the iron ore assets pursuant to an order of the Supreme Court of India directing the cancellation of mining leases in Goa of $758.5 million, impairment of Palar Block at oil and gas business of $17.1 million and a loss of $39 million at Vedanta's aluminium business relating to certain items of capital work-in-progress which were no longer expected to be used. Special items in fiscal year 2017 primarily includes impairment charge of $29.9 million relating to certain old items of capital work-in-progress at the Alumina refinery operations partially offset by reversal of non-cash impairment charge of $12.6 million in oil and gas business. The increase in operating profit before special items is primarily driven by strong operational performance and full commodity prices partially offset by input commodity inflation, unfavourable foreign exchange impact and higher depreciation and amortisation expense. Operating margin before special item decreased to 18.1% in fiscal year 2018 from 18.8% in fiscal year 2017.

Contributing factors to Vedanta's consolidated operating profit were as follows:

- Cost of sales increased from $8,789.2 million in fiscal year 2017 to $11,940.5 million in fiscal year 2018, an increase of $3,151.3 million, or 35.9%. The increase is primarily due to higher volumes at Zinc India, Aluminium, Copper India, input commodity inflation and higher depreciation and amortisation expenses of $240 million.

- Other operating income increased from $73.4 million in fiscal year 2017 to $89.2 million in fiscal year 2018, an increase of $15.8 million, or 21.5%.

- Distribution expenses increased from $274.9 million in fiscal year 2017 to $276.5 million in fiscal year 2018, marginal increase of $1.6 million, or 0.6%, Distribution expense as a percentage of revenue increased from 2.4% in fiscal year 2017 to 1.8% in fiscal year 2018.

- Administration expenses increased from $368.8 million in fiscal year 2017 to $417.3 million in fiscal year 2018, an increase of $48.5 million, or 13.2%. Administration expenses as a percentage of revenue decreased from 3.2% in fiscal year 2017 to 2.7% in fiscal year 2018.

Oil and Gas

The Vedanta EBITDA for the oil and gas business was $849.1 million in fiscal year 2018, an increase of $252.1 million, or 42.2%, from $597.0 million in fiscal year 2017. The increase in Vedanta EBITDA is primarily driven by improved Brent prices partially offset by lower working interest volumes. Crude price in fiscal year 2018 was $57.5 in comparison to $48.6 in fiscal year 2017. Rajasthan operating cost increased from $6.2 per barrel in fiscal year 2017 to $6.6 per barrel in fiscal year 2018, or 6.5%.

Zinc (India)

The Vedanta EBITDA for the India zinc business was $1,902.8 million in fiscal year 2018, an increase of $479.6 million, or 33.7%, from $1,423.2 million in fiscal year 2017. The increase was mainly on account of higher metal volumes, improved commodity prices partially offset by higher cost of production. The cost of production of zinc including royalty increased (net of by-product revenue) from $1,154 per tonne in fiscal year 2017 to $1,365 per tonne in fiscal year 2018 and cost of production excluding royalty increased from $830 per tonne in fiscal year 2017 to $976 per tonne in fiscal year 2018 mainly due to higher input raw materials prices, lower overall grades due to mine mix and Indian Rupee appreciation.

Zinc (International)

The Vedanta EBITDA for the international zinc business was $219.5 million in fiscal year 2018, an increase of $81.2 million, or 58.7%, from $138.3 million in fiscal year 2017. The increase in Vedanta EBITDA was primarily due to higher sales volumes and improved price realisations.

Copper (India/Australia)

The Vedanta EBITDA for the India and Australia copper business was $200.6 million in fiscal year 2018, a decrease of $51.6 million, or 20.4%, from $252.2 million in fiscal year 2017. The decrease in Vedanta EBITDA was primarily due to lower treatment and refining charges (TC/RC), lower premia, higher cost of production and local currency appreciation. In particular:

- TcRc rates decreased from an average of 22.4 ¢/lb realised in fiscal year 2017 to an average of 21.3 ¢/lb realised in fiscal year 2018.

- Cost of production net of by-product and free copper revenue, which consists of cost of smelting and refining costs, increased from 5.0 ¢/lb in fiscal year 2017 to 5.7 ¢/lb in fiscal year 2018, primarily due to higher coal and fuel prices, currency appreciation partially offset by higher by-product credits. Sulphuric acid realisation was influenced significantly with Abu Dhabi National Oil Company (ADNOC) increasing prices from $84 per tonne to $124 per tonne year-on-year.

Copper (Zambia)

KCM's Vedanta EBITDA was $73.2 million in fiscal year 2018, compared to $5.9 million in fiscal year 2017. The increase in EBITDA is mainly on account of improved LME prices, higher custom volumes and a one-off credit related to power provision reversal of $28 million in fiscal year 2018.

Iron ore

The Vedanta EBITDA for the iron ore business was $57.3 million in fiscal year 2018, a decrease of $137 million from $194.3 million in fiscal year 2017. The decrease was primarily due to lower volumes and lower realisations at Goa operations partially offset by improved realisations at Iron Ore Karnataka.

Aluminium

The Vedanta EBITDA for the aluminium business was $452.4 million in fiscal year 2018, an increase of $108.1 million, from $344.3 million in fiscal year 2017. This was primarily due to ramp-up of capacities, higher LME prices partially offset by higher cost of production mainly due to input commodity inflation and coal shortage in domestic market.

Commercial power generation

The Vedanta EBITDA for the commercial power generation business was $258.9 million in fiscal year 2018, an increase of $14.0 million, or 5.7%, from $244.8 million in fiscal year 2017. The increase is mainly due to one-off revenue recognition of $35 million and $22 million at BALCO and at Jharsuguda IPP respectively.

Investment revenue, finance costs and other gains/(losses)

Vedanta's investment revenue was $465.1 million in fiscal year 2018, a decrease of $177.5 million, or 27.6%, from $642.6 million in fiscal year 2017. This was mainly due to lower cash and liquid investments following special dividend pay-outs and gross debt reduction, as well as lower return on investments due to sharp rise in g-Sec yield that resulted in MTM losses on investments. The average post tax return on investment of Vedanta was 5.85% in fiscal year 2018 (7.55% in fiscal year 2017).

Vedanta's finance costs were $1,450.8 million in fiscal year 2018, an increase of $68.6 million, or 5.0%, from $1,382.2 million in fiscal year 2017. This was mainly due to onetime losses incurred on bond buy-back activity in fiscal year 2018 of $90.6 million and in fiscal year 2017 of $41.6 million, charge pursuant to unfavourable arbitration order $17.6 million in fiscal year 2018, lower capitalisation of interest in the Aluminium and Power business $46 million, issuance of preference shares due to merger $39 million partially offset by reduction in gross debt and lower borrowing costs. The average borrowing cost of Vedanta was 7.2% in fiscal year 2018 (7.5% in fiscal year 2017).

Other gains/(losses) in fiscal year 2018 was $4.3 million, compared to $(23.8) million in fiscal year 2017. This includes the impact of MTM on foreign currency borrowings, primarily at Vedanta's Indian businesses. The Indian rupee depreciated against the US Dollar during fiscal year 2018 by 0.3% (64.84 to 65.04), compared with an appreciation of 2.3% fall in fiscal year 2017 (66.33 to 64.84).

Income tax expense and non-controlling interests

Tax expense — Others was $674.7 million in fiscal year 2018, an increase of $179.3 million, from $495.4 million in fiscal year 2017. The effective tax rate for fiscal year 2018 after excluding special item was 35.5%, compared to 34.4% in fiscal year 2017 driven by phasing out of investment allowance claims, a change in the cess rate from 3% to 4% as per the Finance Act 2018, and a change in the profit mix.

Income tax expense special items in fiscal year 2018 were $338.5 million compared to $4.9 million in fiscal year 2017.

The profit attributable to non-controlling interests in fiscal year 2018 was $1,233.3 million in comparison to $902.3 million in fiscal year 2017. The profits attributable to non-controlling interests without special items in fiscal year 2018 was $1,064.7 million in comparison to $908.6 million in fiscal year 2017.

Results of Operations: Fiscal Year 2017 compared to Fiscal Year 2016

Vedanta's revenue was $11,520.1 million in fiscal year 2017, an increase of $782.2 million, or 7.3%, from $10,737.9 million in fiscal year 2016. The increase was primarily driven by improved commodity prices; improved volumes on account of Vedanta's aluminium ramp-up; full year operation at Iron Ore post resumption in August 2015; and all three units being operational at Talwandi Sabo. This was partially offset by lower volumes at Zinc India (in accordance with mine plan), Vedanta Limited due to natural decline, Copper Zambia due to issues pertaining to lower equipment availability, and mine closure at Lisheen.

Vedanta's copper business contributed 34.8%, oil and gas 10.6%, zinc 24.8%, iron ore 5.3%, aluminium 17.7% and power 7.3% to the total revenue in fiscal year 2017.

Oil and Gas

Revenue from the oil and gas business was $1,222.7 million in fiscal year 2017, a decrease of $99.6 million, or 7.5%, from $1,322.3 million in fiscal year 2016. The decrease in revenue was primarily contributed by lower entitlement interest sales volume mainly on account of temporary suspension of gas sales from October to mid-February partly offset by improved Brent prices. Specifically:

- The daily average oil and gas price realisation increased from $40.9 per boe, in fiscal year 2016 to $43.3 per boe, in fiscal year 2017, an increase of 5.9%;

- Entitlement interest sales decreased from 90,788 boepd in fiscal year 2016 to 77,769 boepd in fiscal year 2017, a decrease of 13,019 boepd or 14.3%.

- Average exchange rate increased by 2.5% from ₹65.5 per $1.0 in fiscal year 2016 to ₹67.1 per $1.0 in fiscal year 2017.

Zinc (India)

Revenue from the zinc business was $2,525.0 million in fiscal year 2017, an increase of $414.0 million, or 19.6%, from $2,111.0 million in fiscal year 2016. This increase was primarily driven by higher LME prices of zinc and lead and LBMA price for silver, higher silver volumes. The increase was partially offset by lower integrated metal volumes.

Specifically:

- Zinc ingot production decreased from 758,938 tonnes in fiscal year 2016 to 671,988 tonnes in fiscal year 2017, a decrease of 11.5%. Production during the first half of fiscal year 2017 was lower than the second half of year, caused by cyclical pattern of production at Rampura Agucha open pit mine. Substantially higher mined metal production in second half of the year resulted in increase in mined metal inventory, despite metal in concentrate sales of 26,000 tonnes during fourth quarter. Zinc ingot sales also decreased in line with the lower production, from 760,400 tonnes in fiscal year 2016 to 696,001 tonnes in fiscal year 2017, a decrease of 8.5%.

- Zinc ingot sales in the domestic market decreased from 525,763 tonnes in fiscal year 2016 to 472,824 tonnes in fiscal year 2017, a decrease of 10.1%. The domestic sales as a percentage of total sales slightly decreased from 69.1% in fiscal year 2016 to 67.9% in fiscal year 2017. The export sales also decreased from 234,637 tonnes of zinc in fiscal year 2016 to 223,176 tonnes of zinc in fiscal year 2017, a decrease of 4.9%.

- The daily average zinc cash settlement price on the LME increased from $1,829 per tonne in fiscal year 2016 to $2,368 per tonne in fiscal year 2017, an increase of 29.5%.

- Lead ingot production decreased from 144,919 tonnes in fiscal year 2016 to 139,009 tonnes in fiscal year 2017, a decrease of 4.1%. Lead ingot sales decreased from 145,417 tonnes in fiscal year 2016 to 138,253 tonnes in fiscal year 2017, a decrease of 4.6%, due to decrease in production.

- The daily average lead cash settlement price on the LME increased from $1,768 per tonne in fiscal year 2016 to $2,005 per tonne in fiscal year 2017, an increase of 13.4%.

- Silver ingot production increased from 424,578 kilograms in fiscal year 2016 to 452,543 kilograms in fiscal year 2017, an increase of 6.6% driven by higher grades and greater volumes from Sindesar Khurd mine. Sale of silver ingots increased from 425,685 kilograms in fiscal year 2016 to 448,891 kilograms in fiscal year 2017, an increase of 5.5% in line with silver production.

- The daily average silver London Bullion Market Association prices increased from $15.2 per ounce in fiscal year 2016 to $17.8 per ounce in fiscal year 2017, an increase of 16.7%.

Zinc (International)

Revenue from the international zinc business was $332.4 million in the fiscal year 2017, a decrease of $59.1 million, or 15.1%, from $391.5 million in the fiscal year 2016. The decrease in revenue was primarily due to the closure of the Lisheen mine in Ireland in December 2015 after 17 years in operation, maintenance shutdown and partial industrial action at Skorpion and lower commodity prices. This was partially offset by higher volumes from Skorpion and Black Mountain Mines. Specifically:

- Production of refined zinc metal at Skorpion registered an increase from 82,029 tonnes in fiscal year 2016 to 85,427 tonnes in fiscal year 2017, an increase of 3,398 tonnes or 4.1%. This was despite several challenges faced during the year mainly due to wet ore mined and technical issues at the acid plant. The ore grades were better than the previous year and the successful ramp-up of the plant post the shutdown in the third quarter of fiscal year 2016 prevailed throughout the 2017 fiscal year.

- Production of zinc metal in concentrate from the Lisheen decreased by 100% due to the planned closure of the Lisheen mine in December 2015. Production from BMM mines of lead metal in concentrate increased from 48,091 tonnes to 59,518 tonnes, an increase of 11,427 tonnes or 23.7%. This increase was primarily due to better ore grades and change in mining methods. Production from BMM mines of zinc metal in concentrate decreased from 59,006 tonnes to 58,005 tonnes, a decrease of 1,001 tonnes or 1.7% due to decline in ore grades.

- The daily average zinc cash settlement price on the LME increased from $1,829 per ton in fiscal year 2016 to $2,368 per ton in fiscal year 2017, an increase of 29.5%.

- The daily average Lead cash settlement price on the LME increased from $1,768 per ton in fiscal year 2016 to $2,005 per ton in fiscal year 2016, a decrease of 13.4%.

Copper (India/Australia)

Revenue from the copper business in India and Australia was $3,133.7 million in the fiscal year 2017, a decrease of $63.5 million, or 2.0%, from $3,197.2 million in the fiscal year 2016. This decrease was primarily due to lower LME realisation for the period, lower TC/RC partially offset by better volume. Specifically:

- Copper cathode production increased from 384,047 tonnes in fiscal year 2016 to 402,730 tonnes in fiscal year 2017, an increase of 4.9%. In fiscal year 2017, production was at record level, despite lower copper grade and a few unplanned outages during the year. The plant utilisation touched a record level of 94%. Copper cathode sales increased from 166,957 tonnes in fiscal year 2016 to 192,200 tonnes in fiscal year 2017, an increase of 15.1%.

- Production of copper rods decreased from 210,800 tonnes in fiscal year 2016 to 207,530 tonnes in fiscal year 2017, a decrease of 1.6%. Copper rod sales decreased from 210,285 tonnes in fiscal year 2016 to 207,073 tonnes in fiscal year 2017, a decrease of 1.5% in line with the decrease in production.

- Sales of copper in the Indian market decreased from 238,916 tonnes in fiscal year 2016 to 233,699 tonnes in fiscal year 2017, a decrease of 2.2%, and the exports increased from 138,326 tonnes in fiscal year 2016 to 165,575 tonnes in fiscal year 2017, an increase of 19.7%. Domestic sales as a percentage of total sales decreased from 63.3% in fiscal year 2016 to 58.5% in fiscal year 2017.

Copper (Zambia)

Revenue from KCM in Zambia was $874.3 million in fiscal year 2017, a decrease of $98.2 million, or 10.1%, from $972.5 million in fiscal year 2016. The decrease was mainly due to lower volumes primarily on account of lower production from Nchanga underground mine, which was placed under care and maintenance in third quarter of the year, as well as lower availability of trackless equipment at the Konkola deep mine and lower metal prices. Specifically,

- Copper mined metal production decreased from 122,968 tonnes in fiscal year 2016 to 94,130 tonnes in fiscal year 2017, a decrease of 23.5%. This was primarily driven by lower volumes from Nchanga underground mine which was placed under care and maintenance, at Konkola deep mine due to equipment availability issues and at Tailings Leach Plant due to maintenance breakdowns at the Tailings trails and lower feeds.

- Copper sales decreased from 183,845 tonnes in fiscal year 2016 to 171,722 tonnes in fiscal year 2017, a decrease of 6.6%.

- The daily average copper LME price decreased from $5,211 per tonne in fiscal year 2016 to $5,152 per tonne in fiscal year 2017, a decrease of approximately 1.1%.

Iron ore

Revenue from the iron ore business was $615.4 million in fiscal year 2017, an increase of $265.4 million, or 75.8%, from $350.0 million in fiscal year 2016. The increase was primarily due to resumption of mining in Goa and increase in pig iron production and realisation price. Specifically:

- Saleable iron ore production increased from 5.2 million tonnes in the fiscal year 2016 to 10.9 million tonnes in fiscal year 2017, a sharp increase of 5.7 million tonnes due to a removal of mining ban in the state of Goa during fiscal year 2016. At Karnataka, production recommenced on 28 February 2015, and in Goa it started slowly from August 2015 following receipt of all requisite clearances and approvals.

- The production of pig iron was higher by 8.2% from 654,362 tonnes to 708,342 tonnes whereas, metallurgical coke marginally reduced from 485,054 to 481,218, or by 0.8% from fiscal year 2016 to fiscal year 2017, respectively.

Aluminium

Revenue from the aluminium business was $2,040.0 million in fiscal year 2017, an increase of $345.7 million, or 20.4%, from $1,694.3 million in fiscal year 2016. The increase was primarily due to volume ramp-up, higher average LME prices of aluminium partially offset by lower premium on metal.

Specifically:

- Aluminium production increased from 923,343 tonnes in fiscal year 2016 to 1,213,402 tonnes in fiscal year 2017, an increase of 31.4%. A record annual production of 1.2 million tonnes of aluminium in fiscal 2017, with an exit run-rate of 1.4 million tonnes per annum (excluding trial run production) in March 2017 was achieved. Production of value added products decreased from 52.8% in fiscal year 2016 to 40.4% in fiscal year 2017.

- Aluminium sales increased from 926,950 tonnes in fiscal year 2016 to 1,209,416 tonnes in fiscal year 2017, an increase of 30.5% in line with the increase in production from new smelter in Korba and Jharsuguda. Sales of aluminium ingots increased from 429,366 tonnes in fiscal year 2016 to 676,571 tonnes in fiscal year 2017, an increase of 57.5%. Wire rod sales increased from 357,203 tonnes in fiscal year 2016 to 323,437 tonnes in fiscal year 2017, and rolled product sales decreased from 20,660 tonnes in fiscal year 2016 to 17,996 tonnes in fiscal year 2017, a decrease of 12.9%. Billets sales increased from 110,859 tonnes in fiscal year 2016 to 144,871 tonnes in fiscal year 2017, representing an increase of 30.7%. Hot metal sales increased from 8,892 tonnes during fiscal year 2016 to 46,541 tonnes in fiscal year 2017.

- Aluminium sales in the domestic Indian market decreased from 635,192 tonnes in fiscal year 2016 to 599,873 tonnes in fiscal year 2017, a decrease of 5.6%. Domestic sales decreased in fiscal year 2017 due to market factors and lower premia. Aluminium exports increased from 291,758 tonnes in fiscal year 2016 to 609,543 tonnes in fiscal year 2017 driven by ramp-up of volume at Jharsuguda-II smelter. Domestic sales as a percentage of total sales (excluding export sales from SEZ) decreased from 76.3% in fiscal year 2016 to 74.1% in fiscal year 2017.

- The daily average aluminium cash settlement price on the LME decreased from $1,590 per tonne in fiscal year 2016 to $1,688 per tonne in fiscal year 2017, an increase of 6.2%.

Commercial Power Generation

Revenue from the commercial power generation business was $835.9 million in the fiscal year 2017, an increase of $128.4 million, or 18.1% from $707.5 million in the fiscal year 2016 primarily due to the commencement of additional units at TSPL and BALCO during the year. With these units, entire 9,000 MW of power capacity became operational as of March 2016. Specifically:

- At the Talwandi Sabo power plant, the third 660MW unit commenced commercial production in August 2016. The plant achieved full ramp up and had a record availability of 85% in quarter four of the year and supplied 6,339 million units to the Punjab State Electricity Board or PSEB. TSPL's Power Purchase Agreement with PSEB compensates according to the availability of the plant.

- The Jharsugada 600MW power plant operated at a lower Plant Load Factor (PLF) of 68% during fiscal year 2017, due to a weak power market compared to PLF of 71% during fiscal year 2016.

- The 600 MW BALCO IPP units (2x300MW) operated at a PLF of 58% in Fiscal year 2017, due to the weak power market.

The average power realisation decreased from ₹2.91 per unit in fiscal year 2016 to ₹2.83 per unit in fiscal year 2017, a decrease of 3% (excluding power from TSPL 1980MW power plant). The decrease is on account of the reduced deficit in supply and demand in the nation.

Cost of generation at the power business (excluding power from the TSPL 1980MW power plant) decreased from ₹2.15 per unit in fiscal years 2016 to ₹2.10 in fiscal year 2017, marginal decrease of 2%.

Operating profit

Vedanta's operating profit was $2,143.3 million in fiscal year 2017 compared to an operating loss of $4,328.9 million in fiscal year 2016. Vedanta's operating profit before special items was $2,160.6 million in fiscal year 2017, an increase of $1,279.4 million, from an operating profit before special items of $881.2 million in fiscal year 2016. The special items for fiscal year 2017 includes $29.9 million impairment charge relating to certain old items of capital work-in-progress at the Alumina refinery operations partly offset by impairment reversal of $12.6 million relating to Rajasthan block. Special Items in fiscal year 2016 and fiscal year 2015 primarily relates to impairment charge in Oil and Gas business. The increase in operating profit before special items is primarily driven by strong operational performance on account of ramp-up of capacities at aluminium and power businesses, full year operations at Iron Ore business, cost efficiencies across business as well as the upturn and positive sentiment in commodity prices. Operating margin before special item increased to 18.8% in fiscal year 2017 from 8.2% in fiscal year 2016.

Contributing factors to Vedanta's consolidated operating profit were as follows:

- Cost of sales decreased from $9,241.1 million in fiscal year 2016 to $8,789.2 million in fiscal year 2017, a decrease of $451.9 million, or 4.9%. The decrease is primarily due to lower amortisation expenses of $244.6 million primarily on account of impairment charge in Oil and Gas business in previous years, lower depreciation charge of $180.1 million driven by lower entitlement interest volume at Vedanta Limited and lower charge at Copper Zambia as Nchanga underground assets were fully depreciated in fiscal year 2016.

- Other operating income decreased from $101.7 million in fiscal year 2016 to $73.4 million in fiscal year 2017, a decrease of $28.3 million, or 27.8%.

- Distribution expenses increased from $223.8 million in fiscal year 2016 to $274.9 million in fiscal year 2017, an increase of $51.1 million, or 22.8%, Distribution expense as a percentage of revenue increased from 2.1% in fiscal year 2016 to 2.4% in fiscal year 2017.

- Administration expenses decreased from $493.5 million in fiscal year 2016 to $368.8 million in fiscal year 2017, a decrease of $124.7 million, or 25.3%. Administration expenses as a percentage of revenue decreased from 4.6% in fiscal year 2016 to 3.2% in fiscal year 2017.

Oil and Gas

The Vedanta EBITDA for the oil and gas business was $597.2 million in fiscal year 2017, an increase of $26.8 million, or 4.7%, from $570.4 million in fiscal year 2016. The increase in Vedanta EBITDA is driven by improved crude prices, lower quality discount to Brent, cess reduction, lower operational expenses, which was partially offset by lower volumes. Crude price in fiscal year 2017 was $48.6 in comparison to $47.5 in fiscal year 2016. Rajasthan operating cost has been reduced from $5.2 per barrel in fiscal year 2016 to $4.3 per barrel in fiscal year 2017, or 17%.

Zinc (India)

The Vedanta EBITDA for the India zinc business was $1,423.2 million in fiscal year 2017, an increase of $428.2 million, or 43.0%, from $995.0 million in fiscal year 2016. The increase was on account of improved commodity prices, one-off provision provided in previous year partially offset by lower volumes. The cost of production of zinc including royalty increased (net of by-product revenue) from $1,045 per tonne in fiscal year 2016 to $1,154 per tonne in fiscal year 2017 and cost of production excluding royalty increased from $804 per tonne in fiscal year 2016 to $830 per tonne in fiscal year 2017 mainly due to lower volume of integrated production, higher coal and metcoke prices.

Zinc (International)

The Vedanta EBITDA for the international zinc business was $138.3 million in fiscal year 2017, an increase of $70.2 million, or 103.1%, from $68.1 million in fiscal year 2016. The increase in Vedanta EBITDA was primarily due to higher commodity prices as well as a one-off insurance refund in Skorpion and a one-off royalty refund in Black Mountain Mine.

Copper (India/Australia)

The Vedanta EBITDA for the India and Australia copper business was $252.2 million in fiscal year 2017, a decrease of $84.4 million, or 25.1%, from $336.6 million in fiscal year 2016. The decrease in Vedanta EBITDA was primarily due to lower treatment and refining charges (TC/RC), by-product credits, acid volumes and margin, and a one-off Target Plus Scheme (TPS) benefit of $26 million in fiscal year 2016. In particular:

- TcRc rates decreased from an average of 24.1 ¢/lb realised in fiscal year 2016 to an average of 22.4 ¢/lb realised in fiscal year 2017.

- Cost of production net of by-product and free copper revenue, which consists of cost of smelting and refining costs, increased from 3.2 ¢/lb in fiscal year 2016 to 5.0 ¢/lb in fiscal year 2017, primarily due to lower by-product credits due to lower average net realisation of sulphuric acid of ₹2,117 per tonne in fiscal year 2017 compared with 3,019 per tonne in fiscal year 2016.

Copper (Zambia)

KCM's Vedanta EBITDA was $5.9 million in fiscal year 2017, compared to a loss of $(17.9) million in fiscal year 2016. The increase in Vedanta EBITDA was mainly due to local currency appreciation on VAT Receivables and lower costs partially offset by lower integrated volumes.

Iron ore

The Vedanta EBITDA for the iron ore business was $194.2 million in fiscal year 2017, an increase of $120.8 million from $73.4 million in fiscal year 2016. The increase was primarily due to increase in volume at Goa operations.

Aluminium

The Vedanta EBITDA for the aluminium business was $344.2 million in fiscal year 2017, an increase of $237.5 million, from $106.7 million in fiscal year 2016. This was primarily due to ramp-up of capacities, higher LME prices and cost efficiencies partly offset by lower metal premia.

Commercial power generation

The Vedanta EBITDA for the commercial power generation business was $244.8 million in fiscal year 2017, an increase of $48.5 million, or 24.7%, from $196.3 million in fiscal year 2016. The increase in segment result was primarily as a result of sales from commissioned additional units at TSPL and BALCO.

Investment revenue, finance costs and other gains/(losses)

Vedanta's investment revenue was $642.6 million in fiscal year 2017, a decrease of $55.2 million, or 7.9%, from $697.8 million in fiscal year 2016 mainly at Zinc India and Vedanta Limited. Primarily due to lower cash and liquid investments at Zinc India due to a special dividend pay-out in April-2016, partially offset by mark-to-market (MTM) gains accruing in a falling interest rate environment in India where most of Vedanta's cash and investments reside. The average post tax return on investment of Vedanta was 7.55% (7.2% in fiscal year 2016).

Vedanta's finance costs were $1,382.2 million in fiscal year 2017, an increase of $101.8 million, or 8.0%, from $1,280.4 million in fiscal year 2016. This was due to commissioning of new capacities in the Aluminium and Power business, an increase in INR-denominated borrowings in the borrowing mix, and a one-off impact of c.$40 million for bond buy-back activity in line with Vedanta's strategy of extending the near-term maturities. The same was partially offset by the accounting treatment of interest at the Jharsuguda-II smelter, which was earlier expensed when the project start-up was temporarily on hold, and is now being capitalised as and when aluminium capacities are ramped-up. The average borrowing cost of Vedanta was 7.5% (7.3% in fiscal year 2016).

Other gains/(losses) in fiscal year 2017 was $(23.8) million, compared to $(72.5) million in fiscal year 2016. This includes the impact of MTM on foreign currency borrowings, primarily at Vedanta's Indian businesses and the restatement of Indian Rupee assets in dollar ledger at the Oil and Gas business. The Indian rupee appreciated against the US Dollar during fiscal year 2017 by 2% (66.33 to 64.84), compared with a 6% fall in fiscal year 2016 (62.59 to 66.33).

Income tax expense and non-controlling interests

Net tax expense was $495.4 million in fiscal year 2017, an increase of $239.9 million, from $255.5 million in fiscal year 2016. The effective tax rate for fiscal year 2017 after excluding special item and dividend distribution tax was 18%, compared to 3.1% in fiscal year 2016 driven by phasing out of tax holiday benefits from 100% to 30% at Zinc India and expiry of tax holiday benefit at Oil and Gas business.

Income tax expense special items in fiscal year 2017 were $4.9 million compared to credit of $1,737.4 million in fiscal year 2016.

Tax special items in fiscal year 2016 include a credit of $1,903.3 million relating to the corresponding non-cash impairment charge. In addition, the tax special items in fiscal year 2016 of $173.8 million charge arose in Copper Zambia on restoration of deferred tax liabilities on mining operations at 30%, mineral processing activities at 35%, and changes in legislation restricting the use of past losses.

The profit attributable to non-controlling interests in fiscal year 2017 was $902.3 million in comparison to a loss of $1,664.7 million in fiscal year 2016. The profits attributable to non-controlling interests without special items in fiscal year 2017 was $908.6 million in comparison to $363.5 million in fiscal year 2016.

Liquidity and Capital Resources

Capital Resources

Overview

As of 31 December 2018, Vedanta's cash and cash equivalents and liquid investments were $4,347.5 million, the majority of which were denominated in Indian Rupees. Of this, $707.2 million was cash and cash equivalents and $3,640.3 million was liquid investments. Liquid investments consist of investments in mutual funds and bank deposits with maturities of more than 90 days. Vedanta's investment policy is to invest in funds and banks with a low credit risk and high credit ratings.

Vedanta funds its operations primarily with its current cash and liquid investments, together with cash flows from operations and borrowings under working capital and term loan facilities from banks and/or other financial institutions, and Vedanta expects that these sources will continue to be its principal sources of cash in the next few years. Vedanta believes that its current working capital is sufficient for its present capital requirements.

Vedanta's principal financing requirements include:

- repayment of debts maturing during the year;
- capital expenditures towards the maintenance, upgrading and expansion of capacity in existing businesses;
- consolidation of ownership in various subsidiaries;
- acquisitions of complementary businesses that Vedanta determines to be attractive opportunities; and
- working capital.

Vedanta evaluates its funding requirements regularly in light of its cash flow from its operating activities, the progress of its capital expenditure projects, acquisition initiatives and market conditions. To the extent it does not generate sufficient cash flow from operating activities, Vedanta may rely on other debt or equity financing activities, subject to market conditions. More specifically, Vedanta has from time to time considered, and may pursue in the future, equity offerings or additional listings by its partially owned but controlled subsidiaries. For example, Vedanta has in the past considered public equity offerings of KCM and Vedanta Limited.

The following table sets out selected cash flow data and the cash and cash equivalents for each of fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2017 and 31 December 2018:

	Year ended 31 March			Nine Months Ended 31 December	
	2016	2017	2018	2017	2018
			($ million)		
Net cash from operating activities	2,401.7	1,457.6	1,494.3	775.3	(44.8)
Net cash from/(used in) investing activities	(1,862.3)	72.8	2,213.2	1,765.0	(872.0)
Net cash (used in) financing activities	(446.8)	(343.2)	(4,607.1)	(3,907.0)	901.0
Net increase/(decrease) in cash and cash equivalents	92.6	1,187.2	(899.6)	(1,366.7)	(15.8)
Effect of foreign exchange rate changes	(18.0)	66.7	16.1	18.3	(75.7)
Cash and cash equivalents at beginning of year/period	353.7	428.3	1,682.2	1,682.2	798.7
Cash and cash equivalents at end of year	428.3	1,682.2	798.7	333.8	707.2

Net Cash from Operating Activities

Net cash used in operating activities was $44.8 million in nine months ended 31 December 2018, primarily comprised of profit before tax of $726.1 million and the add-back depreciation and amortisation of $1,090.9 million, finance costs of $948.3 million and impairment reversal of $38.1 million, less $275.6 million of investment revenues, $1,007.9 million in interest paid and $476.5 million in income tax paid. Movement in working capital primarily comprised of a $656.8 million increase in receivables and inventories and a decrease of $435.6 million in payables.

Net cash from operating activities was $775.3 million in nine months ended 31 December 2017, primarily comprised of profit before tax of $439.6 million and the add-back depreciation and amortisation of $794.2 million, finance costs of $1,064.0 million and impairment charges of $772.1 million, less $341.8 million of investment revenues, $1,028.4 million in interest paid and $359.2 million in income tax paid. Movement in working capital primarily comprised of a $1,304.5 million increase in receivables and inventories net of a $667.0 million increase in payables.

Net cash from operating activities was $1,494.3 million in fiscal year 2018, primarily comprised of profit before tax of $2,482.1 million and the add back for impairment reversals of $649.9 million, finance costs of $1,450.8 million and depreciation and amortisation of $1,270.7 million, less $465.1 million of investment revenues, $1,415.6 million in interest paid and $567.2 million in income tax paid. Movement in working capital primarily comprised of a $261.7 million increase in payables net of $961.0 million increase in inventories and receivables.

Net cash from operating activities was $1,457.6 million in fiscal year 2017, primarily comprised of profit before tax of $1,379.9 million and the add back for impairment charges of mining reserves and oil and gas assets of $17.3 million, finance costs of $1,382.2 million and depreciation and amortisation of $1,030.5 million, less $642.6 million of investment revenues, $1,417.5 million in interest paid and $778.7 million in income tax paid. Movement in working capital primarily comprised of a $522.3 million increase in payables net of $266.7 million increase in inventories and receivables.

Net cash from operating activities was $2,401.7 million in fiscal year 2016, primarily comprised of loss before tax of $4,984.0 million and the add back for impairment of mining reserves and oil and gas assets of $5,187.0 million, finance costs of $1,280.4 million and depreciation and amortisation of $1,455.2 million, less $697.8 million of investment revenues, $1,268.4 million in interest paid and $354.7 million in income tax paid. Movement in working capital primarily comprised of a $657.4 million increase in payables net of a $507.0 million increase in receivables and inventories.

Net Cash Used in Investing Activities

Net cash used in investing activities was $872.0 million in nine months ended 31 December 2018, primarily on account of acquisition of a subsidiary $788.3 million, investment in property, plant and equipment $1,014.7 million, purchase of financial asset investments $200.0 million partially offset by net proceeds from redemption of short term investments amounting to $1,123.8 million.

Net cash from investing activities was $1,765.0 million in nine months ended 31 December 2017, primarily on account of net proceeds from redemption of liquid investments amounting to $2,552.1 million offset by purchases of property, plant and equipment and intangibles of $654.6 million and $134.1 million from the acquisition of a subsidiary.

Net cash from investing activities was $2,213.2 million in fiscal year 2018, primarily on account of net proceeds from redemption of short term investments amounting to $3,441.5 million partially offset by purchases of property, plant and equipment and intangibles of $1,104.3 million and acquisition of subsidiary $134.4 million.

Net cash from investing activities was $72.8 million in fiscal year 2017, primarily on account of purchases of property, plant and equipment amounting to $873.9 million and net proceeds of liquid investments amounting to $921.5 million.

Net cash used in investing activities was $1,862.3 million in fiscal year 2016, primarily on account of purchases of property, plant and equipment amounting to $872.4 million and net purchases of liquid investments amounting to $999.9 million.

Net Cash From or Used in Financing Activities

Net cash from financing activities was $901.0 million in nine months ended 31 December 2018, primarily as a result of net additions to medium and long-term borrowings of $2,593.4 million partially offset by payment of dividend to non-controlling interests of subsidiaries of $982.0 million, net repayment of short-term borrowings by $709.8 million.

Net cash used in financing activities was $3,907.0 million in nine months ended 31 December 2017, primarily as a result of payment of dividend to non-controlling interests of subsidiaries of $664.0 million, net repayment of short-term borrowings by $4,299.9 million, repayment of non-convertible bond by $1,128.5 million, offset by net additions to medium and long-term borrowings of $2,212.9 million.

Net cash used in financing activities was $4,607.1 million in fiscal year 2018, primarily as a result of dividend to non-controlling interest of subsidiaries of $1,414.4 million, buy back and repayment of non-convertible bond of $1,128.5 million, repayment of short term borrowings $3,859.2 million offset by proceeds from long-term borrowings by $1,823.3 million.

Net cash used in financing activities was $343.2 million in fiscal year 2017, primarily as a result of dividend to non-controlling interest of subsidiaries of $1,393.3 million, buy back and repayment of convertible and non-convertible bond of $1,448.8 million offset by proceeds from long-term borrowings by $1,940.5 million and short term borrowings by $532.8 million.

Net cash used in financing activities was $446.8 million in fiscal year 2016, primarily as a result of a decrease in short-term borrowings of $1,022.1 million and repayment of long-term borrowings by $958.0 million.

Borrowings

Vedanta had undrawn committed borrowing facilities of $1,129 million available to it as of 31 December 2018.

Vedanta taps both the Indian and offshore markets for its long-term funding needs. In addition, it has sizeable imports and exports and can therefore access both import and export credits, based on cost effectiveness, both in Indian Rupees and in foreign currencies, to finance its short-term working capital requirements. Vedanta has in place both secured and unsecured borrowings, with its secured borrowings being generally Indian Rupee denominated bonds.

Vedanta has tapped different segments of borrowing resources, including banks and capital markets, both in India and overseas. Vedanta currently has a corporate credit ratings of "B+" with a negative outlook by S&P and "Ba3" with a negative outlook by Moody's. Vedanta has not had, and does not currently expect to have, material difficulty in gaining access to short-term and long-term financing sufficient to meet its current requirements.

The following table shows total borrowings of Vedanta as of 31 March 2016, 2017 and 2018 and for the nine months ended 31 December 2018:

	As of 31 March			As of 31 December
	2016	2017	2018	2018
	($ million)			
Bank loans	11,587.9	12,183.4	9,498.7	11,014.4
Bonds	4,074.6	5,566.7	5,139.3	5,399.8
Convertible bonds	587.2	—	—	—
Other loans	13.6	14.4	93	87.9
Preference Shares	—	464.2	462.8	—
Total	**16,263.3**	**18,228.7**	**15,193.8**	**16,502.01**
Borrowings are repayable:				
Within one year (shown as current liabilities)	4,313.8	7,658.5	5,460.3	5,498.0
More than one year	11,949.5	10,570.2	9,733.5	11,004.1
Total borrowings	**16,263.3**	**18,228.7**	**15,193.8**	**16,502.1**
Less: payable within one year	4,313.8	7,658.5	5,460.3	5,498.0
Medium and long-term borrowings	**11,949.5**	**10,570.2**	**9,733.5**	**11,004.1**

As at 31 December 2018, Vedanta had access to funding facilities (both fund based and non-fund based) of $9,195 million, of which $1129 million of fund based and $1215 million of non-fund based, was not yet drawn.

Funding Facilities	Total Facility	Drawn	Undrawn
		($ million)	
Fund based/Non Fund Based	9,195	6,851	2,344

A summary of the principal loans held by Vedanta and its group companies as of 31 December 2018 is contained in Note 24 to the Company's consolidated financial statements.

Vedanta and its subsidiaries have various finance facilities that contain various financial covenants. Vedanta is in compliance with its covenants relating to all facilities for the testing period ended 31 December 2018. These covenants require Vedanta to maintain certain financial ratios and seek the prior permission of the relevant banks and financial institutions for various activities including, amongst others any changes in its capital structure, issue of equity, preferential capital or debentures, raising any loans, undertaking any new project, effecting any scheme of acquisition, merger, amalgamation or reconstruction, implementing a new scheme of expansion or creation of a subsidiary.

Project Capital Expenditures

The following table shows the capital expenditures for Vedanta in fiscal years 2016, 2017 and 2018:

	Year ended 31 March		
	2016	2017	2018
		($ million)	
Expansion capital expenditure	566	668	820

In fiscal year 2016, significant capital expenditure was incurred on development and exploration activities at Vedanta Limited, HZL's underground mine expansion project, increase in aluminium production and power capacities at Vedanta Limited, BALCO and TSPL.

In fiscal year 2017, capital expenditure was incurred on HZL's underground mine expansion project, ramp up of aluminium and power capacities at Vedanta Limited, BALCO and TSPL, Gamsberg Mining project, and various growth projects at the Oil and Gas business.

In fiscal year 2018, capital expenditure was incurred on HZL's underground mine expansion project, ramp up of aluminium and power capacities at Vedanta Limited, Gamsberg Mining project, Tuticorin smelter and various growth projects at the Oil and Gas business.

The following table sets out details regarding Vedanta's capital expenditure as of 31 March 2018, for projects in progress and capex with flexibility.

Capex in Progress	Status	Total Capex Approved	Cumulative Spend up to 31 March 2018	Spend in fiscal year 2018	Unspent as at 31 March 2018
		($ in million)			
Oil and Gas(a)					
Mangala Infill and ASP, Aishwarya and Bhagyam enhanced oil recovery, tight oil and gas etc.		1,863	56	127	1,680
Aluminium					
BALCO — Korba-II 325ktpa Smelter and 1200MW power plant (4x300MW)(1)	Smelter: fully operational	1,872	1,965	(1)(3)	(92)
Jharsuguda 1.25mtpa smelter	Line 3 and 4: fully capitalised Line 5: two section capitalised	2,920	2,746	100	74
Copper India					
Tuticorin Smelter 400 ktpa......................	To complete by third quarter of fiscal year 2020	717	139	50	528
Zinc Sector					
Zinc India					
1.2 mtpa mine expansion(2)	Phase-wise by fiscal year 2020	1,600	967	299	335
Others		150	12	60	77
Zinc International Gamsberg Mining Project(4)	First production by mid-2018	400	68	173	159
Capex Flexibility					
Lanjigarh Refinery (Phase II) — 5mtpa	Under evaluation, subject to bauxite availability	1,570	822	14	734
Skorpion Refinery Conversion	Currently deferred till pit 112 extension	156	14	—	142
Zinc India (1.2 mtpa to 1.35 mtpa mine expansion)	In principle Board Approval	698	—	—	698

(1) Cost over-run due to changes in exchange rate. The total over-run is expected to be $120 million up to fiscal year 2019.

(2) Zinc India total spent to March 2017, adjusted for re-grouping of projects.

(3) Positive on account of sale of trial run production.

(4) Capital approved $400 million excludes interest during construction (IDC).

(5) Based on exchange rate prevailing at time of approval.

(6) Based on exchange rate prevailing at the time of incurrence.

Vedanta may undertake additional capital expenditures as opportunities or needs arise. In addition, Vedanta may increase, reduce or suspend its planned capital expenditures or change the timing and use of its capital expenditures from what is currently planned in response to market conditions or for other reasons.

Vedanta's ability to maintain and grow its revenues, net income and cash flows depends upon continued capital spending. Vedanta's current and future projects may be significantly delayed by the failure to receive regulatory approvals or renewal of approvals in a timely manner, failure to obtain sufficient funding, technical difficulties, human resources constraints, technological or other resource constraints or for other unforeseen reasons, events or circumstances. See "Risk Factors — Risks Relating to Business". Vedanta adjusts its capital expenditure plans and investment budget periodically, based on factors deemed relevant by it. Therefore Vedanta's actual capital expenditures and investments are likely to be different from its current planned amounts, and such differences may be significant.

Contractual Obligations

The following table sets out Vedanta's total future commitments to settle contractual obligations as of 31 March 2018:

Payment due by period	< 1 year	1-3 years	3-5 years	> 5 years	Total
Trade and other payables	4,469.0	30.2	45.9	—	4,545.1
Bank and other borrowings[1]	6,425.6	4,163.5	4,823.4	2,956.2	18,368.7
Derivative liabilities	22.1	18.1	—	—	40.2
Total	**10,916.7**	**4,211.8**	**4,869.3**	**2,956.2**	**22,954.0**

(1) Includes contractual interest payment based on interest rate prevailing at the end of the reporting period.

Vedanta's total future commitments to settle contractual obligations, as of 31 March 2018, were $22,954.0 million.

Vedanta also has commitments to purchase copper concentrate for its copper custom smelting operations. These commitments are based on future LME copper spot prices which are not ascertainable as of the date of this Offering Circular.

Off-Balance Sheet Arrangements

Vedanta has no off-balance sheet entities. In the normal course of business, it enters into certain commitments for capital and other expenditures and certain performance guarantees. The aggregate amount of indemnities and other guarantees was $866.2 million as of 31 December 2018.

Details of Vedanta's indemnities and other guarantees are set out in "— Guarantees". Details of Vedanta's capital commitments and contingencies are set out below.

Capital Commitments Contracted But Not Provided

Vedanta has a number of continuing operational and financial commitments in the normal course of business. Capital commitments contracted but not provided as of 31 December 2018 amounted to $1,913.9 million, related primarily to capacity expansion projects, including the construction of new facilities and the expansion of existing facilities.

Contingencies

As is typical for a Group of its size and complexity, Vedanta is consistently subject to litigation. Certain of its operating subsidiaries have been named as parties to legal actions by third-party claimants and by the Indian sales tax, excise and related tax authorities for additional sales tax, excise and indirect duties. These claims primarily relate either to the assessable values of sales and purchases or to incomplete documentation supporting its tax returns. Vedanta has ongoing disputes with income tax authorities relating to the tax treatment of certain items.

These mainly include disallowed expenses, tax treatment of certain expenses claimed by Vedanta as deductions, and the computation or eligibility of certain tax incentives or allowances. Some of the disputes relate to the year in which the tax consequences of financial transactions were recognised, and in the event these disputes are not resolved in Vedanta's favour, the tax consequences may be reflected in the tax year as required by the income tax authorities and there are therefore timing differences. Most of these disputes and disallowances, being repetitive in nature, have been raised by the tax authorities consistently in most of the years. Vedanta has a right of appeal to the High Court or the Supreme Court of India against adverse initial assessments by the appellate authorities for matters involving questions of law. The tax authorities have similar rights of appeal. The total claims related to these tax liabilities are $1,859.4 million as of 31 December 2018. Vedanta has evaluated these contingencies and estimate that it is probable that some of these claims may result in loss contingencies and hence have recorded $20.6 million as provision as of 31 December 2018.

The amount under dispute with other tax authorities, relating to matters such as sales tax, excise tax and electricity duty and third party claimants, as of 31 December 2018 is $1,277.0 million against which liability of $62.5 million have been recorded based on Vedanta's estimate that none of these claims would become liabilities. Vedanta intends to vigorously defend these claims as necessary.

Although the results of legal actions cannot be predicted with certainty, it is the opinion of the management, after taking appropriate legal advice, that the resolution of these actions will not have a material adverse effect, if any, on Vedanta's business, financial condition or results of operations.

Therefore, Vedanta has not recorded any additional liability in relation to litigation matters in the accompanying consolidated financial statements.

Inflation

According to Inflation.eu, India's annual overall inflation rate was approximately 5.0%, 2.5% and 4.8% for calendar years 2016, 2017 and 2018, respectively. Inflation in India has not significantly impacted Vedanta's results of operations in recent years.

Guarantees

Companies within Vedanta provide guarantees within the normal course of business. Guarantees have also been provided in respect of certain short-term and long-term borrowings.

As of 31 December 2018, $768.3 million of guarantees were advanced to suppliers in the normal course of business. Vedanta has also entered into guarantees advanced to the customs authorities in India of $97.9 million relating to the export and payment of import duties on purchases of raw material and capital goods including export obligations.

Export obligations

The Indian entities of Vedanta have export obligations of $682.1 million as of 31 December 2018 on account of concessional rates received on import duties paid on capital goods under the Export Promotion Capital Goods Scheme and on raw materials under the Advance Licence Scheme enacted by the GoI.

In the event Vedanta fails to meet its obligations, Vedanta's liability would be $95.4 million, reduced in proportion to actual exports. This liability is backed by a bond executed in favour of the Indian customs department amounting to $208.4 million.

Environmental and terminal benefits ("ETB") cash reserve account — KCM

Pursuant to the terms of the shareholders' agreement between Vedanta Resources Holdings Limited ("VRHL") and Zambia Copper Investments Limited or ZCI dated 5 November 2004, KCM is expected to contribute a minimum of $10 million (and not more than a maximum of $18 million) in any fiscal year to ensure that the amount of ETB liabilities is covered by a cash reserve when the life of the Konkola Ore Body comes to an end. The ETB liabilities refer to KCM's obligations in relation to environmental and any terminal benefits payable to its employees. As of 31 December 2018, ETB liabilities provided for were $13.1 million, although these liabilities are likely to fluctuate at each future reporting date.

Market Risk Disclosure

Vedanta is exposed to market risk from changes in foreign exchange rates, interest rates, counterparty and concentration of credit, and commodity prices.

Vedanta uses derivative instruments as part of its management of exposure to fluctuations in foreign currency exchange rates, interest rates and commodity prices. Vedanta does not acquire or issue derivative financial instruments for trading or speculative purposes. Vedanta does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts and interest rate and currency swaps and these are subject to Vedanta guidelines and policies.

Exchange Rate Risk

The results of Vedanta's operations may be affected by fluctuations in the exchange rates between the Indian Rupee, South African Rands, Zambian Kwachas, Namibian dollars and Liberian dollars against the US dollar. Exposures on foreign currency loans are managed through the foreign exchange hedging policy which is reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed. Natural hedges available in the business are identified at each entity level and hedges are placed only for the net exposure. Short term net exposures are hedged progressively based on their maturity. Longer exposures beyond one year for trade and other current account transactions are reviewed and hedges taken accordingly. However, all new exposures on account of long-term borrowing are being hedged.

Hedging activities in India are governed by the RBI with whose policies Vedanta must comply. The policies under which the RBI regulates these hedging activities can change from time to time and these policies may affect the effectiveness with which Vedanta manages exchange rate risk.

Vedanta has in the past held or issued instruments such as options, swaps and other derivative instruments for purposes of mitigating exposure to exchange rate risk. Vedanta does not enter into hedging instruments for speculative purposes.

Vedanta's exposure to foreign currency arises where its group company holds monetary assets and liabilities denominated in a currency different to the functional currency of that entity with USD (US dollar) being the major foreign currency exposure of Vedanta's main operating subsidiaries. Set out below is the impact of a 10% change in the US dollar on profit/(loss) and equity arising as a result of the revaluation of Vedanta's foreign currency financial instruments.

	31 March 2018		
Currency	**Closing exchange rate**	**Effect on pre-tax profit/(loss) of 10% increase in currency**	**Effect on pre-tax equity of 10% increase in currency**
USD	65.0441	233.8	—

The sensitivities are based on financial assets and liabilities held at 31 March 2018 where balances are not denominated in the functional currency of the respective subsidiaries. The sensitivities do not take into account Vedanta's sales and costs and the results of the sensitivities could change due to other factors such as changes in the value of financial assets and liabilities as a result of non-foreign exchange influenced factors. A 10% depreciation of the US dollar would have an equal and opposite effect on Vedanta's financial instruments.

Interest Rate Risk

The Group is exposed to interest rate risk on short-term and long-term floating rate instruments and on the refinancing of fixed rate debt. The Group's policy is to maintain a balance of fixed and floating interest rate borrowings and the proportion of fixed and floating rate debt is determined by current market interest rates.

The borrowings of the Group are principally denominated in Indian Rupees and US dollars with mix of fixed and floating rates of interest. The USD floating rate debt is linked to US dollar LIBOR and INR floating rate debt to Bank's base rate. The Group has a policy of selectively using interest rate swaps, option contracts and other derivative instruments to manage its exposure to interest rate movements. These exposures are reviewed by appropriate levels of management on a monthly basis.

The Group invests cash and liquid investments in short-term deposits and debt mutual funds, some of which generate a tax-free return, to achieve the Group's goal of maintaining liquidity, carrying manageable risk and achieving satisfactory returns.

Floating rate financial assets are largely mutual fund investments which have debt securities as underlying assets. The returns from these financial assets are linked to market interest rate movements; however, the counterparty invests in the agreed securities with known maturity tenure and return and hence has manageable risk. Additionally, the investments portfolio is independently reviewed by CRISIL Limited, and Vedanta's investment portfolio has been rated as 'Very Good', meaning highest safety.

Considering the net debt position as at 31 March 2018 and the investment in bank deposits, corporate bonds and debt mutual funds, any increase in interest rates would result in a net loss and any decrease in interest rates would result in a net gain. The sensitivity analysis below has been determined based on the exposure to interest rates for financial instruments at the balance sheet date.

Borrowing and interest rate hedging activities in India are governed by the RBI and as a result, Vedanta has to comply with the RBI's regulations. The policies under which the RBI regulates these borrowing and interest rate hedging activities can change from time to time and can impact the effectiveness with which Vedanta manages its interest rate risk.

The below table illustrates the impact of a 0.5% to 2.0% change in interest rate of borrowings on profit/(loss) and equity and represents management's assessment of the possible change in interest rates for the year ended 31 March 2018:

Movement in Interest Rates	Effect on pre-tax profit/(loss) for the year
	($ million)
0.5%	(17.3)
1.0%	(34.6)
2.0%	(69.2)

Counterparty and Concentration of Credit Risk

The Group is exposed to credit risk from trade receivables, cash and cash equivalents, liquid investments and other financial instruments.

The Group has clearly defined policies to mitigate counterparty risks. For short-term investments, counterparty limits are in place to limit the amount of credit exposure to any one counterparty. This, therefore, results in diversification of credit risk for mutual fund and bond investments. For derivative and financial instruments, the Group attempts to limit the credit risk by only dealing with reputable banks and financial institutions.

Credit risk on receivables is limited as almost all credit sales are against letters of credit and guarantees of banks of national standing. Moreover, given the diverse nature of the Group's businesses trade receivables are spread over a number of customers with no significant concentration of credit risk. During the year ended 31 March 2018 and 31 March 2017, no single customer accounted for 10% or more of the Group's net sales or for any of the Group's primary businesses. The history of trade receivables shows a negligible provision for bad and doubtful debts. Therefore, the Group does not expect any material risk on account of non-performance by any of counterparties.

Vedanta's maximum gross exposure to credit risk as of 31 March 2018 is $6,856.2 million compared to $10,590.9 million as of 31 March 2017.

Commodity Price Risk

The Group is exposed to the movement of base metal commodity prices on the London Metal Exchange. Any decline in the prices of the base metals that the Group produces and sells will have an immediate and direct impact on the profitability of the businesses. As a general policy, the Group aims to sell the products at prevailing market prices. The commodity price risk in import of input commodities such as copper concentrate and alumina, for Vedanta's copper and aluminium business respectively, is hedged on back-to-back basis ensuring no price risk for the business.

Hedging is used primarily as a risk management tool and, in some cases, to secure future cash flows in cases of high volatility by entering into forward contracts or similar instruments. The hedging activities are subject to strict limits set out by the Board and to a strictly defined internal control and monitoring mechanism. Decisions relating to hedging of commodities are taken at the Executive Committee level. Basis clearly laid down guidelines.

Whilst the Group aims to achieve average LME prices for a month or a year, average realised prices may not necessarily reflect the LME price movements because of a variety of reasons such as uneven sales during the year and timing of shipments.

The Group is also exposed to the movement of international crude oil price and the discount in the price of Rajasthan crude oil to Brent price.

Financial instruments with commodity price risk are entered into in relation to following activities:

- economic hedging of prices realised on commodity contracts

- cash flow hedging of revenues, forecasted highly probable transactions

Aluminium

The requirement of the primary raw material, alumina, is partly met from own sources and the rest is purchased primarily on negotiated price terms. Sales prices are linked to the LME prices. At present the Group on selective basis hedges the aluminium content in outsourced alumina to protect its margins.

The Group also enters into hedging arrangements for its aluminium sales to realise average month of sale LME prices.

Copper

The Group's custom smelting copper operations at Tuticorin is benefited by a natural hedge except to the extent of a possible mismatch in quotation periods between the purchase of concentrate and the sale of finished copper. The Group's policy on custom smelting is to generate margins from Treatment charges/Refining charges or "TcRc", improving operational efficiencies, minimising conversion cost, generating a premium over LME on sale of finished copper, sale of by-products and from achieving import parity on domestic sales.

Hence, mismatches in quotation periods are managed to ensure that the gains or losses are minimised. The Group hedges this variability of LME prices through forward contracts and tries to make the LME price a pass-through cost between purchases of copper concentrate and sales of finished products, both of which are linked to the LME price.

TcRc is a major source of income for the Indian copper smelting operations. Fluctuation in TcRc is influenced by factors including demand and supply conditions prevailing in the market for mine output. The Group's copper business has a strategy of securing a majority of its concentrate feed requirement under long-term contracts with mines.

KCM is largely an integrated copper producer and whenever hedging is done it is with an intention to protect the Group from price fluctuations in copper. KCM also engages in hedging for its custom smelting operations in line with the Group's policy on custom smelting at Tuticorin, as explained above.

Zinc, lead and silver

The sales prices are linked to the LME prices. The Group also enters into hedging arrangements for its zinc, lead and silver sales to realise month of sale LME prices.

Zinc International

Raw material for zinc and lead is mined in Namibia and South Africa with sales prices linked to the LME prices.

Iron ore

The Group sells its Iron Ore production from Goa on the prevailing market prices and from Karnataka through e-auction route as mandated by State Government of Karnataka in India.

Oil and Gas

The prices of various crude oils are based on the price of the key physical benchmark crude oil such as Dated Brent, West Texas Intermediate, and Dubai/Oman. The crude oil prices move based on market factors, such as supply and demand. The regional producers price their crude based on the benchmark crude with a premium or discount over the benchmark based on quality differential and competitiveness of various grades.

Natural gas markets are evolving differently in important geographical markets. There is no single global market for natural gas. Globally, there are three main regional hubs for pricing of natural gas, namely USA (Henry Hub Prices), UK (NBP Price) and Japan (imported gas price, mostly linked to crude oil).

Provisionally priced financial instruments

On 31 March 2018, the value of net financial liabilities linked to commodities (excluding derivatives) accounted for on provisional prices was a liability of $467.6 million (2017: liability of $465.5 million). These instruments are subject to price movements at the time of final settlement and the final price of these instruments will be determined in the financial year beginning 1 April 2018.

Set out below is the impact of a 10% increase in LME prices on profit/(loss) for the year and total equity as a result of changes in value of Vedanta's commodity financial instruments as at 31 March 2018:

($ million except as stated)

Commodity price sensitivity	Total Exposure	Effect on pre-tax profit/(loss) of a 10% increase in the LME	Effect on pre-tax equity of a 10% increase in the LME
	$	($ million)	($ million)
Copper	(568.1)	(56.8)	—

The above sensitivities are based on volumes, costs, exchange rates and other variables and provide the estimated impact of a change in LME prices on profit and equity assuming that all other variables remain constant. A 10% decrease in LME prices would have an equal and opposite effect on Vedanta's financial instruments.

Further, the impact of a 10% increase in closing copper LME for provisionally priced copper concentrate purchased at Vedanta Limited Copper division custom smelting operations is $56.6 million (2017: $48.2 million), which is pass through in nature and as such will not have any impact on the profitability.

Management's Judgment and Estimation

The discussion and analysis of Vedanta's financial condition and results of operations are based upon Vedanta's consolidated financial statements, which have been prepared in accordance with IFRS as adopted by the EU. In the course of preparing these financial statements, the management has made estimates based on and assumptions that impact the amounts recognised in the consolidated financial statements. For a discussion of the significant accounting policies, see note 2(a) to the consolidated financial statements of Vedanta for fiscal year 2018 included elsewhere in this Offering Circular. Vedanta's critical accounting judgements and estimation uncertainty are described in note 2(b) of the consolidated financial statements of Vedanta for fiscal year 2018.

OVERVIEW OF INDUSTRIES

Unless otherwise indicated, all data relating to the copper, zinc, aluminium and iron ore industries contained in this Offering Circular is primarily derived from Wood Mackenzie. Unless otherwise indicated, all data relating to the power industry in this Offering Circular is primarily derived from the GoI and its various ministries and from various multilateral institutions. Unless otherwise indicated, all data relating to the oil and gas industry contained in this Offering Circular is primarily derived from International Energy Agency ("IEA") World Energy Outlook 2018, the BP Statistical Review of World Energy June 2018 (the "BP Statistical Review") and other industry sources.

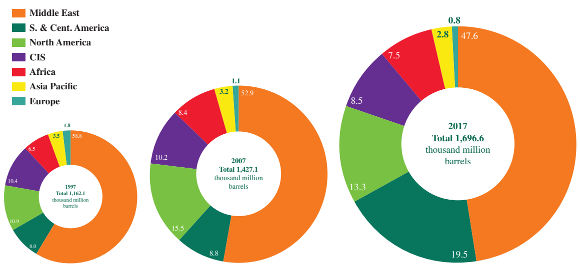
Oil and Gas Overview

Global Crude Oil and Gas Reserves and Resources

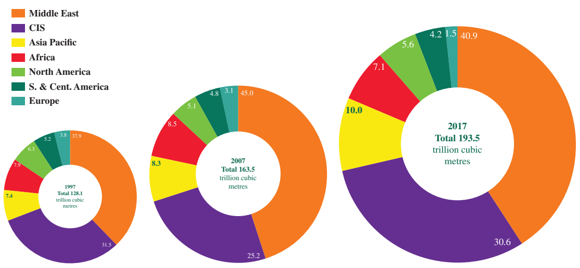
According to the BP Statistical Review, total world proved oil reserves reached over 1,696,600 mmbbls at year end 2017, enough reserves to meet approximately 50 years of global production at 2017 levels. OPEC countries continue to hold majority of world's oil reserves, accounting for 72% of the global proved reserves. Over the past decade, global proved oil reserves have increased by approximately 19%, or approximately 270 mmbbls.

Total world proved natural gas reserves reached 193.1 tcm at year end 2017, sufficient to meet roughly 53 years of global production. Israel was the largest single contributor to growth of gas reserves (0.3 tcm), while the CIS region also added 0.2 tcm to reserves. By region, the Middle East holds the largest proved reserves (79.1 tcm, 40.9% of the global total), followed by CIS (59.2 tcm, a 30.6% share).

Distribution of proved oil reserves in 1997, 2007 and 2017



Distribution of proved gas reserves in 1997, 2007 and 2017

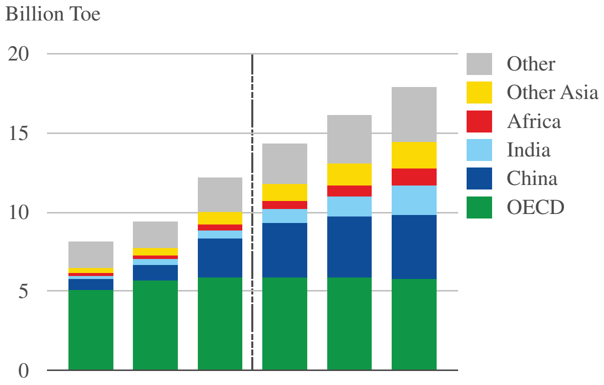


Source: BP Statistical Review 2018

Global Oil and Gas Markets

Global oil and gas markets are undergoing a dynamic phase since 2014, when oil prices fell significantly from the highs of around USD100/bbl. Prices have recovered since then, reaching highs of $86.29/bbl in October 2018 before dipping down in November. Oil Prices (Brent ICE) in 2018 averaged at $72.12/bbl as compared to $53.37/bbl in 2017. Analysts expect prices to stay range bound from $60/bbl — $70/bbl in the near term.

**Primary Energy Consumption by region,
1990-2040 (Billion tonnes oil equivalent)**



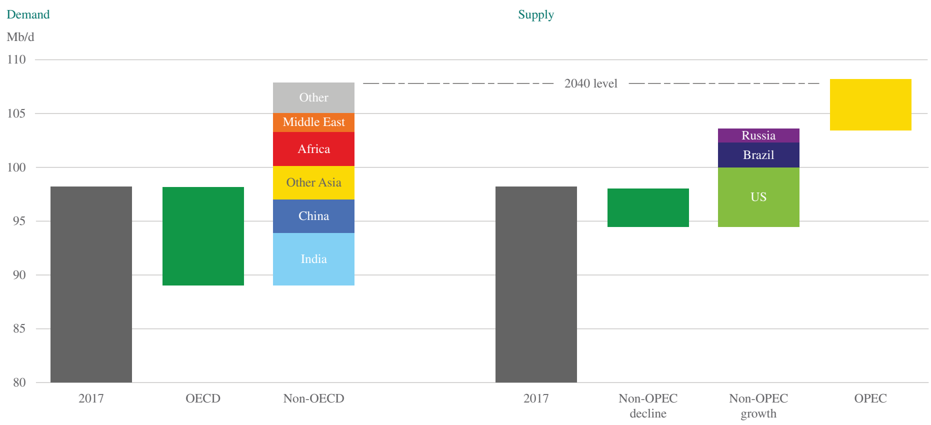
Source: BP Energy Outlook 2019 edition

World economy continues to expand with global GDP expected to grow at an average of 3.2% from 2017 — 2040. Global output is supported by population growth and increasing productivity (GDP/capita). Continuing urbanisation and growing middle class in the developing world with greater access to modern energy, particularly in India and China is increasingly driving the global economic and energy trends.

The world energy market is undergoing a transition and several macro-economic factors continue to affect the demand and supply dynamics. Demand growth will continue to be driven by non-OECD regions, with much of the increase in energy demand expected to come from Asia led by India and China, accounting for 33% of total primary energy demand in 2040. By mid-2020s India will be the world's largest growth market registering a CAGR of 4.5% in the period 2010 — 2040.

Oil and Gas will continue to play a leading role in the world's energy mix, with growing demand driven by commercial transportation and petrochemicals. Driven by technological advancements, significant growth in supply is expected to come from US tight oil and natural gas liquids, and US is expected to become a net exporter.

Global Oil Demand and Supply Outlook



Source: BP Energy Outlook 2019 edition

Indian Oil and Gas Industry

History

The oil and gas industry in India has traditionally been, and continues to be, dominated by public sector companies. In 1955, the GoI entered the oil and gas sector with the establishment of the Oil and Gas Directorate (the predecessor to ONGC), and formed joint venture agreements with domestic and foreign operators.

Until the early 1990s, the Indian oil and gas industry had been dominated by state-owned entities under a series of policies of nationalisation, including taking over the operations from foreign operators, and regulations in pricings. As India's reliance on oil imports increased, the Indian government embarked on a series of reforms aimed at reducing India's dependence on imports, deregulating the industry, improving efficiency, and encouraging private and foreign investment.

In 1997, the New Exploration Licensing Policy ("NELP") was implemented to encourage growth of the domestic exploration and production ("EandP") sector. Successful bidders are required to enter PSCs with the Indian government. Historically, and to promote licensing rounds and encourage potential bidders, PSCs have contained comparatively favourable terms, including, for example, 100% costs recovery, and income tax holiday. In addition, under the NELP, private sector companies have marketing rights of crude oil and natural gas in the domestic market subject to overall government policy guidelines.

Because of the NELP, there have been significantly increased level of participations from the private sectors in the domestic EandP space. Seismic activities were also very strong in the early part of this decade, as was the level of exploration drilling, which led to some of India's largest discoveries being made. In the last 2 years, the GoI has implemented various policies to revive investments and foreign interest in the sector. For instance, from 2017, blocks will be awarded under Hydrocarbon Exploration and Licensing Policy (HELP) under revenue sharing terms with full marketing and pricing freedom for oil and natural gas.

Most of India's oil is produced by ONGC from its Bombay Offshore fields. After staying flat for most of the last decade, oil production has been increasing since 2010 as Vedanta Limited has started producing from the prolific Mangala field in Rajasthan. Other fields on the same blocks have been brought on stream since and a major enhanced oil recovery project is also planned. Other key oil producing basins are Cambay and Assam, both of which are mature regions. State-owned ONGC and OIL have invested significantly in enhanced oil recovery projects in recent years to arrest declining production from their legacy concession areas in these mature basins.

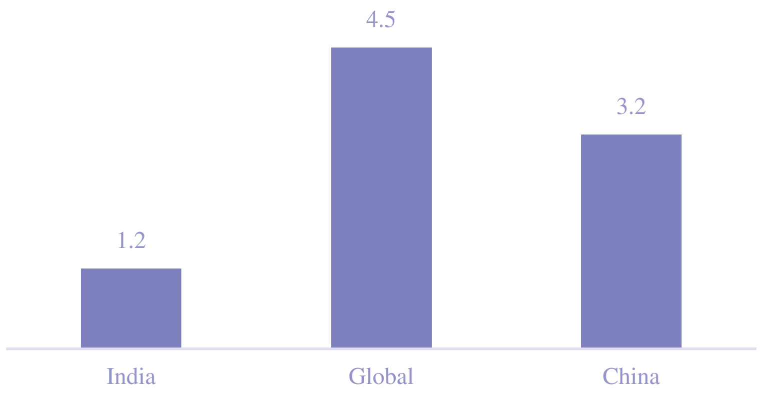
Supply and Demand

India is the second most populous country in the world with a population of approximately 1.3 billion. Rapid economic growth in India has led to a significant increase in demand for crude oil and natural gas. According to the BP Statistical Review, in 2016, India's world share of oil and gas consumption was 4.8% and 1.5% respectively.

India is a net importer of crude oil and natural gas. The BP Statistical Review estimates that in 2017, India domestically produced 0.9 million barrels per day, representing 18.4% of the total crude consumption which was 4.7 million barrels per day. Similarly, in 2017, India natural gas consumption was 54.2 bcm, but the country produced only 28.5 bcm of gas, representing 53% of the total gas consumption.

With consistently high GDP growth of around 7% for the past few years, India's overall energy demand is set to skyrocket over the next few decades. BP estimates, that India's energy consumption will grow at a CAGR of 4.2%, the fastest among all major economies by 2040, and will overtake China as the largest growth market by the late 2020s. India per capita consumption of oil is significantly lower than China and the global average. Oil demand is estimated to rise at a CAGR of 4.8% from 2017 — 2040.

Oil Consumption



Source: BP Energy Outlook 2019 edition, IMF

A significant amount of this demand will have to be met via imports. India met around 90.4% of its total oil consumption for the fiscal year 2017 with foreign crude imports. To reduce this dependency on imports, the GoI has set targets to reduce India's import of oil and gas by 10% by 2022, and laid plans to double India's domestic oil production by 2022. GoI also aims to increase the share of natural gas in country's total energy mix to 15% by 2030.

Zinc

Global Zinc Market

Background

Zinc is a commonly produced metal, valued as an anti-corrosion agent. Annual mine production for 2018 has been estimated by Wood Mackenzie at approximately 13.1 million tonnes.

According to Wood Mackenzie, the principal use for zinc in the western world is galvanising, which involves coating steel with zinc to guard against corrosion. Galvanising, including sheet, tube, wire and general galvanising, accounted for approximately 59% of world consumption of zinc. The main end-use industries for galvanised steel products are the automobile manufacturing, domestic appliance manufacturing and construction industries, and it is these industries on which zinc consumption ultimately depends. Other major uses for zinc include die-casting alloys (13%), brass semis and castings (11%) and oxides and chemicals (9%). Alloys are principally used in toys, vehicles and hardware.

The end-user market is dominated by the construction industry with 50% of global end-use zinc consumption, followed by the sectors of transport (21%), infrastructure (16%), industrial machinery (7%) and consumer products (6%), according to Wood Mackenzie.

The zinc industry has three broad categories of producers:

- Miners, which mine the lead-zinc ore and produce zinc concentrate for sale to smelters, and usually receive payment for 85% of the zinc contained in the concentrate less a treatment charge ("Tc");

- Smelters, which purchase concentrate and sell refined metal, with some smelters also having some integrated production downstream; and

- Integrated producers, which are involved in both the mining and smelting of zinc.

For custom smelters, treatment and refining charges ("TcRc") for zinc concentrates have a significant impact on profitability as prices for zinc concentrate are equal to the LME price net of TcRc and prices of finished zinc products are equal to the LME price plus a premium. A significant proportion of zinc concentrates are sold under frame contracts and TcRc are negotiated annually. The main conditions of the contract which are subject to negotiation are the TcRcs that are expressed in US dollars per dry metric tonne of concentrate being the Tc and in cents per pound of payable zinc being the Rc and, until recently (under long-term contracts) price participation. The TcRc rates are influenced by the demand-supply situation in the concentrate market, prevailing and forecasted LME prices and mining and freight costs.

Global Zinc Reserves

Global zinc reserves were estimated to be, as of 31 December 2018, 225 million tonnes, according to preliminary estimates by the US Geological Survey ("USGS"). Australia, China, Peru, Mexico and the United States collectively account for 71% of world reserves.

The following table shows world zinc reserves by country:

	Reserves
	(in million tonnes)
Australia	64.0
China	44.0
Peru	21.0
Mexico	20.0
Kazakhstan	13.0
United States	11.0
India	10.0
Bolivia	4.8
Canada	3.0
Sweden	1.4
Other countries	33.0
World total (rounded)	**225.2**

Source: US Geological Survey (USGS), Mineral Commodity Summaries, February 2019

Zinc consumption

According to Wood Mackenzie, global zinc consumption rose by 0.6% to 14.3 million tonnes in 2018, following 9 years of strong growth after the 2009 low post economic crisis as refined zinc consumption grew by 42.3% between 2009 and 2018. China, Europe and North America together accounted for 74.8% of global zinc consumption in 2018. With a CAGR of 6.2% between 2009 and 2018, China has been the fastest growing zinc market in the world. Driven by continuing growth in China and India, strong growth in Asia is expected to continue over the next few years.

The following table shows the regional consumption pattern of refined zinc from 2015 to 2018:

Region	Year Ended 31 December							
	2015		2016		2017		2018	
	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	6,424	47.0%	6,673	47.8%	6,827	48.0%	6,909	50.5%
Europe	2,353	17.2%	2,341	16.8%	2,399	16.9%	2,427	17.8%
Rest of Asia	1,988	14.5%	2,005	14.3%	2,076	14.6%	2,026	14.8%
US and Canada	1,172	8.6%	1,209	8.7%	1,161	8.2%	1,159	8.5%
India	634	4.6%	685	4.9%	703	4.9%	716	5.2%
Latin America	579	4.2%	582	4.2%	579	4.1%	602	4.4%
Russia and Caspian	230	1.7%	231	1.7%	249	1.7%	248	1.8%
Africa	158	1.2%	140	1.0%	143	1.0%	131	1.0%
Oceania	133	1.0%	108	0.8%	94	0.7%	103	0.8%
Total	**13,670**	**100.0%**	**13,974**	**100.0%**	**14,232**	**100.0%**	**14,322**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Zinc supply

According to Wood Mackenzie, the five largest zinc mining countries in 2018 are China (35.4%), Peru (10.8%), India (5.6%), Australia (8.5%), and the United States (6.0%), which together accounted for 66.3% of total zinc mined worldwide. The five largest zinc mining companies are Glencore (8.7%), HZL (5.6%), Teck (5.1%), Nexa Resources (2.5%), and Boliden (2.3%) which together accounted for about 24.2% of the total refined zinc produced worldwide.

The following table shows the regional production pattern of zinc mines from 2015 to 2018:

Region	Year Ended 31 December							
	2015		2016		2017		2018	
	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	4,768	36.8%	4,720	34.4%	4,735	38.4%	4,650	35.4%
Latin America	2,707	20.9%	2,611	19.0%	2,817	22.8%	2,935	22.3%
US and Canada	1,081	8.3%	1,071	7.8%	1,082	8.8%	1,090	8.3%
Europe	900	6.9%	834	6.1%	855	6.9%	953	7.3%
India	821	6.3%	645	4.7%	831	6.7%	741	5.6%
Oceania	1,602	12.4%	887	6.5%	822	6.7%	1,121	8.5%
Russia and Caspian	639	4.9%	703	5.1%	765	6.2%	843	6.4%
Africa	306	2.4%	350	2.6%	432	3.5%	476	3.6%
Rest of Asia	300	2.3%	327	2.4%	297	2.4%	324	2.5%
Total	**13,123**	**100.0%**	**12,148**	**100.0%**	**12,635**	**100.0%**	**13,134**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Zinc smelting is slightly less geographically concentrated than zinc mining. Zinc smelter production declined to 13.1 million tonnes in 2018 from 13.5 million tonnes in 2017, a 2.5% decrease. China is the largest single refined zinc-producing country in the world with a production of 5.5 million tonnes in 2018, representing a 42.1% global market share. The other major refined zinc producing countries include South Korea (7.5%), India (5.8%), Canada (5.1%), and Japan (4.0%). The top five countries account for approximately 65.9% of total global refined zinc production. The five largest refined zinc producing companies are Korea Zinc (9.2%), Nyrstar (8.1%), Glencore (7.6%), HZL (5.6%), and Nexa Resources (4.6%), which together accounted for about 35.1% of the total refined zinc produced worldwide.

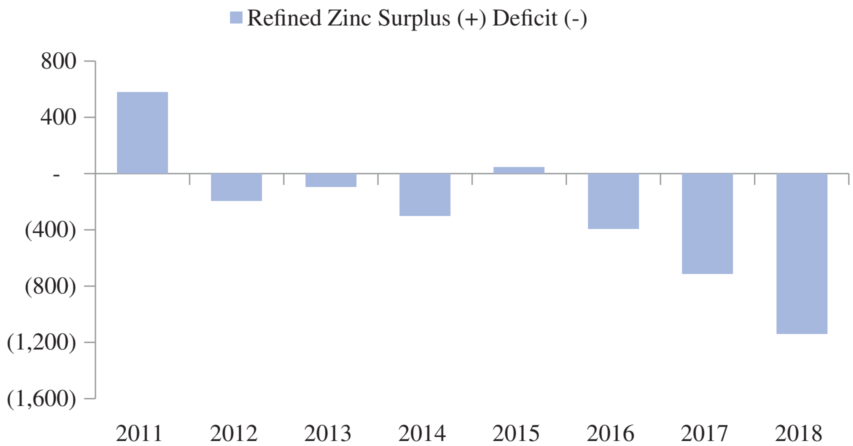
The following table shows the regional production pattern of refined zinc from 2015 to 2018:

	Year Ended 31 December							
	2015		**2016**		**2017**		**2018**	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(thousands of tonnes, except percentages)							
China	5,927	43.2%	6,036	44.4%	5,989	44.3%	5,555	42.1%
Europe	2,226	16.2%	2,178	16.0%	2,159	16.0%	2,232	16.9%
Rest of Asia	1,737	12.7%	1,791	13.2%	1,686	12.5%	1,699	12.9%
Latin America	946	6.9%	936	6.9%	914	6.8%	949	7.2%
India	850	6.2%	641	4.7%	831	6.1%	765	5.8%
US and Canada	859	6.3%	817	6.0%	739	5.5%	787	6.0%
Russia and Caspian	599	4.4%	625	4.6%	649	4.8%	625	4.7%
Oceania	489	3.6%	464	3.4%	459	3.4%	489	3.7%
Africa	83	0.6%	94	0.7%	94	0.7%	82	0.6%
Total	**13,716**	**100%**	**13,582**	**100%**	**13,520**	**100.0%**	**13,183**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

The global refined zinc market is in deficit due to mine closures from 2016.



Source: Wood Mackenzie Zinc LTO Q1 2019, March 2019

Pricing

Zinc is traded on the LME. Although prices are determined by LME price movements, producers normally charge a regional premium that is market driven. Significant price decrease in 2015 has resulted in a number of mine production cuts, which, along with the closure of mines reaching end of production, pushed the zinc price to $2,893 per tonne in 2017, an increase of 38.4% over 2016 and $2,922 per tonne in 2018, an increase of 1.01% over 2017.

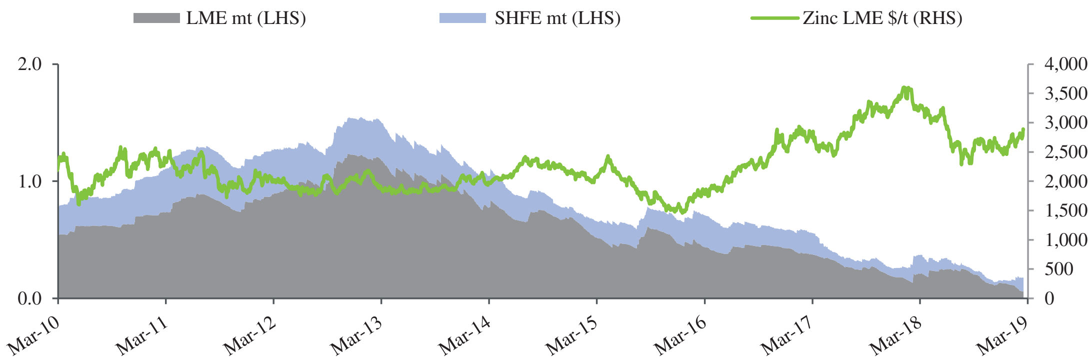
The following table shows the movement in zinc prices from 2008 to 2018:

	Year Ended 31 December										
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
	($ per tonne, except percentages)										
Zinc LME cash price	1,870	1,658	2,158	2,190	1,946	1,909	2,164	1,928	2,090	2,893	2,922
% change.......................	(42.4)	(11.3)	30.1	1.5	(11.1)	(1.9)	13.4	(10.9)	8.4	38.4	1.0

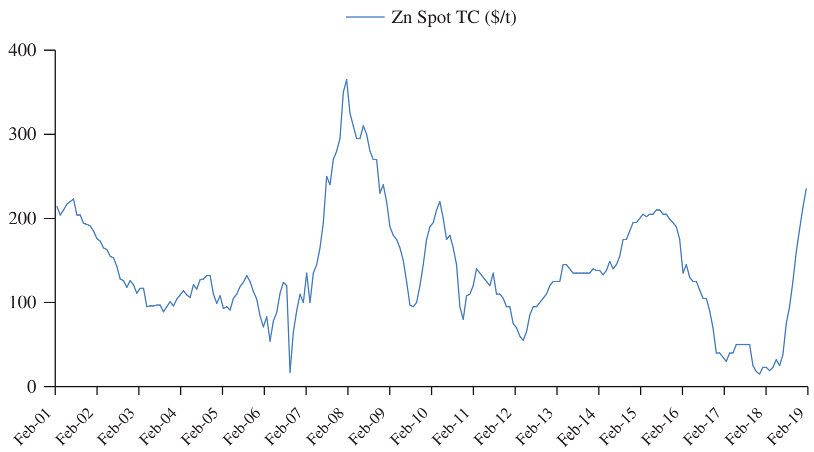
Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

The last closing LME zinc cash price was $2,847 per tonne as of 13 March 2019.

Inventory levels at the LME and SHFE are at 6-year lows. These fundamental and structural factors have continued to support the zinc prices.



Low treatment charges reflect the tightness in the concentrate market.



Source: Wood Mackenzie Zinc STO February 2019

Indian Zinc Market

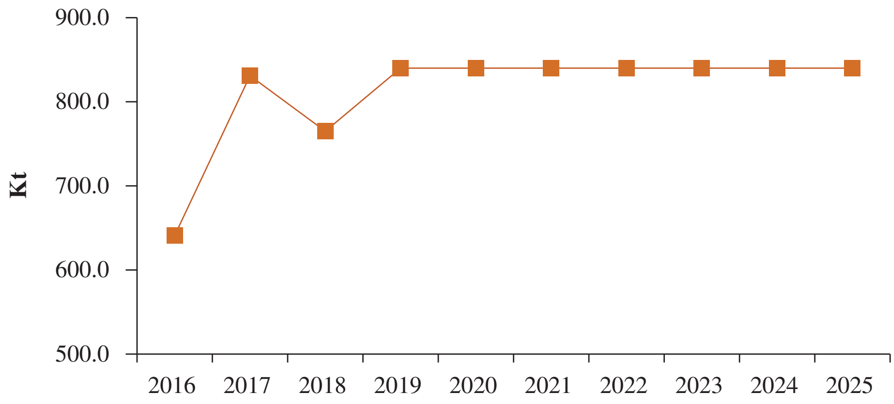
Background

India holds substantial zinc resources — according to the Indian Minerals Yearbook 2017, India held around 36.4 million tonnes in zinc resources as of 1 April 2015. The USGS estimates that India's zinc reserves to be around 10 million tonnes, making it the seventh largest country in terms of zinc reserves globally. The Indian zinc industry is dominated fully by Vedanta's majority-owned subsidiary, HZL, which had a 100% market share in India in fiscal year 2017 for zinc ingots, according to the Indian Minerals Yearbook 2017. The other producer is Edayar Zinc, with a 2% Indian market share in terms of sales volume in fiscal 2014 but had no sales since fiscal year 2015.

Production

Based on Wood Mackenzie data, refined zinc production in India increased by 28.7% from 645,000 tonnes in 2016 to 831,000 tonnes in 2017, but decreased by 10.1% to 745,000 tonnes in 2018 and is expected to reach 827,000 tonnes in 2019.

India Zinc Production Outlook

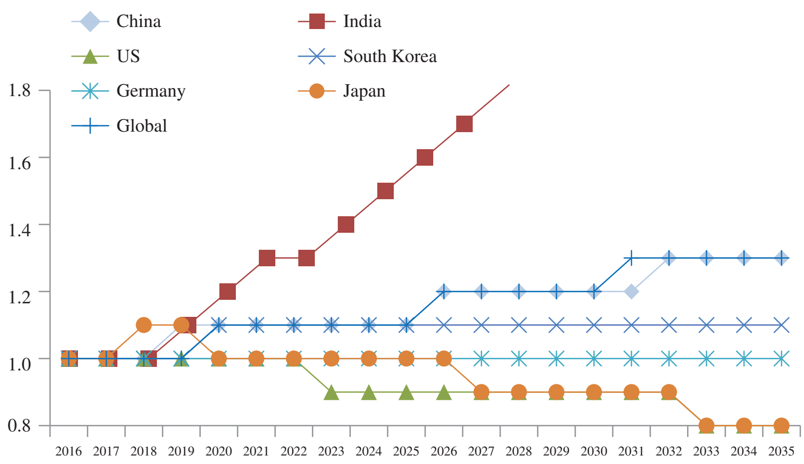


Source: Wood Mackenzie Zinc LTO Q1 2019

Consumption

According to Wood Mackenzie, consumption of refined zinc in India reached 716,000 tonnes during 2018. The principal use of zinc in the Indian market is in the galvanising sector, which is primarily used for tube, sheet and structural products. The other significant end-user of zinc in India is the alloys sector, like western world consumption trends, which has seen an increased demand for die-casting alloys. With expected infrastructure development such as roads, irrigation, construction, oil and gas and ports, there is expected to be increased demand for steel, thus providing significant opportunities for zinc in India. Wood Mackenzie forecasts Indian refined zinc demand to increase at a CAGR of 5.4% from 716,000 tonnes in 2018 to 1,074,000 tonnes in 2025.

India's zinc consumption is expected to grow rapidly over the next decade.



Source: Wood Mackenzie Zinc LTO Q1 2019

Pricing and tariff

Indian zinc prices track global prices as the metal is priced based on the landed costs of imported metal.

The following table shows the customs duties that were applicable on zinc for the periods indicated:

	22 January 2007 to 28 April 2008	**29 April 2008 to 2 January 2009**	**3 January 2009 to 29 February 2016**	**1 March 2016 to present**
Zinc........................	5.0%	0.0%	5.0%	5.0%

In addition, the Finance Act (2 of 2004) of India levies an additional surcharge at the rate of 3% of the total customs duty payable, which is an increase from 2% prior to 1 March 2007.

Market Outlook

Global zinc outlook

According to Wood Mackenzie, global zinc demand will continue to grow over the next few years, at a CAGR of 1.6% between 2018 and 2023, to reach 15.5 million tonnes in 2023. Growth will be led by developing economies in Asia, while zinc consumption will remain broadly stable in Europe, the United States and Canada (which together have a 0.5% CAGR over the same period).

China's zinc consumption will continue to drive the global zinc demand growth based on Wood Mackenzie's forecast. The total consumption of slab zinc in China is expected to grow from 6.9 million tonnes in 2018 to 7.4 million tonnes in 2023. That would translate to China's consumption growth at a CAGR of 1.5% between 2018 and 2023, which compares to global consumption growth excluding China at an expected CAGR of 1.7% for the same period.

According to Wood Mackenzie, between 2018 and 2035, 36 new zinc mines will enter production adding 1.6 million tonnes per annum at peak output. The average size of these operations is quite modest at around 36,000 tonnes per annum. Expansions or production creep at 97 mines globally will add 1.2 million tonnes per annum by 2024. The 183 existing producers are forecast to close on reserve depletion by 2035 for the loss of 6.4 million tonnes per annum. And 28 mines which produced 2.9 million tonnes per annum in 2016 will produce only 2.6 million tonnes per annum by 2035 for a loss of 0.1 million tonnes per annum output by attrition.

Indian zinc outlook

The Indian market is expected to remain positive, with strong growth in key user segments such as sheet galvanising and zinc alloys for the construction segment. As per Wood Mackenzie, Indian zinc demand is expected to grow at a CAGR of 5.8% between 2018 and 2025. The key components for growth are the ongoing and upcoming infrastructure projects, telecom and power projects and automobile sector.

Copper

Global Copper Market

Background

Copper is a non-magnetic, reddish-coloured metal with a high electrical and thermal conductivity (second only to silver in electrical conductivity among all pure metals at room temperature), high tensile strength and resistance to corrosion.

The copper market is geographically diverse in terms of both production and consumption. The different geographical locations of the copper mines and the smelting and refining facilities have led to the development of "custom smelters/refineries", which tend to be heavily reliant on imported concentrates.

Copper consumption can be divided into three main product groups: copper wire rods, copper products and copper alloy products. According to Wood Mackenzie, the predominant use of copper has been the production of copper wire rods, which accounted for an estimated 74% of total global consumption in 2018. Wire rod is consumed in five main wire and cable markets which include general and industrial cable, utility power cable, telecommunication cable, other insulated wire and winding wire.

In the global copper consumer market, the construction segment accounted for 30% of copper consumption, followed by the electrical and electronic products segment (24%), the transportation equipment segment (11%), the industrial machinery segment (10%) and the consumer products segment (25%), as estimated by Wood Mackenzie for 2018.

The copper industry has three broad categories of producers:

- Miners, which mine the copper ore and produce copper concentrate;
- Custom smelters, which smelt and refine copper concentrate to produce copper metal; and
- Integrated producers, which mine copper ore from captive mines and produce copper metal either through smelting and refining or through leaching.

Global Copper Reserves

Global copper reserves were estimated to be, as of 31 December 2017, 826 million tonnes, according to preliminary estimates by the US Geological Survey ("USGS"). Chile, Australia, Peru, Mexico and the United States collectively account for 53% of world reserves.

	Reserves
	(in million tonnes)
Chile	170.0
Australia	88.0
Peru	83.0
Russia	61.0
Indonesia	51.0
Mexico	50.0
United States	48.0
China	26.0
Congo	20.0
Other countries	229.0
World total (rounded)	**826.0**

Source: US Geological Survey (USGS), Mineral Commodity Summaries, February 2019

Refined copper consumption

Global refined copper demand increased from 23.0 million tonnes in 2017 to 23.7 million tonnes in 2018, an increase of 3.0%, according to Wood Mackenzie data.

Refined consumption grew in China, India, US, Canada and Latin America in 2018, but declined in Rest of Asia and Russia and Caspian region, while remaining relatively flat across Europe and Oceania. China was the largest end user of copper in 2018 with a 48.9% market share globally, providing Asia with a combined market share of 68.7%, followed by Europe (16.3%), the United States and Canada (8.6%), and Latin America (3.6%). Previously Europe and North America accounted for approximately 60% of copper consumption during the 1980s, but strong growth in Asia, led by China and Japan, has since significantly changed global consumption patterns. This trend of Asia's growing dominance in copper consumption is expected to continue.

The following table shows the regional consumption pattern of refined copper from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	10,185	46.5%	10,678	47.3%	11,054	48.0%	11,602	48.9%
Rest of Asia	4,003	18.3%	4,126	18.3%	4,215	18.3%	4,160	17.5%
Europe	3,715	16.9%	3,759	16.7%	3,806	16.5%	3,870	16.3%
US and Canada	2,003	9.1%	2,014	8.9%	1,979	8.6%	2,044	8.6%
Latin America	877	4.0%	834	3.7%	822	3.6%	844	3.6%
India	486	2.2%	498	2.2%	500	2.2%	546	2.3%
Russia and Caspian	422	1.9%	431	1.9%	444	1.9%	428	1.8%
Africa	224	1.0%	216	1.0%	211	0.9%	219	0.9%
Oceania	11	0.0%	11	0.0%	11	0.0%	12	0.0%
Total	**21,926**	**100.0%**	**22,569**	**100.0%**	**23,043**	**100.0%**	**23,724**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Copper supply

Global mine production is the principal source of copper, with scrap recycling accounting for only a minor part of the aggregate supplies.

According to Wood Mackenzie's data, the five largest copper mining countries were Chile (28.1%), Peru (11.3%), China (7.8%), the United States (6.5%) and Congo DR (6.0%), which together accounted for approximately 59.7% of the total copper mined worldwide in 2018. The five largest copper mining companies were Codelco (8.4%), Freeport-McMoran (7.0%), Glencore (6.7%), BHP Billiton (5.6%), and Southern Copper (4.3%).

The major smelting locations include China (37.0%), Japan (9.0%), Chile (5.7%), Russia (3.7%) and India (3.2%), which together accounted for 58.6% of global production in 2018. The five largest copper smelting companies were Glencore (5.5%), Codelco (4.9%), Jiangxi Copper (4.8%), Aurubis (3.6%), and Tongling (3.9%).

The five largest refined copper producing countries were China (36.9%), Chile (10.4%), Japan (6.8%), the United States (4.9%) and Russia (4.1%), which together accounted for about 63.1% of the total refined copper produced worldwide in 2017. The five largest copper refining companies were Codelco (5.6%), Jiangxi Copper (7.9%), Aurubis (4.9%), Glencore (4.4%) and Freeport-McMoran (4.5%).

Global refined copper production increased from 23.0 million tonnes in 2017 to 23.6 million tonnes in 2018, an increase of 2.4%.

The following table shows the regional production pattern of refined copper from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	7,049	32.0%	7,830	34.4%	8,268	35.9%	8,703	36.9%
Latin America	3,718	16.9%	3,651	16.1%	3,395	14.7%	3,394	14.4%
Rest of Asia	2,778	12.6%	3,018	13.3%	3,050	13.2%	3,206	13.6%
Europe	2,912	13.2%	2,843	12.5%	2,937	12.7%	2,895	12.3%
US and Canada	1,456	6.6%	1,519	6.7%	1,389	6.0%	1,455	6.2%
Russia and Caspian	1,376	6.3%	1,395	6.1%	1,490	6.5%	1,511	6.4%
Africa	1,449	6.6%	1,246	5.5%	1,270	5.5%	1,462	6.2%
India	791	3.6%	776	3.4%	854	3.7%	584	2.5%
Oceania	467	2.1%	463	2.0%	388	1.7%	385	1.6%
Total	**21,996**	**100.0%**	**22,741**	**100.0%**	**23,042**	**100.0%**	**23,595**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Pricing

Copper is traded on the LME. Although prices are determined by LME price movements, producers normally charge a regional premium that is market driven. Copper price fell by 37.6% between 2011 and 2015 on the back of slowing Chinese growth and increasing production due to continued investments, and continued to decrease in 2016, falling another 11.5% to $4,862 per tonne because of strong supply and elevated stocks. In 2017, prices went up by 26.8% on the back of low concentrate availability and global strong commodities prices. In 2018, prices rose by 6.0%.

The following table shows the movement in copper prices from 2008 to 2018:

	Year Ended 31 December										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	($ per tonne, except percentages)										
Copper LME cash price	6,951	5,163	7,539	8,810	7,949	7,322	6,862	5,494	4,862	6,166	6,535
% change	(2.4)	(25.7)	46.0	16.9	(9.8)	(7.9)	(6.3)	(19.9)	(11.5)	26.8	6.0

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

The last closing LME copper cash price was $6,472 per tonne as of 13 March 2019.

Since peak levels of $1,080 per tonne in 2006, treatment and refining charges (25% concentrate) have fallen significantly, reflecting a continuing tightening in the physical concentrate demand/supply balance while inventories of refined metal remained at elevated levels above 75 days of consumption since 2012, vs. 50 days in 2007. In 2017, spot quotes averaged $589 per tonne, representing a 5.0% decline on 2016 level according to Wood Mackenzie data. China's continuing demand for imported copper concentrates and the recent emergence of increasing disruptions to global mine supply saw spot TcRc rates decline during 2017. Treatment and refining charges are expected to remain under pressure over the short to medium term as global smelting capacity outpaces mined production growth; Wood Mackenzie expects treatment and refining charges (25% concentrate) to average $524 per tonne in 2018.

The following table shows the movement in copper spot annual average TcRc rates from 2008 to 2018 in nominal dollars:

	Year Ended 31 December										
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
	($ per tonne, except percentages)										
TcRc (25% concentrate)......	287	478	296	357	405	446	586	626	606	536	606
% change......................	(25.0)	66.7	(38.0)	20.4	13.4	10.2	31.4	6.8	(3.2)	(11.6)	13.2

Source: Wood Mackenzie Metals Concentrates Market Service Report — Short Term Outlook, February 2019

Indian Copper Market

Background

The Indian copper industry consists primarily of custom smelters as there are limited copper deposits in the country. The available deposits are owned by the government-owned Hindustan Copper Limited ("HCL"), which was the only producer in India until 1995 and has transformed significantly with the entry of Birla Copper, now owned by Hindalco. The Indian industry can be classified into two broad categories — manufacturers of refined copper (copper cathodes) and manufacturers of copper products. Of the three manufacturers of refined copper, HCL is the only primary producer, which mines and refines copper. Hindalco and Vedanta Limited process primarily imported copper concentrate to produce end products such as copper bars, rods and wires.

The Indian copper industry opened to private sector investment in 1992. Prior to 1992, the industry was dominated by HCL, a public-sector undertaking ("PSU"), owned by the GoI. HCL was incorporated in November 1967 with the objectives of carrying out mining operations and producing copper and related products.

Production and Consumption

According to the World Copper Factbook 2017 by the International Copper Study Group, in 2016, India's per capita consumption of copper (0.36kg per person) is significantly less than that of China (8.44kg per person) and other developed nations including Germany (15.05kg per person), Spain (7.77kg per person) and the United States (5.60kg per person). India's consumption of copper is dominated by electrical, telecom, engineering, construction and transport. There is an imbalance between India's smelting/refining capacity and its limited production capacity in copper mining. From 2015 to 2018, based on Wood Mackenzie data, Indian refined copper consumption increased at a CAGR of 6.1% to reach 546,000 tonnes in 2017, while over the same period of time, copper mining output in India decreased by 52.9% with 15,000 tonnes of copper mined in 2017. Wood Mackenzie expects refined copper demand in India to increase to 1,003,000 tonnes in 2025 growing at a CAGR of 9.1% between 2017 and 2025.

Pricing and tariff

Indian copper prices track global prices as the metal is priced on the basis of landed costs of imported metal. The following table sets out the customs duties that were applicable on copper for the period indicated:

	22 January 2007 to 28 April 2008	29 April 2008 to 2 January 2009	3 January 2009 to 27 February 2011	28 February 2011 to present
Copper....................	5%	5%	5%	5%
Copper concentrate ...	2%	2%	2%	2.5%

In addition, the Finance Act (2 of 2004) of India, which has been in effect since 8 July 2004, levies an additional surcharge at the rate of 2% of the total customs duty payable, which has been further increased to 3% of the total customs duty payable effective as of 1 March 2007.

Further, on 1 March 2011, the GoI announced an exemption from import duty on copper concentrate up to an amount equivalent to the customs duty leviable on the value of gold and silver contained in such copper concentrate.

Market Outlook

Global copper outlook

According to Wood Mackenzie, the surplus in refined copper production is expected to continue in the near term as long project lead time means that new production is still coming to the market despite slower demand.

However, copper markets are expected to tighten as output growth slows, with reserve depletion and falling head grades triggering a fall in base case production after 2021. According to Wood Mackenzie, refined copper consumption will grow at a CAGR of 1.7% between 2018 and 2025, reaching 26.6 million tonnes in 2025. Mined production from existing assets and highly probable projects will remain steady with a CAGR of 0.8% over the same period, with 22.0 million tonnes mined in 2025. This imbalance will support higher copper prices and new investments in production capacity. Additionally, the growth of power and auto sectors across emerging markets, including growing demand for electric vehicles globally, will further support the demand growth for copper.

Indian copper outlook

India's copper market is expected to remain positive with strong growth in key user segments such as power, construction and engineering. Indian refined copper consumption is expected to continue to grow strongly in line with the overall growth of the economy, at a CAGR of 9.1% between 2018 and 2025 according to Wood Mackenzie.

The five major sectors that consume most of the copper in India are the electrical, telecom, engineering, construction and transport sectors. These copper consuming sectors have been recognised by the GoI as key infrastructure sectors to sustain the growth of the Indian economy. The GoI's Twelfth Five Year Plan (draft, 2012 — 2017) included addition of approximately 88,000 megawatts of power capacity and 1,229 million tonnes of new capacity in ports, the expansion of India's four-laned and six-laned highway systems and an expansion of its railway system's freight capacity. Going forward demand growth will continue to be driven by the power and auto industries.

Iron Ore

Global Iron Ore Market

Background

Iron ore is the key raw material used to make pig iron and steel. According to the Mineral Information Institute, 98% of the mined iron ore is used to make steel.

The iron ore itself is usually found in the form of magnetite (Fe_3O_4), hematite (Fe_2O_3), goethite, limonite or siderite. Hematite is also known as "natural ore". The name refers to the early years of mining, when certain hematite ores contained 66% iron and could be fed directly into iron making blast furnaces.

The iron ore industry has two broad categories of producers:

(1) Mining companies with a focus on extracting different metals and minerals including iron ore; and

(2) Steel companies, who mine and produce iron ore to benefit from security of supply of its key raw materials.

Historically, steel producers have looked to manage iron ore prices by securing the supply of iron ore through long-term contracts, strategic investments directly in iron ore projects and acquisition of iron ore producers.

World Iron Ore Reserves

Global crude iron ore reserves were estimated to be, as of 31 December 2018, 173.5 million tonnes, according to preliminary estimates by the US Geological Survey ("USGS"). Australia, Russia, Brazil, China and India collectively account for 76.3% of world reserves.

The following table shows world iron ore reserves by country:

	Crude Ore	Iron Content
	(in billion tonnes)	
Australia	50.0	24.0
Brazil	32.0	17.0
Russia	25.0	14.0
China	20.0	6.9
Ukraine	6.5	2.3
Canada	6.0	2.3
India	2.9	0.8
United States	3.5	2.2
Iran	2.7	1.5
Kazakhstan	2.5	0.9
Sweden	1.3	0.6
South Africa	1.2	0.8
Other countries	18.0	9.5
World total (rounded)	**173.5**	**83.7**

Source: US Geological Survey (USGS), Mineral Commodity Summaries, February 2019

Iron ore consumption

Chinese steel consumption has fueled demand for iron ore between 2000 and 2013, as Chinese apparent finished steel demand grew at a CAGR of 14.4% over the period 2000-2013 based on estimates from Wood Mackenzie. However, steel demand in China contracted at a CAGR of 2.5% per annum between 2013 and 2016, falling from 717 tonnes in 2013 to 664 million tonnes in 2016. Demand picked up in 2017 and 2018 and grew at a CAGR of 1.3% and 2.4% over the periods of 2013-2017 and 2013-2018, respectively. Global steel consumption also picked up in 2017 and 2018 and grew at a CAGR of 1.5% and 2.1% over the periods of 2013-2017 and 2013-2018, respectively.

The following table shows the apparent finished steel consumption pattern from 2015 to 2018:

	Year Ended 31 December			
Region	**2015**	**2016**	**2017**	**2018**
	(million of tonnes, except percentages)			
China	656	664	755	806
Change (%)	(5.4)	1.2	13.6	6.8
India	80	84	87	96
Change (%)	5.7	4.2	4.3	10.2
Rest of the world	747	751	772	779
Change (%)	(1.7)	0.5	2.7	0.9
Total	**1,484**	**1,499**	**1,614**	**1,681**
Change (%)	**(3.0)**	**1.0**	**7.6**	**4.2**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

The slowdown in the Chinese steel industry directly impacted global iron ore demand, which has remained flat.

The following table shows the regional consumption pattern of iron ore from 2015 to 2018:

	Year Ended 31 December							
	2015		**2016**		**2017**		**2018**	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(thousands of tonnes, except percentages)							
China	1,242	60.0%	1,228	59.6%	1,238	59.1%	1,241	58.4%
Rest of Asia	277	13.4%	279	13.5%	285	13.6%	297	14.0%
Europe	155	7.5%	153	7.4%	157	7.5%	155	7.3%
CIS	132	6.4%	135	6.5%	129	6.2%	134	6.3%
India	119	5.8%	133	6.5%	141	6.8%	149	7.0%
North America	69	3.3%	63	3.1%	66	3.2%	71	3.3%
South America	54	2.6%	48	2.3%	51	2.5%	53	2.5%
Africa	14	0.7%	14	0.7%	18	0.8%	19	0.9%
Oceania	6	0.3%	6	0.3%	6	0.3%	6	0.3%
Total	**2,069**	**100.0%**	**2,059**	**100.0%**	**2,092**	**100.0%**	**2,124**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Rest of Asia" includes Middle East

Iron ore supply

The largest iron ore producing countries in 2016 are Australia, Brazil, China and India as reported by Wood Mackenzie, and these countries collectively account for 75% of the world's production.

The following table shows the regional production pattern of iron ore from 2015 to 2018:

	Year Ended 31 December							
	2015		**2016**		**2017**		**2018**	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(thousands of tonnes, except percentages)							
Oceania	806	38.0%	860	39.7%	881	39.5%	896	40.1%
South America	467	22.0%	458	21.2%	475	21.3%	485	21.7%
China	242	11.4%	204	9.4%	197	8.8%	192	8.6%
CIS	195	9.2%	188	8.7%	188	8.4%	190	8.5%
India	115	5.4%	154	7.1%	167	7.5%	153	6.8%
North America	105	4.9%	103	4.8%	111	5.0%	113	5.1%
Rest of Asia	62	2.9%	70	3.2%	80	3.6%	83	3.7%
Africa	91	4.3%	88	4.1%	93	4.2%	87	3.9%
Europe	39	1.8%	38	1.8%	39	1.7%	38	1.7%
Total	**2,122**	**100.0%**	**2,164**	**100.0%**	**2,230**	**100.0%**	**2,237**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Rest of Asia" includes Middle East

The iron ore market is highly consolidated with a few producers accounting for the majority of supply. According to Wood Mackenzie, the four largest iron ore mining companies are Vale (13% of global iron ore production in 2018), Rio Tinto (15%), BHP Billiton (12%), and Fortescue Metals Group (8%). These four companies accounted for 48% of global iron ore production.

World seaborne iron ore trade

Due to the disparity in regional supply and demand, particularly in China, there has been a significant increase in world exports of iron ore over the last few years. Wood Mackenzie estimated net world trade had reached 58 million tonnes in 2018, an increase of 11.3% from 2015.

During 2018, Australian producers exported 883 million tonnes, while Brazil exported approximately 394 million tonnes of iron ore. These two countries together represented 79.6% of all world exports of iron ore in 2018. In addition to Australia and Brazil, Canada, CIS and the African continent are also significant exporters of iron ore.

Although its iron ore consumption is slowing, China remains by far the main destination for world iron ore shipments, importing 1,058 million tonnes in 2017, representing a 69.4% share of the total world imports. This trend is expected to continue as iron ore quality in China is inferior and needs to be blended with higher quality iron ore for its steel production requirements.

The below table shows historical world seaborne iron ore trade for the last four years with major exporting and importing countries:

	Year Ended 31 December			
	2015	2016	2017	2018
World iron ore exports	**1,469**	**1,549**	**1,600**	**1,604**
Change (%)	**0.5**	**5.5**	**3.3**	**0.3**
Top 5 exporters (2017)				
Australia	799	842	865	883
Brazil	366	374	384	394
South Africa	65	65	67	61
Canada	37	41	45	46
Ukraine	23	17	14	8
World iron ore imports	**1,416**	**1,474**	**1,538**	**1,546**
Change (%)	**0.3**	**4.1**	**4.4**	**0.5**
Top 5 importers (2017)				
China	953	1,025	1,075	1,072
Japan	131	130	127	124
South Korea	73	72	72	72
Germany	42	40	40	41
Taiwan	24	23	24	23

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Pricing

Iron ore has seen significant price decreases in recent years due to ample supply in the market and slowdown of global demand. Prices have decreased by 59.2% between 2013 and 2015, but rebounded slightly and rose by 23.7% in 2017 from 2015 lows, driven by China's ongoing commitment to supply side reform aimed at coal and steel.

The following table shows the movement in iron ore prices from 2008 to 2018:

	Year Ended 31 December										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	($ per tonne, except percentages)										
Iron Ore Fines (62% Fe, CFR NE China)	134	93	169	188	142	146	103	59	61	73	69
% change	51.3	(30.3)	80.7	11.8	(24.7)	2.6	(29.6)	(42.6)	3.3	19.7	(4.8)

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Indian Iron Ore Market

Background

India is a self-sufficient producer in iron ore for domestic steel production. India has been a traditional exporter of iron ore, with most of the exports going to China, Japan, South Korea and other Far Eastern countries. India has substantial iron ore resources, and has around 33.3 billion tonnes of iron ore resources in estimates as of as reported in the Indian Minerals Yearbook 2017. According to the estimates by USGS, India is the fifth largest country in terms of size of crude ore reserves in 2017, at 8.1 billion tonnes of crude ore. Key players include National Mineral Development Corporation ("NMDC"), Steel Authority of India ("SAIL"), Tata Steel, Rungta Mines Ltd ("Rungta"), Serajuddin and Co., Vedanta Limited and Odisha Mining Corporation Ltd. ("OMC").

Supply and Demand

As of 2018, based on Wood Mackenzie data, India was producing approximately 153 million tonnes of iron ore, of which approximately 17 million tonnes are for export. From 2009 to 2018, India's iron ore production has decreased by 25.9% from 206 to 153 million tonnes while exports have also fallen from 114 million tonnes to around 17 million tonnes. India iron ore imports have increased since 2014, with a peak at 16 million tonnes in 2018. The sharp decrease in both production and exports can be attributed to mining ban and suspensions of mining activities that were in place since 2011 and 2012 in the Indian states of Karnataka and Goa, respectively. On 18 April 2013, the Indian Supreme Court of India has eased the ban on mining in the state of Karnataka by allowing around 100 iron ore mines to restart operation, although production has not fully recovered to historical levels as permitting remains strict.

The table below shows India's historical iron ore production, consumption, imports and exports:

	Year Ended 31 December									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	($ millions of tonnes)									
Production	206	204	183	137	126	122	115	154	167	153
Consumption	92	96	102	105	110	118	119	133	141	149
Imports	1	1	1	3	1	7	10	4	5	16
Exports	114	108	81	33	16	10	4	22	28	17

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Pricing and tariff

As India is self-sufficient in iron ore with minimal quantities being imported, the domestic market is localised in nature with local demand and supply playing a major role in pricing. In addition, logistic costs, local duty structures and other operating costs affect prices unevenly across the different regional markets. This results in prices at regional markets such as Odisha, Chhattisgarh, Karnataka and Goa having a disparity against international prices, while still tracking the general trend in international prices. As the largest producer of iron ore in India, particularly in the Chhattisgarh and Karnataka regions, the government-owned agency NMDC determines contract prices. Such prices are reactionary to international prices, with the NMDC adjusting domestic prices to align with international prices with a time lag.

Prior to June 2008, the GoI had set an export duty on iron ore fines with less than 62% iron content of ₹50 per tonne while the export duty on iron ore fines with an iron content of 62% or more and all grades of lumps was ₹300 per tonne. On 13 June 2008, the GoI changed the export duty on iron ore to 15% ad valorem on the FOB value of exports. On 28 February 2011, India raised the duty to 20% from 5% on fines and to 20% from 15% on lumps with effect from 1 March 2011. In 30 December 2011, the GoI raised the rate of export duty on both iron ore fines and lumps to 30%. From 1 May 2015, export duty in iron ore lumps and fines with less than 58% iron content was reduced to 10%. However, since 1 March 2016, export duty on lumps and fines with less than 58% iron content has been reduced to zero, while lumps and fines with more than 58% iron ore content continue to be charged with a 30% export duty.

	13 June 2008 to 28 February 2011	**1 March 2011 to 29 December 2011**	**30 December 2011 to Present**
Lumps	15%	20%	30%
Fines	5%	20%	30%

Market Outlook

Global Iron Ore Outlook

The slowdown in Chinese steel growth has severely impacted iron ore markets over the last few years. Wood Mackenzie estimates that Chinese demand for iron ore peaked in 2014 and will continue to slowly decrease over time as scrap usage rises. The rebound in iron ore prices in 2016 was relatively unsupported by fundamentals and kept marginal cost producers cash positive. Medium term outlook still looks challenging, as the low point in demand coincides with rapid growth in low cost seaborne supply.

According to Wood Mackenzie, iron ore markets will gradually tighten as a more concentrated industry structure post rationalisation leads to a return of pricing power. Wood Mackenzie estimates a long term average of $65 per tonne for iron ore fines (62% Fe, CFR NE China, in 2018 real terms) from 2025 onwards.

Indian Iron Ore Outlook

According to Wood Mackenzie, growth in iron ore consumption in India will outpace China and the rest of the world, as Indian iron ore demand will grow at a CAGR of 5.5% between 2018 and 2025, vs. a 0.2% for China and 0.7% for world excluding India. Indian iron ore consumption is expected to reach 217 million tonnes in 2025, of which 82.5% will be fulfiled by domestic production.

Steel

Global Steel Market

Background

Steel is an alloy of iron and carbon. It is one of the most widely used materials in the construction, automobile and manufacturing industries. According to the World Steel Association, there are approximately 3,500 different grades of steel, each with unique physical and chemical properties. Commercial steel is generally classified into four groups, depending on their metal alloy content:

(1) Carbon Steel: Can be further classified into low carbon (0.3% carbon), medium carbon (0.3% — 0.6% carbon) and high carbon steels (>0.6% carbon).

(2) Alloy Steel: Contain alloying elements such as manganese, silicon, nickel, titanium, copper, chromium, and aluminium in varying proportions to manipulate the steel's properties, such as its hardenability, corrosion resistance, strength, formability, weld ability, and ductility. Applications for steel alloys include pipelines, auto parts, transformers, power generators, and electric motors.

(3) Stainless Steel: Steel is alloyed with chromium (10% — 20%) to make stainless steel. Its strength, resistance to corrosion, and low maintenance make ideal for a wide range of applications. It also has a long-life cycle and is 100% recyclable. The material is extensively used in construction materials, automotive industry and consumer durables.

(4) Tool Steel: Contains tungsten, molybdenum, cobalt, and/or vanadium in varying quantities to increase heat resistance and durability, making the material ideal for cutting and drilling equipment.

Steel Consumption

Based on Wood Mackenzie data, world steel consumption increased from 1,477 million tonnes in 2014 to 1,674 million tonnes in 2018, at a CAGR of 4.3%. Demand growth is driven by Asia, led by China and India growing at a CAGR of 7.1% and 6.2% in the period 2015 — 2018 respectively. China will remain the largest contributor to global steel demand growth until 2020, post which India will take over as the prime engine of growth.

The following table shows the regional consumption pattern of finished steel from 2015 to 2018:

	Year Ended 31 December							
	2015		**2016**		**2017**		**2018**	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(million tonnes, except percentages)							
China	656	44.4%	664	44.5%	755	47.0%	806	48.2%
Rest of Asia	277	18.7%	286	19.2%	288	17.9%	286	17.1%
Europe	197	13.3%	203	13.6%	210	13.0%	210	12.5%
U.S. and Canada	109	7.4%	107	7.2%	115	7.2%	118	7.1%
India	80	5.4%	84	5.6%	87	5.4%	96	5.7%
Latin America	71	4.8%	65	4.4%	68	4.3%	71	4.2%
Russia and Caspian	47	3.2%	46	3.0%	48	3.0%	47	2.8%
Africa	39	2.6%	38	2.5%	36	2.2%	39	2.3%
Oceania	7	0.5%	7	0.5%	7	0.4%	7	0.4%
Total	**1,484**	**100.0%**	**1,499**	**100.0%**	**1,614**	**100.0%**	**1,681**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Steel Supply

China was the largest producer (50.7%) followed by India (5.9%), Japan (5.8%), South Korea and Russia (4.0%). Asia together contributes 71.9% to total crude steel production.

The following table shows the regional production pattern of crude steel production from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	Volume	%	Volume	%	Volume	%	Volume	%
	(million tonnes, except percentages)							
China	804	51.7%	808	49.6%	868	50.2%	917	50.7%
Rest of Asia	251	16.2%	254	15.6%	267	15.4%	277	15.3%
Europe	225	14.4%	224	13.7%	234	13.5%	235	13.0%
India	89	5.7%	95	5.9%	101	5.9%	106	5.9%
Russia and Caspian	79	5.1%	78	4.8%	80	4.6%	81	4.5%
Latin America	64	4.1%	60	3.7%	64	3.7%	66	3.7%
U.S. and Canada	25	1.6%	91	5.6%	95	5.5%	101	5.6%
Africa	14	0.9%	13	0.8%	16	0.9%	17	0.9%
Oceania	6	0.4%	6	0.4%	6	0.3%	6	0.3%
Total	**1,556**	**100.0%**	**1,629**	**100.0%**	**1,731**	**100.0%**	**1,807**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Pricing

Steel prices declined by 50.3% from 2011 to 2015 on the back of slowing demand. Prices have recovered since then driven by improved outlook on construction and rising utilisation rates.

The following table shows the movement in finished steel product prices from 2008 to 2018:

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	($ per tonne, except percentages)										
Hot Rolled Coil China	688	518	616	710	632	599	528	353	409	556	639
% change	27.3	(24.6)	18.9	15.2	(11.0)	5.2	(11.8)	(33.2)	15.8	36.1	14.9
Rebar China	514	592	710	610	574	492	334	352	556	626	514
% change	40.1	(22.9)	15.0	20.0	(14.1)	(5.8)	(14.3)	(32.1)	5.3	58.0	12.6

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

India Iron and Steel Market

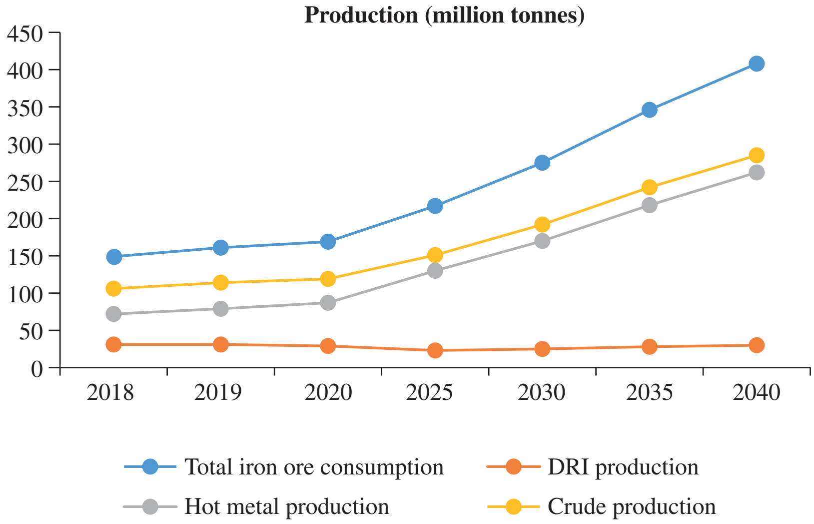
Background

India is the second largest producer of steel after China. In 2018, India contributed 5.9% to total crude steel production. The large steel producers in India are Steel Authority of India, Rashtriya Ispat Nigam Ltd., Tata Steel, Essar Steel, JSW Steel, Jindal Steel and Power Ltd. Besides the steel producing units, there are many sponge iron plants, mini blast finance units, hot and cold rolling mills and galvanising/colour coating units spread across the country. As per the India Minerals Yearbook 2017, India steel demand is driven by Infrastructure (23%), Construction (22%), Manufacturing (18%), Automobiles (12%) and Consumer Durables (6%).

Supply and Demand

As per the Indian Minerals Yearbook 2017, Iron and Steel (83.6%) and Sponge Iron Industries (15.7%) were the major consumer of iron ore and together accounted for over 99.3% of the consumption.

Indian iron-ore demand expected to grow in line with growth of steel and hot metal production.



Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Domestic crude steel production has shown a sustained rise in last five years growing at a CAGR of 5.5%. With the expansion of capacities of integrated plants and installation of new plants, additional supply of steel in Indian markets has considerably increased, creating an intense competition in the domestic market.

	Year Ended 31 December									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	(millions of tonnes)									
Crude Steel Production..................	64	69	73	77	81	87	89	95	101	106
Finished Steel Production..................	58	65	70	72	74	76	80	84	87	96
Finished Steel Imports..	8	9	9	9	7	9	13	9	8	8
Finished Steel Exports..	5	7	8	8	9	9	7	9	14	11

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

The New Steel Policy, 2017 aspires to target 300mt of steelmaking capacity by 2030. The policy seeks to increase consumption of steel by promoting consumption in major sectors such as Infrastructure, Automobiles and Construction. The policy seeks to increase the per capita consumption to 160kg by 2030 from existing level of 60kg.

Present and Future Capacity

	(In million tonnes per annum)	
Item	**Present rated capacity**	**Capacity after expansion**
Hot metal	4.080	7.50
Crude Steel	3.925	7.00
Finished steel	2.620	5.85
Semis	0.533	0.72
Saleable steel	3.153	6.56

Source: India Minerals Yearbook 2017

In 2017, the Ministry of Steel under GoI, introduced the new National Steel Policy 2017 and the DMI&SP policy, to promote the domestic steel industry. Direct benefits are expected to come from the government's massive thrust on infrastructure development, though timely execution of projects remains a core parameter for steel demand. To boost domestic manufacturing, a step up in allocation for smart Cities mission, higher expenditure on railways Infrastructure, airport capacity expansion and transportation especially debottlenecking of the railways and affordable housing which are all expected to act as a major boost for raising domestic steel demand. Additionally, export duty on all varieties of iron-ore (except pellets) has been increased from 20% to 30% ad valorem, to ensure self-sufficiency in steel production.

Market Outlook

Global steel outlook

According to Wood Mackenzie, global crude steel production is forecasted to grow at a 1.1% CAGR between 2018 and 2025 to reach 1,951 million tonnes in 2025, of which China will contribute 48.2% of the volume with annual production being 940 million tonnes in 2025.

Indian steel outlook

India will account for 7.7% of crude steel production globally between 2018 and 2025. India's finished steel production will increase at a 4.9% CAGR between 2018 and 2025 to reach 134.3 million tonnes in 2025. Wood Mackenzie forecasts steel demand to be driven by the construction, machinery and automotive industries. On the supply side, net steel imports will be necessary in the long term, but reliance on scrap will ease as iron production grows faster than steelmaking.

Aluminium

Global Aluminium Market

Background

Aluminium is lightweight in relation to its strength, durability and resistance to corrosion. It can be extruded, rolled, formed and painted for a wide variety of uses.

The raw material from which aluminium is produced is bauxite, which is a very common mineral found mainly in tropical regions. It normally occurs close to the surface and can be mined by open-pit methods. Bauxite is refined into alumina which is used to produce aluminium. Typically, bauxite ranges from 35% to 60% contained alumina. There are several different types of bauxite, and alumina refineries are usually designed to treat a specific type. The majority of alumina refineries are therefore integrated with mines.

The importance of different sectors in aluminium demand varies significantly between developed and developing nations. In mature economies, transport plays a more important role in aluminium demand than construction. As estimated by Wood Mackenzie, in 2018, the four largest sectors of end-uses for aluminium in mature economies like Germany, Japan, South Korea, the United States and Canada were transport (31%), packaging (25%), construction (15%) and machinery (10%). In comparison, in 2018, the four largest sectors of end-uses for aluminium in China, Brazil and India were construction (27%), followed by transport (19%), packaging (9%) and electrical (13%).

Aluminium consumption

Based on Wood Mackenzie data, world primary aluminium consumption increased from 53.9 million tonnes in 2014 to 66.1 million tonnes in 2018, at a CAGR of 5.2%. Chinese demand is fuelling the growth, as China accounted for 55.3% of total global consumption in 2018. Between 2015 and 2018, China's demand for primary aluminium increased at a CAGR of 7.6%, compared to an increase of 2.6% for world demand excluding China.

The following table shows the regional consumption of primary aluminium from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	29,373	51.8%	31,664	52.9%	34,419	54.2%	36,553	55.3%
Europe	8,570	15.1%	8,811	14.7%	9,146	14.4%	9,373	14.2%
Rest of Asia	6,885	12.1%	7,169	12.0%	7,415	11.7%	7,296	11.0%
US and Canada	5,939	10.5%	6,056	10.1%	6,151	9.7%	6,272	9.5%
Latin America	1,989	3.5%	1,938	3.2%	1,955	3.1%	1,969	3.0%
India	1,931	3.4%	2,060	3.4%	2,242	3.5%	2,445	3.7%
Russia and Caspian	872	1.5%	898	1.5%	925	1.5%	964	1.5%
Africa	635	1.1%	652	1.1%	673	1.1%	702	1.1%
Oceania	544	1.0%	553	0.9%	559	0.9%	572	0.9%
Total	**56,738**	**100.0%**	**59,802**	**100.0%**	**63,485**	**100.0%**	**66,147**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Aluminium supply

Aluminium production has become increasingly more concentrated in recent years, with the leading ten producers accounting for 50.0% of world primary aluminium production in 2018 as reported by Wood Mackenzie. The five largest primary aluminium producing companies are Weiqiao Textile Group (9.8%), Xinfa Group (5.9%), UC Rusal (5.9%), Rio Tinto (5.4%) and Chalco (4.7%), which together accounted for approximately 31.7% of the total primary aluminium produced worldwide in 2018.

Global production of primary aluminium increased from 57.1 million tonnes in 2015 to 64.7 million tonnes in 2018, at a CAGR of 4.3%. In 2017, North America, Europe and China together accounted for approximately 69.8%, with China alone accounting for 56.8%, of global primary aluminium production.

The following table shows the regional production of primary aluminium from 2015 to 2018:

	Year Ended 31 December							
	2015		**2016**		**2017**		**2018**	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(thousands of tonnes, except percentages)							
China	30,800	53.9%	32,500	54.6%	36,975	57.4%	36,779	56.8%
Rest of Asia	6,110	10.7%	6,537	11.0%	6,655	10.3%	6,902	10.7%
Europe	4,414	7.7%	4,511	7.6%	4,540	7.0%	4,606	7.1%
Russia and Caspian	3,976	7.0%	4,156	7.0%	4,149	6.4%	4,171	6.4%
US and Canada	4,465	7.8%	4,022	6.8%	3,967	6.2%	3,801	5.9%
India	2,357	4.1%	2,728	4.6%	3,250	5.0%	3,697	5.7%
Oceania	1,979	3.5%	1,971	3.3%	1,818	2.8%	1,926	3.0%
Africa	1,687	3.0%	1,691	2.8%	1,678	2.6%	1,675	2.6%
Latin America	1,325	2.3%	1,360	2.3%	1,375	2.1%	1,160	1.8%
Total	**57,112**	**100.0%**	**59,476**	**100.0%**	**64,407**	**100.0%**	**64,718**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Alumina

Alumina is a key raw material for aluminium production. Generally, it takes two tonnes of alumina to produce one tonne of primary aluminium. According to data compiled by Wood Mackenzie, in 2017, the five largest alumina producing companies are Weiqiao Textile Group (12.7%), Chalco (12.0%), Xinfa Group (8.6%), Alcoa Inc. (6.3%), and Rio Tinto (6.1%), which together accounted for approximately 45.7% of the total alumina produced worldwide.

The following table shows the regional production of alumina from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
	(thousands of tonnes, except percentages)							
China	57,600	48.8%	61,042	50.7%	69,268	53.6%	72,829	55.5%
Oceania	20,393	17.3%	20,906	17.4%	20,856	16.1%	20,642	15.7%
Latin America	13,316	11.3%	12,752	10.6%	12,967	10.0%	10,625	8.1%
Europe	8,707	7.4%	8,724	7.2%	8,687	6.7%	8,647	6.6%
India	5,534	4.7%	5,994	5.0%	6,145	4.8%	6,431	4.9%
Russia and Caspian	4,174	3.5%	4,169	3.5%	4,422	3.4%	4,508	3.4%
Rest of Asia	1,980	1.7%	2,716	2.3%	3,970	3.1%	4,415	3.4%
US and Canada	6,220	5.3%	4,095	3.4%	3,033	2.3%	2,936	2.2%
Africa	0	0.0%	0	0.0%	0	0.0%	144	0.1%
Total	**117,925**	**100.0%**	**120,398**	**100.0%**	**129,347**	**100.0%**	**131,177**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

The following table shows the estimated global demand-supply balance for smelter grade alumina from 2015 to 2018:

	Fiscal Year Ended 31 December			
	2015	2016	2017	2018
	(thousands of tonnes)			
Global alumina surplus/(deficit)	726	(1,840)	(2,998)	(2,227)

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Bauxite

Bauxite, the principal raw material used in the production of alumina, is typically open-pit mined in very large-scale operations. Between 2.0 to 3.6 dry tonnes of bauxite are usually required to make one tonne of alumina (depending on ore type, alumina content and variables such as proportion of reactive silica and organic matter). Based on data from the USGS as reported in January 2018, Guinea has the largest bauxite reserves in the world (24%), followed by Australia (20%), Vietnam (12%), Brazil (9%), Jamaica (7%) and Indonesia (4%).

The table below shows the world reserves of bauxite:

	Reserves
	(in million tonnes)
Guinea	7,400
Australia	6,000
Vietnam	3,700
Brazil	2,600
Jamaica	2,000
Indonesia	1,200
China	1,000
India	660
Russia	500
Malaysia	110
United States	20
Other countries	5200
World total (rounded)	**30,000**

Source: US Geological Survey (USGS), Mineral Commodity Summaries, February 2019

According to the Wood Mackenzie, global production of bauxite reached approximately 342 million tonnes in 2018. Australia, China, Brazil, Guinea and India are the largest bauxite producing countries, representing 85.2% of world's total production in 2018.

The following table shows the regional production of bauxite from 2015 to 2018:

	Year Ended 31 December							
	2015		2016		2017		2018	
Region	Volume	%	Volume	%	Volume	%	Volume	%
	(thousands of tonnes, except percentages)							
China	92,124	29.5%	91,926	30.7%	98,306	29.6%	86,266	25.2%
Oceania	84,513	27.0%	87,423	29.2%	95,596	28.8%	99,206	29.0%
Latin America	46,246	14.8%	46,626	15.5%	44,127	13.3%	41,095	12.0%
Africa	20,723	6.6%	31,375	10.5%	48,653	14.7%	61,948	18.1%
India	21,581	6.9%	21,042	7.0%	16,860	5.1%	18,499	5.4%
Rest of Asia	34,259	11.0%	7,931	2.6%	13,866	4.2%	20,014	5.8%
Russia and Caspian	9,098	2.9%	9,126	3.0%	9,337	2.8%	10,164	3.0%
Europe	3,934	1.3%	4,329	1.4%	5,092	1.5%	5,017	1.5%
US and Canada	126	0.0%	126	0.0%	126	0.0%	126	0.0%
Total	**312,604**	**100.0%**	**299,904**	**100.0%**	**331,962**	**100.0%**	**342,335**	**100.0%**

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

Note: "Russia and Caspian" includes Russia, Armenia, Georgia, Kazakhstan, Tajikistan and Uzbekistan; "Rest of Asia" includes Middle East

Pricing

Aluminium is an LME traded metal. It is either sold directly to consumers or on a terminal market. The price is based on LME price but producers are also able to charge a regional price premium, which generally reflects the cost of obtaining the metal from an alternative source.

Alumina prices are negotiated on an individual basis between buyers and sellers but are usually determined by reference to the LME price for aluminium. The negotiated agreements generally take the form of long-term contracts, but fixed prices can be negotiated for shorter periods and a relatively small spot market also exists.

The following table shows the movement in aluminium and alumina prices from 2007 to 2017:

	Year Ended 31 December										
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
	($ per tonne, except percentages)										
Aluminium											
LME cash price	2,571	1,667	2,173	2,395	2,019	1,846	1,866	1,663	1,604	1,968	2,113
% change	(2.6)	(35.2)	30.3	10.2	(15.7)	(8.6)	1.1	(10.9)	(3.6)	22.7	7.4
Alumina											
Spot price	362	245	333	374	319	327	330	301	254	354	474
% change	2.5	(32.2)	35.6	12.5	(14.9)	2.5	1.1	(8.7)	(15.8)	39.4	33.8
Ratio											
Alumina/aluminium (%)	14.1	14.7	15.3	15.6	15.8	17.7	17.7	18.1	15.8	18.0	22.4

Source: Wood Mackenzie Metals Market Service Report — Long Term Outlook, December 2018

The LME aluminium cash price was $1,905 per tonne as of 13 March 2018.

Indian Aluminium and Bauxite Market

Background

India has been producing primary aluminium since 1938, and over the years, the model that prevailed was of a fully integrated operation with access to bauxite, alumina and power. As this model consolidated, the corporate structure of the aluminium industry also changed, with smaller regional producers being absorbed or merged to form larger integrated players with international presence.

India possesses considerable bauxite resources, estimated at 3.9 billion tonnes according to the Indian Minerals Yearbook 2017. In Odisha, bauxite resources are estimated to be 2.0 billion tonnes, with large reserves in Panchpatmali, Pottangi and Baphlimali. In Andhra Pradesh, there are 0.6 billion tonnes, with large bauxite concentrations in Saparla and Jarella. At current extraction rates, these two states alone have the equivalent of over 100 years of Indian demand. Even using the more conservative the USGS reserve estimate, India has reserves equivalent to almost 30 years at current output. According to the USGS, India has the ninth largest reserves of bauxite ore in the world, with total recoverable reserves estimated at 660 million tonnes. These bauxite ore reserves are high grade and require less energy to refine, thus resulting in significant cost advantages for Indian aluminium producers.

Supply and demand

As of 31 December 2017, there are four major smelting and refining companies in India; 87% state-owned National Aluminium Company Limited, privately held Hindalco, Vedanta Limited and BALCO, which is owned 49% by the Indian government and 51% by Vedanta Limited.

The aluminium industry in India has traditionally been largely self-sufficient. Primary aluminium production has broadly kept pace with demand between the 1980's and 2011, with the country being a small net exporter. Following a surge in aluminium demand, India has experienced a small supply deficit in primary aluminium production between 2012 and 2013 according to the estimates by Wood Mackenzie. Significant new production capacity has been built since then, as smelter capacity has grown from 2.3 million tonnes in 2015 to 3.7 million tonnes in 2018. Supply growth will continue and installed capacity is estimated to reach 4.3 million tonnes in 2018. Local demand for aluminium will gradually catch up; growing at a 6.9% CAGR between 2018 and 2025 is estimated to reach 3.9 million tonnes that year.

Pricing and tariff

Domestic aluminium prices track global price trends as producers usually price the metal at a marginal discount to the landed cost of imported metal. Though value-added product prices also track metal price movement, they usually have relatively less volatility and command a premium reflecting the degree of value addition and quality, as indicated by the brand.

The following table shows the customs duties that were applicable for the periods indicated:

	29 April 2008 to 2 January 2009	**3 January 2009 to 29 February 2016**	**1st March 2016 to present**
Primary Aluminium	5%	5%	7.5%

In addition, the Finance Act (2 of 2004) of India, which has been in effect since 8 July 2004, levies an additional surcharge at the rate of 2% of the total customs duty payable, which has been further increased to 3% of the total customs duty payable effective 1 March 2007.

Pursuant to a notification dated 1 March 2013, a customs duty of 10% was introduced by the GoI on bauxite (natural), in calcined and non-calcined form.

Market Outlook

Global aluminium outlook

According to Wood Mackenzie, global primary aluminium production is forecasted to grow at a 4.6% CAGR between 2018 and 2025 to reach 84.6 million tonnes in 2025. China will contribute 9.3% of the volume and its annual production will be 50.2 million tonnes in 2025.

Collectively, Wood Mackenzie expects the aluminium market to be oversupplied until 2020 when a deficit is expected, then returning to surplus until 2022.

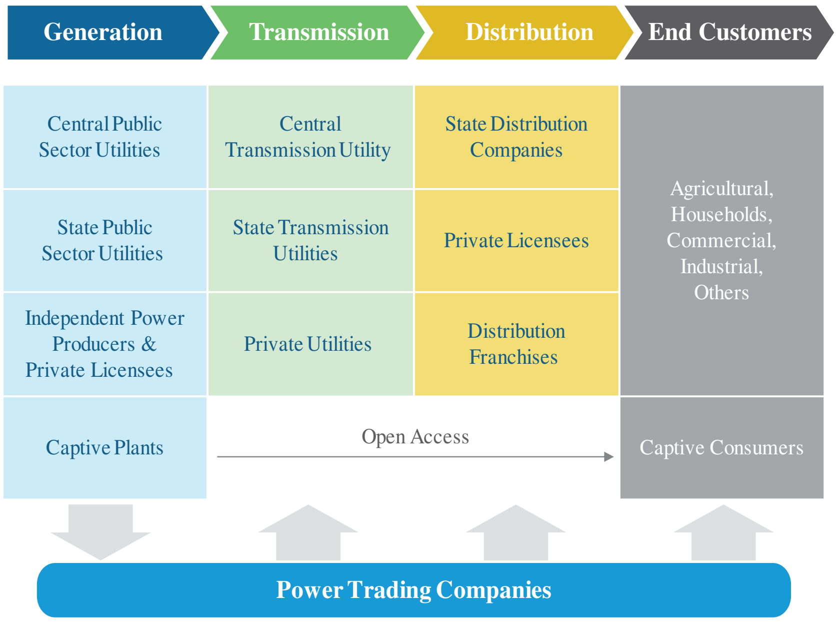
Indian aluminium outlook

India will account for 5.1% of primary aluminium production globally between 2018 and 2025. India's aluminium consumption will increase at a 6.9% CAGR between 2018 and 2025 to reach 3.9 million tonnes in 2025. This growth will be fuelled by India's demand for housing, retail and office space. Indian smelters form part of integrated chains, stretching back to bauxite, alumina and forward into semi-fabricating operations. Indian smelters are also endowed with their own captive power plants and favourable labour costs.

Commercial Power Generation Business

Organisation of the Power Industry

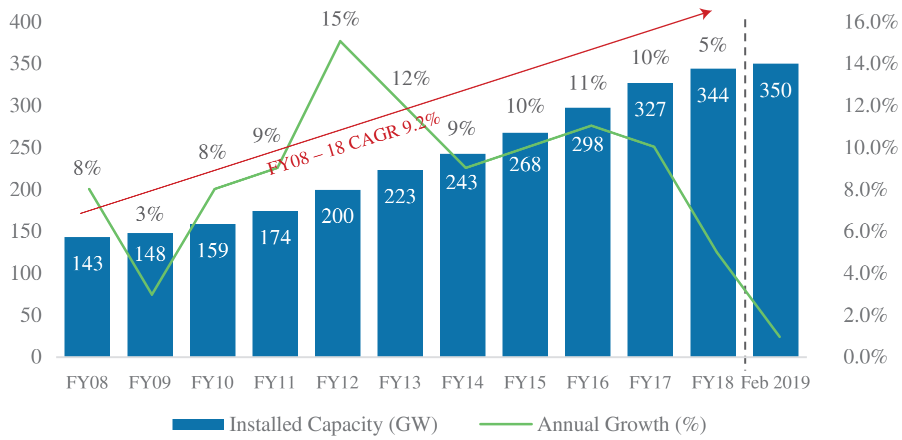
Please see below for a summary on the organisation of the India Power industry. State, Central and Private entities each play important roles along the generation, transmission and distribution value chain.



Overview of the Indian Power Sector

The Indian power sector has grown significantly in size and capacity since independence and is one of the largest power markets globally today. Over the past 10 years, installed capacity grew strongly at a CAGR of 9.2% to 344 GW in fiscal year 18 (350 GW as of February 2019). Despite growth in the installed capacity, some parts of the country continue to face power shortages due to the growth of consumption outpacing the growth of electricity supply.

Total Installed Capacity Growth (fiscal year 2008 — February 2019)



Source: Central Electricity Authority (CEA)

Demand for electricity is on the rise as India's economy gains in global importance. Factors that contribute to rising per capita consumption include: 1) improvement of electrification in villages, 2) GDP growth and general economic activity, 3) growth in consumer electronic device penetration.

The projected demand growth envisaged in the CEA 19th Electric Power Survey which was released in January 2017 is given below.

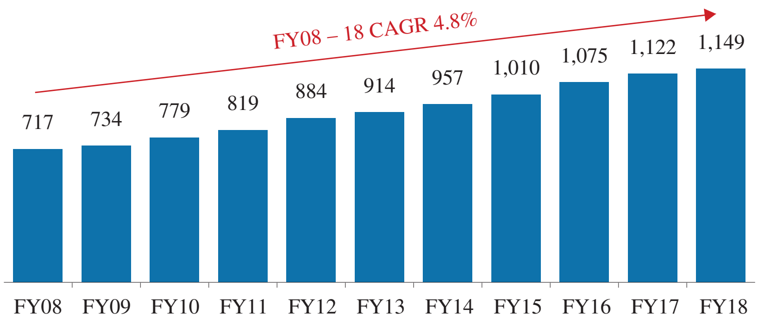
	Electricity requirement (TWh)[(1)]	CAGR	Peak demand (GW)	CAGR
Fiscal year 2018	1,213		164	
Fiscal year 22E	1,566	6.6%	226	8.3%
Fiscal year 27E	2,047	5.5%	299	5.8%

Source: CEA 19th Electric Power Survey (January 2017), CEA power supply position report (March 2018)

Note: (1) Electricity requirement and peak demand are estimated by aggregating the electrical energy requirement of all the States/Union Territories and does not factor in demand side management or energy efficiency/conservation measures.

India's per capita consumption has increased steadily at an annualised growth rate of 4.8% over the fiscal year 2008-fiscal year 2018 period. However, India's per capita consumption continues to remain low when compared to other emerging economies like China and Brazil. It is also significantly lower compared to the world average of 3,110 kWh (as of 2016, based on IEA data from Key World Energy Statistics © OECD/IEA 2018).

Per Capita Electricity Consumption (kWh) (**fiscal year 2008-fiscal year 2018**)

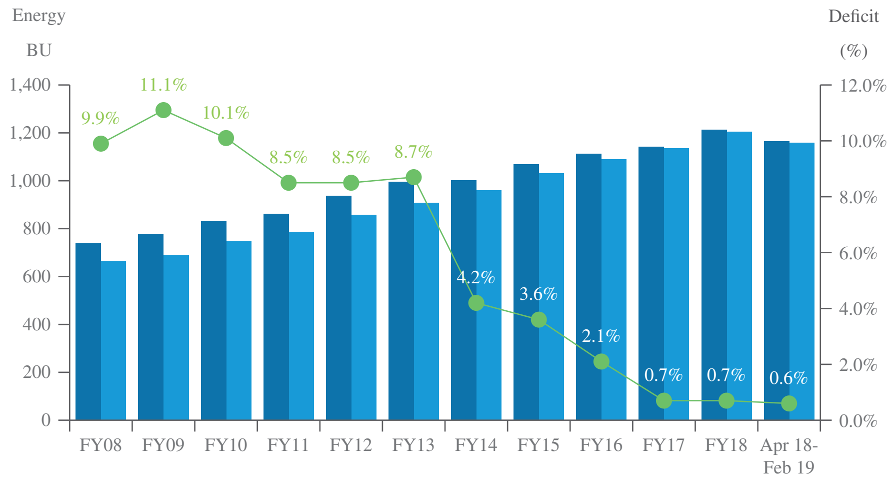


Source: CEA

In order to address the lack of adequate electricity availability to all people in the country, the Government has launched several schemes to ensure continuous and uninterrupted electricity supply to all households, industries and commercial establishments by creating and improving necessary infrastructure. There are also other demand drivers that facilitate accelerated capacity additions in the sector, including low household access to electricity for lighting and the advent of smart cities and industrial corridors, which are likely to further increase per capita consumption of electricity.

Electricity shortages have imposed significant constraint on India's economic growth. In fiscal year 2018, India experienced energy and peak deficits of 0.7% and 2.0% respectively. Significant capacity addition by renewable sources, such as wind and solar, have helped the power deficit situation.

Energy Demand vs Supply (FY08-11M FY19)



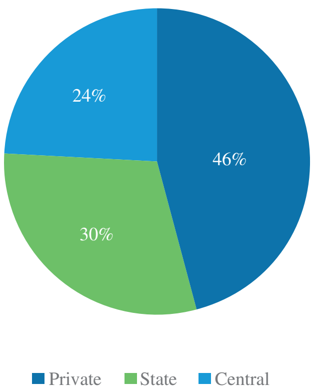
Source: CEA

Installed Capacity

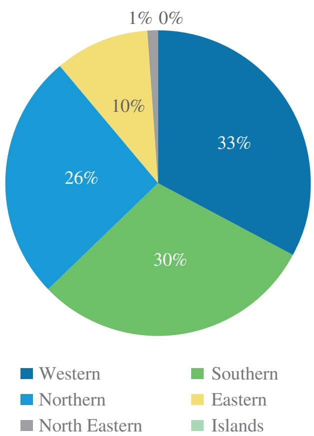
India's power sector has been traditionally dependent on conventional resources like coal and gas. As of February 2019, approximately 64% of the total installed capacity (350 GW) comes from thermal sources (coal, gas, lignite and diesel). With limited domestic access to such resources and inherent exploration, production and transportation challenges, India is dependent on imports of substantial quantities of gas, oil and coal in order to meet its domestic energy demand.

Private sector accounts for a substantial amount of installed capacity in India (46% as of February 2019 compared to 13% as of March 2007). This is a result of the Indian Government's efforts to reform the power generation sector in order to attract private capital.

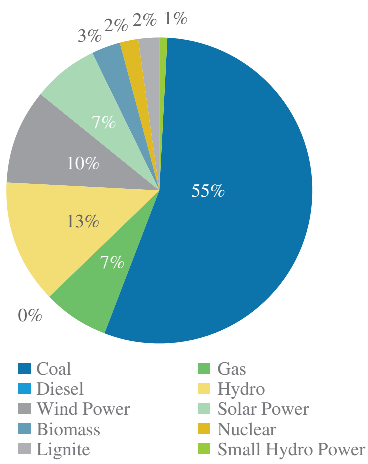
By Ownership



By Region



By Fuel Type

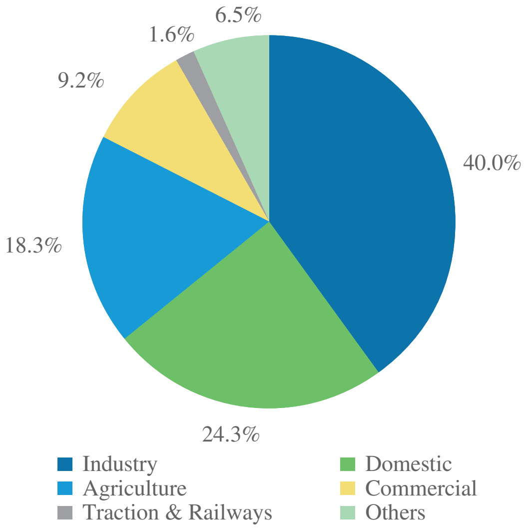


Source: CEA, Ministry of New and Renewable Energy (MNRE) (information as of February 2019)

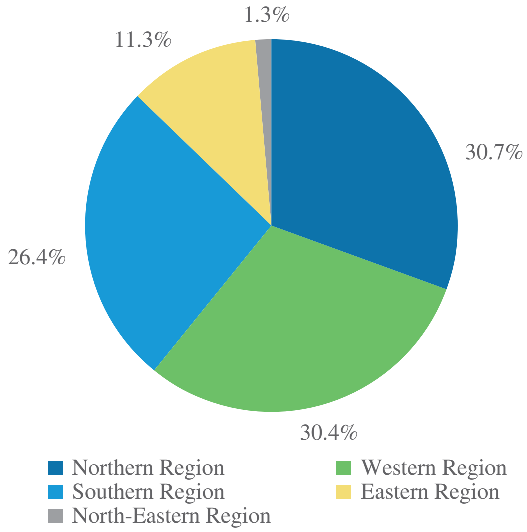
Power Consumption

The end users of electricity in India can be broadly classified into industrial, domestic, agricultural and commercial consumers. The electricity consumption in the domestic sector and commercial sector has increased at a much faster pace compared to other sectors during fiscal year 2007 to fiscal year 2017 with CAGRs of 8.86% and 9.35% respectively.

Electricity Consumption by Sector (FY17)



Electricity Requirement by Region (FY18)



Source: CEA

Based on the Central Electricity Authority's Executive Summary (fiscal year 2018), energy requirement of the Northern and Western regions represented 30.7% and 30.4% respectively of the national energy requirement in the period. The Southern region accounts for c.26.4%, while the Eastern and North-Eastern region together constitute c.12.6% of the national energy requirement.

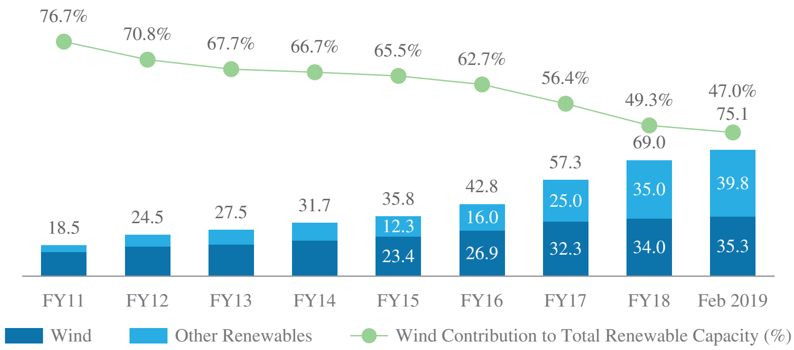
Renewable Energy

India has one of the largest installed renewable capacities in Asia with a generation capacity of 75 GW as of February 2019. Renewable/clean energy sources such as wind, solar and biomass are expected to play an increasingly important role for India amidst favourable government policies supporting the sector. As a result, renewable capacity (excluding large hydro and nuclear projects) as a proportion of total capacity has grown from 5.0% in March 2006 of the total capacity in India to 21.4% in February 2019.

Renewable energy in India is set to continue its trajectory of growth, given India's significant untapped renewable resources. MNRE estimates India to possess about 900 GW of renewable energy potential, of which currently only about 8% is tapped. To further utilize these resources, the India Government up-scaled the target of renewable energy capacity to 175 GW by the year 2022 which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power. With 75 GW of renewable capacity as of February 2019, India has achieved around 43% of its 2022 target.

In terms of the installed renewable capacity mix, wind represents the largest share at 47.0% contribution followed by solar with 34.7% contribution as of January 2019. Historically, wind has played a dominant role in the renewable power generation space in India. However, in recent years, ground mounted solar has experienced an increased policy push and interest among developers primarily as a result of the solar auctions, which resulted in a substantial increase in installed solar capacity to 26 GW as of February 2019.

Growth of Renewable Capacity in India[2] (fiscal year 2011-11MFY19)



Source: MNRE, CEA

Note: (2) Definition of renewable excludes large hydro and nuclear projects.

Wind energy has been a key contributor to the renewable energy growth in India and is one of the most successful renewable energy options in India. India's wind energy sector has grown rapidly, reaching 34 GW of installed capacity in fiscal year 2018 from 14.2 GW in fiscal year 2011, registering a CAGR of c.13%.

Transmission and Distribution

Transmission and distribution in India follows a three-tier structure comprising of: 1) Interconnected regional grids, 2) state grids and 3) distribution networks. Currently there are five regional grids i.e. Northern, Eastern, Western, Southern and North-Eastern grids which have been interconnected to form a single national grid.

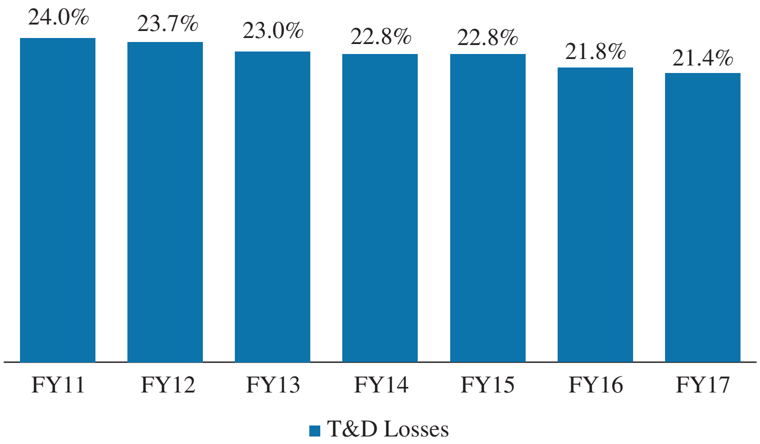
Regional grids enable power to be transferred to a power deficit state from a power surplus state. Regional grids also facilitate co-ordination between the power plants and scheduling of maintenance outages to optimise system delivery of electricity.

Power Grid Corporation of India Limited ("PGCIL") is India's central transmission utility and has one of the largest transmission networks globally. As of September 2017, PGCIL owns and operates around 142,989 ckm of Extra High Voltage (EHV) transmission lines all over India and about 45% of the total power generated in the country is wheeled through PGCIL's network.

State grids and distribution networks are primarily owned and operated by the respective State Electricity Boards (SEBs) or state governments (through state electricity departments). State distribution networks are managed at the state level. While the Ujjwal Discom Assurance Yojana (UDAY) program has led to an improvement in finance strength of SEBs, they continue to be constrained in terms of ability to invest in upgrading transmission and distribution network or making any large investments in generation.

With the enactment of the Electricity Laws (Amendment) Act, 1998 and the Electricity Act, 2003 as well as publishing of the guidelines for competitive bidding in transmission projects, private investment was permitted in power transmission, which became recognised as an independent activity. Power distribution in the States of Delhi and Orissa has been privatised and distribution networks are now operated by private utilities companies such as Tata Power, CESC Limited, Reliance Energy Limited, Torrent Power AEC, Torrent Power SEC, Noida Power Company Limited etc.

Transmission and distribution (T&D) system losses in India
(fiscal year 2011-fiscal year 2017)



Source: CEA

The transmission sector has grown from a capacity of 52,034 circuit kms during the 6th five-year plan (as of fiscal year 1985) to 407,291 circuit kms as on January 2019. The table below shows growth of the transmission sector since the 6th five-year plan:

	HVDC		**AC**			
At end of	**±800kV**	**±500kV**	**765kV**	**400kV**	**220kV**	**Grand Total**
6th Plan	—	—	—	6,029	46,005	**52,034**
7th Plan	—	—	—	19,824	59,631	**79,455**
8th Plan	—	1,634	—	36,142	79,600	**117,376**
9th Plan	—	4,738	1,160	49,378	96,993	**152,269**
10th Plan	—	5,872	2,184	73,438	114,629	**196,123**
11th Plan	—	9,432	5,250	106,819	135,980	**257,481**
12th Plan	6,124	9,432	31,240	157,787	163,268	**367,851**
Plan Period 2017-2022 (up to Mar 2018)	6,124	9,432	35,059	171,600	168,755	**390,970**
Plan period 2017-2022 (up to Jan 2019)	6,124	9,432	39,691	178,146	173,898	**407,291**

Source: CEA

Regulatory Structure of the Indian Power Sector and Key Policy Initiatives

Given below are the key components of the regulatory structure of the Indian Power sector, and their major functions:

- Ministry of Power (MoP): 1) Responsible for planning, policy formulation and processing of projects for investment decisions; 2) Enacts legislation with regard to power generation, transmission and distribution; 3) Monitors implementation of project

- Central Electricity Authority (CEA): A division of the MoP which deals with matters relating to the National Electricity Policy and formulation of plans for development of the power sector

- Central Electricity Regulatory Commission (CERC): Responsible for regulation of tariff and promotion of efficient policies at central level

- State Electricity Regulatory Commission (SERC): Responsible for regulation of tariff, promotion of efficient policies at state level and formulation of policies regarding subsidies

- Central Transmission Utility (CTU): Focuses on development of a coordinated, efficient and economical system of inter-state transmission lines

- State Transmission Utility (STU): 1) Focuses on development of a coordinated, efficient and economical system of intra-state transmission lines; 2) Undertakes intra-state transmission

- National Load Dispatch Centre (NLDC)/Regional Load Dispatch Centre (RLDC): Focuses on ensuring integrated operations of power systems at the national/regional level

- State Load Dispatch Centre (SLDC): Focuses on ensuring integrated operations of power systems at the state level

The Indian power sector was opened to private sector participation in 1991. A list of key policy initiatives by the Government are given below:

1991 **Electricity Laws (Amendment) Act**

- Private participation in generation was allowed

- Foreign ownership cap was increased to 100%

- Framework for Power Purchase Agreements with State Electricity Boards laid down

1998 **Electricity Laws (Amendment) Act**

- Private participation in transmission was allowed

- CTU and STUs were mandated

Electricity Regulatory Commissions Act

- CERC/SERCs were formed to promote competition and transparency as well as protect consumer interest

- Level playing-field was created for all players in the market

2003 **The Electricity Act**

- This Act replaced earlier laws relating to the electricity sector
- The main aim was to enable reform and restructuring of the power sector
- National policy brought out mandatory formation of SERCs
- Emphasized rural electrification as well as non-discriminatory open access in transmission and distribution

2006 **National Tariff Policy**

- Framework for determining tariffs and rate of return for generation, transmission and distribution projects was laid down
- After January 2011, mandatory competitive bidding was introduced for all transmission projects

2011 **National Tariff Policy (Amendment)**

- Intra-state transmission sector was exempted from mandatory competitive bidding until 5 January 2013
- Select experimental, urgent or compressed time schedule work was exempted from competitive bidding based on tariffs

2016 **National Tariff Policy (Amendment)**

- Emphasized renewable energy sector by allowing competitive bidding for renewable energy procurement and through waiver of inter-state transmission charges
- Mandatory procurement of power from waste-to-energy introduced
- Discouraged differential duties particularly when states impose differential duties on captive power generation
- Allowed licensees to charge lower tariffs than those determined by the SERC

Other Government Initiatives

Integrated Power Development Scheme

In November 2014, the Integrated Power Development Scheme ("IPDS") was launched by Ministry of Power, Government of India with the objectives of:

1) Strengthening of sub-transmission and distribution network in the urban areas;

2) Metering of distribution transformers/feeders/consumers in the urban areas;

3) IT enablement of distribution sector and strengthening of distribution network as per Cabinet Committee on Economic Affairs ("CCEA") approval dated 21 June 2013 for completion of targets laid down under Restructured Accelerated Power Development and Reforms Programme ("R-APDRP") for 12th and 13th Five-Year Plans by carrying forward the approved outlay for R-APDRP to IPDS.

The scheme will help in reduction in AT&C losses, establishment of IT enabled energy accounting/auditing system, improvement in billed energy based on metered consumption and improvement in collection efficiency.

Deendayal Upadhyaya Gram Jyoti Yojana (Rural Electrification Initiative)

The Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is a Government of India scheme designed to provide continuous power supply to rural India. The scheme replaces the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY).

DDUGJY was instituted to accomplish (i) separation of agriculture and non-agriculture feeders facilitating judicious rostering of supply to agricultural and non-agricultural consumers in rural areas and (ii) strengthening and augmentation of sub transmission and distribution infrastructure in rural areas, including metering of distribution transformers/feeders/consumers.

The estimated cost of the scheme for above two components was estimated to be ₹43,033 crore which includes the requirement of budgetary support of ₹33,453 crore from Government of India over the entire implementation period. The Cabinet further approved, that the balance work relating to rural electrification as per CCEA's approval in August 2013 with the norms of the ongoing scheme of RGGVY in 12th and 13th Plans will get subsumed in DDUGJY as a distinct component for rural electrification, for which CCEA has already approved the scheme cost of ₹39,275 crore including budgetary support of ₹35,447 crore.

SAUBHAGYA — Pradhan Mantri Sahaj Bijli Har Ghar Yojana

In September 2017, the Government of India launched the Saubhagya scheme to achieve universal household electrification in India by March 2019. Under the Saubhagya scheme, free electricity connections will be provided to households that qualify. The scheme is expected to cost ₹16,320 crores.

The scheme is designed to:

- Provide electricity connections to all un-electrified households in rural areas

- Provide Solar Photo Voltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages/habitations, where grid extension is not feasible or cost effective

- Provide electricity connections to all remaining economically poor un-electrified households in urban areas

As of March 2019, India has achieved close to 100% household electrification.

Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India (SHAKTI)

In May 2017, the Cabinet Committee on Economic Affairs approved a new scheme for providing long term coal linkages to power projects in India which do not yet have a secured coal supply contract.

Under the policy, coal linkages would be awarded to designated state-owned DISCOMs. These, in turn, would assign linkages to state or central power generation companies via allocation, and through auction to independent power producers.

The independent power producers, already having PPAs, participating in the auction bid for discounts on the existing tariff and this will be adjusted from the gross coal bills. The future linkages for supply of coal to independent power producers without PPAs shall be on the basis of auctions where bidding for linkages will be done over the notified price of the coal company.

The approved framework is designed to provide long term domestic coal security to power projects which do not have long term coal supply agreements and have to rely on short term purchases through e-auction or imported coal. Key benefits of this policy are as follows:

- Transparent and objective allocation of coal supply for all power plants;

- A framework to address the stress in the power sector due to non-availability of linkages for power; and

- Reduced power costs as independent power producers will need to provide competitive tariffs in order to secure coal linkages under PPAs.

In line with the Ministry of Coal's Power Sector Linkage Policy (dated 22 May 2017), the first phase of coal linkage auctions for IPPs having PPAs based on domestic coal was conducted between 11 and 13 of September 2017. A total of 27.2 MT of coal was earmarked for allocation in this phase. As of February 2019, out of the maximum allocable quantity of 27.2MT of coal that was earmarked, almost all the allocable quantities have been booked. FSA's have also been executed with 9 out of 10 successful bidders. The implementation of linkage auction to IPPs/power producers without PPAs has been put on hold as the issue of eligibility criteria was taken up for further direction with the Ministry of Coal.

Ujjwal Discom Assurance Yojana

In November 2015, the Ujjwal Discom Assurance Yojana (UDAY) scheme was launched to address the problem of high accumulated losses and debts of electricity distribution companies (DISCOM) in India. As of fiscal year 2015, DISCOMs had accumulated losses of approximately ₹3.8 lakh crores and outstanding debt of approximately ₹4.3 lakh crores.

The scheme is designed to improve financial performance of DISCOMs. Key initiatives under UDAY include:

- Phased takeover of DISCOM debt by state governments, with a view to reduce interest costs of distribution companies;

- Incentivising distribution companies to achieve higher operational efficiencies;

- Reduction in cost of power purchase; and

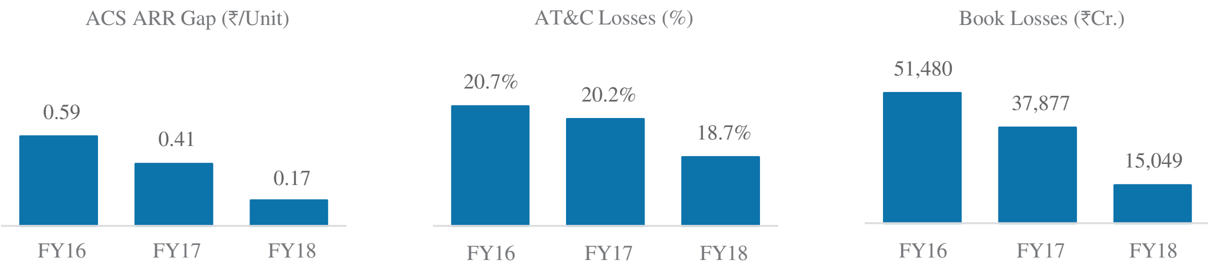
- Imposing financial discipline on distribution companies through an alignment with state finances.

Under the UDAY scheme, states take over 75% of DISCOM debt as of 30 September 2015 over a two-year period (50% of DISCOM debt taken over in fiscal year 2016 and 25% in fiscal year 2017). Principal debt taken over will not be included in fiscal deficit of states for fiscal year 2016 and fiscal year 2017. However, interest has to be serviced within Fiscal Responsibility and Budgetary Management Act (FRBM) limits. As of June 2018, 27 states and 5 Union Territories have joined the UDAY scheme.

State	MOU
Jharkhand	5-Jan-16
Chhattisgarh	25-Jan-16
Rajasthan	27-Jan-16
Uttar Pradesh	30-Jan-16
Gujarat	13-Feb-16
Bihar	22-Feb-16
Punjab	4-Mar-16
Haryana	11-Mar-16
Jammu and Kashmir	15-Mar-16
Uttarakhand	31-Mar-16
Goa	16-Jun-16
Karnataka	16-Jun-16
Andhra Pradesh	24-Jun-16
Manipur	26-Jul-16
Madhya Pradesh	10-Aug-16
Puducherry (UT)	10-Aug-16
Maharashtra	7-Oct-16
Himachal Pradesh	8-Dec-16
Assam	4-Jan-17
Telangana	4-Jan-17
Tamil Nadu	9-Jan-17
Sikkim	23-Feb-17
Meghalaya	9-Mar-17
Kerala	15-Mar-17
Arunachal Pradesh	29-Mar-17
Tripura	29-Mar-17
Mizoram	31-Mar-17
Nagaland	20-N0v-17
Daman & Diu (UT)	20-N0v-17
Dadra & Nagar Haveli (UT)	20-N0v-17
Andaman & Nicobar Islands (UT)	20-N0v-17
Lakshadweep (UT)	28-Feb-18

Source: Ministry of Power

Performance of UDAY Scheme



Source: Ministry of Power

Based on the latest UDAY updates by the Ministry of Power, the ACS-ARR gap (see above) has come down from ₹0.59/kWh in fiscal year 2016 to ₹0.17/kWh in fiscal year 2018. The fiscal year 2019 target is to reach ₹0.0/kWh. Post launch of the UDAY programme, AT&C losses have also consistently declined, from 20.7% in fiscal year 2016 to 18.7% in fiscal year 2018. The fiscal year 2019 target for AT&C losses is 15%. Lastly, UDAY states have also demonstrated an improvement in book losses from ₹51,480 Cr. in fiscal year 2016 to ₹15,049 Cr. in fiscal year 2018, decreasing by more than 71% since the inception of UDAY.

Provision for Merchant Power Plants

Merchant power plants generate electricity for sale at market-driven rates in the open wholesale market. Typically, these plants do not have long-term PPAs and are constructed and owned by private developers. Merchant sales, however, include the sale of power under short-term PPAs and on spot basis. Merchant power plants can sell power to the power trading companies (such as PTC India Limited and Tata Power Trading Company Limited), the SEBs, distribution companies and industrial and bulk customers.

Captive Power Generation

Another important segment of power generation in India is the captive power segment. Captive power refers to power generation from a project established for industrial consumption. Continuing increase in demand for power and India's sustained economic growth make captive power an important avenue of electricity supply. Captive power capacity is 51,529 MW in India as of March 2017.

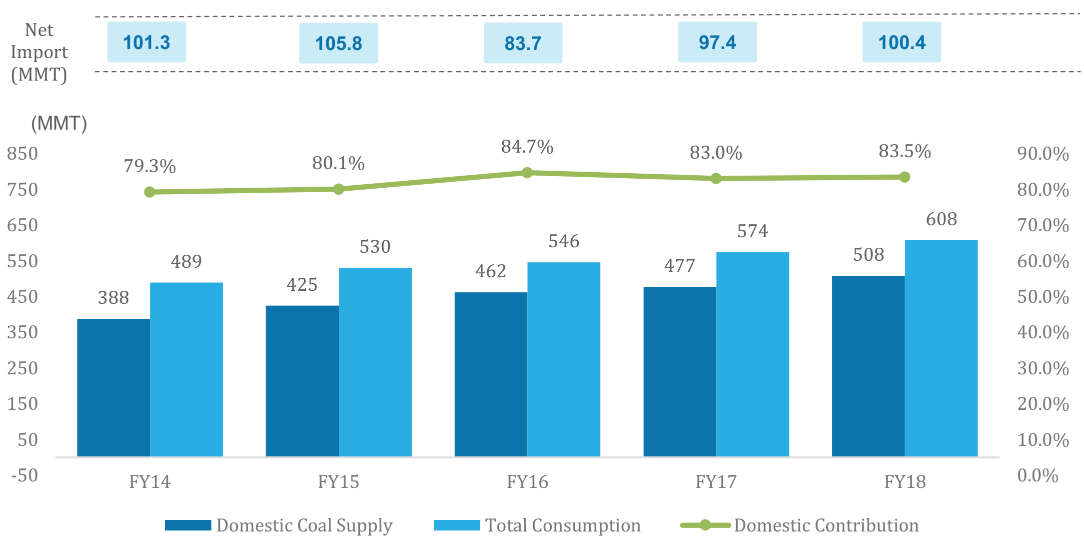
Overview of Coal Availability

Coal is the most important and abundant fossil fuel in India. As of February 2019, it accounted for c.55% of its power generation capacity in the country.

Indian coal-based power generation is predominantly supplied by domestic coal. India consumed approximately 608 million MT of coal as in fiscal year 2018, of which approximately 83.5% was supplied domestically and the balance was supplied by imports from countries such as Indonesia, South Africa and Australia. According to the Geological Survey of India, India is estimated to have total coal reserves of approximately 315.1 billion MT for fiscal year 2018.

Coal India Ltd. (CIL), the state-controlled coal mining company, produces a majority of the country's overall coal production (contributing c.84% in fiscal year 2017 according to the Ministry of Coal Annual Report fiscal year 2017-fiscal year 2018) and is the single, largest coal producing company in the world. Over the last few years, it has undertaken various measures to increase the production of coal. These measures include implementation of state-of-the-art mechanization for high capacity mines, modernisation of both opencast and underground mines, improvement in capacity utilisation through efficiency improvement, capacity augmentation of running projects, and better coordination with related ministries and state governments.

Improvements in the domestic availability of coal for the power sector have resulted in a reduction of reliance on imports. Overall net import of coal has decreased marginally between fiscal year 2014 and fiscal year 2018 from 101.3 million MT to 100.4 million MT; at the same time, contribution from domestic coal has increased from 388 million MT in fiscal year 2014 to 508 million MT in fiscal year 2018. Proportion of domestic coal to total consumption has increased from 79.3% in fiscal year 2014 to 83.5% in fiscal year 2018. This allow the country to achieve greater energy sufficiency.



Source: CEA, Ministry of Coal

In line with the Ministry of Coal's Power Sector Linkage Policy (dated 22 May 2017), the Ministry of Coal is taking steps to address issues related to coal supply for IPPs having PPAs based on domestic coal as well as IPPs without PPAs. It is also formulating policy for potential linkages to IPPs having PPAs based on imported coal.

The first round of auctions for coal linkages to IPPs having PPAs based on domestic coal has already been conducted in September 2017 and the execution of revised Fuel Supply Agreements with successful bidders is currently underway.

Ten power plants had won coal linkages totalling 27.2 mtpa for 25 years in the first round of auctions under the SHAKTI policy, out of which 9 have been successfully executed.

BUSINESS

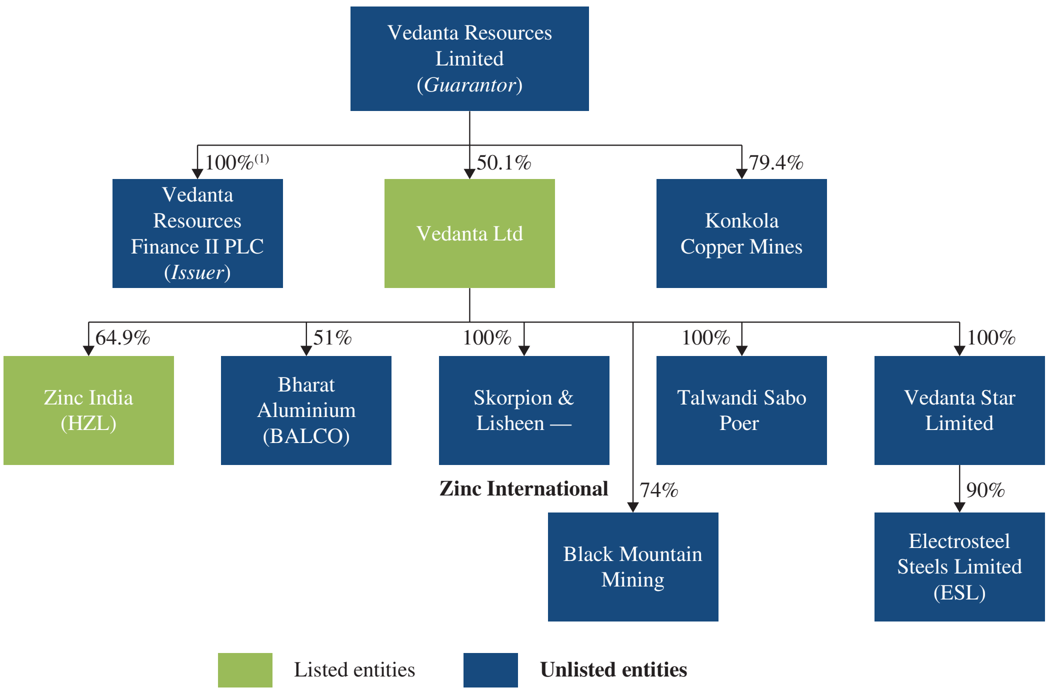
Overview

Vedanta is a globally diversified metals and mining, oil and gas and power generation company. Its businesses are principally located in India. India is one of the fastest growing large economies in the world with a 7.3% increase in GDP during fiscal year 2018 (at constant fiscal 2012 prices), according to the Central Statistical Organisation of the GoI's Ministry of Statistics and Programme Implementation. Vedanta also has operations in Zambia, Namibia, South Africa, UAE, Japan, South Korea, and Taiwan, and a workforce of over 70,000 people worldwide. Vedanta is primarily engaged in oil and gas, zinc, copper, iron ore, lead, silver, steel, aluminium and commercial power generation businesses, and is developing a port operation business and infrastructure assets. Vedanta experienced significant growth in recent years through the expansion of projects for its oil and gas, copper, zinc, aluminium and iron ore businesses and recently acquired a steel business through acquisition of ESL. Vedanta believes its experience in operating and expanding its businesses in India will allow it to capitalise on attractive growth opportunities arising from India's large mineral reserves, relatively low cost of operations and large and inexpensive labour and talent pools.

For fiscal years 2016, 2017 and 2018, and for the nine months ended 31 December 2018 Vedanta reported total revenue of $10,738 million, $11,520 million, $15,359 million and $10,602 million, respectively, and Vedanta EBITDA of $2,336 million, $3,191 million, $4,051 million and $2,517 million, respectively.

Group Structure

The following chart depicts Vedanta's corporate structure as at 31 December 2018 with the exception of Vedanta Resources Finance II Plc (the Issuer) which was incorporated on 20 March 2019. Vedanta owns other subsidiaries that are not material and are not shown in the chart below.



(1) The Issuer is a wholly owned subsidiary of Vedanta Resources Holdings Limited, which is a wholly owned subsidiary of the Guarantor.

Competitive Strengths

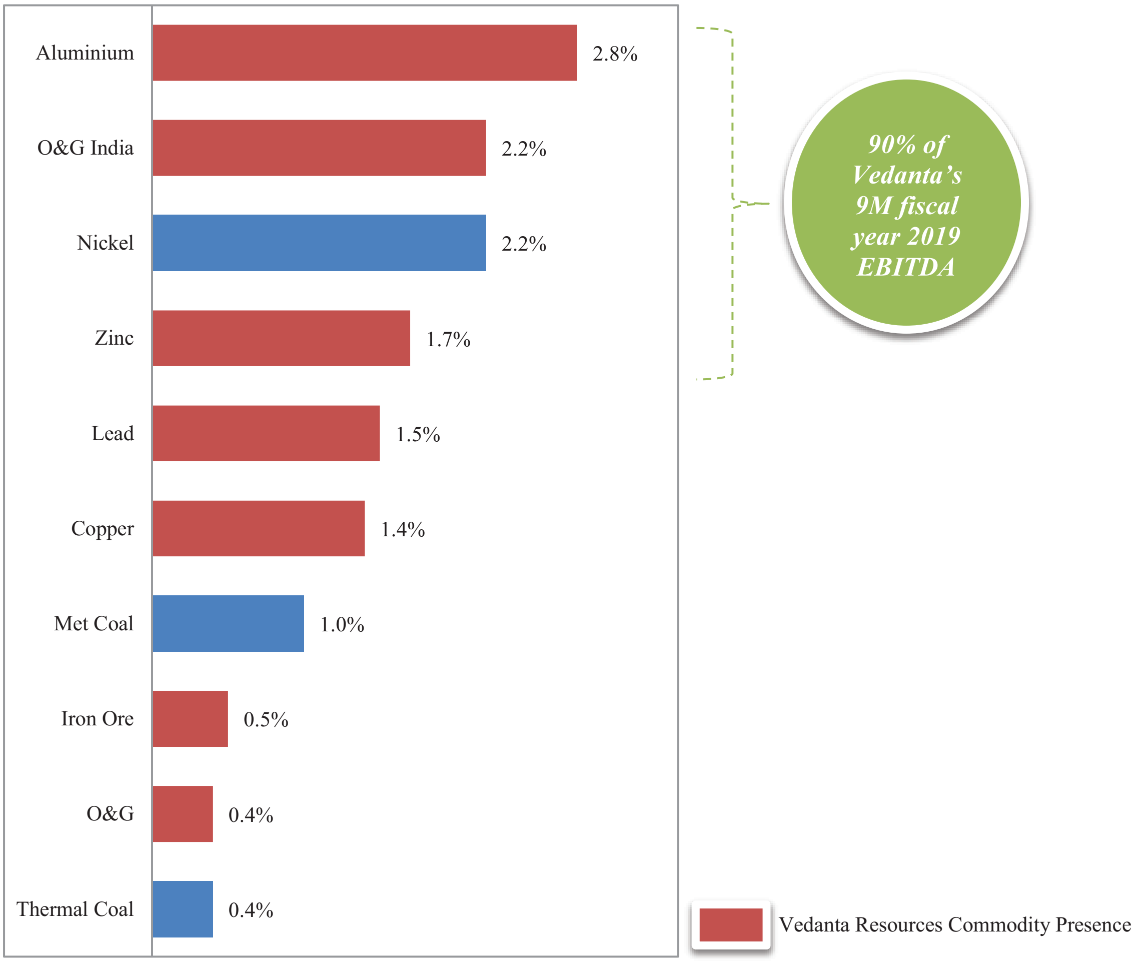
Vedanta believes it has the following competitive strengths:

Large Diversified Asset Base with an Attractive Commodity Mix

Vedanta is a leading diversified natural resources company with assets primarily located in India. Vedanta believes that its business comprises of high-quality assets of global size and scale.

Global Demand CAGR 2018-30E

Vedanta's focus is on high growth commodities.



Source: Wood Mackenzie

- *Zinc:*

  According to Wood Mackenzie, HZL is the second largest integrated zinc-lead miner and the largest zinc-lead smelter globally. HZL owns six zinc mines of which Rampura Agucha mine was the largest zinc-lead mine globally in fiscal year 2018 and HZL assets sit in the first quartile of zinc mine cost curve, as per Wood Mackenzie. Under Zinc international operations, Vedanta operates the Black Mountain Mine and smelter operations in Namibia. It is also developing the Gamsberg mine, which is one of the world's largest undeveloped zinc deposits.

The development of Gamsberg was being done in a modular and flexible manner to maximise value. According to Wood Mackenzie, the Zinc international operations is currently in the second quartile of zinc mines cost curve.

Zinc benefits from the strongest fundamentals within the base metals space with prices supported by tightening of supply and demand balance. Globally, limited new capacities in the pipeline are expected to be insufficient to offset mine closures and the incremental increase in global demand.

- *Oil and gas:*

  Vedanta's oil and gas business is owned and operated by Vedanta Limited, one of the largest independent oil and gas exploration and production companies and the largest private sector producer of crude oil in India, according to Wood MacKenzie. Vedanta's oil and gas business has a diversified asset base with six production and exploration blocks, according to Wood MacKenzie: one in Rajasthan, one on the west coast of India, three on the east coast of India and one in South Africa.

- *Aluminium:*

  Vedanta, through its subsidiaries BALCO and Vedanta Limited, is the largest primary producer of aluminium in India with 2.3 mtpa aluminium capacity, according to Wood MacKenzie. Vedanta also has captive power and an alumina refinery as part of its aluminium capacity.

  Aluminium remains a lighter weight and non-corrosive substitute for steel in many transport applications and the automotive sector and will continue to be a major growth driver. Aluminium is expected to benefit from better fundamentals and the possibility of output cut by China. In addition, the development of the Indian railways combined with the 'Make in India' campaign will herald new growth opportunities for new investments in the aluminium sector.

- *Copper:*

  Refined copper is predominantly used for manufacturing cables, transformers and motors as well as castings and alloy-based products.

  Vedanta Limited, with its 403 kt per annum custom smelter in South India, is the market leader in India with a market share for refined copper of approximately 33.0%, according to the International Copper Association (India). Vedanta Limited's copper exports accounted for 49.0% of overall sales in fiscal year 2018 and were primarily to China and South East Asia.

  Vedanta Limited expects to see continued demand growth in India and China in the coming years, driven by population growth, urbanization, the rise of the middle class and supported by government measures and initiatives. In addition, the demand for copper products feeding the electronics and automotive industries will support growth in the short to medium term in Japan, South Korea, and Taiwan.

- *Iron ore:* Vedanta Limited has been the largest exporter of iron ore in the private sector by volume since 2003. In nine months ended 31 December 2018, iron ore production was 3.5 million dmt and pre-ban capacity was 20.5 mtpa. Vedanta Limited has the potential to ramp up to pre-ban levels of 20.5 mtpa without any significant investments. At a 58% iron cost basis, Vedanta Limited is in the first quartile of cost curve, as per Wood Mackenzie.

- *Power:* As of 31 December 2018, Vedanta has a total power portfolio of 9,000 MW, including 3,600 MW of commercial power generation capacity. This includes the coal-fired power plant at Talwandi Sabo with a design capacity of 1,980 MW. The projects are strategically located with easy access to fuel and water and are well connected by railways and roads. Vedanta has reduced production and pricing risks with long-term power off-take arrangements with state electricity boards and state-owned utilities.

A low cost production profile, with its major assets having one of the lowest quartiles, Vedanta is able to generate positive free cash flow even at low commodity prices. Competitive cost base combined with portfolio of large, high quality, diversified assets enables Vedanta to deliver value throughout the commodity cycle.

Vedanta Limited has a diversified asset base with significant presence in commodities with leading global demand growth.

Vedanta's operations cover a range of attractive commodities with strong fundamentals and this has enabled Vedanta to deliver strong margins through the commodity cycle.

Vedanta's portfolio is weighted towards zinc, with 44.6% of Vedanta EBITDA coming from its zinc operations in nine months ended 31 December 2018. Zinc market has strong fundamentals, as global zinc concentrate and refined zinc market remain in deficit. Supply of zinc concentrate continues to be constrained, due to continued closure of mines, the latest being the Century and Vedanta's Lisheen mines in 2015.

Ideally Positioned to Capitalise on Favourable Geographic Presence

Vedanta is ideally positioned to take advantage of the strength in its key operating markets, given the scale, high quality and low-cost nature of its assets. Vedanta believes that its experience in operating and expanding its business in India will allow it to capitalise on attractive growth opportunities arising from factors including:

Economic growth in Key Geographies. India is one of the fastest growing large economies in the world with a 7.3% increase in GDP during fiscal 2018 (at constant (2011-12) prices), according to the Central Statistical Organization of the GoI's Ministry of Statistics and Programme Implementation. According to IHS Markit, India's GDP (in nominal terms) is expected to grow at 9% cumulative average growth rate (CAGR) from $10.5 trillion in 2018 to $29.4 trillion in 2030 and per capita income (in nominal terms) is expected to grow at 7.7% CAGR from $8,091 in 2018 to $19,597 in 2030. During the same period as per United Nations World Urbanisation Prospects: The 2018 Revision, the population is expected to grow at 1.2% CAGR from 1.3 billion in 2018 to 1.5 billion in 2030 and urbanization is expected to increase from 34% in 2018 to 40% in 2030 at 1.4% CAGR. This compares favourably with China whose GDP (in nominal terms) is expected to grow at 9.4% CAGR from $10.1 trillion in 2018 to $24.9 trillion in 2030. During the same period, per capita income (in nominal terms) is expected to grow at 9.0% CAGR from $7,680 in 2018 to $18,101 in 2030, the population is expected to grow at 0.4% CAGR from 1.3 billion in 2018 to 1.4 billion in 2030 and urbanization is expected to increase from 47% in 2018 to 58% in 2030 at 2.2% CAGR. Africa is not far behind with GDP (in nominal terms) is expected to grow at 6.2% CAGR from $6.6 trillion in 2018 to $13.6 trillion in 2030. During the same period, per capita income (in nominal terms) is expected to grow at 3.8% CAGR from $5,107 in 2018 to $8,101 in 2030, the population is expected to grow at 2.4% CAGR from 1.3 billion in 2018 to 1.7 billion in 2030 and urbanization is expected to increase from 42% in 2018 to 48% in 2030 at 1.1% CAGR. These growth rates are significantly high that average world growth rate of 5.95 CAGR is GDP (on nominal basis), 4.9% in per capita income (on nominal basis), 0.9% CAGR in population and 0.8% CAGR in urbanisation rate.

Significantly lower per capita consumption of Aluminium, Zinc and Copper. According to Wood Mackenzie consumption and IMF population data, India's per capita aluminium consumption is 1.7 kg compared to 8.6 kg globally and 34.4 kg in China; and India's per capita zinc consumption is 0.5 kg compared to 1.9 kg globally and 4.9 kg in China. Based on BP Energy Outlook 2019 and IMF population data, India's per capita oil consumption is 1.2 boe compared to 4.5 boe globally and 3.2 boe in China.

India's mineral resource base. According to USGS Mineral Commodity Summaries (February 2019) and OPEC Annual Statistical Bulletin 2018, India's zinc reserves are the seventh largest in the world with total reserves estimated at 10 million tonnes, bauxite reserves are the eighth largest in the world with total reserves estimated at 660 million tonnes, has the seventh largest iron ore reserves in the world at 5 billion tonnes and oil reserves of 4.5 billion boe.

Strong market position. According to Wood Mackenzie, Vedanta's is the largest zinc, copper and aluminium producer in India. Globally, Vedanta is the largest zinc-lead smelter and eighth largest aluminium smelter. Vedanta is the largest private sector oil producer in India with 25% share in domestic crude production as per Petroleum planning and Analysis Cell of the MoPNG.

Vedanta is strongly positioned to benefit from this expected growth and resource potential, as 53.8% of its revenue for fiscal year 2018 came from India. Vedanta has a long history of established operations and experience in the country. Vedanta also has a strong market share in India in its key commodities. According to India Lead Zinc Development Association ("ILZDA"), Vedanta had a market share of 78% by sales volume in the Indian zinc market, is a primary aluminium producer with a 40% market share according to the Aluminium Association of India, is a primary copper producer with a 33% primary market share by sales volume according to the International Copper Association India and a primary crude oil producer operating 25% of the crude oil produced in India.

Well invested assets driving cash flow growth

With a significant amount of its capital investment programme completed, Vedanta is now ramping up and have commenced reaping benefits of these investments. Vedanta believes that it will be able to reach full capacity with limited capital expenditure and consequently, Vedanta's cash flows are poised for a significant increase.

Vedanta has largely completed its capital expenditure programmes in all its businesses though the businesses are not fully ramped up. It is now ramping up its capacities in its zinc, aluminium, iron ore and power businesses with incremental capex as described under the section "Management's Discussion and Analysis of Financial Condition and Results of Operations — Project Capital Expenditures", with focus on strong cash flow growth.

- *Zinc:* In fiscal year 2013, HZL announced an expansion of its zinc-lead mined metal production capacity to 1.2 million tonnes, which involved the sinking of underground shafts and developing underground mines. Benefit of these growth projects started in fiscal year 2016 but the full ramp up to 1.2 million tonnes is expected in fiscal year 2020 and the remaining capex for this project is only $335 million as of 31 March 2018. The growth plan will increase mined metal production capacity to 1.2 mmtpa, including 24 million ounces of silver. Vedanta is also developing the Gamsberg project in South Africa, with a design capacity of 250,000 tonnes per annum which had a remaining capex is $159 million as of 31 March 2018. The plant was commissioned in September 2018.

- *Aluminium:* Vedanta Limited has set up another 1.25 mtpa aluminium smelter in Jharsuguda, of which some sections of line five are yet to be commissioned with remaining capex of $74 million for this project as of 31 March 2018.

- *Oil and Gas:* Vedanta has finalised development partners for the next phase of growth to get to a near term capacity of approximately 275-300 kboepd by undertaking various projects at Rajasthan — enhanced oil recovery, tight oil, and gas.

- *Copper:* Vedanta is working to optimise volumes through process improvements and cobalt value chain enhancement in Zambia with total expanded capacity of 200kt integrated and 100kt custom copper.

Operational excellence and technology driving efficiency and sustainability

Vedanta continues to focus on operational excellence and high asset utilisation to deliver top quartile cost performance and strong cash flows. Digitalisation in the mining industry is gaining traction and Vedanta is capitalising on India's leading position and expertise in information technology. Examples of technology initiatives undertaken by Vedanta to drive efficiency and sustainability include: (i) autonomous machines for 24x7 manning at SK Mine, (ii) the world's largest continuously heated pipeline for an oil and gas business in India and (iii) a collision awareness system at Gamsberg.

Vedanta's sustainability framework guides to ensure a long-term, sustainable future for its business operations, meeting growth aspirations, and creating long-term value for all stakeholders. Hindustan Zinc ranked first in the Environment category and fifth overall in the Mining and Metal industry. Key sustainability initiatives by Vedanta include: (i) executing a drinking water initiative at Barmer, Cairn by setting up 331 reverse osmosis water plants to benefit approximately one million people; (ii) implementing a biodiversity management plan at Gamsberg to minimise the environmental footprint; (iii) setting up 16 MW solar projects on waste land in Udaipur with a target of 115 MW in the short term; and (iv) Nand Ghar initiative to empower 15,000 women and 17,000 children.

Strong financial profile

Vedanta generated a total revenue of $15,359 million and Vedanta EBITDA of $4,051 million in the fiscal year ended 31 March 2018 and $10,602 million and $2,517 million in the nine months ended 31 December 2018, respectively. Through its diversified portfolio of assets, Vedanta has maintained strong Vedanta EBITDA margins during this period of low and volatile commodity prices.

Vedanta also has a balanced debt portfolio with a diversified range of funding sources. Vedanta maintains a strong relationship with its lending banks which enables it to obtain funding at attractive rates.

The free cash flow ("FCF") after accounting for capital expenditure for Vedanta for fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2017 and 2018 was $1,772.9 million, $1,543.6 million and $925 million $422.6 million and $(574.0) million respectively, as highlighted in the table below:

	Fiscal year ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Vedanta EBITDA	2,336.4	3,191.1	4,051	2,698.2	2,517.3
Operating exceptional items	(23.0)	—	33	38.7	—
Changes in working capital	1,164.6	295.0	(611)	(655.7)	(1,056.0)
Changes in non-cash items	22.8	28.7	28	16.3	20.0
Sustaining Capital expenditure	(184.9)	(145.4)	(385)	(180.3)	(322.8)
Changes in capital creditors	(210.3)	(158.1)	42	38.1	26.0
Sales of property, plant and equipment's	10.0	25.2	10	1.6	7.0
Net Interest paid	(489.9)	(700.8)	(925)	(636.9)	(660.0)
Tax Paid	(287.0)	(323.9)	(498)	(342.2)	(315.2)
Expansion Capital expenditure	(565.8)	(668.2)	(820)	(555.2)	(790.3)
Free cash flow post capex (FCF)	**1,772.9**	**1,543.6**	**925**	**422.6**	**(574.0)**

Vedanta has achieved Adjusted Vedanta EBITDA margin of 28%, 36%, 35%, 34% and 28% for fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2017 and 2018, as highlighted in the table below:

	Fiscal year ended 31 March			Nine months ended 31 December,	
	2016	2017	2018	2017	2018
			($ million)		
Vedanta EBITDA	**2,336.4**	**3,191.1**	**4,051.2**	**2,698.2**	**2,517.3**
Less:					
Vedanta EBITDA from Copper India custom smelting	(336.6)	(252.2)	(200.6)	(109.6)	23.9
Vedanta EBITDA from Copper Zambia custom smelting	(0.9)	(28.7)	(26.2)	(21.1)	7.9
Vedanta EBITDA from Zinc India custom smelting	(0.5)	(0.2)	—	—	—
Adjusted Vedanta EBITDA	**1,998.4**	**2,910.0**	**3,824.3**	**2,567.5**	**2,549.1**
Revenue	**10,737.9**	**11,520.1**	**15,358.7**	**10,830.7**	**10,601.8**
Less:					
Revenue from Copper India custom smelting	(3,197.2)	(3,133.7)	(3,832.7)	(2,664.3)	(1,138.9)
Revenue from Copper Zambia custom smelting	(335.7)	(401.0)	(742.3)	(577.1)	(440.7)
Revenue from Zinc India custom smelting	(11.4)	(3.1)	—	—	—
Adjusted Revenue (d-e)	**7,193.6**	**7,982.3**	**10,783.7**	**7,589.3**	**9,022.2**
Adjusted Vedanta EBITDA margin	**28%**	**36%**	**35%**	**34%**	**28%**

Vedanta's return on capital employed ("ROCE") was 3.4%, 12.8%, 14.9% and 11.6% for fiscal years 2016, 2017 and 2018 and for the nine months ended 31 December 2018 (computed on the basis of last twelve months) respectively, as highlighted in the table below:

	Fiscal year ended 31 March			Nine months ended 31 December
	2016	2017	2018	2018
		($ million)		
Operating Profit before special items	881.2	2,160.6	2,780.5	2,302.8
Tax Outflow	287.0	323.9	497.9	419.7
Operating profit (post-tax)	**594.1**	**1,836.7**	**2,282.6**	**1,883.1**

	As of 31 March			As of 31 December
	2016	2017	2018	2018
	($ million)			
Equity attributable to equity holders of the Parent	(712.8)	(408.5)	(338.2)	(955.0)
Non-controlling interest	7,565.2	6,423.1	6,859.4	5,959.9
Net Debt	7,328.8	8,503.5	9,587.4	11,926.1
Capital Employed	**14,181.2**	**14,518.0**	**16,108.6**	**16,931.0**
Average Capital Employed	**17,448.3**	**14,349.6**	**15,313.3**	**16,212.3**
Return on Capital Employed	**3.4%**	**12.8%**	**14.9%**	**11.6%**

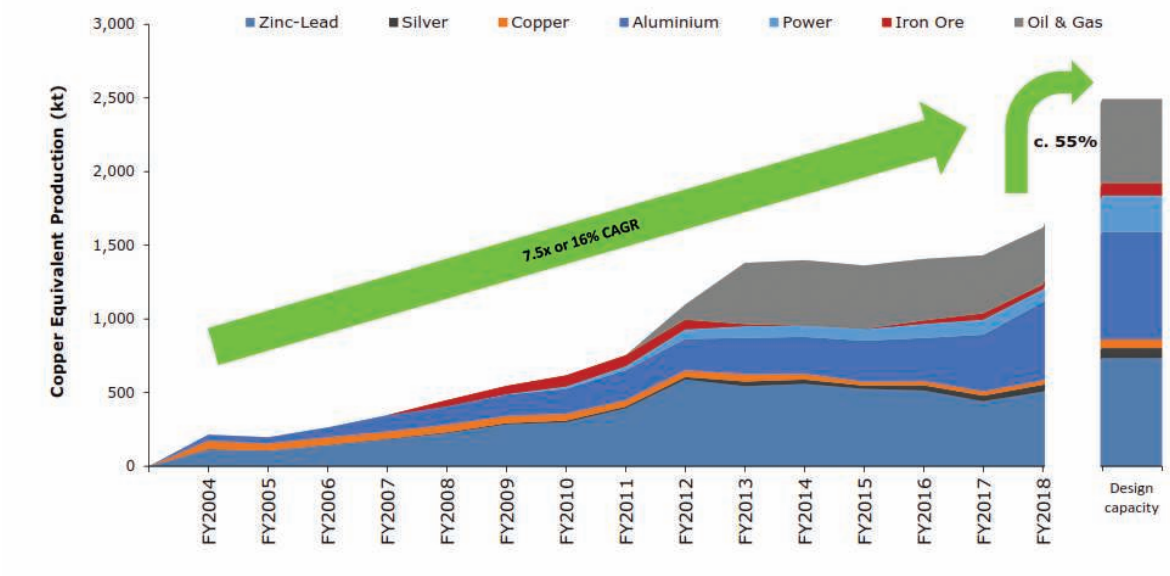
Return on Capital Employed (ROCE) is defined as operating profit before special items and net of tax outflow, as a ratio of average capital employed.

In addition, both Vedanta Limited and HZL have dividend policies in place which have been filed with their relevant stock exchanges.

Proven track record

Vedanta has a strong track record of exploration, executing projects and delivering production growth. Vedanta have a proven management team with a diverse and extensive range of sector and global experience who ensure that operations are run efficiently and responsibly. Vedanta has taken a disciplined approach to development, growing its production steadily with an ongoing focus on operational efficiency and cost savings.

Vedanta has delivered a 16% annualised production growth in copper equivalent terms since fiscal year 2004, to 1,703 kt in fiscal year 2018. It has further increased the EBITDA at a CAGR of $323 million in fiscal year 2004 to $4,051 million in fiscal year 2018.



All commodity and power capacities rebased to copper equivalent capacity (defined as production x commodity price / copper price) using average commodity prices for fiscal year 2018. Power rebased using fiscal year 2018 realisations, copper custom smelting production rebased at TC/RC for fiscal year 2018, iron ore volumes refers to sales with prices rebased at realised prices for fiscal year 2018.

Vedanta Limited, post-acquisition of Cairn, has added proven exploration expertise to its foldhaving made 40 hydrocarbon discoveries in India since 1994. Particularly, it has ramped-up oil production from 150 kbpoed in 2011 at the time of Cairn acquisition to 188 kbpoed currently. Vedanta Limited has continued to add to its exploration portfolio and, in addition to accessing new opportunities, has been an active and successful participant in Open Acreage Licensing Policy ("OALP") licensing rounds, as demonstrated by Vedanta Limited being awarded 41 exploration blocks in sedimentary basins throughout India Vedanta Limited's executive management team has a proven track record of developing hydrocarbon resources which includes making 38 discoveries in the Rajasthan block including the landmark Mangla field, commencing natural gas production in less than 28 months at the Lakshmi field in Cambay Basin, building the world's longest continuously heated and insulated crude oil pipeline, and executing the world's largest polymer flood project. In addition, in March 2019, Vedanta Limited was awarded two exploration blocks pursuant to Discovered Small Field (DSF-II) policy.

- Vedanta started its aluminium business with the acquisition of BALCO with an installed capacity for aluminium smelting of 100 ktpa. It has since then expanded its aluminium business to include Design capacities for aluminium smelting of 570 ktpa at BALCO and 1,750 ktpa at Jharsuguda.

- Vedanta acquired HZL in 2002, when its production was at 170ktpa and reserves and resources life of five years. Through investments in technology and people with an innovative mindset and increasing productivity, HZL today has a reserves and resources life of more than 25 years with a 1.2 mtpa production capacity, making HZL the second largest zinc miner in the world.

- Vedanta's senior management has significant experience in all aspects of its business which has contributed in transforming Vedanta into a leading diversified natural resources company Mr. Anil Agarwal, Vedanta's founder, remains involved in overseeing Vedanta's business as its Executive Chairman. Vedanta's executive management team focuses on group strategy and capital allocation, while operational and project goals are led by the experienced management teams overseeing each individual business.

- Vedanta's experienced and focused management and dedicated project execution teams have proven track record of successfully implementing capital-intensive projects to increase its production capacities. Vedanta utilises project monitoring and assurance systems to facilitate timely execution of its projects.

Vedanta's Strategy

Vedanta's strategic goal is to become one of the top diversified natural resources company in the world, and has the following key strategic priorities:

Operational Excellence and Delivering on Growth Opportunities.

Vedanta strives to ramp up its assets with a disciplined approach towards cost, capex allocation and operating efficiency. Strict cost management and increases in productivity form an integral component of its day-to-day operations. Vedanta is placed in the lower half of the global cost curve in most of its operations and intends to improve its cost position further. Highlights of Vedanta's recent achievements include:

- As of 31 March 2017, Vedanta's power business under TSPL became fully operational, with the capitalisation of the third 660 MW unit during the second quarter of fiscal year 2017.

- Vedanta is ramping up its aluminium business to achieve the design capacity of 2.3 million tonnes. During fiscal year 2017, three of the four 600 MW units at the Jharsuguda started to supply power to the Jharsuguda-II smelter for its capacity ramp up.

- The transition to underground mine at Rampura Agucha, and a progressive ramp-up at Sindesar Khurd mine are on track to increase the overall capacity at Zinc India to 1.2 mtpa from one mtpa.

- The Gamsberg started operations during the year fiscal year 2019 with the first filter output being achieved on 30 September 2018. As of 31 December 2018, a total of 3,018 tons of zinc metal concentrate has been produced, of which 2,056 tons were dispatched to Korea Zinc in December 2018.

- Enhanced oil recovery programmes at the oil and gas business have commenced and Vedanta expects significant contribution from these to achieve higher production volumes.

Optimise capital allocation and maintain strong balance sheet

A key strategic priority for Vedanta is to maintain and grow strong cash flow through disciplined approach on capital allocation towards capital expenditure and operating expenditure; along with disciplined management of working capital. Despite low commodity prices recently, Vedanta continued to deliver strong Vedanta EBITDA margins and free cash flows through a strong focus on its cost optimisation plan. As Vedanta continues to ramp up its portfolio of diversified, low-cost and well-invested assets, Vedanta expects to generate significant organic free cash flow with minimal remaining capital expenditure. In 2017, Vedanta completed an exclusive liability management program that resulted in meaningful deleveraging by proactively tendering for its 2018, 2019 and 2021 bonds and completing the cash redemption of the remaining 2018 bonds. The focus for the year till December 2018 has been on growth projects which utilised most fresh cash flows instead of actual debt reduction.

Protect and preserve its license to operate

A key strategic priority and critical to its licence to operate, Vedanta continues to focus on embedding a culture of sustainability across the businesses, allocating resources, skills and financial contributions to support its people and the communities where it operates whilst minimising its environmental impact. Although Vedanta's injury rates have declined over the years, three fatalities were recorded during the nine months ended 31 December 2018 have heightened Vedanta's resolve to create a zero-harm culture across the organisation and raise the profile of health and safety by reviewing safety incidents at the board, business segment and operational levels. The business units have implemented and put forward behavioural based and technical programmes to avoid the reoccurrence of these incidents. Further safety investigations and follow-ups have been improved and quantitative risk assessments have been introduced for all critical areas.

Making a positive contribution to local communities in India and Africa remains a high priority for Vedanta, with around 3.4 million beneficiaries of community development programmes during fiscal year 2018, supported by over 250 partnerships with NGOs, local governments, academia and private hospitals. Vedanta's social investment reached $39 million and is aligned with its social vision and community need based approach.

Vedanta is committed to managing its environmental footprint seeking to control pollution, reduce water and energy consumption and protect bio-diversity around its operating sites and has achieved water saving targets. During fiscal year 2018, there were zero higher category environmental incidents and all subsidiary businesses have been assessed with environmental gaps identified in energy, water management, greenhouse gas emissions and biodiversity. The significant improvements and adoption of best practices in resource management, biodiversity and site closure practices along with awards like Excellent Energy Efficient Unit Award by the Confederation of Indian Industry ("CII") and Rajasthan Energy Conservation Award for Excellence in Space Energy Management, CII, the National Award for Excellence in Water Management, the Confederation of Indian Industry — Centre for Excellence for Sustainable Development Awards, 2018 and D.L. Shah Gold Award for Sustainability.

Augment reserves and resources base

Vedanta follows a disciplined approach to exploration and continues to enhance its exploration capabilities. Vedanta's strategic priority is to add to its reserves and resources by extending resources at a faster rate than deplete them, through a continuous focus on its drilling and exploration programme. In order to achieve this, Vedanta has formed an exploration cell-VEDEX under the guidance of senior leaders to build on the Company's reserve base across businesses.

History and Development

In 1979, Mr. Anil Agarwal acquired Shamsher Sterling Corporation, which manufactured polyvinyl chloride power and control cables, overhead power transmission conductors and enamelled copper wire. Sterlite Cables Limited, in which the Agarwal family had a substantial interest, subsequently acquired this business and in 1986 changed its name to Sterlite Industries (India) Limited ("Sterlite").

- In 1988, Sterlite conducted an IPO in India.
- In 1995, Sterlite entered the aluminium production business by acquiring an 80% interest in The Madras Aluminium Company Limited ("MALCO").
- In 1997, Sterlite commissioned the first privately developed copper smelter in India.
- In 2001, Sterlite acquired a 51% interest in BALCO.
- In 2002, Sterlite acquired a 26% interest in HZL. In 2003, Sterlite increased its interest in HZL to 64.9%.
- In 2003, Vedanta was incorporated and re-registered as a public company and its name was changed to Vedanta Resources plc.
- In 2003, Vedanta was listed on the LSE.
- In 2004, Vedanta acquired a 51% interest in KCM.
- In 2006, Sterlite acquired Sterlite Energy Limited.
- In 2007, Vedanta acquired its iron ore business through the acquisition of a 51.2% interest in Sesa Goa Limited ("SGL") (now Vedanta Limited).
- In 2007, Sterlite completed an initial public offering on the NYSE. Vedanta's ownership interest in Sterlite decreased to 59.9%.
- In 2008, Vedanta increased its ownership interest in KCM to 79.4%.
- In 2009, Vedanta increased its ownership interest in MALCO to 94.8%.
- In 2009, Sterlite conducted a follow-on offering of its shares. Vedanta's ownership interest in Sterlite decreased to 56.9%.
- In 2009, SGL acquired SRL, which increased its iron ore reserves and resources by an estimated 101.8 million tonnes.
- In 2010 and 2011, Vedanta acquired Skorpion, Black Mountain Mining, and Lisheen.
- In 2011, SGL acquired the steel plant assets in Karnataka of Bellary Steel and Alloys Limited.

- In 2011, SGL acquired 51% of WCL.

- In 2011, Vedanta acquired a 58.5% interest in Cairn India.

- In 2012, SGL acquired Goa Energy Limited

- In 2012, SGL acquired the remaining 49% of WCL.

In 2014, Vedanta completed the reorganisation transactions though effective from August 2013, where in

- Sterlite merged with and into SGL;

- Aluminium business of Vedanta Aluminium Limited was demerged into SGL;

- Sterlite Energy Limited was merged with and into SGL;

- Power business of MALCO was demerged into Vedanta Aluminium Limited (now renamed as MALCO Energy Limited or MEL);

- Remaining MALCO was merged with and into SGL;

- Power business of Vedanta Aluminium Limited was slump sold to SGL;

- Group's ownership in Cairn India was consolidated under SGL;

- The name of SGL was changed to Sesa Sterlite Limited with effect from 18 September 2013;

- In 2015, the name of Sesa Sterlite Limited was changed to Vedanta Limited; and

- In 2017, the merger of Cairn India with Vedanta Limited was completed.

- In 2017, Vedanta Limited's wholly owned subsidiary Cairn India Holdings Limited acquired Avanstarte Inc., a Japanese manufacturer of LCD glass substrate.

- In 2018, Vedanta Limited's wholly owned subsidiary Vedanta Star Limited acquired ESL under the Insolvency and Bankruptcy Code, 2016 of India (the "Bankruptcy Code").

- On 2 October 2018, Vedanta Resources Plc delisted from the London Stock Exchange and re-registered as a private limited company under the name Vedanta Resources Limited.

Oil and Gas Business

Vedanta's oil and gas business is primarily owned and operated by Vedanta Limited and its subsidiaries. Vedanta's oil and gas business segment has a diversified asset base with six production and exploration blocks, one in Rajasthan, one on the west coast of India, three on the east coast of India and one in South Africa.

In August 2018, Vedanta Limited was successfully awarded 41 exploration blocks (comprising 33 onshore blocks and eight offshore blocks) in sedimentary basins throughout India under the OALP.

In March 2019, Vedanta Limited was awarded two exploration blocks under the Discovered Small Fields (II) auction.

Zinc Business

Vedanta's zinc India business is owned and operated by HZL. The international zinc business is operated by Skorpion in Namibia, Lisheen in Ireland and Black Mountain Mining in South Africa.

HZL. HZL was incorporated in Jaipur, India, and is headquartered in Udaipur in the State of Rajasthan. HZL's equity shares are listed and traded on the NSE and the BSE and as of 31 December 2018, had a market capitalisation of ₹1,179 billion ($16.89 billion). As of 31 December 2018, Vedanta Limited directly owns 64.9% of the share capital of HZL and has management control. GoI and institutional and public shareholders own the remaining 29.5% and 5.6% of HZL respectively. HZL's fully integrated zinc operations include five lead-zinc mines at the Chanderiya, Dariba and Zawar facilities in Rajasthan. Processing facilities are located at Haridwar, Punjab and Uttrakhand.

THL Zinc Namibia Holdings (Pty) Ltd. Skorpion was incorporated in Namibia, and is headquartered near Rosh Pinah. Skorpion was acquired from Anglo American plc in May 2010. The acquisition of Skorpion was completed on 3 December 2010. Skorpion produces zinc ingots of London Metal Exchange ("LME") grade.

Vedanta Lisheen Holdings Limited. Lisheen was incorporated in Ireland, and is headquartered in Thurles. Lisheen was acquired from Anglo American plc in May 2010. The acquisition of Lisheen was completed on 15 February 2011. The Lisheen mine is located in County Tipperary, Republic of Ireland. Mining and milling activities at the Lisheen mine ceased in December 2015 and the facility is currently in the process of implementing a mine closure plan in conjunction with statutory authorities.

Black Mountain Mining (Pty) Ltd. Black Mountain Mining was incorporated in South Africa, and is headquartered in Aggeneys. Black Mountain Mining was acquired from Anglo American plc in May 2010 and its assets include the Black Mountain mine and the Gamsberg deposit in South Africa. On 4 February 2011, Vedanta Limited completed the acquisition of the 74.0% ownership interest in Black Mountain Mining. Black Mountain Mining consists of the Black Mountain mine and the Gamsberg Project which produces zinc, copper and lead in concentrate.

Copper Business

Vedanta's copper business comprises operations in India, Zambia and Australia. Vedanta's Indian copper business is operated by Vedanta Limited and its Australian copper mines are held by CMT, while its Zambian copper business is owned and operated by KCM.

Vedanta Limited. Vedanta Limited's shares are listed and traded on the NSE and the BSE, and are also listed and traded on the NYSE in the form of ADSs. Vedanta, as of 31 December 2018 owns 50.1% of Vedanta Limited and has management control of the company. The remainder of Vedanta Limited's share capital is held by institutional and public shareholders. Vedanta Limited operates the copper business in India and operates the Australian business through CMT.

CMT. CMT was incorporated in Belmont, Australia, and is headquartered in Queenstown, Tasmania. Vedanta Limited owns 100.0% of CMT as of 31 December 2018 and has management control of the company. The Company's registered office is in Marin Place, Sydney.

KCM. KCM was incorporated in Lusaka, Zambia, and has its registered office in Chingola, Zambia. As of 31 December 2018, Vedanta owns 79.4% of KCM's share capital through Vedanta's wholly-owned subsidiary, VRHL, and has management control of the company. KCM's other shareholder is ZCCM Investment Holdings Plc. The Government of Zambia has a controlling ownership interest in ZCCM Investment Holdings Plc.

Iron Ore Business

Vedanta's iron ore business comprises operations in India and Liberia.

Vedanta Limited. Vedanta Limited operates Vedanta's iron ore business in Goa and Karnataka, India.

Western Cluster Limited. WCL was incorporated in Liberia and is headquartered in Monrovia, Liberia. WCL's assets include development rights to the Western Cluster, a network of iron ore deposits in West Africa.

Aluminium Business

BALCO. BALCO was incorporated in New Delhi, India and is headquartered at Korba in the State of Chhattisgarh. Vedanta Limited owned 51.0% as of 31 December 2018 of the share capital of BALCO and has management control of the company. The GoI owns the remaining 49.0%. BALCO operates two Bauxite mines in Chhattisgarh, India.

Vedanta Limited. Vedanta Limited operates Vedanta's aluminium business in the state of Odisha.

Commercial Power Generation Business

Vedanta Limited. Vedanta Limited operates the 2,400 MW coal based power plant facility in Jharsuguda in the state of Odisha. The three units of 600 MW each of coal-based thermal power plants in Jharsuguda have been converted from commercial power plants to captive power plants from 1 April 2016 and is now part of the aluminium business and one unit is an independent power plant for commercial power generation.

TSPL is a wholly-owned subsidiary of Vedanta Limited acquired by Vedanta Limited in September 2008. It is currently operating a 1,980 MW coal-based thermal commercial power plant at Talwandi Sabo, Punjab, India.

MEL. MEL is a wholly owned subsidiary of Vedanta Limited and operates a 106.5 MW coal based thermal power plant in Mettur Dam.

BALCO. BALCO operates an independent thermal power plant of 600 MW in Korba, Chhattisgarh.

HZL. HZL operates wind power plants in Gujarat, Karnataka, Maharashtra, Tamil Nadu and Rajasthan with a combined capacity of 273.5 MW as of 31 December 2018.

Description of the Businesses

Oil and Gas Business

Introduction

Oil and gas business is primarily owned and operated by Vedanta Limited and its subsidiaries. The oil and gas business segment has a diversified asset base with 46 blocks in India and one block in South Africa. The blocks are primarily located across the Indian basins in Barmer, Krishna-Godavari, Cambay, Assam, Gujarat Kutch and Cauvery, and the Orange Basin in South Africa.

Vedanta Limited is primarily engaged in the business of exploration, development and production of crude oil, gas and related by-products. Oil and gas business continues to contribute significantly to India's domestic crude oil production. Vedanta Limited operates approximately 25% of India's domestic crude oil production and, to date, has opened four frontier basins with numerous discoveries.

The following table sets forth details of Vedanta Limited's assets including its percentage interest and its partners, as of 31 December 2018:

	Asset	Basin	Our interest	JV partners	Area (in sq km)
India					
1	RJ-ON-90/1	Barmer	70%	ONGC	3,111
2	CB/OS-2	Cambay	40%	ONGC, Tata Petrodyne	207
3	RAVVA	KG Offshore	22.50%	ONGC, Ravva Oil, Videocon	331
4	KG-ONN-2003/1	KG Onshore	49%	ONGC	315
5	KG-OSN-2009/3	KG Offshore	100%	—	1,988
6	AA-ONHP-2017/1	Assam	100%	—	715
7	AA-ONHP-2017/6	Assam	100%	—	279
8	AA-ONHP-2017/14	Assam	100%	—	1,719
9	AA-ONHP-2017/4	Assam	100%	—	839
10	AA-ONHP-2017/5	Assam	100%	—	758
11	AA-ONHP-2017/8	Assam	100%	—	611
12	AA-ONHP-2017/9	Assam	100%	—	18
13	AA-ONHP-2017/11	Assam	100%	—	785
14	AA-ONHP-2017/15	Assam	100%	—	1,367
15	AA-ONHP-2017/2	Assam	100%	—	73
16	AA-ONHP-2017/3	Assam	100%	—	268
17	KG-ONHP-2017/1	KG Onshore	100%	—	2,321
18	KG-ONHP-2017/2	KG Onshore	100%	—	668
19	KG-ONHP-2017/3	KG Onshore	100%	—	49
20	KG-OSHP-2017/1	KG Offshore	100%	—	177
21	KG-DWHP-2017/1	KG Deepwater	100%	—	6,574
22	CY-OSHP-2017/1	Cauvery Offshore	100%	—	Onshore 154 Offshore 1,640
23	CY-OSHP-2017/2	Cauvery Offshore	100%	—	Onshore 100 Offshore 2,474
24	GK-ONHP-2017/1	Gujarat Kutch Onland	100%	—	Onshore 2,454 Offshore 236
25	GK-OSHP-2017/1	Gujarat Kutch Offshore	100%	—	2,960
26	GS-OSHP-2017/1	Gujarat Kutch Offshore	100%	—	2,627
27	GS-OSHP-2017/2	Gujarat Kutch Offshore	100%	—	674
28	MB-OSHP-2017/2	Mumbai Offshore	100%	—	2,690
29	RJ-ONHP-2017/5	Barmer	100%	—	917
30	RJ-ONHP-2017/6	Barmer	100%	—	925
31	RJ-ONHP-2017/7	Barmer	100%	—	603
32	RJ-ONHP-2017/1	Barmer	100%	—	542
33	RJ-ONHP-2017/2	Barmer	100%	—	1,072
34	RJ-ONHP-2017/3	Barmer	100%	—	1,430
35	RJ-ONHP-2017/4	Barmer	100%	—	1,087

	Asset	Basin	Our interest	JV partners	Area
					(in sq km)
36	CB-ONHP-2017/1	Cambay	100%	—	1,490
37	CB-ONHP-2017/7	Cambay	100%	—	1,335
38	CB-ONHP-2017/10	Cambay	100%	—	2,766
39	CB-ONHP-2017/6	Cambay	100%	—	19
40	CB-ONHP-2017/2	Cambay	100%	—	317
41	CB-ONHP-2017/3	Cambay	100%	—	83
42	CB-ONHP-2017/4	Cambay	100%	—	95
43	CB-ONHP-2017/5	Cambay	100%	—	990
44	CB-ONHP-2017/11	Cambay	100%	—	70
45	HF-ONHP-2017/1	Himalaya Foreland	100%	—	666
46	GV-ONHP-2017/1	Ganga Valley	100%	—	1,817
International					
47	Block 1	Orange, South Africa	60%	Petro SA	19,898
	Total				**75,304**

Oil and gas is produced from the Rajasthan, Ravva and Cambay blocks. Gross production of Vedanta Limited was 189.9 kboepd in fiscal year 2017 and 185.6 kboepd in fiscal year 2018. For the nine months ended 31 December 2018, the Vedanta EBITDA from the oil and gas segment was $845.0 million compared to $609.7 million for nine months ended 31 December 2017.

The Rajasthan RJ-ON-90/1 (“Rajasthan block”) is an onshore block. It is the principal production asset, and as of 31 December 2018, Vedanta owns a 70% participating interest in the Rajasthan block pursuant to the production sharing contract. Joint venture partner, ONGC, the remaining 30% participating interest in the Rajasthan block. The Rajasthan block is spread over 3,111 sq. kms west of Barmer district. The block consists of three contiguous development areas (“DA”): (i) DA one, primarily comprising the Mangala, Aishwariya, Raageshwari and Saraswati (“MARS) fields; (ii) DA two primarily consisting of the Bhagyam, NI and NE and Shakti fields; and (iii) DA three, comprising the Kaameshwari West fields.

The Mangala field was discovered in January 2004. This was followed by many other discoveries including the Aishwariya and Bhagyam fields. In the Rajasthan block, 38 discoveries have been established, since inception. The Mangala, Bhagyam and Aishwariya fields (collectively, the “MBA Fields”) are the largest in the Rajasthan Block and the Mangala field was the first to be developed, having commenced production of commercial crude oil in August 2009. In addition, Vedanta Limited completed the Mongala Processing Terminal (“MPT”), a centralised hub facility to handle crude oil production from the MBA Fields and other fields, such as Raageshwari, Saraswati and other satellite fields. Since June 2010, sales of crude oil from the Rajasthan Block are made through a pipeline (the “Pipeline”) of approximately 590 km running from the MPT to Salaya which further extends 73 km to Bhogat. In November 2015, the Salaya-Bhogat pipeline and terminal at Bhogat were commissioned and the first cargo of 500,000 barrels of Rajasthan crude oil was successfully loaded in December 2015 through the Bhogat terminal for Mangalore Refinery and Petrochemicals Limited (“MRPL”). The terminal provides access to a larger market for Rajasthan crude. The Bhogat terminal is a 160 hectare site located eight km from the Arabian Sea coast at Bhogat in Jamnagar District, Gujarat.

Outside of the Rajasthan Block, the two producing blocks are Ravva and the Cambay Basin Block.

Vedanta Limited signed a farm-in agreement with the Petroleum Oil and Gas Corporation of South Africa Ltd. ("PetroSA"), the national oil company of South Africa, for the 19,898 km^2 off-shore block one, located in the geologically-proven Orange Basin in South Africa. Cairn South Africa Proprietary Limited, a wholly owned subsidiary of Vedanta Limited holds a 60% participating interest in off-shore block 1 and is the operator. The second phase of the block is subject to regulatory and fiscal terms proposed in the amendment bill of Mineral and Petroleum Resources Development Act, 2002.

Vedanta Limited holds interest in the onshore block KG-ONN-2003/1 which is under development and the offshore block KG-OSN-2009/3 which is in the exploration phase.

In August 2018, Vedanta Limited was awarded 41 blocks under the first round of auctions under the OALP. These blocks are spread across India in the states of Andhra Pradesh, Assam, Tamil Nadu, Triupra, Rajasthan, Maharashtra and Gujarat, and add approximately 50,000 km^2 to Vedanta Limited's oil and gas portfolio. The contracts for these were signed in October 2018.

Principal products

Oil. Vedanta Limited produces crude oil of various grades with different degrees and contents, depending on which field it has been extracted from. While, the crude oil in the majority of fields in the Rajasthan block is characterised by its high pour point and is medium sweet oil in nature, the crude oil produced from Ravva and Cambay oil blocks are light sweet in nature.

Gas. The Rajasthan, Ravva and Cambay blocks produce natural gas and natural gas commingled with crude oil. While gas is being sold from the offshore blocks of Ravva and Cambay, pursuant to the regulatory approval of March 2013, gas sales have commenced from the Rajasthan block in fiscal year 2014.

Production

The table below sets out Vedanta Limited's gross production[(1)] for the periods indicated:

	Fiscal year ended 31 March			**Nine months ended 31 December**	
	2016	**2017**	**2018**	**2017**	**2018**
Average Daily Gross Operated					
Production (boepd)	203,703	189,926	185,587	184,086	189,347
Rajasthan	169,609	161,571	157,983	156,552	156,910
Ravva	23,845	18,602	17,195	17,498	14,832
Cambay	10,249	9,753	10,408	10,036	17,605
Average Daily Working Interest Production (boepd)	128,191	121,186	118,620	117,538	120,342
Rajasthan	118,726	113,100	110,588	109,586	109,837
Ravva	5,365	4,185	3,869	3,937	3,337
Cambay	4,100	3,901	4,163	4,015	7,042
KG-ONN	—	—	—	—	126
Total Oil and Gas (mmboe)					
Oil and Gas-Gross	74.6	69.3	67.7	50.62	52.1
Oil and Gas-Working Interest	46.9	44.2	43.3	32.32	33.1

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

The following table sets forth Vedanta Limited's production for the periods indicated.

	Fiscal year ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
Gross:					
Oil (bopd)	196,955	184,734	177,678	176,391	179,957
Gas (mmscfd)	40	31	47	46.2	56
Oil and gas (boepd)	203,703	189,926	185,587	184,086	189,347
Total:					
Oil (mmbbls)	72.1	67.4	64.8	48.5	49.5
Gas (mmboe)	2.5	1.9	2.9	2.1	2.6
Oil and gas (mmboe)	74.6	69.3	67.7	50.6	52.1

Vedanta Limited's Estimates of Hydrocarbons Initially in Place, Reserves and Contingent Resources

Vedanta Limited uses various measures of hydrocarbons to make decisions regarding exploration priorities and investment in field developments. In the exploration phase, estimates of hydrocarbons initially in place, and the associated estimate of prospective resource are essentially speculative and subject both to a binary risk (probability of success or failure) and considerable uncertainty of volumetric magnitude. Following successful exploration and appraisal work, and as a field matures technically and commercially through development work and actual production, it becomes possible for Vedanta Limited to make estimates, which may change over time, of the volumes of hydrocarbons or reserves that, in varying degrees of certainty or uncertainty, will ultimately be recoverable.

Vedanta Limited relies primarily on estimates of 2P reserves for purposes of significant capital investment decisions.

Estimates of contingent resources are also used as a further measure of the potential commerciality of known accumulations of hydrocarbons in Vedanta Limited's areas. The estimation of these resources, and the likelihood that they may be reclassified as reserves, depends on Vedanta Limited's ability to prove commercial and technical viability of recovery within a reasonable timeframe. Vedanta Limited employs reserves and resources definitions according to international standards set by the Society of Petroleum Engineers and the World Petroleum Council which provide detailed descriptions for each category of reserves and resources.

The table below sets forth certain data regarding Vedanta Limited's estimates of gross hydrocarbons initially in place, gross and net working interest reserves and contingent resources from fields within the Rajasthan Block, the Ravva Block, Cambay Basin Block and the KG-ONN-2003/1 block. The reported numbers for the Rajasthan block have been updated subsequent to the Rajasthan Production Sharing Contract (PSC) extension to 2030 and are as of 31 October 2018. The numbers for other blocks are as of 31 March 2018. In this table, gas has been converted into oil equivalent using a conversion factor of 6,000 standard cubic feet per barrel of oil equivalent. The estimates with respect to Rajasthan Block fields include additions subsequent to the grant of the extension of the production sharing contract to May 2030. Based on the fiscal year 2018 gross production, the gross 2P reserves and 2C resources have a life of approximately 18 years.

	Gross Proved Plus Probable Hydrocarbons Initially in Place	Gross Proved Plus Probable Reserves and 2C resources	Net Working Interest Proved Plus Probable Reserves and 2C resources
		(mmboe)	
Rajasthan Block			
Total "MBA" Fields	2,288	394	276
Rajasthan enhanced oil recovery	—	308	216
Rajasthan Block Other Fields	3,458	427	299
Ravva Block	733	45	10
Cambay Basin Block	251	34	14
KG-ONN-2003/1	335	48	24
Total (excluding enhanced oil recovery)	7,065	948	62
Total (including enhanced oil recovery)	**7,065**	**1,256**	**839**

DeGolyer and MacNaughton's Estimates of Reserves

DeGolyer and MacNaughton, independent petroleum engineering consultants, had been engaged to prepare estimates of the proved, probable, and possible oil, condensate, and marketable gas reserves and the contingent resources contained within the areas of Vedanta Limited.

The estimation of oil and gas reserves and resources is uncertain and subjective and different, reasonable estimates may be produced by different engineers analysing the same geological, technical and commercial data. As a result, there are differences between Vedanta Limited's estimates and DeGolyer and MacNaughton's estimates.

The table below sets forth a summary of the gross and net participating interest oil equivalent reserves reported in millions of barrels for certain properties which have been derived from estimates of gross oil and marketable gas reserves prepared by DeGolyer and MacNaughton for fields within the Rajasthan Block, the Ravva Fields, and fields within the Cambay Basin Block and the KG-ONN-2003/1 Block. In this table, marketable gas has been converted into oil equivalent using a conversion factor of 6,000 standard cubic feet per barrel of oil equivalent.

	Gross Proved Plus Probable Hydrocarbon Reserves	Net Participating Interest Proved Plus Probable Hydrocarbon Reserves
	(mmboe)	(mmboe)
Rajasthan Block		
Mangala	310.7	217.5
Bhagyam	50.2	35.1
Aishwariya.	51.1	35.8
Total "MBA" Fields	411.9	288.4
Rajasthan Block Small Fields	128.7	90.1
Rajasthan Block Other Fields	0.0	0.0
Ravva Block	6.2	1.4
Cambay Basin Block	20.8	8.3
KG-ONN-2003/1	4.4	2.1

(1) The reported numbers for Rajasthan block have been updated subsequent to the Production Sharing Contract (PSC) extension to 2030 and are as of 31 October 2018. The numbers for all the other blocks are as of 31 March 2018.

The difference in total gross "Proved plus Probable" hydrocarbon reserves estimates between Vedanta Limited and DeGolyer and MacNaughton is negligible (~0.65%). The field by field differences are due to differences in the interpretations made by the estimating engineers.

The Rajasthan Block

The majority of the estimated hydrocarbons in place, 2P reserves and contingent resources attributable to fields in which Vedanta Limited has an interest are contained in the Rajasthan block.

As of 31 March 2018, Vedanta Limited estimates the gross hydrocarbons initially in place and the gross 2P reserves plus 2C resources of 5.7 bnboe and 1.1 bnboe.

As of 31 March 2018, Vedanta Limited's oil and gas estimates that the MBA fields (including enhanced oil recovery) contained gross hydrocarbons initially in place and the gross 2P reserves plus 2C resources 2.3 bnboe and 0.7 bnboe respectively. The other fields in Rajasthan block contained gross hydrocarbons initially in place and the gross 2P reserves plus 2C resources 3.5 bnboe and 0.4 bnboe, respectively.

Set out below is the gross production from the Rajasthan block and Vedanta Limited's net participating interest with regard to such production for the periods indicated:

Particulars Average Daily Production	**Units**	**For the Year ended 31 March**			**Nine Months period ended 31 December**	
		2016	**2017**	**2018**	**2017**	**2018**
Gross Operated.........	Boepd	169,609	161,571	157,983	156,552	156,910
Net Operated...........	Boepd	118,726	113,100	110,588	109,586	109,837
Oil...........................	Bopd	117,086	111,958	108,015	107,263	106,347
Gas..........................	Mmscfd	9.8	6.9	15.4	13.9	21

The Rajasthan Block PSC

Vedanta Limited along with Cairn Energy Hydrocarbons Limited are working in partnership with their joint operations partner, ONGC in the Rajasthan block. The Rajasthan block production sharing contract was signed in May 1995 between the GoI and a consortium consisting of ONGC and Shell India Production Development BV.

Vedanta Limited (then Cairn India Limited) acquired its interest in the Rajasthan production sharing contract in three stages, eventually acquiring a 100.0% beneficial interest in the assets and liabilities as of May 2002 and acquiring legal title to this interest on 20 June 2003. Under the Rajasthan production sharing contract, the GoI has an option to acquire a participating interest of 30.0% in any development area containing a commercial discovery. The GoI exercised their right in all three development areas, specifically, DA 1 in 2005, DA 2 in 2007 and DA 3 in 2009, acting through its nominee ONGC, and acquired a 30.0% participating interest. As of 31 March 2018, ONGC holds 30.0% and Vedanta Limited holds 35.0% participating interest in the Rajasthan block, and the remaining 35.0% interest is held by Cairn Energy Hydrocarbons Limited, which is a wholly owned subsidiary of Vedanta Limited.

Under the terms of the Rajasthan production sharing contract and permissions from the GoI, the crude oil, natural gas and condensate produced at Rajasthan block is sold to both public sector undertakings and private refineries. As of 31 March 2018, commercial sales arrangements were in place for over 250,000 bopd with public sector undertakings and private refineries.

The Rajasthan production sharing contract established a management committee for the Rajasthan block which consists of four members, two of whom are nominated by and represent the GoI and the licensee, namely ONGC, taken together, and two of whom are nominated by and represent Vedanta Limited and Cairn Energy Hydrocarbons Limited. The management committee must unanimously approve annual work programs, budgets, proposals for the declaration of a discovery as commercial, field development plans, and the delineation of or additions to a development area, while all other matters only require a majority vote, provided that the majority vote includes the vote of the member representing the GoI.

The Rajasthan production sharing contract is valid until May 2020, unless it is terminated in accordance with its terms, but may be extended by mutual agreement among the parties for up to an additional term of five years, provided in case of commercial production of natural gas which is expected to continue beyond 2020, the production sharing contract shall be extended for a period of 35 years from May 15, 1995. There is also a provision to further extend the Rajasthan production sharing contract by agreement of the parties if production of crude oil or of natural gas is expected to continue after the relevant period.

By way of a notification dated 7 April 2017, the Ministry of Petroleum and Natural Gas ("MoPNG") issued a policy for the grant of extension to the production sharing contracts signed by the GoI awarding Pre-New Exploration Licensing Policy ("Pre-NELP") Exploration Blocks ("Pre-NELP Extension Policy"). The Pre-NELP Extension Policy defines the framework for granting extensions for Pre-NELP blocks and covers both the Rajasthan and Cambay fields. Pre-NELP Extension Policy, amongst others, provides for an increased share of profit petroleum of 10% for the GoI during the extended term of the Rajasthan production sharing contract.

In October 2018, the GoI, acting through the Directorate General of Hydrocarbons, Ministry of Petroleum and Natural Gas granted its approval for a ten-year extension of the production sharing contract for the Rajasthan Block. The tenure of the Rajasthan production sharing contract was extended for an additional period of 10 years with effect from 15 May 2020. Such extension was granted by the GoI, pursuant to its policy dated 7 April 2017 for extension of Pre-NELP exploration blocks production sharing contracts signed by the GoI (the "Pre-NELP Extension Policy"), subject to certain conditions. The applicability of the Pre-NELP Extension Policy to the Rajasthan production sharing contract is currently sub-judice.

The Rajasthan block had benefitted from a tax holiday of seven years from fiscal year 2009 (the year of commencement of commercial production from the Rajasthan block) to 31 March 2016. However, during the seven year tax holiday, minimum alternate tax rules were applicable which resulted in a taxation of book profits computed in accordance with the generally accepted accounting principles as used in India. Any minimum alternate tax paid can be carried forward for a total period of 15 years from the year of credit and used to reduce corporate tax to be paid in future years in excess of minimum alternate tax payable in those years.

Under the Rajasthan production sharing contract, all sales made to GoI or Government companies as well as private buyers are valued at a weighted average F.O.B. selling price per barrel of a basket of international crude oil as agreed by all parties which is quoted in Platts, a provider of energy information. For any delivery period in which sales take place, the price is set at an average price per barrel determined by calculating the average for such delivery period of the mean of the high and low F.O.B prices of the basket for each day adjusted for differences in quality, delivery time, quantity, payment terms and other contract terms to the extent known. In agreeing to an appropriate basket, the parties attempt, so far as is reasonably practicable, to choose a mixture and weighing of crude oils which would produce a quality similar to the quality of crude oil expected to be produced from that development area, and to agree what quality adjustment, if any, to the basket price is appropriate. In determining the quality of crude oil, account is to be taken of all relevant characteristics including gravity, sulphur and metal content, pour point and product yield.

The crude oil produced at the Rajasthan block is benchmarked to Bonny Light, an international low sulphur crude oil published in Platts Crude Oil Market wire on a daily basis. The pricing formula also adjusts for differences in yield and quality.

In the event of a dispute between the parties to the Rajasthan production sharing contracts as to the basis of, or mechanism for, the calculation of the crude oil price, any party may refer the matter to a sole expert, to be appointed by the parties to the dispute jointly, who is to be an independent and impartial person of international standing with relevant qualifications and experience. Under the provisions of the Rajasthan production sharing contract, the decision of the sole expert is final and binding on the parties and not subject to arbitration.

Mangala

The Mangala field commenced production in August 2009 and is the largest field in the Balmer Basin in Rajasthan, India. To increase the ultimate oil recovery and support for production volumes, Cairn has embarked on an enhanced oil recovery project, which was successfully executed in fiscal year 2016.

The alkaline surfactant polymer enhanced oil recovery pilot commenced during fiscal year 2015 and has shown positive results with better mobilization of unswept oil. Preliminary analysis suggested that the alkali surfactant polymer pilot wells produced approximately 10-15% incremental oil of the pilot stock tank of oil in place over polymer flood.

In order to accelerate recovery from the Mangala field, an infill drilling campaign consisting of 15 wells was carried out during fiscal year 2018. Further, during fiscal year 2019, additional 45 infill wells are being drilled.

Bhagyam

Bhagyam, the second largest field in Rajasthan, forms part of DA2 and commenced production in January 2012.

Cairn is looking to replicate the success of the Mangala enhanced oil recovery program to enhance recovery from the Bhaygam field through the execution of polymer flooding. The field development plan for the Bhagyam polymer enhanced oil recovery project has been approved and the drilling of wells has commenced in the first quarter of fiscal year 2019.

Aishwariya

The Aishwariya field is located in the northern Barmer Basin in the state of Rajasthan, immediately south of the Mangala field and was discovered in March 2004.

Aishwariya, the third largest discovery in Rajasthan, commenced production in March 2013. It is the fifth oil producing field from in the Rajasthan block. Cairn is replicating the success of the Mangala enhanced oil recovery program to enhance recovery from the Aishwariya field through the execution of polymer flooding. The field development plan for the Aishwariya polymer enhanced oil recovery project has been approved and the drilling of wells has commenced in the first quarter of fiscal year 2019.

South Satellite fields including Raageshwari, Saraswati, Guda and Kaameshwari

The Raageshwari oil field commenced production in March 2012, while the Saraswati field commenced production in May 2011. Kaameshwari and Guda oil fields commenced production in May and June 2017, respectively.

Availability of the integrated processing and evacuation facility has reduced operating costs and has therefore made these fields economically viable.

Facilities

Mangala Processing Terminal

The MPT is spread over an area of 1.6 square kms and is a core asset. The MPT processes crude oil produced from various oil fields in the Rajasthan block. The MPT is currently operational with three oil processing trains. The overall liquid handling nameplate capacity of the oil processing trains is 800 kblpd. The oil processing train primarily consists of slug catchers, production heaters, a production separator and settling tank for oil water separation and degassing. Stabilized crude after meeting export crude specification is transported to refineries through a 24-inch diameter continuously heated and insulated pipeline. The MPT's integrated production facilities support the field development plan approved production, which is in line with Cairn's unified Rajasthan block off-take capability.

Raageshwari Gas Processing Facility

The Raageshwari gas terminal about 70 kms from the Mangala processing terminal, comprises facilities to remove condensable hydrocarbon liquids and water from the gas produced from Raageshwari gas terminal wells. Gas produced and processed at Raageshwari gas terminal was supplied solely to Mangala processing terminal and to the heating stations along the oil export pipeline from Mangala processing terminal. In March 2013, Cairn commenced the commercial sale of gas from the Raageshwari deep gas field. This was the first step towards unlocking the natural gas potential of the Rajasthan assets. An ongoing drilling programme with surface upgradation project is expected to increase natural gas production and sales from the field. The upgrade of the facility is expected to be completed by the fourth quarter of 2020. The upgraded facility will have the capacity to process approximately 150 mmscfd of gas from adjoining gas fields. On the pipeline front, Cairn signed an agreement with GSPL India Gasnet Limited for constructing eighteen inches diameter pipeline connecting Raageshwari Gas Terminal to Pali and thereon connecting Mehsana to Bhatinda to Palanpur, in accordance with the Petroleum and Natural Gas Regulatory Board ("PNGRB") approval. This pipeline has already got commissioned.

Power facilities

At the Rajasthan block, captive power is generated at the Mangala processing terminal via steam turbine generators and Raageshwari gas terminal via gas engines. The total power capacity across Mangala processing terminal and Raageshwari gas terminal aggregates to 63.3 MW. The gas used as fuel is the associated gas from the fields at Rajasthan. For power requirements exceeding the power generation capacity, which is based on associated gas availability, Cairn taps into the Rajasthan state grid power or buys it through open access from the energy exchanges at lower rates.

Mangala Development Pipeline ("MDP")

The MDP is designed to evacuate the crude oil and transport gas from the Rajasthan block. Beginning at the MPT and Raageshwari terminal respectively, the 24 inch crude oil and 8 inch gas pipeline passes through eight districts across two states, Rajasthan and Gujarat. The pipeline ends at Bhogat near Jamnagar on the western coast of India. There are buffer crude storage terminals at Radhanpur and Viramgam for sales to Indian Oil Corporation and off-take lines at Salaya for sales to the Reliance India Limited and Essar Oil refineries in Jamnagar.

Since its commissioning, total cumulative crude oil sales of 446 million barrels have been achieved through the existing pipeline facilities up to 31 March 2018. With the use of drag reducing agents, the proven dispatch capacity of the Mangala development pipeline has been enhanced to around 250,000 bbls per day. Given its length, the Mangala development pipeline incorporates a pipeline intrusion detection system to provide surveillance along its entire length by using fibre optics. Vedanta Limited — oil and gas business's pipeline operations received accreditation of both OHSAS: 18001 and ISO: 14001 systems in fiscal year 2018.

In fiscal year 2014, gas sales commenced through the eight inches gas line. Capacity was further enhanced through installation of higher capacity gas compressors at Raageshwari and Viramgam terminals to nearly double gas sales capability; as well as modification of impellers of the mainline booster pumps at Viramgam. During fiscal year 2016, stabilization of the compressors and optimization of plant operations aided production.

In November 2015, the Salaya-Bhogat pipeline and terminal at Bhogat were commissioned and the first cargo of 500,000 barrels of Rajasthan crude oil was successfully loaded in December 2015 through the Bhogat terminal for Mangalore Refinery and Petrochemicals Limited ("MRPL"). The terminal has provided access to a larger market for Rajasthan crude. This should enable Cairn to diversify customer mix and reduce dependence on limited number of customers.

Bhogat Terminal Facilities

The Bhogat terminal in the Jamnagar district, Gujarat, is a 160 hectare site located eight kms from the Arabian Sea coast. The terminal will facilitate the storage and evacuation of crude oil by sea. The terminal consists of tankages with storages capacity of around 2.1 million barrels of Rajasthan crude. It also has associated facilities for the operation of terminal and marine export of crude. The evacuation facility includes two 24 inch sub-sea export pipelines from the Bhogat landfall point to the single point mooring system to enable crude transfer and a single point mooring system and sub-sea pipeline end manifold in deep sea to enable tanker berthing and loading. The terminal was commissioned in November 2015 and the dispatch of Rajasthan crude to MRPL has commenced.

Exploration

Cairn is rejuvenating its oil and gas exploration efforts in the prolific Barmer Basin. An integrated contract has been awarded for exploration and appraisal drilling campaign of seven to 18 exploration and appraisal wells. Well spud is expected in first part of fiscal year 2020.

The Ravva Block — Krishna Godavari Basin

Vedanta Limited is the operator of the Ravva field in the Ravva Block, which lies in the Krishna Godavari Basin mostly off the coast of the state of Andhra Pradesh in eastern India in water depths of between approximately 5 and 40 metres isobaths. ONGC discovered the Ravva field in 1987 and production commenced in 1993.

As of 31 March 2018, Ravva field had produced more than 288 mmbbls of crude oil and 354 BCF of gas.

The Ravva PSC

The production sharing contract for the exploration, development and production of the Ravva block (the "**Ravva PSC**") was signed on 28 October 1994 between GoI and a consortium consisting of ONGC, Videocon Industries Limited (formerly Videocon Petroleum Limited), Ravva Oil and Cairn Energy India Pty Limited (formerly known as Command Petroleum (India) Pty Limited) ("**Command Petroleum**") with Command Petroleum being designated as the operator. In 1996, Cairn Energy Plc acquired Command Petroleum, including its interest in the Ravva block, and subsequently Vedanta Limited — oil and gas business (since merged with Vedanta) became the operator.

As at 31 March 2018, Vedanta Limited holds a 22.5% working interest in the Ravva block with the remaining interests currently held by ONGC (40%), Videocon Industries Limited (25%) and Ravva Oil (12.5%) (together the "Ravva Joint Operating Partners"). Ravva PSC is valid until 27 October 2019, unless the Ravva PSC is terminated earlier in accordance with its terms, but may be extended by GoI for a further period not exceeding five years, provided that in the event of commercial production of non-associated natural gas, the Ravva PSC may be extended for a period not exceeding 35 years from the Effective Date. The MoPNG, through a notification dated 28 March 2016 issued a policy for the grant of an extension to the production sharing contracts signed by the GoI awarding small, medium sized and discovered fields to private joint ventures (the "**Ravva Extension Policy**"). The Ravva Extension Policy defines the framework for granting of the extension and covers 28 small and marginal fields, including the Ravva field.

The Ravva Extension Policy, amongst others, provides for an increased share of profit petroleum of 10% for the GoI during the extended term of the Ravva PSC. According to the terms of the Ravva Extension Policy, the joint operation partners have applied to the GoI seeking extension of the Ravva PSC by 10 years. In March 2019, the GoI, acting through the Directorate General of Hydrocarbons, Ministry of Petroleum and Natural Gas granted its approval for a ten-year extension of the production sharing contract for the Ravva Block. The tenure of the Rajasthan production sharing contract was extended for an additional period of 10 years with effect from 28 October 2019. Such extension was granted by the GoI, pursuant to its policy dated 28 March 2016, subject to certain conditions.

Under the Ravva PSC, Vedanta Limited — oil and gas business is entitled to recover 100% of exploration, development and costs of production from crude oil and natural gas sales before any profit is allocated among the parties.

As per the terms of the Ravva PSC, the crude oil and condensate produced from the Ravva block is being sold to both the public sector undertakings refineries and private refineries. As of 31 March 2018, commercial sales arrangements are in place for over 25,000 bopd with public sector undertakings and private refineries. All sales to the GoI nominees are to be valued at a F.O.B. selling price per barrel in US dollars, ascertained on Platts, of one or more crude oils of similar characteristics and quality or through the spot market for such crude oil, whichever price is determined by the parties to reflect more truly the current value of the sale.

As ONGC originally discovered the Ravva block, Vedanta Limited — oil and gas business and other members of the Ravva Joint Operating partner are obliged to make a series of production payments to ONGC based on cumulative crude oil production. The method of calculating the production payments is set out below.

	Gross Payment Owed to ONGC	Net Payment by Vedanta Limited — oil and gas business
	($ million)	
For every 25 million barrels produced up to 75 million barrels	9.0	3.4
For every 5 million barrels produced between 75-100 million barrels	1.8	0.7
For every 5 million barrels produced between 100-225 million barrels	1.7	0.6
For every 5 million barrels produced between 225-250 million barrels	1.4	0.5
For every 5 million barrels produced over 250 million barrels	0.9	0.3

Disputes have arisen between the Ravva Joint Operating Partners over the interpretation of the Ravva PSC which have required arbitration. For example, a dispute arose between the GoI and Ravva Joint Operating Partners on the issue of excess cost recovery made by Ravva joint operation partners against the base development cost as mentioned in the Ravva PSC which has limited the escalation of such costs for cost recovery purposes.

The Ravva joint operation partners (excluding ONGC) initiated arbitration proceedings and the arbitral tribunal announced its award on 18 January 2011 broadly allowing companies including Vedanta Limited to recover base development cost spent amounting to $278 million and disallowed an over-run of $22 million spent in respect of base development cost and directed 50.0% legal cost on the GoI. The High Court of Kuala Lumpur, on 30 August 2012, dismissed the GoI's application for setting aside the award with costs. Further appeal by the GoI before the Court of Appeal, Kuala Lumpur and the Federal Court of Malaysia were also dismissed. The arbitration award in base development matter was in favour of Vedanta Limited — oil and gas business, Videocon Industries and Ravva Oil Singapore and has attained finality, in so far as the Malaysian proceedings are concerned. Vedanta Limited, Videocon Industries and Ravva Oil Singapore have filed an application for enforcement of the said award before the High Court of Delhi as an additional measure of caution. An application was made for listing the matter on 29 October 2018 and the matter is listed for 17 May 2019. Vedanta Limited — oil and gas business, Videocon Industries also initiated an arbitration proceeding against the GoI to determine the costs to be considered for cost recovery purposes, in connection with the ONGC carry.

In addition, on 14 August 2015, GoI filed a suit and obtained an ex-parte stay-order from the High Court of Delhi against the determination of 'quantum of costs' by the arbitral tribunal. Vedanta Limited — oil and gas business filed an appeal before the Court against the stay-order. The same appeal has been allowed by the Court through its order dated 3 May 2016 and the aforesaid stay-order obtained by the GoI in this matter has been set aside by the Division Bench of the High Court. The GoI filed a special leave petition against the Division Bench's order, which will be heard by the Supreme Court of India at a date which will be made available by the Court. The next hearing before the Court in the GoI's civil suit is scheduled for 25 July 2019.

Facilities

Currently, there are eight unmanned offshore platforms and a 225-acre onshore processing facility at Surasaniyanam, Andhra Pradesh, for processing the natural gas and crude oil produced from the offshore field. The Ravva onshore terminal operates under internationally recognised environmental standard (ISO 14001) and occupational health and safety standard (OHSAS18001). The onshore facility has the capacity to handle 90,000 barrels per day of liquid, 95 mmscfd of natural gas, and 110,000 bbls of water injection per day. The terminal also has the capacity to store 1.0 mmbbls of crude oil and captive power generation capacity of 10 MW.

Production from the Ravva Field

During fiscal year 2018, the block produced 17,195 boepd on a gross basis, with a plant uptime of more than 99%. In the Ravva block, coil tubing and acid stimulation campaign was executed in fiscal year 2017 and this has helped to partly offset the natural decline. Well stimulation in a few of the water injector wells has also had a positive effect, helping to sustain the required water injection to support production from the oil wells.

The following table sets out the net average oil and gas daily production from the Raava block for the years ended 31 March 2016, 2017 and 2018, and for the nine months ended 31 December 2017 and 2018.

Particulars Average Daily Production	**Units**	**For the year ended 31 March**			**Nine Months period ended 31 December**	
		2016	**2017**	**2018**	**2017**	**2018**
Gross Operated.........	Boepd	23,845	18,602	17,195	17,498	14,832
Net Operated............	Boepd	5,365	4,185	3,869	3,937	3,337
Oil...........................	Bopd	4,690	3,727	3,329	3,381	2,817
Gas..........................	Mmscfd	4.1	2.7	3.2	3.3	3.1

The Cambay Basin Block — Lakshmi, Gauri and CB-X

The Cambay CB/OS-2 ("Cambay") block is an offshore block which is located in the Cambay Basin of the state of Gujarat in western India. Vedanta's operations in the Cambay block are centred on the Lakshmi and Gauri oil and gas fields and the CB-X development area. Based on exploration and development activities undertaken by us, the Cambay block has yielded natural gas discoveries in its offshore Lakshmi and Gauri fields and onshore CB-X field and crude oil discoveries in the former two fields. Gas production commenced from the Lakshmi gas field in 2002 and from the Gauri field in 2004. Production of co-mingled crude oil, which consists of crude oil plus condensate, from the Gauri field commenced in 2005. The Lakshmi and Gauri offshore fields cover areas of 121.1 sq. kms and 50.7 sq. kms, respectively, in the Cambay Basin and lie off the coast of the state of Gujarat in water depths of approximately 20 metres. CB-X is an onshore gas field situated in the Cambay block and covers an area of 33.28 sq. kms.

As of 31 March 2018, the block has produced 31 mmbbls of crude oil and 233 bcf of gas.

Cambay Basin PSC

Exploration, development and production of the Cambay block is governed by a production sharing contract between the GoI and a consortium consisting of ONGC, Tata Petrodyne Limited ("**Tata**") and Vedanta Limited — oil and gas business, (the "**Cambay Joint Operating Partners**") which was signed on 30 June, 1998 ("**Effective Date**") (the "**Cambay PSC**") and runs until 2023 unless the Cambay PSC is terminated earlier in accordance with its terms and may be extended for a further period of not exceeding five years, provided that in the event of commercial production of non-associated natural gas the Cambay PSC may be extended for period not exceeding 35 years. By way of a notification dated 7 April 2017, the MoPNG issued a policy for the grant of extension to the production sharing contracts signed by the GoI awarding Pre-NELP Extension Policy. The Pre-NELP Extension Policy defines the framework for granting extensions for Pre-NELP blocks and covers both the Rajasthan and Cambay fields. The Pre-NELP Extension Policy, amongst others, provides for an increased share of profit petroleum of 10% for the GoI during the extended term of the Cambay PSC. The extension application for the Cambay block shall be due for filing in 2021. Vedanta's participating interest in the Cambay Basin joint operation consists of a 40% interest in the Lakshmi, Gauri and CB-X development areas. The remaining interests in these development areas are held by ONGC (50%) and Tata (10%).

Facilities

An 82-acre onshore processing facility at Suvali, processes natural gas and crude oil from the Lakshmi and Gauri fields. This facility has a capacity to process 150 mmscfd of natural gas and 10,000 bopd of crude oil and includes a three-stage separator oil processing train, four storage tanks of combined capacity of 40,000 bbls as well as 4.8 MW captive power generation capacity. As part of the asset's long-term facility augmentation plan, a storage tank to expand the crude storage capacity at Suvali terminal and an offshore gas lift compressor package to provide artificial lift to the wells have been commissioned during fiscal year 2016. The processing plant and offshore infrastructure are certified to ISO 14001 and OHSAS 18001 standards.

Production from the CB/OS-2 Field

During fiscal year 2018, the Cambay block produced 10,408 boepd, with an uptime of more than 99%. In the Cambay block, the production increased owing to successful completion of the infill drilling work program.

The following table sets out the net average oil and gas daily production from the CB/0S-2 block for the years ended 31 March 2016, 2017 and 2018, and for the nine months ended 31 December 2017 and 2018.

Particulars Average Daily Production	Units	For the year ended 31 March			Nine Months period ended 31 December	
		2016	2017	2018	2017	2018
Gross Operated.........	Boepd	10,249	9,753	10,408	10,036	17,605
Net Operated...........	Boepd	4,100	3,901	4,163	4,015	7,042
Oil..........................	Bopd	3,538	3,291	3,430	3,252	6,205
Gas.........................	Mmscfd	3.4	3.7	4.4	4.6	5.0

KG-ONN-2003/1, Krishna Godavari Basin (49% participating interest)

The onshore block KG-ONN-2003/1, located in the Krishna Godavari basin in the state of Andhra Pradesh, was awarded in NELP V round to a joint venture between Vedanta Limited — oil and gas business and ONGC. Vedanta Limited — oil and gas business and ONGC entered into a production sharing contract on 23 September 2005 (the "KG-ONN-2003/1 PSC"). Vedanta Limited — oil and gas business has 49% ownership interest in the block. Nagayalanka-1Z was the first discovery in the block. Following this discovery, the joint operation (with ONGC) for the block opted to enter phase-II of the exploration license. The second exploration well, Nagayalanka-SE-1, was drilled which resulted in a light oil discovery in the onshore part of the KG basin.

The Declaration of Commerciality for the two Nagayalanka discoveries (Nagayalanak-1z and Nagayalanka SE-1) was approved at the management committee meeting held in July 2014. Operatorship was then transferred to ONGC as per the KG-ONN-2003/1 PSC. Production from existing well has commenced in first quarter of fiscal year 2019 and a new campaign to drill three development wells commenced in fiscal year 2019.

Exploration

In addition to the Rajasthan, Ravva and Cambay blocks, exploration activity was carried out in the year across other blocks in Vedanta's portfolio. The main basins include the Orange Basin and the Krishna Godavari Basin.

Krishna-Godavari Offshore

KG-OSN-2009/3, Krishna Godavari Basin (operator, 100% participating interest)

The offshore block KG-OSN-2009/3 covers an area of 1,988 square kms and is located in the Krishna Godavari Basin off the coast of the state of Andhra Pradesh. Vedanta Limited — oil and gas business is the operator and holds a 100% interest in the block. Block KG-OSN-2009/3 is a shallow water block with water depths within the block ranging between near shore to 400 meters. The production sharing contract was signed on 30 June 2010 and the petroleum exploration license was granted in August 2010. The block is currently in the initial exploration phase which is extended until 31 January 2019 pursuant to an approval from MoPNG. Application has been submitted for a further extension of 1 year.

Interpretation of the seismic volumes has identified robust drillable prospects and a number of leads over different play types. A two-well exploratory drilling campaign commenced during the first quarter of fiscal year 2019 to establish the potential of the block.

Palar-Pennar

Palar-Pennar Basin (operator, 35% participating interest Relinquished)

The block is located in the Palar Pennar basin, south of the Krishna Godavari basin and north of the Cauvery basin off the east coast of India. Water depths in the block range from a few meters (near shore) to 400 meters at the eastern boundary of the block. The block covers an area of approximately 9,417 square kms. Vedanta Limited — oil and gas business has a 35% ownership interest in the block and are the operator, while the consortium members ONGC and Tata hold interests of 35% and 30%, respectively.

The block was under force majeure since fiscal year 2010 as the location was falling within the prohibited zone notified by government authorities and permission to carry out exploration and petroleum operations in this area was not considered appropriate by the Department of Space, GoI. However, the application for the shift of the restricted boundary has been accepted by government authorities paving the way for further exploration activity. Approval for a special dispensation period in the block was granted for 30 months effective from 1 January 2015 and date of the expiry of Phase-1 completed on 30 June 2017. A three-well exploratory drilling campaign in the frontier block started in February 2017 and was completed on 16 April 2017.

All three commitment wells were drilled, plugged and abandoned as dry wells. The wells targeted different play types, which have been successful in the adjacent Krishna-Godavari and Cauvery Basins. The lack of hydrocarbons in these wells due to absence of source rock in the basin, which was envisaged as the principal risk in pre-drill prognosis, led to the decision on relinquishment of the same. All the formalities relating to the relinquishment were completed during the second quarter of fiscal year 2018.

Mumbai Offshore

Mumbai Offshore Basin (operator, 100% participating interest Relinquished)

This block was awarded under the NELP VIII licensing round and is located in the Mumbai Offshore Basin. The processing of the acquired 2,128 line km of 2D broadband seismic was completed in fiscal year 2015. During fiscal year 2016, regional prospectively analysis was completed, together with interpretation of the newly acquired PSTM processed broadband 2D seismic data. Due to poor prospects and high levels of risk revealed through the analysis, during fiscal year 2017, relinquishment was applied. The first exploration phase expired on 16 April 2016 and all related formalities related to the relinquishment were completed in fiscal year 2018.

South Africa

Block 1 — Orange Basin, South Africa (operating through a subsidiary, 60% participating interest)

Cairn signed a farm-in agreement with PetroSA, the national oil company of South Africa, for the 19,898 square kms off-shore block 1 ("**Block 1**"), located in the Orange Basin in South Africa. Cairn South Africa Proprietary Limited, which is wholly owned by Vedanta Limited through its subsidiaries, holds a 60% participating interest in Block 1 and is the operator.

Following farm-in and assignment of participating interest in the block in early calendar year 2013, Cairn acquired 1,981 square km of 3D seismic data in fiscal year 2014. Additionally, acquisition of 3,000 line km of 2D seismic data was concluded in early March 2014. Both the 3D seismic and 2D seismic surveys were completed without incident and on time to fulfil the work program commitments for the first renewal phase.

A robust inventory of exploration prospects has been identified based on fiscal year 2014 3D seismic survey, which covers the outboard portion of Block 1. The outboard region is interpreted as oil-prone, constituting a play fairway that has not been tested by historical exploration drilling. Cairn along with the joint operation partner has deferred its entry to the second renewal phase awaiting clarity on the proposed regulatory changes and fiscal terms as given in the amendment bill of Mineral and Petroleum Resources Development Act, 2002.

OALP Blocks

Vedanta Limited has been successfully awarded 41 exploration blocks in sedimentary basins throughout India pursuant to the OALP at a total bid cost of $551 million. The OALP is a government-led initiative organised by the Directorate General of Hydrocarbons of GoI. The 41 blocks awarded to Vedanta comprise 33 onshore blocks and 8 offshore blocks.

Vedanta entered into revenue sharing contracts with the GoI to effect the transaction in October 2018. The exploration period shall consist of two phases: (i) the Initial Exploration Phase; and (ii) the Subsequent Exploration Phase. In total, the exploration period will be a duration of six years for all Blocks, subject to any extension granted. The development and production period of each contract will be a maximum of 20 years from the date of grant of the petroleum mining lease following discovery of previously unknown deposits of hydrocarbons and approval of the relevant field development plan, subject to any extension granted. The bid cost of $551 million represents the Company's total committed capital expenditure on the Blocks during the exploration phase. It is expected that this capital expenditure will occur over a period of approximately three to four years.

Distribution, Logistics and Transport

Rajasthan

The MPT has been designed as a centralized hub facility to handle crude oil production from the fields in the Rajasthan block that have been discovered by Cairn. Once crude oil reaches the MPT, generally via the pipeline, it is processed and transported to public-sector customers or private refineries that have purchased it. See "— *Facilities — Mangala Processing Terminal*" for more details.

Cambay

The 82-acre onshore processing facility at Suvali, processes natural gas and crude oil from the Lakshmi and Gauri fields. It has a capacity to process 150 mmscfd of natural gas and 10 kbopd of crude oil and includes a three stage separator oil processing train, four storage tanks of combined capacity of 37,700 bbls as well as 4.8 MW captive power generation capacity. The processing plant and offshore infrastructure are certified to ISO 14001 and OHSAS 18001 standards.

The crude oil produced from Suvali Onshore Terminal is transported via truck tankers approximately 15 km to Adani Hazira Port Private Limited. Thereafter, the crude cargo is sold to coastal refineries via sea tankers.

The processed natural gas is sold through the Gujarat State Petronet Limited pipeline facility to CLP India Private Limited and Gujarat Gas Corporation Limited.

Ravva

Currently, there are eight unmanned offshore platforms and a 225-acre onshore processing facility at Surasaniyanam for processing the natural gas and crude oil produced from the offshore field. The Ravva onshore terminal operates as per the internationally recognised environmental standard (ISO 14001) and the occupational health and safety standard (OHSAS18001). Onshore facility has the capacity to handle 70kbopd of crude oil, 95 mmscfd of natural gas and 110,000 bbls of water injection per day. The terminal also has the capacity to store 1.0 mmbbls of crude oil.

The crude produced from the wells in the Ravva block is sent to the onshore processing terminal via subsea pipelines. The oil is processed and stored in the storage tanks at the terminal. Thereafter, the crude oil is transported to local refineries (nominated by GoI) via 20 inch export line (approximately 16 km long) from the terminal to a ship tanker, which is moored to the single point mooring buoy located in the field. The single point mooring buoy and associated equipment are together termed as tanker mooring and loading facility.

Natural gas from the wells after treatment is transported to buyer's ("GAIL") pipeline.

Sales and marketing

Vedanta Limited's 10 largest customers in the oil and gas business accounted for 100% of its revenue in fiscal years 2016, 2017 and 2018 respectively. Four of Vedanta Limited's customers in the oil and gas business accounted for 87% of its business revenue in fiscal year 2016, 87% in fiscal year 2017 and 89.8% in fiscal year 2018. In fiscal year 2018, Vedanta Limited sold 100% of the oil and gas it produces in the Indian market.

100% of the oil and gas that Vedanta Limited produced in fiscal year 2018 was sold under annual/monthly contracts specifying quantity and price. For Rajasthan and Cambay blocks, crude oil price in fiscal year 2018 was benchmarked to Bonny Light, West African low sulphur crude that is frequently traded in the region, with appropriate adjustments for crude quality. Similarly, for Ravva block, crude oil price in fiscal year 2018 was benchmarked to Tapis and Minas, South Asian crude. The crude oil price benchmarks are based on crude oil sales agreement.

Projects and Developments

The Oil & Gas business has commenced investment in growth projects in order to monetize the resource base. The Oil & Gas business has a rich project portfolio comprising of enhanced oil recovery projects, tight oil, tight gas, satellite field development, facility upgradation, and exploration & appraisal prospects. The Gross Capex being invested is estimated $3.2 billion (Cairn Net at $2.3 billion).

In order to execute the projects, the Vedanta Limited — oil and gas business has devised a model to partner with world class oil field service companies for the end to end integrated execution of its projects. The scope of the project involves end to end turn-key development including exploration and appraisal, reservoir establishment, well construction and surface facilities development. The contracts are being awarded with built in risk-reward mechanism for early execution. The rewards (bonus) over and above the base costs are primarily linked to schedule adherence, reserve accretion and health, safety and environment performance as per the respective contracts for the projects.

Some of Vedanta Limited — oil and gas business's principal projects are set out below:

Enhanced Oil recovery — Polymer in Bhagyam and Aishwariya fields and Alkaline Surfactant Polymer in Mangala, Bhagyam and Aishwarya Fields

The success of the polymer enhanced oil recovery at Mangala is being replicated at Bhagyam and Aishwariya fields to increase recovery rates. Drilling has commenced during the first quarter of fiscal year 2019. The target is to drill 42 wells, of which 32 have been drilled as of December 2018.

In addition, Cairn is commencing a 45 infill wells drilling campaign in the prolific Mangala field to accelerate near term production. The drilling has commenced from the first quarter of fiscal year 2019. As of December 2018, 18 wells have been drilled.

The Alkaline surfactant polymer project at Mangala shall enable incremental recovery from the prolific Mangala field. The pilot project in the Mangala field was successfully tested, which has created opportunities for Cairn to implement the alkaline surfactant polymer project. The project shall entail drilling of wells and developing infrastructure facilities at Mangala processing terminal.

The contract for drilling in the alkaline surfactant polymer project has been awarded, whereas, the contract for facilities is under tendering stage.

Barmer Hill and Satellite field development

The development of Barmer Hill and Satellite fields is a key growth driver for Cairn, with a focus on increasing production through the development of these fields. The Barmer Hill formation can be classified into two major development opportunities namely, Barmer Hill North consisting of oil prone porcellanite rocks and Barmer Hill South consisting of muddy porcellanites.

The Aishwariya Barmer hill is the first tight oil project being monetized. Aishwariya Barmer hill stage I production from seven existing wells commenced during second quarter of fiscal year 2018. Aishwariya Barmer hill stage II consists of drilling and fracking of 39 new wells, new surface facilities including well hook-ups, pipeline augmentation and installation of de-gassing facility. The drilling of wells in Aishwariya Barmer hill has commenced with 10 wells drilled as at December 2018.

Cairn has made overall 38 discoveries in the Rajasthan Block to date In order to monetize the satellite fields, appraisal as well as development activities through global technology partnership has been planned to be executed.

Raageshwari Deep Gas development

Gas development in the Raageshwari Deep Gas field continues to be a strategic priority. The overall production has been ramped up to 65 mmscfd through debottlenecking of facilities.

In order to realize the full potential of the block, contract for the drilling of wells as well as construction of terminal has been awarded and work commenced which is expected to add approximately 90 mmscfd of gas production.

Surface facility upgrade at Mangala Processing Terminal

In order to maximize oil production, Cairn is focusing on increasing liquid handling capacity by 30% at the Mangala processing terminal. A series of measures are being planned to increase the liquid handling and water injection capacities in a phased manner.

KG Offshore Exploration

Two well exploration work program commenced during the fiscal year 2019.

The first well A3-2 was notified as a discovery. Multiple reservoir zones were encountered in the Mesozoic rift formation between the depths of 3351-3944m MDBRT with indications of hydrocarbon during drilling and formation evaluations. Down hole formation tester sampled oil and gas from the zones of interest. The zone from 3610-3715m MDBRT flowed gas to surface during well testing. Further appraisal will be required to assess the potential commerciality of this Mesozoic rift discovery.

The second well H2 has also been notified as oil discovery. Multiple reservoir zones were encountered within the Mesozoic sequence between the depths of 3310m to 4026m with hydrocarbon indications during drilling and down hole logging. The zone from 3403m to 3431m was tested through conventional well testing (Drill Stem Test) and flowed oil to surface. Further appraisal will be required to establish the size and commerciality of the oil discovery in the Mesozoic sequence.

Evaluations are ongoing based on the results of the first well A3-2 and the second well H2 to finalise the forward programme.

Market share and competition

The oil and gas exploration and production industry in India is competitive. Acreages to explore and exploit hydrocarbon resources are put up for bidding by the MoPNG under the Hydrocarbon Exploration and Licensing Policy, for Vedanta Limited. Competition is faced from Indian companies, including ONGC and Reliance Industries Limited, and major integrated and large independent multinational companies. The GoI has launched special bid rounds for small discoveries, thereby further enhancing competition to acquire acreage. The GoI has a major stake in ONGC, which has been awarded the majority of the exploration blocks offered by the GoI in the nine NELP licensing rounds held so far. Many of these competitors have access to financial or other resources substantially in excess of those available to Vedanta Limited and accordingly may be better positioned to acquire and exploit prospects, hire personnel and market production. In addition, many of Vedanta's competitors may be better able to withstand the effect of external changes in industry conditions such as worldwide crude oil and natural gas prices and levels of supply and the application of government regulations, which affect Vedanta's business and which are beyond Vedanta's control.

Vedanta is a significant contributor to India's domestic crude oil production, operating approximately 25% as derived from the provisional data published by Petroleum Planning and Analysis Cell of MoPNG statistics as of 31 March 2018.

Zinc Business

Introduction

Vedanta's fully integrated zinc business in India is owned and operated by HZL, India's leading primary zinc producer with a 78.0% market share by sales volume in India in fiscal year 2018, according to ILZDA.

HZL's fully-integrated zinc operations include five lead-zinc mines, one rock phosphate mine, four hydrometallurgical zinc smelters, two lead smelters, one pyro metallurgical lead-zinc smelter, eight sulphuric acid plants and six captive power plants at the Chanderiya, Dariba and Zawar facilities in the state of Rajasthan, processing and refining facilities for zinc at Haridwar and processing and refining facilities for zinc and lead, as well as a silver refinery at Pantnagar, both located in the State of Uttarakhand in northern India. HZL sources almost all of its concentrate requirements from its mines. HZL's annual production of zinc and lead for year ended 31 March 2018 was 791,461 tonnes and 175,193 tonnes, respectively. Lead metal production 175,193 is inclusive of HSL production, saleable lead is 168,247 MT.

In fiscal year 2018**,** HZL was one of the top five lead mining companies based on production volumes and in the first quartile in terms global cost curve, according to Wood Mackenzie. In addition, HZL's Rampura Agucha mine was the largest zinc mine in the world on a production basis and its Chanderiya hydrometallurgical zinc smelter was the fourth largest smelter on a production basis worldwide, according to Wood Mackenzie.

As of 31 December 2018, Vedanta Limited has a 64.9% ownership interest in HZL, with the remainder owned by the GoI (29.5%) and institutional and public shareholders (5.6%). Vedanta Limited exercised a call option in 2009 to acquire the GoI's remaining ownership interest in HZL although the exercise is subject to dispute and an alternative offer authorised by the Company's shareholders has not yet been accepted by the GoI. Accordingly, the acquisition might not proceed. See "— Litigation — Vedanta Limited has commenced proceedings against the GoI, which has disputed Vedanta Limited's exercise of the call option to purchase its remaining 29.5% ownership interest in HZL."

In recent years, HZL has improved its operating performance by:

- its ability to maintain a high share of concentrate from its Rampura Agucha mine by consistently adding to the capacity of the mine and the concentrator and by also adopting the technique of underground mining, as its open cast is closed;

- commissioned a concentrator at Sindesar Khurd mine of 1.5 mmtpa in 2011 and increased capacity to 2.80 mmtpa in fiscal year 2017; also increased capacity of Sindesar Khurd mine to 4.5 mmtpa in fiscal year 2018;

- commenced ore mining Kayad mine since fiscal year 2013 and has a capacity of 1.2 mmtpa in fiscal year 2018;

- continuing its initiatives to improve operational efficiencies at its existing operations;

- reducing power costs by building on-site captive power plants rather than relying on state power grids;

- reducing the size of its workforce including through voluntary retirement plans;

- increasing productivity and upgrading existing technology; and

- increasing recovery from its residue and waste.

HZL pays royalties to the state government of Rajasthan based on its extraction of lead-zinc ore. The royalty rate is 10% of the LME zinc metal price payable on the zinc metal contained in the concentrate produced and 14.5% of the LME lead metal price payable on the lead metal contained in the concentrate produced. For silver, the royalty rate is 7.0% of the silver London Bullion Market Association price chargeable on silver-metal produced. Since September 2015, the MMDRA Amendment Act provides for a royalty of 30% the base royalty rate to be contributed to the DMF for the benefit of people affected by mining and an additional 2% of the base royalty rate to the NMET. Vedanta also pays royalties in connection with its zinc operations in Namibia at 3% of sale value the product, Ireland and South Africa.

In addition to ongoing exploration activities, HZL has finalised plans for the next phase of development growth, which will involve the sinking of underground shafts and developing underground mines. The plan comprises developing a 3.75 mtpa shaft at Rampura Agucha, expanding the Sindesar Khurd mine from 4.5 mtpa to 6.0 mtpa, expanding the Zawar Group mines from 1.2 mtpa to 4.0 mtpa, expanding the Rajpura Dariba mine from 0.6 mtpa to 1.2 mtpa and developing a new mine at Kayad with capacity of 1.2 mtpa.

Vedanta's Zinc International business comprises assets held by Vedanta Limited, namely (i) Skorpion, which owns the Skorpion mine and refinery in Namibia, (ii) a 74%, (as of 31 December 2018) ownership interest in Black Mountain Mining, which has assets that include the Black Mountain mine and the Gamsberg Deposit, in South Africa and (iii) Lisheen, which owns the Lisheen mine in Ireland, which ceased operations in December 2015 and is in the process of mine closure. Vedanta commenced the closure operation in April 2014 and expects to receive the closure certificate by June 2019.

Principal products

Zinc. HZL produces and sells zinc ingots in all four international standard grades: Special High Grade (99.995%) ("SHG"), High Grade (99.95%) ("HG"), Continuous Galvanising Grade (99.5%) ("CGG") and Prime Western (98.0%) ("PW"). HZL sells most of its zinc ingots to Indian steel producers for steel to improve its durability and also in the export markets. Some of its zinc is also sold to alloy, dry cell battery, die casting and chemical manufacturers. Skorpion produces SHG zinc ingots of LME grade. Skorpion offers the product to customers through one-year contracts and also through spot contracts with market-determined premiums, covering the sale of all zinc ingots produced at the integrated mine and refinery of Skorpion. Black Mountain produces zinc in concentrate which is sold through market priced off-take concentrate sales contracts with international customers and also in the spot market.

Lead. HZL produces and sells lead ingots of 99.99% purity primarily to battery manufacturers and to a small extent to chemical manufacturers. Black Mountain produces lead in concentrate, which is sold through market-priced off-take concentrate sales contracts with international customers and in the spot market.

By-products

Sulphuric acid. HZL sells sulphuric acid to cement manufacturers and other industries.

Silver. HZL produces and sells silver ingots primarily to industrial users, jewellery manufacturers and traders of silver. Black Mountain also produces silver as a by-product.

Copper. Black Mountain produces copper in concentrate as a by-product, which is sold through market-priced off-take concentrate sales contracts with international customers and in the spot market.

Production

The following table sets out Vedanta's total production[1] from its Chanderiya, Debari, Dariba and Vizag facilities for the periods indicated:

		Year Ended 31 March			Nine months ended 31 December	
Facility	**Product**	**2016**	**2017**	**2018**	**2017**	**2018**
		(Tonnes, except for silver which is in m oz)				
Chanderiya:						
ISPI pyrometallurgical lead-zinc smelter.....	Zinc	86,908	83,838	86,424	63,694	16,111
	Lead[2]	21,517	23,121	23,868	14,468	26,198
Hydrometallurgical zinc smelters..........	Zinc	401,562	351,826	410,624	303,759	300,868
AusI[(TM)] lead smelter..	Lead	23,045	23,352	48,583	34,934	36,669
Sulphuric acid plants ..	Sulphuric acid	618,426	545,563	615,409	456,352	408,815
Dariba:						
Hydrometallurgical zinc smelter...........	Zinc	203,704	189,882	217,433	160,822	152,545
Lead smelter	Lead	100,357	92,535	95,796	69,044	82,387
Sulphuric acid plant....	Sulphuric acid	499,222	446,997	512,945	380,585	359,121
Debari:						
Hydrometallurgical zinc smelter...........	Zinc	66,764	46,442	76,979	57,061	52,046
Sulphuric acid plant....	Sulphuric acid	224,675	191,636	275,741	201,357	194,849
Pantnagar Silver Refinery	Silver[3]	13.65	14.55	17.92	12.46	15.68
Skorpion:						
Zinc refinery	Zinc	82,029	85,427	84,215	62,207	44,943
Total.........................	Zinc	840,967	757,415	875,675	647,543	550,402
	Lead	144,919	139,008	168,247	118,446	145,254
	Silver	13.65	14.55	17.92	12.46	15.68
	Sulphuric acid	1,342,323	1,184,196	1,404,095	1,038,284	962,785

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

(2) Excludes lead contained in lead with high content of silver (High Silver lead) produced from the pyrometallurgical lead-zinc smelter for captive use, which was 6,657 tonnes, 5,285 tonnes and 6,946 tonnes in fiscal year 2016, 2017 and 2018, and 5,376 tonnes and 5,131 tonnes for the nine months ended 31 December 2017 and 2018, respectively.

(3) Excludes silver contained in lead with high content of silver (High Silver Lead) produced from pyrometallurgical zinc-lead smelter for captive use which was 1.11 moz, 0.88 moz and 1.17 moz in fiscal years 2016, 2017 and 2018, and 0.91 moz and 0.86 moz for the nine months ended 31 December 2017 and 2018, respectively.

The following table sets out Vedanta's total ore, zinc concentrate and lead concentrate production[1] for the periods indicated:

		Year Ended 31 March			**Nine months ended 31 December**	
Mine (Type of Mine)	**Product**	**2016**	**2017**	**2018**	**2017**	**2018**
		(Tonnes, except for silver which is in m oz)				
Rampura Agucha (Open-pit and Underground)[2]....	Ore mined	5,464,735	5,700,938	3,614,173	3,614,173	3,383,543
	Ore grade — Zinc	11.05%	11.98%	10.13%	10.13%	10.06%
	Lead	1.73%	1.66%	1.51%	1.51%	1.58%
	Recovery — Zinc	88.74%	91.96%	90.74%	90.74%	88.40%
	Lead	60.89%	63.89%	62.79%	62.79%	55.47%
	Zinc concentrate	1,179,362	1,121,463	789,810	789,810	685,619
	Lead concentrate	109,631	92,228	71,659	71,659	71,130
Zawar Group (Underground)......	Ore mined	1,349,850	1,770,000	1,405,969	1,405,969	2,132,165
	Ore grade — Zinc	2.77%	2.73%	2.40%	2.40%	2.41%
	Lead	2.08%	2.12%	2.05%	2.05%	2.03%
	Recovery — Zinc	90.38%	90.24%	80.14%	80.10%	81.21%
	Lead	90.43%	90.54%	77.14%	77.10%	79.61%
	Zinc concentrate		3,441	26,123	26,123	78,955
	Lead concentrate		3,088	17,535	17,535	53,091
	Bulk Concentrate[3]	102,987	113,015	41,697	41,697	0
Sindhesar Khurd (Underground)......	Ore mined	2,969,587	3,664,768	3,248,228	3,248,228	3,905,607
	Ore grade — Zinc	3.90%	3.85%	3.94%	3.73%	3.74%
	Lead	2.16%	2.04%	2.09%	2.00%	2.44%
	Recovery — Zinc	91.00%	90.97%	90.76%	90.66%	90.92
	Lead	88.96%	88.07%	87.80%	87.85%	88.67%
	Zinc concentrate	176,761	230,677	326,890	229,705	244,916
	Lead concentrate	92,611	109,007	146,148	107,265	132,833

Mine (Type of Mine)	Product	Year Ended 31 March 2016	2017	2018	Nine months ended 31 December 2017	2018
		(Tonnes, except for silver which is in m oz)				
Rajpura Dariba (Underground)	Ore mined	668,777	745,534	895,568	606,743	754,219
	Ore grade — Zinc	4.94%	5.17%	4.78%	4.71%	4.91%
	Lead	1.31%	1.19%	1.10%	1.09%	1.15%
	Recovery — Zinc	83.72%	83.84%	83.86%	83.81%	83.77%
	Lead	72.04%	68.98%	68.64%	68.52%	68.05%
	Zinc concentrate	59,054	65,012	76,495	54,252	66,155
	Lead concentrate	15,784	14,851	18,394	13,215	16,138
	Bulk Concentrate(3)	8,941	0	0	0	0
Skorpion (Open-pit) .	Ore mined	1,245,198	1,206,756	537,066	456,083	788,863
	Ore grade — Zinc	7.5%	8.4%	8.2%	8.24%	7.11%
	Recovery — Zinc	85.5%	83.9%	81.2%	83%	78.8%
Lisheen (Underground)	Ore mined	849,618	—	—	—	—
	Ore grade — Zinc	9.5%	—	—	—	—
	— Lead	1.5%	—	—	—	—
	Recovery — Zinc	89.2%	—	—	—	—
	— Lead	68.5%	—	—	—	—
	Zinc concentrate	135,611	—	—	—	—
	Lead concentrate	14,371	—	—	—	—
Black Mountain (Underground)	Ore mined	1,579,633	1,590,600	1,605,892	1,214,299	1,309,601
	Ore grade — Zinc	2.5%	2.5%	2.29%	2.32%	2.35%
	— Lead	2.6%	3.2%	3.37%	3.53%	2.27%
	Recovery — Zinc	75.0%	77.1%	76.4%	79.2%	86.7%
	— Lead	84.6%	86.3%	86.8%	89.7%	84.5%
	Zinc concentrate	59,006	58,005	55,501	21,694	41,349
	Lead concentrate	48,091	59,518	65,381	37,412	40,211
Totals	Ore mined	1,609,794	1,475,157	1,522,524	1,095,461	1,038,039
	Zinc concentrate	280,488	275,604	321,118	229,551	260,312
	Lead concentrate	111,928	113,015	41,697	41,697	0
	Bulk Concentrate(3)	1,609,794	1,475,157	1,522,524	1,095,461	1,038,039

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

(2) Includes mining operations at Kayad mine.

(3) Bulk concentrate is concentrate that contains both zinc and lead.

Ore Reserve base

The following table sets out Vedanta's proved and probable zinc and lead Ore Reserves[(1)] as of 31 March 2018:

	Proved Reserve			Probable Reserve			Total Proved and Probable Reserves		
	Quantity	Zinc Grade	Lead Grade	Quantity	Zinc Grade	Lead Grade	Quantity	Zinc Grade	Lead Grade
	(Million tonnes)	(%)		(Million tonnes)	(%)		(Million tonnes)	(%)	
Rampura Agucha ...	14.2	11.5	1.6	31.7	14.9	2.0	46.0	13.8	1.9
Rajpura Dariba	3.7	5.9	1.6	5.6	4.3	1.7	9.3	4.9	1.7
Zawar Group	3.6	2.6	2.6	6.8	3.2	1.8	10.4	3.0	2.1
Kayad	4.5	5.9	0.8	0.9	4.0	0.6	5.5	5.6	0.8
Sindesar Khurd......	12.8	4.3	3.0	21.8	3.8	3.0	34.6	4.0	3.0
Skorpion	1.1	7.5	—	1.63	11.5	—	2.74	9.9	—
Black Mountain[(2)]..	44.49	6.8	0.5	8.69	5.9	0.5	53.18	6.6	0.5
Total	70.19	33	8.5	45.42	32.7	7.6	115.72	34.0	8.1

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources" for an explanation of the basis of preparation of reserve amounts.

(2) Black Mountain includes Gamsberg reserves.

Description of operations

Smelters and refineries. The following table sets out the total capacities[(1)] as of 31 March 2018 at Vedanta's Chanderiya, Debari, Dariba, Zawar, Pantnagar and Skorpion facilities:

	Capacity				
Facility	**Zinc**	**Lead**	**Silver**	**Sulphuric Acid**	**Power Plant**
			(tpa)		(MW)
Chanderiya[(2)(3)].............................	535,000	85,000	—	859,000	262.5
Debari...	88,000	—	—	387,600	22.2
Dariba[(3)]	220,000	116,000	—	712,000	174.2
Zawar Group	—	—	—	—	86.0
Pantnagar	—	—	600	—	—
Skorpion	150,000	—	—	335,000	—
Total	**973,000**	**185,000**	**518**	**2,293,000**	**509.4**

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

(2) The Haridwar plant refines and processes zinc ingots from zinc cathodes produced in the Chanderiya and Dariba smelters and therefore its production capacity does not increase the total production capacity of HZL's facilities.

(3) The Pantnagar plant refines and processes zinc and lead ingots from zinc and lead cathodes that are produced in the Chanderiya and Dariba smelters and silver ingots from lead residues in the Dariba lead smelter. Accordingly, it does not contribute to the total production capacity of HZL's facilities.

Chanderiya. The Chanderiya facility is located approximately 120 km east of Udaipur in the State of Rajasthan in northwest India. The Chanderiya zinc smelter is the third largest smelter on a production basis worldwide in 2018, according to Wood Mackenzie. The facility contains four smelters, two associated captive power plants, three sulphuric acid plants and one silver refinery:

- I ISP(TM) pyrometallurgical lead-zinc smelter with a capacity of 105,000 tpa of zinc ingots and 35,000 tpa of lead ingots that was commissioned in 1991;

- Two hydrometallurgical zinc smelters with 430,000 tpa capacity that were commissioned in May 2005 and December 2007 and expanded in April 2008 together with associated captive power plants;

- I Ausmelt(TM) lead smelter with a capacity of 50,000 tpa that was commissioned in February 2006;

- Associated 154 MW and 80 MW coal-based thermal captive power plants commissioned in May 2005 and April 2008, respectively;

- A 14.8 MW captive power plant which was commissioned at Debari in March 2003 and transferred from Debari to Chanderiya in March 2009;

- Three sulphuric acid plants with a total capacity of 859,000 tpa sulphuric acid; and

- A silver refinery with a capacity of 168 tpa silver ingots.

The 154 MW, 80 MW and 14.8 MW captive power plants provide all of the power for the Chanderiya facilities. The captive power plant requires approximately 100,000 metric tonnes of coal per month, which is currently met through imports, mostly from Indonesia.

HZL was also awarded 1.16 million tonnes of coal linkage by the Ministry of Coal, which will enable it to source coal from mines of Coal India Limited ("Coal India") (catering to approximately four months of its total coal requirements), although access to this coal has been stopped since April 2013. HZL's operations source their back-up power from imported coal with own captive power plants or import from local power companies.

Debari. The Debari hydrometallurgical zinc smelter is located approximately 12 km east of Udaipur in the State of Rajasthan, India. The hydrometallurgical zinc smelter was commissioned in 1968, uses RLE technology and has a capacity of 88,000 tpa. The Debari facility also includes a 387,600 tpa sulphuric acid plant. A majority of the power requirements of the facility is sourced from the coal-based thermal captive power plant at Chanderiya and the balance is sourced from an on-site liquid fuel-based 14.8 MW captive power plant commissioned in March 2003. The liquid fuel is procured from domestic oil-producing companies through a tender process for a yearly contract.

Vaizag. Operations at the Vaizag plant shut down since July 2013.

Haridwar. The 210,000 tpa zinc ingot melting and casting plant in Haridwar in the State of Uttarakhand was commissioned in July 2008. This plant refines and processes zinc ingots from zinc cathodes produced in the Chanderiya and Dariba smelters and therefore its production capacity does not increase the total production capacity of HZL's facilities. After the start of the second stream, the capacity of Haridwar Zinc Plant is 288,000 tpa. The plant is no longer in operation. However, limited operations were conducted at the plant from July 2017 to March 2019.

Zawar Group. The Zawar Group facility does not have a smelter. The captive power plant at this facility provides power to the mine.

Dariba. The Dariba hydrometallurgical zinc smelter is located in the Rajsamand district of Rajasthan which was commissioned in March 2010 and has a capacity of 220,000 tpa. The Dariba facility also includes a 306,000 tpa sulphuric acid plant. A new lead smelter was commissioned in July 2011 and has a capacity of 116,000 tpa, which also included a 98,500 tpa sulphuric acid plant. A majority of the power requirements of the facility is sourced from the 160 MW coal-based captive power plant at Dariba. A new roaster was commissioned in April 2013 in the Dariba facility with an associated sulphuric acid plant capacity of 306,000 tpa. Total sulphuric acid production capacity is 710,500 MT. Zinc cathodes are sent to its refining facilities at Pantnagar in Uttarakhand state for finishing and casting. The anode slime obtained as a residue from lead smelting at this smelter is refined and casted into silver ingots at the Pantnagar plant.

Pantnagar. The Pantnagar plant, which is located in Pantnagar in the State Uttarakhand, India, includes facilities for the refining and processing of zinc, lead and silver. The silver refinery has a capacity of 600 tpa and was commissioned in December 2011. The 465,000 tpa zinc ingot and 100,000 tpa lead ingot melting and casting plant were commissioned in March 2012. This plant was established to convert zinc and lead cathodes from the Chanderiya and Dariba hydrometallurgical smelters, as well as silver-rich lead residues from the Dariba lead smelter, into ingots.

Skorpion. The Skorpion mine and refinery are located 25 kms of Rosh Pinah town in Namibia. The Skorpion mine is an open cast oxide deposit mine, which feeds material directly to the refinery. The refinery uses a leaching process due to the oxide feed from the mine. Metal is casted in the electro wining-circuit as ingots or otherwise according to customer requirement. The Skorpion refinery runs on oxide feed.

Mines

Rampura Agucha. The Rampura Agucha lead-zinc mine is located near Gulabpura in the north-west State of Rajasthan. The good ore mineralogy of the mine provides a high metal recovery ratio and a low overall cost of production for zinc concentrate extracted from the mine. The mining and processing facilities are modern and in good condition. The ore body has been mined by open-pit and underground methods. The operation of the open-pit was closed in fiscal year 2018. The capacity of the mine and concentrator was expanded between 2003 and 2010 from 2.4 million tpa to 6.2 million tpa for mine and 6.5 million tpa for mill through the purchase of additional mining equipment, upgrades to the truck fleet, improvements to the operational efficiency of the plant and the installation of a new semi-autogenous, or SAG, mill and ball mill circuit.

The processing facility is a conventional crushing, milling and differential lead-zinc floatation plant. Ore from the open-pit is crushed in a series of crushing circuits and then milled in four streams, one rod mill-ball and three other sag mill-balls in closed circuit. The milled ore is then sent to the lead flotation circuit which includes roughing, scavenging and three stages of cleaning. The lead concentrates are thickened and filtered ahead of storage and transport to the Chanderiya and Dariba lead smelter. The lead flotation tails proceed to zinc flotation which comprises roughing, scavenging and four stages of cleaning. Zinc concentrates are thickened and filtered ahead of storage and transported to different HZL zinc smelters. Zinc flotation tails are thickened ahead of disposal to the tailings dam.

Since 2004, exploration at Rampura Agucha has resulted in significant increases in the reserves at the mine. Following an extensive drilling programme to convert mineralised material to reserves, better definition of the ore body boundaries, addition of mineralised material and the conduct of open-pit re-optimisation, as well as the commencement of underground mine project work, the reserves were 46.0 million tonnes as of 31 March 2018 with an average grade of 13.8% zinc and 1.9% lead in ore. The drill spacing for the definition of proven reserves were approximately 50 metres by 50 metres while for probable reserves was 100 metres by 100 metres. HZL commenced production at the mine in 1991. Since inception, approximately 79.2 million tonnes of ore, with an ore grade of 12.5% zinc and 1.84% lead, respectively, have been extracted from the open-pit mine. HZL is continuing to evaluate the potential of this deeper mineralization. As of 31 March 2018, HZL estimates the remaining mine life at Rampura Agucha to be 12 years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan.

In fiscal year 2018, 3.84 million tonnes of ore at 11.4% zinc and 1.6% lead were mined from Rampura Agucha, which produced approximately 862,313 million tonnes of zinc concentrate at 50.11% zinc and 66,048 tonnes of lead concentrate at 57.41% lead. Approximately 15.46 million tonnes of waste was removed giving a strip ratio of 7.77 tonnes of waste per tonne of ore mined. The expansion of the mine from 5 mmtpa to 6.2 mmtpa was completed in 2010 and has resulted in a significant increase in the strip ratio as there was dimensional change in the pit with the ultimate depth of the mine increasing to 421 metres. During fiscal year 2018, approximately 89.82% of the zinc was recovered to the zinc concentrate, while 60.37% of the lead and 72.14% of the silver was recovered from the metal contained in the ore mined. The Rampura Agucha mine has transitioned from open pit to underground mine production, with the underground project picking up pace after a slower than planned ramp up due to difficult geotechnical conditions.

The gross book value of the Rampura Agucha mine's fixed assets and mining equipment (including assets related to the Rampura Agucha's underground mining operations and the Kayad mine) was ₹53,261 million as of 31 March 2018. The mining lease of Rampura Agucha mine is up to March 2030. Power is mainly supplied from the HZL's captive thermal power plants with two backup 5 MW generators on-site.

Rajpura Dariba. Rajpura Dariba is a medium sized underground lead-zinc mine and processing facility located northeast of Udaipur in the Rajsamand district in the state of Rajasthan, northwest India.

Mining at Rajpura Dariba commenced in 1983 and is carried out using the vertical crater retreat method and blasting hole mining method with mined out stopes backfilled with cemented classified mill tailings. In certain areas the ground conditions adversely affect slope stability and dilution. These ground conditions are the result of the weak graphitic nature of the shear zone combined with the dissolution of fractured and sheared dolomites by percolating acidic groundwater derived for overlying adjacent oxidized zones. HZL's Rajpura Dariba's mine lease is valid until May 2030. The mine is serviced by two vertical shafts approximately 600 meters deep. The main shaft is 6 meters in diameter and the auxiliary shaft is 4.5 meters in diameter. The main shaft has the capacity to hoist 0.7 million tpa of ore and is equipped with a modern multi-rope koepe winder. All personnel and materials are hoisted in a large counterbalanced cage which is operated by the koepe winder. The surface infrastructure includes ventilation fans, compressors and ore loading facilities. A 2.2 km surface decline was commissioned in September 2013 to increase the ore production.

The ore is crushed underground before being hoisted to the surface. It is then crushed again and milled before undergoing a lead flotation process incorporating roughing, scavenging and includes three stages of cleaning of rougher concentrate to get final lead concentrate. Lead flotation tails are sent to the zinc flotation process which incorporates roughing, scavenging and includes three stages of cleaning of rougher concentrate to get final Zinc concentrate. In one flotation the Zinc rougher concentrate is being cleaned in column flotation cells. Then Zinc flotation tails proceed to a backfill plant where final trains are cycloned with the underflow proceeding to intermediate storage where cement is added in preparation for use as underground fill. The cyclone overflow is thickened to recover water ahead of disposal in the tailings dam. The final lead and zinc concentrates are thickened, filtered and stored before they are sent to HZL's smelters.

Power for the mine is supplied largely from HZL's 160 MW captive power plants at Dariba and through a contract with a state-owned entity.

The gross book value of the Rajpura Dariba mine's fixed assets and mining equipment is approximately ₹5,352 million ($82.3 million) as of 31 March 2018.

The proven and probable ore reserves for the Rajpura Dariba mine as of 31 March 2018 was 9.3 million tonnes with 4.9% zinc and 1.7% lead. As of 31 March 2018, HZL estimates the remaining mine life at Rajpura Dariba to be around eight years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan which includes assumed production expansion. An exploration program is also underway to identify new resources with the potential to be upgraded to reserves, and has been and continues to be focused on maintaining the reserve position after annual mining depletion. The drill spacing for proved reserves was approximately 30 meters while for probable reserves was less than 60 meters.

The average grade for each individual stope was defined using standard parameters for internal waste and dilution and a geological cut-off grade of 3.0% combined lead and zinc, though the mineralization generally has a sharp natural contact. The in-situ quantities and qualities were adjusted by applying a mining loss factor of 10.0%, a dilution factor of between 12.0% and 20.0% depending on ground conditions. These parameters are based on a reconciliation of historical production. Stopes with average grades below this economic cut-off grade were excluded from the reserve estimate. The final reserve estimate is the sum of the stopes with an average grade above the economic cut-off limit. As the stopes are all accessed using the existing infrastructure and as there is sufficient capacity on the tailings dam, the capital expenditure was limited to the replacement of mining equipment and was therefore considered not to have a material impact on the cut-off grade.

In fiscal year 2018, 0.90 million tonnes of ore at a grade of 4.78% zinc and 1.1% lead ore was mined at Rajpura Dariba mine which produced 76,495 tonnes of zinc concentrate at 48.68% zinc, 18,393 tonnes of lead concentrate at 38.60% lead and 1,269 grams per tonnes of silver, with 83.86% of the zinc being recovered in the zinc concentrate and 68.64% of the lead and 68.88% of the silver.

Sindesar Khurd. The Sindesar Khurd mine is a large scale underground mine deposit that was explored during 1992 to 1995. Mine production began at the Sindesar Khurd mine in April 2006 and HZL's mining permit is valid until March 2029. The Sindesar Khurd mine lies on the same geological belt as the Rajpura Dariba mine. The mine is approachable from Rajpura Dariba mines by road.

The mineralization has been traced over almost 2.5 kilometers along strike and 1.3 kilometre vertical extension. In the mine area, dip is steep westerly, while the dip turns into easterly direction in the lower-southern part of the deposit. The current mine block extends over 1,500 meters along strike and up to 420 meters depth extension.

The deposit has been drilled to a depth of approximately 1,300 meters below surface and the ore body is traced over approximately 2 kilometers along the strike with a 1,100 meters vertical extension. While the deposit is still open in depth in the southern extension of the present mine block, the area below the mine block and towards the north extension only has narrow and low to moderate grade mineralization intersected.

Exploration at the south part of Sindesar Khurd has been continuing since March 2005 with a drilling program aimed at increasing the size of the ore body. A continuous exploration program from underground is also underway with the aim to upgrade the reserve status so that the stopes planned to be mined out shall be extracted with maximum recovery and thereby reducing mining losses. The drill spacing for proven reserves was 12.5-25 meters while for probable reserves was less than 25-50 meters.

The proven and probable ore reserves for the Sindesar Khurd mine as of 31 March 2018 is 34.6 million tonnes with 4.0% zinc and 3.0% lead. The in-situ quantities are adjusted by applying a mining loss factor of 5.0% and dilution factor of 12.0%.

Sindesar Khurd Mine ("SKM") is a world-class silver rich mine with state-of-the-art infrastructure and best-in class mechanisation. The mine produced 250 kt in fiscal year 2018. As a result of on-going volume ramp-up and higher recoveries, the mine has achieved a production of 4.5 million MT of ore during the fiscal year 2018,

SKM started operations in 2006 and has seen several phases of expansions from 0.3 million MT to its current capacity of 4.5 million MT of ore, making it the largest underground mine in India. SKM consists of multiple standalone deposits, or auxiliary lenses leading to three standalone production centres at present. SKM's expansion has significantly contributed to the Company's integrated lead and silver production.

The management system of SKM comprises of Quality System ISO 9001:2008, Environmental System ISO 14001:2004 and Occupational Health, Safety Management System OHSAS 18001:2007, SA 8000:2008 and 5S Certifications.

The gross book value at this mine is approximately ₹19,662 million ($302.3 million) as of 31 March 2018.

As of 31 March 2018, HZL estimates the remaining mine life at Sindesar Khurd to be around eight years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan which includes assumed production expansion. Power for the mill and the mine is supplied from HZL's captive power plant located at Dariba itself.

In fiscal year 2018, 4.50 mt of ore at a grade of 3.94% zinc and 2.09% lead ore was mined at Sindesar Khurd mine which produced 326,890 tonnes of zinc concentrate at 49.80% zinc, 146,148 tonnes of lead concentrate at 57.4% lead and 2,850 grams per tonnes of silver, with 90.76% of the zinc being recovered in the zinc concentrate and 87.80% of the lead and 90.71% of the silver.

Zawar Group. Zawar consists of four mines namely, Mochia, Balaria, Zawar Mala and Baroi. The deposit is located near Udaipur city, in Rajasthan in northwest India. The deposits lie within a 36.2 square kilometers mining lease granted by the state government of Rajasthan which is valid until 31 March 2030.

Ore processing is carried out in a conventional comminution and flotation plant having facility for "differential" as well as "bulk flotation" of zinc and lead metals. The ore is crushed primarily underground and then hoisted to the surface. Thereafter, the ore is crushed to 12 to 15mm in size before being milled to 74 microns. In the differential flotation process, milled ore is conveyed separately to two lead flotation circuits and undergoes a process incorporating roughing, scavenging and cleaning. Lead flotation tails proceed to two zinc flotation circuits comprising roughing, scavenging and cleaning. Zinc flotation tails are disposed in slurry form in designated tailings disposal area. Lead and zinc concentrates are thickened, filtered and then stored before they are sent to HZL's smelters. In the bulk flotation process, milled ore is conveyed to the flotation circuit and undergoes a process incorporating roughing, scavenging and cleaning. Final bulk concentrate is thickened, filtered and then stored before it is sent to the lead zinc smelter at Chanderiya. Bulk flotation tails are disposed in slurry form in designated tailings disposal areas.

Ore production capacity at Zawar Mines is expected to progressively increase to 4.8 million MT per annum by fiscal year 2021 and the vision is 8.0 million MT per annum based on reserves and resources potential. On completion of the ongoing expansion, Zawar Mines will become a significant contributor to the Company's output.

During the year, production capacity was ramped-up to 2.18 million MT annual rate respectively with production commencing via the large declines at Mochia and Baroi using 60 MT LPDTs.

In fiscal year 2018, approximately 2.18 million tonnes of ore at 2.48% zinc and 1.99% lead was mined which produced 113,015 tonnes of bulk concentrate at 32.5% zinc and 25.0% lead. The recovery of zinc and lead during fiscal year 2018 was 78.61% and 75.13%, respectively.

The gross book value of the Zawar fixed assets and mining equipment was approximately ₹9,801 million ($150.7 million) as of 31 March 2018 and of the 80 MW coal-based thermal captive power plant at Zawar was ₹3,245 million ($49.9 million).

Power is supplied through a combination of an 80 MW thermal coal-based captive power plant commissioned in December 2008 and a 6 MW captive power plant.

As of 31 March 2018, HZL estimates the remaining mine life of the Zawar mine to be five years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan which includes assumed production expansion. The focus of mine exploration at Zawar is to replenish the ore reserves that are being depleted through exploration activities and to look for new mineralized areas to enhance production capacity. A surface drilling program is underway to locate deeper resources below -100 meter reduce level up to 500 meter reduce level. Underground exploratory drilling is carried out on a grid of between 25 meters and 30 meters which is then infilled to 12.5 meters/15 meters after completing the development for final delineation of ore bodies. Past exploration has outlined additional in-mine mineral resources which require further delineation to add to reserves and further extend the mine life.

The proven and probable reserves for the Zawar Group as of 31 March 2018 is 10.4 million tonnes with 3.0% zinc and 2.1% lead.

Kayad. The Kayad lead-zinc mine is located in Ajmer, in the state of Rajasthan.

The Kayad lead-zinc deposit was initially prospected by Airborne Mineral Survey and Exploration wing of Geological Survey of India and drilling commenced in August 1988 and was completed in December 1991. Mineral Exploration Corporation Limited worked on the project on promotional basis, started the exploration and a total of 9,585 meters of drilling was achieved in 42 completed bore holes between 1994 and 1997. The detailed exploration of Kayad deposit was commenced by HZL in 1999 and continues as of today with a total of 178 kilometers in 1,132 drill holes. According to the reserve report, the proven and probable reserves for Kayad mine as of 31 March 2018 was 5.5 million tonnes at 5.6% zinc and 0.8% lead. As of 31 March 2018, HZL estimates the remaining mine life of the Kayad mine to be over 5 years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan which includes assumed production expansion.

The ground breaking of the mine commenced on 11 June 2011. The access is through a decline which then divides into two declines at 420 meter reduce level. Development ore production was achieved in the second quarter of fiscal year 2013, and the mine started operations in fiscal year 2014. The mining method practiced in Kayad is long hole open stopping with cemented rock filling/rock filling in the steeper portions of the deposit; while transverse stopping method at flat portion along with rock filling/cemented rock filling. The mining is highly mechanized with twin boom jumbo drills used for face drilling, rock bolting machines used for support and 10 T and 17 T diesel load haul dump vehicles coupled with 30 T/50 T low profile dump trucks for loading and hauling. For production drilling Simba Drills are being used. The run of mine is stacked in the surface ore stock pile and transported by trucks to the Rampura Agucha mine for beneficiation.

A mine lease of 480.45 hectares was granted to Kayad mine by the state of Rajasthan and is valid until February 2048, subject to further renewal. Surface land rights over 49.8 hectares have been obtained. Mine plan approval from the Indian Bureau of Mines have been obtained and received environmental clearance from the MoEF for an increase in lead zinc ore production capacity from 0.35 million tonnes per annum to 1.0 million tonnes per annum. Consents under various environmental laws to operate the mine, including from the Rajasthan State Pollution Control Board have also been obtained.

A 33 KV power line was commissioned on 2 February 2012 to meet the constructional power requirements of the mine. Currently, most of the power is being taken from captive power plant, Zawar and some power is taken from state grid. A one megavolt amperes diesel generator is kept as a backup power supply for emergency operations in the event of power failure. For proper power distribution 2 megavolt amperes underground substation is commissioned in North and south section each.

Principal raw materials

The principal inputs of HZL's zinc smelting business are zinc and lead concentrates and power. HZL has in the past been able to secure an adequate supply of the principal inputs for its business.

Zinc and lead concentrates: Zinc and lead concentrates are the principal raw material of HZL's smelters. HZL's lead-zinc mines have provided nearly all of its requirements for zinc and lead concentrates in the past. Vedanta expect HZL's mines to continue to provide nearly all of its zinc and lead concentrate requirements for the foreseeable future.

Power: Most of HZL's operations are powered by the coal-based captive power plants at Chanderiya, Dariba and Zawar. HZL imports the required thermal coal from a number of third party suppliers and part of the requirement is sourced by way of linkage with South Eastern Coalfields Ltd ("SECL"), Western Coalfields Ltd ("WCL"), which are subsidiary of Coal India Ltd. HZL was awarded 2.43 million tonnes of coal linkage by Ministry of Coal. However, due to limited coal availability, Coal India has been supplying only 50.0% of the 2.4 million tonnes linkage quantity. As of April 2013, the coal supplies to Chanderiya have stopped due to pending decision at Ministry of Coal on the linkages for plants which have been allocated coal blocks. In February 2014 the coal block allocated to the Chanderiya lead zinc smelter captive power plant was deallocated by the Ministry of Coal. As in January 2016 the coal supplies to Dariba captive power plant has stopped due the expiry of the existing fuel supply agreement and further renewal of fuel supply agreement has not been sanctioned by South Eastern Coalfields Limited as of 31 March 2017. HZL has entered new FSA in September 2017 with SECL and WCL for CLZS and Dariba CPP with Zawar CPP FSA is valid till May 2019 and the linkage quantity for Zawar FSA has been restricted to 50% of 0.22 million tonnes. Realisation of linkage coal is around 7% if HZL annual requirement and HZL is sourcing coal not supplied by (CIL) (SECL, WCL) and balance coal requirements via import of coal from various countries which is currently priced higher than linkage coal on a landed basis.

HZL's remaining operations source their required power from liquid fuel-based captive power plants or from local power companies. The liquid fuel is sourced from third party suppliers on yearly contracts.

Metallurgical coke: In addition, HZL's pyrometallurgical smelter at Chanderiya requires metallurgical coke that is used in the smelting process. HZL currently sources its metallurgical coke requirements from third parties under long-term contracts and the open market.

Distribution, logistics and transport

Zinc and lead concentrates from HZL's lead-zinc mines are transported to the Chanderiya and Debari smelters by road. Zinc and lead ingots, silver and sulphuric acid by-products are transported primarily by road to customers in India directly or via HZL's depots. Zinc and lead cathodes are mostly transported by rail to its processing and refining facilities in Uttarakhand state in northern India. Zinc and lead ingots are transported for exports to ports in India primarily by rail, from where they are loaded on ships. The facilities in Uttarakhand also serve as finished goods centre for nationwide distribution of its finished products.

Zinc at the Skorpion mine is cast into ingots for export and transported from the refinery to the port of Luderitz, approximately 300 km away by trucks each having a maximum capacity of 35 tonnes.

Zinc concentrate, lead concentrate and copper concentrate from the Black Mountain mine is hauled by road to a dedicated railway siding along a 170 km gravel road, which is owned by the provincial authorities but maintained by Blahad ck Mountain Mining. The concentrate is then transported by train to Saldanha on the Sishen-Saldanha railway with delivery terms to export customers on a cost, insurance and freight basis.

Sales and marketing

HZL's 10 largest customers accounted for 36.5%, 34.0% and 32.6% of its revenue in fiscal years 2016, 2017 and 2018 respectively. No customer accounted for greater than 10.0% of HZL's zinc business revenue in fiscal years 2016, 2017 and 2018.

HZL's marketing office is located in Mumbai, and it has field sales and marketing offices in most major metropolitan centres in India. In fiscal year 2018, HZL sold approximately 68% of the zinc and lead metal it produces in the Indian market and exported approximately 32% of Vedanta's zinc India segment revenue.

In fiscal year 2018, HZL sold approximately 98% of the zinc metal in the domestic market and exported approximately 75% under annual contracts specifying quantity, grade and price, with the remainder sold on the spot market. The contract sales price is linked to prevailing LME price with an additional physical market premium. Thus, the price that HZL receives for its zinc is dependent upon, and subject to fluctuations in the LME price.

Skorpion's 10 largest customers accounted for approximately 79.9%, 99.0% and 94.4% of its revenue in fiscal years 2016, 2017 and 2018 respectively. Three of Skorpion's customers accounted for approximately 64%, 86% and 75% of Skorpion's revenue in fiscal years 2016, 2017 and 2018. Skorpion's marketing office is located in Rosh Pinah. Most of the zinc metal that Skorpion produced in fiscal year 2018 was sold under spot or short-term contracts. About 13.9% of the metal produced is sold in the Southern African Customs Union market and balance is sold to other regions. The contract sales price is linked to prevailing LME price with an additional market premium. Thus, the price that Skorpion receives for its zinc is dependent upon and is subject to fluctuations in the LME price.

BMM produces zinc, lead and copper concentrates that are sold in international markets on a spot basis or a frame contract basis. The commercial terms negotiated include taking into account the percentage of payable metals, treatment and refining charges and applicable prices. Some of the customers of Black Mountain mine are Cliveden Trading AG, Ocean Partners UK Limited, Louis Dreyfus Company Metals Suisse SA and Trafigura PTE Limited. All the zinc and lead metal that BMM produced in fiscal year 2018 was sold under frame or spot contracts specifying quantity, grade and price. The contract sales price is linked to the prevailing LME price with an additional market premium. Thus, the price that BMM receives for its zinc and lead is dependent upon and is subject to fluctuations in the LME price.

Projects and developments

HZL has been actively conducting exploration, which has resulted in net ore reserves of 105.6 million tonnes across all mines in fiscal year 2018. Based on long-term evaluation of assets and in consultation with mining experts, Vedanta has finalized the next phase of growth, which will involve sinking of underground shafts and developing underground mines. The plan comprises developing a 4.5 mmtpa underground mine at Rampura Agucha mine and expanding the Sindesar Khurd mine from 4.5 mmtpa to 6.00 mmtpa, Zawar mines from 1.2 mmtpa to 4.50 mmtpa, Rajpura Dariba mine from 0.9 mmtpa to 1.5 mmtpa and Kayad mine 1.2 mmtpa. The growth plan will increase mined metal (MIC) production capacity to 1.2 mmtpa. The estimated cost for these projects amounts to ₹122,100 million ($1877.3 million). HZL spent ₹117,180 million ($264.14 million) on these projects in fiscal year 2018. These projects are financed from internal sources.

Gamsberg Project

The Gamsberg ore body is a large undeveloped zinc deposit situated approximately 22 kms from Black Mountain. The Gamsberg Project was officially approved by the Company's Board in November 2014. In April 2015, the project schedule was revised after optimizing the mining cost. The mining and milling capital costs were reduced primarily due to engineering improvements and negotiations. The total expected project cost will be within the approved amount of approximately $400 million.

In Mining, project to date ore mined is 1.3 million tons with a grade Zn 5.54%, Mn 2.71%. A mining production rate of 4 — 4.5 million tons per month of overall rock mining is consistently being achieved.

In plant and infrastructure, the plant started operations and first filter output was achieved on 30 September 2018. As of 31 December 2018, a total of 3,018 tons of zinc MIC was produced, of which 2,056 tons were dispatched as first contracted shipment to Korea Zinc in December 2018. Most of the project construction manpower was demobilised by the end of the third quarter of fiscal year 2019 and full operation team has been mobilised.

Market share and competition

HZL is the only integrated zinc producer in India and had a market share by sales volume of the Indian zinc market of 78.0% in fiscal year 2018, according to ILZDA. Imports accounted for the remaining 22.0% market share, according to ILZDA. Zinc is a commodity product and HZL competes primarily on the basis of price, time of delivery and location. Zinc metal also faces competition as a result of substitution of materials, including aluminium, stainless steel and other alloys, plastics and other materials being substituted for galvanized steel and epoxies, paints and other chemicals being used to treat steel in place of galvanization in the construction market.

HZL is the only primary lead producer in India, with competition coming from imports which provide a substantial majority of the lead consumed in India. Lead is a commodity product and HZL competes primarily on the basis of price, time of delivery and location.

Skorpion. The Skorpion mine and refinery is located in the Karas region of southern Namibia, comprising an open pit mine. As of 31 March 2018, the remaining mine life of the Skorpion mine is approximately 2.5 years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan, which includes assumed production expansion. The Skorpion mine has an attached electrolytic refinery producing approximately 150,000 tonnes of SHG zinc ingots annually. Further opportunities to extend the life of the mine are currently being evaluated based on the sulphide ore bodies in the nearby areas. Skorpion is also working towards expanding the refinery from stand-alone oxide ore treatment to sulphide ore treatment also.

The Skorpion mine produces only high-grade, high purity SHG zinc ingots that are registered on the LME. Exploration of nearby ore bodies is underway to extend the life of mine beyond 2021.

The mineral rights over the Skorpion zinc deposit are currently held under mining licence ML 108 and exclusive prospective licence 2229. The EPL was originally issued by the Government of Namibia to Erongo Mining and Exploration Company, which covered 33,192 hectares. An extension to the south was subsequently granted, which increased the exclusive prospective licence area to 98,683 hectares. Mining licence number 108 of July 2000 is valid for 25 years up to July 2025. The licence covers 951 hectares and includes the site for the refinery. Skorpion is also the holder of another mining licence covering the limestone mining area, ML 127, which is valid until February 2026.

The Skorpion deposit lies within the volcano sedimentary rocks of the late Proterozoic Port Nolloth zone of the pan-African Gariep Belt. The ore body consists of secondary oxide zinc mineralisation, including silicates, clays and carbonates. It is covered by a 10 to 20 km thick layer of sand, calcrete, boulder beds and silcrete and is hosted by weakly metamorphosed, quartz-rich clastic sediments. Commonly, mineralisation occurs in the lower portion of the sedimentary package immediately overlaying a unit of impure limestone and calcareous sandstone. A steep dipping zone of sheared sericite schist cuts through the ore and the surrounding host rocks, roughly following the long axis of the mineralised body. Quartz sericite schist, believed to be a weathered product of a felsic volcanic unit, occurs in the north eastern portion of the open pit. Towards the west, black shale, amphibolite and quartz biotite schist underlies the body. Down hole geophysical logging indicates that the water table lies at about 175 metres below the surface.

Although the geology of the deposit is complex and the ore, limestone and arkose interface requires careful separation, the mine has managed this with accurate grade control and selective mining.

The processing at the Skorpion mine is unique, using solvent-extraction/electrowinning from zinc oxide ore. In this process, mined ore is crushed, homogenised and milled before acid leaching in agitated tanks at the refinery. Clarified liquor is purified by solvent extraction and zinc is electrolytically plated on to aluminium cathodes. Zinc is periodically stripped from these cathodes before being melted and cast as ingots for export.

Zinc at the Skorpion mine is cast into ingots for export and transported from the refinery to the port of Luderitz, approximately 300 km away, by trucks each having a maximum capacity of 35 tonnes.

The maximum power demand of the Skorpion mine is 85 MW and power is supplied by Namibia Power Corporation (Proprietary) Limited which in turn procures power from South Africa's Eskom Holdings Limited. The contract between Skorpion and Namibia Power Corporation is fixed price contract that currently links the annual increases in power costs to NERSA (National Energy Regulator of South Africa) approved increases.

During the year ended 31 March 2018, 0.5 million tonnes of ore at 8.2% zinc were mined from the Skorpion mine, which produced approximately 84,215 tonnes of zinc metal.

Lisheen. The Lisheen mine is located in County Tipperary, Republic of Ireland and when operational consisted of an underground mine, concentrator and backfill plant, with a related capacity of approximately 131,000 tonnes of zinc in concentrate annually. The Lisheen mine also included approximately 19,000 tonnes of lead in concentrate annually. Mining and milling activities ceased in December 2015 and the facility is currently in the process of implementing a mine closure plan in conjunction with the statutory authorities. Management is actively exploring further business opportunities and ways to utilise the existing resources and skills at Lisheen following the cessation of normal mining activities and a task force has been established to facilitate this.

Mining activities at the Lisheen mine ceased in December 2015. Closure operations commenced in April 2014 and are expected to be complete by June 2019. Vedanta expects to procure the required mine closure certificate in June 2019. After successfully closing down the mine, Vedanta will continue to provide care and maintenance for 30 years as required under Irish law.

Black Mountain. The zinc mine at Black Mountain is an underground operation, mining a polymetallic ore body, with an attached concentrator producing zinc, lead, copper and silver in concentrate, annually. Exxaro Resources (through its wholly owned subsidiary, Exxaro Base Metals) holds the remaining 26.0% interest in Black Mountain.

The Black Mountain mine is operated pursuant to mining right 58/2008 MR granted pursuant to the Mineral and Petroleum Resources Development Act, 28 of 2002 of South Africa which entitles Black Mountain Mining to mine for lead, copper, zinc and associated minerals in, on and under an area in the district of Namaqualand measuring 24,195 hectares for a period of 30 years from 2008 to 2038.

Four major stratiform exhalative sediment hosted base metal deposits are located in a 10 by 30 km area, centred on Aggeneys. The deposits are situated in the supracrustal rocks of the mid-Proterozoic age Bushmanland group of the Namaqualand metamorphic complex. The deeps ore body, which is currently being mined, is considered to start at 166 metres above mean sea level, with a down plunge extent of 1.1 km with the deepest position of the ore body being 1,680 metres below the surface. Mineralisation in the deeps is hosted by iron formations, massive sulphide and sulphide quartzite. The massive sulphide rock is either banded, massive or occurs as fine grained mylonite. Banding is expressed as 1-5 m thick sulphide bands alternating with quartz rich bands of similar thickness.

Underground drilling of the deeps ore body started in 2000 and was completed in 2012. Based on Ore Reserves and Mineral Resources as of 31 March 2017 and current production levels, Black Mountain Mine estimates the remaining life of the mine of the deeps ore body to be over four years.

The predominant mining method is ramp in stope cut and fill. The planned production rate is 1.8 mtpa plant feed and the shaft hoisting capacity is approximately 1.44 mtpa from Deeps mine and 0.36 mtpa from Swartberg. All production stopes in the Deeps mine are backfilled and waste filled, integrated into the mining sequence.

The mining process includes primary crushing underground before being hoisted to surface coarse ore silos for stockpile. Coarse ore is screened before secondary and tertiary crushing, from where it is fed into a milling plant. The slurry product from the grinding mills passes directly to the floatation circuits from which copper concentrates, lead concentrates and, finally zinc concentrates are floated off. The concentrates are dewatered by thickening and subsequent pressure filtration to reduce moisture content to shipment requirements. The dewatered concentrates are discharged onto conveyors, before being transferred to separate copper, lead and zinc concentrate stockpiles. From the stockpiles, the concentrates are hauled by truck to a dedicated railway siding 170 kms away, where they are loaded onto rail cars for outbound shipping.

Power at the zinc mine at Black Mountain is supplied from two 40 MVA transformers at the Eskom Aggeneys substation. Water is supplied by the Pelladrift Water Board, which supplies potable water to the mine from the Orange River for both human consumption and industrial water requirements.

Zinc, lead and copper concentrate from the mine are road hauled to a dedicated railway siding along a 170 km gravel road, which is owned by the provincial authorities but maintained by Black Mountain. The concentrate is then transported by train to Saldanha on the Sishen-Saldanha railway with delivery terms to export customers on a cost, insurance and freight basis.

During fiscal year 2018, 1,605,892 tonnes of ore at 2.3% zinc and 3.4% lead were mined from the Black Mountain mine, which produced approximately 55,501 tonnes of zinc concentrate and 65,381 tonnes of lead concentrate, containing 27,175 tonnes of zinc and 45,113 tonnes of lead respectively. In addition, the Black Mountain mine also produced 4,969 tonnes of copper in concentrate and 42 tonnes of silver in concentrate.

Copper Business

Introduction

Vedanta's copper business comprises operations in India, Zambia and Australia. Vedanta's Indian and Australian copper business is operated by Vedanta Limited, while its Zambian copper business is owned and operated by KCM. As of 31 December 2018, Vedanta owned 50.1% of the share capital of Vedanta Limited and 79.4% of the share capital of KCM. According to Wood Mackenzie, KCM is one of the world's highest grade copper mines, in terms of contained copper. Vedanta's custom smelting and refining business forms 40% of the total Indian capacity according to the Indian Minerals Yearbook 2014. KCM is one of Africa's largest integrated copper producers.

Vedanta's Indian copper business is principally a custom smelting business, which includes a smelter, refinery, phosphoric acid plant, sulphuric acid plant, copper rod plant and three captive power plants at Tuticorin in southern India, a refinery and two copper rod plants at Silvassa in western India, a precious metal refinery that produces gold and silver, a doré anode plant, and a copper rod plant at Fujairah in the UAE. According to Wood Mackenzie, Vedanta Limited's Tuticorin smelter was one of the world's top ten, in terms of production volumes in 2016.

In addition, Vedanta Limited owns the Mt. Lyell copper mine in Tasmania, Australia, which provides a small percentage of its copper concentrate requirements. The operation of Mt Lyell mine was suspended in January 2014, following a mud slide incident. Subsequently, the operations at Mt. Lyell copper mine has been placed under care and maintenance since 9 July 2014 following a rock falling on the ventilation shaft in June 2014.

As a custom smelter, Vedanta Limited buys copper concentrate at LME-linked copper prices less TcRc that it negotiates with suppliers. Vedanta Limited sells refined copper at LME-linked prices in domestic and export markets. Vedanta Limited receives a discount from its suppliers in the form of aTcRc, which is influenced by the global copper concentrate demand, supply of copper smelting and refining capacity, LME trends, LME-linked price participation and other factors. Vedanta Limited sources its concentrate from various global suppliers and its Mt. Lyell copper mine.

In recent years, Vedanta Limited has improved the operating performance of its copper business by improving operational efficiencies and reducing unit costs, including reducing power costs by constructing a captive power plant at Tuticorin. Vedanta Limited intends to further improve the operating performance of its copper business by continuing to reduce unit operating costs through improvements in recovery rates, lowering power and transport costs, achieving economies of scale and the achievement of other operational efficiencies. The copper business in Zambia is owned and operated by KCM which is largely an integrated copper producer. KCM's Zambian operations comprise various facilities at Konkola, Nchanga, Nkana and Nampundwe. KCM's operations at Nchanga include a number of open-pit mines, a large underground mine, TLP with the associated solvent extraction electro winning ("SX-EW") facility, a smelter with a cobalt recovery furnace, and a sulphuric acid plant and copper concentrators comprising two main processing units and a refractory ore stockpile. At Konkola, KCM operates a large underground mine and a concentrator on site. There is also a refinery at Nkana and a pyrite mine and concentrator at Nampundwe. In fiscal year 2018, the KCM mines provided approximately 33% of KCM's copper concentrate requirements for its smelting operations, with the remainder of KCM's copper concentrate requirements being obtained from third parties. As of 31 March 2018 Vedanta had spent over $3 million since 1 April 2005 on its asset base.

Since the acquisition of KCM in 2004, Vedanta has implemented or is in the process of implementing various projects and expansions to improve KCM's operating performance. These include:

- the Konkola Deep Mining Project (the "KDMP"), a comprehensive project developing mining infrastructure to access the large copper ore body available at deeper levels at KCM's Konkola mine, which Vedanta estimates will increase the output of KCM's Konkola underground mine to approximately 7.5 mtpa at full ramp-up; It is a flagship asset with a life of over 50 years;

- de-bottlenecking the TLP at Nchanga to increase its capacity from 15.1 mtpa to up to 17.3 mtpa;

- installing a second cobalt recovery furnace at the Nchanga smelter to double cobalt recovery;

- upgrading and modernizing the east and west mill processing plants at the Nchanga concentrator, including upgrading the west mill Nchanga underground mine concentrator with a new 3.0 mtpa concentrator and the east mill Nchanga open-pit concentrator with a new 6.5 mtpa concentrator;

- commissioning a 311,000 tpa direct-to-blister flash smelter at Nchanga with a cobalt recovery furnace;

- commissioning a 6 mtpa concentrator at Konkola to enhance mining output, improve recovery and improve the concentrate grade of its copper;

- expanding the Nkana refinery to a production capacity of 300,000 tpa of copper cathode; and
- commissioning a 640,000 tpa sulphuric acid plant at Nchanga to produce acid for use in the TLP.

KCM intends to improve its operating performance by:

- substantially developing its open-pit mines at Nchanga, including the opening of additional pits and the mining of cobalt ore at the Nchanga open-pit;
- expanding capacity at, and extending the life of, the existing Nchanga underground mine by extracting as yet unmined ore in the upper ore body of the Nchanga ore deposit; and
- accelerating development and dewatering at KDMP for ramping to its full potential. As a part of its ramp up strategy, KCM has institutionalised its performance-linked business partnering model through three renowned contractors. The model aims at delivery of high quality performance allied to developments and ore production. A 5-year performance contract has been signed off with the partners and is currently under the mobilisation stage. KCM is also in engagement with original equipment manufacturers for on-site equipment maintenance and technical experts for focussed supervision on dewatering and implementation of new productivity-enhancing mining methods in certain areas of the mines, which will pave the way for realising mine potential.

Total revenue from Vedanta's copper businesses during fiscal year 2018 was $3,832.7 million and $1,138.9 million for the nine months ended 31 December 2018.

Principal products

Copper cathode. Vedanta's copper cathodes from the Tuticorin and Nkana refinery are square shaped with purity levels of 99.9% copper. These cathodes meet international quality standards and are registered as LME "A" Grade. KCM also produces Kabundi copper cathode, which is marketed as "KBC" from SX-EW TLP at Nchanga. The major uses of copper cathodes are in the manufacture of copper rods for the wire and cable industry and copper tubes for consumer durable goods. Copper cathodes are also used for making alloys like brass, bronze and alloy steel, with applications in transportation, electrical appliances and machinery in defence and construction.

Copper rods. Vedanta's copper continuous cast rods meet all the requirements of international quality standards including the ASTM B 49: 2010 or the BS EN 1977:1998 standards. Vedanta's copper rods are currently used primarily for power and communication cables, transformers and magnet wires.

Sulphuric acid. Vedanta Limited and KCM produce sulphuric acid at their sulphuric acid plants through conversion of sulphur dioxide gas that is generated from the copper smelter. A significant amount of the sulphuric acid produced at the Tuticorin smelter is consumed by the phosphoric acid plant in the production of phosphoric acid, and the remainder is sold to fertiliser manufacturers and other industries. Sulphuric acid produced at the sulphuric acid plants at the Nchanga smelter is used in the TLP to extract oxide copper minerals from the current and old tailings and any surplus sulphuric acid is sold in the region.

Phosphoric acid. Vedanta Limited produces phosphoric acid at its phosphoric acid plant by chemical reaction of sulphuric acid and rock phosphate, which is imported. Phosphoric acid is sold to fertiliser manufacturers and other industries.

Other by-products. Other by-products of Vedanta Limited's copper smelting operations are gypsum, bismuth and anode slimes, which Vedanta Limited sells to third parties. Copper cobalt alloy is a by-product of KCM's copper mining operations, which KCM also sells to third parties. KCM is also pursuing potential opportunities to extract sales from the slag produced at its Nchanga smelter.

Production

Copper anode is an intermediate product produced by copper smelters and is generally not sold to customers except KCM where copper anodes are sold to customers. Approximately one tonne of copper anode is required for the production of one tonne of copper cathode. Sulphuric acid is used as an input material for phosphoric acid. Approximately 2.8 tonnes of sulphuric acid is required for the production of one tonne of phosphoric acid. Copper Starter Sheets are produced from Copper Anodes at Nkana Refinery to support TLP's Cathode Production. Copper cathode is produced at the TLP at Nchanga using current tailings from the Nchanga west concentrator and reclaimed tailings sourced from the decommissioned tailings storage facilities. The Nchanga smelter produces copper in the form of copper-cobalt alloy, which accounts for approximately 8% to 10% of the smelter's total design capacity of 311,000 tpa. Nampundwe currently produces pyrite concentrate which is blended with copper concentrate at the Nchanga smelter when required. Copper cathode is used as a starting material for copper rods. Approximately one tonne of copper cathode is required for the production of one tonne of copper rods. The table below sets out Vedanta's total production(1) from Tuticorin, Silvassa, Nkana, Nchanga and Nampundwe for the periods indicated.

		Year Ended 31 March			For the nine months ended 31 December	
Facility	**Product**	**2016**	**2017**	**2018**	**2017**	**2018**
				(Tonnes)		
Tuticorin	Copper anode	387,016	400,620	328,076	299,297	0
	Copper cathode	201,864	216,119	216,749	161,491	0
	Copper rods	68,685	71,178	67,207	44,768	0
	Sulphuric acid	1,070,786	1,043,748	1,033,249	771,318	0
	Phosphoric acid	198,779	200,119	191,746	146,214	0
Silvassa	Copper cathode	182,183	186,611	186,418	135,615	60,221
	Copper rods	142,115	136,352	135,332	94,401	84,000
Nkana refinery	Copper anode(2)	260	1,236	964	0	0
	Copper cathode(3)	92,525	58,856	8,523	6,153	10,423
Nchanga (smelter and TLP)	Copper anodes(2)	97,242	99,661	111,247	78,561	107,611
	Copper cathode(3)	55,232	60,985	50,494	41,713	33,541
	Sulphuric acid	234,879	237,308	219,619	152,457	214,758
Nampundwe	Pyrite concentrate	14,275	15,810	6,115	4,648	5,492
Total	**Copper anode**	**487,913**	**512,831**	**466,658**	**406,908**	**144,871**
	Copper cathode	**503,888**	**461,747**	**460,134**	**341,070**	**114,419**
	Copper rods	**210,800**	**207,530**	**202,539**	**139,169**	**86,280**
	Sulphuric acid	**1,308,094**	**1,263,367**	**1,297,113**	**986,076**	**181,511**
	Phosphoric acid	**198,779**	**200,119**	**191,746**	**146,214**	**0**
	Pyrite concentrate	**15,810**	**6,115**	**7,713**	**5,492**	**7,985**

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

(2) During fiscal years 2017 and 2018 and nine months ended 31 December 2017 and 31 December 2018, 101,900 tonnes, 114287 tonnes, 94,196 tonnes and 78,011 tonnes respectively of copper anode were not processed into copper cathode and sold as Copper anode and anode slags at KCM.

(3) The production numbers for copper cathode excludes the copper in copper cobalt alloy and copper in concentrate produced and sold as concentrate. Copper in copper cobalt alloy production in fiscal years 2016, 2017 and 2018 and nine months ended 31 Dec 2017 and 31 December 2018 were 19,828 tonnes, 17,350 tonnes, 23,028 tonnes, 17,074 tonnes and 16,830 tonnes respectively, copper in copper concentrate produced and sold as concentrate in fiscal years 2017 and 2018 and nine months ended 31 December 2017 and 2018 were, 1,570 tonnes, nil, nil and 10 tonnes, respectively at KCM.

The table below sets out KCM's and CMT's total mine production[(1)] for the periods indicated:

Mine (Type of Mine)	Product	Year Ended 31 March 2016	2017	2018	Nine months ended 31 Dec 2017	2018
				(Tonnes)		
Nchanga (Open-Pit and Underground)......	Ore mined	10,299,672	11,237,492	11,469,134	8,833,923	9,519,207
	Copper concentrate	101,744	72,377	111,878	83,951	82,008
	Copper in concentrate	18,054	11,754	12,465	9,871	10,959
Konkola Mine (Underground).....	Ore mined	1,676,592	1,302,389	1,405,064	1,054,947	846,133
	Copper concentrate	136,748	101,417	107,094	77,756	72,600
	Copper in concentrate	49,448	36,100	37,316	27,747	24,077
Nampundwe Mine (Underground).....	Pyrite ore mined	136,879	65,181	102,357	83,074	65,512
Total.....................	**Copper ore mined**	**11,976,264**	**12,539,881**	**12,874,198**	**9,888,869**	**10,365,340**
	Copper concentrate	**238,492**	**173,794**	**218,972**	**161,706**	**154,608**
	Copper in concentrate	**67,502**	**47,854**	**49,781**	**37,618**	**35,036**
	Pyrite ore mined	**136,879**	**65,181**	**102,357**	**83,074**	**65,512**

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

Ore Reserve base

The figures for the Mt. Lyell Mine show the split between the ore derived from primary ("in-situ") ore and secondary ore, which consists of broken fresh ore from previous levels, remnants of ore from the open-pit side wall and pillars remaining from a former mining method together with sub-economic dilution from the mineralised material surrounding the ore body. The quantity and grade of the secondary ore was determined from the analysis of historical production. The estimate of the quantity and grade of the remnant material has been evaluated from previous studies and only uses a small proportion of this source of ore. Consequently, Vedanta believes that this allowance can be sustained for the forecast life of the Ore Reserves.

As of 31 March 2018, the proved and probable copper Ore Reserves at the Mt. Lyell Mine is nil.

Nampundwe has total Ore Reserves 1.6 Mt grading 11.18% S comprising, Proved Ore Reserves of 0.2 Mt grading 10.34% S and 1.35 Mt grading 11.32% S. The copper grades in the table below are stated as Total Copper. For the Refractory Ore, the Acid Soluble Copper grades is 0.46%.

The table below sets out the proved and probable copper Ore Reserves(1), as applicable, at Konkola and Nchanga as of 31 March 2018:

	Proved Reserve		Probable Reserve		Reserves	
	Quantity	Total Copper Grade	Quantity	Total Copper Grade	Quantity	Total Copper Grade
	(Million tonnes)	(%)	(Million tonnes)	(%)	(Million tonnes)	(%)
Konkola	3.35	3.52%	31.68	3.39%	35.03	3.40%
Nchanga (open-pits)	0.00	0.00%	4.81	0.87%	4.81	0.87%
Nchanga (other pits and stockpiles)	0.05	1.05%	35.44	1.19%	35.49	1.19%
Tailings Dams	42.58	0.67%	0.00	0.00%	42.58	0.67%
Refractory Ore	0.00	0.00%	105.52	0.66%	105.52	0.66%
Total	**45.98**	**0.88%**	**177.46**	**1.26%**	**223.44**	**1.18%**

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources".

Description of operations

Smelters and Refineries

The table below sets out Vedanta's total capacities from the Tuticorin, Silvassa, Nkana and Nchanga facilities as of 31 December 2018:

	Capacity					
	Copper Anode(1)	Copper Cathode(4)	Copper Rods(2)	Sulphuric Acid(3)	Phosphoric Acid(3)	Captive Power Plant
			(tpa)			(MW)
Tuticorin	400,000	235,000	96,000	1,300,000	230,000	191.5
Silvassa	—	215,000	172,000	—	—	—
Nkana		300,000	—	—	—	—
Nchanga	311,000	80,000	—	582,750	—	—
Total	**711,000**	**830,000**	**262,000**	**1,882,750**	**230,000**	**191.5**

(1) Copper anode is an intermediate product produced by copper smelters and is generally not sold to customers except in case of KCM where copper anodes are sold to customers. It is used for the production of copper cathode by copper refineries. Approximately one tonne of copper anode is required for the production of one tonne of copper cathode.

(2) Copper cathode is used as a starting material for copper rods. Approximately one tonne of copper cathode is required for the production of one tonne of copper rods.

(3) Sulphuric acid is used as a starting material for phosphoric acid. Approximately 2.8 tonnes of sulphuric acid are required for the production of one tonne of phosphoric acid.

(4) Copper starter sheets are used as a starting material for KBC Copper cathodes. Approximately one tonne of copper starter sheets are required for the production of eight tonne of copper cathodes at TLP.

Tuticorin facility. The Tuticorin facility, commissioned by Vedanta Limited in 1997 and is located approximately 17 km inland from the port of Tuticorin in the State of Tamil Nadu in southern India. Tuticorin is one of India's largest copper smelters based on production volume. As of 31 December 2018, the Tuticorin facility consists of a 400,000 tpa copper smelter, a 235,000 tpa copper refinery, a 96,000 tpa copper rod plant, a 1,300,000 tpa sulphuric acid plant, a 230,000 tpa phosphoric acid plant, and three complete captive power plants with capacities of 160 MW, 7.5 MW and 24 MW, respectively. The coal based power plant of 160 MW is primarily used for captive consumption.

Vedanta Limited also generates five MW of power from a smelter waste heat boiler. Coal for the 160 MW power plant is imported, and other captive power plants at Tuticorin operate on furnace oil. With captive power plants with a total capacity of 191.5 MW, which, together with a further five MW generated from the smelter waste heat boiler, Tuticorine facility will meet most of the facility's power requirements once the proposed expansion to 800,000 tpa is complete. Vedanta Limited's operations at Tuticorin, India are currently suspended due to ongoing litigation regarding the renewal of the its consent to operate.

On 29 March 2013, the TNPCB ordered the closure of the copper smelter at Tuticorin due to complaints about a noxious gas leak by local residents. On 1 April 2013, Vedanta Limited (then Sterlite) filed a petition before the NGT challenging the order of the TNPCB on the basis that the plant's emissions were within permissible limits. TNPCB through an order on 9 April 2018 rejected Vedanta Limited's CTO the Tuticorin copper plant and issued a direction to suspend production and disconnect electric supply at the plant. In May 2018, TNPCB, at the direction of the Government of Tamil Nadu directed Vedanta Limited to permanently close and seal the Tuticorin copper plant. In response to Vedanta Limited's appeal to the NGT against the aforementioned orders, the NGT set aside the impugned orders and directed TNPCB to renew the CTO in December 2018. However, the Supreme Court of India set aside NGT's orders on the grounds of maintainability in February 2019 and directed Vedanta Limited to file a writ petition before the Madras High Court challenging the impugned orders and seek interim relief. Vedanta Limited filed the writ petitions before the Madras High Court on 22 February 2019 and the next hearing is scheduled on 23 April 2019. The Company also filed appeals dated 6 June 2018 before the Appellate Authority of the TNPCB under the Air Act and the Water Act respectively. See "Litigation — Proceedings related to the existing copper smelting plant and the proposed expansion at the Tuticorin plant" for more details on this litigation.

Silvassa refinery. The Silvassa facility, commissioned in 1997, comprises a refinery and two copper rod plants and is located approximately 140 km from Mumbai in the union territory of Dadra and Nagar Haveli in western India. Its refinery is ISA Process$^{(TM)}$ technology to produce copper cathode and its copper rod plants use Properzi CCR copper rod technology. Silvassa facility consists of a 215,000 tpa copper refinery and two copper rod plants with a total installed capacity of 172,000 tpa of copper rods. Vedanta Limited's Silvassa facility draws on the state power grid to satisfy its power requirements. A new Copper Rod Mill plant with an installed capacity of 267,000 tpa is under construction at Silvassa and is expected to start commercial operations in April 2019.

Fujairah precious metal refinery. The Fujairah Gold FZE facility is located in Fujairah Free Zone-2. It is strategically located 130 km east of Dubai, on the coast of the Arabian Sea. The precious metals refinery at the Fujairah Gold FZE facility was completed in March 2009 and it began production in April 2009. The precious metals refinery has a capacity of 20 million tonnes ("mt") of gold and 105 mt of silver. The technology for the refinery was supplied by Outotec Oyj, Finland, a pioneer in providing technology for the extraction and refining of precious metals. The Fujairah Gold FZE facility also has a copper rod plant with an annual capacity of 100,000 tpa. Production commenced in May 2010. Continuous-Properzi S.p.A., Italy supplied the rod mill equipment for this project, and the copper cathode required for the copper rod plant is expected to be sourced from the smelters of KCM. Additionally, the doré anode plant which was previously located at Tuticorin has been relocated to the precious metals refinery at Fujairah in June 2012 for smelting of "anode slime" to "doré anode" which is the raw material used by the Fujairah precious metal refinery.

Nkana facility. The Nkana facility, commissioned in 1932, primarily comprises a smelter, as refinery and a sulphuric acid plant, of which smelter and sulphuric acid plant have been dismantled. The Nkana operations are located in Kitwe approximately 360 km from Lusaka in the Copper belt Province of Zambia and approximately 55 km from Chingola where the Nchanga facilities are located.

The Nkana refinery produces finished copper in the form of cathodes. It also produces anode slime as a by-product, which contains copper and smaller amounts of certain precious metals, such as gold, silver, platinum, and palladium. The Nkana refinery uses the conventional electrolytic refining process to produce copper cathode that is LME-registered REC brand, which is at a minimum 99.99% pure copper. Further, the starter sheets produced at the Nkana refinery are used at the Nkana and Nchanga TLP for electro-refining and electro-winning, respectively. Capacity at the Nkana refinery has been expanded from approximately 220,000 tpa to 300,000 tpa and this expansion was completed in November 2009.

Nchanga facility. The Nchanga facility, initially commissioned in 1971, comprises a TLP and SX-EW facility and a state-of-the-art smelter commissioned in 2008 with a capacity of 311,000 tpa in the form of copper in copper anode and copper in copper-cobalt alloy and sulphuric acid plants with a capacity of 2,350 tonnes per day. It processes reclaimed tailings sourced from the Nchanga surfaces sources operations and the current tailings from the Nchanga concentrator for the production of copper cathode with an installed capacity of 80,000 tpa, as of 31 December 2018.

The TLP comprised an acid leach SX-EW circuit which treats both reclaimed tailings and mine tailings from the copper flotation circuits at the west mill.

The Nchanga Smelter consists of a flash smelting furnace, slag cleaning furnace, cobalt recovery furnace, anode furnaces along with an acid, oxygen and water treatment plants. It operates on a direct to blister OUTOTEC technology and processes concentrates received from its integrated Mines (Nchanga and Konkola) as well as custom concentrates received from other mines in Zambia and the Democratic Republic of Congo.

During fiscal year 2013, the west mill Nchanga underground mine concentrator was upgraded with the commissioning of a new 3.0 mtpa concentrator and the east mill Nchanga open-pit concentrator was upgraded with the commissioning of a new 6.5 mtpa concentrator. Additionally, a cobalt recovery furnace was commissioned.

Mines

Mt. Lyell. The Mt. Lyell mine is located at Queenstown, Australia. It comprises of an underground copper mine and a copper processing facility and is owned and operated by CMT. The Mt. Lyell mine is owned and operated under the terms and conditions as stipulated in Mining Leases 9M/2013 (earlier 1M95) and 10M/2013 (earlier 5M95) granted by the state government of Tasmania. Mining Lease 9M/2013 was granted on 1 January 1995 for a period of 15 years and the mining lease 10M/2013 was granted on 1 February 1995 for a period of 14 years and 11 months. Both leases have been renewed for a period of 18 years and are valid up to 30 December 2027. The mine is also covered by the Copper Mines of Tasmania (Agreement) Act 1999, which, in conjunction with an agreement between the state government of Tasmania and CMT entered into pursuant to that Act, limits CMT's environmental liabilities to the impact of current operations, thereby insulating CMT from any historical legacy claims. The operation of Mt Lyell mine was suspended in January 2014, following a mud slide incident.

Monte Cello acquired CMT in 1999 from Mt. Lyell Mining Company Limited. Since Monte Cello took over the mine, annual production has increased from 2.2 million tpa in fiscal year 2000 to 2.5 million tpa in fiscal year 2013. Vedanta Limited acquired Monte Cello, and CMT, from a subsidiary of Twin Star in the year 2000.

The principal deposits in the Mt. Lyell region are all of the volcanic disseminated pyrite-chalcopyrite type which accounts for approximately 86.0% of the known ore in the region. The geology of the Mt. Lyell mine consists of a series of intercalated felsic to mafic-intermediate volcanics. Lithologies are highly altered quartz-sericite-chlorite volcanics with individual units delineated largely by the relative abundance of phyllosilicates. Volcanoclastic and rhyolitic lithologies occur sporadically throughout the sequence, as does pervasive iron mineralisation in the form of haematite, magnetite and siderite.

Chalcopyrite is the principal ore mineral and occurs chiefly in higher grade lenses enveloped by lower grade halos. The overall structure of Mt. Lyell is that of a steeply dipping overturned limb of a large anticline. The hanging wall (stratigraphic footwall) of the ore body consists of weakly mineralised chloritic schists with disseminated pyrite. The footwall is sharply defined by the Great Lyell Fault — Owen Conglomerate contact which truncates the ore body at its southern end.

The Mt. Lyell mine is under care and maintenance following a rock falling on the ventilation shaft in June 2014. All mining operations at CMT, when operational were undertaken by contractors while the processing and mill maintenance operations are undertaken by CMT employees. A sub-level caving underground mining method is used at the Prince Lyell ore body. Ore is loaded into trucks and then transported to the underground crusher and skip loading area. Crushed ore is then hauled by the Prince Lyell shaft and unloaded onto a conveyor feeding the ore bin at the Mt. Lyell processing plant. At the processing plant, the ore is crushed and ground prior to processing by flotation to produce copper concentrate which is then filtered to form a cake and trucked to the melba flats railway siding for transport to the port of Burnie. The concentrate is stored at Burnie until it is loaded into ships for transport to the port of Tuticorin from where it is trucked to the smelter. CMT has an active exploration and evaluation program at Mt. Lyell which involves upgrading resources below the Prince Lyell reserves and testing additional exploration targets on the mining lease. The western tharsis deposit lies to the west of the Prince Lyell ore body, but CMT has not yet committed to its development. Additional targets include Tasman and Crown, Glen Lyell, Copper Clays and NW Geophysics. The tailings dam is a valley-fill type and excess water is discharged via a spillway. The water quality is sampled before the water is released from the site. The tailings are deposited on beaches around 300 metres from the dam spillway. CMT's accepted closure plan is to flood the tailings which will require CMT to raise the tailings dam wall and such plan is currently in progress.

The processing plant is approximately 30 years old and has been partially refurbished following CMT's acquisition with the addition of crushers, a float cell and a regrind mill at the surface. While the condition of the plant is ageing, maintenance is carried out as required to ensure that the process plant remains in safe and efficient condition.

Power at the mine is supplied through an electricity supply agreement with Aurora Energy Proprietary Limited and Hydro Tasmania Proprietary Limited to supply approximately 112 giga watts per hour. Aurora Energy Proprietary Limited supplies electricity on a spot price basis and Hydro Tasmania Proprietary Limited is under a fixed arrangement. There is ample supply of mine water and storm water captured on the tailings dam.

The cut-off grades are based on copper grades with the gold credit deducted from the operating costs. The reserves are derived from stopes which are designed such that the limits of the stope are defined by a cut-off grade of 0.8% copper and have an average grade that exceeds 0.8% copper. The revenue derivation of the cut-off grade includes the gold credit. The break-even cut-off grade of 0.65% copper is the grade that makes enough margin to cover the fixed and variable costs while the actual or operational cut-off grade used is 0.55% copper. CMT operates on a 0.8% copper operational cut-off grade in practice, which prefers to take higher revenue at the expense of a longer mine life.

At the time of finalization of reserve statement as of 31 March 2018, no mineral reserves have been determined due to government statutory restrictions imposed post the mud slide incident in January 2014.

The reserves at CMT in the proven reserve category are defined as the portion that can be economically mined of the measured in-situ resource, which has gold drill coverage (<50 metres) and is on or within the 50 metre zone below the lowest active production level. The probable in-situ reserve is the material which has been defined as the portion that can be economically mined and has good drill coverage but is outside the 50 metre zone from the lowest active production level. The ex-situ probable reserve is the portion of ex-situ indicated resource which can be economically recovered with the mining of the in-situ reserves; this is applied as a modifying factor.

CMT does not use a copper equivalent calculation for the determination of stope limits as the relationship between the copper and gold grades is essentially linear, allowing the gold credits to be deducted from operating costs.

CMT has identified additional mineral deposits in the Mt. Lyell mine and had engaged in drilling, scoping and feasibility studies on these deposits and has completed scoping study of Prince Lyell North Flank bottom block/lift and Copper Chert prospect and feasibility of Prince Lyell North Flank top block.

KCM mines. KCM's mining operations are located in the Copper belt Province of Zambia and consist of the Nchanga open pits and Nchanga underground mines, concentrator and TLP, the Konkola underground copper mine and concentrator, the Nchanga smelter with a copper recovery furnace and sulphuric acid plant, and the Nkana smelter and refinery. The Zambian Copper belt ore deposits lie along a 50-km wide strip of country that extends for 150 km from Chililabombwe in the northwest to Luanshya in the southeast. The Nampundwe pyrite mine and the concentrator are located in the Central Province approximately 50 km from Lusaka.

The geological setting of the Zambian Copperbelt is unusual compared to other worldwide copper deposits in that it occurs in sedimentary host rocks that have high carbonate content. The presence of dolomite in the geological sequence effectively eliminates any risk of acid mine drainage. The dominant structural feature of the Zambian Copperbelt is the Kafue Anticline, a Northwest — Southeast striking structure, the core of which is comprised of granite, schist and gneiss of the basement complex.

The focus of KCM's exploration has been the maintenance of resources and reserves following mining depletions.

Konkola. The Konkola mine is situated about 26 km north of Chingola and is the most northerly of KCM's Copperbelt mines. These mining operations currently exploit the Kirila Bombwe ore body by underground methods and have historically been focused on two existing shaft systems, the Kirila Bombwe South ore body (the "No. 1 shaft") and the Kirila Bombwe North ore body (the "No. 3 shaft"). Additionally, in June 2006, KCM commenced sinking of the No. 4 shaft in the Kirila Bombwe South ore body as part of the KDMP. The No. 4 shaft lies approximately 130 metres due north of the No. 1 shaft. The mid-shaft loading station of the No. 4 shaft was commissioned in April 2010. The mid-shaft loading station of the No. 4 shaft was commissioned in April 2010. Construction of the bottom shaft sinking, which included the continued development of the No. 4 shaft to a design depth of approximately 1,500 metres, was completed during fiscal year 2012.

The Konkola mine commenced production in 1957. KCM acquired the mine in April 2000 from Zambia Consolidated Copper Mines Limited. At Konkola, KCM holds large-scale mining licence ("LML") number 7076-HQ-LML for its operations, which expires on 31 March 2025. The licence permits the mining of copper, gold, silver, sulphur, selenium, cobalt and tellurium within the leasehold area. KCM's mining licence is valid until 31 March 2025, but operating permits subjected to annual renewal.

The operating shafts at the Konkola mine are underground mine (No. 1 shaft, No. 3 shaft and new No. 4 shaft, along with a number of ventilation shafts as well as the pipe shaft) and the Konkola concentrators.

The dominant features of the mine are the Kirila Bombwe Anticline in the southeast and the Konkola Dome in the northwest. The ore body in the No. 1 shaft area lies on the southern flank of the Kirila Bombwe Anticline and has an average thickness of about nine metres. The No. 1 shaft ore body generally strikes to the northwest-southeast and dips steeply southwest. It has a strike length of approximately 4,000 metres with an average dip of 50 degrees. The ore body in No. 1 shaft area is traced to 1,800 mtr deep and is open-ended at that depth. The ore body at the No. 3 shaft lies across the axis of the Kirila Bombwe Anticline and has an average thickness of 13 metres. The dips at the No. 3 shaft generally range from 10 degrees to 65 degrees. The ore body at the No. 3 area has been traced to a depth of 1,150 metres where it flattens out and continuing in the neighbouring license area.

Historically, the No. 1 and No. 3 shafts have been managed as two separate mines. Underground haulage connections between the two mines were developed mainly for cross tramming and de-watering purposes. The separate treatment of the two mines was due to their Ore Reserves being physically divided by the presence of a barren gap in the ore body that extended from the surface down to about 720 metres. Below that level the ore body is continuous along a strike length of approximately 10 km and this large ore body forms the basis of the KDMP. The total capacity of the Konkola underground mine has been expanded by the KDMP.

Mine developments consist of primary and secondary developments at both the No. 1 and No. 3 shafts. Primary developments involve mining haulages, drain drives, access ramps, footwall ventilation raises and rock passes on main levels. Secondary development includes the mining of drives, crosscuts and raises in ore and waste on the sublevel to prepare the ore body for stopping. The mining operations are constrained by the necessity to de-water from both hanging wall and footwall aquifers at an overall pumping rate of approximately 350,000 m^3 per day.

The ore body limits are defined by sampling cross cut as well as diamond drilling on approximately 30 metres by 30 metres pattern. The stope limits are contained within the ore body defined using a 1.0% total copper cut-off. Other stope dimensions are worked out using geotechnical properties of the rocks.

Appropriate actions are taken while designing the blast holes as well as during blasting to minimise dilution from the sub-economic areas outside the ore body limits. However, due to the stratified nature of the rocks some dilution does take place. Dilution generally ranges from 5.0% to 25.0%, depending on the rock condition.

Mining methods employed at the Konkola mine include sub level open stopping, post pillar cut and fill and panel stopping. The total rock hoisting capacity at the Konkola mine is 645 kilo tonnes per month ("ktpm") which comprises 160 ktpm from the No. 1 shaft, 135 ktpm from the No. 3 shaft and 350 ktpm from the No. 4 shaft. On reaching the surface run of the mine ("RoM") ore from the No. 1 and 4 shaft is conveyed via conveyor belt directly to the Konkola concentrator and the RoM ore from the No. 3 shaft is transported three km to the Konkola concentrator using 85 tonne off-highway trucks.

The 6 mtpa Konkola concentrator processes RoM ore sourced from the Konkola underground mine using froth flotation to produce copper concentrate for smelting at the smelter in Nchanga.

The 6 mtpa concentrator comprises two streams of 3 mtpa. KCM commissioned the first stream of 3 mtpa in October 2008 and the second stream of 3 mtpa in February 2010. The Konkola concentrator utilises SAG and Ball mill comminution and beneficiation by froth flotation processing. The nominal capacity of the milling circuit is 6.6 mtpa, which with a 10.0% design allowance yields a maximum milling capacity of 7.3 mtpa.

The crushed RoM ore is fed directly into the concentrator's SAG mill with final milling being performed in the Ball mill prior to flotation. The concentrates are thickened and filtered to produce a final concentrate with a grade of approximately 36.0% to 40.0%.

The concentrates are then transported 26 km southwest of Chililabombwe by road to the Nchanga smelter in Chingola. Approximately 60.0% of the residual tailings pumped straight to the Lubengele tailings dam situated approximately 4.5 km north of the plant, while approximately 40.0% of the tailings are pumped to the backfill plant to produce backfill for underground mining operations.

During nine months ended 31 December 2018, Konkola mined and processed approximately 846,133 tonnes of ore (fiscal year 2018: 1,405,064 tonnes), to produce 72,600 tonnes (fiscal year 2018: 107,094 tonnes) of copper concentrate containing 2.5% tonnes of copper in ore. Based on ore reserves and mineral resources as of 31 March 2018 and anticipated production, the Konkola mine has an estimated mine life of over 50 years from fiscal year 2018, a significant position of which is contributed from Inferred Mineral Resources.

Power at the mine is supplied by Copperbelt Energy Corporation PLC ("CEC") with fixed rates subject to index adjustment based on the US Producer Price Indices until 2020. The maximum demand for Konkola is currently 90 MW, but Vedanta estimates that it will rise to 120 MW as it ramps up the KDMP. On-site emergency power is available from two 10 MW diesel generators owned and operated by CEC. This power is mainly utilised for running the de-watering pumps underground. Water pumped from underground is utilised for the plant. The power infrastructure at Konkola is being upgraded to meet the enhanced requirements of the KDMP project. In addition, in anticipation of any power failure, KCM has installed three diesel generator sets of 8 MW each to meet the power requirements of its Konkola mining operations and the KDMP project.

Mine water as well as water from the nearby Kafue river is utilised for domestic requirements. Mulonga Water and Sewerage Company handles the domestic water supply.

Nchanga. The Nchanga mine is situated in the Copperbelt Province of Zambia, in the vicinity of the town of Chingola. Nchanga's operating units comprise two operational open-pit mines, a large underground mine (currently on care and maintenance), a TLP with the associated SX-EW facility, a sulphuric acid plant, copper concentrators comprising two main processing units and a recently commissioned direct blister flash smelter. At Nchanga, KCM holds LML number 7075-HQ-LML for its operations which expires on 31 March 2025. The licence allows KCM to mine copper, cobalt, gold, silver, sulphur, selenium and tellurium within the leasehold area. Under its mining licence, KCM is required to obtain an operating permit on an annual basis. The current mining licence is valid until 31 March 2025.

Following exploration in 1923, development in 1927 and the cessation of operations due to flooding and low copper prices in 1931, mining at the Nchanga underground mine recommenced in 1937. Surface mining operations from the Nchanga open-pit commenced in 1957.

Access to the underground operations is by a series of vertical and inclined primary and sub-vertical shafts. The combined rock hoisting capacity is 292 ktpm. The current operations are projected to extend to 920 metres below the surface. Mine de-watering at Nchanga requires pumping approximately 75,000 m^3 of water per day, a component of which is derived from inflow through the open-pit during the wet months. Underground operations, which were placed are currently under care and maintenance in November 2015, were restarted in June 2017. The Nchanga underground possess a vast ore material resource of 297 million tonnes with a grade of 1% total copper.

The Nchanga deposit is situated on the northern end of the southwest margin of the Kafue anticline in the vicinity of Chingola. The mineralisation is hosted within two stratigraphic horizons being the Lower Ore Body ("LOB") and Block "A". Block "A" lies to the southwest of LOB and has a similar deposit with a slightly more gentle dip of about 20 degrees. The underground Mineral Resources are defined using an assay footwall and an assay hanging wall with a cut-off grade of 1.5% total copper.

The Nchanga mining licence areas also have stockpiles of Chingola Refractory One ("CRO") with a high refractory material content in mica which is not treatable by conventional methods. These stockpiles add up to approximately 105.52 million tonnes of Probable Ore Reserves with an average grade of 0.66% total copper as of 31 March 2018

The mining method currently employed at Nchanga is block carving using a continuous advancing long wall caving method. The ore body and the rocks above the areas where the long wall caving method is used are very weak and as a result no development takes place within it. Ore body limits are primarily defined by diamond drilling from the access established below the ore body. The drill holes are located on a 30 metres by 30 metres pattern. Extreme care is taken to ensure that core recovery from diamond drilling remains high (in excess of 85.0%) and contamination is avoided by use of double or triple tube core barrels. Logging, sampling and assaying are carried out in accordance with quality assurance/quality control procedures. An external cut-off of 1.5% total copper is taken to define the ore body limits. The cut-off is reduced to 1.0% total copper where the ore body is thin and richly mineralised. For the Nchanga open-pit ore bodies, a cut-off grade of 0.5% total copper is used.

Sub-economic dilution is practically zero at the initial stages, but it increases as the extraction increases. Depending upon the in situ grade, a dilution in excess of 50.0% may be recorded at the time when the grade of material from a finger raise has fallen below 1.0% exhausted finger raises are barricaded with timbers.

Open-pit mining has historically been exploited near surface ore bodies, including the LOB, UOB, River Lode, Luano and Chingola Ore Bodies. The mining operations are heavily mechanised using surface drilling techniques, electric shovel loading and hydraulic excavators for loading and 240 tonnes off-highway rear dump trucks. The mining operations at Nchanga are currently exclusively owner operated with the exception of stockpile dumps which are outsourced to meet mill requirements.

As part of growth projects for the Open pits, Mimbula II open pit which is located south — east of Chingola, about 12 km from the Chingola-Chilabombwe highway, and along the Mimbula Chabunyama syncline is being considered for exploitation. In fiscal year 2006, further exploration work was done at Mimbula II area indicating a north extension to the existing Mimbula II open pit and also led to the upgrade of the existing mineral resource. Viability of the resource is understudy and provides good potential for open pits.

The Nchanga concentrator comprises two main processing units; the east mill and the west mill. The east mill is a conventional comminution circuit with a RoM capacity of 6.5 mpta which treats copper ore from the open-pits to produce a thickened product which is pumped to the west mill situated approximately two km away for further processing. The west mill comprises two distinct circuits: the copper comminution circuit for underground ore, the copper flotation circuit for open-pit and underground. The copper comminution circuit crushes and mills ore from the Nchanga underground mine ahead of the flotation circuit and has a RoM capacity of approximately 3.0 mpta. The copper flotation circuit treats milled ore from the Nchanga underground mine (copper comminution circuit) and milled ore from the Nchanga open-pit (east mill) to produce concentrates. Residues from the concentrator are pumped to the TLP for hydrometallurgical processing. The concentrates are transported to the Nchanga smelters except bulk copper-cobalt concentrates which are sold in the market.

During fiscal year 2013, the west mill Nchanga underground mine concentrator was upgraded with the commissioning of a new 3.0 mtpa concentrator and the east mill Nchanga open-pit concentrator was upgraded with the commissioning of a new 6.5 mtpa concentrator. For the nine months ending 31 December 2018, the Nchanga underground mine mined and processed approximately 1.6 million tonnes (fiscal year 2018: 2.04 million tonnes) of ore at a grade of 1.01% copper and the Nchanga open-pit mines (including CRO) mined and processed approximately 7.34 million tonnes (fiscal year 2018: 8.4 million tonnes) of Ore at a grade of 1.3% total copper. During the same period, the Nchanga open pits and underground mine concentrators processed ore to produce 82,008 tonnes (fiscal year 2018: 111,878 tonnes) of copper concentrates containing 10,959 tonnes (fiscal year 2018: 12,465 tonnes of copper).

From 2014 through to 2015, the Nchanga underground mine was making losses entity due to high cost of production emanating from high power tariffs, low mine grade due to mining in the fringe and patchy lower ore body compounded with low copper price at LME. Hence, NUG was put under managed Care and Maintenance in November 2015.

Power at the mine is supplied by CEC with fixed rates subject to index adjustment based on the US Producer Price Indices until 2020. Nchanga's maximum demand is 97 MW.

Nampundwe. The Nampundwe mining operating assets are the Nampundwe pyrite underground mine and concentrator. These are located in the Central Province of Zambia, approximately 50 km west of Lusaka. Nampundwe exploits iron pyrite rich ore bodies containing 11.0% in situ sulphur and has capacity to produce 60,000 tpa of pyrite concentrate that is blended with copper concentrate for smelting. As of 31 March 2018, the Nampundwe mine also had a reserve of 6.3 mt of Sulphur, which is a material used in the smelting process.

Principal raw materials

The principal inputs of Vedanta's copper business are copper concentrate, rock phosphate, power, fuel and sulphuric acid. Other inputs include coke, lime, reagents and oxide ore. Vedanta has in the past been able to secure an adequate supply of the principal inputs for its copper production.

Copper concentrate. Copper concentrate is the principal raw material of Vedanta Limited's copper smelters. Vedanta Limited sourced 100% of its copper concentrate requirements from third-party suppliers, either through long-term contracts or on spot markets. Vedanta Limited purchases copper concentrate at the LME price less a TcRc that it negotiates with its suppliers but which is influenced by the worldwide prevailing market rate for the TcRc. It is expected that the purchased from third party suppliers to increase in future periods to the extent sought to increase the copper smelting and refining capacity. As smelting operations at Tuticorin have been halted since March 2018, Vedanta Limited has not procured copper concentrate in the nine months ended December 2018.

During fiscal year 2018, out of KCM's copper concentrates treatments (in terms of copper content); it treated 66.5% from third-party suppliers and 33.5% from its own mines in Zambia, respectively. KCM purchases copper concentrate at the LME price less a TcRc that KCM negotiates with its suppliers, but which is influenced by the worldwide prevailing market rate for the TcRc.

In general, Vedanta Limited's long-term agreements run for a period of three to five years and KCM's agreements run for a period of one year, and are renewable at the end of the period. The quantity of supply for each contract year is fixed at the beginning of the year and terms like TcRc and freight differential are negotiated each year depending upon market conditions.

Vedanta Limited also purchases copper concentrate on a spot basis to fill any gaps in its requirements based on production needs for quantity and quality. These deals are struck on the best possible TcRc during the period and are specific for short-term supply. As smelting operations at Tuticorin have been halted since March 2018, Vedanta Limited has not procured copper concentrate in the nine months ended December 2018.

Rock phosphate. Vedanta Limited's rock phosphate is sourced primarily from Jordan at spot prices. Vedanta Limited is currently exploring the sourcing of rock phosphate from countries such as Morocco, Nauru, Togo, Algeria and Israel to diversify its supply base.

Power. The electricity requirements of Vedanta Limited's copper smelter and refinery at Tuticorin are primarily met by the on-site captive power plants. The first 80 MW of a new 160 MW coal-fired thermal power plant was commissioned in the first quarter of fiscal year 2014. Vedanta Limited's other captive power plants at Tuticorin operate on furnace oil that is procured through long-term contracts with various oil companies. Vedanta Limited has outsourced the day-to-day operation and maintenance of its captive power plants at Tuticorin. Vedanta Limited's Silvassa facility relies on the state power grid for its power requirements.

KCM's Nkana, Nchanga and Konkola operations receive their electricity requirements pursuant to a long-term agreement with CEC. KCM also has an agreement with the national utility company of Zambia, Zambia Electricity Supply Corporation Limited ("ZESCO"), to provide power to Nampundwe on substantially the same terms as its agreement with CEC. ZESCO transmits power from hydroelectric generating stations at Kariba North, Kafue Gorge and Victoria Falls to the central switching station in Kitwe and at the Luano substation outside Chingola at 330 KV, which is sold in bulk to CEC. The 330 KV voltage is stepped down to 220 KV and 66 KV and distributed by CEC throughout the Zambian Copperbelt. ZESCO also supplies electricity directly to the mining operations at Nampundwe in the Central Province of Zambia. In addition, in anticipation of any power failure, KCM has installed a diesel generator set of 24 MW to meet the power requirements of its Konkola mining operations and the KDMP project.

KCM agreed to a 33.0% increase in its tariff under the terms of its electricity supply agreement with CEC. This increase became effective on 1 January 2008 and remained fixed for a period of three years. A 50.0% tariff increase effective from 2011 and spread over a period of five years was signed with CEC. Effective from 1 January 2016, Zambia has increased power tariffs for mining companies in a bid to lure companies to invest in power generation. The increase in prices by 25% comes as the country is facing severe electricity crisis, which has worsened by a drought. However, the drought conditions have improved since then.

Fuel. KCM's fuel supply is completely dependent on imports. In the past, Zambia has faced fuel shortages. KCM has addressed these fuel shortages by entering into a light fuel supply agreement with BP Zambia Limited on 1 September 2010, which expired on 31 December 2013. Fuel supplies through imports under spot market. In addition to the light fuel supply agreement with BP Zambia Limited, KCM is also party to a heavy fuel oil supply agreement with Kobil Zambia Limited.

Sulphuric acid. The sulphuric acid for KCM's TLP is largely supplied by the 1,850 TPD and 500 TPD sulphuric acid plants at the Nchanga smelter.

Distribution, logistics and transport

Copper concentrate from third parties is received at the port of Tuticorin and then transported by road to the Tuticorin facility.

Once processed at the Tuticorin facility, copper anodes are either refined at Tuticorin or transported by road to Silvassa. Copper cathodes, copper rods, sulphuric acid, phosphoric acid and other by-products are shipped for export or transported by road to customers in India.

KCM's finished copper in the form of copper cathodes are mainly sold to overseas markets in the Middle East, Southeast Asia and the Far East with very little copper being sold locally in Zambia. The metal is transported to these markets by road and rail to the Indian Ocean ports of Dar-es-Salaam in Tanzania and Durban in South Africa and, more recently, Beira in Mozambique.

Sales and marketing

The ten largest customers of Vedanta's India copper business accounted for 30.6%, 47.8% and 56.8% of Vedanta's revenue from the copper business for the fiscal years 2016, 2017 and 2018, respectively.

Vedanta Limited's copper sales and marketing head office is located in Mumbai, and it has field sales and marketing offices in most major metropolitan centres in India. KCM does not maintain any significant sales offices as sales are effected mainly through contracts executed at its corporate offices in Chingola, Zambia. Vedanta Limited sells its copper rods and cathodes in both domestic and export markets. KCM primarily sells its products in export markets. Domestic sales in Zambia form an insignificant portion of KCM's sales. In fiscal years 2016, 2017 and 2018, exports the ten largest customers of accounted for approximately 38.0%, 55.52% and 52.3%, respectively. Vedanta's export sales were primarily to China, Japan, the Philippines, Singapore, South Korea, Taiwan, Thailand and various countries in the Middle East. Vedanta Limited also sells phosphoric acid and other by-products in both domestic and export markets. Vedanta's exports of copper anode slimes are predominately sold to Europe, UAE, Belgium and Korea amongst others.

Domestic sales by Vedanta Limited in India are broadly based on the LME spot price plus regional premiums, as well as domestic supply and demand conditions. A majority of Vedanta's sales are made pursuant to existing supply agreements. The price for the copper Vedanta Limited sells in India is normally higher than the price it charges in the export markets due to the tariff structure on costs, smaller order sizes that domestic customers place and the packaging, storing and truck loading expenses that it incurs when supplying domestic customers.

Vedanta Limited's export sales of copper are made on the basis of both long-term sales agreements and spot sales. The prices of Vedanta Limited's copper exports include the LME price plus a producer's premium. Vedanta Limited does not enter into fixed price long-term copper sales agreements with its customers. In fiscal year 2018, 70% of KCM's sales were through annual contracts priced on the monthly average LME price plus a premium.

Market share and competition

Vedanta Limited owns one of the two custom copper smelters in India and had a 33.0% primary market share by sales volume in India in fiscal year 2018, according to International Copper Association (India). The other major custom copper smelter in India was owned by Hindalco, while the remainder of the primary copper market in India was primarily served by imports and Hindustan Copper Limited in fiscal year 2018.

Copper is a commodity product and Vedanta Limited competes primarily on the basis of price and service, with price being the most important consideration when supplies of copper are abundant. Vedanta Limited's metal products also compete with other materials, including aluminium and plastics that can be used in similar applications by end-users. Copper is sold directly to consumers or on terminal markets such as the LME. Prices are established based on the LME price, though as a regional producer Vedanta Limited is able to charge a premium to the LME price which reflects the cost of obtaining the metal from an alternative source.

Projects and developments

Tuticorin.

Vedanta Limited undertook expansion projects to setup copper smelter plant II at Tuticorin costing ₹44,240 million ($717 million) to increase its total copper capacity to 800,000 tpa. Vedanta Limited had incurred ₹9,969 million ($142.83 million) on these projects as of 31 December 2018.

The application for renewal of the environmental clearance for the proposed project which was due to expire on 31 December 2018 was rejected by the MoEF. Vedanta Limited filed a new application on 12 March 2018 and a sub-committee of the MOEF was directed to visit the project site for inspection. In the meantime, the Madurai Bench of the High Court of Madras on 23 May 2018 held that the application for renewal of the Environmental Clearance for the project shall be processed after a mandatory public hearing and the said application shall be decided by the competent authority on or before 23 September 2018. In the interim, the High Court ordered Vedanta Limited to cease construction and all other activities on site. Separately, The SIPCOT on 29 May 2018, cancelled 342.22 acres of the land allotted to Vedanta Limited for the proposed project. Further the TNPCB on 7 June 2018 directed the withdrawal of the Consent to Establish ("CTE") which was valid until 31 December 2022. Hearing the case of expansion project, Madras High Court on 23 May 2018 directed the Company to suspend expansion activities at the copper smelter plant. Further, on 3 October 2018 the Madras High Court granted an interim stay on order of SIPCOT. The MoEF has indicated that the Project's environmental clearance is subject to NGT's order. Vedanta Limited filed appeals before the TNPCB Appellate Authority challenging the withdrawal of CTE by the TNPCB.

KDMP. The KDMP was approved by KCM's board of directors in July 2005, at a total initial capital outlay of approximately $357.0 million. This project is expected to contribute to the productivity of KCM's underground copper deposit. All governmental approvals for the KDMP have been received. The mid-shaft loading station of the No. 4 shaft was commissioned in April 2010. Construction of the bottom shaft sinking, which included the continued development of the No. 4 shaft to a design depth of approximately 1,500 metres, the bottom-shaft loading and waste hoisting was completed during fiscal year 2012. The KDMP was originally planned to increase the ore production of the Konkola mine from 1.8 mtpa of ore to approximately 6 mtpa, and its scope and configuration was subsequently revised. This revised scope and configuration plans an increase in target output of up to an estimated 7.5 mtpa at full ramp-up by accessing its rich underground ore body. The increase in target output, changes in commodity prices and other project work have resulted in an increase in the estimated project cost from $357 million to $674 million, as of 31 March 2017. The cost was since been revised upward to $974 million primarily due to an increase in the scope of the project and consequent extra time required, weak ground conditions at the site resulting in additional engineering costs, commodity price increases and appreciation of the South African rand to the US dollar during fiscal year 2018 when the project was completed.

The Konkola Deep Mine Project (KDMP) started to bring copper ore from its mid-level in 2010 and from the bottom of the shaft in 2014. The infrastructure for the KDMP project is now complete and mine development to ramp-up production is underway.

Overall, KCM has, among others, the following key focus areas going forward: (i) early-start programmes for development, dewatering and sustained fleet availability, (ii) an outsourcing model for higher quality maintenance standards, (iii) a stockpiled refractory ore treatment focus, (iv) maximisation of custom smelting production, (v) harnessing technology and innovation, (vi) unleasing the cobalt value chain and (vii) sustaining cost efficiencies through value-focused initiatives.

Iron Ore Business

Introduction

Vedanta's iron ore business is carried out in the states of Goa and Karnataka through Vedanta Limited. Vedanta Limited's iron ore business includes exploration, mining and processing of iron ore. During nine months ended 31 December 2018, Vedanta Limited produced approximately 3.5 million dmt of saleable iron ore fines and lumps. The sales for nine months ended 31 December 2018 were at 2.4 million dmt.

Vedanta Limited was India's largest private sector exporter of iron ore in fiscal year 2018, according to the Federation of Indian Mineral Industries. Iron ore is a key ingredient in steel production, which ultimately serves the construction, infrastructure and automotive sectors. In fiscal year 2018, approximately 53.0% of Vedanta Limited's iron ore production in Karnataka and Goa, were sold domestically to Indian steel producers and 47.0%, comprising low grade iron ore from Goa, were exported primarily to Chinese steel mills.

Vedanta operates a metallurgical coke plant with an installed capacity of 522,000 tpa and a pig iron plant operating with a rated capacity of 832,000 tpa. Vedanta Limited manufactures pig iron through the blast furnace route. Vedanta Limited has a patent for the technology for the manufacture of energy recovery based metallurgical coke.

In addition, Vedanta Limited also operates two waste heat recovery plants of 30 MW each in Goa. In nine months ended 31 December 2018, Vedanta Limited produced approximately 502,000 tonnes of pig iron and 358,000 tonnes of metallurgical coke.

Our mining operations are carried out in the states of Goa and Karnataka, both of which became subject to suspension of mining activities due to alleged environmental and other violations by miners, which has adversely impacted the production of iron ore since August 2011. The suspension was imposed by the state government of Goa and this suspension was upheld by the Supreme Court of India on the mining activities in the state of Goa from September 2012 to April 2014 and a suspension imposed by the state government of Karnataka until April 2013. Although operations resumed in Karnataka after receiving the stage I forest clearance from the state government of Karnataka and a temporary working permission from the MoEF, the temporary working permission expired on 31 July 2014. Karnataka operations were halted for the period from 1 August 2014 to 27 February 2015. Operations in Karnataka resumed after all statutory clearances were in place from 28 February 2015. Following the Supreme Court of India's order in April 2014, High Court of Bombay at Goa in August 2014 pronounced the order to renew mining leases in Goa. The MoEF and the state government also revoked their suspension orders subject to limits imposed by the Supreme Court of India, for renewal of the leases and consent to operate from the Government of Goa. In August 2015, the mining operations resumed in the principal mines after completion of necessary statutory formalities and fulfilment of conditions annexed by Supreme Court of India and the state government of Goa. The Supreme Court of India passed its final order in the matter on 7 February 2018 wherein it set aside the second renewal of the mining leases granted by the State of Goa. The Supreme Court of India directed all lease holders operating under a second renewal to stop all mining operations with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environmental clearances are granted under the Mines and Minerals (Development and Regulation) (MMDR) Act.

On 22 August 2011, Vedanta Limited acquired a 51.0% ownership interest in WCL, a Liberian iron ore exploration company which was a wholly-owned subsidiary of Elenilto Minerals and Mining LLC, for a cash consideration of $90.0 million. On 20 December 2012, Vedanta Limited acquired the remaining 49.0% of the outstanding common shares of WCL from Elenilto Minerals and Mining LLC for a cash consideration of $33.5 million. However, due to the outbreak of Ebola in Liberia, Vedanta Limited's project was temporarily suspended in August 2014 as the staff had to be evacuated. Since then, iron ore prices have fallen significantly, due to which it was considered not viable to resume operations. Vedanta Limited is in discussions with the government to amend the Mineral Development Agreement to make this project more sustainable.

Goa Energy Limited ("GEL"), which merged into Vedanta Limited on 24 March 2015, owned one of the 30 MW waste heat recovery power plants in Goa which generates power from the waste gases of the metallurgical coke plant and blast furnace.

In October 2015, Vedanta Limited proposed to the state government of Jharkhand to set up a one mtpa pig iron plant in Jharkhand, for Dhobil mining lease. On 6 May 2016, a memorandum of understanding for the first phase was signed between the state government of Jharkhand and Vedanta Limited to set up a 1 mtpa hot metal plant. Further on 1 November 2017, the memorandum of understanding for the second phase was signed. The exploration drilling in the lease area commenced in May 2017 and a report was submitted to the state government of Jharkhand in October 2017. The exploration report was examined by a technical committee comprising of experts. In March 2018, the technical committee approved the report for issuing of letter of intent to Vedanta Limited for grant of a mining lease for Dhobil iron ore mine. Vedanta Limited is still awaiting the letter of intent to further carry on the process.

Revenue from Vedanta's iron ore business in the nine months ended 31 December 2018 was $296 million.

Principal products

Iron ore. Vedanta Limited's iron Ore Reserves consist of both lump and fine ore. As of 31 March 2018, the percentage of lump ore in the reserves was approximately 20.0% in Karnataka. The mines in Karnataka are of higher grade deposits, ranging between 56.0% to 60.0% iron. Lump ore is sold from the mines in Karnataka primarily to domestic pig iron or steel producers. The majority of other iron ore produced by Goan mines was sold to purchasers in China.

Pig iron. Vedanta Limited produces basic, foundry and nodular grade pig iron in various sub-grades for steel mills and foundries.

Metallurgical coke. Vedanta Limited also produces metallurgical coke, which is primarily used for captive consumption for producing pig iron in India.

Production

The table below sets out Vedanta Limited's total production[1] for the periods indicated:

Mine/Mine Type	Product	2016	2017	2018	2017	2018
Goa (Open-Pit)	Iron ore	2.0	7.8	3.8	2.66	0.2
Sesa Resources Limited (open-pit)[1]		0.2	1.0	1.1	0.69	0
A. Narrain (Open-Pit)	Iron ore	3.0	2.1	2.2	2.09	3.2
Liberia	Iron ore	0.2	0.0	0.0		
Total Iron Ore	Iron ore	**5.2**	**10.9**	**7.1**	**5.4**	**3.5**
Amona Plant	Metallurgical coke	0.48	0.48	0.44	0.46	0.36
	Pig iron	0.66	0.71	0.64	0.32	0.50

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

The table below sets out proved and probable iron Ore Reserves[1] as of 31 March 2018 at mines that Vedanta Limited owns or has rights to:

	Proved Reserve		Probable Reserve		Total Proved and Probable Reserves	
	Quantity	Iron Grade	Quantity	Iron Grade	Quantity	Iron Grade
	(Million tonnes)	(%)	(Million tonnes)	(%)	(Million tonnes)	(%)
Karnataka — A. Narrain	33.1	57.0	12.8	46.4	45.9	54.1
Total Iron Ore Reserves	**33.1**	**57.0**	**12.8**	**46.4**	**45.9**	**54.1**

Additional Information

For India

- The reserve estimates were prepared by the geologists and mining engineers at Vedanta Limited.

- Ore reserves are estimated at a variable cut-off grade based on ore type; the minimum cut-off grade was 30% iron for siliceous ore and 45% iron for normal ore.

- The ore bodies are of relatively significant size with good continuity of the mineralised zones and little internal dilution, the contacts are well constrained, free digging and diluting material can also carry grade, a mining recovery of 98%; a mining dilution of 2%; is considered.

During 2016, Vedanta Limited recognised an impairment charge of $227.5 in respect of the exploratory assets in West Africa (Western Cluster, Liberia) on account of low iron ore prices, geo-political factors, and also due to the fact that there are no plans for any substantive expenditure given the continued uncertainty in the project. Therefore, Vedanta did not receive any certification of reserves and resources for the current period.

Description of operations

Production facilities

Amona plant. Vedanta Limited commenced operations at its Amona plant in Goa in 1992 and has been engaged in the manufacture and sale of pig iron since then. Vedanta Limited's metallurgical coke plant at Amona produces a range of coke fractions from over 70 mm for foundries, 20 mm to 60 mm for blast furnaces and six mm to 25 mm for the ferrous alloy industry. Approximately 80.0% to 90.0% of the total production of metallurgical coke is consumed by Vedanta Limited for its pig iron production and the remainder is sold to customers primarily located in India. The cost of the input coal blend is the single most important cost component for the production of coke. Vedanta Limited's production consists mainly of low ash coking coal and it imports 100.0% of low ash coking coal each year. In order to ensure a stable raw material supply, Vedanta Limited has long-term supply contracts for the procurement of such coal. Vedanta Limited generates its own electric power from the waste heat of Vedanta Limited's metallurgical coke plant and the blast furnace gas.

The following table sets out the total rated capacities as of 31 March 2018 at Vedanta Limited's Amona facility:

	Capacity		
	Metallurgical Coke	**Pig Iron (tpa)**	**Power (mw)**
Amona Plant	522,000	832,000	60

Mines

Goa mines. Vedanta Limited's iron ore operations in Goa consist of four major iron ore mines, namely Codli, Sonshi, Bicholim and Surla. In addition, Vedanta Limited derives ore production from several satellite mines in North Goa. The Goa leases were originally granted as mining concessions by the government during the Portuguese regime from 1955 onwards, and in 1987 these concessions were converted to mining leases. Before suspension of operations in September 2012, Vedanta Limited operated a total of twenty-one mining leases in Goa representing an area of approximately 1,695 hectares (includes one third-party lease on contract, representing an area of approximately 62 hectares).

On 7 February 2018 the Supreme Court of India passed a final order setting aside the second renewal of the mining leases granted by the State of Goa. The Supreme Court of India directed that all lease holders operating under a second renewal to stop all mining operations with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environment clearances are granted under the Mines and Minerals (Development and Regulation) ("MMDR") Act. Vedanta's mines in the state of Goa were impacted as a result of this order and operations at the mines in Goa are suspended.

Vedanta Limited carries out exploration in grid patterns of 100 metres by 100 metres at the initial stage of exploration, followed by grid patterns of 50 metres by 50 metres. Core samples are analysed and used to interpret the ore body for the preparation of geological cross sections and the classification of the ore as either crude ore or sub-grade ore. Drill core sampling is undertaken on entire holes and the drill core material is sampled at the sample preparation facilities.

Codli mines. The Codli group of mines is situated in South Goa, approximately 600 km south of Mumbai and 50 km east of Panaji, the capital of Goa. It is an open-pit operation and the mining leases are held by Vedanta Limited. The nearest railway stations, Sanvordem and Margao, are approximately 13 km and 40 km, respectively, from the mine. There is an airport 55 km from the mine at Dabolim. The river loading points at Sanvordem and Capxem are approximately 12 km and 14 km, respectively, from the Codli mines while the port is approximately 40 nautical miles from the river loading point.

The Codli mines cover an area of approximately 340 hectares and are operated under the terms and conditions stipulated in four contiguous leases, three of which are owned by us with the remaining lease being owned by a third-party. Vedanta Limited owns an additional two mining leases to the northwest of the current Codli mine operations where exploration is being undertaken. Exploration at the Codli mines began in 1966 and the mine first commenced production in 1973. Production at the mine reached 3 mmtpa by 1995. This mine has been granted environmental clearance for a production level of 7 mmtpa until the date of order passed by Supreme Court of India discontinue the mining operations.

At the Codli mines, the lower grade iron formation is folded and subsequently eroded into basinal areas amenable to open-pit mining. Economically mineable material occurs over an area of about 3.1 km by 1.6 km and is located between 84 metres above sea level and 50 metres below sea level. The formations show a general northwest-southeast trend with shallow to moderate dips towards the northeast with local reversals. The footwall is comprised manganiferous clay and decomposed quartzites and the stratigraphy of the ore body is cross cut by late dolerite dykes and sills which are manifested by pink clayey zones in the mine area.

The Codli mines are multi-pit, multi-lease fully mechanised mining units. The open-pits have a bench height of seven metres, haulage roads of 25 metres width and an overall pit slope of 26 degrees. The Codli mines have 14 basins, of which five pits have been exhausted. The lateritic overburden is removed either by ripping or dozing, and loaded by excavators and/or wheel loaders into heavy earth moving machinery such as rigid dumpers and articulated dumpers. Hauling within the mine is also done by rigid and articulated dumpers. An ore stockpile is maintained at all times to continuously feed the processing plants.

Vedanta Limited has extensive ore processing facilities for upgrading the ore, which include crushing, dry screening, scrubbing, log washing, classifying, hydrocycloning, and magnetic separation with a wet high-intensity magnetic separator. The four Codli processing plants are between 1 and 18 years old and throughput capacity of the four Codli processing plants is 10 mmtpa. The processed ore is transported by road to a riverhead jetty by 10 tonne tipper trucks and then further transported by barges to the Goa ports or transhipper for onward shipment. One plant is provided with a dry circuit to process high grade ore, while the remaining four wet plants process low grade ores. The Codli processing plants undergo regular maintenance and annual repairs are conducted during the monsoon season.

As at 31 March 2018 Vedanta Limited has undertaken an exploration and evaluation programme at the Codli mines which involved drilling a total of 79,379 metres in depth in 79,379 holes. The Codli mine deposits are extensively.

Power at the Codli mines is supplied through a government grid supply network with a maximum contracted demand of 5,000 kVA. The site's full water requirements are met from the rainwater accumulated in exhausted pits.

In fiscal year 2018, 2.4 million wmt of crude ore was produced from the Codli mines.

The economic cut-off grade at the Codli mines is determined by the requirement to meet various sales contracts. Vedanta Limited operates on a 50.0% iron operational cut-off grade in practice, as compared to the statutory cut-off grade of 45.0% iron.

Vedanta Limited operates the Gauthona Dusrifal mine, the lease of which is held by M/s Timblo Private Limited, as an ore raising contractor since 1989. Since 1983, Vedanta Limited had a common boundary working agreement with M/s Timblo Private Limited and, in 1989, Vedanta Limited acquired control of 40.8 hectares of the leasehold area. This mine is contiguous to the Codli mines. The mining method at the Gauthona Dusrifal mine is the same as that of the Codli mines described above. During fiscal years 2017 and 2018, there was no ore production from the Gauthona Dusrifal mine.

Sonshi mine. The Sonshi mine is situated in the North Goa District, approximately 34 km from Panaji and approximately 40 km north of the Codli mines. It comprises an open-pit mine. The area is well connected by metalled roads and the nearest railway station is at Tivim, approximately 25 km from the Sonshi mine. The river loading point, Amona, is nine km from the site and the port is approximately 35 nautical miles from the river loading point. The airport is approximately 50 km from the Sonshi mine.

The leasehold area of the Sonshi mine is 62 hectares. The Sonshi mine was operating under deemed consent until the temporary suspension of mining activities relating to iron ore by the state government of Goa. Due to the narrow width of the leasehold area, common boundary working agreements have been entered into with adjoining lessees to facilitate mining operations. The original mining concession was granted in 1953 to Cosme Costa and Sons. Production at the mine commenced in 1958. The agreements entered into by Vedanta Limited with Cosme Costa & Sons for the raising and sale of iron ore were in place till 31 March 2018. The Sonshi mine has been granted environmental clearance for a production level of 3.0 mmtpa till the date of order of Supreme Court of India to discontinue the mining operations.

The area surrounding the Sonshi mine is covered with laterite capping underlain by lumpy ore zone. The ore deposit at the Sonshi mine forms the northern limb of the northwest-southeast trending syncline. The formations dip 50 degrees to 60 degrees northeast. The principal deposit of the Sonshi mine comprises three distinct ore bodies that are folded into a syncline. The youngest ore body has a width of 50 metres, while the other ore bodies dip steeply to the northeast and have widths of approximately 20 metres to 25 metres. The intervening parting between the ore bodies comprised 50 metres of manganiferous clay and a 30 metre wide limonitic zone separating one ore body from the footwall phyllite. The depth extent of these bands has been outlined with deep drilling. Hematite is the major economic mineral in each of the bands.

The open-pit mining operations at the Sonshi mine are fully mechanised. The hard laterite capping is loosened either by drilling, blasting or ripping/dozing. The soft sub-lateritic zone is excavated and transported to respective laterite, clay and ore stacks. The material is then reloaded into smaller 10-tonne trucks and transported to the plants for processing and beneficiation, which involves crushing, scrubbing, log washing, classifying, double stage cycloning and thickening. The waste is transported to a dump stockpile six to seven km away. Processing operations for the Sonshi mine are similar to those of the Codli mines described above. The processed ore is transported to the Amona jetty, loaded in barges and sent to Mormugao port approximately 35 nautical miles away.

There was no processing plant on-site. The extracted ore was transported by a fleet of contractors with 10-tonne trucks to the processing plants at Amona (approximately nine km away) and at Cudnem (approximately six km away). The combined throughput capacity of the processing plants was 8.4 mmtpa till the date of order of Supreme Court of India to discontinue the mining operations. The plants underwent regular maintenance and annual repairs are carried out during the monsoon season.

No exploration activity was carried out in the mine during fiscal year 2018. The Sonshi mine was sampled in vertical and inclined drill holes with a total of 66,766 meters being drilled in 644 holes as of 31 March 2018.

Power at the mine is supplied through a government grid supply network and the maximum contracted demand is up to 1,000 KVA. A 625 KVA diesel generator is also available to supply power in case of the fluctuations at grid power. In fiscal year 2018, 0.25 million wmt of crude ore was produced from the Sonshi mine.

The economic cut-off grade at the Sonshi mine was determined by the requirement to meet various sales contracts and the need to maintain stockpiles to meet the contract. Vedanta Limited operated on a 50.0% iron operational cut-off grade in practice, as compared to the statutory cut-off grade of 45.0% iron.

Vedanta Limited acquired an adjoining mining lease for the Mareta Sodo mine in 2004 from Pandurang Timblo Industries. This mining concession was granted in 1955 and was operated intermittently until the mine was transferred to Vedanta Limited in November 2004. This mine has been granted environmental clearance by the MoEF for production of 1 mmtpa till the date of order of Supreme Court of India for stopping the mining operations. As of 31 March 2018, 17,886.8 metres have been drilled in 112 boreholes on the leased area. The mining method of the Mareta Sodo mine is the same as that of the Sonshi mine described above. In fiscal year 2018, 0.31 million wmt crude ore was produced from this mine. In addition to the Codli mines and right to the third-party mining lease at the Sonshi mine, Vedanta Limited has ten additional mining leases, of which four are non-operative leases. The operative mines are the Sanquelim mines with three contiguous leases with an environmental clearance of 0.2 mtpa, the Orasso Dongor mine (0.2 mtpa) and the Botvadeacho Dongor mine (0.2 mtpa). The non-operative leases are under exploration.

Karnataka. Vedanta Limited's main operations in Karnataka are at the A. Narrain mine which is located approximately 200 km northwest of Bangalore. The open-pit mine is operated by Vedanta Limited and is well connected by rail, with the nearest stations, Sasalu and Amruthapura, and M/s Mineral Enterprises server by Chikkajajur or MMEC railway siding located 16 km, 17 km and 4 km respectively, from the A. Narrain mine. The nearest port at Mangalore is approximately 430 km from the mine and the nearest airport is located at Bangalore, approximately 230 km from the mine.

The leasehold area of the mine is 160.6 hectares, which is classified into two blocks, namely the south block, which is 123.5 hectares, and the north block, which is 37.1 hectares. These two blocks are joined by a narrow stretch of land 30 metres in width and 660 metres in length along the eastern side of the leasehold area. Vedanta Limited has operated the mine since 1994. The MOEF had granted an environment clearance for 6 mtpa in the year 2009. However, due to conditions introduced by the Supreme Court of India, the production capacity of the mine was reduced to 2.29 mtpa. In April 2018, the Supreme Court of India has increased the cap on production of iron ore for the state from 30 to 35 million tonnes for Karnataka. As a result, the production capacity of the mine was enhanced to 4.51 mmtpa by the central empowered committee.

The geological formation of this region belongs to the Archean-Proterozoic age. The geology of the A. Narrain mine consists of Archean formations locally termed "Dharwars" which contain rich and large iron ore deposits. The leasehold area forms part of the Chitradurga-Tumkur schist belt and part of a regional isoclinal fold. The strike direction of the ore body dips westerly at an angle of about 60 degrees to 70 degrees. Hematite is the principal ore mineral and limonite, goethite and magnetite constitute the associated minor minerals of the mine. The mineralized horizon extends over a length of about two km. The footwall comprised decomposed quartzite and phyllite, and the stratigraphy is cross cut by late dolerite dykes and sills which are manifested by pink clayey zones in the mine area.

Currently, the north and the south block of the A. Narrain mine have mechanized mining operations. The open-pit mines have a bench height of seven metres, haulage roads of 12 metres to 15 metres in width and an overall pit slope of less than 26 degrees. The A. Narrain mine is equipped with dry process facilities for processing all grades of ore.

The lateritic overburden is removed either by blasting or ripping/dozing, loaded onto and transported by 30-tonne trucks. The ore mined is processed at the mine's processing facilities, which involves crushing and dry screening processes. The processed ore is then transported by road to the railway yard, for onward transport to customers in Karnataka, Goa and other places. Ore produced in Karnataka ranges from 56.0% to 60.0% iron content and comprises 82.0% fines and 18.0% lumps.

Since the mine was taken over by Vedanta Limited, exploration at the A. Narrain mine involved the drilling of a total of 61,857 metres in 628 boreholes as of 31 March 2018. The A. Narrain deposit is extensively sampled in vertical and inclined drill hole grid intervals in side direction of 50 metres and in cross section average of 25 metres with most of the holes covering a depth of 50 metres to 200 metres. Power at the mine is supplied by a 725 KV and 320 KV generator.

On 26 August 2011, the Supreme Court of India suspended mining activities in the Chitradurga and Tumkur districts of Karnataka. In view of this order, mining activities at this mine were stopped with immediate effect. On 18 April 2013, this suspension was lifted by the Court and in December 2013, the operations were resumed after getting necessary regulatory clearances. Although Vedanta Limited resumed operations in Karnataka based on the stage I forest clearance from the state government of Karnataka and a temporary working permission from the MoEF, the temporary working permission expired on 31 July 2014. Karnataka operations were halted for the period from 1 August 2014 to 27 February 2015. Vedanta Limited resumed operations in Karnataka after all statutory clearances were in place from 28 February 2015. The economic cut-off grade at the A. Narrain mine is determined by the requirement to meet various sales contracts and the need to maintain stockpiles to meet the contract specifications.

The reserves in proved reserve category at the Karnataka mines are estimated based on drilled boreholes spaced at 50 metres along predefined section lines and occasionally off of the section lines, the probable reserves are estimated based on drilled boreholes spaced at 50 metres from the proved reserves and the possible reserves are estimated based on drilled boreholes spaced at 25 metres from the probable reserves. As the area is drilled at approximately 50 metre by 50 metre grids, the physical continuity of the ore is well demonstrated.

SRL, Goa. SRL and its subsidiary Sesa Mining Corporation Limited extract iron ore from 11 mining leases spread across a total of approximately 970 hectares in Goa. SRL's operations consist of two major iron ore mining areas, one in Bicholim and the other in Surla, both located in North Goa and which together account for approximately 90% of SRL's total estimated iron ore reserves as of 31 March 2018. The Bicholim mine consists of five contiguous mining leases covering an area of 479.3 hectares in the north of Goa. The Surla mine consists of three contiguous mining leases covering an area of 253.4 hectares in the recognised iron ore belt of Pale-Velguem-Bicholim-Shirgao in the north of Goa. Mining operations started at the Bicholim mine and the Surla mine in 1958. Processed ore from the Bicholim and Surla mines is transported by SRL to loading jetties at Sarmanas and Surla/Sinori in north of Goa, and then loaded into barges and sent to Mormugao port in Goa, India, where it is then shipped to customers. SRL's mining assets include processing plants, barges, jetties, transhippers and loading capacities at the Mormugao port.

In fiscal year 2018, the combined production of the Bicholim and Surla mines was 1.3 million of crude ore.

WCL. WCL comprises of three concession areas (Bomi Hills, Bea Mountain and Mano River). The Ebola epidemic in Liberia resulted in stoppage of drilling and exploration work for iron ore during fiscal year 2015. The staff was evacuated as a result of the Ebola outbreak in 2015. In consideration of the suspension of exploration in Liberia, low iron ore prices, geo-political factors and no plans for any substantive expenditure resulting in continued uncertainty in the project, an impairment charge of $227.5 million was recognised in fiscal year 2016. Vedanta Limited is in discussions with the government to amend the Mineral Development Agreement to make this project more sustainable.

Principal raw materials

Iron ore operations. There are no direct raw materials used in Vedanta Limited's iron ore mining and processing operations. Indirect raw materials include power, fuel and lubricants. Vedanta Limited procures these indirect materials from various vendors. The electricity required for its operations is supplied by the government grid and supplemented by Vedanta Limited's owned and hired diesel generator sets. The prices of fuel and necessary lubricants are volatile and the price of power is dependent on tariffs imposed by State Governments.

Pig iron operations. The principal raw materials for the manufacture of pig iron are iron ore, metallurgical coke, limestone and dolomite.

Iron ore is largely sourced from mines in Karnataka and Goa. The iron ore is transported from Karnataka by truck/barges and railway rakes and from Goa by truck. Iron ore requirements are met by Vedanta Limited's own mines, and through purchases from other miners in Karnataka and Goa. Vedanta Limited's metallurgical coke requirements are met by its metallurgical coke division. Limestone and dolomite are purchased from mines in Karnataka and transported to Vedanta Limited by trucks.

Metallurgical coke. The principal raw materials for the manufacture of metallurgical coke are hard and semi-hard coking coals. These raw materials are imported from various international suppliers primarily from Australia.

Power. Electricity for Vedanta Limited's metallurgical coke and manufacturing operations is primarily supplied by its captive power plant which generates power from the waste gases of Vedanta Limited's metallurgical coke plant and blast furnace.

The gross value of fixed assets, including capital works-in-progress, was ₹12,312 million ($189 million) as of 31 March 2018.

Distribution, logistics and transport

Vedanta Limited's mining operations are advantageously located in Goa and are complemented by an efficient transportation network. In order to achieve higher volume and loading capacities and vessels with higher drafts, Vedanta Limited and Sesa Resources Limited own and operate transfer vessels, which are used for mid-stream loading at Goa. Vedanta Limited ships products from ports on the west coast of India and so, the annual monsoon season in Goa impacts its distribution operations from June to September. Vedanta Limited maintains a network of rail cars, barges and transhippers that are primarily used to facilitate the export of its ore to foreign customers. Vedanta Limited's fleet includes 33 barges with capacities between 1,600 to 2,500 tonnes per barge. Vedanta Limited also has one transhippers and a floating crane station with a combined rated capacity of up to 54,000 ton/day.

Sales from Vedanta Limited's Karnataka mines to Indian domestic customers take place on an ex-mine basis, and the transportation is handled by the customer.

Sales and marketing

At present, China is Vedanta's major buyer in the export market, and high iron ore inventories at major ports are being looked at as a catalyst that will change the course for fiscal year 2019 and the year next for iron ore prices.

Pig iron. Currently, the majority of the pig iron produced by Vedanta Limited is sold within India to foundries and steel mills. The sale of pig iron is generally done on a spot basis with prices valid for a month. The prices of pig iron are fixed on a delivered basis, with material generally being sent on a freight-to-pay and prepaid basis.

Metallurgical coke. Approximately 90.0% of the metallurgical coke produced by Vedanta Limited is used for production of pig iron. The balance is sold in the domestic Indian market to foundries, pig iron producers, ferrous alloys producers and cement plants.

The sale of metallurgical coke to other customers is done on a spot basis with prices valid for a month. Contracts with some ferrous alloy producers are on a quarterly or bi-monthly basis, where the quantity, grade and price are fixed.

Vedanta Limited has a marketing office at Panaji in Goa with indenting agents to sell the pig iron and metallurgical coke products. The sales and chartering needs are managed from the office at Goa.

Vedanta Limited's ten largest customers accounted for approximately 28.5%, 39.7% and 43.6% of revenue for iron ore business in fiscal years 2016, 2017 and 2018, respectively. No customer accounted for greater than 10.0% of Vedanta Limited's revenue in fiscal year 2018. One customer each accounted for greater than 10.0% of the revenue in fiscal year 2018.

Market share and competition

The prime export market for Goa Iron Ore is China. Revenue from the iron ore business for the nine month ended 31 December 2018 was $295.3 million. The Domestic sales of Iron Ore for this fiscal year 2018 was 4.0 million dmt, and the total exports done for the fiscal year 2018 was 3.6 million dmt. Out of the total sales in fiscal year 2018, 28.4% was from Karnataka mines and the remaining 71.6% was from Goa. The limit set by the environmental clearances is 20 MT for Goa and 30 MT for Karnataka.

Vedanta's primary competitors in both the public and private sectors in India include National Mineral Development Corporation, MMTC India Limited, Rungta Mines Ltd., Mineral Sales Private Limited and Essel Mining and Industries Limited. In addition, Vedanta's international competitors include Fortescue Metal Group, Sierra Leone, Vale, BHP Billiton Limited, and Rio Tinto.

Total sales including sales of confiscated ore purchased through e-auction, was 10.1 million dmt in fiscal year 2017 and 7.6 million dmt in fiscal year 2018.

Aluminium Business

Introduction

Vedanta's aluminium business is in Chhattisgarh and Odisha. Vedanta operates the business in Chhattisgarh through BALCO, in which Vedanta Limited has a 51.0% ownership interest as of 31 December 2018 and the remaining 49.0% is held by GoI. Operations in Odisha are held through Vedanta Limited.

Since acquiring the interest in BALCO, Vedanta Limited has worked to improve BALCO's operating performance through expansion and by improving operational efficiencies and reducing unit costs of production. BALCO currently sources the alumina required for its smelters from third-party suppliers on the international markets. BALCO intends to further improve its operating performance by continuing to reduce unit operating costs at the Korba facility, including by lowering power consumption and improving the operating efficiency of the captive power plant. BALCO also intends to focus on the production of fabricated products with higher margins.

BALCO is one of the four primary producers of aluminium in India. BALCO's partially integrated aluminium operations are comprised of two bauxite mines, 1,140 MW power plants, and refining, smelting and fabrication facilities in central India. BALCO's operations benefit from relatively cost-effective access to power, the most significant cost component in aluminium smelting due to the power-intensive nature of the process. This is to a considerable extent due to BALCO being an energy-integrated aluminium producer. BALCO has set up a 325,000 tpa aluminium smelter, the first 84 pots of which started commercial production in September 2014 and another 84 pots in August 2016. The remaining 168 pts has started commercial production from May 2017. The consent to operate the 1,200 MW power plant was received in January 2015, of which 900 MW was commissioned at various dates in phased manner during fiscal year 2016. The fourth unit was commissioned and started commercial production from 1 May 2016.

Pursuant to the re-auctioning of coal mines conducted by the GoI in February 2015, BALCO was successful in securing the Chotia coal block and was the highest bidder for the Gare Palma IV/1 coal block. The total reserves at the Chotia block is 17.5 million tonnes with an annual production capacity of one million tonnes and mining operations commenced in November 2015. Mining production at the Chotia mine restarted in October 2018.

BALCO's Bodai-Daldali bauxite mines provide a majority of the bauxite required for BALCO's smelters. The bauxite is transferred to the alumina refinery in Lanjigarh, which converts bauxite to alumina and supplies the alumina back to BALCO, for payment of a conversion price by BALCO to us, which is based on the actual cost of production plus a reasonable margin. The remainder of BALCO's alumina requirements is sourced from third parties and from Vedanta Limited on sale basis at Arm length price. The mining lease of the Mainpat bauxite mine has been renewed and it is valid up to 8 July 2042.

The Odisha operations include approximately two million tpa alumina refinery at Lanjigarh with associated 75 MW coal based captive power plant, 0.5 million tpa aluminium smelter with an associated 1,215 MW (nine units with a capacity of 135 MW each) coal based captive power plant, further 1.25 million tpa aluminium smelter, a 1,800 MW (three units with a capacity of 600 MW each) coal based captive power plant at Jharsuguda. The alumina refinery at Lanjigarh was commissioned in March 2010. The green field smelter project of 0.5 million tpa at Jharsuguda was implemented in two phases of 250,000 tpa each. The first phase was completed on 30 November 2009 and the second phase was completed on 1 March 2010. At Lanjigarh, production ramped up with recommencement of the second stream of the refinery during the first quarter of fiscal year 2017 (up to two million tonnes per annum debottlenecked capacity) while approval was received for the expansion of up to four million tonnes per annum.

Vedanta Limited has set up another 1.25 mtpa aluminium smelter in Jharsuguda. The first line of pots was commissioned by the end of July 2016 and as of 31 December 2018, the third, fourth and fifth line were also operational.

Revenue from Vedanta's aluminium business for the nine months ended 31 December 2018 was $3,299.2 million.

Principal products

Primary aluminium. Primary aluminium is produced from the smelting of metallurgical grade alumina. Vedanta produces primary aluminium in the form of ingots and wire rods for sale. Ingots are used extensively for aluminium castings and fabrication in the construction and transportation industries. Wire rods are used in various electrical applications especially in the form of electrical conductors and cables. Vedanta Limited also produces aluminium billets.

Rolled products. Rolled products, namely coils and sheets, are value-added products that BALCO produces from primary aluminium. Rolled products are used for a variety of purposes in different industries, including aluminium foil manufacturing, printing, transportation, consumer durables, building and architecture, electrical and communications, packaging and general engineering industries.

By-products. Vanadium sludge is a by-product of the alumina refining process and is primarily used in the manufacture of vanadium-based ferrous alloys.

Production

The following table sets out Vedanta's total production[1] from its Korba, Lanjigarh and Jharsuguda facilities for the periods indicated:

		Year Ended 31 March			Nine months ended 31 December	
Facility	**Product**	**2016**	**2017**	**2018**	**2017**	**2018**
				(Tonnes)		
Korba	Ingots	93,442	202,769	318,585	246,704	241,541
	Rods	217,650	205,277	223,983	159,853	166,429
	Rolled products	20,526	19,033	26,483	20,236	19,839
	Total	**331,618**	**427,079**	**569,051**	**426,792**	**427,809**
Lanjigarh	Alumina[2]	970,893	1,207,957	1,209,436	858,616	1,077,005
Jharsuguda	Ingots	333,249	474,289	590,375	412,966	608,766
	Rods	139,184	119,471	155,865	107,538	102,416
	Hot metal sold	8,892	46,540	44,257	32,874	24,800
	Billets	110,400	146,023	315,537	218,075	308,711
	Slab					5,296
	Total	**591,725**	**786,323**	**1,106,034**	**771,453**	**1,049,990**
Total	**Alumina[2]**	**970,893**	**1,207,957**	**1,209,436**	**858,616**	**1,077,005**
	Ingots	**426,691**	**677,058**	**908,960**	**659,670**	**850,307**
	Rods	**356,834**	**324,748**	**379,848**	**267,391**	**268,845**
	Rolled products	**20,526**	**19,033**	**26,483**	**20,236**	**19,839**
	Hot metal sold	**8,892**	**46,540**	**44,257**	**32,874**	**24,800**
	Billets	**110,400**	**146,023**	**315,537**	**218,075**	**308,711**
	Slab	**0**	**0**	**0**	**0**	**5,296**

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

(2) Alumina is used for the production of aluminium and rolled products. Approximately two tonnes of alumina is required for the production of one tonne of aluminium. Additional alumina needed for the production of aluminium is purchased from third parties and is not reflected in alumina production numbers.

The following table sets out the total bauxite ore production[1] for each of Vedanta's mines for the periods indicated:

		Year Ended 31 March			Nine months ended 31 December	
Facility	**Product**	**2016[3]**	**2017[4]**	**2018**	**2017**	**2018**
				(Tonnes)		
Mainpat (Open-pit) ...	Bauxite ore mined	455	73,170	589,320	439,861	0
	Ore grade	47.7%	43.6%	43.5%	43.4%	0%
Bodai-Daldali	Bauxite ore mined	1,033,300	1,065,300	581,920	581,800	319,656
(Open-pit)............	Ore grade	46.8%	46.9%	45.5%	43.1%	45.6%
Total.......................	Bauxite ore mined	860,170	1,755	1,171,240	1,021,661	319,656

(1) See "Presentation of Information — Basis of Presentation of Reserves and Resources — Reserves and Production" for an explanation of the basis of preparation of production amounts.

Ore Reserve base

The table below sets out BALCO's proved and probable bauxite Ore Reserves as of 31 March 2018:

	Proven Reserves			Probable Reserves			Total Proven and Probable Reserves		
Mines	**Quantity**	**Alumina**	**Silica**	**Quantity**	**Alumina**	**Silica**	**Quantity**	**Alumina**	**Silica**
	(in million tonnes)	(%)	(%)	(in million tonnes)	(%)	(%)	(in million tonnes)	(%)	(%)
Mainpat................	5.2	43.2	4.26	—	—	—	5.2	43.2	4.26
Bodai-Daldali	2.8	42.8	5.67	—	—	—	2.8	42.8	5.67
Total....................	8.0	43.1	4.76	—	—	—	8.0	43.1	4.76

Description of operations

Smelters and Refineries

The following table sets out the total capacities as of 31 March 2018 at BALCO's Korba and Vedanta Limited's Lanjigarh and Jharsuguda facilities:

	Capacity		
	Alumina(1)	**Aluminium**	**Power**
			(tpa) (MW)
Korba	—	245,000	1,140
Korba II..	—	325,000(2)	—
Lanjigarh	2,000,000	—	75
Jharsuguda	—	500,000(3)	3,615
Jharsuguda (SEZ Plant)..	—	1,250,000	—
Total..	2,000,000	2,320,000	5,100

(1) Alumina is used for the production of aluminium and rolled products. Approximately two tonnes of alumina is required for the production of one tonne of aluminium.

(2) For the 325,000 tpa smelter, 84 pots became operational during fiscal year 2015. An additional 84 pots became operational during fiscal year 2017 and the remaining 168 pots became operational from 1 May 2017.

(3) For the 1,250,000 tpa smelter, until 31 December 2018, the third, fourth and fifth lines are operational and out of 1,322 pots, 1,008 pots were operational.

Korba aluminium complex. BALCO's aluminium complex is located at Korba in the State of Chhattisgarh in central India. The aluminium smelter at Korba, which uses pre-baked Guiyang Aluminium Magnesium Design Research Institute technology or GAMI technology and has a capacity of 245,000 tpa, was fully commissioned in November 2006 at a cost of $543.2 million. The Korba alumina refinery was commissioned in 1973, used the conventional high pressure Bayer process and has a capacity of 200,000 tpa of alumina. The operations of the refinery have stopped since September 2009.

BALCO has set up a 325,000 tpa smelter at the Korba facility, first 84 pots of which commenced commercial production in September 2014 and the second set of 84 pots started commercial production in August 2016. The remaining 168 pots started commercial production in May 2017. BALCO's 100,000 tpa and 200,000 tpa smelters are no longer in operation since June 2009 and November 2009, respectively.

The fabrication facility at Korba has two parts, a cast house and a sheet rolling shop. The cast house uses Properzi CCR copper rod technology and has a foundry which has twin-roll continuous casters with a SNIF degasser and hydraulically driven semi-continuous ingot casting machine to produce ingots and wire rods. The sheet rolling shop has three parts: a hot rolling mill with a capacity of 75,000 tpa, an older cold rolling mill with a capacity of 30,000 tpa and a cold rolling mill commissioned in 2004 with a capacity of 36,000 tpa. Molten metal is cast into slabs and then either hot-rolled and sold as hot-rolled sheets or converted into cold-rolled sheets in the cold rolling mills. Alternatively, molten metal is directly used in strip casting and then fed to the cold rolling mills to be converted into cold-rolled sheets or coils.

Smelting requires a substantial continuous supply of power and interruptions can cause molten metal to solidify and damage or destroy the pots. Power for the Korba facility is for the most part provided by the coal-based 540 MW captive power plant commissioned in March 2006. The surplus generation from the power plant is supplied to the State Electricity Board and other customers. Following the shutdown of the 100,000 tpa aluminium smelter, power from its associated 270 MW power plant was sold in the merchant power market and presently 270 power plant is under suspension due to lower realization in merchant sale. BALCO has constructed a CPP 600 MW coal-based thermal power facility at Korba in the state of Chhattisgarh. The power generated from CPP 600 MW units is being utilized in the 325,000 tpa smelter.

Coal mining operations

Thermal coal is a key raw material required for the operation of BALCO's captive power plants. In September 2014, the Supreme Court of India cancelled all the coal blocks that were awarded by the Ministry of Coal between 1992 and 2012 to all companies in India. Consequently, in February 2015, the GoI conducted an auction to award mining rights to successful bidders for all such coal blocks. Pursuant to the re-auctioning of coal mines conducted by the GoI in February 2015, BALCO was successful in securing the Chotia coal block, in the state of Chhattisgarh and was the highest bidder for the Gare Palma IV/1 coal block. The total reserves at the Chotia block is 17.5 million tonnes with the annual production capacity of one million tonnes. Mining operations at the Chotia coal block commenced in November 2015 and stopped due to pending renewal of environment clearances and consent to operate. The Chotia coal block commenced operations again in October 2018.

The following tables contain details of Vedanta's coal mining operations.

(1) The Chotia coal mine is divided into two sub-blocks, Chotia I and Chotia II. Both of these blocks are assigned to the existing captive power facilities at the BALCO operations. The estimates provided below are based on the DMT report.

Blocks	**Gross CV range (Min — Max)**	**Sulphur**
	Kcal/kg	**(%)**
Chotia-I	3,565-6,476	0.30-0.60
Chotia II	3,967-6,152	0.30

* Sulphur data is not available for all seams. Total is based only on available seam data.

(2) This coal, which is thermal grade coal, would be blended with low GCV coal before being fed to the Boiler.

(3) The extractable coal indicated is considering all losses. This number reflects the final tonnage of the mine. There is no plan of putting wash plant either at the mine site or at the plant as the coal is of high GCV.

Lanjigarh alumina refinery. The Lanjigarh alumina refinery is located in the Lanjigarh district in the state of Odisha, which is located approximately 450 km from BALCO's Korba facility in the state of Chhattisgarh. In March 2007, Vedanta Limited began the progressive commissioning of a 1,000,000 tpa Greenfield alumina refinery, which expanded to 1.4 mmtpa of installed capacity in the fiscal year 2017, and the debottlenecked capacity has reached 1.7-2.0 million tonnes per annum as of 31 December 2018, (which is contingent on the quality of bauxite). Lanjigarh alumina refinery also has associated 75 MW captive power plant, which can be expanded to 90 MW. The captive power plant is fully operational and can meet the power requirements of the refinery. Vedanta Limited is currently in discussions with government authorities for sourcing adequate supply of bauxite. Production at the alumina refinery does not affect production at the smelters.

Vedanta plans to expand the alumina refining capacity at Lanjigarh to six mtpa from the current two mtpa. The expansion will be undertake in two phases. The first phase will involve an expansion of approximately two to four mtpa and the second phase will involve an expansion of approximately four to six mtpa. Vedanta has received approvals and environmental clearances for expanding the Lanjigarh refinery to 4 mtpa on 20 November 2015, and further received environmental clearances for expanding the refinery to six mtpa. Vedanta further received the consent to establish the six mtpa capacity and a consent to operate the two mtpa capacity. In October 2018, Vedanta's Board has in-principal approved the expansion of the refinery up to four mtpa. As of 31 December 2018, ₹41,240 million ($591 million) were spent on the Lanjigarh expansion project.

The second stream operations have commenced at the Alumina refinery from April 2016 and the debottlenecked capacity has reached 1.7-2.0 million tonnes per annum (although this is contingent on the bauxite quality). Vedanta's Board has provided in-principal approval for a further ramp-up to four mtpa which will be done in a phased manner.

Jharsuguda aluminium smelter. The Jharsuguda aluminium smelter is located in Jharsuguda in the state of Odisha, India. Operations in the Jharsuguda facility were implemented in two phases. The first phase has a production capacity of 250,000 tpa and was completed in November 2009. The second phase was commissioned in June 2010. A total of nine units of the associated 1,215 MW coal-based thermal captive power plant of 135 MW each have been commissioned. The captive power plant units meet the power requirements of the Jharsuguda smelter and all other power requirements of this facility. The Jharsuguda 500,000 tpa smelter suffered an unfortunate pot outage incident in April 2017. 228 pots out of the total 608 pots were taken out of production, however by 31 December 2018, all pots were operational. There were no injuries in the incident.

Vedanta Limited is also setting up an 1,250,000 tpa aluminium smelter. For the 1,250,000 tpa aluminium smelter, the third, fourth and fifth lines of the four plotlines were operational as of 31 December 2018. Power to this smelter will be provided by Vedanta Limited's 2,400 MW power plant in Jharsuguda. Three units of 600 MW each are identified as captive power plant for its aluminium business, with effect from 1 April 2016 and one unit is considered as independent power plants for commercial power generation. Operations of the first three units are captured in Commercial Power Sector for period up to 31 March 2017 and aluminium sector thereafter.

Balco Korba

On 7 October 2006, BALCO entered into a memorandum of understanding with the state government of Chhattisgarh and the Chhattisgarh State Electricity Board, under which, among other things, feasibility studies were undertaken to build a thermal coal-based 1200 MW power facility, along with an integrated coal mine in the state of Chhattisgarh at an estimated cost of ₹46,500 million ($697.6 million). The project was disrupted in September 2009 due to the collapse of a chimney under construction during heavy rains and lightning at Korba. There were 40 fatalities in the accident and SEPCO Electric Power Construction Corporation, the contractor and the sub-contractor Gamon Dunkerley and Company Limited, are the subject of an investigation by the Chhattisgarh government. The hearing would be listed in due course of time as the trial has been stayed by the High Court.

On 8 August 2007, BALCO entered into a memorandum of understanding with the state government of Chhattisgarh for a potential investment to build an aluminium smelter with a capacity of 650,000 tpa at Chhattisgarh at an estimated cost of ₹81,000 million ($1,215.1 million). BALCO has received environmental clearances for both phases of the project. Trial production started in February 2014 from the 325,000 tpa aluminium smelter and 84 pots started commercial production from September 2014. The second 84 pots started commercial production in August 2016 and balance 168 pots in May 2017.

BALCO received a coal block allocation in fiscal year 2007 of which 211 million tonnes for use in its captive power plants which was subsequently deallocated in fiscal year 2015 pursuant to the orders of the Supreme Court of India.

Mines

Chhattisgarh. BALCO has two captive bauxite mines, namely, the Mainpat bauxite mine and the Bodai-Daldali bauxite mine, in the state of Chhattisgarh in central India. Mainpat is an open-pit bauxite mine located in the Surguja district of the state of Chhattisgarh. The Mainpat mine has been in production since 1993 and has a leased hold area of 6.39 km^2. The bauxite extraction limit for the mine granted by MoEF is 750,000 tpa. The mining lease of Mainpat mine is valid until 8 July 2042. Environmental clearance for the Mainpat mine has been renewed by the MoEF and is valid up to 16 September 2038. The Forest Clearance for the entire revenue forest land co-terminus with the Mining Lease period obtained and the Mining operation resumed in October 2016. During fiscal year 2018-19 mining operations were disrupted as ore quality rendered operations uneconomical.

The Bodai-Daldali deposits are located approximately 260 km from Korba in the Kawardha district of the state of Chhattisgarh. Bodai-Daldali was commissioned in 2004 and the mining lease that is valid until 26 March 2047. The bauxite extraction limit for Bodai-Daldali Mines granted by MoEF is 1,250,000 tpa.

The Chhattisgarh bauxite deposits are situated over a plateau with steep scarps on both sides, at an elevation of approximately 1,000 meters above sea level, for Mainpat, and approximately 940 meters above the surrounding land, for Bodai-Daldali. Bauxite is generally one meter to three meters thick and lies within a laterite sequence overlying thick tertiary basalts of the Deccan Traps. The cover of laterite and thin top soil is up to five meters thick but is generally less than two meters. Bauxite outcrops around much of the plateau rims.

A typical profile of the Chhattisgarh deposits comprises topsoil and soft overburden above the laterite. The upper laterite consists of hard, lose or indurated bauxite pebbles and boulders with a clear contact with the underlying hard bauxites. The bauxite occurs in discontinuous lenses up to four meters in thickness with laterite infilling joints and fractures with the bauxite. The contact with the softer lower laterite is usually gradational and irregular.

The bauxite is hard with a natural moisture content of 5.0% to 10.0%, with an in-situ density of 2.4 tonnes per meter to 2.4 tonnes per $meter^3$. It comprises primarily gibbsite with boehmite and minor diaspore. The reactive silica content is low and iron is present in the form of hematite and aluminous goethite. The average grade of the bauxite is approximately 44.53% aluminium oxide and 4.44% of silica as of 31 March 2018.

All mining and transportation at both mines are undertaken by contractors. One thin top soil layer is removed by an excavator and is either transported to an adjacent storage point or an area that is being backfilled. The laterite layer is drilled and blasted. The overburden is then removed by backhoe excavators and 15 tonne dumpers. Broken ore is hand-sorted, leaving waste material behind. Ore productivity is around two to three tonnes per person per day in the dry season which decreases to 1.25 to 1.75 tonnes per person per day in the wet season.

The current exploration drilling program is based on a 50-meter square pattern and is reduced to a 25-meter centres for detailed mine planning. Sampling is normally in 0.4 meter lengths and core is currently split and retained for future reference. Bauxite samples are tested for silica and aluminium oxide at laboratories situated on site and at the Korba plant. Selected sample are re-assayed as part of a quality control program.

Since commencement of operations, the Mainpat mine has produced approximately 8.09 million tonnes of bauxite. During fiscal year 2018 there was production totalling approximately 589,320 tonnes at 43.48% aluminium oxide.

As of 31 March 2018, BALCO estimated reserves at Mainpat to be 5.2 million tonnes and the remaining mine life of the Mainpat mine to be approximately six to seven years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan.

Total production at the Bodai-Daldali mine since the commencement of production has been 7.54 million tonnes of bauxite, with production in fiscal year 2018 totalling to approximately 581,920 tonnes with 45.45% aluminium oxide. Power is supplied by on-site diesel generators and ground water provides the water requirements for the mine.

As of 31 March 2018, BALCO estimates the reserves at Bodai-Daldali to be 2.8 million tonnes and the remaining mine life to be approximately 2 years based on (i) reserves; and (ii) planned production which is determined on the basis of a life-of-mine plan. The cut-off grade used to define the reserves at BALCO's mines was 38.0%.

In fiscal year 2018, all mining and transportation of the bauxite was done by contractors and the total cost for this was ₹2,704 ($41.95) per tonne of bauxite.

Vedanta believes that the deposits at the Mainpat and Bodai-Daldali mines fulfil the requirements of being classified as reserves. The reserves as of 31 March 2018 at BALCO's mines at Mainpat and Bodai-Daldali have been determined by verifying that the integrated operation is economic at an aluminium price of $1,747 per ton, which is the average metal price for fiscal years ended 31 March 2016, 2017 and 2018.

The mining recovery factors applied to determine the reserves for both mines are 65.0%. The grade dilution factor is reconciliation between the actual mined/dispatched grades obtained and in-situ grade values. The grade correction/dilution factors applied for Mainpat and Bodai-Daldali mines are Al2O3 — 97%, SiO2 — 103% and Al2O3 — 97%, SiO2 — 103% respectively. The parameters for Mainpat are derived from the reconciliation of actual production against the geological model, while the parameters for Bodai-Daldali are based on estimates.

In fiscal year 2018, stripping ratio at the Mainpat mine was 1:1.45, while the stripping ratio at the Bodai-Daldali mine was 1:1.14. The stripping ratio for the remaining reserves at Mainpat is 2.15 tons of waste per ton of ore, while at the Bodai-Daldali mine, it is 2.16 tons of waste per ton of ore.

Shevaroy. The Shevaroy bauxite mine is located eight km northeast of Yercaud town in the state of Tamil Nadu in India, which is approximately 85 km east of the Mettur Dam complex, where Vedanta Limited's aluminium operations were located when they were operational. Work at the Shevaroy mine has been suspended since Vedanta Limited's aluminium operations ceased in November 2008. Vedanta Limited estimates the balance reserves of the portion of the Shevaroy mine which Vedanta Limited is permitted to mine was 0.04 million tonnes as of 31 March 2016. If mining recommences at this mine, its life is estimated by Vedanta Limited to be approximately three months.

Kolli Hills. The Kolli Hills bauxite mine is located in the state of Tamil Nadu in India, approximately 150 km southeast of the Mettur Dam complex, where Vedanta Limited's aluminium operations were located when they were operational. Work at the Kolli Hills mine has been suspended since Vedanta Limited's aluminium operations ceased in November 2008. It is estimated the balance reserves of the portion of the Kolli Hills mine which Vedanta Limited is permitted to mine was 0.11 million tonnes as of 31 March 2016. If mining recommences at this mine, its life is estimated by Vedanta Limited to be approximately seven months.

Principal raw materials

The principal inputs for Vedanta's aluminium operations are bauxite, alumina, power, water, carbon, caustic soda and certain other raw materials. In the past, Vedanta has been able to secure an adequate supply of the principal inputs for its aluminium business.

Bauxite. Bauxite is the primary raw material used in the production of alumina. Currently, Vedanta Limited does not have any dedicated mining source and are in the process of identifying bauxite mining sources across India. Currently, bauxite is being sourced mainly through imports (50%), from the domestic market in the west coast (2%), and BALCO mines (30%) and, the remaining from Madhya Pradesh, Chhattisgarh, Jharkhand and Andhra Pradesh. BALCO supplies bauxite to the Lanjigarh refinery, on per job basis and receives alumina produced from the supplied bauxite.

Alumina. Alumina is the primary raw material used in the production of aluminium. Vedanta's aluminium business currently sources alumina largely from third-party suppliers in international markets. The alumina sourced externally is metallurgical grade calcined alumina with a minimum alumina content of 98.6% on a dry basis. In fiscal years 2016, 2017 and 2018, BALCO purchased 299,357 tonnes, 447,883 tonnes and 766,457 tonnes of alumina at an average price of, $323, $314, and $425 per ton, respectively, on a cost, insurance and freight or CIF basis at the port of Vizag, Kakinada and Gangavaram, India. Similarly, in fiscal years 2015, 2016, 2017, 2018 and for the nine months ended 31 December 2018, Vedanta Limited purchased 0.37 million tonnes, 0.47 million tonnes, 0.77 million tonnes, 1.38 million tonnes, and 1.31 million tonnes of alumina at an average price of $357 per mt, $353 per mt, $311 per ton, $400 per mt, and $520 per mt respectively, on a cost, insurance and freight basis at the port situated in the state of Andhra Pradesh.

Power. Smelting primary aluminium requires a substantial, continuous supply of electricity. As a result, power is a key input at BALCO's Korba facility, where it is provided by two coal-based captive power plant of 540 MW and CPP 600 MW. The captive power plant has historically been dependent upon coal allocations from Coal India. In November 2007, BALCO received a coal block allocation of 211.0 million tonnes for use in its captive power plants. The said coal block was deallocated during fiscal year 2015. However, Vedanta received another coal the Chotia coal block through the e-auction. As of 31 March 2018, Vedanta also secured linkage coal of 4.1 million tonne per annum for its captive power plants for a term of 5 years.

Power for BALCO's mines is provided by on-site diesel generators. BALCO has constructed a 1,200 MW coal-based thermal power facility three out of four units of which were commissioned during fiscal year 2016 and the forth unit has commenced operations during May 2016. Of the 1200 MW facility, power generated from two 300 MW units is being utilized in the 325,000 tpa smelter being set up and the power from the balance 600 MW units will be sold to third parties in the fiscal year 2018.

Vedanta Limited's nine coal-based captive power plant of 135 MW each at Jharsuguda facility have been sourcing coal through coal linkage from Mahanadi coal field, imports, e-auction and from washeries. The linkage coal quantity from Mahanadi coal field is transported through bottom discharge wagons. The power plant at Jharsugada sources coal from sources such as the GoI's coal mining companies, long-term coal supply agreements with various state governments under PPAs, from spot auctions and from imports. In fiscal year 2016, the total coal purchased from these other sources was 7.21 million tonnes, for the fiscal year 2017 it was 7.11 million and for the fiscal year 2018 it was 15.2 million.

The total volume of coal consumed annually by coal-fueled power plants is largely dependent on the amount of generation and is approximately 16.5 million tonnes as of 31 December 2018.

Water. Water is also an important input for BALCO's captive power plants. BALCO sources its water requirements at Korba from a nearby canal, with the water transported by pipelines. BALCO is currently in a dispute with the National Thermal Power Corporation ("NTPC") regarding the right of way for its water pipeline that supplies water to its 270 MW captive power plant, which has been built through National Thermal Power Corporation premises. Arbitration proceedings commenced in 2009 and the order was reserved on 30 June 2014. BALCO and National Thermal Power Corporation submitted a joint survey report to the Arbitrator. On the issue of easmentary rights, the Arbitrator issued its award dated 11 January 2016 in favour of BALCO and rejected all counter claims of the NTPC. The NTPC has challenged the said award by filing an application under section 34 before the Honorable High Court of Delhi which was listed for admission on 5 May 2016 and the court has ordered for issuance of notice. The next hearing will take place on 15 October 2019. BALCO has also filed the application under section 34 before the Honorable High Court of Delhi with respect to claims which were rejected by the Arbitrator which is to be listed in due course.

Vedanta Limited's Jharsuguda facility sources its water requirements at Jharsuguda from Hirakud Dam situated over a distance of 33 km, with the water transported by pipelines. Water from the dam is stored at water reservoir inside the plant, from where the water is purified in a demineralized plant to make it fit for use in the power plant.

Carbon. Carbon is an important raw material to the aluminium smelting process. Carbon is used in the process of electrolysis, in the form of cathodes and anodes, with the latter being the biggest component of Vedanta Limited's carbon costs. Anodes are made up of carbonaceous material of high purity. For pre-baked anodes, green carbon paste made of calcined petroleum coke and coal tar pitch is compacted or pressed into the required form. These anodes are baked before their use in electrolytic cells or pots. Both BALCO and Vedanta Limited has in-house facilities to manufacture carbon anodes to meet their entire carbon anode requirements at Korba and Jharsuguda facility, respectively. Calcined petroleum coke, coal tar pitch and fuel oil, which are the key ingredients for the manufacture of carbon anodes, are sourced primarily from the Indian market. There is an adequate supply of these raw materials in India, though their prices are generally determined by movements in global prices. At times, based on commercial comparison, orders for imports are also placed.

Caustic soda. Caustic soda is a key raw material used to dissolve the bauxite in the alumina refining process. The caustic soda requirement varies significantly depending on the silica content of the bauxite and the technology employed.

Other raw materials. Vedanta Limited and BALCO uses other raw materials such as fluorides and other chemicals. For these raw materials, there are several sources of supplies in the domestic/international markets and Vedanta does not currently foresee any difficulty in securing supplies when needed.

Distribution, logistics and transport

Bauxite mined from the Mainpat and Bodai-Daldali mines is transported by road and rail Alumina Refinery at Lanjigarh of Vedanta Limited for conversion into Alumina and Alumina from Vedanta Lanjigarh is transported through Rail to BALCO's Korba facility. Alumina purchased from third-party suppliers is obtained from a combination of domestic sources and imports, and is transported to the Korba facility by rail and the Jharsuguda facility by road from domestic third-party suppliers or ports. BALCO's and Vedanta Limited's aluminium products are transported from the Korba facility and the Jharsuguda facility, respectively to domestic customers through a combination of road and rail, and shipped for export.

Sales and marketing

BALCO's aluminium businesses' ten largest customers accounted for 58.4%, 69.1% and 65.4% of its revenue from the aluminium business in fiscal years 2016, 2017 and 2018 respectively. One of BALCO's customers accounted for more than 11% of BALCO's revenue in fiscal year 2018, two of BALCO's customers accounted for greater than 16.0% of BALCO's revenue in fiscal years 2017 and two of BALCO's customers accounted for more than 23.19% BALCO's revenue in fiscal year 2016.

Vedanta Limited's 10 largest customers of the Odisha aluminium business accounted for 46.3%, 53.4%, 63.1% and 68% of its Odisha aluminium business in fiscal years 2015, 2016, 2017 and 2018, respectively. Top two customers accounted for more than 10% of Odisha's aluminium business revenue in fiscal year 2018. None of the customers accounted for greater than 10.0% of Odisha aluminium business in fiscal year 2015.

BALCO's and Vedanta Limited's aluminium sales and marketing head office is located in Mumbai, and it has field sales and marketing offices in most major metropolitan centers in India. Currently, Vedanta's aluminium business sells its products primarily in the Indian market, with limited focus on exports. However, with the further commissioning of the new 325,000 tpa aluminium smelter at Korba and the three lines of new 1,250,000 tpa aluminium smelter at Jharsuguda, a significant part of the additional production will be sold in the export market. Vedanta's aluminium business's key customers include conductor manufacturers, state road transport corporations, railways, defence contractors and electrical equipment and machinery manufacturers.

Domestic sales are normally conducted on the basis of a fixed price that BALCO and Vedanta Limited determine from time to time based on the LME spot prices plus regional premiums, as well as domestic supply and demand conditions. The price for the aluminium which BALCO and Vedanta Limited sell in India is normally higher than the price it charges in the export markets due to the Indian tariff structure, smaller order sizes that domestic customers place and the packaging, storing and truck loading expenses incurred when supplying domestic customers.

Vedanta's export sales of aluminium are currently through short-term contracts as well as on a spot basis at a price based on the LME price plus a premium.

Projects and developments

Lanjigarh

Vedanta Limited plans to expand the alumina refining capacity at Lanjigarh to six mtpa from the current two mtpa. The expansion will be done in two phases. The first phase will involve an expansion of approximately two to four mtpa and the second phase will involve an expansion of approximately four to six mtpa. Vedanta Limited has received approvals and environmental clearances for expanding the Lanjigarh refinery to 4 mtpa on 20 November 2015, and further received environmental clearances for expanding the refinery to six mtpa. Vedanta further received the consent to establish the six mtpa capacity and a consent to operate the two mtpa capacity. In October 2018, Vedanta's Board has in-principal approved the expansion of the refinery up to four mtpa. As of 31 December 2018, ₹41,240 million ($591 million) were spent on the Lanjigarh expansion project. As of 31 December 2018, ₹41,240 million ($591 million) was spent on the Lanjigarh expansion project.

Jharsuguda

Vedanta Limited is also setting up another 1,250,000 tpa aluminium smelter in Jharsuguda. An investment of approximately ₹145,000 million ($2,238 million) is being made to set up a second 1,250,000 tpa aluminium smelter. As of 31 December 2018, ₹146,624 million ($2,255 million) was spent on this project. The commissioning of pots at the first line of the 1.25 mtpa aluminium smelter at Jharsuguda was completed at the end of July 2016. The Jharsuguda 500,000 tpa smelter suffered an unfortunate pot outage incident in April 2017. 228 pots out of the total 608 pots were taken out of production, however by 31 December 2018, all pots were operational. There were no injuries in the incident.

Market share and competition

According to the AAI, BALCO and Vedanta Limited are two of the four primary producers of aluminium in India and together had a 40% market share by sales volume in India in fiscal year 2018 while its main competitors are Hindalco and National Aluminium Company Limited with a 39% and 21% market share by sales volume in India in fiscal year 2018, respectively.

Aluminium ingots, wire rods and rolled products are commodity products and BALCO and Vedanta Limited compete primarily on the basis of price and service, with price being the most important consideration when supplies are abundant. Aluminium competes with other materials, particularly plastic, steel, iron, glass, and paper, among others, for various applications. In the past, customers have demonstrated a willingness to substitute other materials for aluminium.

Commercial Power Generation Business

Introduction

Vedanta has been building and managing captive power plants in India since 1997, and currently operates multiple power plants across locations in India. Vedanta's commercial power generation business in India leverages its experience in building and managing captive power plants that support its primary businesses. As of 31 December 2018, the total power generating capacity of Vedanta Limited's thermal power plants, wind power plants and gas based plants was 9,000 MW. As of 31 December 2018, the total power generating capacity of Vedanta's non-captive thermal power plants and wind power plants was approximately 3,830.7 MW.

Vedanta owns and operates several commercial power plants, namely Vedanta Limited's 600 MW coal-based thermal power plant in Jharsuguda, MEL's 106.5 MW coal-based thermal power plant in Mettur Dam, HZL's wind power plants in Gujarat, Karnataka, Maharashtra, Tamil Nadu and Rajasthan aggregating 274.2 MW, BALCO's 270 MW coal-based thermal power plant, and TSPL's 1,980 MW coal-based thermal power plant at Talwandi Sabo.

Vedanta Limited operates a coal-based thermal power plant of 2,400 MW, four units of 600 MW each at Jharsuguda. The three units of 600 MW each of coal-based thermal power plants in Jharsuguda have been converted from commercial power plants to captive power plants from 1 April 2016 and is now part of the aluminium business and one unit is an independent power plant for commercial power generation. Operations of the first three units are captured in Commercial Power Sector for the period up to 31 March 2017 and in the aluminium sector thereafter.

BALCO operates coal-based thermal power plant of 270 MW which previously for Captive consumption before the shutdown of 100,000 tpa aluminium smelter at Korba. BALCO operates coal-based thermal power plant of 1,200 MW, four units of 300 MW each at Korba. The first two units are identified as independent power plants and are referred to as IPP 600 MW. The first 300 MW unit of the IPP 600 MW was capitalized on 1 August 2015 after the successful completion of trial runs. The second unit has been commissioned and commenced commercial production on 1 May 2016.

Vedanta Limited has secured coal linkages of 8 mtpa through Tranche I and II auctions for the power plants at BALCO and Jharsuguda. A further 2.0 mtpa of coal linkages was secured in a Tranche III auction, and Vedanta Limited is working towards improved materialisation of these linkages.

Sales of units of power decreased from 12,916 million units in fiscal year 2017 to 11,041 million units of power in fiscal year 2018. The revenue from Vedanta's commercial power generation business increased from $835.9 million in fiscal year 2017 to $877.0 million in fiscal year 2018 mainly due to one-off revenue recognition of $35 million and $22 million at BALCO and at Jharsuguda IPP respectively partially offset by a decrease in power sales. Revenue from the commercial power generation business was $698 million in nine months ended 31 December 2018, an increase of $95 million, or 15.8% from $603 million in nine months ended 31 December 2017.

The following table sets out information relating to Vedanta's power plants:

Fiscal Year Commissioned	Capacity	Location	Fuel Used	CPP/IPP
	(MW)			
1988[1]	270.0	Korba	Thermal Coal	IPP
1997	24.0	Tuticorin	Liquid fuel	CPP
1999	75.0	Mettur Dam	Thermal Coal	IPP
2003	7.4	Debari	Liquid fuel	CPP
2003	6.0	Zawar	Liquid fuel	CPP
2003	14.8	Chanderiya[2]	Liquid fuel	CPP
2003	4.8	Cambay	Gas based	CPP
1999 and 2003	10.0	Ravva	Gas based	CPP
2005	7.5	Tuticorin	Liquid fuel	CPP
2005	15.0	Pantnagar	Liquid fuel	CPP
2005	154.0	Chanderiya	Thermal coal	CPP
2006	540.0	Korba	Thermal coal	CPP
2007	75.0	Lanjigarh	Thermal coal	CPP
2007	107.2	Gujarat and Karnataka	Wind[3]	IPP
2007	30.0	Amona	Gas based	CPP
2008	80.0	Chanderiya	Thermal coal	CPP
2009	80.0	Zawar	Thermal coal	CPP
2009	16.0	Gujarat and Karnataka	Wind[3]	IPP
2009	675.0	Jharsuguda	Thermal coal	CPP
2009	25.0	Mettur Dam	Thermal coal	IPP
2010	540.0	Jharsuguda	Thermal coal	CPP
2010	3.3	Rajasthan Raageshwari Gas terminal	Gas based	CPP
2010	14.4	Gujrat Viramgam Terminal	Gas based	CPP
2010	32.5	Pipeline Above Ground Installations	Gas based	CPP
2011	1,200.0	Jharsuguda	Thermal coal	CPP
2011	48.0	Rajasthan and Karnataka	Wind	IPP
2011	174.3	Dariba	Thermal coal	CPP
2012	103.0	Karnataka, Maharashtra, Rajasthan and Tamil Nadu	Wind[3]	IPP
2012	600.0	Jharsuguda	Thermal coal	IPP
2012	30.0	Amona	Gas based	CPP
2013	600.0	Jharsuguda	Thermal coal	CPP
2013	80.0	Tuticorin	Thermal coal	CPP
2013	6.5	Mettur Dam	Thermal coal	IPP
2014	80.0	Tuticorin	Thermal coal	CPP
2010 and 2014	60.0	Rajasthan Mangala Processing terminal	Thermal coal	CPP

Fiscal Year Commissioned	Capacity	Location	Fuel Used	CPP/IPP
	(MW)			
2015	31.3	Gujrat Bhogat terminal	Thermal coal	CPP
2015	660.0	Mansa-Talwandi Sabo Road, Mansa, Punjab	Thermal coal	IPP
2016	660.0	Mansa-Talwandi Sabo Road, Mansa, Punjab	Thermal coal	IPP
2016	600.0	Korba	Thermal coal	CPP
2016	300.0	Korba	Thermal coal	IPP
2017	300.0	Korba	Thermal coal	IPP
2017	660.0	Mansa-Talwandi Sabo Road, Mansa, Punjab	Thermal coal	IPP
Total	9,000.0			

(1) Commissioned by BALCO prior to the acquisition of BALCO in 2001 which is not being used for captive purposes at present due to the closure of operations at the 100,000 tpa aluminium smelter.

(2) Transferred from Debari to Chanderiya in March 2009.

(3) The wind power plants are not for captive use.

The following table sets out the total power sales in MU for the fiscal years ended 31 March 2016, 2017 and 2018, and for the nine months ended 31 December 2017 and 31 December 2018.

	For the Fiscal Year Ended 31 March			Nine Months Ended 31 December	
Facility	2016	2017	2018	2017	2018
Jharsuguda 2400 MW coal based thermal power plant	7,319	3,328	1,172	768	424
TSPL	2,792	6,339	7,915	5,657	7,624
BALCO 270 MW (i.e. CPP)	169	—	—	—	—
BALCO 600 MW	1,025	2,609	1,536	1,148	1,575
HZL — Wind Power Plant	415	448	414	356	372
MALCO — 106.5 MW coal based thermal power plant	402	190	—	4	—
Total	12,122	12,916	11,037	7,932	9,995

Commercial power plants

Vedanta Limited. Vedanta Limited has a 2,400 MW coal based thermal power plant facility (comprising of four units of 600 MW each) in Jharsuguda in the state of Odisha. The three units of 600 MW each of coal-based thermal power plants in Jharsuguda have been converted from commercial power plants to captive power plants from 1 April 2016 and is now part of the aluminium business and one unit is an independent power plant for commercial power generation. Operations of the first three units are captured in Commercial Power Sector for the period up to 31 March 2017 and in the aluminium sector thereafter.

The plant has been built with an investment of approximately ₹82,000 million ($1,265 million). The first unit of commercial operation commenced in November 2010. The second unit was operational on 20 March 2011, the third unit was operational on 19 August 2011. The fourth unit was operational on 26 April 2012.

This facility requires approximately 15 million tpa of coal. Vedanta Limited has applied to the Ministry of Coal for allotments of coal blocks and long term coal linkages, which are long term supply contracts for delivery of coal meeting specific contract specifications for captive use. In January 2008, the Ministry of Coal jointly allocated the coal blocks in the Rampia and Dip Side Rampia in the state of Odisha to six companies, including Vedanta Limited. The six companies entered into an agreement to jointly promote a new company, Rampia Coal Mine and Energy Private Limited, or RCMEPL which was incorporated in February 2008.

On 16 April 2008, RCMEPL submitted an application to the state government of Odisha for the grant of a prospecting license, or a license for exploration, which was pending approval from the regulatory authorities. However, Ministry of Coal issued a letter on 15 January 2014 de-allocating the coal block from RCMEPL. RCMEPL has approached the High Court of Odisha against the action of the Ministry of Coal. On 24 September 2014, the Supreme Court of India ordered for the cancellation of coal blocks allotted by the government over past few decades.

The total volume of coal consumed annually by Odisha's coal-fueled power plants is largely dependent on the amount of generation and ranges between 5.5 million to 6.4 million tonnes.

Additionally, Vedanta Limited has been allotted a coal linkage of 2.6 mmtpa for the Jharsuguda project to meet the coal requirements of one of the units of 600 MW of the 2,400 MW power facility, for which Mahanadi Coalfields Limited has signed fuel supply agreement for supplying 80% of the letter of assurance quantity. For the remaining 3 X 600 MW units, Vedanta Limited is buying coal primarily through the auction route. The facility is also designed to include a water reservoir, railway marshalling yard, coal stockpile, ash pond and other required facilities. The power generated from the 2,400 MW power plant is sold to customers such as, state electricity boards, state-owned utility companies, power trading companies and private entities.

In September 2006, Vedanta Limited entered into a power purchase agreement with Grid Corporation of Orissa Limited ("GRIDCO"), under which GRIDCO was granted the right to purchase up to 25.0% of the installed capacity of the power plant after adjustments for auxiliary consumption by us, for approximately up to 561 MW from this project. Further, GRIDCO shall at all times have the right on behalf of the state government of Odisha to receive from the Jharsuguda power project, 7.0% of the power generated (after adjustments for auxiliary consumption by us), up to approximately 157 MW of power at variable cost, as determined by the Odisha Electricity Regulatory Commission ("OERC"). GRIDCO will have the right to purchase power from us once every five years, for a period of 25 years from the date of commercial operation of the last unit. This right is an option to purchase rather than a binding commitment of GRIDCO.

In the event GRIDCO decides not to avail part or whole of the above mentioned right during any five year period, it shall give six months' notice of the same to us prior to the commencement of such period. Power from the power plant to be purchased by GRIDCO will be evacuated by GRIDCO from the bus bar (which is the discharge point of the power plant) of the project. For the evacuation of the remaining power, Vedanta Limited has constructed a 400 KV Loop-In-Loop-Out I and a 400 KV Loop-In-Loop-Out II transmission line to connect to the transmission line being developed by Power Grid Corporation India Limited ("PGCIL") near Jharsuguda. Vedanta Limited entered into an agreement with PGCIL in July 2010 to build the dedicated transmission system required for evacuating power from the power plant to the pooling units of PGCIL. The tariff for the sale of power by Vedanta Limited to GRIDCO will be determined by the OERC as follows:

For the sale of power up to 25.0% of the installed capacity:

- a fixed capacity charge which shall be determined by the OERC as per the terms and conditions of tariff issued from time to time and will be related to target availability. Recovery of fixed capacity charges below the level of target availability shall be done on a pro rata basis and calculated proportionately to the capacity requisitioned to GRIDCO; and

- a variable energy charge, which shall comprise fuel cost and shall be calculated on the basis of the ex-bus energy scheduled to be sent out from the generating station. The energy charges shall be calculated as per the methodology prescribed by the OERC from time to time.

For the sale of power for 7% or 5% depending on the allocation of coal blocks within the state of Odisha a variable energy charge is applicable, which shall comprise fuel cost and shall be calculated — on the basis of the ex-bus energy scheduled to be sent out from the generating station. The energy charges shall be calculated as per the methodology prescribed by the appropriate commission, from time to time. The working methodology of tariff determination is under dispute and pending before the courts in India.

Vedanta Limited petitioned to OERC to convert the 600 MW X 4 IPP into a captive generating plant ("CGP") to cater to the power needs of the 1.25 mtpa Smelter at Jharsuguda. After extensive deliberation and inconsideration of the facts, the OERC issued an order of conversion of Unit I, III and IV into CGP with effect from 1 April 2015, while retaining the IPP status of Unit II to fulfil the obligation under a PPA with GRIDCO.

BALCO. BALCO's power business includes a 270 MW power plant at BALCO's Korba facility, which was previously for captive use before the shutdown of the 100,000 tpa aluminium smelter at Korba on 5 June 2009. BALCO also operates IPP 600 MW coal-based thermal power facility in the state of Chhattisgarh which had received approval to operate on 14 January 2015 from the regulatory authorities. One unit of 300 MW was commissioned and commenced production during fiscal year 2016 and the second unit was commissioned and commenced commercial production on 1 May 2016.

MEL. Mettur power plant is a 106.5 MW coal based thermal power plant operated by MALCO Energy Limited or MEL in the state of Tamil Nadu. The plant has been set up in stages, with the first 75 MW set up in the year 1999 to cater to the requirements of the aluminium smelter operated by MEL. The aluminium operations were closed since November 2008. An additional 25 MW unit was added in the year 2009. Further, a 6.50 MW steam turbine generator was added in the year 2013 taking capacity to 106.5 MW.

MEL entered into an energy purchase agreement with Tamil Nadu Electricity Board in January 2009 for supply of power until April 2009 and entered with Power Trading Corporation Limited for supply of power to Tamil Nadu Electricity Board from April 2009 until May 2011, which was subsequently re-entered with Tamil Nadu Electricity Board from June 2011 until May 2016. MEL had entered into an agreement with NTPC Vidyut Vyapar Nigam Limited for supply of power (66.3 MW) to Telangana State Southern Power Distribution Company Limited (TSSPDCL) from June 2016 to May 2017. Currently MEL does not have any energy purchase agreement for supply of power.

HZL. As of 31 March 2018, wind power plants with a combined power generation capacity of 273.5 MW have been commissioned in the States of Gujarat, Karnataka, Tamil Nadu, Maharashtra and Rajasthan in India at a total cost of ₹14,520 million ($217.8 million). The electricity from these wind power plants is sold to State Electricity Boards. During their meeting on 21 January 2016, the HZL's Board of Directors approved the sale of the Company's wind power assets subject to the final approval of the price by the board. HZL is in the process of identifying a buyer.

Talwandi Sabo

In July 2008, the 1,980 MW Talwandi Sabo project was awarded to Vedanta Limited through an international Case 2 tariff based competitive bidding process. The project was set up through Vedanta Limited's wholly owned subsidiary, TSPL. All necessary approvals for the project have been obtained and commissioning of this project was carried out in four stages. Total approved capex for the plant is $2,150 million of which $2,113 million have been spent as of 31 March 2017. The boiler light up and synchronisation of the first unit was achieved in the third quarter of fiscal year 2014 and coal logistics were established in the fourth quarter of fiscal year 2014. The first 660 MW unit of the Talwandi Sabo power plant was capitalized in fiscal year 2015 and the second 660 MW unit was capitalized in December 2015 after the successful completion of trial runs. The third unit was commissioned in the second quarter of fiscal year 2017. Since commissioning the plant is running successfully (except for one fire incident in April 17 in coal handling area resulting in a shut-down of all three units of the power plant for around 66 days, though there were no injuries in the incident) with consistent improvement in all key operational indices like plant availability, station heat rate, auxiliary power consumption, ash utilization, among others. This project is financed through internal sources and external borrowings.

The primary fuel for TSPL is domestic coal which Vedanta sources from Mahanadi Coalfields Limited or MCL. The annual coal requirement of the power plant is around 8.19 mtpa (for a GCV of coal at 3,700 kcal/kg and PLF of 80%). TSPL entered into a Fuel Supply Agreement (FSA) with MCL on 4 September 2013 with Annual Contracted Quantity (ACQ) of 7.72 million tonnes per annum (mtpa) for a 20-year period. As per the FSA, the coal supplied would be E/F grade i.e. between G8-G13 based on the recent grading system of Coal India Limited. Based on the G8-G13 grades, the GCV of the coal would be in the range of 3400 — 5200 Kcal/kg.

According to the terms of FSA, the MCL shall endeavour to supply coal from its own sources and also has the option to supply the balance quantity of coal through import (subject to mutual agreement with TSPL). MCL may also provide domestic coal more than these levels. The balance coal requirement will be met by Vedanta through alternate sources i.e. use of imported coal/e-auction coal.

As per the presidential directive issued on 17 July 2013 and consequently the Cabinet Committee of Economic Affairs (CCEA) approval and advice of CERC, considering impact on cost of generation in the concluded PPAs due to shortage in domestic coal availability, pass through of imported coal cost has been allowed in the tariff. TSPL has been getting pass through of the imported coal cost being procured in consultation with PSPCL on need basis.

In May 2008, Vedanta Limited entered into an on-shore and offshore engineering, procurement and construction contract with SEPCO Electric Power Construction Corporation ("SEPCO"), for the Talwandi Sabo thermal power project for ₹66,560 million ($1,024 million). Under the contract, SEPCO is to provide testing, system design, engineering services for the plant and equipment among other things. In November 2012, TSPL had entered into a revised offshore EPC contract where contract value was revised up to $1,081 million. After the commissioning of three units, the contract was revised upwards by $74 million in November 2012. In April 2016 the parties entered into a revised ECP contract, for $1,041.8 million and ₹21,371 million for offshore and onshore EPC services respectively.

Surplus Power from Captive Power Plants

Vedanta also sells excess power generated from its captive power plants to third parties pursuant to commercial arrangements. For example, Vedanta Limited entered into a letter of intent dated 16 November 2011 with GRIDCO for the sale of excess power from its captive power plant at Jharsuguda. Similar agreements have been entered into with third parties for the excess power at Vedanta's captive power plant in Tuticorin.

Other Activities

Port business

Vedanta has 100.0% interest in Vizag General Cargo Berth Private Limited (VGCB) as of 31 December 2018, a joint venture between Vedanta Limited and Leighton which won the bid to mechanise the coal handling facilities and upgrade the general cargo berth for handling coal at the outer harbour of Vishakhapatnam port, on the east coast of India.

The capacity of the upgraded berth is 10.18 mtpa VGCB had entered into an agreement on 10 June 2010 with the port authority, Vishakhapatnam Port Trust, to mechanise the coal handling facilities and upgrade the general cargo berth on a build-operate-transfer basis for 30 years commencing on the date of award of concession. Vishakhapatnam Port Trust receives a royalty of 38.1% of the gross revenue as per TAMP tariff from the cargo handling activities as set out in the concession agreement.

Construction was completed on 8 April 2013 and commercial operations started in same year. The estimated project cost was approximately ₹6,228 million (approximately $96 million). As of 31 March 2018, the total cost (Gross block) was ₹6,764 million including interest capitalisations.

During fiscal year 2018, VGCB's operations showed an increase of 29.5% in discharge as well as in dispatch, compared with fiscal year 2017. This was mainly due to increase coal imports, driven by higher demand in steel and power market. The dispatch tonnage increased by 22.0% to 5.4 million tonnes (4.4 million tonnes in fiscal year 2017) and generated an EBITDA of about ₹117.6 million. VGCB is one of the deepest coal terminals on the eastern coast of India, which enables the docking of large Cape-size vessels.

During nine months ended 31 December 2018, there is a decrease in the volume handled by VGCB by approximately 3% when compared with similar period in previous year. The EBITDA for VGCB for the nine months ended 31 December 2018 was $181 million.

Sterlite Ports Limited, a 100% subsidiary of Vedanta Limited has received an award of letter dated 31 March 2016, for redevelopment of berths 8, 9, barge berths and mechanical ore handling plant at the Port of Mormugao, Goa on a design-build-finance-operate-transfer basis for 19 mmtpa capacity multi-cargo port terminal. A special purpose company, "Goa Sea Port Private Limited" was incorporated on 5 July 2016 as a wholly owned subsidiary of Sterlite Ports Limited, Goa Sea Port Private Limited entered into an agreement on 22 September 2016 with the Mormugao Port Trust, to operate the berth on a build-finance-operate-transfer basis for 30 years commencing on the date of award of concession. The date for fulfilment of condition precedents for commencement of the concession has been mutually extended till 14 May 2019 as Mormugao Port Trust is in process of obtaining environment clearance, which is one of the condition precedent.

Electrosteel business

Vedanta Limited through its wholly owned subsidiary, VSL, acquired management control over ESL on 4 June 2018. Further, pursuant to the allotment of shares to VSL on 15 June 2018, Vedanta holds 90% of the paid up share capital of ESL through VSL. The acquisition will complement Vedanta's existing iron ore business as the vertical integration of steel manufacturing capabilities. ESL under the Bankruptcy

Code of India was subject insolvency proceedings. The NCLT on 17 April 2018 approved the resolution plan submitted by Vedanta for acquiring ESL. NCLAT also upheld the NCLT order on 30 May 2018 and allowed Vedanta Limited to acquire ESL by depositing an upfront payment to the Committee of Creditors. A total cash consideration of ₹53,200 million ($817 million) was paid for the acquisition.

ESL is primarily involved in the business of steel-making and downstream value added products. ESL owns and operates a greenfield integrated steel manufacturing facility near Bokaro, Jharkhand, India, which has a current capacity of 1.5 mtpa of finished steel. Vedanta has been continuously focusing on developing ESL's business and the increase in volume has provided certain cost benefits and led to an improvement in the per tonne EBITDA. However this trend was partially offset by a decrease in steel prices in the industry. Other operational improvements are driven by better yields, charge blends, substituting sinter with pellets, change of input mix in power plant to use dolo-char and tailings instead of thermal coal besides procurement related efficiencies. On the marketing side, ESL increased value-added products in its overall product sale. In the nine months ended 31 December 2018, ESL recorded a revenue of ₹2,615 Crore ($375 million) and an EBITDA of ₹473 Crore ($67.9 million).

Seasonality

Vedanta's iron ore mining operations are affected by changes in weather conditions, particularly heavy rains. Goa, where the majority of Vedanta's iron ore mining operations are located, experiences monsoon seasons, which usually occurs from early June to early October. During the monsoon season, restricted barge movements result in significantly lower exports through the Mormugao port in Goa, where Vedanta's iron ore is shipped to customers. Vedanta attempts to mitigate the effects of the monsoon season by concentrating on mine development and extracting larger quantities of overburden waste during the monsoon season in order to permit speedier extraction of iron ore during the dry season. In addition, during the monsoon season, Vedanta typically conducts annual maintenance at its processing plants and its other mining machinery.

Vedanta's oil and gas, zinc, copper, aluminium and commercial power business segments are not subject to seasonality.

Intellectual Property

Vedanta, through Vedanta Limited, owns one patent in India and another in Europe that relates to a system for producing metallurgical coke. Vedanta Limited also has a patent in the United States relating to the reduction of sulphur-based gases during the production of iron ore. Vedanta, through Vedanta Limited, owns an additional patent in India that relates to a system for enhancing the quality of cathodes. Vedanta through Vedanta Limited owns a new pig iron product. Vedanta also has a number of patents in the process of being granted in India related to mining, refining and smelting processes. Vedanta owns a number of trademarks that are used to identify its businesses and products. Vedanta has also acquired certain intellectual property rights under licences from third parties for use in its businesses. Cain India has entered into various agreements with Cairn Energy and its subsidiaries (the "Cairn Energy Group") in connections with trademarks and corporate logos, which are registered in EU, UK, India and Benelux. Vedanta's patents, licences and trademarks constitute valuable assets. Vedanta has a patent for the manufacture of energy recovery based metallurgical coke. However, Vedanta does not depend on any single patent, licence or trademark in a material manner in the conduct of its sales and operations viewed as a whole.

Awards

In 2018, Hindustan Zinc received the India Sustainability Leadership Award 2018 in two categories — Sustainable Business of the Year Award and Sustainability Disclosure Leadership Award. Hindustan Zinc received CII-ITC Sustainability Awards 2018 for Corporate Excellence — Outstanding Accomplishment Award, Commendation for Significant Achievement in CSR and Excellence in Environment Management Award. HZL was ranked 5th globally in Metals & Mining Category and 1st in

Environmental Dimensions for Metals & Mining in Dow Jones Sustainability Index for 2018. Vedanta Limited was awarded for global best practices in procurement as the 'Best Cross-Functional Team Work' for its integrated growth projects in Oil and Gas division from CIPS, United Kingdom. Vedanta Limited also won CII's 12th National Award for Excellence in Water Management 2018 for its Rajasthan oil block. Vedanta Limited was ranked as one of the Indian corporate disclosure champions in the Disclosure Index Ratings 2018 by FTI Consulting.

Litigation

Save as disclosed below, there are no outstanding governmental, legal or arbitration proceedings, including any such proceedings which are pending or threatened of which Vedanta is aware, which Vedanta believes could reasonably be expected to have a material adverse effect on its results of operation or financial condition.

Vedanta Limited has commenced proceedings against the GoI, which has disputed Vedanta Limited's exercise of the call option to purchase its remaining 29.5% ownership interest in HZL.

Under the terms of the shareholders' agreement between the GoI and Vedanta Limited, Vedanta Limited was granted two call options to acquire all the shares in HZL held by the GoI at the time of exercise. Vedanta Limited exercised the first call option on 29 August 2003. Arbitration is on-going in relation to a dispute between the GoI and Vedanta Limited, with respect to Vedanta Limited's exercise of its second call option to acquire the remaining shares in HZL held by the GoI, pursuant to the shareholders' agreement between the parties. The GoI has refused to act upon the second call option, stating that Vedanta Limited's second call option violates the provisions of the Indian Companies Act, 1956, by restricting the right of the GoI to transfer its shares. The next date of hearing by the arbitral tribunal is to be notified, as one of the members of the tribunal is suffering from a grave illness.

Vedanta Limited has commenced proceedings against the GoI which has disputed Vedanta Limited's exercise of the call option to purchase its remaining 49.0% ownership interest in BALCO.

Arbitration proceedings have been concluded in relation to a dispute between the GoI and Vedanta Limited, with respect to Vedanta Limited's exercise of its second call option to acquire the remaining shares in BALCO held by the GoI, pursuant to the shareholders' agreement between the parties. In January 2011, the arbitration tribunal rejected Vedanta Limited's claims on the grounds that the clauses relating to the call option, the right of first refusal, the "tag-along" rights and the restriction on the transfer of shares violate the provisions of the Indian Companies Act, 1956. In April 2011, Vedanta Limited filed an application under section 34 of the Arbitration and Conciliation Act, 1996 in the High Court of Delhi to set aside the award dated 25 January 2011 to the extent that it holds these clauses ineffective and inoperative. The GoI also filed an application before the High Court of Delhi to partially set aside the arbitral award dated 25 January 2011 in respect of certain matters involving valuation. The High Court of Delhi passed an order dated 10 August 2011 directing Vedanta's application and the application by the GoI to be heard together as they arise from a common arbitral award. The matter is currently pending before the High Court of Delhi and the next date of hearing is on 2 August 2019.

Appeal proceedings in the High Court of Bombay brought by SEBI to overrule a decision by the Securities Appellate Tribunal of India that Vedanta Limited has not violated regulations prohibiting fraudulent and unfair trading practices.

In April 2001, SEBI ordered prosecution proceedings to be brought against Sterlite (now Vedanta Limited), alleging that it violated regulations prohibiting fraudulent and unfair trading practices, and also passed an order prohibiting Sterlite from accessing the capital markets for a period of two years. SEBI's order was overruled by the Securities Appellate Tribunal of India on 22 October 2001 on the basis of a lack of sufficient material evidence to establish that Sterlite had, directly or indirectly, engaged in market manipulation and that SEBI had exercised its jurisdiction incorrectly in prohibiting Sterlite from accessing the capital markets. In November 2001, SEBI appealed to the High Court of Bombay. No further action or procedures have taken place since 2001. SEBI's order was based on its finding that Sterlite had manipulated the price of its shares in connection with its proposed acquisition of shares in Indian Aluminium Company Limited ("INDAL") and its proposed open offer to the shareholders of INDAL in 1998. SEBI also alleged that MEL provided funds to an entity Vedanta allegedly controlled to enable its associate to purchase Sterlite's shares, as part of a connected price manipulation exercise.

In addition to the civil proceedings, SEBI also initiated criminal proceedings in 2001 before the Court of the Metropolitan Magistrate, Mumbai, against Sterlite, Vedanta's Executive Chairman, Mr. Anil Agarwal, Sterlite's Director of Finance, Mr. Tarun Jain, and the chief financial officer of MEL at the time of the alleged price manipulation. When SEBI's order was overturned in October 2001, Sterlite filed a petition before the High Court of Bombay to defend those criminal proceedings on the grounds that the Securities Appellate Tribunal of India had overruled SEBI's order on price manipulation. An order has been passed by the High Court of Bombay in Sterlite's favour, granting an interim stay of the criminal proceedings.

Criminal proceedings against former directors of SIL.

Ms. Krishna Bajaj filed a complaint against the former directors of Sesa Industries Limited ("SIL") (which has since been amalgamated with Sesa Goa) before the Magistrate at Mumbai in 2000, in relation to shares issued on a preferential basis by Sesa Industries Limited in 1993 to Sesa Goa's shareholders, alleging that the shares of Sesa Industries Limited were not listed within 12 to 18 months of the offer as stated in the offering document. The four directors appeared before the court on 16 June 2009 and pleaded not guilty to the charges. The four directors filed a criminal application in the High Court of Bombay challenging the Magistrate's order of framing charges, before the High Court of Bombay. The High Court of Bombay admitted the criminal application and stayed the proceedings pending before Magistrate at Mumbai.

Criminal proceedings against certain directors and employees of BALCO.

Criminal proceedings were initiated by Mr. Ajay Padia before the Court of the Judicial Magistrate First Class, Pune against Mr. Anil Agarwal, Mr. Navin Agarwal, Mr. Tarun Jain and certain of the other former directors and employees in 2002 alleging that an assurance that was given by the above mentioned directors regarding payment of all amounts owed to him for the damaged material supplied by BALCO was not honoured. An application under was filed in the High Court of Bombay for quashing the proceedings in the Judicial Magistrate First Class and to dispose the matter directing that alternative remedies were available before the Sessions Court, Pune, which was the appropriate court. The High Court of Bombay stayed the criminal proceedings and the application was listed for disposal. The next date of hearing has not been fixed.

BALCO is involved in litigation in relation to the illegal felling of trees situated on forest land.

Petitions have been filed in public interest before the Supreme Court of India by various individuals and Sarthak, a non-governmental organisation alleging that illegal possession and use of forest land, which has been proposed to be leased by Chhattisgarh Government, for non-forest activities by BALCO. The Supreme Court of India referred the matter to the Central Empowered Committee, which recommended an ex post-facto diversion of forest land with payment of net present value on land for which forest compensation was not paid prior to the year 1980. Subsequently, it was alleged that BALCO had cut trees in violation of the Supreme Court of India order and one of the petitioners filed a contempt petition and the matter was again referred to the Central Empowered Committee. The Central Empowered Committee submitted its report on 30 June 2012 to the Court recommending that a detailed survey should be conducted through the Forest Survey of India MoEF using high quality remote sensing technique to find out whether any tree felling and/or non-forest use has taken place after 29 February 2008 in the revenue forest land and/or deemed forest in possession of BALCO. In order to expedite the proceedings, BALCO filed an application in the Supreme Court of India seeking direction to pay the net present value on forest land as per the recommendation of the Central Empowered Committee providing an ex-post facto diversion of the 1,751 acres forest land held by BALCO. The CEC has submitted its report dated 22 February 2019 on the ground truthing exercise conducted by the Forest Survey of India (FSI) jointly with BALCO between 29-31 October 2019. The matter is likely to be scheduled for hearing before the Supreme Court of India on 12 April 2019.

Writ petitions filed against Vedanta alleging violation of certain air, water and hazardous waste management regulations at Vedanta's Tuticorin plant.

On 24 March 2013, the TNPCB issued a show cause notice to Vedanta alleging violation of environmental laws and conditions imposed by the TNPCB and releasing pollutants from the Tuticorin plant. Further, TNPCB issued an order dated 29 March 2013 ordering the closure of the Tuticorin plant. Vedanta filed an appeal before the NGT, Chennai against the order of closure by the TNPCB on 1 April 2013. The matter was transferred to the NGT Principal Bench at New Delhi and in a hearing in May 2013, Vedanta was directed to provide certain information to the Tribunal.

The Tribunal passed an interim order in 31 May 2013 allowing the smelter to recommence operations subject to certain conditions, and consequently Vedanta recommenced operations on 16 June 2013. The expert committee constituted by the Tribunal submitted a report on the operation of the plant on 10 July 2013 stating that the plant's emissions were within the prescribed standards. Based on this report, the Tribunal on 15 July 2013 ordered that the interim order dated 31 May 2013 shall continue to operate. On 8 August 2013, the Tribunal confirmed its 31 May 2013 order with directions to comply with the recommendations made by the committee to further improve the working of the plant within a time bound schedule.

Vedanta implemented all the recommendations during fiscal year 2013. However, the TNPCB filed Civil Appeals in 2013 against the Tribunal's interim order dated 31 May 2013 and final order and judgment dated 8 August 2013. V Gopalaswamy, General Secretary of a political party, MDMK, also filed Civil Appeals in 2013. The appeals were allowed by the Supreme Court of India and the NGT judgment dated 8 August 2013 were set aside on grounds of maintainability. However, the Supreme Court of India gave the Vedanta the liberty to approach the High Court of Madras challenging the orders of TNPCB. Vedanta has now approached the High Court of Madras, Principal Bench challenging the impugned orders of TNPCB passed in 2013. This writ petition is next listed for hearing on 23 April 2019.

Proceedings related to the existing copper smelting operations and the proposed expansion project at the Tuticorin plant.

The CTO for the existing 400,000 TPA copper smelter plant at Tuticorin was due to expire on 31 March 2018. Vedanta has filed an application on 31 January 2018 with the TNPCB for renewal of the consent to operate, as per procedure established by law. The TNPCB rejected the said renewal application on dated 9 April 2018 (Rejection Order). Vedanta has filed an appeal before the TNPCB Appellate Authority challenging the Rejection Order and the appeal is next listed for hearing on 20 May 2019.

During the pendency of the appeal, TNPCB on 23 May 2018 ordered the disconnection of electricity supply and closure of the existing copper smelter plant with immediate effect. TNPCB passed the said closure order without any prior notice to us, which was due to be served as per the requirements under Section 21(4) of the Air (Prevention and Control of Pollution) Act, 1981 and Rule 34 of the Water (Prevention and Control of Pollution) Rules 1975. Thereafter, the Government of Tamil Nadu, proclaiming and endorsing TNPCB's Rejection Order, issued dated 28 May 2018, with a direction to seal the existing copper smelter plant unit permanently ('TN Government Order'), without providing any prior notice to Vedanta. Subsequently, the Directorate of Industrial Safety and Health issued orders dated 30 May 2018, directing the immediate suspension and revocation of the factory license and the registration certificate for the existing smelter plant.

Vedanta filed an appeal before NGT, Principal Bench at New Delhi challenging the closure order passed by TNPCB as well as the TN Government Order for sealing of the existing plant and the appeal was allowed vide NGT's judgement dated 15 December 2018. The NGT judgment was challenged by the State of Tamil Nadu and TNPCB before the Supreme Court of India. The court set aside the order on 18 February 2019 on the grounds of maintainability, allowing Vedanta the liberty to challenge the earlier impugned orders passed by TNPCB and the State of Tamil Nadu before Madras High Court under Article 226 and indicated for an expeditious hearing of the matter.

Based on the said order, Vedanta filed a writ petition before the Principal Bench of the High Court of Madras an application seeking interim relief for care and maintenance of the plant. The matter is now to be heard on 23 April 2019.

Separately, the environmental clearance for the proposed copper smelter plant 2 (expansion project) was due to expire on 31 December 2018. The application for renewal of such environmental clearance was rejected by the MoEF. Thereafter, a fresh application was made on 12 March 2018, before the Expert Appraisal Committee of the MoEF wherein a sub-committee was directed to visit the expansion project site prior to prescribing the terms of reference.

In the meantime, the Madurai Bench of the High Court of Madras in a public interest litigation filed against Vedanta by the MoEF and State Industries Promotion Corporation of Tamil Nadu (SIPCOT) held through its order dated 23 May 2018, that the application for renewal of the environmental clearance for the expansion project shall be processed after a mandatory public hearing and the said application shall be decided by the competent authority on or before 23 September 2018. In the interim, the High Court ordered us to cease construction and all other activities on site for the proposed expansion project with immediate effect. Separately, SIPCOT through its letter dated 29 May 2018, cancelled 342.22 acres of the land allotted to us for the proposed expansion project. Further, the TNPCB issued orders on 7 June 2018, directing the withdrawal of the consent to establish for the expansion project, which is valid until 31 December 2022.

The Enforcement Directorate has levied penalty of approximately ₹347 million on Vedanta Limited.

The Enforcement Directorate ("ED") by an order in August 2004 alleged that Sterlite (now Vedanta Limited) and MALCO had remitted approximately $49 million to Twin Star without prior permission from the Reserve Bank of India ("RBI"). By this order, the ED levied penalties on Vedanta Limited and certain directors of Vedanta Limited of approximately ₹347.0 million.

Vedanta Limited filed an appeal against the order of ED before Appellate Tribunal of Foreign Exchange seeking waiver of pre-deposit, which was allowed by the Appellate Tribunal of Foreign Exchange. The ED challenged this order before Delhi High Court. The Delhi High Court remanded the matter back to the Appellate Tribunal of Foreign Exchange for deciding the issue of waiver of pre-deposit afresh. The next date of hearing is 18 July 2019.

Challenge relating to the environmental clearance granted for the expansion plans of refinery in Lanjigarh.

The MoEF on 20 November 2015 granted environmental clearance for the alumina refinery expansion from 1 to 6 mtpa in a phased manner and subject to certain conditions being met. For the 6 mtpa expansion, the company is required to obtain an amendment of environmental clearance after the completion of land acquisition of the balance area of 666.03 HA. Subsequent to the grant of environmental clearance for expansion, the Odisha State Pollution Control Board granted the consent to operate for the 2 mtpa on 31 December 2015 and also revalidated the consent to establish the alumina refinery expansion on 2 January 2016.

On 18 February 2016 an individual challenged the environmental clearance granted for the alumina refinery expansion at Lanjigarh before the National Green Tribunal Kolkata wherein MoEF, Odisha State Pollution Control Board and Vedanta Limited have been made parties. Meantime, another individual has filed an interlocutory application for being impleaded in the matter before NGT Kolkata.

Demands against HZL by the Department of Mines and Geology and Ministry of Mines.

The Department of Mining and Geology, Rajsamand of the State of Rajasthan issued several show cause notices in August, September and October 2006, aggregating ₹3,339 million ($51.5 million) to HZL, claiming unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan, during the period from July 1968 to March 2006. In response, HZL filed a writ petition against these show cause notices. In October 2006, the High Court issued an order granting a stay and restrained the Department of Mines and Geology from undertaking any coercive measures to recover the penalty. In January 2007, the High Court issued another order granting the Department of Mines and Geology additional time to file their reply and also ordered the Department of Mines and Geology not to issue any orders cancelling the lease. The next date of hearing has not yet been fixed.

Demands against HZL by the State of Rajasthan.

The State of Rajasthan issued a notification in February 2008 notifying the Rajasthan Environment and Health Cess Rules, 2008, imposing environment and health cess on major minerals including lead and zinc. HZL and other mine operators resisted this notification and the imposition thereunder before the High Court of Rajasthan on the ground that the imposition of such cess and all matters relating to the environment fall under the competence of the central government as opposed to the state government. In October 2011, the High Court of Rajasthan disposed the writ petitions and upheld the validity of the Rajasthan Environment and Health Cess Rules, 2008. HZL challenged this order by a special leave petition in December 2011 before the Supreme Court of India. The Supreme Court of India issued a notice for stay. Further direction was issued by the Supreme Court on 23 March 2012 not to take any coercive action against HZL for recovery of cess. The matter is still pending and is not yet listed for hearing. The state government has rescinded the prospective liability towards environment and health cess by notification dated 6 January 2017.

Vedanta is involved in proceedings related to mining operations in the State of Goa.

Pursuant to findings in the Justice M.B. Shah Commission Report dated 15 March 2012 on the allegations of illegal mining in the State of Goa, the state government had banned iron ore mining operations in Goa on 10 September 2012 and the Ministry of Environment and Forest ("MOEF") had suspended environmental clearances of all mining leases within the State of Goa. A writ petition was filed before the Supreme Court of India to initiate action based on the Justice M.B. Shah Commission Report and an interim order was passed by the Supreme Court of India on 5 October 2012 suspending mining operations within Goa.

The Supreme Court of India passed an interim order on 11 November 2013 directing that the inventory of the excavated mineral ores be verified by the Directorate of Mines and Geology ("DMG") and the Monitoring Committee was constituted to sell the materials through an e-auction. The Monitoring Committee is e-auctioning the ore and the proceeds from the auction will go to the state government.

On 21 April 2014, the Supreme Court of India passed judgment in the matter lifting the ban with certain stipulations including directions on mining by the lessees after 22 November 2007 as being illegal, dumping outside the leased area as being impermissible; interim buffer zone fixed at one kilometre from the boundaries of National Parks and Sanctuaries, ad-hoc cap on annual excavation at 20 million tonnes other than from dumps until the final report of Expert Committee is submitted, appropriation of the sale value of e-auctioned inventorised ores by the state government as per stipulated conditions, payment of 10% of the sale proceeds to the Goan Iron Ore Permanent Fund. The Supreme Court of India has held that all mining leases in the State of Goa, including those of the Company, had expired in 2007 and consequently, no mining operations can be carried out until renewal/execution of mining lease deeds by the state government. The petition filed by Vedanta in May 2014 for the review of the aforesaid judgment in the Supreme Court of India on certain limited issues was subsequently withdrawn by Vedanta in September 2014.

On 13 August 2014, the High Court of Bombay, Goa Bench passed a common order directing the State of Goa to renew the mining leases for which stamp duty was collected in accordance with the Goa Mineral Policy (2013) and to decide the other applications for which no stamp duty was collected within three months thereof.

In January 2015, the government of Goa revoked the order suspending mining operations in the State of Goa and MOEF revoked suspension of environmental clearances in March 2015. Subsequently, the lease deeds for all working leases were executed and registered as of August 2015. Vedanta obtained consent to operate under the Air Act and Water Act from the Goa State Pollution Control Board ("GSPCB") and mining plan approval from the Indian Bureau of Mines for these leases, and Vedanta resumed operations of its mines on 10 August 2015.

On 10 September 2014, the Goa Foundation challenged the High Court order directing the renewal of mining by way of a Special Leave Petition (SLP) before the Supreme Court of India, challenging the judgment of the High Court dated 13 August 2014 directing renewal of mining leases. No stay has yet been granted by the Supreme Court of India. Another set of SLPs on an identical issue were filed by Rama Velip. Two writ petitions have also been filed before the Supreme Court of India by Goa Foundation and Sudip Tamankar in September 2015 for setting aside the second renewal of iron ore mining leases in Goa made under section 8(3) of MMDR Act and challenging the revocation of suspension on mining in State of Goa. The Supreme Court of India passed its final order in the matter on 7 February 2018 wherein it set aside the second renewal of the mining leases granted by the State of Goa. The court directed all lease holders operating under a second renewal to stop all mining operations with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environmental clearances are granted in accordance with the provisions of the MMDR Act.

Separately, the Expert Committee has filed its reports on dump handling and ceiling on annual extraction before the Supreme Court of India recommending enhancement of annual extraction ceiling immediately to 30 million MT and subsequently to 37 million MT after infrastructure development. Vedanta filed an application before the Supreme Court of India, requesting clarification on whether any contributions to the Goa Permanent Iron Ore Fund should be made as per the Supreme Court of India's orders, as the Central government has introduced a provision to set up social fund known as District Mineral Foundation in states for similar objectives. The Expert Committee Report is yet to be accepted and the matter is pending before the Supreme Court of India along with the application filed by Vedanta.

Proceedings against Vedanta challenging environmental consents received for expansion project of pig iron, metallurgical coke, sinter plants and power plant in Goa.

On 6 March 2012, the High Court of Bombay dismissed a public interest litigation filed by Mr. Ramachandra Vaman Naik and others for quashing an approval issued by the MoEF and the GSPCB for the expansion project of a pig iron plant, sinter plant, metallurgical coke plant and power plant in Goa. On 26 July 2012, Mr. Naik challenged this order by filing a special leave petition before the Supreme Court of India for an interim stay of the order and for a stay on the construction and operation of the plants in Goa. No stay has been granted in these matters and all respondents have filed their pleadings. The Supreme Court of India, on 7 November 2016, transferred the matter to the National Green Tribunal, New Delhi for de novo hearing and disposal in accordance with the law. The Supreme Court of India also set aside the order passed by the High Court without expressing any opinion on the merits of the contention open to the parties. The matter before the National Green Tribunal, New Delhi was heard on 4 December 2017 and the Tribunal has disposed the matter with directions to the MoEF to examine, if any, additional conditions are to be added to the environmental clearance. Applicants were given liberty to submit suggestions, if any, to MoEF within 2 weeks and MoEF was directed to pass orders expeditiously thereafter.

Separately, an application was filed by the village panchayat head of Navelim, Goa before the National Green Tribunal against the GSPCB, MoEF, State of Goa, others and Vedanta alleging that (i) GSPCB had issued its approval in a piecemeal manner to Vedanta, even though the environmental clearance order issued by the MoEF and the approval are for all four plants thereby violating the MoEF order, (ii) the no-objection certificate issued in relation to this project in 2007 was forged and fabricated, and (iii) the CN5 bridge at Maina-Navelim junction falls outside the notified industrial area. The application sought cancellation of the approval and the order of the MoEF. On 1 March 2013, the National Green Tribunal gave directions to issue notices to all the parties. Vedanta responded on 11 April 2013, denying all contentions and submissions made by the village head and requested that the application be dismissed. Pleadings in the matter have been completed. Subsequently on 10 February 2014 the matter was transferred from the Principal Bench of the National Green Tribunal at New Delhi to the Western Bench of the National Green Tribunal at Pune, where it is currently pending.

Vedanta has challenged the imposition of forest development tax by Government of Karnataka.

In October 2008, Vedanta filed a writ petition in the High Court of Karnataka against the Government of Karnataka and others, challenging the imposition of a forest development tax at a rate of 8.0% (a subsequent demand was made for the payment of tax at the rate of 12.0%) on the value of iron ore sold by Vedanta from the mining leases in the forest area, pursuant to the notification by the Government of Karnataka and the memorandum/common order issued by the Deputy Conservator of Forests. In August 2009, the High Court of Karnataka permitted the Government of Karnataka to levy the forest development tax and ordered that the demand be restricted to 50.0% of the forest development tax as an interim arrangement pending disposal of the writ petition.

Vedanta filed an application before the High Court of Karnataka, seeking modification of the order in August 2009. However, the application was not taken up for hearing. Subsequently, Vedanta filed a special leave petition before the Supreme Court of India against the High Court's order. In November 2009, the Supreme Court of India ordered the High Court of Karnataka to dispose the application for modification of the order given in August 2009 and ordered Vedanta to furnish a bank guarantee towards payment of the forest development tax. In April 2010, High Court of Karnataka ordered to pay 25.0% of the demand in cash and furnish a bank guarantee for the remaining 25.0%.

On 3 January 2016, the High Court of Karnataka passed its final order quashing the forest development tax notification, holding that the rate of forest development tax levied to be 8% and directing a refund of the amount collected from mining leases other than state government owned companies. The state government of Karnataka appealed against the order before the Supreme Court of India, and another mining lessee also filed a counter appeal in the matter. The matter is pending before the Supreme Court of India. In the interim, the Supreme Court of India has stayed the refund of the forest development tax amount as ordered by the High Court.

Meanwhile, the Government of Karnataka issued the Karnataka Forest Development (Amendment) Act, 2016 (the 'Amendment Act') to validate the earlier law, making certain amendments with retroactive effect. The Amendment Act has also changed the nomenclature of "Forest Development Tax" ("FDT") to "Forest Development fee ("FDF")" with retroactive effect, since the court had previously declared that FDT was a tax and not a fee, as claimed by Government of Karnataka. The validity of the Amendment Act was challenged by way of a writ petition before the High Court of Karnataka. The High Court of Karnataka, on 4 October 2017, struck down the Amendment Act directing refund of the amounts collected. On 13 March 2018, the Supreme Court of India, in the appeal filed by state of Karnataka against the order of the High Court, has stayed the refund of the amount collected as FDF. On 21 March 2018, the Supreme Court of India directed that appeals against both the FDT and FDF matters will be heard together. The matter will be listed for hearing in due course.

Vedanta is involved in a tax dispute with the Indian Tax Department.

The Group through its subsidiaries Richter Holdings Limited and Westglobe Limited in 2007 acquired the entire stake in Finsider International Company Limited (FICL) based in the United Kingdom which was holding 51 percent shares of Sesa Goa Ltd, an Indian Company. In October 2013, the Indian Tax Authorities (Tax Authorities) have served an order on Richter and Westglobe for alleged failure to deduct withholding tax on capital gain on the indirect acquisition of shares in April 2007.

The Tax Authorities determined the liability for such non-deduction of tax as ₹8,751.8 million ($135 million) in the case of Richter and ₹5,834.5 million ($90 million) in the case of Westglobe, comprising tax and interest. Being aggrieved, Richter and Westglobe filed appeals before the first appellate authority. Writ petitions were filed in the High Court of Karnataka challenging the constitutional validity of retrospective amendments made by the Finance Act 2012 and in particular the imposition of obligations to deduct tax on payments made against an already concluded transaction. The Karnataka High Court passed interim orders and directed that the adjudication of liability (TDS quantum and interest) shall no more remain in force since tax department passed the orders on merits travelling beyond the limited issue of jurisdiction. The high court will hear on jurisdiction issue. The next hearing is awaited.

The Cairn India Group is involved in a special leave petition relating to income tax.

Cairn India Energy West BV ("Cairn Energy") filed a writ petition with the High Court of Gujarat in December 2008 challenging the restriction of section 80-IB(9) of the Indian Income Tax Act, 1961 ("Section 80-IB(9)") to the production of oil. Section 80-IB(9) allows the deduction of 100% of profits from the commercial production or refining of mineral oil. The term "mineral oil" is not defined but has always been understood to refer to both oil and gas, either separately or collectively. The 2008 Indian Finance Bill appeared to remove this deduction by stating (without amending section 80-IB(9)) that "for the purpose of section 80-IB(9), the term 'mineral oil' does not include petroleum and natural gas, unlike in other sections of the Act". Subsequent announcements by the Indian Finance Minister and the MoPNG have confirmed that a tax holiday would be available on production of crude oil but have continued to exclude gas. The High Court of Gujarat, by its order dated 29 July 2009 did not admit the writ petition on the ground that the matter needs to be first decided by the lower tax authorities. A special leave petition has been filed before the Supreme Court of India against the decision of the High Court of Gujarat. In the event that this challenge is unsuccessful, the potential liability for tax and related interest on the tax holiday claimed on gas production for all periods to 31 March 2016 is approximately ₹3,201 million.

Separately, the Commissioner of Income Tax (Appeals) has understood natural gas as falling within the ambit of the term "mineral oil" in the assessee's own cases.

Vedanta Limited has filed certain writ petitions relating to sales tax.

Vedanta Limited has filed two writ petitions before the Rajasthan High Court seeking to set aside the letters and show cause notice issued by the Rajasthan Sales Tax Department and others demanding 4% VAT on sales of crude oil on the basis of an intra-state sale (as opposed to an inter-state sale). A 2% Central States Tax is currently being paid. A stay against the show cause notices has been issued. The potential liability for tax and related interest for all periods until 31 Dec 2018 is approximately ₹58,333 million ($833.3 million) (Tax ₹38,324 million ($547.5 million) and Interest ₹20,009 million ($285.8 million)). The High Court via an order dated 13 July 2016 allowed the petition and held that sale of crude oil should be regarded as interstate sale subject to central states tax and that Rajasthan VAT should not be applicable. The Rajasthan Sales Tax Department filed a writ petition before the division bench of the Rajasthan High Court against the order dated 13 July 2016 which was dismissed by division bench on 04 April 18. The Rajasthan Sales Tax department has now filed an SLP before Supreme Court of India against the judgment of the Division Bench of the Rajasthan High Court. SLP yet to be listed due to certain procedural defects which needs to be cured by department.

Claim against BALCO for energy development cess.

In December 2006, the High Court of Chhattisgarh on a writ filed by BALCO and others, declared the provisions relating to imposition of energy development cess of ₹6,102 million ($94.1 million) on the captive power plants to be unconstitutional and ordered refund of the cess already collected by the state government. The State of Chhattisgarh filed a special leave petition in the Supreme Court of India against the order of the High Court. The Supreme Court of India has issued notice and stayed the refund of the cess already collected, pending the disposal of the special leave petition and restrained the tax department from taking any corrective step for the collection of the cess. The matter came up before the court on 12 February, 2019, but was adjourned. It remains on the board, and should come up for hearing in the course of the next few months.

The Amalgamation and Re-organisation Scheme has been challenged by the Indian tax authorities and others.

Subsequent to the effectiveness of the Amalgamation and Re-organisation Scheme, special leave petitions challenging the orders of the High Court of Bombay at Goa were filed before the Supreme Court of India by the Commissioner of Income Tax, Goa and the Ministry of Corporate Affairs in July 2013 and in April 2014, respectively. Further, a creditor and a shareholder have challenged the Amalgamation and Re-organisation Scheme in the High Court of Madras in September 2013. Further, the Ministry of Mines, GoI have challenged the Amalgamation and Reorganisation Scheme before the High Court of Madras and the High Court of Bombay, Goa Bench, respectively. The Supreme Court of India has admitted the special leave petitions and the matter has been listed on 15 April 2019.

Arbitration proceedings on issues related to the cost recovery of the Ravva block.

Vedanta Limited along with other joint operation partners (the "Contractor Parties") are involved in a dispute against GoI relating to the recovery of contractual costs in terms of calculation of payments that the Contractor Parties were required to make in connection with the Ravva field.

The Ravva production sharing contract obliges the Contractor Parties to pay a proportionate share of ONGC's exploration, development, production and contract costs in consideration for ONGC's payment of costs related to construction and other activities it conducted in Ravva prior to the effective date of the Ravva production sharing contract (the "ONGC Carry"). The question as to how the ONGC Carry was to be recovered and calculated, along with other issues, was submitted to an international arbitration tribunal in August 2002 which rendered a decision on the ONGC Carry in favour of the Contractor Parties whereas four other issues were decided in favour of GoI in October 2004 (the "Partial Award").

The GoI then proceeded to challenge the ONGC Carry decision before the Malaysian courts, as Kuala Lumpur was the seat of the arbitration. On 11 October 2011, the Federal Court of Malaysia adjudicated the matter and upheld the Partial Award. Per the decision of the arbitral tribunal with regards to Partial Award, the Contractor Parties and the GoI were required to arrive at a quantification of the sums relating to each of the issues under the Partial Award. Also, the arbitral tribunal retained the jurisdiction for determination of any remaining issues in the matter.

Pursuant to the decision of the Federal Court, the Contractor Parties approached the Ministry of Petroleum and Natural Gas ("MoPNG") to implement the Partial Award while reconciling the statement of accounts as outlined in the Partial Award. GoI failed to implement the Partial Award by way of reconciling accounts as provided in the Partial Award.

However, on 10 July 2014, MoPNG issued a show cause notice alleging that since the Partial Award had not been enforced the profit petroleum share of the GoI had been short-paid. MoPNG threatened to recover that amount from the sale proceeds payable by the oil marketing companies to the Contractor Parties. The Contractor Parties replied to the show cause notice taking various legal contentions. On 9 March 2015, a personal hearing took place between MoPNG and the Contractor Parties whereby the Contractor Parties expressed their concerns against such alleged unilateral recoveries and filed further written submissions on 12 March 2015.

Because the Partial Award did not quantify the sums, the Contractor Parties approached the same arbitral tribunal to pass a final award in the subject matter since the arbitral tribunal had retained the jurisdiction to do so. The arbitral tribunal was reconstituted the final award was passed by the tribunal on 26 October 2016, in Vedanta Limited' favour upholding that no further amounts are due from the claimants. The award specifies that each party should bear the arbitration costs equally.

The GoI's has, in parallel, challenged the final award that was dismissed by the High Court of Malaysia on 27 September 2018. GoI further appealed against the decision of the Court of Appeal before the Federal Court of Malaysia which was also dismissed on 28 February 2019.

Meanwhile, Vedanta Limited has filed a petition before the High Court of Delhi for the enforcement of the partial award and final award.

While the enforcement petitions were still pending in the High Court of Delhi, the GoI issued a notice, dated 22 October 2018, directing the oil marketing companies (OMCs) (who are the offtakers for Ravva) to divert the sale proceeds to the GoI's account towards recovery of alleged short payment of profit petroleum by the JV with interest (Vedanta's share being USD64 million). Vedanta challenged the said recovery notice before the High Court of Delhi wherein the court as an interim measure directed that the OMCs deposit the sale proceeds in the Court and granted liberty to Vedanta to seek withdrawal of the amounts from the Court upon furnishing a bank guarantee of commensurate value. The interim arrangement is to continue until further orders by the court. The matter is scheduled to be heard on 17 May 2019.

Proceedings related to the Imposition of Entry Tax.

Vedanta Limited and other group companies challenged the constitutional validity of the local statutes levying entry tax on the entry of goods brought into the states from outside and other notifications, as being in violation of certain provisions of the Indian Constitution. BALCO paid the entry tax of ₹2,410 million ($34.5 million) under protest to the state government of Chhattisgarh until 30 June 2017. By its order dated 10 September 2009, the Chhattisgarh High Court upheld the constitutional validity of the impugned statute. Following some contradictory orders of High Courts across India adjudicating on similar challenges, the Supreme Court of India referred the matters to a nine judge bench. The Supreme Court of India in its order rejected the compensatory nature of tax as a ground for challenge and left all other issues open for adjudication by regular benches hearing the matter.

Following the order of the nine judge bench, the regular bench of the Supreme Court of India proceeded with hearing the matters. The regular bench remanded the entry tax matters relating to the issue of discrimination against domestic goods from other States to the respective High Courts for final determination but retained the issue of jurisdiction on levy on imported goods, for determination by regular bench of the Supreme Court of India. Following the order of the Supreme Court of India, Vedanta Limited filed a writ petition in the High Court of Rajasthan and Odisha. Hindustan Zinc Limited and BALCO have also filed writ petitions in the High Court of Rajasthan and High Court of Chhattisgarh, respectively.

On 9 October 2017, the Supreme Court of India held that States have the jurisdiction to levy entry tax on imported goods. With this Supreme Court of India judgement, imported goods will rank pari passu with domestic goods for the purpose of levy of entry tax. Vedanta and its subsidiaries have appropriately amended their appeals (Writ Petitions) in Orissa and Chhattisgarh to include imported goods as well. With respect to Rajasthan, the State Government has filed a counter petition in the Rajasthan High Court, whereby it has admitted that it does not intend to levy the entry tax on imported goods. The issue of discrimination has been remanded back to the High Courts for final adjudication.

In a related matter, the issue pertaining to levy of entry tax on movement of goods into a Special Economic Zone (SEZ) remains pending before the High Court of Odisha. Meanwhile, the Government of Odisha further through its SEZ Policy 2015 and the operational guidelines for administration of this policy dated 22 August 2016, exempted entry tax levy on SEZ operations.

Ravva Joint Venture Arbitration Proceedings: Base Development Cost.

The Ravva joint venture had received a notice from Ministry of Petroleum and Natural Gas, Government of India (GoI) for the period from 2000-2005 for USD129 million for an alleged underpayment of profit petroleum to the Indian Government, out of which, Vedanta Limited's share is USD29 million plus potential interest at applicable rate (LIBOR plus 2% as per PSC).

This claim relates to the Indian Government's allegation that the Ravva JV had recovered costs in excess of the Base Development Costs ("BDC") cap imposed in the PSC and that the Ravva JV had also allowed these excess costs in the calculation of the Post Tax Rate of Return (PTRR). The Ravva joint operation partners (excluding ONGC) initiated arbitration proceedings and the arbitral tribunal announced its award on 18 January 2011, broadly allowing companies including Vedanta Limited to recover base development cost spent amounting to $278 million and disallowed an over-run of $22.3 million spent in respect of base development cost and directed 50.0% legal cost on the GoI. The High Court of Kuala Lumpur, on 30 August 2012, dismissed the GoI's application for setting aside the award with costs. The GoI further filed an appeal before the Court of Appeal, Kuala Lumpur, which was dismissed on 27 June 2014. The GoI thereafter filed an application for a leave to appeal against the Court of Appeal's order before the Federal Court, which was dismissed by the Federal Court of Malaysia on 17 May 2016 exhausting GoI's legal remedies to challenge the Award which is now final and binding. Meanwhile, GoI issued a show-cause notice in this matter which Vedanta Limited replied to and subsequently also filed an application for enforcement of the award before the Delhi High Court as an additional measure of caution. Additionally a suit has been filed by the GoI challenging the BDC Award arbitration costs proceedings before the Single Bench in the Delhi High Court which has been listed for hearing on 25 July 2019. The Single Bench restrained the Tribunal from proceeding on quantification of arbitration costs, accordingly ruled in favour of the GoI. On appeal, the Division Bench, of Delhi High Court, set aside the order of the Single Bench. GoI has challenged the order of the Division Bench of the Delhi High Court by way of Special Leave Petition in the Supreme Court of India, and the next date for the matter will be made available in due course.

While the enforcement petitions were still pending in the High Court of Delhi, the GoI issued a notice, dated 22 October 2018, directing the oil marketing companies (OMCs) (who are the offtakers for Ravva) to divert the sale proceeds to the GoI's account towards recovery of alleged short payment of profit petroleum by the JV with interest stating Vedanta's aggregate share as USD93 million (Vedanta's share pertaining to the Base Development Costs stands at USD29 million a stated above). Vedanta challenged the said recovery notice before the High Court of Delhi wherein the court as an interim measure directed that the OMCs deposit the sale proceeds in the Court and granted liberty to Vedanta to seek withdrawal of the amounts from the Court upon furnishing a bank guarantee of commensurate value. The interim arrangement is to continue until further orders by the court. The matter is scheduled to be heard on 17 May 2019.

Proceedings, notices and enquires initiated by the Central Excise.

The Central Excise department of the GoI had issued in June 2010 an ex-parte notice for reversal of Cenvat credit of ₹3,150 million ($47.3 million) along with interest of ₹88 million ($1.3 million) for the non-compliance of Rules 4(5a) and 4(6) of the Cenvat Credit Rules, in respect of non-return of job work challans for the period 1 March 2009 to 30 September 2009 within a stipulated time. In addition, it also alleged that Vedanta violated the advance license conditions from 2005 to 2009. In 2010, Vedanta filed four writ petitions WP No. 8123, 8135, 9744 and 9755 in the High Court of Madras against the Central Excise department along with an associated contempt petition. All the above petitions were heard on 29 July 2010 and pursuant to the order dated 8 June 2010, the High Court of Madras in relation to WP

No. 8123, remanded the matter to be heard and determined afresh by a new set of officers of the Central Excise department. The High Court of Madras further granted a stay in relation to WP No. 8135 in so far as relates to job work challan matter and until a fresh enquiry was made. Further, pursuant to the order dated 29 April 2011 the High Court of Madras dismissed WP No. 9744, 9755 and the contempt petition.

The Central Excise department deputed the Assistant Commissioner of Central Excise to conduct an enquiry for the alleged non-compliance of Rules 4(5a) and 4(6) of the Cenvat Credit Rules in respect of non-return of job work challans. The Assistant Commissioner of Central Excise served a show cause notice on 9 September 2011. Vedanta filed a response before the Assistant Commissioner of Central Excise. After conducting a personal hearing, the Assistant Commissioner passed a favourable order on 1 January 2012 and dropped the entire demand for duty and interest. The department went into appeal before the Commissioner (Appeals) against this order, but the appeal was restricted only to the demand of interest. The Commissioner (Appeals) allowed the appeal on 25 February 2013 on the condition that interest would become applicable only in those cases where goods have not been sent back or cleared from the premises within 180 days from the date of dispatch from the Tuticorin unit. The verification whether any interest is payable or not has been completed and department raised the interest liability of ₹2.4 million which Vedanta has challenged before Tribunal on 7 April 2015 and the case has yet to be listed for hearing.

Vedanta filed two writ appeals no. 704 and 705 of 2011 in the High Court of Madras, Division Bench challenging the orders passed with respect to the writ petitions no. 8135 and 9744 of 2010. The writ petitions were admitted on 1 August 2011 and the Court ordered other party to maintain the status quo. In the meanwhile, the Commissioner of Customs Tuticorin issued a show cause notice in January 2015 based on alleged violation of advance license conditions from 2005 to 2009 expressly mentioning that this show cause notice shall be kept pending and not be adjudicated unless and until directions are obtained from the High Court enabling such adjudication. The show cause notice also sought explanation as to why (i) a sum of ₹3,996.08 million along with interest for alleged violation of condition of export obligation should not be demanded as duties of customs; and (ii) the quantity of 77,241.0 metric tonnes of copper should not be held liable for confiscation for violation of export obligation. Vedanta filed writ petition no. 626 of 2015 against this show cause notice, which was tied up with writ appeals no. 704 and 705 of 2011 and heard together. Thereafter, regular hearings took place in the High Court, and on 12 March 2015 the High Court gave an interim order, allowing one of the prayers in writ in form of injunction to the Directorate General of Foreign Trade actions in pursuit of the show cause notice received from customs department. During the course of the hearings, writ appeal no. 704 was withdrawn as it has become infructuous as it relates to the job work challan matter which has already been concluded.

Writ appeal no. 705 of 2011 and writ petition no. 626 of 2015 were heard on 11 March 2016, and were both dismissed in terms of the final judgment of the High Court dated 1 August 2016. The court held that it did not find any impediment to custom authorities issuing show cause notice on basis of material gathered/input received from excise authorities. The court also held that company shall respond to the show cause notice dated 13 January 2015 within two weeks from receipt of the order and directed the Commissioner of Customs to conduct proceedings as expeditiously as possible. Vedanta has filed a Special Leave Petition against the High Court's order before the Supreme Court of India. The final hearing before the Supreme Court of India on the Special Leave Petition, as well as the accompanying stay application is awaited. The stay hearing before the Supreme Court of India on the special leave petition, took place on 21 April 2017 wherein the Supreme Court of India held that the commissioner of customs, Tuticorin may pass a final order against the notice but that it had to be kept in sealed cover. The tax authorities have taken on record the statements made by the employees of Vedanta prior to the issuance of a show cause notice. These recorded statements were then made part of the show cause notice in support of the allegations of the department. The Commissioner of Customs has allowed a personal hearing to adjudicate upon the show cause notice wherein Vedanta asked for cross examination of the concerned persons who have given and recorded the statements in the show cause notice. Further, Vedanta Limited requested for certain documents which the Commissioner of Customs refused to provide. Thereafter, Vedanta Limited filed an appeal against refusal order before the Customs, Excise and Service Tax Appellate Tribunal at Chennai wherein the Tribunal allowed for the request of cross examination but dismissed appeal with respect to the request for documents. Vedanta filed CMA 649 and 650 of 2018 in the High Court of Madras, Madurai Division Bench challenging the order passed by CESTAT and meantime cross examination of two witness has been done by Customs Commissioner, Tuticorin. High court has passed interim order on 06 March 2019 granting stay from further action/cross-examination by Custom Commissioner. The new date of hearing in this matter is awaited.

Assessment proceedings for VAT & CST.

A VAT audit was conducted of Vedanta Limited (Sterlite Copper) for the years 2007-08 to 2014-15 during the months of February and March 2015. Based upon the audit report submitted to Assistant Commissioner (AC), a demand notice was issued to pay tax amounting to Rs. 32,140 million (including a VAT amount aggregating to Rs. 22,100 million and CST Rs 10040 million). Writ Petitions were filed before Madras High court (Madurai Bench) wherein the High Court remanded the matter to the AC to reassess the matter. The Madras High Court further held that AC shall not be influenced by the audit report and shall act independently. The Company furnished its replies to all the notices received for the years 2007-08 to 2014-15 by 31 March 2016. AC, Tuticorin began the reassessment proceedings for two years 2007-08 and 2008-09 after providing a personal hearing on 18 May 2016. The Company attended the hearing and put forth its submissions in addition to the submissions made in the reply filed with the AC.

The re-assessment order dated 14 March 2017 was passed and the AC held that a CST demand of Rs. 1080 million was payable. The Company filed a writ petition before the Madras High Court. On 6 April 2017, the Madras High Court sent back the matter to the AC for further verification and directed a report to be furnished within eight weeks. The court granted a stay for recovery of dues. Another re-assessment order dated 31 August 2017 was passed by the AC in relation to the assessment year 2008-2009 with a CST demand aggregating to Rs. 3234 million against which the Company filed a writ petition before the Madras High Court. The court passed an order of stay dated 22 September 2017 and directed the AC to file a counter within 4 weeks of the order. However, the AC and the department have not filed a counter reply. Order are awaited in relation to the VAT payable for the years 2007-2008 and 2014-2015, and CST for the years 2009-2010 and 2014-2015. An assessment order was passed in relation to the payment of CST for the years 2015-16, 2016-17 and 2017-18 (for the April-June quarter). The next date of hearing is yet to be fixed.

Writ petition filed in the Delhi High Court by Vedanta Limited relating to extension of tenure of the Production Sharing Contract for the Rajasthan block.

Vedanta Limited filed a writ petition before the High Court of Delhi against the MoPNG, the DGH and ONGC regarding the extension of the tenure for the Production Sharing Contract ("PSC") for the RJ-ON-90/1 Block ("RJ Block").

The RJ Block PSC is valid until 14 May 2020. Consistent with the terms of the PSC, given that the RJ Block is also producing natural gas, Vedanta Limited has been requesting an extension of the tenure of the RJ Block PSC for a period of up to 10 years, i.e., until 14 May 2030. ONGC, Vedanta Limited's joint venture partner in the RJ Block, is technically aligned on the recoverable resources potential of the RJ Block beyond the PSC period, until the proposed extension period up to 2030. Vedanta Limited has been making regular requests to the MoPNG for extension of the tenure of the RJ Block PSC since the past few years. However, apart from seeking further technical and financial details, the MoPNG has not yet made a final decision in the matter.

In view of MoPNG's delay, a writ petition was filed by Vedanta Limited on 11 December 2015, seeking relief from the High Court of Delhi.

The High Court of Delhi on 31 May 2018 allowed the writ petition, directing GoI to extend the PSC for the RJ Block for a period of ten years beyond the current contract term in accordance with Article 2.1 of the PSC on the same terms and conditions. The GoI appealed the decision of the Single Bench before the Division Bench High Court of Delhi. The Court ordered that the application filed by Vedanta Limited in May 2018 for seeking extension of the PSC for ten years shall be decided/processed by the GoI under the new extension policy dated 7 April 2017 ("Policy") within a period of two months, notwithstanding the time prescribed in the Policy. The Court also stayed the order passed by the Single Judge and placed on record that the question of applicability of the Policy was presently left open.

On 26 October 2018, the GoI granted extension of the PSC for a period of ten years under the Policy, subject to the fulfilment of certain conditions. The applicability of the Policy remains *sub-judice*. The matter is scheduled to be heard on 6 May 2019.

Writ petition filed in the Delhi High Court by Vedanta Limited relating to export of crude oil from the Rajasthan Block.

Vedanta Limited has filed a writ petition before the High Court of Delhi against the Directorate General of Foreign Trade ("DGFT"), the MoPNG, and Indian Oil Corporation Limited ("IOCL") for the export of crude oil from the RJ Block.

Due to its nature and composition, RJ Block crude has the potential to be valued higher by refineries in other markets, beyond the prices being received from the GoI nominated buyers and other domestic, private refiners. Since 2009, Vedanta Limited has been receiving bids from international buyers and refiners offering prices that are an additional \$3 per bbl more than the domestic sale prices for RJ Block crude.

In accordance with the provisions of the RJ Block PSC and the applicable GoI policies for crude oil export, Vedanta Limited repeatedly requested IOCL and MoPNG to allow it to export RJ Block crude oil, to which there has been no firm response. Vedanta Limited also made written requests to the DGFT to intervene in the matter, which again proved unsuccessful.

In view of the aforesaid, Vedanta Limited filed a writ petition in the High Court of Delhi on 11 December 2015 to obtain relief in the form of orders to the DGFT, MoPNG and IOCL for approvals and authorisations to permit and facilitate the export of RJ Block crude oil, to the extent GoI nominated buyers are unable to cover the entire production. Through its order dated 14 December 2015, the High Court ordered the MoPNG, DGFT and IOCL to obtain necessary instructions on whether the GoI was willing to pick up the entire crude oil production from the RJ Block, or in the alternative was ready to grant permission to Vedanta Limited to directly export the crude oil not covered by the GoI nominees.

On 18 October 2016, the writ petition was dismissed by the High Court. Vedanta Limited then filed an appeal against the said order before the division bench of the High Court of Delhi which was dismissed by the court by way of its order dated 28 November 2018. Vedanta is currently exploring its legal remedies in the matter.

Shenzhen Shandong Nuclear Power Construction Co. Limited has commenced arbitration proceedings against Vedanta.

On 19 February 2012, Shenzhen Shandong Nuclear Power Construction Co. Limited ("SSNP") filed a petition before the Bombay High Court under section 9 of the Arbitration and Conciliation Act, 1996, that Vedanta had suppressed the fact that it had failed to obtain environmental clearances in relation to a 210 MW co-generation power plant for a refinery expansion project at Lanjigarh and further alleged the non-payment of dues for construction and other services in relation to the same. This was subsequent to SSNP's notice for termination of the contract dated 25 February 2011 and legal notice dated 23 February 2012 for recovery of its alleged dues. SSNP also made a request for interim relief. Under the petition, SSNP sought for a restraining order on encashment of the advance bank guarantee, injunction from disposing or creating third party right over plant and machinery at the project site and security for the amount due under the contract. During the pendency of the petition, SSNP invoked arbitration by way of a notice dated 18 April 2012. SSNP sought an award for the sums of ₹4,472.11 million, USD2,380 million and Euro 121 million. On 25 April 2012, the High Court of Bombay dismissed SSNP's petition. SSNP appealed against this order before a division bench of the High Court of Bombay, which, by its order of 12 December 2012 ordered Vedanta to deposit a bank guarantee for an amount of ₹1,870 million (\$28.8 million) until completion of the arbitration proceedings.

On 9 April 2013, Vedanta also filed a counterclaim for delays in operations caused arguing that SSNP was responsible. Subsequently SSNP filed an application for an interim award of ₹2,020 million ($28.9 million) before the arbitral tribunal, which was not allowed.

The arbitral award was pronounced on 9 November 2017, wherein the Tribunal awarded an aggregate amount of ₹2,210 million ($34 million) to SSNP payable within a period of 120 days carrying an interest at the rate of nine per cent (9%) from the date of filing of the claim along with a cost of ₹5 million. The tribunal further directed that beyond the said period of 120 days, the award amount shall carry an interest at the rate of fifteen per cent (15%) till the realization of the award amount.

Vedanta challenged the award before the High Court of Delhi under section 34 of Arbitration Act. This was dismissed by the court, post which Vedanta filed an appeal under section 37 before the division bench of the High Court of Delhi. The court granted a stay subject to the deposit of the award amount. Accordingly, Vedanta deposited an amount of ₹1,522.2 million with the court, requesting the court to direct SSNP to return the bank guarantee post which the balance amount shall be deposited.

The division bench, on 30 August 2018, dismissed the appeal under section 37 of Act and vacated all interim orders passed by the court. Vedanta challenged the said order of High Court before Supreme Court of India by way of a special leave petition. In the meantime, SSNP also filed an execution application before the High Court for appropriation of money which was deposited with the court, against which Vedanta filed an appeal to get a stay of execution.

The Supreme Court of India disposed of the SLP passing its final order, on 11 October 2018, partially modifying the Arbitral Award on the interest aspect as under: (i) A uniform rate of 9% will be applicable for the INR component of the award amount in entirety till the date of realization (ii) The interest payable on the EUR component of the award amount will be as per LIBOR + 300 basis points on the date of Award, till the date of realization. The aggregate award amount now stands revised at ₹2,899 million ($41.4 million) as on 28 February 2019.

SSNP filed a clarification application before the Supreme Court of India praying for the original award pronounced by the Tribunal on 9 November 2017, which is yet to be decided by the court.

Proceedings against TSPL relating to its delay in commissioning various units of the power plant.

TSPL entered into a long term power purchase agreement with the Punjab State Power Corporation Limited ("PSPCL") for supply of power. TSPL has a contractual obligation to commence commercial operation of various units of the power plant according to the scheduled timelines agreed in terms of the agreement. However, there were delays in implementing the project as compared to the scheduled timelines under the agreement. TSPL received letter from PSPCL, seeking payment of liquidated damages of ₹3,176.4 million ($50.0 million) for each delay in commissioning of Units I, II and III totalling ₹9,529.25 million ($146.9 million).

Subsequently, PSPCL invoked the bank guarantee of ₹1,500 million ($23.1 million) towards payment of the liquidated damages on account of delay in completion of the commissioning of Unit I. TSPL filed a petition with the Punjab State Electricity Regulatory Commission ("PSERC") for quashing of the claim of liquidated damages and grant of extension of time to complete the commissioning of various units of the power plant. It claimed that the highlighted delays arose due to PSPCL's delay in the fulfilment of certain obligations under the power purchase agreement, such as those in relation to procuring interconnection and transmission facilities and arranging supply of adequate quantity of fuel for the project, as well as other force majeure reasons. On 22 October 2014, PSERC ordered the matter to be settled through arbitration and the Punjab and Haryana High Court allowed the stay on encashment of bank guarantee until further orders. PSPCL submitted an appeal in Appellate Tribunal for Electricity (APTEL) against the PSERC order and on 12 May 2015, APTEL disposed the appeal by directing that the matter will be adjudicated by an arbitral tribunal. The proceedings before the arbitral tribunal have concluded and the award has been passed in TSPL's favour. Meanwhile, PSPCL has filed an application challenging the award under section 34 of the Arbitration and Conciliation Act, 1996 which is scheduled for hearing on 23 April 2019.

Proceedings against TSPL relating to mega power project benefits.

Sterlite Energy Limited (now Vedanta Limited) ("SEL") submitted its bid for setting up a 1980 MW thermal power plant in the state of Punjab under a tariff based international competitive bidding process under a Case-II competitive bidding mechanism on June 2008, which was ultimately awarded to SEL. A power purchase agreement (PPA) was entered between TSPL and PSEB on September 2008, which is now known as PSPCL. According to the power purchase agreement, any increase or decrease in the capital cost of the project on the occurrence of any "Change in Law" (as defined therein) after the cut-off date of 16 June 2008, had to be passed on to PSPCL, if it resulted in change in economic position of TSPL.

Because TSPL intended to sell all of the generated electricity to the state of Punjab, it did not meet one of the requirements for the mega power project at the time of bidding, namely that the project had to sell electricity to more than one state. However, the said requirement was amended in October 2009, making TSPL eligible for the mega power project status. Accordingly, TSPL was given the mega power project status in 2010 and thereafter has been receiving the customs and excise exemption.

In July 2013, PSPCL filed a petition before the PSERC, alleging that a TSPL had become entitled to the mega power project status after the cut-off date, the mega power project benefits received by TSPL had to be passed on to PSPCL pursuant to the power purchase agreement's "Change in Law" clause. TSPL in its reply stated that as of the cut-off date, similar benefits were available to it under India's foreign trade policy as a non-mega power project and accordingly, that its economic position had not altered pursuant to the grant of mega power project status to warrant the passing on of such benefits to PSPCL. TSPL has also produced a number of approval letters issued by various Director General of Foreign Trade offices across India, which extended such benefits to non-mega power projects including government power projects or other public sector undertakings.

PSERC passed an order dated 2 December 2014, holding against TSPL. TSPL thereafter filed an appeal on January 2015 along with a stay application before the APTEL, challenging the order of PSERC. The stay application was rejected by APTEL without considering the submissions of TSPL. TSPL then filed a stay application before the Supreme Court of India, appealing against APTEL's order on the stay application. The Supreme Court of India granted a stay on 24 April 2015 and subsequently on 28 July 2015, the Supreme Court of India ordered the stay to continue until given any further orders. Stay granted by the Supreme Court of India was later vacated on 6 February 2017 which led to a deduction of ₹214 crores whereas basis a subsequent Supreme Court order ₹50 crores was later refunded. Post this order APTEL granted a stay for further deductions from the monthly billing cycle against a bank guarantee furnished by the Company.

APTEL dismissed the appeal filed by TSPL and disallowed TSPL's contentions in its final judgement order dated 4 July 2017. TSPL filed an appeal before the Supreme Court of India against the adverse final judgement of APTEL. This appeal was admitted by Supreme Court of India on 10 July 2017 and a stay order was granted against PSPCL's proposed deduction of ₹900 million ($14 million) from TSPL's bills and against the encashment of bank guarantee amounting to ₹380 million ($6 million) which was furnished by TSPL to PSPCL under APTEL's order. TSPL filed a clarification application before the Supreme Court of India, which was allowed and PSPCL was directed to refund INR ₹500 million ($8 million). However, the ongoing monthly deductions on account of mega benefit claim has not been stayed by the Supreme Court of India. The appeal is pending for further hearing and next date is yet to be notified.

TSPL: Proceedings related to determination of energy changes.

Upon PSPCL's refusal to pay energy charges to TSPL as per provisions of power purchase agreement (PPA) between PSPCL and TSPL, TSPL filed a petition in PSERC against PSPCL claiming charges for washing, unloading, surface transportation, transit loss, finance charges and Gross Calorific Value (GCV) loss related to procurement of coal. PSPCL's contention was that fuel charges should only include charges billed by fuel supply company namely Mahanadi Coalfields Limited (MCL) whereas TSPL contended that all costs of fuel procurement are to be considered by PSPCL under PPA since obligation to supply fuel for the project is that of PSPCL under Case II Scenario IV bidding procedure of Ministry of Power. PSPCL's obligation of signing fuel supply agreement with MCL and to supply fuel for project was later upheld by Appellate Tribunal for Electricity ("APTEL") in another case between TSPL and PSPCL and that judgement is subsisting since its operation has not been disturbed in PSPCL's appeal to Supreme Court of India.

PSERC gave the final order on 23 November 2015 denying all the claims made by TSPL. TSPL later filed an appeal before APTEL challenging the order of PSERC. On 3 July 2017, APTEL partially allowed the appeal awarding unloading and shunting charges to TSPL whilst it ruled against TSPL on other claims. TSPL filed an appeal against the APTEL order before the Supreme Court of India. In a similar matter before the Supreme Court of India, it has granted substantial relief allowing costs for washing and road transportation besides directing measurement of GCV at plant site. Accordingly, the Supreme Court *vide* its order dated 7 March 2018 upheld the claims of TSPL. However, PSPCL misinterpreting the Supreme Court of India order, paid only ₹160 million on account of washing charges. On 24 September 2018, TSPL filed a contempt petition in the Supreme Court of India. The matter appears in the regular list of matters for the week starting 1 April 2019 and will get taken up for hearing in due course. The claim amount involved is ₹10,900 million ($155.7 million).

The Supreme Court of India also dismissed the cross appeal filed by PSPCL, thereby affirming APTEL's order allowing unloading and shunting charges to be paid by PSPCL. PSERC remand proceedings have commenced pursuant to APTEL's order dated 3 July 2017, for computation of unloading and shunting charges allowed to TSPL. In the remand proceedings on 3 April 2019, PSERC reserved its order in this matter.

TSPL involved in litigation for cost pass through of pollution compliance regulations.

There is an ongoing litigation where Ministry of Environment, Forest and Climate Change (MOEF&CC) issued Environment (Protection) Amendment Rules to implement new emission norms in all thermal power plants in India. The timeline of TSPL to implement these guidelines is 31 December 2019. For this, TSPL approached PSPCL since change in law costs are to be transferred to PSPCL as per PPA, but no positive response received from PSPCL in cost pass through matter. The amount involved is estimated at ₹10,000 million ($143.3 million) on account of capital cost for the FGD installation and operating costs ₹700 million per year ($10 million). PSERC has passed an adverse order in the matter considering that the said notification is not a change in law event. TSPL has filed its appeal in APTEL. Appeal has been admitted in APTEL and the next date of hearing 22 April 2019. Pending disposal of the appeal, TSPL has already started the implementation process in terms of inviting quotations from prospective bidders and negotiations, however installation of FGD is not going to be completed before the said date of 31 December 2019 and hence will be seeking an extension of the timeline. While TSPL is hopeful of securing such an extension no assurance can be given at this stage that the extension would be granted.

Claim for contributions towards the District Mineral Foundation.

The District Mineral Foundation was introduced by MMDRA Amendment Act, whereby all the mining lease holder have been made liable to pay contribution towards District Mineral Foundation, which shall be such percentage of royalty as prescribed by the Central Government. The Section 9B of the MMDRA Amendment Act, providing this levy was introduced and made effective from 12 January 2015. In September 2015, a notification was issued by the Ministry of Mines prescribing the rate for the District Mineral Foundation contribution.

Subsequently, state rules were formulated for Rajasthan with effect from May 2016 and HZL received demand notices for the deposit of contributions to the District Mineral Foundation from 12 January 2015. In its order dated 8 August 2016, the High Court of Rajasthan stayed the demand retroactively for the period under challenge.

On 16 December 2015, the Federation of Indian Mineral Industries also filed a writ petition before the High Court of Delhi, obtaining an order for no coercive action. The writ petition was subsequently transferred to the Supreme Court of India.

In October 2015, another notification was issued by the Ministry of Coal whereby rates were prescribed for certain minerals such as coal and lignite, although an additional provision also required for the application of such rates from the earlier date of the notification or the respective state rules. Vedanta Limited and Balco challenged the notifications for liability on account of fuel before the High Court of Delhi.

The Supreme Court of India through order dated 13 October 2017, held that contribution to DMF in case of minerals other than coal shall take effect from 17 September 2015 and in the case of coal from 20 October 2015 or from the date on which the DMF was established by the state, whichever is later. Pursuant to the Supreme Court of India order, HZL has challenged the demand for payment between the disputed period i.e. from the date when the State of Rajasthan established DMF until the date when the High Court of Rajasthan has granted a stay. In parallel, BALCO has filed a writ petition before the High Court of Delhi challenging the constitutionality of section 9B(5) and section 9B(6) of the MMDR Act. HZL has also filed an intervention application in the said petition. The matter is listed for hearing on 12 April 2019.

Vedanta Limited received a show cause notice from the Indian tax authorities for not withholding tax on payments made while acquiring a subsidiary.

In March 2015, Vedanta Limited received a notice from the Indian Tax Authorities ("Tax Authorities") alleging failure by Vedanta Limited to withhold tax on the consideration paid to Cairn UK Holdings Limited ("CUHL") on a transaction which took place in the year 2007-08. The said transaction relates to the acquisition of the shares of CIHL, a 100% subsidiary of Vedanta Limited as of 31 March 2017, from CUHL during the financial year 2006-2007 as a part of group reorganisation by the then ultimate parent company Cairn Energy Plc. Based upon the retrospective amendment(s) made in the year 2012 by inserting explanation 5 of section 9(1)(i) of the Income Tax Act, 1961, the Tax Authorities vide its order dated 11 March 2015, raised a demand of approximately ₹204,947 million ($2,927.8 million) comprising tax of approximately ₹102,480 million ($1,463.9 million) and interest of an equivalent amount for not withholding tax on the consideration paid to CUHL, for shares of CIHL. The Tax Authorities stated in the said order that a short term capital gain of ₹245,035 million ($3,500.5 million) accrued to CUHL on transfer of the shares of CIHL to Vedanta Limited in financial year 2006-2007, on which tax should have been withheld by Vedanta Limited.

Vedanta Limited understands that a tax demand has also been raised by the Tax Authorities on CUHL with respect to taxability of alleged capital gain earned by CUHL on whom the primary liability of tax lies, CUHL has received an Order from the ITAT holding that the transaction is taxable in view of the clarification made in the Act but also acknowledged that being a retrospective transaction, interest would not be levied. Hence affirming a demand of ₹102,480 million ($1,464 million) excluding the interest portion that had previously been claimed. The tax department has appealed this order before the Delhi High Court. As a result of the above order from ITAT, the Group now considers the risk in respect of the interest portion of claim to be remote. Further, as per the recent recovery notice dated 12 October 2018 received from the Tax Recovery Officer (TRO) appointed for CUHL, tax demand of CUHL of approx. ₹49,960 million ($713.7 million) along with interest is outstanding. Further, in the said notice, tax department has also instructed to remit the preference shares redemption amount including dividend payable thereon to the TRO. Amount aggregating to ₹6,070 million ($86.7 million) has been paid to the TRO on the 26 October 2018 thus reducing the liability to ₹43,890 million ($627 million). Vedanta has also paid interim dividend of fiscal year 2019 of ₹40 million ($0.6 million) to the TRO on 22nd November 2018. Accordingly, the Group has revised the contingent liability to ₹43,850 million ($626.4 million).

In this regard, on 27 March 2015 Vedanta Resources Plc. filed a Notice of Claim against the GoI under the UK-India bilateral investment treaty in order to protect its legal position and shareholder interests. Management was advised that Vedanta Resources Plc. has a good case to defend as per the provisions of the UK-India bilateral investment treaty. The International Arbitration Tribunal via an order dated 27 December 2017 held that Vedanta Resources Plc is an investor eligible for arbitration and further held that jurisdiction is in favour of Vedanta Resources Plc. The matter is now scheduled to be heard on its merits between 29 April 2019 to 10 May 2019. The Government of India has however, challenged the jurisdiction of the Arbitration Tribunal before the High Court of Singapore. Further, Vedanta Limited has sought independent advice on this issue and has been advised that there could be no liability on Vedanta Limited for the failure to withhold the taxes in the year 2006-07 based on provisions of law prevailing at the time of transaction as the aforesaid retrospective amendment has cast an impossible obligation on Vedanta Limited to deduct tax by having to predict and anticipate that the retrospective amendment will be made by the legislature on a future date. Vedanta Limited has approached the Delhi High Court against the said order and also filed an appeal before the Commissioner of Income Tax (Appeals). The Commissioner of Income Tax (Appeals) has confirmed the tax demand and interest against Vedanta Limited. The order has been challenged before Income Tax Appellate Tribunal, Delhi and the matter is next listed for hearing on 6 August 2019 before the Honourable Delhi High Court.

Proceedings relating to the challenge against the consent to operate and environmental clearance for ESL.

A writ petition was filed by ESL before the Jharkhand High Court against the orders issued by the Jharkhand State Pollution Control Board ("JSPCB") of rejecting ESL's application for the renewal of its CTO, which expired in December 2017. The MOEF issued an order on 20 September 2018 revoking the environment clearance of ESL which was also challenged before the Jharkhand High Court in a separate writ petition. The High Court has granted a stay against orders on MOEF and JSPCB and allowed the plant operations to continue till the next date of hearing, which is scheduled on 16 May 2019.

Class actions against KCM on behalf of Zambian nationals.

Two separate proceedings were issued in England and Wales by two English law firms, Hausfeld and Leigh Day, on behalf of Zambian nationals who allege that they have suffered loss and damages as a result of KCM's operation of the Konkola copper mine.

On 31 July 2015, Leigh Day issued proceedings on behalf of 1813 individual claimants from the Shimulala, Kakosa, Hellen and Hippo Pool communities in the Chingola district in Zambia. The allegations made against Vedanta and KCM pertain to alleged incidents occurring over an 11 year time period and include claims of personal injury, significant pollution, environmental damage and claims for aggravated and exemplary damages and for injunctive relief. These allegations are currently being investigated by KCM. There has been no hearing or proceeding in any court on the merits of any of these claims to date, none has been scheduled, and the amount of the claims has not been specified.

Vedanta and KCM have challenged the jurisdiction of the High Court of Justice of England and Wales, *inter alia*, on the basis that (a) there are already existing proceedings in Zambia which have been brought by multiple claimants against KCM in respect of the operation of the Konkola copper mine, (b) some of the claimants have already brought claims in Zambia, (c) the Konkola copper mine is situated, operated and regulated by Zambian regulators pursuant to Zambian law, (d) it is where KCM, the operator of the mine, is domiciled, (e) it is where the minority shareholder of KCM (controlled by the Government of the Republic of Zambia) is domiciled, (f) it is where the claimants are situated; (g) it is where the damage is alleged to have occurred, (h) it is the where the relevant witnesses are based, the relevant evidence is based, and (i) it is Zambian law which applies to these claims and Zambia has a fully functional legal system which can also accommodate group actions (or class actions) claims.

On 28 May 2016, the English High Court of Justice, Queen's Bench Division, Technology and Construction Court released a judgment disallowing the applications from Vedanta and KCM, respectively, ruling that the English courts have jurisdiction to hear and adjudicate the claims and Vedanta and KCM were granted permission to appeal the order. The hearing in the appeal before the UK Supreme Court was completed. On April 10, 2019, The UK Supreme Court while deciding on the appeal by Vedanta and KCM, held that the English court has jurisdiction to try the claims. As the judgement of the UK Supreme Court was only to decide on the procedural claims, the claims on merits are yet to be decided by the relevant court.

Hausfeld issued a claim form on 16 July 2015 in the Queen's Bench Division on behalf of 347 claimants in relation to alleged pollution from the Konkola copper mine which was alleged to have led to, amongst other things, personal injury. Whilst no particulars of claim were produced, the claims by Hausfeld appeared to cover materially the same facts and matters as those which form the substance of the claim being brought against Vedanta and KCM by Leigh Day (referred to above). It subsequently became clear that Leigh Day and Hausfeld were claiming to act for some of the same claimants and, following a case management conference in the English High Court on 24 November 2015, it appears to have been established between Leigh Day and Hausfeld that those "overlapping" claimants wished to instruct Leigh Day rather than Hausfeld, increasing the number of claimants represented by Leigh Day to 1826. The Hausfeld claim form was therefore allowed to lapse without service. That claim on behalf of 347 claimants is therefore at an end.

On 25 January 2016, Hausfeld informed the High Court that they are assessing the viability of potential new claims relating to alleged environmental pollution against KCM and Vedanta, involving 1,099 individuals in the Copperbelt region in Zambia. Hausfeld told the Court that the alleged pollution appeared to emanate from a different source than that which is the subject of the Leigh Day claim, though Hausfeld have indicated that they are awaiting the outcome of Vedanta and KCM's jurisdiction challenges in the Leigh Day claim (referred to below) before deciding whether to pursue those claims. Hausfeld have not yet commenced pre-action correspondence, or taken any other steps, in respect of those potential new claims. The claim amount is not currently quantifiable.

Sustainability

In fiscal year 2012, Vedanta introduced a series of policies and technical and management standards (the "Sustainability Framework") aligned to international sustainability standards, such as the International Finance Corporation Performance Standards, the International Council on Mining and Metals Sustainable Development Framework and the United Nations Global Compact Principles. In fiscal year 2013, Vedanta took further steps to implement the Sustainability Framework by requiring its operating subsidiaries to have clear action plans in place with supporting documentation to guide them to further implement the Sustainability Framework, based on self-assessment. In addition to the self-assessment requirement, Vedanta has also adopted an evaluation and internal assurance process and programmes to train and develop its employees and contractors in the Sustainability Framework.

In fiscal year 2015, Vedanta introduced safety performance standards, formal safety risk assessment, industrial hygiene baseline assessment and safety leadership coaching. In fiscal year 2016, Vedanta incorporated safety performance standards into executive remuneration. These standards now form integral part of internal assurance process, known as Vedanta Sustainability Assurance Programme (VSAP) and the businesses performance is tracked against these standards on regular basis.

Vedanta's Board, particularly the Sustainability Committee, is responsible for ensuring the implementation of the Sustainability Framework and to otherwise assist the Board in meeting its responsibilities in relation to sustainability related matters arising out of the activities and operations of Vedanta. See "Management — The Board — Sustainability Committee". The committee which is headed by independent director meets on a quarterly basis and takes stock of Vedanta's sustainability performance and provides guidance on related strategic and policy decisions.

As of 31 March 2018, 100% of existing and running operations are certified to ISO 14001 and OHSAS 18001 standards. Further 44 plants are certified to ISO 9001, 16 plants are certified to ISO 50001 and 10 plants are certified to SA 8000. Vedanta procures required approvals from suppliers and the local community, before it sources its raw materials for its operations.

In its effort to promote health and safety, Vedanta has adopted the Experience Based Risk Quantification and Bow Tie and Making Better Risk Decision approach to enhance its risk assessment, incident investigations and decision making capabilities. Additionally, Vedanta has adopted Consequence Management technique to instil discipline amongst people and avoid repeat incidents. The 14 fatalities recorded during Fiscal 2018 have heightened Vedanta's resolve to create a zero-harm culture across the organisation and raise the profile of health and safety by reviewing safety incidents at the board, business segment and operational levels. The business units have implemented behavioural based and technical programmes to avoid the reoccurrence of these incidents. Further safety investigations and follow-ups have been improved and quantitative risk assessments have been introduced for all critical areas.

During fiscal year 2018 Vedanta engaged an independent agency to conduct a stability assessment of its tailing dams and fly ash ponds. Vedanta has a tailing dam related business risk as a part of its group risk register and its businesses regularly provide updates. Vedanta is committed to mitigating its impact on climate change and seeks to reduce its GHG emissions intensity by 16% by 2020 against a 2011 baseline.

Vedanta's operations are aligned with regulatory requirements, as applicable, such as the IFC performance standards. With recent developments in relation to climate change and environment protection, Vedanta is in the process of updating its policies and is taking steps to implement measures for environment protection, such as conservation of forests and biodiversity enhancement. Vedanta also engages with third party consultants to effectively mitigate, manage and resolve environment pollution, if any, in locations where it operates.

As of 31 December 2018, Vedanta employed, directly or through contractors, over 70,000 people. Making a positive contribution to local communities in India and Africa remains a high priority for Vedanta, with around 3.36 million beneficiaries of community development programmes during fiscal year 2018, supported by over 250 partnerships with NGOs, local governments, academia and private hospitals. Vedanta's social investment reached $39 million and is aligned with its social vision and community need based approach, which includes developing infrastructure, including roads, sanitation, education and medical facilities, in the communities where it operates.

Additionally, Vedanta paid $5.3 billion to the various governments during fiscal year 2018 through direct and indirect taxes, royalty and oil tax.

HZL was ranked 5th globally in Metals & Mining Category and 1st in Environmental Dimensions for Metals & Mining in Dow Jones Sustainability Index for 2018. Vedanta Limited's Lanjigarh Refinery received the Kalinga Safety Award 2018 in silver category at the 9th Odisha State Safety Conclave (OSSC) 2018 for excellence in safety practices in Alumina Production Industry. Dariba Smelting Complex won Gold award in Fame Excellence Award 2018, under the category 'Energy Efficient Power Plant. Chanderiya Smelting Complex receives 5S Certification Award from Quality Circle Forum of India (QCFI).

Indian Regulatory Matters

Vedanta's mining business is subject to mining laws and regulations. The MMDR Act, the Mineral Concession Rules, 1960 of India, as amended, and the Mineral Conservation and Development Rules, 2017 (which was notified on 27 February 2017) which has replaced Mineral Conservation and Development Rules, 1988 (the "MCD Rules"), as amended governs the mining rights and operations of mines in India. The MCD Rules outline the procedures for obtaining a prospecting license or the mining lease, the terms and conditions of such licenses and the model form in which they are to be issued. The GoI announced the National Mineral Policy in 1993 which was replaced by the National Mineral Policy of 2008 ("NMP 2008"). Thereafter, the National Mineral Policy of 2019 was approved by the government of India on 28 February 2019 ("**NMP 2019**"). NMP 2019 provides for incentives for private sector investment in exploration and mining by encouraging merger and acquisition of mining entities, creation of dedicated mineral corridors to boost private sector mining areas, and for ensuring level playing field and transparency in the grant of concessions and promotion of scientific mining within a sustainable development framework so as to protect the interest of local population in mining areas. Further, NMP 2019 focuses on improving the regulatory mechanism by incorporation of e-governance, including satellite and remote sensing applications. The NMP 2019 has introduced the right of first refusal for reconnaissance permit/prospecting licence holders, encouraging the private sector to take up exploration of a sections in prospective areas. The NMP 2019 also proposes to grant the status of an 'Industry' to mining activity to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by the private sector entities. The MMRD Act was amended on 27 March 2015 and has brought about significant changes in the legal regime for the mining sector including defining bauxite, iron ore, limestone and manganese ore as notified minerals, creation of a new category of mining license i.e. the prospecting license-cum-mining lease, grant of mining lease for a period of 50 years for all minerals other than coal, lignite and atomic minerals, establishment of District Mineral Foundation for the benefit of persons in districts affected by mining related operations, auction of notified and other minerals by competitive bidding, including e-auction etc. The MMDR Act was further amended by the Mines and Minerals (Development and Regulation) Amendment Act, 2016 (which received presidential assent on 6 May 2016) which permits the transfer of captive mine leases (granted before 12 January 2015) without having to go through an auction processed and also allows the dumping of waste outside of the mining area by including dumping sites within the definition of lease area.

Working conditions of mine laborers are regulated by the Mines Act, 1952, as amended ("Mines Act") and it sets forth standards of work, including number of hours of work, leave requirements, medical examination, weekly days of rest, night shift requirements and other requirements to ensure the health and safety of mine workers. The Mines (Amendment) Bill, 2011 proposes several amendments to the Mines Act, including significant enhancement to the monetary penalties and terms of imprisonment for violations.

Oil and Gas Laws

Vedanta's oil and gas business is governed by various oil and gas laws and is regulated by the MoPNG. The MoPNG is the principal regulator of oil and natural gas exploration and production in India. The MoPNG established the Directorate General of Hydrocarbons in 1993 to promote the sound management of Indian petroleum and natural gas resources with due regard to the environmental, safety, technological and economic aspects of petroleum activities. The Directorate General of Hydrocarbons is responsible for, inter alia, ensuring correct reservoir management practices, reviewing and monitoring exploratory programmes, the development plans of oil companies, and monitoring the production and the optimal utilisation of gas fields.

The MoPNG oversees the Oil Industry Safety Directorate, which develops standards for safety, fire-fighting, training programmes and information dissemination, and conducts periodic safety audits of all petroleum-handling facilities. It also oversees the Oil Industry Development Board, which provides financial and other assistance for the conductive development of the oil industry. The safety standards prescribed by the Oil Industry Safety Directorate, and the safety regulations prescribed by the Directorate General of Mines Safety in respect of onshore petroleum mining installations, must be complied with.

Oil and natural gas exploration activities are governed by the Oilfields (Regulation and Development) Act, 1948, as amended ("ORDA Act"). This legislation provides for the regulations of oilfields and for the development of mineral oil resources, including natural gas and petroleum. The ORDA Act empowers the GoI to frame rules on the granting of mining leases and petroleum exploration or prospecting licenses, the conservation and development of mineral oils, the production of oil, and the regulation of oilfields.

The Petroleum and Natural Gas Rules, 1959, as amended ("PNG Rules") provides the framework for the granting of petroleum exploration licenses and petroleum mining leases. The PNG Rules prohibits the prospecting or exploitation of any oil or gas unless a license or lease has been granted under the PNG Rules. A petroleum mining lease entitles the lessee to an exclusive right to extract oil and gas from the relevant contract area. Petroleum exploration licenses and petroleum mining leases are granted by the MoPNG for offshore areas and by the relevant state governments, with the prior approval of the GoI, for onshore areas. A notification dated 24 July 2018 amended the PNG Rules to redefine the term "petroleum" to mean any naturally occurring hydrocarbon in the in the form of natural gas or in a liquid, viscous or solid form, or a mixture thereof, in order to open exploration of hydrocarbons in existing fields, in line with the Hydrocarbon Exploration Licensing Policy, 2016.

The Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976, as amended regulates the exploration and exploitation of resources of the continental shelf and exclusive economic zone.

The Essential Commodities Act, 1955, as amended makes provisions controlling the production, supply and distribution of certain essential commodities, which include petroleum and petroleum products.

The Petroleum Act, 1934, as amended ("Petroleum Act") provides that no person shall produce, refine, blend, store or transport petroleum except in accordance with the rules framed by the GoI under the Petroleum Act. The Petroleum Rules, 2002, as amended now regulate these activities.

The Petroleum and Natural Gas Regulatory Board Act, 2006, as amended provides for the establishment of the Petroleum and Natural Gas Regulatory Board. The board regulates the refining, processing, storage, transportation, distribution, marketing and sale of petroleum products and natural gas (excluding production of crude oil and natural gas).

The Petroleum and Minerals Pipelines (Acquisition of Right of User in Land) Act, 1962, as amended provides the framework governing the acquisition of right of user in land for laying pipelines for the transportation of petroleum and minerals and other matters connected therewith. This law is limited to the acquisition procedure, restrictions on use of land and compensation payable to the persons interested in the land.

The MoPNG through its notification no. O-32011/4/2013-ONG-I dated 30 March 2016 introduced a new exploration and licensing policy named Hydrocarbon Exploration and Licensing Policy ("HELP"). This is a fundamental change in the Indian oil and gas sector, which introduces a new contractual and fiscal model for the award of hydrocarbon acreages. Four main facets of HELP are: single license, open acreages, revenue sharing model and marketing and pricing freedom.

The MoPNG through its notification no. O-22013/27/2012-ONG-D-V(Vol-II) dated 21 March 2016 introduced the policy for marketing including pricing freedom for the gas to be produced from discoveries in deepwater, ultra-deepwater and high-pressure temperature areas. This policy is applicable to all discoveries in deep water/ultra-deep water/high temperature-high pressure areas which are yet to commence commercial production as of 1 January 2016 and to all future discoveries in such areas. As per the policy the producers will be allowed marketing freedom including pricing freedom subject to a ceiling price on the basis of landed price of alternative fuels. The MoPNG has by way of notification no. O-32011/4/2013-ONG-I dated 30 June 2017 has introduced the Open Acreage Licensing Policy (Modalities for operationalization-Hydrocarbon Exploration and Licensing Policy) for the bidding process for exploration and development of oil and gas blocks in India under the HELP. Further, the MoPNG has by way of notification no. O-22013/6/2016-ONG-D-V(Part)(FTS-44334) dated 25 June 2018 has introduced the Policy framework for streamlining operations, relaxation of timelines and delegation of powers to DG, DGH under PSCs for streamlining the operations under the production sharing contracts.

Power Sector

Vedanta's power sector is regulated by laws relating to power and electricity generation. Under the Electricity Act, 2003, as amended from time to time (the "Electricity Act"), transmission and distribution of, and trading in, electricity require licences from the appropriate Central or State Electricity Regulatory Commissions (respectively, "CERCs" and "SERCs", and collectively, "ERCs"), unless exempted in accordance with the Electricity Act. CERC has jurisdiction over generating companies owned or controlled by the GoI or which have a composite scheme for generation and sale in more than one State. SERCs have jurisdiction over generating stations within State boundaries, except those under CERC's jurisdiction. The respective ERC determines the tariff for supply of electricity from a generating company to a licensee, transmission, wheeling, and retail sale of electricity. The Electricity Act was amended in 2007 to exempt captive power generation plants from licencing requirements.

The Electricity Act allows generating companies open access to transmission lines. The provision of open access is subject to the availability of adequate transmission capacity as determined by the Central or State Transmission Utility. Under the Electricity Act, ERCs determine tariff for supply of electricity by a generating company (as well as for transmission, wheeling and retail sale of electricity).

The Electricity (Amendment) Bill 2014 ("2014 Bill") seeks to segregate the distribution network business and the electricity supply business, and introduce multiple supply licensees in the market. The Bill introduces a supply licensee who will supply electricity to consumers. The distribution licensee will maintain the distribution network and enable the supply of electricity for the supply licensee. Further, the Electricity (Amendment) Bill 2016 which was introduced on 11 July 2016, in addition to the amendments sought to be introduced by the 2014 Bill, seeks to enhance the use of non-conventional energy systems using renewable sources of energy in rural areas and formulate policies accordingly.

Environmental Laws

Vedanta's business is subject to environmental laws and regulations. The applicability of these laws and regulations varies from operation to operation and depends on jurisdiction in which Vedanta operates. Vedanta's operations require environmental and other permits covering, amongst other things, water use and discharges, stream diversions, solid waste disposal and air and other emissions. Major environmental laws applicable to Vedanta's operations, as amended from time to time, include the Environment (Protection) Act, 1986 as amended, Forest (Conservation) Act, 1980 of India as amended, and the Forest Conservation Rules, 2003 as amended, Hazardous Wastes (Management and Transboundary Movement) Rules, 2016, Water Act, as amended Water (Prevention and Control of Pollution) Cess Act, 1977 as amended, Air Act as amended, The Coal Mines (Nationalisation) Act, 1973 as amended, or Coal Nationalisation Act as amended, Coking Coal Mines (Nationalisation) Act, 1972 as amended, Coal Mines (Taking Over of Management) Act, 1973 as amended, Coking Coal Mines (Emergency Provision) Act, 1971 as amended, Coal Bearing Areas (Acquisition and Development) Act, 1957 as amended, Coal Mines (Conservation and Development) Act, 1974 as amended and the New Coal Distribution Policy, 2007 as amended.

The Environmental Protection Act, 1986 as amended from time to time, the Water (Prevention and Control of Pollution) Act, 1974 as amended from time to time and the Air (Prevention and Control of Pollution) Act, 1981 as amended from time to time provide for the prevention, control and abatement of pollution. Pollution control boards have been set up in states in India to exercise the powers under these statutes to prevent and control pollution. Companies must obtain the clearance of state pollution control boards before emitting or discharging effluents into the environment.

In case the project value exceeds ₹1 billion for a new project or ₹500 million for the expansion of existing oil and gas exploration and production project, the project would also require the approval of the Ministry of Environment and Forest.

The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 ("HWMTM Rules 2016"), as amended, encourages disposal of waste farther away from the source of generation. It promotes transboundary movement of hazardous wastes. Further, the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2019 has prohibited the import of solid plastic wastes and provides that industries that do not require consent under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981, will be exempted from requiring authorisation also under the HWMTM Rules 2016.

Employment and Labour Laws

Vedanta is subject to various labour, health and safety laws which govern the terms of employment of Vedanta's laborers at the mining and manufacturing facilities, their working conditions, the benefits available to them and the general relationship between the management and such laborers. These employment laws applicable to Vedanta, as amended from time to time, include the Industrial Disputes Act, 1947 as amended, Factories Act, 1948 as amended, Contract Labour (Regulation and Abolition) Act, 1970 as amended, Employee State Insurance Act, 1948 as amended, Payment of Wages Act, 1936 as amended, Minimum Wages Act, 1948 as amended, Workmen's Compensation Act, 1923 as amended, Payment of Gratuity Act, 1972 as amended, Payment of Bonus Act, 1965 as amended, and Employees' Provident Funds and Miscellaneous Provisions Act, 1952 as amended.

Corporate Laws

In addition to the above, Vedanta is required to comply with the provisions of the Companies Act, 2013, as amended, Companies Act, 1956, to the extent applicable, and rules framed thereunder and other applicable statutes imposed by the central or the state government and authorities for the day-to-day business and operations. Vedanta is also subject to various central and state tax laws.

Moreover, there are various rules and regulations which are framed and amended from time to time by the SEBI in order to regulate the functioning of the securities market, which Vedanta is required to comply with.

The Insolvency and Bankruptcy Code, 2016 (Bankruptcy Code) as amended was notified on 5 August 2016. The Bankruptcy Code offers a uniform and comprehensive insolvency legislation encompassing all companies, partnerships and individuals (other than financial firms). It allows creditors to assess the viability of a debtor as a business decision, and agree upon a plan for its revival or a speedy liquidation. The Bankruptcy Code creates a new institutional framework, consisting of a regulator, insolvency professionals, information utilities and adjudicatory mechanisms, which will facilitate a formal and time-bound insolvency resolution and liquidation process.

Regulation of Foreign Investment

Foreign investment in India is governed primarily by the provisions of the Foreign Exchange Management Act, 1999, as amended (FEMA) which relates to regulation primarily by the Reserve Bank of India (RBI) and the rules, regulations and notifications thereunder, and the policy prescribed by the Department of Industrial Policy and Promotion, Government of India, which is regulated by the Foreign Investment Promotion Board. The FEMA regulates transactions involving foreign exchange and provides that certain transactions cannot be carried out without the general or specific permission of the RBI. Vedanta is also required to comply with the Foreign Exchange Management Act, 1999 (FEMA) as amended and the rules and regulations made thereunder as amended from time to time, which primarily governs foreign investment in India.

Dividends are freely repatriable without any restrictions (net after tax deduction at source or dividend distribution tax, if any, as the case may be). The repatriation is governed by the provisions of the Foreign Exchange Management (Current Account Transactions) Rules, 2000, as amended from time to time.

Further, RBI has placed certain restrictions and conditions for the use of debt funds in India which are raised in the overseas market by overseas holding/group companies of Indian companies where such Indian companies account for sole/major operations of the group. Under the Foreign Exchange Management (Borrowing or Lending in Foreign Exchange) Regulations, 2018 read together with the Master Direction on External Commercial Borrowings, Trade Credit, Borrowing and Lending in Foreign Currency by Authorised Dealers and Persons other than Authorised Dealers, FED Master Direction No. 5/2015-16 dated 1 January 2016 issued by the RBI read together with the A.P (DIR Series) Circular no. 17 dated 16 January 2019 on the new External Commercial Borrowings framework and A.P. (DIR Series) Circular no. 18 dated 7 February 2019, as amended, modified or replaced from time to time by any rules, regulations, notifications, circulars, press notes or orders issued by the RBI or other Indian governmental agency in relation to external commercial borrowings ("**ECB Guidelines**"), AD banks are allowed to permit creation/cancellation charge on immovable assets, movable assets, financial securities and issue of corporate and/or personal guarantee in favour of overseas lender/security trustee to secure the ECB to be raised by the borrower as long as the following conditions are satisfied:

a. The ECB should be in compliance with applicable ECB Guidelines;

b. The loan agreement should have a security clause requiring the ECB borrower to create/cancel charge, in favour of overseas lender/security trustee, on immovable assets/movable assets/ financial securities/issuance of corporate and/or personal guarantee and

c. No objection certificate from the existing lenders in India has to be obtained for creation of charge.

Once the aforesaid conditions are met, the AD Bank can allow creation of charge on immovable assets, movable assets, financial securities and issue of corporate and/or personal guarantee during the currency of the ECB in compliance with the conditions laid down in respect of kinds of security created under the revised ECB framework. Indian companies are also not allowed to use funds raised abroad unless it is in compliance with the general or specific permissions that are stipulated under ECB Guidelines.

DESCRIPTION OF THE ISSUER

The Issuer, Vedanta Resources Finance II Plc, is a company incorporated in England and Wales on 20 March 2019. The registered office of the Issuer is at 5 Floor, 6 Andrew Street, London, United Kingdom, EC4A3AE, and the telephone number is +44 (20) 7499-5900. The issuer is holding company for natural resources group. The Issuer is a wholly owned subsidiary of Vedanta Resources Holdings Limited, which is a wholly owned subsidiary of the Guarantor.

Business Activity

The Issuer has been incorporated for this offering.

The issuance of the Notes was approved by the Board of Directors of the Issuer at a meeting of the Board of Directors held on 3 April 2019.

Management

The directors of the Issuer are:

- Deepak Kumar; and
- Mansoor Siddiqi

Capitalization

The Issuer has an issued and paid up share capital of GBP 50,000, comprising 50,000 shares of GBP 1 per share each.

MANAGEMENT

The following table sets forth certain information regarding Company's Directors and executive officers and senior management as of 31 December 2018.

Name	Nationality	Age	Position
Board of Directors			
Anil Agarwal	Indian	66	Executive Chairman
Navin Agarwal	Indian	58	Executive Vice Chairman
Srinivasan Venkatakrishnan	British	53	Chief Executive Officer
Geoffrey Green	British	69	Non-Executive Director
Deepak Parekh	Indian	74	Non-Executive Director
Ekaterina (Katya) Zotova	Dutch	40	Non-Executive Director
Ravi Rajagopal	British	64	Non-Executive Director
Edward Story	American	75	Non-Executive Director
Executive Committee			
Tarun Jain	Indian	59	Director of Finance
Arun Kumar GR	Indian	47	Chief Financial Officer
Deshnee Naidoo	South African	42	CEO Zinc International
Dilip Golani	Indian	53	Director, Management Assurance
Sunil Duggal	Indian	57	Chief Executive Officer, HZL and Lead Base Metals Group
Rajagopal Kishore Kumar	Indian	57	Head — Group External Relations
Sudhir Mathur(1)	Indian	57	Chief Executive Officer — Vedanta Limited Oil and Gas
P Ramnath	Indian	61	Chief Executive Officer, Vedanta Limited Copper
Mansoor Siddiqi	Indian	66	Group Director — Projects
Phillip Turner	Australian	61	Head — Group HSE and Sustainability
Scott Caithness	Australian	58	Head — Group Mining Exploration
Madhu Srivastava	Indian	45	Head — Group Human Resources
Naveen Singhal	Indian	55	Chief Executive Officer, Iron Ore business
Ajay Dixit	Indian	59	Interim Chief Executive Officer, Aluminium and Power
Pankaj Malhan	Indian	46	Chief Executive Officer, ESL
Vikas Sharma	Indian	54	Chief Executive Officer, BALCO
Abhijit Pati	Indian	55	Chief Executive Officer, Jharsuguda
Pankaj Kalra(2)	Indian	43	Chairman, Commercial Cost and Marketing
Pankaj Kumar	Indian	50	Chief Operating Officer, Smelters (HZL)
Laxman Shekhawat	Indian	51	Director-Operations, HZL

(1) Sudhir Mathur, CEO of the Oil and gas division of Vedanta Limited, who was due to retire from his current role in March 2020, has expressed his desire to resign from the Company in advance of that date. The Company is in discussions with him regarding an orderly plan of succession. As part of such planning, the Company is in the process of internally designating a deputy or acting CEO.

(2) Pankaj Kalra, the CFO of Vedanta Limited's oil and gas division, tendered his resignation on 5 April 2019. The Company is in the process of appointing a successor and in the interim Vivek Rathi, the Deputy CFO of oil and gas division, will be acting as interim CFO.

Directors and Senior Management

Other than those interests and relationships disclosed in "Principal Shareholders" and "Related Party Transactions", no conflicts of interest exist between the private interests of the management team and the interests of the Company.

Directors

The Company's Board is chaired by Mr. Anil Agarwal. The other members of the Board are Messrs. Navin Agarwal, Srinivasan Venkatakrishnan, Geoffrey Green, Deepak Parekh, Ravi Rajgopal, Edward Story and Ms. Ekaterina (Katya) Zotova. The business address of each of the Directors is 30 Berkeley Square, London WIJ 6EX.

Executive Directors

Mr Anil Agarwal founded Vedanta in 1976 and has over three decades of entrepreneurial and mining experience. He has helped to shape Vedanta's strategic vision and under his leadership, Vedanta has grown from an Indian domestic miner into a global natural resources group with a world class portfolio of large, diversified, structurally low-cost assets which are capable of generating strong cash flow. Mr Agarwal is also a director of Sterlite Technologies Limited, Conclave PTC Limited and the Anil Agarwal Foundation.

Mr Navin Agarwal is currently the Chairman of the Company's principal subsidiary Vedanta Limited. He has been associated with the Group from its founding days. He has over 25 years of strategic management experience within the Group and is widely credited for creating a culture of business excellence delivering superior benchmark performance. Mr. Agarwal pursues a vision to partner India's journey for industrial regeneration and socio-economic well-being through the Company's sustainable approach and value-focused strategy. He seeks to leverage the potential of India's natural resources sector. He plays a key role in the strategic and governance framework of the Vedanta group and has led the growth of the Company, through organic projects, as well as, acquisitions.

Mr Agarwal was formerly the Chairman of the Executive Committee until 31 August 2013 and chairman of Cairn India Limited until its merger with Vedanta Limited.

Mr Srinivasan Venkatakrishnan was appointed as the Company's Chief Executive Officer and a Director on 31 August 2018. Prior to joining the Group, he was CEO of AngloGold Ashanti Limited, the world's largest emerging market gold producer since 2013. Between 2005 and 2013, Mr Venkatakrishnan was AngloGold Ashanti's Chief Financial Officer and prior to this, he was CFO of London-listed Ashanti Goldfields Limited. Mr Venkatakrishnan brings to Vedanta an impressive set of values and a wealth of experience in corporate and other roles, together with a proven ability to deliver significant operating and financial improvements, while also ensuring important advances in sustainability.

Non-Executive Directors

Mr Geoffrey Green was a partner of the leading international law firm, Ashurst LLP from 1983 to 2013 and served as Ashurst's senior partner and chairman of its management board for 10 years until 2008. He was subsequently appointed as head of the firm's expanding Asian practice from 2009 to 2013, based in Hong Kong. Mr Green is currently also the non-executive chairman of the Financial Reporting Review Panel, one of the main subsidiary bodies of the Financial Reporting Council. Mr Green has a wealth of knowledge in respect of UK corporate governance, regulatory and strategic matters, having been an adviser to several major UK listed companies and their boards on a wide variety of corporate and governance issues. He has a degree in law from Cambridge University and qualified as a solicitor at Ashurst LLP. He was appointed as a director of company in August 2012 and is the Chairman of the Company's Remuneration Committee. He is also a member of the Audit Committee.

Mr Deepak Parekh is the chairman of Housing Development Finance Corporation, India's leading financial services conglomerate with a presence in banking, asset management, life insurance, general insurance, real estate, venture funds and education loans. He is the non-executive chairman of GlaxoSmithkline Pharmaceuticals and Siemens, in India. Mr Parekh also serves as a director on the Boards of Exide, Indian Hotels and the international Board of DP World in the UAE. In addition, he is on the advisory boards of several Indian and multinational corporations. Mr Parekh was the first international recipient of the Institute of Chartered Accounts in England and Wales outstanding achievement award in 2010. He received the Padma Bhushan in 2006, Knight in the Order of the Legion of Honour in 2010 and the Bundesverdienstkreuz. Mr Parekh is the Company's Senior Independent Director and also a member of the Audit, Remuneration and Nominations Committees.

Ms Katya Zotova has a wide range of commercial experience in the oil and gas industry including strategy, portfolio management, finance and mergers and acquisitions. She was a Principal at L1 Energy LLP. Prior to this, Ms Zotova was Head of International Acquisitions and Divestments for Citigroup's oil and gas division focusing on oil majors and national oil companies. She has also previously held a variety of upstream commercial roles during a 14 year career at Royal Dutch Shell including Head of Portfolio Management for upstream International. She has a summa cum laude degree in finance and management from the Academy of National Economy in Moscow and an MBA from Rotterdam School of Management/Columbia Business School. She was appointed as a director of company in August 2014 and is the Chairman of company's Sustainability Committee and is a member of the Nomination and Remuneration Committee.

Mr Ravi Rajagopal joined Vedanta in July 2016, and is currently a member of Vedanta's Audit and Sustainability Committees. He has worked in a variety of senior finance and operational roles, including CFO for Europe and Group Financial Controller in Diageo plc since December 1996, where he was the Global Head of Business Development of Diageo plc from July 2010 until 2015. Prior to joining Diageo plc, Mr. Rajagopal worked with ITC India (a BAT plc associate in India), where he held a variety of senior positions both in finance and general management. Mr. Rajagopal is also a Non-Executive Director of United Spirits, India and is a Senior Advisor to JM Financial Institutional Securities Limited, a leading Investment Bank in India. He has a degree in Commerce from Madras University and is a fellow of the Institute of Chartered Accountants of India and the Cost and Works Accountants of India. He has also completed the Advanced Management Program at Harvard Business School. He was appointed as a director of company in July 2016 and is the Chairman of the Company's Audit Committee and a member of the Sustainability Committee.

Mr Edward Story was appointed to the Board in 1 June 2017. He serves as a member of the Company's Audit Committee. Mr Story is the founder, president and chief executive officer of SOCO International PLC, an international oil and gas exploration and production company listed on the London Stock Exchange with operations in Vietnam, Thailand, Republic of Congo (Brazzaville) and Angola. He brings to the Board over 50 years of global experience in the oil and gas industry, having previously held a number of senior executive positions at various international oil and gas companies such as Snyder Oil Corporation, Conquest Exploration Company, Superior Oil Company, Exxon Corporation and Esso Standard Oil. He was formerly also a non-executive director of Cairn Energy plc and more recently, a non-executive director of Cairn India Limited until its merger with Vedanta Limited. Mr Story holds a Bachelor of Science degree from Trinity University, San Antonio, Texas, a Master's degree in Business Administration from the University of Texas and an honorary Doctorate degree by the Institute of Finance and Economics of Mongolia.

Executive Committee

Tarun Jain: Mr Jain is a Whole-Time Director of Vedanta Limited. He joined the Group in 1984 and has over 34 years of executive experience in finance, audit, accounting, taxation, mergers and acquisitions and company secretarial functions. He is responsible for the Group's strategic financial matters including corporate finance, corporate strategy, business development and mergers and acquisitions. Mr Jain also serves on the board of Bharat Aluminium Company Limited, Sterlite (USA) Inc and was a director of Cairn

India Limited until its merger with Vedanta Limited. Mr Jain is a graduate of the Institute of Cost and Works Accountants of India and a fellow of the Institute of Chartered Accountants of India and the Institute of Company Secretaries of India.

Arun Kumar GR: Mr Kumar was appointed as the Chief Financial Officer of company in September 2016. Arun joined company in 2013 as Chief Financial Officer for the company's Aluminium and Power business. In 2014, he moved into the role of Executive Vice President Finance and Deputy Chief Financial Officer, as part of which he was responsible for enhancing the capability of the finance function in the areas of accounting, risk management, driving value creation, strategic planning, re-financing, board reporting and governance and direct taxation. As a Chartered Accountant, Arun has over 21 years of experience at global companies such as Hindustan Unilever and General Electric. Prior to joining company, Arun was the Chief Financial Officer for General Electric's Asia-Pacific Lighting and Appliances business based out of Shanghai.

Deshnee Naidoo: Ms Naidoo joined the Group in 2014 as Chief Executive Officer designate of Zinc International and Copper Mines of Tasmania (CMT) and was appointed chief executive officer of Zinc International and CMT in February 2015. Ms. Naidoo has over 20 years of experience in the natural resources industry, including platinum, thermal coal, manganese and zinc. Prior to joining the Group, Ms Naidoo held various senior and executive roles at Anglo American such as the strategic long-term planning manager, corporate finance manager and deputy head of the CEO's office. She was appointed as the CFO of Anglo American Thermal Coal in 2011, where she managed thermal coal and manganese across South Africa, South America and Australia. Ms Naidoo holds a Bachelor's degree in Chemical Engineering from the University of Natal and Certification in Finance and Accounting from the University of Witwatersrand, Johannesburg.

Dilip Golani: Mr Golani joined the Group in April 2000 and currently heads the Group's Management Assurance function. He has over 25 years of operational experience and previously headed the Sales and Marketing function at Hindustan Zinc Limited and the Group Performance Management function. Prior to joining the Group, Mr. Golani was a member of Unilever's corporate audit team responsible for auditing the Unilever group companies in Central Asia, Middle East and Africa region. He was also formerly responsible for managing the operations and marketing functions for one of the export businesses at Unilever India and has worked at Union Carbide India Limited and Ranbaxy Laboratories. Mr Golani has a degree in mechanical engineering and a post graduate degree in industrial engineering and management from NITIE.

Mansour Siddiqi: Mr Siddiqi joined the Group in 1991 and having risen through various operational roles has 40 years of industry experience. He was formerly chief executive officer, Aluminium and led the setting up of the Group's large aluminium and power projects including BALCO smelters and captive power plants. He also played a key role in setting up the Group's copper smelter at Tuticorin and copper refinery at Silvassa. Prior to joining the Group, Mr Siddiqi held senior positions in Hindustan Copper Limited. Mr Siddiqi has a mechanical engineering degree from the Indian Institute of Technology, New Delhi and a PG Diploma in Management from AIMA, New Delhi.

Madhu Srivastava: Ms Srivastava joined the Group in 2012 and has over 20 years of rich and diverse work experience across HR, sales, and operations functions. She is a member of the Chairman's Committee, the Group HR Council, and the Group Ethics Committee and leads Group talent acquisition and diversity and inclusion (D&I). Ms Srivastava has been instrumental in launching Vedanta's flagship talent development programs and is also responsible for leadership and development of Group recruitment, driving use of e-learning platforms and in-house programs like Leaders Teach, and employer branding through innovative initiatives like talent roadshows and market mapping. She has also played a key role in launching progressive and globally benchmarked people practice, including enhanced parental leave policy and standardization of employee benefits across the Group. Prior to joining the Group in 2012, Ms Srivastava held several roles of increasing responsibility at Citibank, Genpact, Reliance Industries, and Godrej. She completed her MBA from IIM, Ahmedabad.

Naveen Singhal: Mr Singhal is the Chief Executive Officer, Vedanta Limited Iron Ore. He comes with over three decades of experience, of which 22 years has been in the natural resources arena having handled various portfolios in metals and mining and the cement industry. Mr Singhal joined Vedanta in 2003 and was instrumental in driving the growth projects in Hindustan Zinc from conceptualization to commissioning through best-in-class mining and smelting technologies, mechanization and automation alongside effective stakeholder management. He has been a key pillar to bring about strategic alignment in business with his strong techno-commercial mind set. Prior to joining Vedanta, he had served in leadership roles at Swaraj Mazda, Shri Ram & Dunkan Goenka Group and played a pivotal role in supply chain management, assets acquisition, business turnaround strategy, general management and project management. Mr Singhal has a bachelor degree in mechanical and industrial engineering from IIT, Roorkee and has a post graduate diploma in industrial engineering and management from NITIE, Mumbai.

Phillip Turner: Mr Turner joined the Group in September 2014 as Head of Group Health and Safety. He currently heads the Group HSE and Sustainability function. Mr Turner has over 35 years' of experience within mining, heavy engineering and manufacturing organizations. He was previously General Manager Risk & Sustainability of JK Tech, a wholly-owned subsidiary of the University of Queensland. He has also previously held a number of senior corporate and operational roles at Rio Tinto in Australia, Canada and the UK including responsibility for HSE and sustainability assurance. Mr Turner has held senior roles at mining company, North Limited and at BHP Petroleum's offshore operations. Mr. Turner has a Master of Applied Science degree in Risk Engineering from Ballarat University; Bachelor of Science degree in Chemistry/Physics from Deakin University; Graduate Diploma in Occupational Hygiene from Deakin University; and Graduate Diploma in Occupational Hazard Management from Ballarat C.A.E.

P Ramnath: Mr Ramnath joined Vedanta in September 2011 and is the Chief Executive Officer of Vedanta's Copper Business in Tuticorin, Silvassa and Fujairah Gold, UAE. He is also a board member for MALCO Energy Limited, a subsidiary company of Vedanta Limited. Prior to joining the Company, he was the Chief Operating Officer of JK Paper Ltd. He has over 32 years of experience across many varied sectors which include chemicals, specialty chemicals and paper industries at Jubilant Life Sciences Ltd, Praxair India, SNF Ion Exchange Ltd, Bakelite Hylam Limited and Reliance Industries Limited. Mr. Ramnath holds a Bachelor's degree in Chemical Engineering from Osmania University, Hyderabad and has a Post Graduate diploma from the Indian Institute of Management, Bengaluru.

Rajagopal Kishore Kumar: Mr. Kumar joined the Group in April 2003 and has over 32 years of experience covering finance, commerce, marketing, supply chain management, mergers and acquisitions, human capital development, business turnaround and policy advocacy. With remarkable multi-commodity experience across the globe, Mr. Kumar has assumed the vital responsibility to lead the Group's overall Policy Advocacy framework and external stakeholder management along with strategizing new business and growth opportunities since February 2018. In his previous role, Mr. Kumar was pivotal for the revival of the Group's iron ore mining operations in India as the Chief Executive Officer of Vedanta Sesa Goa since 2015. He also handled the Group's Port business until February 2018. Mr. Kumar has previously held various executive roles in the Group including Chief Executive Officer of Sterlite Copper from 2007 to 2008, Chief Executive Officer of KCM from 2008 to 2011, Chief Executive Officer of Zinc International from 2011-2013 and Chief Executive Officer, Africa (Base Metals) from 2013 to 2015. Prior to joining the Group, he worked with Hindustan Lever Limited for 12 years. Mr. Kumar is a Chartered Accountant by profession and he is a fellow of the Institute of Chartered Accountants of India.

Scott Caithness: Mr Caithness was appointed Head of Exploration for Hindustan Zinc Limited, in November 2015 before moving into the role of Director — Exploration for the Group in October 2017. Mr Caithness has over 30 years of experience within the exploration industry. Prior to joining the Group he co-founded and was Managing Director of an unlisted Australian exploration company, Indian Pacific Resources Limited. He spent 18 years with Rio Tinto Exploration where he held a number of senior corporate and operational roles in Australia, Papua New Guinea and India including establishing Rio Tinto Exploration's first exploration office in India. In addition, Mr Caithness held senior roles at Indophil Resources and the Australian Trade Commission. He was also associated with Vedanta, as Head of Exploration in the year between 2005 and 2006. Mr. Caithness has a Bachelor of Applied Science degree in Geology from RMIT University in Melbourne, Australia.

Sudhir Mathur: Mr Mathur joined the Group in September 2012 as chief financial officer of Cairn India Limited and has been the chief executive officer of the Group's oil and gas business since June 2016. He has over 31 years of experience working in various industries such as telecommunications, manufacturing, infrastructure and consulting. Mr Mathur began his career with PricewaterhouseCoopers in 1986. Prior to joining the Group, he was chief financial officer of Aircel Cellular Ltd and was responsible for strategy, finance, supply chain management and regulatory affairs. He has substantial expertise, knowledge and experience in several key areas of finance and strategic planning, with a proven track record in deploying significant capital to enable value creation. He has also played a pivotal role in his previous assignments in accelerating business growth. He has previously also held senior executive positions in Delhi International Airport Ltd., Idea Cellular, Ballarpur Industries Limited and Price Waterhouse Coopers India. Mr. Mathur has a Bachelor's degree in Economics from Delhi University and a Masters of Business Administration from Cornell University.

Sunil Duggal: Mr Duggal joined the Group in August 2010 and has been a significant driver of Hindustan zinc's growth. His dedication to sustainability has enhanced safety awareness and helped to embed culture of safety at HZL. He has led the value adding adoption of best-in-class mining and smelting techniques, machineries, state of art environment friendly technologies, mechanisation and automation of operational activities. Mr Duggal has over 20 years of prior experience of leading high performance teams and working in leadership positions, nurturing business, evaluating opportunities and risks and successfully improving efficiency and productivity whilst reducing costs and inefficiencies. He is an electrical engineering graduate from Thapar Institute of Engineering & Technology, Patiala and is an Alumni of IMD, Lausanne — Switzerland and IIM, Kolkata.

Pankaj Malhan: Mr Malhan joined the Vedanta Group in October 2018 as Deputy Chief Executive Officer, Electrosteel Steel Limited. He has 22 years of experience and is spearheading major strategy with focus on Sustainability and Governance practices, technical shifts across the Group's steel portfolio of products and creating new benchmarks in the industry. He has previously held various management assignments in TATA group companies — TATA steel, TATA BlueScope steel, TATA power over 18 years. His experience covers the entire gamut of business roles including business excellence and total quality management, building and leading high-performance teams. He has also worked in Acrylics Limited and Fisher Rosemount Limited. Mr Malhan holds a graduate degree in Instrumentation and Control from NIT, Jalandhar and Post-Graduation in Business Management from XLRI, Jamshedpur.

Pankaj Kumar: He has over 28 years of rich diversified experience in Steel, Copper, Glass, Ports and Beer. Some of the companies he has worked with are Tata Steel, Mittal Steel, Adani Ports, United Breweries and Guardian Industries. He believes in teamwork, innovation and a systems-based approach. He has a passion for safety, automation and continuous improvement. He is a Mechanical engineer from IIT Kharagpur and has done his Post Graduate Diploma in Business Management from XLRI Jamshedpur.

Ajay Dixit: Mr. Dixit joined Vedanta in 2015 and is currently operating as CEO Alumina effective February 2017, prior to which he was operating as CEO, Power for Vedanta Limited since May 2015. Prior to joining the Company, Mr. Dixit worked at Siemens for nearly 36 years, in various profiles in the industry and energy sectors before taking over as CEO — Energy sector for South Asia. At Vedanta, he is leading the power plant units vertical with a capacity of over 9 GW and driving strategies to achieve the full potential of the business. Mr. Dixit is an electrical engineer from Delhi College of Engineering.

Pankaj Kalra: Mr Kalra has been CFO of Vedanta's Oil and Gas business since 2014 and has over 21 years of experience across key verticals in finance and strategic planning. He has been instrumental in enabling business growth through his focus on fiscal discipline and strategic finance planning initiatives. In addition to leading the finance, procurement and supply and information technology functions, he has added significant value as the head of Group Investments, anchoring the group-wide spend base and commercial function, and championing digitalization initiatives. Some of his key achievements include generating higher free cash flows through working capital unlocking and driving the transformational integrated-partnership contract approach with global oilfield service players to implement key growth projects. Before joining the Group, Mr Kalra was business CFO and Executive Vice President for Reliance Infocomm Limited, where he was responsible for finance, strategy, M&A and regulatory affairs. He has formerly also held senior leadership positions at various multinationals including Idea Cellular, American

Towers Corporation, Ernst and Young, and Sprint R&G. Pankaj earned his bachelor's degree in commerce from the Shri Ram College of Commerce, is a chartered accountant from the Institute of Chartered Accountants of India, and a certified company secretary from the Institute of Company Secretaries of India.

Laxman Shekhawat: Mr. Shekhawat started his career with Hindustan Zinc Limited at Rampura Agucha Mine in 1990 as a Mining Engineer and has worked his way up to become the Chief Operating Officer of HZL Mines in 2014. He is the recipient of "National Geoscience award "2016 for contribution in the field of Mining Technology, systematic mine planning and mines safety. Over the last 28 years, he has been involved in several mine expansion projects across HZL in different roles and responsibilities and has been instrumental in many of Vedanta's key M&A activities in mining. Mr Shekhawat has rich experience in the field of process standardization & system implementation, bringing global best practices into the organization leading to cost optimization and effective controls. He is a Mining engineering graduate from MBM College of Engineering, Jodhpur, India & completed Executive Programme in "Business Finance" — IIMA.

Abhijit Pati: Mr. Pati joined the Group in 2008 and is currently operating as CEO Aluminium, Jharsuguda, effective from December 2016. Prior to this, he was handling the Group's Aluminium business since March 2015, with his wealth of knowledge gained in over 28 years in the industry. He has been a significant driver of the Company's aluminium growth. Mr. Pati is a two-times gold medal holder and an honours graduate in Chemical Engineering from the prestigious Calcutta University and holds an MBA from IMI Delhi.

Vikas Sharma: Mr. Sharma joined Vedanta in 2012 and is currently the Chief Executive Officer of BALCO effective March 2017, prior to which he was associated with HZL as COO Smelters, HZL. Mr. Sharma is known as a result-driven individual in the industry, with experience of over 29 years in various national and multinational companies. He holds the experience of serving HMT, Praxair, JSW and AMP in various key positions. He has done his B.E. (Mechanical) Honours from Engineering College, Kota and MBA (Marketing) from Sikkim Manipal University.

Corporate Governance

The Company's shares were listed on the London Stock Exchange in 2003. Following the successful takeover by its controlling shareholder, Volcan Investments Limited, Vedanta was delisted from the Official List of the London Stock Exchange on 1 October 2018. Most of Vedanta's assets and management are located in India. Two of Vedanta's subsidiary companies, namely Vedanta Limited and HZL are listed on stock exchanges in India and maintain their own corporate governance arrangements in compliance with Indian regulations. Vedanta Limited also has ADSs listed on the NYSE and is thus subject to NYSE listing requirements. In addition, BALCO, HZL and KCM have government appointees on their boards of directors to represent wider shareholder interests.

The Company's Executive Chairman, Mr. Anil Agarwal, is Vedanta's original promoter and founder having built Vedanta from its inception in 1976. Volcan Investments Limited is the Company's sole shareholder with 100% voting share interests as of 31 December 2018.

The Board

Role and Responsibilities of the Board

The role of the Board is to provide leadership to maximize opportunities to develop the Company's portfolio of businesses profitably while assessing and managing the associated risks. The boards of directors of Vedanta's individual businesses are responsible for managing their businesses profitably while controlling risks. The Board assesses the strategic objectives of each business, monitors performance, ensures the availability of financial, management and other resources required to meet the objectives, sets Vedanta's standards of conduct and ensures that effective controls are in place to manage risk and that the interests of shareholders and other investors are observed. Vedanta's "Code of Conduct and Ethics" provides overarching standards for Vedanta's individual businesses.

The Board has adopted a schedule of matters reserved for its consideration to ensure that it is in a position to assess strategy, monitor performance and maintain effective controls while delegating operational management to the Executive Committee and Vedanta's businesses. Such matters reserved to the Board include, amongst other things, approving Vedanta's overall strategy and annual budgets, major capital expenditures, acquisitions, appointments, disposals and changes to capital structure and dividend policy.

As part of its decision-making processes the Board considers the long-term consequences of its decisions, the interests of various stakeholders including employees, the impact of Vedanta's operations on the environment and the need to maintain high standards of business. This is achieved through a prudent and robust risk management framework and internal controls and strong governance processes. Vedanta's corporate governance framework involves coordination and cooperation amongst shareholders, the Board, Board Committees and management committees.

The Board meets on a regular basis and throughout fiscal year ended 31 March 2018 met eight times. The Executive Chairman also met with the Non-Executive Directors without the Executive Directors during this period. All of the Board Committees are authorised to obtain legal or other professional advice as necessary, to secure the attendance of external advisers at their meetings and to seek information from any employee of the Company in order to perform their duties.

There are four Board Committees: Nominations, Remuneration, Audit, and Sustainability. Each of the Board Committee reports directly to the Board.

Board Balance and Independence

The Board comprises the following members as of 31 December 2018:

Mr. Anil Agarwal	Executive Chairman
Mr. Navin Agarwal	Executive Vice Chairman
Mr Srinivasan Venkatakrishnan	Chief Executive Officer
Mr. Geoffrey Green	Non-Executive Director
Mr. Deepak Parkh	Non-Executive Director
Mr. Ravi Rajagopal	Non-Executive Director
Ms. Ekaterina Zotova	Non-Executive Director
Mr. Edward Story	Non-Executive Director

All the Non-Executive Directors served throughout the fiscal year 2018 and up to the date of this Offering Circular.

The Company regards the above as an appropriate board structure. The Company considers all of its Non-Executive Directors as independent Non-Executive Directors within the meaning of "independent" and free from any business or other relationship which could materially interfere with the exercise of their independent judgment.

Mr Deepak Parekh is the Senior Independent Director. His primary responsibilities are to lead discussions at meetings of the Non-Executive Directors, provide an effective channel of communication between the Chairman and Non-Executive Directors ensure that the views of the Non-Executive Directors are given due consideration and provide a point of contact for any shareholder who wishes to raise concerns which the normal channels of communication through the Executive Chairman and Chief Executive Officer have failed to resolve, or for which contact is inappropriate.

Executive Chairman and Chief Executive Officer

There is a clear division of the responsibilities between the running of the Board and executive responsibility for running the business, so that no one person should have undue power of decision. In 2005, the Board approved a policy to ensure a clear separation is maintained between the responsibilities of the Executive Chairman and the Chief Executive Officer, as detailed below:

Executive Chairman	**Chief Executive Officer**
• Leading the Board and ensuring that it has the resources required to function effectively;	• Ensuring effective implementation of Board decisions;
• Developing succession plans for Board appointments for Board approval;	• Developing operational business plans for Board approval;
• Helping to identify strategic priorities to enhance shareholder value;	• Providing leadership to the senior management team for the delivery of the Group's operational business plans following Board approval;
• Formulating strategic plans for the Board's consideration and approval;	• Providing oversight and management of all of the Group's operations, business activities and performance including environmental, social, governance, health and safety, sustainability, investor relations and external communications;
• Identifying new business opportunities in line with the strategic plans approved by the Board;	• Managing the Group's risk profile in line with the risk appetite set by the Board;
• Engaging with the Company's shareholders and other stakeholders such as governments, communities and employees to ensure that an appropriate balance is maintained between the various interests;	• Ensuring that prudent and robust risk management and internal control systems are in place throughout the Group;
• Providing leadership to the senior management team;	• Recommending annual budgets to the Board for approval;
• Upholding the highest standards of integrity, probity and governance at Board level and throughout the Group;	• Making recommendations to the Remuneration Committee on remuneration policy and executive remuneration;
• Facilitating active engagement by all Directors and fostering an environment in which Non-Executive Directors can freely provide constructive challenge;	• Supporting the Executive Chairman in maintaining effective communications with various stakeholders;
• Evaluating the performance of the Board, Board committees and individual Directors and acting on the results of such evaluation;	• Maintaining a close working relationship with the Chairman; and
• Reviewing the training needs of the Directors for the fulfilment of their duties; and	• Leading the Executive Team.
• Ensuring that new Directors participate in a full, formal and tailored induction programme.	

Executive Committee

The Executive Committee, comprising of the senior management team within Vedanta who head the principal businesses and corporate functions, meets on a monthly basis to consider the operating performance of each of the principal subsidiaries. Mr Srinivasan Venkatakrishnan chairs the Executive Committee and keeps the Board informed of the Executive Committee's activities. The Board's role is to set Vedanta's values and standards, determine its strategic objectives and monitor operational performance.

The Executive Committee supports the Board in fulfilling this role and is essentially responsible for operational performance including: implementing and delivering the strategic plans formulated by the Board, monitoring operational and financial performance, prioritising and allocating resources and developing and reviewing objectives and budgets with subsidiary company boards to ensure that these fall within agreed targets and parameters set by the Board. In addition, the Executive Committee approves capital expenditure (within pre-defined limits) and reviews the Vedanta's Human Resources Policy and Treasury Policy.

Nominations Committee

In conjunction with the consultation of Volcan, the Committee is responsible for leading the process for Board appointments and for keeping the balance of skills, experience, independence, knowledge and diversity, including gender on the Board under review to ensure the orderly evolution of the membership of the Board and its Committees. In identifying and nominating candidates for approval by the Board, the Committee continues to take account of the Board's aims in relation to diversity, whilst ensuring that the right people with the right range of skills and experience are on the Board and in senior management positions in the coming years.

Mr. Anil Agarwal is Chairman of the Nominations Committee. The other members are Mr. Deepak Parekh and Ms Ekaterina Zotova. The Group Company Secretary acts as the secretary to the Nominations Committee. The Nominations Committee met five times in fiscal year 2018.

Each of the Company's Directors was proposed and elected/re-elected by shareholders at the Company's 2018 Annual General Meeting.

Remuneration Committee

The Remuneration Committee is responsible for setting the remuneration policy and remuneration packages for the Executive Directors and for maintaining an awareness of the overall remuneration of the key operational and financial heads within Vedanta. In the Remuneration Committee's terms of reference approved by the Board the Remuneration Committee is required to consider and give due regard to the recommendations of the Code and other guidelines published in respect of the remuneration of directors of listed companies such as that produced by the Association of British Insurers and National Association of Pension Funds. A significant proportion of the Executive Directors' remuneration is performance related through the annual bonus and long term incentive schemes. The fees of the Non-Executive Directors are independently reviewed and take into account the time commitments and responsibilities of the role. Mr. Geoffrey Green is Chairman of the Remuneration Committee. The other members are Ekaterina Zotova and Deepak Parekh. The Remuneration Committee met two times in the fiscal year 2018.

Audit Committee

Strong corporate governance and risk management is a key part of Vedanta's business model and the Board and the Audit Committee continues to be focused on maintaining high standards of governance and risk management across Vedanta. The Audit Committee oversees the financial reporting process in order to ensure that that the information provided to its shareholders is fair, balanced and understandable and allows assessment of the Company's position, performance, business model and strategy.

In line with best practice, the Board has reviewed the internal control system in place for Vedanta up to the period ended 31 December 2018. During the course of its review of the system of internal control, the Board has not identified nor been advised of any weaknesses or control failure that is significant.

Certain of the Company's subsidiaries, by virtue of their listings on the Indian stock exchanges or the NYSE, have their own audit committees which are established in accordance with Indian or NYSE corporate governance requirements, as applicable. This provides a second level of financial oversight below Vedanta's Audit Committee which also monitors the discussions and findings of the audit committees of the Company's subsidiaries.

Mr Ravi Rajagopal is the Chairman of the Audit Committee. The other members are Messrs. Deepak Parekh, Geoffrey Green and Edward Story. The Group Company Secretary acts as the secretary to the Audit Committee. The Audit Committee met seven times in fiscal year 2018.

Sustainability Committee

The role of the Sustainability Committee is to assist the Board in meeting its responsibilities in relation to sustainability-related matters arising out of the activities and operations of Vedanta. For more information on sustainability-related matters arising out of the activities and operations of Vedanta, please see "Business — Sustainability".

Miss Ekaterina Zotova is the Chairman of Vedanta's Sustainability Committee. The other members are Messrs. Srinivasan Venkatakrishnan, Ravi Rajagopal, Sunil Duggal and Ms Deshnee Naidoo. The Chief Sustainability Officer acts as the secretary to the committee. The Sustainability Committee met five times in fiscal year 2018.

The principal duties and responsibilities of the Sustainability Committee are to:

- advise on sustainability policies and framework, clearly setting out the commitments of the Company to manage matters of sustainable development effectively;

- review and approve targets for sustainability performance and report to the Board with respect to their appropriateness and assess progress towards achieving those targets;

- recommend initiatives required to institutionalise a sustainability culture through involvement of leadership, employees and communities at all levels;

- review and report to the Board, the performance of the Company and Vedanta companies with respect to the implementation of the Vedanta Sustainability Framework through the Sustainability Assurance Programme so that sustainability and reputation related risks are assessed, controlled and managed effectively; and

- approve the Sustainable Development Report prior to publication.

Directors' and Executive Officers' Compensation

The aggregate compensation the Company paid to its executive directors for fiscal year 2018 was $9.7 million, which includes $7.1 million paid towards short term benefits comprising salary, bonuses and allowances, $0.4 million paid towards post-employment benefits and $2.2 million in non-cash payments relating to the LTIP. The total compensation paid to the Company's most highly compensated executive during fiscal year 2018 was $5.0 million, of which $3.6 million comprised salary, bonus and benefits in kind and $1.4 million comprised non-cash payments relating to the LTIP.

The aggregate compensation the Company paid its Non-Executive Directors in fiscal year 2018 was $0.88 mn.

The following table sets forth the pre-tax remuneration for fiscal year 2018 for individual Directors who held office in the Company during this period. Payment is generally made in UK pounds sterling although payments in India under service contracts with Vedanta Limited are paid in Indian Rupees.

	Base Compensation	Taxable benefits	Pensions	Annual Performance Bonus	Long term incentives(9)	Total for fiscal year 2018	Total for fiscal year 2017(10)(11)
				($ million)			
Executive Directors							
Anil Agarwal(1)	2.12	0.16	—	1.34	1.38	5.00	3.69
Navin Agarwal(2)(3)(7) ...	1.45	0.16	0.23	0.92	0.85	3.62	2.71
Tom Albanese(4)(7)........	0.14	0.05	0.14	0.35	—	1.08	2.69
Non-Executive Directors(5)							
Geoffrey Green...........	0.15	—	—	—	—	0.15	0.14
Aman Mehta(6)	0.15	—	—	—	—	0.15	0.32
Deepak Parekh	0.17	—	—	—	—	0.17	0.14
Katya Zotova	0.16	—	—	—	—	0.16	0.16
R.Rajgopal	0.15	Nil	—			0.15	0.10
Ed Story	0.10					0.10	
Total	**5.00**	**0.37**	**0.37**	**2.61**	**2.23**	**10.58**	**9.95**

Notes:

1 Mr Anil Agarwal's taxable benefits in kind include provision of medical benefits; car and fuel in the UK for business purposes.

2 There has been no increase in the base compensation of Mr Navin Agarwal and the change in compensation reflected in the table is purely on account of movement in currency exchange (GBP vs ₹) during fiscal year 2018. Furthermore, he is based out of India and is drawing the majority of his remuneration in Indian rupees. For the financial year ended 31 March 2018, Mr Navin Agarwal received a Vedanta Limited salary of ₹85,618,845 ($1,328,454) excluding medical and leave travel allowances, the Company fees of £85,000 ($119,000), Hindustan Zinc Limited fees of ₹250,000 ($3,879) and Commission of ₹1,000,000 ($15,516).

3 Mr Navin Agarwal's taxable benefits in kind include housing and related benefits, and use of a car and driver.

4 Mr Tom Albanese's taxable benefits in kind include housing and related benefits, and use of a car and driver (grossed up to tax) in India and medical benefits in the UK.

5 Non-Executive Directors are reimbursed for expenses incurred while on Company business. No other benefits are provided to Non-Executive Directors.

6 Mr Aman Mehta retired from the Board post conclusion of the annual general meeting in 2017. The above amount for Mr Aman Mehta includes a commission of ₹6,554,795 ($101,704) and Sitting Fees of ₹800,000 ($12,413) received from Vedanta Limited in fiscal year 2018.

7 All of the Group's pension schemes are based on cash contribution and do not confirm an entitlement to a defined benefit. Pension contributions are made into the Deputy Executive Chairman's and Chief Executive Officer's personal pension schemes (or local provident fund) and will become payable on the retirement, normally at age 58. The Executive Chairman does not receive pension benefits.

8 Amounts shown for fiscal year 2018 relate to the payment of the annual bonus for the year ended 31 March 2018. 50% of the annual bonus figures shown in the table are paid in cash and the balance 50% is paid in the form of deferred shares to vest in the staggered manner in three years in the ratio 40:30:30 subject to continued employment except for Mr Tom Albanese who will be paid the annual bonus in cash owing to his contract closure effective 31 August 2017. Further details of this payment are set out below.

9 The amount shown here pertains to the Performance Share Plan ("PSP") 2014. The performance period for PSP 2014 came to a close on 31 March 2017. Upon testing as per the scheme rules, Vedanta stood at 6th position against its peers in the TSR Basket with a 28.6% TSR Achievement which made the potential EDs eligible for vesting of 60% against the grant made to them. However, this was not made part of the Remuneration Table in fiscal year 2017 as the vesting period completed on 16 November 2017.

10 NIC Contribution as per the statutory requirement is made for all Executive and Non-Executive Directors

11 The exchange rate applicable as at 31 March 2017 was ₹87.7138 to £1; and at 31 March 2018 was ₹85.4732 to £1.

Employee Share Schemes

Vedanta Performance Share Plan ("PSP")

The Company previously operated the Vedanta Resources Performance Share Plan which was adopted to grant share options to its employees or employees of its subsidiaries. Awards were made to certain senior employees and executive directors on an annual basis.

Following the takeover offer by Volcan becoming unconditional, eligible outstanding options under the PSP vested based on the Company's Total Shareholder Return ("TSR") performance (*being the movement in a company's share price plus reinvested dividends*). Accordingly, as of 31 December 2018, there were nil options outstanding under the PSP.

Employee Stock Option Scheme ("ESOS") 2016

During the fiscal year 2017, the company introduced a new Employee Stock Option Scheme for the employees in its subsidiary, Vedanta Limited. ESOS 2016 aims at rewarding employees with wealth creation opportunities, encouraging high-growth performance and reinforcing employee pride. The Grant under the Employee Stock Option Scheme is consistent with the PSP scheme being administered by the company, which is a combination of Individual Contribution; Business as well as Overall Vedanta Limited Performance. The reward scheme under ESOS 2016 is company's first ever stock option scheme linked to Vedanta Limited. The Executive Directors are not eligible for awards under this scheme.

Long Term Cash Based Plan

All awards which were granted by the Company under the Company's Long Term Cash Based Plan vested on the takeover offer by Volcan becoming unconditional. The vesting of long-term performance based cash was based on Vedanta Resources Plc's TSR performance. As of 31 December 2018, there were nil options outstanding under the Long Term Cash Based Plan.

The following table sets forth the options granted to the Company's Directors and executive officers during fiscal year 2018:

		31 March 2016 Number of shares	Granted in 2017-18 Number of shares	Vested in 2017-18 Number of shares	Lapsed in 2017-18 Number of shares	31 March 2018 Number of shares	Exercise price US cents	Award price £	Earliest/latest exercise date
Anil Agarwal									
17 November 2014...	PSP[3]	135,000	—	135,000	—	—	0.1	8.09	17 Nov 17 — 17 May 18
30 December 2015...	PSP	275,000	—	—	—	275,000	0.1	2.717	30 Dec 18 — 30 Jun 19
4 January 2016	DSBP	41,197	—	20,599	—	20,598	0	6.534	22 May 16 — 22 May 18
8 September 2016....	DSBP[2]	119,084	—	47,634	—	71,450	0	3.753	19 May 17 — 19 May 19
11 November 2016...	PSP	210,000	—	—	—	210,000	0.1	8.215	10 Nov 19 — 19 May 20
25 August 2017......	DSBP	—	85,861	—	—	85,861	0	5.995	19 Jun 18 — 19 Jun 20
14 November 2017...	PSP	—	178,230	—	—	178,230	0.1	8.12	14 Nov 20 — 14 May 21
Navin Agarwal									
17 November 2014...	PSP[3]	84,000	—	84,000	—	—	0.1	8.09	17 Nov 17 — 17 May 18
30 December 2015...	PSP	130,000	—	—	—	130,000	0.1	2.717	30 Dec 18 — 30 Jun 19
4 January 2016	DSBP	36,217	—	18,109	—	18,108	0	4.435	12 Aug 16 — 12 Aug 18
8 September 2016....	DSBP[2]	57,697	—	23,079	—	34,618	0	5.177	1 Sept 17 — 1 Sept 19
11 November 2016...	PSP	125,000	—	—	—	125,000	0.1	8.215	10 Nov 19 — 10 May 20
25 August 2017......	DSBP	—	47,563	—	—	47,563	0	7.585	25 Aug 18 — 25 Aug 20
14 November 2017...	PSP	—	122,440	—	—	122,440	0.1	8.12	14 Nov 20 — 14 May 21
Total................		**1,213,195**	**434,094**	**328,421**		**1,318,868**			
Tom Albanese									
17 November 2014...	PSP[3,]	102,000		—	—	102,000	0.1	8.09	17 Nov 17 — 17 May 18
30 December 2015...	PSP	200,000				200,000	0.1	2.717	30 Dec 18 — 30 Jun 19
4 January 2016	DSBP	25,163		—	—	25,163	0	4.435	12 Aug 16 — 12 Aug 18
8 September 2016....	DSBP[2]	53,690				53,690	0	5.177	1 Sept 17 — 1 Sept 19
11 November 2016...	PSP	140,000				140,000	0.1	8.215	10 Nov 19 — 10 May 20
5 August 2017	DSBP	—	42,203			42,203	0.1	7.585	5 Aug 18 — 5 Aug 20
Total................		520,853	42,203			563,056			

(1) 50% of the annual bonus for previous year was paid as deferred shares.

(2) The Performance Period for PSP 2014 came to a close on 31 March 2017. Upon testing as per the scheme rules, Vedanta stood at 6th position against its peers in the TSR Basket with a 28.6% TSR achievement which made the Executive Directors eligible for vesting of 60% against the grant made to them. The options vested at the close of the vesting period on 17 November 2017.

(3) Tom Albanese has exercised these options in April 2018

For fiscal year 2018, Mr Anil Agarwal's interest over ordinary shares of $0.10 in the Company included their interest over 41,197 and 119,084 forfeitable shares, which were awarded to him under the Company's Deferred Share Bonus Plan or DSBP on 4 January 2016 and 8 September 2016 and was granted additional and 85,861 shares on 25 August 2017 of which 20,598 and 47634 shares fully vested and ceased to be subject to restrictions and risk of forfeiture on 22 May 2017 and 19 May 2017 respectively while out of the balance, 20,598, 35,725 and 34,245 shares fully vested and ceased to be subject to restrictions and risk of forfeiture on 22 May 2018, 19 May 2018 and 19 June 2018 and the remaining 87,241 forfeitable shares held by Mr. Anil Agarwal under the DSBP vested and ceased to be subject to restrictions and at risk of forfeiture on the takeover offer by Volcan becoming unconditional.

For fiscal year 2018, Mr Navin Agarwal's interest over ordinary shares of $0.10 in the Company included their interest over 36,217 and 57,697 forfeitable shares, which were awarded to him and under the Company's Deferred Share Bonus Plan or DSBP on 4 January 2016 and 8 September 2016 and was granted 47,563 shares on 24 August 2017 of which 18,108 and 23,079 shares fully vested and ceased to be subject to restrictions and risk of forfeiture on and 12 August 2017 and 1 September 2017 respectively while out of the balance, 18,108, 17,309 and 19,025 shares fully vested and ceased to be subject to restrictions and risk of forfeiture on 12 August 2018, 1 September 2018 and 25 August 2018 and the remaining 45,847 forfeitable shares held by Mr Navin Agarwal under the DSBP vested and ceased to be subject to restrictions and at risk of forfeiture on the takeover offer by Volcan becoming unconditional.

Limitations on Liability and Indemnification Matters

Section 201 of the Indian Companies Act provides that a company may indemnify any director, officer or auditor against any liability incurred by such director, officer or auditor in defending any civil or criminal proceedings, in which a judgment is given in favour of such director, officer or auditor or in which he or she is acquitted or discharged or in connection with application made by a director or an officer to the High Court of the relevant state for relief, because he or she has reason to apprehend that any proceeding will or might be brought against him in respect of any negligence, default, breach of duty, misfeasance or breach of trust, in which relief has been granted by the High Court of the relevant state.

Section 201 also provides that, except for such indemnity described above, any provision, whether contained in the articles of association of a company or in an agreement with the company or in any other instrument, for exempting any director, officer or auditor of the company from, or indemnifying him or her against, any liability which, by any rule of law, would otherwise attach to such director, officer or auditor in respect of any negligence, default, misfeasance, breach of duty or breach of trust of which he or she may be guilty in relation to the company, shall be void.

PRINCIPAL SHAREHOLDERS

Volcan Investments Limited has beneficial ownership of 100% of Vedanta's Ordinary Shares as of 31 December 2018. The following table sets forth information regarding beneficial ownership of Vedanta's Ordinary Shares as of 31 December 2018:

Each Ordinary Share is entitled to one vote on all matters that require a vote of shareholders, and none of the Vedanta's shareholders has any contractual or other special voting rights.

As used in this table, beneficial ownership means the sole or shared power to vote or direct the voting or to dispose of or direct the sale of any security. A person is deemed to be the beneficial owner of securities that can be acquired within 60 days upon the exercise of any option, warrant or right. Ordinary Shares subject to options, warrants or rights that are currently exercisable or exercisable within 60 days are deemed outstanding for computing the ownership percentage of the person holding the options, warrants or rights, but are not deemed outstanding for computing the ownership percentage of any other person. The amounts and percentages as of 31 December 2018 are based upon 285,246,698 voting Ordinary Shares.

Shareholders' Name	Number of Ordinary Shares	Percentage of Issued Voting Share Capital as at 31 December 2018
Volcan and affiliates[1]	285,246,698	100%
Loyalist Plaza, Don Mackay Boulevard P O Box AB-20377 Marsh Harbour, Abaco Bahamas		

(1) Volcan owns 285,246,698 Ordinary Shares, or 100% of the issued voting share capital, of Vedanta as of 31 December 2018. Volcan is owned and controlled by the Anil Agarwal Discretionary Trust (the "Trust"). Conclave PTC Limited ("Conclave") is the trustee of the Trust and controls all voting and investment decisions of the Trust. As a result, shares beneficially owned by Volcan may be deemed to be beneficially owned by the Trust and, in turn, by Conclave. Mr. Anil Agarwal, the Executive Chairman of the Company, may be deemed to have beneficial ownership of shares that may be owned or deemed to be beneficially owned by Conclave.

RELATED PARTY TRANSACTIONS

The following is a summary of material transactions that Vedanta has engaged in with its controlling shareholder, Volcan, and its subsidiaries and other related parties, including those in which Vedanta or its management has a significant equity interest. In addition, the following contains a discussion of how Vedanta intends to handle conflicts of interest and allocations of business opportunities between itself and its affiliates, Directors and executive officers. For further discussion of related party transactions, see the consolidated financial statements appearing elsewhere in this Offering Circular.

Related Parties

Volcan and the Agarwal Family

Volcan owns 100.0% of the issued ordinary shares of Vedanta as of 31 December 2018. Volcan is 100% owned and controlled by the Trust. Conclave is the trustee of the Trust and controls all the voting and investment decisions of the Trust. As a result, securities beneficially owned by Volcan may be regarded as being beneficially owned by the Trust and, in turn, by Conclave. Mr. Anil Agarwal, the Executive Chairman of Vedanta and the Chairman emeritus of Vedanta Limited, may be deemed to have beneficial ownership of securities that are owned by Conclave. Vedanta, Volcan, Conclave and Mr. Agarwal were parties to the Relationship Agreement, which regulated the ongoing relationship among them. The Relationship Agreement automatically terminated on 8 October 2018 when Vedanta delisted from the LSE. Mr. Agarwal, his father, Mr. Dwarka Prasad Agarwal, and his son, Mr. Agnivesh Agarwal, the Non-Executive Chairman of HZL, also have a controlling interest in Sterlite Technology Limited ("STL"), a publicly-listed company in India, except for nominal interests in STL held by MEL and Vedanta Limited. In addition, Mr. Anil Agarwal holds is a director of Vedanta with other members of Vedanta and will continue to hold such cross directorships. Mr. Agarwal is also the non-executive chairman of Vedanta Limited. These directorships and positions give rise to situations in which Mr. Agarwal could have a direct or indirect interest that conflicts, or possibly may conflict, with the interests of the Company.

In December 2018, as part of its cash management activities, Cairn India Holdings Limited (CIHL), a subsidiary of the Company, entered into a tripartite agreement with Volcan and one of its subsidiaries. Under the agreement CIHL purchased an economic interest in a structured investment for the equity shares of Anglo American Plc (AA Plc), a company listed on the London Stock Exchange, from Volcan for a total consideration of US$540.9 million, determined based on an independent third-party valuation. The ownership of the underlying shares, and the associated voting interests, remained with Volcan and the investment would mature in two tranches in April 2020 and October 2020. As part of the agreement, CIHL also received a put option from the aforesaid subsidiary the value of which, both at the time of the entering into the initial contract and on the balance sheet date, was not material. Subsequent to the last reported balance sheet date, certain terms of the aforesaid agreement were modified, and it was converted into a bi-party agreement between CIHL and Volcan. The revision in the terms did not have any material effect on the fair value of the instrument.

As per the revised agreement, if the share price of AA plc remains above the put exercise price, CIHL would be entitled to an amount determined based on the share price of AA plc multiplied by 24.7 million shares. CIHL also has an option to exercise the put option and realise the instrument for $347.0 million and $240.0 million on the respective maturity dates.

Related Transactions

STL

Vedanta entered into a shared services agreement dated 5 December 2003 with STL (the "Shared Services Agreement") as part of the Listing. Under this Shared Services Agreement, Vedanta Limited (then Sterlite) and Vedanta agreed to continue to provide STL with various commercial services in relation to STL's businesses on an arm's length basis and at normal commercial terms.

	Year ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Sales to STL	140.4	127.8	10.8	9.3	0.1
Recovery of expenses	0.2	0.0	—	—	—
Purchases	1.1	2.6	0.1	0.1	—
Net Interest Income	0.2	1.3	—	—	—
Dividend Income	0.0	0.1	0.1	0.1	—

	Year ended 31 March			Nine months ended 31 December
	2016	**2017**	**2018**	**2018**
		($ million)		
Net amounts receivable at year end	0.2	4.0	0.8	—
Net amounts payable at year end	1.4	0.2	—	0.0
Outstanding advance received	—	2.1	—	—
Investment in Equity Share	6.5	9.2	22.9	20.0

In fiscal years 2016, 2017 and 2018, services provided to STL $0.02 million, $0.03 million and $0.04 million from STL, respectively.

SPTL

Sterlite Power Transmission limited ('SPTL') is related by virtue of having the same controlling party as Vedanta, namely Volcan.

	Year ended 31 March			Nine months ended 31 December	
	2016	**2017**	**2018**	**2017**	**2018**
			($ million)		
Sales to SPTL	—	2.6	175.1	121.2	107.6
Purchases	—	0.4	2.0	1.0	0.2

	Year ended 31 March			Nine months ended 31 December
	2016	2017	2018	2018
	($ million)			
Investment in Equity Share	—	1.5	1.6	1.6
Net amounts receivable	—	—	0.8	0.1
Net amounts payable	—	—	0.5	0.8

Vedanta Foundation

Vedanta Foundation is a registered not-for-profit entity engaged in computer education and other related social and charitable activities. The Vedanta Foundation is a related party as it is controlled by members of the Agarwal family who control Volcan, the majority owner of Vedanta. During fiscal years 2016, 2017, and 2018 Vedanta paid were $0.5 million, $10.2 million and $0.0 million to Vedanta Foundation, respectively.

Sesa Goa Community Foundation Limited

Following the acquisition of SGL (now Vedanta Limited), the Sesa Goa Community Foundation Limited, a charitable institution, became a related party of Vedanta on the basis that key management personnel of Vedanta have significant influence on the Sesa Goa Community Foundation Limited. During the years ended 31 March 2016, 2017 and 2018, Vedanta paid $0.4 million, $0.3 million and $0.8 million to Sesa Goa Community Foundation Limited.

Loans to Sterlite Iron and Steel Limited

As of 31 March 2018, Vedanta had an outstanding loan balance receivable from Sterlite Iron and Steel Limited of $0.7 million. Sterlite Iron and Steel Limited is a related party by virtue of having the same controlling party as the Company, namely Volcan.

Vedanta Medical Research Foundation

In fiscal years 2016, 2017 and 2018 and nine months ended 31 December 2017 and 31 December 2018, Vedanta gave donations of $2.7 million, $5.2 million, $12.8 million, $8.8 million and $13.3 million to Vedanta Medical Research Foundation, which is a related party of Vedanta on the basis that key management personnel of Vedanta exercise significant influence. Volcan is a related party of Vedanta by virtue of being an ultimate controlling party of Vedanta.

Volcan Investments Limited

	Year ended 31 March			Nine months ended 31 December	
	2016	2017	2018	2017	2018
	($ million)				
Dividends paid	75.0	93.7	110.6	110.4	73.3
Recovery of expenses	0.3	0.2	0.3	0.2	0.1

	Year ended 31 March			Nine months ended 31 December
	2016	2017	2018	2018
	($ million)			
Purchase of structured investment*	—	—	—	540.9
Net amount receivable at the year/period end	0.2	0.4	0.6	0.1
Guarantees given	17.3	17.7	17.7	16.5
Fair value of structured investment*	—	—	—	570.9
Deferred consideration payable*	—	—	—	342.5

* In December 2018, as part of its cash management activities, Cairn India Holdings Limited (CIHL), a step-down subsidiary of the Company, entered into a tripartite agreement with Volcan and one of its subsidiaries. Under the agreement CIHL purchased an economic interest in a structured investment for the equity shares of Anglo American Plc (AA Plc), a company listed on the London Stock Exchange, from Volcan for a total consideration of US$ 540.9 million (of which US$ 200.0 million has been paid up to 31 December 2018), determined based on an independent third-party valuation. The ownership of the underlying shares, and the associated voting interests, remained with Volcan and the investment would mature in two tranches in April 2020 and October 2020. As part of the agreement, CIHL also received a put option from the aforesaid subsidiary the value of which, both at the time of the entering into the initial contract and on the balance sheet date, was not material. Subsequent to the Balance sheet date, certain terms of the aforesaid agreement were modified, and it was converted into a biparty agreement between CIHL and Volcan. The revision in the terms did not have any material effect on the fair value of the instrument.

As per the revised agreement, if the share price of AA plc remain above the Put exercise price, CIHL would be entitled to an amount determined based on the share price of AA plc multiplied by 14.6 million and 10.1 million shares respectively on the aforementioned two maturity dates. Alternatively, CIHL also has an option to realise the instrument for US$ 347.0 million and US$ 240.0 million on the respective maturity dates.

MATERIAL CONTRACTS

The following is a summary of each of the Vedanta's material contracts.

HZL call options

On 11 April 2002, Vedanta Limited acquired a 26.0% interest in HZL from the GoI through its subsidiary, SOVL (which has since merged into Vedanta Limited). Upon Vedanta Limited's acquisition of the 26.0% interest in HZL, the GoI and Vedanta Limited entered into a shareholders' agreement to regulate, among other things, the management of HZL and dealings in HZL's shares.

Under the shareholders' agreement, the GoI granted Vedanta Limited two call options to acquire all the shares in HZL held by the GoI at the time of exercise. Vedanta Limited exercised the first call option on 29 August 2003 and acquired an additional 18.9% on 12 November 2003, taking Vedanta Limited's interest in HZL to 64.9%.

The shareholders' agreement provides that prior to selling shares in HZL to a third party, either party must first issue a sale notice offering those shares to the other party at the price it intends to sell them to the third party. However, a transfer of shares, representing not more than 5.0% of the equity share capital of HZL, by the GoI to the employees of HZL is not subject to such right of first refusal by Vedanta Limited. The GoI has transferred shares representing 1.5% of HZL's share capital to the employees of HZL. The shareholders' agreement also provides that if the GoI proposes to make a sale of its shares in HZL by a public offer prior to the exercise of Vedanta Limited's second call option, then Vedanta Limited shall have no right of first refusal.

The second call option provides Vedanta Limited a right to acquire the GoI's remaining 29.5% shareholding in HZL, subject to the right of the GoI to transfer up to 3.5% of the issued share capital of HZL to employees of HZL, in which case the number of shares that Vedanta may purchase under the second call option will be reduced accordingly. The exercise price for the second call option will be equal to the fair market value of the shares as determined by an independent appraiser. By a letter dated 21 July 2009, Vedanta Limited exercised the second call option.

BALCO call option

On 2 March 2001, Vedanta Limited acquired a 51.0% interest in BALCO from the GoI. On the same day, Vedanta Limited entered into a shareholders' agreement with the GoI and BALCO to regulate, among other things, the management of BALCO and dealings in BALCO's shares. The shareholders' agreement provides that as long as Vedanta Limited holds at least 51.0% of the share capital of BALCO, it is entitled to appoint one more director to the board of BALCO than the GoI and is also entitled to appoint the managing director.

Under the shareholders' agreement, if either the GoI or Vedanta Limited wishes to sell its shares in BALCO to a third party, the selling party must first offer the shares to the other party at the same price at which it is proposing to sell the shares to the third party. The other party shall then have the right to purchase all, but not less than all, of the shares so offered. If a shareholder does not exercise its right of first refusal, it shall have a tag along right to participate in the sale pro rata and on the same terms as the selling party, except that if the sale is by the GoI by way of a public offer, the tag along right will not apply. However, a transfer of shares representing not more than 5.0% of the equity share capital of BALCO by the GoI to the employees of BALCO is not subject to such right of first refusal by Vedanta Limited. The GoI also granted to Vedanta Limited an option to acquire the remaining shares in BALCO held by the GoI at the time of exercise.

Mineral Development Agreement executed relating to the rehabilitation and development of the Western Cluster iron ore deposits with the Government of Liberia

On 3 August 2011, Sesa Goa, BFL, Elenilto, WCL and the Government of Liberia entered into a Mineral Development Agreement relating to the exploration and development of the Western Cluster iron ore deposits (the "MDA"). The MDA became effective on 22 August 2011 (the "Effective Date").

Following satisfaction of certain conditions, including ratification of the MDA by the Legislature of the Republic of Liberia. The initial term of the MDA is 25 years from the Effective Date and will automatically be extended to match any extensions of the term of any mining licence granted by the Government of Liberia to WCL pursuant to the MDA.

The MDA provides that exploration licences are to be granted to WCL for the exclusive exploration of iron ore deposits in the Bomi, Mano River and Bea Mountain exploration areas. The MDA provides that WCL be granted land use rights in relation to the land subject to any exploration licence or mining licence; provided WCL pays reasonable compensation to landowners and occupants of the land for loss of or diminution in value of the land. These land use rights terminate at the end of the term of the MDA.

WCL must pay the Government of Liberia a royalty of 4.50% multiplied by the fair market value determined in accordance with the Liberian revenue code. WCL must also pay the Government of Liberia a fee of $25 million. In addition, WCL is required to develop programmes for the development and maintenance of the communities that have formed and that may form as a result of its operations in the exploration areas and to also make annual contributions ranging from $2 million to $3.1 million to a specially managed fund for the benefit of communities in affected counties.

In the event of a transfer of an interest in WCL, WCL or the transferor of such interest must pay a withholding tax to the Government of Liberia of 15.0% of the value of all cash and other consideration received by the transferor or any other entity with respect to the transfer. No change of control of WCL is permitted by the MDA unless the prior written consent of the Government of Liberia is obtained or is otherwise permitted under the MDA. The MDA provides that a change of control of a shareholder of WCL (including Elenilto, BFL and any person who acquires an interest in WCL) will constitute a change of control of WCL. Due to a change in control of WCL pursuant to the share purchase agreement dated 20 December 2012, the Legislature of Liberia is required to approve the amendment to the MDA which is currently in progress.

WCL agreed to indemnify the Government of Liberia and its officers and agents from all losses and liabilities incurred as a direct consequence of death or injury to persons or damage to property directly resulting from the conduct of WCL. Sesa Goa, BFL and Elenilto jointly and severally guaranteed the performance of the obligations of BFL and WCL under the MDA. Furthermore, Sesa Goa agreed to maintain a net worth of at least $100 million. The MDA is governed by Liberian law.

Rajasthan Block Production Sharing Contract

Vedanta Limited is working in partnership with its joint operation partner, ONGC, in the Rajasthan Block. The Rajasthan production sharing contract (the "Rajasthan Block PSC") was signed on 15 May 1995 between the GoI and a consortium consisting of ONGC and Shell India Production Development BV.

Vedanta Limited acquired its interest in the Rajasthan Block PSC in three stages, eventually acquiring a 100 per cent. beneficial interest in the assets and liabilities as of May 2002 and acquiring legal title to this interest on 20 June 2003. Under the Rajasthan Block PSC, the GoI has an option to acquire a participating interest of 30 per cent. in any development area containing a commercial discovery. The GoI exercised its right in all three development areas, specifically DA 1 in 2005, DA 2 in 2007 and DA 3 in 2009, acting through its nominee, ONGC, and acquired a 30 per cent. participating interest. As of 31 March 2017, along with ONGC (holding 30.0%), Vedanta Limited holds a 35.0% participating interest in the Rajasthan block, with the balance 35.0% interest being held by Cairn Energy Hydrocarbons Limited, a wholly owned subsidiary of Vedanta Limited.

Under the Rajasthan Block PSC, until such time as India attains self-sufficiency in its crude oil supply, Vedanta Limited is required to sell to the GoI, or its nominee, all of Vedanta Limited's entitlement to crude oil and condensate extracted from the Rajasthan Block to assist in satisfying domestic Indian crude oil demand. The GoI has the option but not an obligation to purchase the entire or part of the crude oil produced from the Rajasthan Block. However, the GoI has granted permission to Vedanta Limited to sell the remaining quantities of crude oil, over and above those allocated to government nominees, to other domestic private refineries. As of 31 March 2017, Vedanta Limited sells the crude oil to both private refineries and, the public sector undertakings refineries. As of 31 March 2017, commercial sales arrangements were in place for over 200,000 bopd with public sector undertakings and private refineries. Any additional sales to the public sector undertakings refineries, special economic zone refineries and overseas are subject to approval from the GoI.

The Rajasthan Block PSC established a management committee for the Rajasthan Block, which consists of four members, two of whom are nominated by and represent the GoI and the licensee, ONGC, together, and two of whom are nominated by and represent Vedanta Limited. The management committee must unanimously approve annual work programs, budgets, proposals for the declaration of a discovery as commercial, field development plans, and the delineation of or additions to a development area, while all other matters only require a majority vote, provided the majority vote includes the vote of the member representing the GoI.

The Rajasthan Block PSC is currently due to expire in May 2020, but it may be extended by mutual agreement among the parties for up to an additional ten years in the case of commercial production of natural gas or, in other cases, up to five years. There is also a provision to further extend the production sharing contract by agreement of the parties if production of crude oil or natural gas is expected to continue after the relevant period. The Ministry of Petroleum and Natural Gas via notification No. O-19025/07/2014-ONG-D-V dated 7 April 2017, has issued a policy for the grant of extension to the production sharing contracts signed by the GoI awarding Pre-New Exploration Licensing Policy (Pre-NELP) Exploration Blocks ("Pre-NELP Extension Policy"). The Pre-NELP Extension Policy defines the framework for granting extensions for Pre-NELP blocks and covers both the Rajasthan and Cambay fields.

The Rajasthan Block benefitted from a tax holiday of seven years from the fiscal 2009 (being the year of commencement of commercial production in the Rajasthan Block) to 31 March 2016. However, during this seven year period, minimum alternate tax rules applied resulting in a taxation of book profits calculated in accordance with the generally accepted accounting principles used in India. Any minimum alternate tax paid can be carried forward for a total period of fifteen years from the year of credit and used to reduce corporate tax due in future years in excess of minimum alternate tax payable in those years.

Ravva Block Production Sharing Contract

The production sharing contract for the exploration, development and production of the Ravva field (the "Ravva PSC") was signed on 28 October 1994 between the GoI and a consortium consisting of ONGC, Videocon Petroleum Limited, Ravva Oil and Cairn Energy India Pty Limited (formerly known as Command Petroleum (India) Pty Limited) ("Command Petroleum") with Command Petroleum being designated as the operator. In 1996, Cairn Energy Plc acquired Command Petroleum, including its interest in the Ravva field, and Vedanta Limited became the operator.

Vedanta Limited holds a 22.5 per cent. working interest in the Ravva field, with the remaining interests currently held by ONGC (40 per cent.), Videocon Petroleum Limited (25 per cent.) and Ravva Oil (12.5 per cent.) (together, the "Ravva joint operation"). The Ravva PSC is currently valid until 27 October 2019, but may be extended by the GoI for up to an additional ten years in the case of commercial production of non-associated natural gas or up to five years otherwise. The MoPNG, via notification dated 28 March 2016, issued a policy for the grant of an extension to the production sharing contracts signed by the GoI awarding small, medium sized and discovered fields to private joint ventures (the "Extension Policy"). The Extension Policy defines the framework for the granting of extension and covers 28 small and marginal fields, including the Ravva block.

Under the Ravva PSC, Vedanta Limited is entitled to recover 100 per cent. of exploration, development and costs of production from crude oil and natural gas sales before any profit is allocated among the parties.

Under the Ravva PSC, until such time as India attains self-sufficiency in its crude oil supply, Vedanta Limited is required to sell in the domestic Indian market all of its entitlement to crude oil extracted from the Ravva field to assist in satisfying domestic Indian crude oil demand.

Cambay Block Production Sharing Contract

Exploration, development and production of the Cambay block is governed by a production sharing contract between the GoI and a consortium consisting of the Cambay Joint Operating Partners which was signed on 30 June 1998 and runs until 2023 and can be extended for a further period of 10 years in the event of commercial production of non-associated natural gas or for a period not exceeding five years. The MoPNG issued the Pre-NELP Extension Policy, which defines the framework for granting of extension for Pre-Nelp blocks and covers both the Rajasthan and Cambay fields. Vedanta Limited's participating interest in the Cambay Basin joint venture consists of a 40% interest in the Lakshmi, Gauri and CB-X development areas. The remaining interests in these development areas are held by ONGC (50%) and Tata Petrodyne (10%).

Conflicts of Interest

From time to time, conflicts of interest have in the past and will in the future arise between the Company and its affiliates. With respect to transactions between the Company and its affiliates, Directors and executive officers that involve conflicts of interests, the Company has in the past undertaken and will continue in the future to undertake such transactions in compliance with the rules for interested or related party transactions of the NYSE on which Vedanta Limited is listed and the Indian stock exchanges.

As part of Vedanta Limited's listing on the NYSE, Vedanta Limited was required to confirm to the NYSE that it will appropriately review and oversee related party transactions on an ongoing basis. Such related party transactions include transactions between Vedanta Limited and the Company, and the Company's affiliates. The NYSE reviews the proxy statements and other public filings of its listed companies as to related party transactions. Under the rules of the NYSE, Vedanta Limited was required to have an independent audit committee comprised of a majority of independent directors within 90 days of listing and comprised entirely of independent directors within one year of listing. Vedanta Limited currently has an independent audit committee comprised entirely of independent directors and expects to continue to do so following the Listing. One of the functions of its independent audit committee is to review any related party transactions by Vedanta Limited or any of its subsidiaries or affiliates. In addition, under the rules of the NYSE, Vedanta Limited is required to obtain shareholder approval for any issuance of its equity shares, or securities convertible into or exercisable for the Company's equity shares, to any related party, except that such approval would not be required for sales of the Company's equity shares to the Company's controlling shareholder or its affiliates in an amount not to exceed 5% of the number of the Company's equity shares outstanding prior to such issuance and at a price equal to or greater than the higher of the book or market value of the Company's equity shares.

Under the listing agreements that the Company's Indian subsidiaries have entered into with the Indian stock exchanges, these subsidiaries are required to ensure that their disclosures in relation to material and significant related party transactions in their annual reports are in compliance with Indian Accounting Standards. Specifically, these subsidiaries are required to place before their audit committee and publish in their annual reports a statement in summary form of the related party transactions entered into by them during the previous fiscal year, providing details of whether such transactions were undertaken in the ordinary course of business and details of material individual transactions with related parties or others which were not on an arm's length basis, together with their management's justification for such transactions. Under the listing agreements, their audit committee is required to review and discuss with the management the disclosures of any related party transactions, as defined under Indian Accounting Standards, in the Company's annual financial statements.

The Company also has used and will continue to use independent appraisers in appropriate circumstances to help determine the terms of related party transactions. The Company has had and will continue to have an Audit Committee comprised entirely of independent directors which is responsible for reviewing any related-party transaction by the Company or any of its subsidiaries or affiliates.

DESCRIPTION OF MATERIAL INDEBTEDNESS

Set forth below is a summary of the terms and conditions of certain of Vedanta's debt instruments that Vedanta considers to be the most material as of 31 December 2018. The summary may not contain all of the information that is important to you. You should read the notes to the financial statements for additional information about the indebtedness of Vedanta.

As of 31 December 2018 Vedanta had $16,502.0 million of debt outstanding including term loans and working capital facilities. Set forth below is information regarding Vedanta's material debt outstanding as of 31 December 2018.

Material Indebtedness

Issue of $1,000.0 million 6.125% bonds due 2024

On 9 August 2017, the Company issued $1,000.0 million 6.125% bonds due 2024 ("2024 Bonds"). The 2024 Bonds were offered by Barclays Bank PLC, Credit Suisse, DBS Bank Ltd, First Abu Dhabi Bank, J.P. Morgan, Standard Chartered Bank as joint global co-ordinators, outside of and within the United States in accordance with Regulation S and Rule 144A, respectively, under the Securities Act.

The interest on the 2024 Bonds is payable semi-annually in arrear on 9 February and 9 August each year, at a rate of 6.125% per annum. The 2024 Bonds will mature on 9 August 2024.

Under the terms and conditions of the 2024 Bonds, the Company is subject to certain covenants restricting it and its material subsidiaries (as defined in the terms and conditions of the bonds) from creating or permitting to subsist any mortgage, charge, pledge, lien or other form of encumbrance or security interest upon the whole or any part of their respective undertaking or assets, present or future to secure any indebtedness or debt, or any guarantee or indemnity in respect of the Company's indebtedness or any relevant debt (as defined in the terms and conditions of the bonds) of its material subsidiaries, unless the bonds are secured equally and rateably therewith or otherwise benefit identically or not materially less beneficial to the bondholders.

Issue of $1,000.0 million 6.375% bonds due 2022

On 30 January 2017, the Company issued $1,000.0 million 6.375% bonds due 2022 ("2022 Bonds"). The 2022 Bonds were offered by Barclays Bank PLC, Citigroup Global Markets Limited, J.P. Morgan Securities plc and Standard Chartered Bank as joint global co-ordinators, outside of and within the United States in accordance with Regulation S and Rule 144A, respectively, under the Securities Act.

The interest on the 2022 Bonds is payable semi-annually in arrear on 30 January and 30 July each year, at a rate of 6.375% per annum. The 2022 Bonds will mature on 30 July 2022.

Under the terms and conditions of the 2022 Bonds, the Company is subject to certain covenants restricting it and its material subsidiaries (as defined in the terms and conditions of the bonds) from creating or permitting to subsist any mortgage, charge, pledge, lien or other form of encumbrance or security interest upon the whole or any part of their respective undertaking or assets, present or future to secure any indebtedness or debt, or any guarantee or indemnity in respect of the Company's indebtedness or any relevant debt (as defined in the terms and conditions of the bonds) of its material subsidiaries, unless the bonds are secured equally and rateably therewith or otherwise benefit identically or not materially less beneficial to the bondholders.

Issue of $1,200.0 million 6% bonds due 2019 and $500.0 million 7.125% bonds due 2023

In June 2013, the Company issued $1,200.0 million bonds bearing a coupon rate of 6% and $500.0 million at a coupon rate of 7.125%. The same are due for repayment in January 2019 and May 2023 respectively.

The 2023 Bonds were offered by Barclays Bank PLC, BofA Merrill Lynch, Citi, JP Morgan, The Royal Bank of Scotland and Standard Chartered Bank as joint lead managers, outside of and within the United States in accordance with Regulation S and Rule 144A, respectively, under the Securities Act.

The issue price of the bonds was 100% of the principal amount. The interest is payable semi-annually payable on (i) with respect to the 2019 Bonds, 3 June and 3 December of each year and (ii) with respect to the 2023 Bonds, 3 June and 3 December of each year. 2019 Bonds will mature on 31 January 2019 and the 2023 Bonds will mature on 31 May 2023.

Under the terms and conditions of the Bonds, the Company is subject to certain covenants restricting it and its material subsidiaries (as defined in the terms and conditions of the bonds) from creating or permitting to subsist any mortgage, charge, pledge, lien or other form of encumbrance or security interest upon the whole or any part of their respective undertaking, assets or revenues, present or future to secure any indebtedness or debt or any guarantee or indemnity in respect of the Company's indebtedness or relevant debt (as defined in the terms and conditions of the bonds) of its material subsidiaries, unless the bonds are secured equally and rateably therewith or otherwise benefit identically or not materially less beneficial to the bondholders.

Pursuant to a tender offer floated by Vedanta in January 2017 and August 2017 for the 2019 Bonds, the outstanding amount on the 2019 Bonds as of 31 December 2018 is $252.5 million. However, this has since been repaid in January 2019.

Issue of $900.0 million 8.25% bonds due 2021

On 7 June 2011, the Company issued $900.0 million 8.25% bonds due 2021 ("2021 Bonds"). The 2021 Bonds were offered by Barclays Bank PLC, Citi, Credit Suisse, The Royal Bank of Scotland and Standard Chartered Bank as joint lead managers, outside of and within the United States in accordance with Regulation S and Rule 144A, respectively, under the Securities Act. The issue price of the bonds was 100% of the principal amount. The interest on the 2021 Bonds is payable semi-annually in arrear on 7 June and 7 December each year, at a rate of 8.25% per annum. The 2021 Bonds will mature on 7 June 2021.

Under the terms and conditions of the 2021 Bonds, the Company is subject to certain covenants restricting it and its material subsidiaries (as defined in the terms and conditions of the bonds) from creating or permitting to subsist any mortgage, charge, pledge, lien or other form of encumbrance or security interest upon the whole or any part of their respective undertaking, assets or revenues, present or future to secure any indebtedness or debt or any guarantee or indemnity in respect of the Company's indebtedness or relevant debt (as defined in the terms and conditions of the bonds) of its material subsidiaries, unless the bonds are secured equally and rateably therewith or otherwise benefit identically or not materially less beneficial to the bondholders.

Pursuant to a tender offer floated by Vedanta in August 2017 for the 2021 Bonds, the outstanding amount on the 2021 Bonds as of 31 December 2018 is $670.2 million.

$500.0 million Term Loan Facility dated March 2014 between Twinstar Holding Limited as borrower and Axis Bank Limited as arrangers

In March 2014, the Company has entered into a $500.0 million syndicated facility agreement with Axis Bank as the lead arranger. The facility bears an interest rate of $LIBOR plus 352 basis points. The facility was fully drawn in September 2014. The same is repayable as $100.0 million in December 2018, $150.0 million in March 2019 and $250.0 million in September 2019.

On 28 March 2018, $100.0 million instalment due in December 2018 was prepaid. As at 31 December 2018, the principal amount outstanding under this facility was $400.0 million.

$350.0 million Term Loan Facility between the Company with SBI (London Branch)

In March 2015, the Company entered into a facility agreement with State Bank of India for $350.0 million. Out of said facility $100.0 million bears an interest rate of $LIBOR plus 370 basis points and is repayable in March 2020. $250.0 million bears an interest rate of $LIBOR plus 403 basis points repayable in two instalments of $100.0 million and $150.0 million in June 2021 and June 2022 respectively. As at 31 December 2018, the principal amount outstanding was $350.0 million under this facility.

$300.0 million Term Loan Facility between the Company with SBI (London Branch)

In January 2016, the Company entered into a facility agreement with State Bank of India for $300.0 million. Out of which $120.0 million bears an interest rate of $LIBOR plus 450 basis points and is repayable in February 2022. Balance $180.0 million bears an interest rate of $LIBOR plus 454 basis points and is repayable in February 2023. As at 31 December 2018, the principal amount outstanding was $300.0 million under this facility.

$575.0 million Term Loan Facility dated September 2017 between Twinstar Holding Limited as borrower, the Company as the guarantor and Barclays Bank Plc, Credit Suisse Ag Singapore Branch, DBS Bank Ltd, National Bank of Abu Dhabi Pjsc Singapore Branch, Standard Chartered Bank Singapore Branch as Arrangers.

In September 2017, the Company has entered into a $575.0 million syndicated facility agreement with Barclays Bank Plc, Credit Suisse Ag Singapore Branch, DBS Bank Ltd, National Bank of Abu Dhabi Pjsc Singapore Branch, Standard Chartered Bank Singapore Branch as Arrangers. The facility bears an interest rate of $LIBOR plus 310 basis points. The facility was fully drawn in September 2017. The same is repayable as $17.25 million in September 2020, $34.5 million in March 2021, $172.5 million in September 2021, $172.5 million in March 2022, $178.25 million in September 2022. As at 31 December 2018, the principal amount outstanding under this facility was $575.0 million.

$200.0 million Term Loan Facility between Vedanta Resourced Limited from SBI (London Branch)

In January 2018, the Company entered into a $200.0 million facility with State Bank of India (London Branch). The facility bears an interest rate of LIBOR plus 338.57 basis points. The facility was fully drawn in March 2018 and is repayable in January 2025. As at 31 December 2018, the principal amount outstanding under this facility was $200.0 million.

$180.0 million Term Loan Facility between Vedanta Resources Jersey II Limited (wherein the Company is the guarantor) with Yes Bank Limited (IFSC Banking Unit)

In December 2017, the Company entered into a $150.0 million facility with Yes Bank Limited, which was amended to $180.0 million in January 2018. The facility bears an interest rate of LIBOR plus 264 basis points. The facility was fully drawn in January 2018. The facility is repayable as $18.0 million in December 2020, $24 million in June 2021, $30 million in December 2021, $48 million in June 2022 and $60 million in December 2022. As at 31 December 2018, the principal amount outstanding under this facility was $180.0 million.

$200.0 million Term Loan Facility between Vedanta Resourced Limited from Bank of Baroda (London Branch)

In June 2018, the Company entered into a $200.0 million facility with Bank of Baroda. The facility bears an interest rate of LIBOR plus 300 basis points. The facility was fully drawn in June 2018 and is repayable in nine half-yearly instalments starting from June 2020. As at 31 December 2018, the principal amount outstanding under this facility was $200.0 million.

$200.0 million Term Loan Facility between Vedanta Resourced Limited from ICICI Bank Limited (Bahrain Branch)

In September 2018, the Company entered into a $200.0 million facility with ICICI Bank Limited. The facility bears an interest rate of LIBOR plus 339 basis points. The facility was fully drawn in October 2018 and is repayable in six half-yearly instalments starting from March 2021. As at 31 December 2018, the principal amount outstanding under this facility was $200.0 million.

$820.0 million Term Loan Facility to KCM from Standard Bank

A term loan facility of $820.0 million has been obtained by KCM from Standard Bank. In November 2015 the loan agreement was amended and restated with Standard Bank and got a moratorium period for testing of financial covenants. First testing was done on 30 September 2017. The loan consists of 2 tranches: Facility A (repayable in 11 quarterly instalments commencing from 30 September 2016, excluding 1 installment paid in December 2015) and Facility B (repayable in 14 quarterly installments commencing from 31 March 2017, excluding 1 installment paid in December 2015). The loan is secured against the fixed assets of KCM and a corporate guarantee from the Company for the amount equivalent to the total outstanding loan. Interest is payable quarterly at LIBOR plus 350 basis points for Facility A and LIBOR plus 450 basis points from April 2017 to March 2018 and LIBOR plus 470 basis points April 2018 onwards for Facility A. As at 31 December 2018, the principal amount outstanding was $159.9 million under this facility.

Vedanta Limited

$651.0 million Term Loan Facility with CIHL as borrower

In April 2017, CIHL entered into a $651.0 million facility with Barclays Bank PLC, Citigroup Global Markets Asia Limited, Credit Suisse AG, Singapore branch, National Bank of Abu Dhabi, Standard Chartered bank, Singapore branch, Axis Bank Limited and ICICI Bank Limited. Out of the said facility, $155.1 million bears an interest rate of LIBOR plus 171 basis points with an average maturity of about 2.2 years, $186.0 million bears an interest rate of LIBOR plus 205 basis points with an average maturity of about 3.4 years, and the balance $309.9 million bears an interest rate of LIBOR plus 215 basis points with an average maturity of about 3.9 years from the date of first drawdown. As at 31 December 2018, the principal amount outstanding is $392.2 million.

Axis Bank Limited's Rupee Term Loan of INR 30.0 billion

In June 2016, Vedanta Limited entered into common rupee loan agreement with Axis Bank Limited to avail rupee term loan of ₹30.0 billion at an interest rate of the bank's 1 year MCLR plus 45 basis points. The facility is secured by hypothecation of movable fixed assets of 1 mtpa of refinery at Lanjigarh (along with captive power plant of 75 MW) and aluminium smelter of 1.6 mtpa along with a 1,215 MW CPP at Jharsuguda, Odisha and the mortgage by deposit of title deeds of the land pertaining to the project. The facility is repayable in 10 equal semi-annual instalments up to 30 April 2021. The interest rate has been reset at Bank's 1 Year MCLR in May 2017. As at 31 December 2018, the principal amount outstanding under this facility was $210.62 million.

Axis Bank Limited's rupee corporate loan of INR 50.0 billion

In November 2015, Vedanta Limited entered into common rupee loan agreement with Axis Bank Limited to avail rupee term loan of ₹50 billion at interest rate of Axis bank's base rate plus 30 basis points. The facility is secured by first pari passu mortgage and hypothecation over the fixed assets of Vedanta Limited in respect of the specific aluminium division assets in Odisha. The facility is repayable in 60 quarterly instalments up to 31 December 2030. As at 31 December 2018, the principal amount outstanding was $302.99 million (including the amount outstanding on the portion of loan novated to other banks). The interest rate has been reset at Bank's 1 year MCLR plus 25 basis points in May 2017.

Axis Bank Limited novated a part of facility to the following banks:

(1) Loan amount of ₹3.0 billion at an interest rate of Canara bank's 1 year MCLR plus 5 basis points per annum, have been novated to Canara Bank. As at 31 December 2018, the principal amount outstanding was $39.6 million.

(2) Loan amount of ₹2.0 billion, at an interest rate of bank's MCLR plus 5 basis points per annum, have been novated to State Bank of India (erstwhile known as State Bank of Hyderabad). The interest rate has been reset at Bank's 1 Year MCLR plus 100 basis points in June 2018. As at 31 December 2018, the principal amount outstanding was $26.3 million.

(3) Loan amount of ₹5.0 billion, at an interest rate of Vijaya bank's base rate plus 15 basis points per annum, have been novated to Vijaya Bank. As at 31 December 2018, the principal amount outstanding was $65.8 million.

(4) Loan amount of ₹3.0 billion, at an interest rate of bank's MCLR plus 125 basis points per annum, have been novated to State Bank of India (erstwhile known as State Bank of Patiala). The interest rate has been reset at Bank's 1 Year MCLR plus 100 basis points in June 2018. As at 31 December 2018, the principal amount outstanding was $39.6 million.

State Bank of India's rupee corporate loan of INR 12.5 billion

In December 2015, Vedanta Limited entered into corporate loan agreement with State Bank of India to avail corporate loan of ₹12.50 billion. At present, this facility carries an interest rate of SBI's 1 year MCLR plus 75 basis points. The facility is secured by first pari passu mortgage and hypothecation over the fixed assets of aluminium division of Vedanta Limited in Odisha. The facility is repayable in 29 quarterly instalments up to 31 March 2025. As at 31 December 2018, the principal amount outstanding was $171.9 million.

State Bank of India's rupee corporate loan of INR 50 billion

In July 2014, Vedanta Limited entered into corporate loan agreement with State Bank of India to avail corporate loan of INR 50 billion. At present, this facility carries an interest rate of SBI's 1 year MCLR plus 75 basis points. The facility is secured by first pari passu mortgage and charge over the specific fixed assets of aluminium division of Vedanta Limited in Odisha. The facility is repayable in 30 quarterly instalments up to 31 March 2022. As at 31 December 2018, the principal amount outstanding was $555.2 million.

Bank of Baroda Rupee Term Loan of INR 30.0 billion

In July 2018, Vedanta Limited entered into corporate loan agreement with Bank of Baroda to avail corporate loan of INR 30.0 billion. The facility became fully drawn in August 2018. At present, this facility carries an interest rate of bank's 1 Year MCLR plus 20 basis points. The facility is secured by first pari-passu charge on fixed assets pertaining to Aluminium Division of the company situated at Jharsuguda, Odisha. The facility is repayable in 32 consecutive structured quarterly instalments starting from June 2020 (post 2 years moratorium). As at 31 December 2018, the principal amount outstanding was $429.74 million.

Vedanta Star Limited

Standard Chartered Bank Rupee Term Loan facility of INR 34.0 billion

In June 2018, Vedanta Star Limited entered into rupee loan agreement with Standard Chartered Bank to avail a rupee term loan of INR34.0 billion for acquiring shares of a target company in furtherance of the approval of a resolution plan submitted to the NCLT under Section 31 of the Insolvency and Bankruptcy Code, 2016. The facility is secured by hypothecation on all fixed assets of Vedanta Star Limited and Electrosteel Steel Limited (ESL), a corporate guarantee provided by Vedanta Limited in favour of the security trustee and a mortgage on all the immovable properties of Electrosteel Steel Limited (ESL). The interest rate with respect to Standard Chartered Bank is set at the aggregate of Standard Chartered Banks' 3M MCLR plus 10 basis points per annum. The facility is repayable from 24 months from the date of utilisation in 33 instalments. In June, 2018, loan amount of Rs. 15 billion, at an interest rate of ICICI Bank Limited's 3M MCLR plus 70 basis points per annum, have been novated to ICICI Bank Limited. As at 31 December 2018, the principal amount outstanding under this facility was $487.16 million (including the amount outstanding on the portion of the loan novated to other banks).

Standard Chartered Bank and ICICI Bank Limited further novated a part of the facility to the following banks:

(1) Loan amount of Rs. 10 billion, at an interest rate of Bank of Baroda's 1 Year MCLR plus 25 basis points per annum, have been novated to Bank of Bardoa. As of 31 December 2018, the principal amount outstanding was $ 143.28 million (Rs. 10 billion).

(2) Loan amount of Rs. 5 billion, at an interest rate of Punjab National Bank's 1 Year MCLR plus 80 basis points per annum, have been novated to Punjab National Bank. As of 31 December 2018, the principal amount outstanding was $ 71.64 million (Rs. 5 billion).

(3) Loan amount of Rs. 5 billion, at an interest rate of Bank of India's 1 Year MCLR plus 45 basis points per annum, have been novated to Bank of India. As of 31 December 2018, the principal amount outstanding was $ 71.64 million (Rs. 5 billion).

(4) Loan amount of Rs. 5 billion, at an interest rate of Andhra Bank's 1 Year MCLR plus 55 basis points per annum, have been novated to Andhra Bank. As of 31 December 2018, the principal amount outstanding was $ 71.64 million (Rs. 5 billion).

Non-Convertible Debentures

Vedanta has non-convertible debentures ("NCDs") aggregating to $2,017 million principal outstanding as at 31 December 2018. These NCDs were issued by Vedanta between April 2013 and December 2018. The details of the material NCDs are as follows:

Issuer of NCDs	Principal Outstanding as at 31 December 2018 ($ million)	Interest Rate	Date of Maturity
Vedanta Limited	391.1	9.1%	5 April 2023
Vedanta Limited	312.9	9.7%	17 August 2020

In addition to the above indebtedness, Vedanta has entered into various arrangements with lenders in relation to its long-term and short-term borrowings (which includes commercial paper and credit lines) to fund its working capital requirements. Certain of these financing arrangements are secured by movable and immovable assets of the Company, including the capital stock of its subsidiaries and, in certain instances, guarantees by the Company.

TERMS AND CONDITIONS OF THE BONDS

The following, other than the paragraphs in italics, is the text of the terms and conditions of the Bonds which will be endorsed on the individual certificates ("Individual Certificates") issued in respect of the Bonds.

The issue of the U.S.$400,000,000 8.00 per cent. Guaranteed Bonds due 2023 (the "2023 Bonds") and the U.S.$600,000,000 9.25 per cent. Guaranteed Bonds due 2026 (the "2026 Bonds" and together with the 2023 Bonds, the "Bonds"), which expression shall, unless the context requires, include any bonds issued pursuant to Condition 15 and forming a single series with the 2023 Bonds or the 2026 Bonds, as applicable, issued on the Closing Date) was authorised by resolutions of the Board of Directors of Vedanta Resources Finance II PLC (the "Issuer") on 4 April 2019 and on 11 April 2019. The guarantee of the Bonds by Vedanta Resources Limited (the "Guarantor") was authorised by its Board of Directors on 4 April 2019. The Bonds are constituted by a Trust Deed (the "Trust Deed") to be dated on or about the Closing Date among the Issuer, the Guarantor and Citicorp International Limited (the "Trustee", which expression shall include all persons for the time being acting as trustee or trustees under the Trust Deed) as trustee for the Bondholders. These terms and conditions (the "Conditions") include summaries of, and are subject to, the detailed provisions of the Trust Deed, which includes the form of the Bonds. The Issuer will enter into an agency agreement to be dated on or about the Closing Date (the "Agency Agreement") among the Issuer, the Trustee, Citibank, N.A., London Branch, as principal paying agent, Citigroup Global Markets Deutschland AG as transfer agent and registrar, and the other paying and transfer agents appointed under it. The principal paying agent, transfer agent, registrar, paying agents and transfer agents for the time being are referred to herein as the "Principal Agent", the "Registrar", the "Paying Agents" (which expression shall include the Principal Agent) and the "Transfer Agents" (which expression shall include the Registrar), respectively, each of which expressions shall include the successors from time to time of the relevant persons, in such capacities, under the Agency Agreement, and are collectively referred to herein as the "Agents". Copies of the Trust Deed and the Agency Agreement are available for inspection during usual business hours at the specified office of the Principal Paying Agent. The Bondholders (as defined in Condition 1(b)) are entitled to the benefit of, are bound by, and are deemed to have notice of, all the provisions of the Trust Deed and are deemed to have notice of the provisions of the Agency Agreement applicable to them.

1 Form, Denomination, Title, Guarantee and Status

(a) Form and denomination

The Bonds are in registered form in the minimum denomination of U.S.$200,000 each and in integral multiples of U.S.$1,000 in excess thereof, without coupons attached. A bond certificate (each, a "Certificate") will be issued to each Bondholder in respect of its registered holding of Bonds. Each Bond and each Certificate will have an identifying number which will be recorded on the relevant Certificate and in the Register (as defined in Condition 2(a)).

Certificates issued with respect to Rule 144A Bonds will bear the Securities Act Legend (as defined in the Trust Deed), unless determined otherwise in accordance with the provisions of the Agency Agreement by reference to applicable law. Certificates issued with respect to the Regulation S Bonds will not bear the Securities Act Legend. Upon issue, the Rule 144A Bonds of each series will be represented by the Restricted Global Certificate and the Regulation S Bonds of each series will be represented by the Unrestricted Global Certificate. The Restricted Global Certificate will be deposited with a custodian for, and registered in the name of Cede & Co. as nominee of, The Depository Trust Company ("DTC") and the Unrestricted Global Certificate will be deposited with a custodian for, and registered in the name of Cede & Co. as nominee of, DTC for the accounts of Euroclear Bank SA/NV ("Euroclear") and Clearstream Banking, S.A. ("Clearstream, Luxembourg"). The Conditions are modified by certain provisions contained in the Global Certificates. See "Summary of Provisions relating to the Bonds while in Global Form."

Except in the limited circumstances described in the Global Certificates and "Summary of Provisions relating to the Bonds while in Global Form," owners of interests in Bonds *represented by the Global Certificates will not be entitled to receive Individual Certificates in respect of their individual holdings of Bonds. The Bonds are not issuable in bearer form.*

(b) Title

Title to the Bonds passes only by transfer and registration in the Register (as defined in Condition 2(a)). The holder of any Bond will (except as otherwise required by law or as ordered by a court of competent jurisdiction) be treated as its absolute owner for all purposes (whether or not it is overdue and regardless of any notice of ownership, trust or any interest in it or the theft or loss of, the Certificate (if any) issued in respect of it or anything written on it or on the relevant Certificate) and no person will be liable for so treating the holder. In these Conditions, "Bondholder" and (in relation to a Bond) "holder" mean the person in whose name a Bond is registered in the Register from time to time.

(c) Guarantee

The Guarantor has unconditionally and irrevocably guaranteed the due payment of all sums expressed to be payable by the Issuer under the Trust Deed and the Bonds. The obligations of the Guarantor in that respect (the "Guarantee") are contained in the Trust Deed. The obligations of the Guarantor under the Guarantee shall, save for such exceptions as may be provided by applicable legislation and subject to Condition 3(a), at all times rank at least equally with all its other present and future unsecured and unsubordinated obligations.

(d) Status

The Bonds of each series constitute senior, unsubordinated, direct, unconditional and (subject to Condition 3(a)) unsecured obligations of the Issuer and shall at all times rank *pari passu* and without any preference among themselves. The payment obligations of the Issuer under the Bonds shall, save for such exceptions as may be provided by applicable legislation and subject to Condition 3(a), at all times rank at least equally with all its other present and future unsecured and unsubordinated obligations.

2 Transfer of Bonds

(a) The Register

The Issuer will cause to be kept at the specified office of the Registrar and in accordance with the terms of the Agency Agreement a register (the "Register") on which shall be entered, on behalf of the Issuer, the names and addresses of the Bondholders from time to time and the particulars of the Bonds held by them and of all transfers and redemptions of Bonds. Each Bondholder shall be entitled to receive only one Certificate in respect of its entire holding.

(b) Transfers

Subject to the terms of the Agency Agreement and to Conditions 2(e) and 2(f), a Bond may be transferred by delivering the Certificate issued in respect of it, with the form of transfer on the back duly completed and signed, to the specified office of the Registrar or any of the Transfer Agents. No transfer of a Bond will be valid unless and until entered on the Register.

Transfers of interests in the Bonds evidenced by the Global Certificates will be effected in accordance with the rules of the relevant clearing systems.

Upon the transfer, exchange or replacement of a Rule 144A Bond, a Transfer Agent will only deliver Certificates with respect to Rule 144A Bonds that bear the Securities Act Legend unless there is delivered to such Transfer Agent such satisfactory evidence, which may include an opinion of legal counsel, as may be reasonably required by the Issuer, that neither the

Securities Act Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the US Securities Act of 1933, as amended (the "Securities Act").

Interests in Bonds represented by the Restricted Global Certificate may be transferred to a person who wishes to take delivery of any such interest in the form of an interest in Bonds represented by the Unrestricted Global Certificate only if a Transfer Agent receives a written certificate from the transferor (in the form provided in the Agency Agreement) to the effect that such transfer is being made in accordance with Rule 903 or 904 of Regulation S under the Securities Act ("Regulation S") or Rule 144 under the Securities Act ("Rule 144A") (if available).

Prior to the 40th day after the day of issue of the Bonds (the "Restricted Period"), an interest in Bonds represented by the Unrestricted Global Certificate may be exchanged for an interest in Bonds represented by the Restricted Global Certificate only if a Transfer Agent receives a written certificate from the transferee of the interest in Bonds represented by the Unrestricted Global Certificate (in the form provided in the Agency Agreement) to the effect that the transferee is a qualified institutional buyer (as defined in Rule 144A) and is obtaining such interest in a transaction meeting the requirements of Rule 144A and any applicable securities laws of any state of the United States or any other jurisdiction. After the expiration of the Restricted Period, this certification requirement will no longer apply to such transfers.

Transfers of Bonds are also subject to the restrictions described under "Plan of Distribution" and "Transfer Restrictions" below.

(c) Delivery of new Certificates

Each new Certificate to be issued on transfer of a Bond or Bonds will, within five Business Days of receipt by the relevant Transfer Agent of the duly completed and signed form of transfer, be made available for collection at the specified office of the relevant Transfer Agent or, if so requested in the form of transfer, be mailed by uninsured mail at the risk of the holder entitled to the Bonds transferred (free of charge to the holder), to the address specified in the form of transfer.

Except in the limited circumstances described in "Summary of Provisions relating to the Bonds while in Global Form — Registration of Title", owners of interests in Bonds represented by the Global Certificates will not be entitled to receive physical delivery of Individual Certificates. Issues of Certificates upon transfers of Bonds are subject to compliance by the transferor and transferee with the certification procedures described above and in the Agency Agreement and, in the case of Rule 144A Bonds, compliance with the Securities Act Legend.

Where some but not all of the Bonds in respect of which a Certificate is issued are to be transferred or redeemed, a new Certificate in respect of the Bonds not so transferred or redeemed, will, within five Business Days of delivery or surrender of the original Certificate to the relevant Transfer Agent or Registrar, be made available for collection at the specified office of the relevant Agent or, if so requested by the holder, be mailed by uninsured mail at the risk of the holder of the Bonds not so transferred or redeemed (free of charge to the holder), to the address of such holder appearing on the Register.

In this Condition 2, "Business Day" means a day (other than a Saturday or a Sunday) on which banks are open for business in the city in which the specified office of the Registrar and the relevant Transfer Agent to which the Certificate in respect of the Bonds to be transferred or relevant form of transfer is delivered is situated.

(d) Formalities free of charge

Registration of transfer of Bonds will be effected without charge by or on behalf of the Issuer or any of the Transfer Agents, but only upon the person making such application for transfer, paying or procuring the payment (or the giving of such indemnity as the Issuer or any of the Transfer Agents may require) of any tax, duty or other governmental charges which may be imposed in relation to such transfer.

(e) Closed periods

No Bondholder may require the transfer of a Bond to be registered during the period of 15 days ending on (and including) the due date for any payment of principal of that Bond or seven days ending on (and including) any Interest Record Date (as defined in Condition 6(a)).

(f) Regulations

All transfers of Bonds and entries on the Register will be made subject to the detailed regulations concerning transfer of Bonds scheduled to the Agency Agreement. The regulations may be changed by the Issuer with the prior written approval of the Trustee and the Registrar. A copy of the current regulations will be mailed (free of charge) by the Registrar to any Bondholder upon written request.

3 Covenants

(a) Negative Pledge

So long as any Bond remains outstanding (as defined in the Trust Deed), neither the Issuer nor the Guarantor will create or permit to subsist any mortgage, charge, pledge, lien or other form of encumbrance or security interest ("Security") upon any assets directly held by the Issuer or the Guarantor, present or future, to secure any Indebtedness or any guarantee or indemnity in respect of any Indebtedness, unless, at the same time or prior thereto, the Issuer's obligations under the Bonds and the Trust Deed (x) are secured equally and rateably therewith in substantially identical terms thereto, in each case to the satisfaction of the Trustee; or (y) have the benefit of such other security or other arrangement as the Trustee in its absolute discretion shall deem to be not materially less beneficial to the Bondholders or as shall be approved by an Extraordinary Resolution of the Bondholders; *provided* that this clause (a) shall not apply to Security (x) arising by operation of law or (y) created in respect of Indebtedness (which for this purpose shall exclude Relevant Debt) in an aggregate principal amount not exceeding 10 per cent. of Total Assets. For the avoidance of doubt, the foregoing restriction shall not apply to Security upon assets held by any Subsidiary (other than assets that are jointly held with the Guarantor).

As used in these Conditions:

"Excluded Indebtedness" means any Indebtedness to finance or refinance the ownership, acquisition, development and/or operation of projects, assets or installations (the "Relevant Property") in respect of which the person or persons (in this definition the "Lender") to whom any Indebtedness is or may be owed by the relevant borrower (whether or not a member of the Group) has or have no recourse whatsoever to any member of the Group for the repayment of all or any portion of such indebtedness other than recourse to:

(i) such borrower for amounts limited to the present and future cash flow or net cash flow from the Relevant Property; and/or

(ii) the proceeds of enforcement of any Security given by such borrower over the Relevant Property or the income, cash flow or other proceeds deriving therefrom (or given by any shareholder or the like in the borrower over its shares or the like in the capital of the borrower) to secure such Indebtedness, *provided* that:

(A) the extent of such recourse to such borrower is limited solely to the amount of any recoveries made on any such enforcement; and

(B) such Lender is not entitled, by virtue of any right or claim arising out of or in connection with such Indebtedness, to commence proceedings for the winding-up or dissolution of such borrower or to appoint or procure the appointment of any receiver, trustee or similar person or officer in respect of such borrower generally or any of its projects, assets or installations (save for the Relevant Property the subject of such security); and/or

(iii) such borrower generally, or directly or indirectly to a member of the Group, under any form of assurance, undertaking or support, which recourse is limited to a claim for damages (other than liquidated damages and damages required to be calculated in a specified way) for breach of an obligation (not being a payment obligation or an obligation to procure payment by another person or an indemnity in respect thereof or an obligation to comply or to procure compliance by another person with any financial ratios or other tests of financial condition) by the person against whom such recourse is available; and/or

(iv) any Subsidiary of the Guarantor by way of guarantee of such Indebtedness (but not benefiting from any security or quasi-security from that Subsidiary of the Guarantor);

"Group" means the Guarantor and its Subsidiaries;

"Indebtedness" means any obligation (whether present or future, actual or contingent, secured or unsecured, as principal, surety or otherwise) for the payment or repayment of money;

"Relevant Debt" means any present or future indebtedness (other than Excluded Indebtedness) of the Issuer, the Guarantor or any other person in the form of, or represented by, bonds, notes, debentures, loan stock or other securities, which are for the time being, or are capable of being, quoted, listed or ordinarily dealt in on any stock exchange, over-the-counter or other securities market, have an original maturity of more than one year from their date of issue and are denominated, payable or optionally payable in a currency other than Rupees or are denominated in Rupees and more than 50 per cent. of the aggregate principal amount of which is initially distributed outside India by or with the authority of the Guarantor;

"Subsidiary" means any company or other business entity of which the Guarantor owns or controls (either directly or through one or more other Subsidiaries) more than 50 per cent. of the issued share capital or other ownership interest having ordinary voting power to elect directors, managers or trustees of such company or other business entity or any company or other business entity which at any time has its accounts consolidated with those of the Guarantor or which, under English or other applicable law or regulations, or International Financial Reporting Standards, as the case may be, from time to time, should have its accounts consolidated with those of the Guarantor; and

"Total Assets" means the aggregate of consolidated total current assets and consolidated total non-current assets of:

(i) the Guarantor as shown in the balance sheet of the latest available audited consolidated financial statements of the Guarantor; and

(ii) any Subsidiary of the Guarantor acquired by the Guarantor or any Subsidiary of the Guarantor since the date of the latest available audited consolidated financial statements of the Guarantor as shown in the balance sheet of the latest available audited consolidated financial statements of such Subsidiary.

(b) Dividend restriction

The Issuer shall not, the Guarantor shall not, and the Guarantor shall procure that each of its Material Subsidiaries shall not, create or otherwise cause or permit to exist or become effective any consensual encumbrance or restriction on the ability of the Issuer or any Material Subsidiary to pay dividends or make any other distribution with respect to its Share Capital or to make or repay loans to the Issuer, the Guarantor or any other Material Subsidiary of the Guarantor, other than:

(a) the subordination of any Indebtedness made to the Issuer, the Guarantor or any of its Material Subsidiaries to any other Indebtedness of the Issuer, the Guarantor or any of its Material Subsidiaries; *provided* that:

(i) such other Indebtedness is permitted under these Conditions; and

(ii) such subordination would not singly or in the aggregate have a materially adverse effect on the ability of the Issuer or the Guarantor to meet its obligations under the Bonds,

(b) such encumbrance or restriction in relation to any Indebtedness of any Material Subsidiary or other assurance against financial loss where such encumbrance or restriction relates to payment of dividends or other distributions during the continuance of an event of default (howsoever described) which has occurred pursuant to the terms of that Indebtedness;

(c) such encumbrance or restriction arising by operation of law;

(d) such encumbrance or restriction as is in existence on the date of issue of the Bonds; or

(e) in respect of any Person (including any existing Subsidiary of the Guarantor) which becomes a Material Subsidiary after the date of issue of the Bonds, any encumbrance or restrictions on such Person as may be in existence on the date such Person becomes a Material Subsidiary provided such restrictions were not imposed in contemplation of such Person becoming a Material Subsidiary; *provided* that this Condition 3(b) shall not restrict any Material Subsidiary from issuing Preferred Stock otherwise in accordance with these terms of the Conditions.

(c) Limitation on Borrowings

The Guarantor shall not, and shall procure that each of its Subsidiaries shall not, Incur directly or indirectly any Borrowings, and the Guarantor shall procure that each of its Subsidiaries shall not issue any Preferred Stock; *provided* that:

(a) the Guarantor may Incur Borrowings if, after giving pro forma effect to the Incurrence of such Borrowings and the application of the proceeds thereof, the Fixed Charge Coverage Ratio would be not less than 3.0 to 1.0; and

(b) any Subsidiary of the Guarantor may Incur Borrowings or issue Preferred Stock if, after giving pro forma effect to the Incurrence of such Borrowings or issuance of Preferred Stock and the application of the proceeds thereof, the Fixed Charge Coverage Ratio would be not less than 3.5 to 1.0.

(d) Limitation on distribution of Net Proceeds of Asset Sales

The Guarantor shall not, and shall procure that each of its Subsidiaries shall not pay any dividend in respect of or otherwise distribute the Net Proceeds from any Asset Sale to any Person (other than to the Guarantor or any of its Subsidiaries) if such dividend or distribution, individually or when aggregated with all other dividends or distributions in respect of the Net Proceeds from any Asset Sales in the twelve month period prior to the date of the declaration of such dividend or distribution, exceeds U.S.$250,000,000 or its equivalent in other currencies.

(e) Material Subsidiaries

So long as any of the Bonds are outstanding (as defined in the Trust Deed), the Guarantor or any of its Subsidiaries shall retain Control over, or, directly or indirectly, own more than 50 per cent. of the issued equity share capital of, each of its Material Subsidiaries.

(f) Accounts

The Guarantor agrees that:

(i) as soon as reasonably practicable after the issue or publication thereof and in any event within 180 days after the end of each financial year (beginning with 31 March 2019) it will deliver to the Trustee and the specified office of each of the Paying Agents three copies of its annual report and audited Accounts as at the end of and for the financial year ending on such 31 March and will establish, announce and conduct one conference call with all the holders of Bonds (including the beneficial owners thereof), the contents of which will be limited to such annual report and audited Accounts and any other publicly available information regarding the Guarantor and its Subsidiaries;

(ii) as soon as reasonably practicable after the issue or publication thereof, it will deliver to the Trustee and the specified office of each of the Paying Agents three copies of its unaudited interim Accounts as of the end of the six month period ending on 30 September (beginning with 30 September 2019), *provided* that if and to the extent that the financial statements are not prepared or adjusted on a basis consistent with that used for the preceding relevant semi-annual or annual fiscal period, that fact shall be stated, and will establish, announce and conduct one conference call with all the holders of Bonds (including the beneficial owners thereof), the contents of which will be limited to such unaudited interim Accounts and any other publicly available information regarding the Guarantor and its Subsidiaries; and

(iii) with each set of Accounts delivered by it under this Condition 3, the Guarantor will deliver to the Trustee and the specified office of each of the Paying Agents the Compliance Certificate.

(g) Limitation on Issuer's activities

The Issuer shall not, and the Guarantor will procure that the Issuer will not, carry on any business activity whatsoever other than in connection with the issue of debt (including the Bonds) and any other activities reasonably incidental thereto (such activities shall, for the avoidance of doubt, include (i) the entry into currency and interest rate swap transactions and the on-lending of the proceeds of the issue of such debt and/or such swap transactions to the Guarantor or any other Subsidiaries of the Guarantor, (ii) activities undertaken to fulfill its obligations under such debt including under the Bonds, the Trust Deed and the Agency Agreement, and such swap transactions, (iii) redemptions, purchases, consent solicitations and tender and exchange offers in respect of such debt and (iv) activities directly related to the establishment and maintenance of the Issuer's corporate existence).

(h) Covenant suspension

If, on any date following the date of the Trust Deed, the Bonds of any series have an Investment Grade rating from any two of the Rating Agencies and no Event of Default or Potential Event of Default (as defined in the Trust Deed) has occurred and is continuing (a "Suspension Event"), then, beginning on that day and continuing until such time, if any, at which the Bonds of that series cease to have an Investment Grade rating from either of the Rating Agencies, the provisions of the Trust Deed summarised under the following captions will not apply to the Bonds of that series:

(a) Condition 3(c) "Limitation on Borrowings"; and

(b) Condition 3(d) "Limitation on distribution of Net Proceeds of Asset Sales."

Such covenants will be reinstituted and apply according to their terms as at and from the first day on which a Suspension Event ceases to be in effect. Such covenants will not, however, be of any effect with regard to actions of the Issuer properly taken in compliance with the provisions of the Trust Deed during the continuance of the Suspension Event.

(i) Definitions

As used in these Conditions:

"Accounts" means:

(i) as of each 31 March and for the twelve month period then ending, the audited consolidated profit and loss account and balance sheet of the Guarantor prepared in accordance with Applicable Accounting Principles; and

(ii) as of each 30 September and for the six month period then ending, the unaudited consolidated profit and loss account and balance sheet of the Guarantor prepared in accordance with Applicable Accounting Principles.

"Adjusted Treasury Rate" means, with respect to any redemption date:

(1) the average of the yields in each statistical release for the immediately preceding week (from the calculation date) designated "H.15" or any successor release published by the Board of Governors of the Federal Reserve System which establishes yields on actively traded U.S. Treasury securities adjusted to constant maturity under the heading "U.S. government securities — Treasury constant maturities — nominal," for the maturity corresponding to the Comparable Treasury Issue; *provided* that if no maturity is within three months before or after the period from the redemption date to the maturity of the

Comparable Treasury Issue, yields for the two published maturities most closely corresponding to the Comparable Treasury Issue will be determined and the Adjusted Treasury Rate will be interpolated or extrapolated from those yields on a straight-line basis rounding to the nearest month; *provided* further that if the period from the redemption date to 23 April 2023 is less than one year, the weekly average yield on actually traded U.S. Treasury securities adjusted to a constant maturity of one year will be used; or

(2) if such release (or any successor release) is not published during the week preceding the calculation date or does not contain such yields, the rate per annum equal to the semi-annual equivalent yield to maturity of the Comparable Treasury Issue, calculated using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date.

The Adjusted Treasury Rate shall be calculated on the third Business Day preceding the redemption date.

"Affiliate" means, with respect to any Person, any other Person, directly or indirectly controlling, controlled by, or under direct or indirect common control with, such Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling," "controlled by" and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

"Applicable Accounting Principles" means the accounting principles and provisions of International Financial Reporting Standards applicable to the Guarantor and its Subsidiaries as in effect from time to time.

"Applicable Premium" means with respect to a Bond at any redemption date, the greater of:

(i) 1.0 per cent. of the principal amount of such Bond; and

(ii) the excess of:

(A) the present value at such redemption date of the redemption price of such Bond on 23 April 2023, plus all required remaining scheduled interest payments due on such Bond through 23 April 2023 (but excluding accrued and unpaid interest to the redemption date), computed using a discount rate equal to the Adjusted Treasury Rate plus 50 basis points; over

(B) the principal amount of such Bond.

"Assets" of any Person means all or any of its shares, business, undertaking, property, assets, revenues (including any right to receive revenues) and uncalled capital.

"Asset Sale" means any sale, transfer or other disposition (including by way of merger, consolidation or sale leaseback transactions) in one or a series of transactions in any twelve-month period by the Guarantor or any Subsidiary to any Person other than the Guarantor or any of its Subsidiaries of a material part of the consolidated Assets of the Guarantor.

"Balance Sheet Date" means each 30 September and 31 March or other semi-annual date at which the Guarantor prepares its audited or unaudited Accounts.

"Borrowings" means, with respect to any Person at any date, without duplication:

(i) all obligations of such Person for borrowed money;

(ii) all obligations of such Person to pay the deferred purchase price of property or services, except trade accounts payable arising in the ordinary course of business;

(iii) all obligations of such Person as lessee which are capitalised in accordance with Applicable Accounting Principles;

(iv) all non-contingent obligations of such Person to reimburse any bank or other Person in respect of amounts paid under a letter of credit or similar instrument, except in respect of trade accounts payable arising in the ordinary course of business;

(v) all obligations of such Person representing Disqualified Stock valued at the greater of its voluntary or involuntary liquidation preference and its maximum fixed repurchase price, plus accrued dividends, if any;

(vi) all Borrowings of others guaranteed by such Person;

(vii) all Borrowings of others secured by Security on any Asset of such Person (whether or not such Borrowings are assumed by such Person); *provided* that the amount of such Borrowings will be the lesser of:

(A) the fair market value of such Asset at such date of determination; and

(B) the amount of such Borrowings; and

(viii) in the case of a Subsidiary of the Guarantor, all obligations representing Preferred Stock valued at the greater of its voluntary or involuntary maximum fixed repurchase price, plus accrued dividends, if any; *provided* that for the purposes of Condition 3(c), Borrowings shall not include:

(A) Borrowings of the Guarantor or any of its Subsidiaries owed to the Guarantor or any of its Subsidiaries; *provided* that where

(1) any Subsidiary of the Guarantor to which such Borrowing is owed ceases to be a Subsidiary of the Guarantor;

(2) there is a subsequent transfer of such Borrowing to any Person (other than the Guarantor or any of its Subsidiaries), then such Borrowing shall be deemed to constitute a Borrowing for the purposes of Condition 3(c); and

(B) Preferred Stock or Disqualified Stock issued by any Subsidiary of the Guarantor to the Guarantor or any other Subsidiary of the Guarantor; *provided further* that for the purposes of clause (y) of the proviso in Condition 3(c), Borrowings shall not include the Borrowings of any Subsidiary (which is established as a special purpose entity for the sole purpose of engaging in financing activities) of the Guarantor, which are guaranteed by the Guarantor and have no recourse, directly or indirectly, to any other member of the Group.

"Business Day" means a day (other than a Saturday or Sunday) on which commercial banks are open for business in New York City and London.

"Capital Stock" means, with respect to any Person, any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) in equity of such Person, whether outstanding on the date of the Trust Deed or issued thereafter, including, without limitation, all Common Stock and Preferred Stock.

"Change of Control" means the occurrence of either of the following events:

(1) the Permitted Holders are the beneficial owners of less than 35 per cent. of the total voting power of the Voting Stock of the Guarantor; or

(2) any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the United States Securities Exchange Act of 1934, as amended (the "Exchange Act")) is or becomes the "beneficial owner" (as such term is used in Rule 13d-3 of the Exchange Act), directly or indirectly, of total voting power of the Voting Stock of the Guarantor greater than such total voting power held beneficially by the Permitted Holders.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Rating Decline.

"Common Stock" means, with respect to any Person, any and all shares, interests or other participations in, and other equivalents (however designated and whether voting or non-voting) of such Person's common stock or ordinary shares, whether or not outstanding at the date of the Trust Deed, and include, without limitation, all series and classes of such common stock or ordinary shares.

"Comparable Treasury Issue" means the U.S. Treasury security selected by an Independent Investment Bank having a maturity most nearly equal to the period from the redemption date to 23 April 2023.

"Comparable Treasury Price" means, with respect to any redemption date:

(1) the average of five Reference Treasury Dealer Quotations for such redemption date, after excluding the highest and lowest of such Reference Treasury Dealer Quotations; or

(2) if the Independent Investment Bank obtains fewer than five Reference Treasury Dealer Quotations, the average of all such quotations.

"Compliance Certificate" means a certificate signed by each of:

(i) the chief financial officer; and

(ii) either a director or other authorised signatory of the Guarantor confirming compliance with the financial ratios set out in this Condition 3,

in each case as of each Balance Sheet Date and in respect of the whole of the financial year for each Balance Sheet Date falling on 31 March and in respect of the whole of the six month period ending on the Balance Sheet Date for each Balance Sheet Date falling on 30 September, and setting out in reasonable detail the computations necessary to demonstrate such compliance.

"Consolidated EBITDA" means, for any period, the amount equal to:

(i) "operating profit"; plus

(ii) "depreciation"; plus

(iii) "special items" reducing "operating profit"; minus

(iv) "special items" increasing "operating profit,"

in each case as it is presented on consolidated financial statements of the Guarantor and its Subsidiaries prepared in accordance with the Applicable Accounting Principles for such period.

"Consolidated Fixed Charges" means, for any period, the sum (without duplication) of:

(i) Consolidated Net Interest Expense for such period; and

(ii) all cash and non-cash dividends accrued or accumulated during such period on any Disqualified Stock or Preferred Stock of the Guarantor or any of its Subsidiaries held by Persons other than the Guarantor or any of its Subsidiaries.

"Consolidated Net Interest Expense" means, for any period, the amount equal to "finance costs" minus "investment revenue," in each case as it is presented on a consolidated income statement of the Guarantor and its Subsidiaries prepared in accordance with the Applicable Accounting Principles for such period.

"Control", "Controlling" or "Controlled" means the right to appoint and/or remove all or the majority of the members of the board of directors or other governing body or the right to direct or cause the direction of the management and policies, in each case whether obtained directly or indirectly, and whether obtained by ownership of share capital, the possession of voting rights, contract or otherwise.

"Disqualified Stock" means any class or series of Capital Stock of any Person that by its terms or otherwise is:

(1) required to be redeemed prior to the stated maturity of the Bonds;

(2) redeemable at the option of the holder of such class or series of Capital Stock at any time prior to the stated maturity of the Bonds; or

(3) convertible into or exchangeable for Capital Stock referred to in clause (1) or (2) above or Borrowing having a scheduled maturity prior to the stated maturity of the Bonds.

"Fitch" means Fitch Ratings Limited, its affiliates and any successor to or assignee of its ratings business.

"Fixed Charge Coverage Ratio" means, on any Transaction Date, the ratio of:

(1) the aggregate amount of Consolidated EBITDA for the then most recent two semi-annual periods prior to such Transaction Date for which consolidated financial statements of the Guarantor prepared in accordance with the Applicable Accounting Principles (which the Guarantor shall use its best efforts to compile in a timely manner) are available (the "Two Semi-annual Period") and have been provided to the Trustee; to

(2) the aggregate Consolidated Fixed Charges during such Two Semi-annual Period.

"Incur" means, as applied to any obligation, to directly or indirectly, create, incur, issue, assume, guarantee or in any other manner become directly or indirectly liable, contingently or otherwise. Such obligation and "Incurred", "Incurrence" and "Incurring" shall each have a correlative meaning.

"Independent Investment Bank" means a Reference Treasury Dealer appointed by the Guarantor as such.

"Investment Grade" means a long term credit rating of "AAA," "AA," "A" or "BBB," as modified by a "±" or "-" indication, or an equivalent rating representing one of the four highest rating categories, by S&P or a long term credit rating of "Aaa," or "Aa," "A" or "Baa," as modified by a "1," "2" or "3" indication, or an equivalent rating representing one of the four highest rating categories, by Moody's or a long term credit rating of "AAA," or "AA," "A" or "BBB," as modified by a "±," or "-" indication, or an equivalent rating representing one of the four highest rating categories, by Fitch or the equivalent long term credit ratings of any internationally recognised rating agency or agencies, as the case may be, which shall have been designated by the Guarantor as having been substituted for S&P, Moody's or Fitch or all of them, as the case may be.

"Material Subsidiary" has the meaning specified in Condition 8.

"Moody's" means Moody's Investors Service, Inc., its affiliates and any successor to or assignee of its ratings business.

"Net Proceeds" means the aggregate cash proceeds received by the Guarantor or any Subsidiary of the Guarantor in respect of any Asset Sale (including, without limitation, any cash received upon the sale or other disposition of any non-cash consideration received in any Asset Sale), net of the direct costs relating to such Asset Sale.

"Offer to Purchase" means an offer to purchase the Bonds of any series by the Issuer from the Bondholders commenced by mailing a notice by first class mail, postage prepaid, to the Trustee and each Bondholder of Bonds of that series at its last address appearing in the Register stating:

(1) the provision of the Trust Deed pursuant to which the offer is being made and that all Bonds of that series validly tendered will be accepted for payment on a pro rata basis;

(2) the purchase price and the date of purchase (which shall be a Business Day no earlier than 30 days nor later than 60 days from the date such notice is mailed) (the "Offer to Purchase Payment Date");

(3) that any Bond of that series not tendered will continue to accrue interest pursuant to its terms;

(4) that, unless the Issuer or the Guarantor, as the case may be, defaults in the payment of the purchase price, any Bond of that series accepted for payment pursuant to the Offer to Purchase shall cease to accrue interest on and after the Offer to Purchase Payment Date;

(5) that Bondholders electing to have a Bond of that series purchased pursuant to the Offer to Purchase will be required to surrender the Bond, together with the form entitled "Option of the Holder to Elect Purchase" on the reverse side of the Bond completed, to the Paying Agent at the address specified in the notice prior to the close of business on the Business Day immediately preceding the Offer to Purchase Payment Date;

(6) that Bondholders will be entitled to withdraw their election if the Paying Agent receives, not later than the close of business on the third Business Day immediately preceding the Offer to Purchase Payment Date, a facsimile transmission or letter setting forth the name of such Bondholder, the principal amount of Bonds of that series delivered for purchase and a statement that such Bondholder is withdrawing his election to have such Bonds of that series purchased; and

(7) that Bondholders whose Bonds of that series are being purchased only in part will be issued new Bonds equal in principal amount to the unpurchased portion of the Bonds of that series surrendered; *provided* that each Bond of that series purchased and each new

Bond of that series issued shall be in a minimum principal amount of U.S.$200,000 or integral multiples of U.S.$1,000 in excess thereof.

On the Offer to Purchase Payment Date, the Issuer shall:

(a) accept for payment on a pro rata basis Bonds of any series or portions thereof tendered pursuant to an Offer to Purchase;

(b) deposit with the Paying Agent money sufficient to pay the purchase price of all Bonds of that series or portions thereof so accepted; and

(c) deliver, or cause to be delivered, to the Trustee all Bonds of that series or portions thereof so accepted together with a certificate signed by two directors of the Issuer specifying the Bonds of that series or portions thereof accepted for payment by the Issuer.

The Paying Agent shall promptly mail to the Bondholders so accepted payment in an amount equal to the purchase price, and the Registrar shall promptly authenticate and mail to such Bondholders a new Bond of that series equal in principal amount to any unpurchased portion of the Bond of that series surrendered; *provided* that each Bond of that series purchased and each new Bond of that series issued shall be in a principal amount of U.S.$200,000 or integral multiples of U.S.$1,000 in excess thereof. The Issuer will publicly announce the results of an Offer to Purchase as soon as practicable after the Offer to Purchase Payment Date. The Issuer will comply with all applicable securities laws and regulations if it is required to repurchase Bonds of that series pursuant to an Offer to Purchase and, to the extent any applicable securities laws and regulations conflict with the Offer to Purchase obligations, the Issuer will not be deemed to have breached such obligations by virtue of such compliance.

The materials used in connection with an Offer to Purchase are required to contain or incorporate by reference information concerning the business of the Guarantor and its Subsidiaries which the Issuer in good faith believes will assist such Bondholders to make an informed decision with respect to the Offer to Purchase, including a brief description of the events requiring the Issuer to make the Offer to Purchase, and any other information required by applicable law to be included therein. The offer is required to contain all instructions and materials necessary to enable such Bondholders to tender Bonds pursuant to the Offer to Purchase.

"Permitted Holders" means any or all of the following:

(1) Mr Anil Agarwal, Mr D.P. Agarwal and Mr Agnivesh Agarwal, individually or collectively;

(2) any Affiliate or a direct family member of any of the Persons specified in clause (1) of this definition; and

(3) any Person both the Capital Stock and the Voting Stock of which (or in the case of a trust, the beneficial interests in which) are more than 80 per cent. owned by Persons specified in clauses (1) and (2) of this definition.

"Person" means any individual, firm, corporation, partnership, association, joint venture, tribunal, limited liability company, trust, government or political subdivision or agency or instrumentality thereof, or any other entity or organisation.

"Preferred Stock" as applied to the Capital Stock of any Person means Capital Stock of any class or classes that by its term is preferred as to the payment of dividends, or as to the distribution of assets upon any voluntary or involuntary liquidation or dissolution of such Person, over any other class of Capital Stock of such Person.

"Primary Treasury Dealer" means a primary U.S. government securities dealer in New York City.

"Rating Agencies" means:

(i) S&P;

(ii) Moody's;

(iii) Fitch; and

(iv) if any or all of them shall not make a rating of the Bonds publicly available, an internationally recognised securities rating agency or agencies, as the case may be, selected by the Guarantor, which shall be substituted for such Rating Agency or Rating Agencies, as the case may be.

"Rating Date" means the date which is 90 days prior to the earlier of the date of consummation of Change of Control and a public announcement of a Change of Control.

"Rating Decline" means the occurrence on, or within six months after, the earlier of the date of consummation of Change of Control or public announcement of a Change of Control (which period shall be extended so long as the rating of the Bonds of any series is under publicly announced consideration for possible ratings change by any of the Rating Agencies) of any of the events listed below:

(1) If the Bonds of that series are rated by Moody's, S&P and Fitch on the Rating Date as Investment Grade, the rating of the Bonds of that series by at least two such Rating Agencies shall be below Investment Grade;

(2) If the Bonds of that series are rated by two of the three Rating Agencies on the Rating Date as Investment Grade, the rating of the Bonds of that series by either such Rating Agency shall be below Investment Grade;

(3) If the Bonds of that series are rated by one of the three Rating Agencies on the Rating Date as Investment Grade, the rating of the Bonds of that series by such Rating Agency shall be below Investment Grade; or

(4) If the Bonds of that series are rated by Moody's, S&P and Fitch on the Rating Date as below Investment Grade, the rating of the Bonds of that series by any such Rating Agency shall be below the rating it provided on the Rating Date.

"Reference Treasury Dealer" means:

(1) each of Axis Bank Limited, Singapore Branch, Barclays Bank PLC, Credit Suisse (Hong Kong) Limited, DBS Bank Ltd., First Abu Dhabi Bank PJSC, ICICI Bank Limited — IFSC Banking Unit, J.P. Morgan Securities plc and Standard Chartered Bank and their respective successors or any of their respective affiliates, so long as it is Primary Treasury Dealer; *provided* that, if any such Person ceases to be a Primary Treasury Dealer, the Guarantor will substitute another Primary Treasury Dealer; and

(2) any other Primary Treasury Dealer selected by the Guarantor.

"Reference Treasury Dealer Quotation" means, with respect to each Reference Treasury Dealer and any redemption date, the average, as determined by the Independent Investment Bank, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Independent Investment Bank by such Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding such redemption date.

"S&P" means S&P Global Ratings, a division of the McGraw Hill Companies, Inc., its affiliates and any successor to or assignee of its ratings business.

"Share Capital" means any and all shares, interests (including joint venture and partnership interests), participations or other equivalents of capital stock of a corporation or any and all equivalent ownership interests in a Person.

"Transaction Date" means, with respect to the Incurrence of any Borrowing, the date such Borrowing is to be Incurred.

"Voting Stock" means, with respect to any Person, Capital Stock of any class or kind ordinarily having the power to vote for the election of directors, managers or other voting members of the governing body of such Person.

4 Interest

The 2023 Bonds will bear interest from the Closing Date at the rate of 8.00 per cent. per annum and the 2026 Bonds will bear interest from the Closing Date at the rate of 9.25 per cent. per annum, in each case, payable semi-annually in arrear on (i) with respect to the 2023 Bonds, 23 April and 23 October of each year, commencing on 23 October 2019, and (ii) with respect to the 2026 Bonds, 23 April and 23 October of each year, commencing on 23 October 2019 (each such interest payment date, an "Interest Payment Date"). Interest on the Bonds of any series shall accrue from (and including) the most recent date to which interest has been paid and ending on (but excluding) the next Interest Payment Date for the Bonds of that series. Each Bond will cease to bear interest from the due date for redemption unless, upon surrender in accordance with Condition 6, payment of the full amount of principal is improperly withheld or refused or unless default is otherwise made in respect of any such payment. In such event each Bond shall continue to bear interest at the applicable rate (both before and after judgment) until, but excluding whichever is the earlier of:

(a) the day on which all sums due in respect of such Bond up to that day are received by or on behalf of the relevant holder; and

(b) the day which is seven calendar days after the Trustee or the Principal Agent has notified Bondholders of receipt of all sums due in respect of all the Bonds up to that seventh calendar day (except to the extent that there is failure in the subsequent payment to the relevant holders under these Conditions). If interest is required to be calculated for a period of less than one year, it will be calculated on the basis of a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the number of days elapsed.

5 Redemption and Purchase

(a) Final redemption

Unless previously redeemed, or purchased and cancelled as provided herein, the 2023 Bonds will be redeemed at their principal amount on 23 April 2023 and the 2026 Bonds will be redeemed at their principal amount on 23 April 2026. The Bonds may not be redeemed at the option of the Issuer other than in accordance with this Condition 5.

(b) Redemption at the option of the Issuer

At any time and from time to time prior to 23 April 2023, the Bonds of any series may be redeemed, in whole or in part, at the option of the Issuer on giving not less than 30 nor more than 60 calendar days' written notice to the Trustee and the Bondholders of Bonds of that series, at a redemption price equal to 100 per cent. of the principal amount of the Bonds of that series being redeemed plus the Applicable Premium, plus accrued and unpaid interest, if any, to (but excluding) the redemption date. For the avoidance of doubt, none of the Agents or the Trustee have any responsibility with respect to the calculation of the Applicable Premium.

At any time and from time to time on or after 23 April 2023, the 2026 Bonds may be redeemed, in whole or in part, at the option of the Issuer on giving not less than 30 nor more than 60 calendar days' written notice to the Trustee and the Bondholders, at the following redemption prices (expressed as percentages of the principal amount of the 2026 Bonds at maturity) plus accrued and unpaid interest, if any, to (but excluding) the redemption date:

Twelve-Month Period Commencing on 23 April in	Redemption Price
	(%)
2023	104.6250
2024	102.3125
2025	100

Any optional redemption of Bonds and notice of redemption may, at the Issuer's discretion, be subject to the satisfaction (or waiver by the Issuer in its sole discretion) of one or more conditions precedent. If any such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice may state that, in the Issuer's sole discretion, the redemption date may be delayed until such time as any or all such conditions shall be satisfied, or such redemption may not occur and such notice may be rescinded if any or all such conditions shall not have been satisfied by the redemption date, or by the redemption date so delayed.

If fewer than all the Bonds are to be redeemed, the Bonds for redemption will be selected on a pro rata basis, by lot or by such other method as the Trustee in its sole and absolute discretion deems fair and appropriate unless otherwise required by law or requirement of any stock exchange on which the Bonds are listed or DTC or any alternative clearing system; *provided* that Bonds with a principal amount of U.S.$200,000 will not be redeemed in part.

(c) Redemption for taxation reasons

The Bonds of any series may be redeemed at the option of the Issuer in whole, but not in part, at any time on giving not less than 30 nor more than 60 calendar days' written notice to the Trustee and the Bondholders of Bonds of that series (which notice shall be irrevocable), at their principal amount (together with interest accrued and unpaid to (but excluding) the date fixed for redemption), if:

(i) the Issuer (or the Guarantor) has or will become obliged to pay additional amounts as provided or referred to in Condition 7 as a result of any change in, or amendment to, the laws or regulations of the United Kingdom or any authority therein or thereof having power to tax, or any change in the application or official interpretation of such laws or regulations, which change or amendment becomes effective on or after the date hereof; and

(ii) such obligation cannot be avoided by the Issuer (or as the case may be, the Guarantor) taking reasonable measures available to it (*provided* that changing the jurisdiction of organisation of the Issuer (or as the case may be, the Guarantor) is not a reasonable measure for purposes of this section),

provided that no such notice of redemption shall be given earlier than 90 calendar days prior to the earliest date on which the Issuer (or, as the case may be, the Guarantor) would be obliged to pay such additional amounts were a payment in respect of the Bonds of that series then due. Prior to the publication of any notice of redemption pursuant to this paragraph, the Issuer (or, as the case may be, the Guarantor) shall deliver to the Trustee a certificate signed by two directors of the Issuer (or, as the case may be, the Guarantor) stating that the obligation referred to in (i) above cannot be avoided by the Issuer (or, as the case may be, the Guarantor) taking reasonable measures available to it and the Trustee shall be entitled to accept such certificate as sufficient evidence of the satisfaction of the condition precedent set out in (ii) above in which event it shall be conclusive and binding on the Bondholders.

(d) Repurchase of Bonds Upon a Change of Control Triggering Event

Not later than 30 days following the occurrence of a Change of Control Triggering Event, the Issuer will make an Offer to Purchase all outstanding Bonds of each series (a "Change of Control Offer") at a purchase price equal to 101.0 per cent. of the principal amount thereof plus accrued and unpaid interest, if any, to (but excluding) the Offer to Purchase Payment Date.

Notwithstanding the above, the Issuer will not be required to make a Change of Control Offer following a Change of Control if a third party makes the Change of Control Offer in the same manner and at the same time and purchases all Bonds validly tendered and not withdrawn under such Change of Control Offer.

Except as described above with respect to a Change of Control, the Trust Deed does not contain provisions that permit the Bondholders to require that the Issuer purchase or redeem the Bonds in the event of a takeover, recapitalisation or similar transaction.

(e) Purchase

Subject to the requirements (if any) of any stock exchange on which the Bonds may be listed at the relevant time the Guarantor and any of its Subsidiaries may at any time purchase Bonds in the open market or otherwise at any price. Any purchase of Bonds of any series by tender shall be made available to all Bondholders of Bonds of that series alike and such Bonds of that series may be retained for the account of the relevant purchaser or otherwise dealt with at its discretion (but may not be resold). The Bonds of any series so purchased, while held by or on behalf of the Guarantor or any such Subsidiary, shall not entitle the holder to vote at any meetings of the Bondholders of Bonds of that series and shall not be deemed to be outstanding for the purposes of calculating quorums at meetings of the Bondholders of Bonds of that series or for the purposes of Condition 12(a).

(f) Cancellation

All Bonds of any series so redeemed will be cancelled and may not be re-issued or resold. All Bonds purchased pursuant to this Condition may be cancelled at the discretion of the relevant purchaser. Bonds may be surrendered for cancellation by surrendering each such Bond to the Principal Agent and if so surrendered shall be cancelled forthwith (and may not be reissued or resold) and the obligations of the Issuer in respect of any such Bonds shall be discharged.

6 Payments

(a) Principal and Interest

Payment of principal and interest due other than on an Interest Payment Date will be made in United States dollars by transfer to the registered account of the Bondholder. Payment of principal will only be made after surrender of the relevant Certificate at the specified office of any of the Paying Agents.

Interest on Bonds due on an Interest Payment Date will be paid in United States dollars on the due date for the payment of interest to the holder shown on the Register at the close of business on the fifteenth day before the due date for the payment of interest (the "Interest Record Date"). Payments of interest on each Bond will be made by transfer to the registered account of the Bondholder.

(b) Registered accounts

For the purposes of this Condition, a Bondholder's registered account means the United States dollar account maintained by or on behalf of it with a bank in New York City, details of which appear on the Register at the close of business on the second business day (as defined below) before the due date for payment, and a Bondholder's registered address means its address appearing on the Register at that time.

(c) Payments subject to fiscal laws

All payments are subject in all cases to:

(i) any applicable fiscal or other laws and regulations in the place of payment, but without prejudice to the provisions of Condition 7; and

(ii) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986 (the "Code") or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any law implementing an intergovernmental approach thereto. No commissions or expenses shall be charged to the Bondholders in respect of such payments.

(d) Payment initiation

Where payment is to be made by transfer to a registered account, payment instructions (for value on the due date or, if that is not a business day (as defined below), for value on the first following day which is a business day) will be initiated on the due date for payment (or, if it is not a business day, the first following day which is a business day) or, in the case of a payment of principal, if later, on the business day on which the relevant Certificate is surrendered at the specified office of a Paying Agent.

Bondholders will not be entitled to any interest or other payment for any delay after the due date in receiving the amount due if the due date is not a business day or if the Bondholder is late in surrendering its Certificate (if required to do so).

(e) Business Day

In this Condition, "business day" means:

(i) in the case of payment by transfer to a registered account, a day (other than a Saturday or Sunday) on which commercial banks are open for business in New York City; and

(ii) in the case of the surrender of a Certificate, a day in which commercial banks are open for business in the place of the specified office of the Paying Agent to whom the Certificate is surrendered. If an amount which is due on the Bonds is not paid in full, the Registrar will annotate the Register with a record of the amount (if any) in fact paid.

(f) Paying Agents

The initial Paying Agents, Transfer Agents and Registrar and their initial specified offices are listed below. The Issuer reserves the right at any time with the approval of the Trustee to vary or terminate the appointment of any Paying Agent, Transfer Agents or Registrar and appoint additional or other Paying Agents, Transfer Agents or Registrar; *provided* that it will maintain:

(i) a Principal Agent;

(ii) a Paying Agent in Singapore so long as the Bonds are listed on the SGX-ST and the rules of the SGX-ST so require; and

(iii) a Registrar. Notice of any change in the Paying Agents, Transfer Agents or Registrar or their specified offices will promptly be given to the Bondholders and the SGX-ST (so long as the Bonds of any series are listed on the SGX-ST and the rules of the SGX-ST so require).

7 Taxation

All payments of principal and interest by or on behalf of the Issuer or the Guarantor in respect of the Bonds or the Guarantee, as applicable, shall be made free and clear of, and without withholding or deduction for, any taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or within the United Kingdom or any authority therein or thereof having power to tax, unless such withholding or deduction is required by law. If such withholding or deduction is required by law, the Issuer, or as the case may be, the Guarantor shall pay such additional amounts as will result in receipt by the Bondholders of such amounts as would have been received by them had no such withholding or deduction been required, except that no such additional amounts shall be payable in respect of any Bond:

(a) to a holder (or to a third party on behalf of a holder) who is liable to such taxes, duties, assessments or governmental charges in respect of such Bond by reason of his having some connection with the United Kingdom other than the mere holding of the Bond;

(b) in the case of payment of principal or interest (other than interest due on an Interest Payment Date) if the Certificate in respect of such Bond is presented for payment more than 30 days after the Relevant Date except to the extent that the holder of it would have been entitled to such additional amounts on presenting such Certificate for payment on the last day of such period of 30 days;

(c) with respect to taxes, duties, assessments or governmental charges in respect of such Bond imposed as a result of the failure of the holder or beneficial owner of the Bond to comply with a written request of the Issuer or the Guarantor before any such withholding or deduction would be payable to provide timely or accurate information concerning the nationality, residence or identity of the holder or beneficial owner or to make any valid or timely declaration or similar claim or satisfy any certification, information or other reporting requirement, which is required or imposed by a statute, treaty, regulation or administrative practice of the United Kingdom or any authority therein or thereof having the power to tax as a condition to exemption from all or part of such taxes;

(d) for any estate, inheritance, gift, sale, transfer, personal property or similar tax or assessment;

(e) for any Taxes imposed or required to be withheld under Sections 1471 to 1474 (or any successor provisions or amendments thereof) of the Code, any regulations or other official guidance thereunder, any intergovernmental agreement entered into in connection therewith or any law or regulation (or any official interpretation thereof) implementing an intergovernmental approach thereto, or any agreements entered into pursuant to Section 1471(b) of the Code; or

(f) for any taxes, duties, assessments or governmental charges payable otherwise than by deduction or withholding on payments under the Bonds.

Such additional amounts shall also not be payable where, had the beneficial owner of the Bond been the holder of the Bond, it would not have been entitled to payment of additional amounts by reason of clauses (a) through (f) inclusive above.

"Relevant Date" means whichever is the later of:

(i) the date on which such payment first becomes due; and

(ii) if the full amount payable has not been received in New York City by the Principal Agent or the Trustee on or prior to such due date, the date on which, the full amount having been so received, notice to that effect shall have been given to the Bondholders and payment made.

Any reference in these Conditions to principal and/or interest in respect of the Bonds shall be deemed to include any additional amounts which may be payable under this Condition or any undertaking given in addition to or substitution for it under the Trust Deed.

8 Events of Default

The Trustee at its discretion may, and if so requested by holders of not less than 25 per cent. in principal amount of the Bonds of any series then outstanding or if so directed by an Extraordinary Resolution shall (subject in each case to it being indemnified and/or secured (including by way of payment in advance) to its satisfaction), give notice in writing to the Issuer and the Guarantor that the Bonds of that series are, and they shall immediately become, due and payable at their principal amount together with accrued interest, if applicable, if any of the following events (each an "Event of Default") shall have occurred:

(a) Non-Payment:

(i) the Issuer and the Guarantor each fail to pay all or any part of the principal of any of the Bonds of that series when the same shall become due and payable, whether at maturity, upon redemption or otherwise and such failure continues for a period of seven calendar days; or

(ii) the Issuer and the Guarantor each fail to pay any instalment of interest upon any of the Bonds of that series as and when the same shall become due and payable, and such failure continues for a period of 14 calendar days; or

(b) Breach of Other Obligations:

(i) the Issuer fails to make or consummate an Offer to Purchase with respect to any of the Bonds of that series in the manner set out in Condition 5(d); or

(ii) the Issuer or the Guarantor defaults in the performance or observance of or compliance with any of its other obligations set out in the Bonds of that series or the Trust Deed or under the Guarantee, which default is incapable of remedy or, if in the opinion of the Trustee such default is capable of remedy, is not in the opinion of the Trustee remedied within 45 calendar days after the date on which written notice specifying such failure, stating that such notice is a "Notice of Default" under the Bonds of that series and demanding that the Issuer, or as the case may be, the Guarantor remedy the same, shall have been given to the Issuer and the Guarantor by the Trustee; or

(c) Cross-Default:

(i) any other present or future indebtedness of the Issuer or the Guarantor or any of its Material Subsidiaries for or in respect of moneys borrowed or raised becomes due and payable prior to its stated maturity (otherwise than at the option of the Issuer, the Guarantor or any Material Subsidiary, as the case may be) by reason of any actual or potential default, event of default or the like (howsoever described); or

(ii) any such indebtedness is not paid when due or, as the case may be, within any applicable grace period originally provided for; or

(iii) the Issuer or the Guarantor or any of its Material Subsidiaries fails to pay when due (or within any applicable grace period originally provided for) any amount payable by it under any present or future guarantee for, or indemnity in respect of, any moneys borrowed or raised; *provided* that the aggregate amount of the relevant indebtedness, guarantees and indemnities in respect of which any one or more of the events mentioned above in this Condition 8(c) has or have occurred equals or exceeds U.S.$100,000,000 or its equivalent in other currencies; or

(d) Enforcement Proceedings: a distress, attachment, execution or other legal process (other than distraint or attachment imposed by any government, authority or agent prior to enforcement foreclosure) is levied, enforced or sued out, as the case may be, on or against a substantial part of the property, assets or revenues of the Issuer, the Guarantor or all or a substantial part of the property, assets or revenues of any of its Material Subsidiaries and is not:

(i) either discharged or stayed within 60 calendar days or in circumstances where the levy, enforcement or suing out, as the case may be, of such legal process is not, or does not become, materially prejudicial to the interests of the Bondholders, within 120 calendar days; or

(ii) being contested in good faith on the basis of appropriate legal advice provided by reputable independent counsel in the relevant jurisdiction or jurisdictions and by appropriate proceedings; or

(e) Security Enforced: an encumbrancer takes possession or a receiver, administrative receiver, administrator, manager or other similar person is appointed over, or an attachment order is issued in respect of, the whole or a substantial part of the undertaking, property, assets or revenues of the Issuer, the Guarantor or any of its Material Subsidiaries and in any such case such possession or appointment is not stayed or terminated or the debt on account of which such possession was taken or appointment made is not discharged or satisfied within 60 calendar days of such appointment or the issue of such order; or

(f) Insolvency: the Issuer, the Guarantor or any of its Material Subsidiaries:

(i) is insolvent or bankrupt or is deemed to be insolvent as a result of the court being satisfied that the value of the Issuer, the Guarantor or any of its Material Subsidiaries' assets is less than the amount of its liabilities, taking into account contingent and prospective liabilities or unable to pay its debts or stops, suspends or threatens to stop or suspend payment of all or a substantial part of (or of a particular type of) its debts as they mature; or

(ii) applies for or consents to or suffers the appointment of an administrator, administrative receiver, liquidator, manager or receiver or other similar person in respect of the Issuer, the Guarantor or any of its Material Subsidiaries or over the whole or a substantial part of the undertaking, property, assets or revenues of the Issuer, the Guarantor or any of its Material Subsidiaries; or

(iii) proposes or makes or enters into a general assignment or an arrangement or composition with or for the benefit of its creditors in respect of any of such debts or a moratorium is agreed or declared or comes into effect in respect of or affecting all or a substantial part of (or of a particular type of) the debts of the Issuer, the Guarantor or any of its Material Subsidiaries, except, in any such case, for the purpose of and followed by a reconstruction, amalgamation, reorganisation, merger or consolidation on terms approved by the Trustee or by an Extraordinary Resolution; or

(g) Winding-up, Disposals: an administrator or an administrative receiver is appointed, an order is made or an effective resolution passed for the winding-up or dissolution or administration of the Issuer, the Guarantor or any of its Material Subsidiaries, or the Issuer, the Guarantor or any of its Material Subsidiaries ceases or threatens to cease to carry on all or a substantial part of its business or operations, or the Issuer, the Guarantor or any of its Material Subsidiaries sells or disposes of all or a substantial part of its assets or business whether as a single transaction or a number of transactions, related or not; except, in any such case, for the purpose of and followed by a reconstruction, amalgamation, reorganisation, merger, consolidation or other similar arrangement:

(i) on terms previously approved in writing by the Trustee or by an Extraordinary Resolution, or

(ii) in the case of a Material Subsidiary, not including arising out of the insolvency of such Material Subsidiary and under which all or substantially all of its assets are transferred to another member or members of the Group or to a transferee or transferees which immediately upon such transfer become(s) a Subsidiary or Subsidiaries of the Guarantor; or

(h) Expropriation: any governmental authority or agency condemns, seizes, compulsorily purchases or expropriates (excluding any distraint or attachment prior to enforcement or foreclosure) all or a substantial part of the assets or shares of the Issuer, the Guarantor or any of its Material Subsidiaries;

(i) Issuer ceases to be Subsidiary: the Issuer ceases to be a Subsidiary wholly-owned and controlled, directly or indirectly, by the Guarantor;

(j) Analogous Events: any event occurs which under the laws of England or, in the case of a Material Subsidiary, the laws of the relevant Material Subsidiary's place of incorporation or principal place of business has an analogous effect to any of the events referred to in paragraphs (d) to (i) above; or

(k) Guarantee: the Guarantee is not (or is claimed by the Guarantor not to be) in full force and effect.

Upon any such notice being given to the Issuer and the Guarantor, the Bonds of that series will immediately become due and payable at their principal amount together with accrued interest as provided in the Trust Deed, *provided* that no such notice may be given unless an Event of Default shall have occurred and *provided further* that, in the case of paragraphs (b)(ii), (d), (e) and (h), the Trustee shall have certified that in its opinion such event is materially prejudicial to the interests of the Bondholders of Bonds of that series.

For the purposes of paragraph (c) above, any indebtedness which is in a currency other than US dollars shall be translated into US dollars at the middle spot rate for the sale of US dollars against the purchase of the relevant currency quoted by any leading bank selected by the Trustee on any day when the Trustee requests a quotation for such purposes.

"Material Subsidiary" means, at any particular time, a Subsidiary of the Guarantor:

(a) whose:

  (i) total assets; or

  (ii) gross revenues,

(in each case on an unconsolidated basis) attributable to the Guarantor are equal to or greater than 10 per cent. of the consolidated total assets or consolidated gross revenues of the Guarantor, as applicable (in each case as calculated based on the latest annual unconsolidated financial statements of the Subsidiary and the latest audited annual consolidated financial statements of the Guarantor); or

(b) to which is transferred all or substantially all of the business, assets and undertaking of a Subsidiary of the Guarantor which immediately prior to such transfer is a Material Subsidiary, whereupon the transferor Subsidiary of the Guarantor shall immediately cease to be a Material Subsidiary and the transferee Subsidiary shall immediately become a Material Subsidiary (subject to the provisions of paragraph (a) above).

A report by two directors of the Guarantor that in their opinion a Subsidiary of the Guarantor is or is not, or was or was not, at any particular time or throughout any specified period a Material Subsidiary shall, in the absence of manifest error, be conclusive and binding on the Trustee and the Bondholders.

9 Consolidation, Amalgamation or Merger

The Guarantor will not consolidate with, merge or amalgamate into, or transfer its properties and assets substantially as an entirety to, any corporation or convey or transfer its properties and assets substantially as an entirety to any person (the consummation of any such event, a "Merger"), unless:

(a) the Person formed by such Merger or that acquired such properties and assets shall expressly assume, by a supplemental trust deed in form and substance satisfactory to the Trustee, all obligations of the Guarantor under the Trust Deed and the Bonds and the performance of every covenant and agreement applicable to it contained therein;

(b) the Person formed by such Merger or that acquired such properties and assets, if not organised under the law of the United Kingdom, shall expressly agree, by a supplemental trust deed in form and substance satisfactory to the Trustee, that its jurisdiction of organisation (or any authority therein or thereof having power to tax) will be added to Condition 7 and clause (c) of Condition 5 in each place therein in which reference is made to the United Kingdom, subject to clause (d) of this Condition 9;

(c) immediately after giving effect to any such Merger, no Event of Default or Potential Event of Default (as defined in the Trust Deed) shall have occurred or be continuing or would result therefrom as confirmed to the Trustee by:

(i) a certificate signed by two directors of the Guarantor; and

(ii) a certificate signed by two directors of the Person that would result from such Merger or that would acquire such properties and assets; and

(d) the Person formed by such Merger or that acquired such properties and assets shall expressly agree, among other things, not to redeem the Bonds pursuant to Condition 5(c) as a result of it becoming obliged to pay any additional amounts (as provided or referred to in Condition 7) arising solely as a result of such Merger.

10 Prescription

Claims in respect of principal and interest will become void unless made as required by Condition 6 within a period of 10 years in the case of principal and five years in the case of interest from the appropriate Relevant Date.

11 Replacement of Certificates

If any Certificate representing a Bond is lost, stolen, mutilated, defaced or destroyed it may be replaced at the specified office of the Registrar subject to all applicable laws and stock exchange or other relevant authority requirements, upon payment by the claimant of the costs and expenses incurred in connection with such replacement and on such terms as to evidence, security, indemnity and otherwise as the Issuer and the Guarantor may require (*provided* that the requirement is reasonable in the light of prevailing market practice). Mutilated or defaced Certificates must be surrendered before replacements will be issued.

12 Meetings of Bondholders, Modification and Waiver

(a) Meetings of Bondholders

The Trust Deed contains provisions for convening meetings of Bondholders of Bonds of any series to consider matters affecting their interests, including the sanctioning by Extraordinary Resolution of a modification of any of these Conditions or any provisions of the Trust Deed or the Agency Agreement. Such a meeting may be convened by the Issuer, the Guarantor or the Trustee at any time and shall be convened by the Trustee if it receives a written request by Bondholders of Bonds of any series holding not less than 15 per cent. in principal amount of the Bonds of that series for the time being outstanding. The quorum for any such meeting convened to consider an Extraordinary Resolution will be two (2) or more persons holding or representing a clear majority in principal amount of the Bonds of that series for the time being outstanding, or at any adjourned meeting two (2) or more persons being or representing Bondholders of Bonds of that series whatever the principal amount of the Bonds of that series held or represented, unless the business of such meeting includes consideration of proposals, *inter alia*:

(i) to modify the maturity of the Bonds of that series or the dates on which interest is payable in respect of the Bonds of that series;

(ii) to reduce or cancel the principal amount of, or interest on, the Bonds of that series;

(iii) to change the currency of payment of the Bonds of that series;

(iv) to cancel or modify the Guarantee (other than any modification described in Condition 12(b)); or

(v) to modify the provisions concerning the quorum required at any meeting of Bondholders of that series or the majority required to pass an Extraordinary Resolution, in which case the necessary quorum will be two (2) or more persons holding or representing not less than two-thirds, or at any adjourned meeting not less than one-third, in principal amount of the Bonds of that series for the time being outstanding. Any Extraordinary Resolution duly passed shall be binding on Bondholders of Bonds of any series (whether or not they were present at the meeting at which such resolution was passed and whether or not they voted in favour).

The expression "Extraordinary Resolution" means a resolution passed at a meeting of Bondholders of Bonds of any series duly convened and held in accordance with these provisions by a majority consisting of not less than two-thirds of the votes cast.

(b) Modification and Waiver

The Trustee may agree, without the consent of the Bondholders of Bonds of any series, to:

(i) any modification to these Conditions or to the provisions of the Trust Deed or the Agency Agreement which is in its opinion of a formal, minor or technical nature or is made to correct a manifest error, and

(ii) any other modification (except as provided for in the Trust Deed), and any waiver or authorisation of any breach or proposed breach, of any of the provisions of these Conditions, the Trust Deed or the Agency Agreement which is in the opinion of the Trustee not materially prejudicial to the interests of the Bondholders of Bonds of that series.

Any such modification, authorisation or waiver shall be binding on the Bondholders of Bonds of that series and such modification shall be notified to the Bondholders of Bonds of that series as soon as practicable.

(c) Written resolutions of 90 per cent. holders

The Trust Deed provides that a written resolution signed by or on behalf of the holders of not less than 90 per cent. of the aggregate principal amount outstanding of Bonds of any series who for the time being are entitled to receive notice of a meeting in accordance with the provisions of the Trust Deed shall be as valid and effective as a duly passed Extraordinary Resolution.

(d) Entitlement of the Trustee

In connection with the exercise of its powers, trusts, authorisations or discretions (including but not limited to those referred to in this Condition), the Trustee shall have regard to the interests of the Bondholders of Bonds of any series as a class and shall not have regard to the consequences of such exercise for individual Bondholders of Bonds of that series (including as a result of their being for any purpose domiciled or resident in, or otherwise connected with, or subject to the jurisdiction of, any particular territory) and the Trustee shall not be entitled to require, nor shall any Bondholder of Bonds of any series be entitled to claim, from the Issuer or the Guarantor any indemnification or payment in respect of any tax consequence of any such exercise upon individual Bondholders of Bonds of that series.

13 Enforcement

At any time after the Bonds of any series become due and payable, the Trustee may, at its discretion and without further notice, institute such proceedings against the Issuer and/or the Guarantor as it may think fit to enforce the terms of the Trust Deed and the Bonds of that series and/or the Guarantee, but it need not take any such proceedings unless:

(a) it shall have been so directed by an Extraordinary Resolution or so requested in writing by Bondholders of Bonds of that series holding at least one-quarter in principal amount of the Bonds of that series outstanding; and

(b) it shall have been indemnified and/or secured (including by way of payment in advance) to its satisfaction.

No Bondholder may proceed directly against the Issuer and/or the Guarantor unless the Trustee, having become bound so to proceed, fails to do so within a reasonable time and such failure is continuing.

14 Indemnification of the Trustee

The Trust Deed contains provisions for the indemnification of the Trustee and for its relief from responsibility, including provisions relieving it from taking proceedings to enforce repayment unless indemnified and/or secured (including by way of payment in advance) to its satisfaction. The Trustee is entitled to enter into business transactions with the Issuer, the Guarantor and any entity related to the Issuer or the Guarantor without accounting for any profit.

The Trustee may rely without liability to Bondholders on any certificate or report prepared by the auditors or any other person pursuant to these Conditions and/or the Trust Deed, whether or not addressed to the Trustee and whether or not the auditors liability in respect thereof is limited by a monetary cap or otherwise; any such certificate shall be conclusive and binding on the Issuer, the Guarantor, the Trustee, and the Bondholders.

15 Further Issues

The Issuer may from time to time without the consent of the Bondholders create and issue further securities either having the same terms and conditions as the Bonds of any series in all respects (or in all respects except for the first payment of interest on them) and so that such further issue shall be consolidated and form a single series with the outstanding securities (including the Bonds of any series) or upon such terms as the Issuer may determine at the time of their issue, *provided* that, if the securities of such further issue are not fungible with the Bonds of any series for U.S. federal income tax purposes, such securities will have a separate CUSIP or ISIN from those of the Bonds. References in these Conditions to the Bonds of any series include (unless the context requires otherwise) any other securities issued pursuant to this Condition and forming a single series with the Bonds. Any further securities forming a single series with the outstanding securities of any series (including the Bonds of any series) constituted by the Trust Deed or any deed supplemental to it shall, and any other securities may (with the consent of the Trustee), be constituted by a deed supplemental to the Trust Deed.

16 Notices

Notices to Bondholders will be valid if published in a leading newspaper having general circulation in Singapore (which is expected to be the Business Times). Any such notice shall be deemed to have been given on the date of such publication or, if published more than once, on the first date on which publication is made.

So long as the Bonds are represented by the Global Certificates and the Global Certificates are held on behalf of DTC or the alternative clearing system (as defined in the Global Certificates), notices to Bondholders may be given by delivery of the relevant notice to DTC or the alternative clearing system, for communication by it to entitled accountholders in substitution for notification as required by the Conditions.

17 Contracts (Rights of Third Parties) Act 1999

No person shall have any right to enforce any term or condition of the Bonds under the Contracts (Rights of Third Parties) Act 1999.

18 Governing Law and Jurisdiction

(a) Governing Law

The Trust Deed, the Bonds and all non-contractual matters arising therefrom or in connection therewith are governed by and construed in accordance with English law.

(b) Jurisdiction

The courts of England have exclusive jurisdiction to settle any dispute (a "Dispute") arising from or connected with the Trust Deed or the Bonds and all non-contractual matters arising therefrom or in connection therewith (including a dispute regarding the existence, validity or termination of the Trust Deed or the Bonds or the consequences of their nullity). The submission to the jurisdiction of the courts of England is for the benefit of the Trustee and the Bondholders only and shall not (and shall not be construed so as to) limit the right of the Trustee or any Bondholder to take proceedings relating to a Dispute ("Proceedings") in any other courts with jurisdiction nor shall the taking of Proceedings in any one or more jurisdictions preclude the taking of Proceedings in any other jurisdiction (whether concurrently or not) if any to the extent permitted by law.

SUMMARY OF PROVISIONS RELATING TO THE BONDS WHILE IN GLOBAL FORM

The Global Certificates contain provisions which apply to the Bonds while they are in global form, some of which modify the effect of the Conditions of the Bonds set out in this Offering Circular. Terms defined in the Conditions have the same meaning in the paragraphs below. The following is a summary of certain of those provisions.

Book-Entry; Delivery and Form

The certificates representing the Bonds will be issued in fully registered form without interest coupons attached. The Regulation S Bonds of each series will initially be represented by the Unrestricted Global Certificates and will be deposited with a custodian for, and registered in the name of a nominee of, DTC for the accounts of Euroclear and Clearstream. Prior to the 40th day after the date of issue of the Bonds, beneficial interests in the Regulation S Bonds may only be held through Euroclear or Clearstream, and any resale or transfer of such interests to US persons shall not be permitted during such period unless such resale or transfer is made pursuant to Rule 144A or Regulation S under the Securities Act.

The Rule 144A Bonds of each series will be represented by the Restricted Global Certificates and will be deposited with a custodian for, and registered in the name of a nominee of, DTC.

Each Global Certificate (and any Bonds issued for exchange therefor) will be subject to certain restrictions on transfer set forth therein as described under "Transfer Restrictions".

Ownership of beneficial interests in a Global Certificate will be limited to persons who have accounts with DTC ("participants") or persons who hold interests through participants. Ownership of beneficial interests in a Global Certificate will be shown on, and the transfer of that ownership will be effected only through, records maintained by DTC or its nominee (with respect to interests of participants) and the records of participants (with respect to interests of persons other than participants). QIBs may hold their interests in a Restricted Global Certificate directly through DTC if they are participants in such system, or indirectly through organisations which are participants in such system.

Investors may hold their interests in a Regulation S Bond directly through Euroclear or Clearstream, if they are participants in such systems, or indirectly through organisations that are participants in such system. On or after the 40th day following the date of issue of the Bonds, investors may also hold such interests through organisations other than Euroclear or Clearstream that are participants in the DTC system. Euroclear and Clearstream will hold interests in the Regulation S Bonds on behalf of their participants through DTC.

So long as DTC, or its nominee, is the registered owner or holder of a Global Certificate, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Bonds represented by such Global Certificate for all purposes under the Trust Deed and the Bonds. No beneficial owner of an interest in a Global Certificate will be able to transfer that interest except in accordance with DTC's applicable procedures, in addition to those provided for under the Trust Deed and the Agency Agreement and, if applicable, those of Euroclear and Clearstream.

Registration of Title

Individual Certificates will not be issued in exchange for interests in the Bonds in respect of which the Global Certificates are issued, except in the event that (where they shall be issued free of charge to the holder) DTC (or any clearing system as shall have been designated by the Issuer and approved by the Trustee (the "Alternative Clearing System") on behalf of which the Bonds evidenced by the Restricted Global Certificates may be held) notifies the Issuer that it is no longer willing or able to discharge properly its responsibilities as depositary with respect to the Bonds, or ceases to be a "Clearing Agency" registered under the Exchange Act or is at any time no longer eligible to act as such and the Issuer is unable to locate a qualified successor within 90 days of receiving notice of such ineligibility on the part of DTC (or, as the case may be, such Alternative Clearing System).

So long as the Bonds are listed on the SGX-ST and the rules of the SGX-ST so require, the Issuer shall appoint and maintain a paying agent in Singapore in the event that the Global Certificate is exchanged for Individual Certificates. In addition, in the event that the Global Certificate is exchanged for Individual Certificates, an announcement of such exchange shall be made through the SGX-ST (so long as the Bonds are listed on the SGX-ST and the rules of the SGX-ST so require) and such announcement will include all material information with respect to the delivery of the Individual Certificates, including details of the paying agent in Singapore.

In such circumstances, the Issuer will cause sufficient Individual Certificates to be executed and delivered to the Registrar for completion, authentication and despatch to the relevant Bondholders. A person with an interest in the Bonds in respect of which the Global Certificate is issued must provide the Registrar with a written order containing instructions and such other information as the Issuer and the Registrar may require to complete, execute and deliver such Individual Certificates and, in the case of a person with an interest in the Bonds represented by the Restricted Global Certificates, a fully completed, signed certification substantially to the effect that the exchanging holder is not transferring its interest at the time of such exchange, or in the case of a simultaneous sale pursuant to Rule 144A, Regulation S or Rule 144 under the Securities Act ("Rule 144"), a certification that the transfer is being made in compliance with the provisions of Rule 144A, Regulation S or Rule 144, as the case may be, in accordance with the Agency Agreement. Restricted individual certificates issued in respect of the Rule 144A Bonds shall bear the Securities Act Legends applicable to transfers pursuant to Rule 144A.

Payments and Transfers

Payments of principal and interest in respect of Bonds represented by a Global Certificate will be made to DTC or its nominee, as the case may be, and will be made without presentation or, if no further payment falls to be made in respect of the Bonds, against presentation and surrender, of the Global Certificate to or to the order of the Principal Agent or such other Paying Agent as shall have been notified to the Bondholders for such purpose. None of the Issuer, the Trustee nor any Paying Agent will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests in a Global Certificate or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

The Issuer expects that DTC or its nominee, upon receipt of any payment of principal or interest in respect of a Global Certificate, will credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the principal amount of such Global Certificate as shown on the records of DTC or its nominee. The Issuer also expects that payments by participants to owners of beneficial interests in such Global Certificate held through such participants will be governed by standing instructions and customary practices, as is now the case with securities held for the accounts of customers registered in the names of nominees for such customers. Such payments will be the responsibility of such participants.

Transfers between participants in DTC will be effected in the ordinary way in accordance with DTC rules and will be settled in same-day funds. Transfers between participants in Euroclear and Clearstream will be effected in the ordinary way in accordance with their respective rules and operating procedures.

The Issuer expects that DTC will take any action permitted to be taken by a Bondholder (including the presentation of Bonds for exchange as described below) only at the direction of one or more participants to whose account the DTC interests in a Global Certificate is credited and only in respect of such portion of the aggregate principal amount of Bonds as to which such participant or participants has or have given such direction.

The Issuer understands that DTC is a limited purpose trust company organised under the laws of the State of New York, a "banking organisation" within the meaning of New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the Uniform Commercial Code and a "Clearing Agency" registered pursuant to the provisions of Section 17A of the Exchange Act. DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between participants through electronic book-entry changes in accounts of its participants, thereby eliminating the need for physical movement of securities certificates. Indirect access to the DTC system is available to others such as banks, brokers, dealers and trust companies and certain other organisations that clear through or maintain a custodial relationship with a participant, either directly or indirectly ("indirect participants").

Although DTC, Euroclear and Clearstream are expected to follow the foregoing procedures in order to facilitate transfers of interests in a Global Certificate among participants of DTC, Euroclear and Clearstream, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time. None of the Issuer, the Trustee or any Paying Agent will have any responsibility for the performance by DTC, Euroclear or Clearstream or their respective participants or indirect participants of their respective obligations under the rules and procedures governing their operations.

Notices

So long as the Bonds are listed on the SGX-ST and the rules of the SGX-ST so require, notices will be published in a leading newspaper having general circulation in Singapore (which is expected to be the Business Times). Any such notice shall be deemed to have been given on the date of such publication. So long as the Bonds are represented by a Global Certificate and such Global Certificate is held on behalf of DTC or an Alternative Clearing System, notices to Bondholders may be given by delivery of the relevant notice to that clearing system for communication by it to entitled account holders in substitution for publication as required by the Conditions.

Meetings

The registered holder of each Global Certificate will be treated as being two persons for the purposes of any quorum requirements of a meeting of Bondholders and, at any such meeting, as having one vote in respect of each $1,000 in principal amount of the Bonds for which the Global Certificates may be exchanged. The Trustee may allow a person with an interest in the Bonds in respect of which a Global Certificate has been issued to attend and speak (but not to vote) at a meeting of Bondholders on appropriate proof of his identity and interest.

Purchase and Cancellation

Cancellation of any Bond required by the Conditions to be cancelled following its purchase will be effected by reduction in the principal amount of the Bonds in the register of Bondholders.

Trustee's Powers

In considering the interests of Bondholders while a Global Certificate is registered in the name of a nominee for a clearing system, the Trustee may have regard to any information provided to it by or on behalf of the relevant clearing system or its operator as to the identity (either individually or by category) of its account holders with entitlements to the Bonds and may consider such interests as if such account holders were the Bondholders.

The Clearing Systems

General

DTC, Euroclear and Clearstream have advised the Company as follows:

DTC. DTC is a limited-purpose trust company organised under the laws of the State of New York, a "banking organisation" within the meaning of New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act. DTC was created to hold securities of its participants and to facilitate the clearance and settlement of securities transactions among its participants in such securities through electronic book entry changes in accounts of its participants, thereby eliminating the need for physical movement of securities certificates. DTC's participants include securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organisations, some of whom own DTC, and may include the Joint Bookrunners. Indirect access to the DTC system is also available to others that clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. Transfers of ownership or other interests in Bonds in DTC may be made only through DTC participants. In addition, beneficial owners of Bonds in DTC will receive all distributions of principal of and interest on the Bonds from the Trustee through such DTC participant.

Euroclear and Clearstream. Euroclear and Clearstream hold securities for participating organisations and facilitate the clearance and settlement of securities transactions between their respective participants through electronic book-entry changes in accounts of such participants. Euroclear and Clearstream provide to their participants, among other things, services for safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream interface with domestic securities markets. Euroclear and Clearstream participants are financial institutions such as underwriters, securities brokers and dealers, banks, trust companies and certain other organisations. Indirect access to Euroclear or Clearstream is also available to others such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a Euroclear or Clearstream participant, either directly or indirectly.

Initial Settlement

Initial settlement for the Bonds will be made in immediately available funds. All Bonds issued in the form of global certificates will be deposited with Cede & Co., as custodian for DTC. Investors' interests in Bonds held in book-entry form by DTC will be represented through financial institutions acting on their behalf as direct and indirect participants in DTC. As a result, Euroclear and Clearstream will initially hold positions on behalf of their participants through DTC.

Investors electing to hold their Bonds through DTC (other than through accounts at Euroclear or Clearstream) must follow the settlement practices applicable to United States corporate debt obligations. The securities custody accounts of investors will be credited with their holdings against payment in same day funds on the settlement date.

Investors electing to hold their Bonds through Euroclear or Clearstream accounts will follow the settlement procedures applicable to conventional Eurobonds in registered form. Bonds will be credited to the securities custody accounts of Euroclear holders and of Clearstream holders on the business day following the settlement date against payment for value on the settlement date.

Secondary Market Trading

Because the purchaser determines the place of delivery, it is important to establish at the time of trading of any Bonds where both the purchaser's and seller's accounts are located to ensure that settlement can be made on the desired value date.

Trading between DTC participants. Secondary market trading between DTC participants will occur in the ordinary way in accordance with DTC rules and will be settled using the procedures applicable to United States corporate debt obligations in same-day funds using DTC's Same-Day Funds Settlement System.

Trading between Euroclear and Clearstream participants. Secondary market trading between Euroclear participants and Clearstream participants will occur in the ordinary way in accordance with the applicable rules and operating procedures of Clearstream and Euroclear and will be settled using the procedures applicable to conventional Eurobonds in same-day funds.

Trading between DTC seller and Euroclear or Clearstream purchaser. When Bonds are to be transferred from the account of a DTC participant to the account of a Euroclear participant or a Clearstream participant, the purchaser must send instructions to Euroclear or Clearstream through a participant at least one business day prior to settlement. Euroclear or Clearstream, as the case may be, will receive the Bonds against payment. Payment will then be made to the DTC participant's account against delivery of the Bonds. Payment will include interest accrued on the Bonds from and including the last interest payment date to and excluding the settlement date, on the basis of a calendar year consisting of twelve 30-day calendar months. For transactions settling on the 31st day of the month, payment will include interest accrued to and excluding the first day of the following month. Payment will then be made to the DTC participant's account against delivery of the Bonds. After settlement has been completed, the Bonds will be credited to the respective clearing system and by the clearing system, in accordance with its usual procedures, to the Euroclear participant's or Clearstream participant's account. Credit for the Bonds will appear on the next day (European time), and cash debit will be backvalued to, and the interest on the Bonds will accrue from, the value date (which would be the preceding day when settlement occurs in New York). If settlement is not completed on the intended value date (i.e., the trade date fails), the Euroclear or Clearstream cash debit will be valued instead on the actual settlement date.

Euroclear participants or Clearstream participants will need to make available to the respective clearing systems the funds necessary to process same-day funds settlement. The most direct means of doing so is to pre-position funds for settlement, either from cash on hand or existing lines of credit, as they would for any settlement occurring within Euroclear or Clearstream. Under this approach, they may take on credit exposure to Euroclear or Clearstream until the Bonds are credited to their accounts one day later.

As an alternative, if Euroclear or Clearstream has extended a line of credit to them, participants can elect not to pre-position funds and allow that credit line to be drawn upon to finance settlement. Under this procedure, Euroclear participants or Clearstream participants purchasing Bonds would incur overdraft charges for one day, assuming they cleared the overdraft when the Bonds were credited to their accounts. However, interest on the Bonds would accrue from the value date. Therefore, in many cases, the investment income on Bonds earned during that one-day period may substantially reduce or offset the amount of such overdraft charges, although this result will depend on each participant's particular cost of funds.

The sale proceeds will be available to the DTC seller on the settlement date. Thus, to the DTC participant, a cross-market transaction will settle no differently than a trade between two DTC participants.

Finally, day traders that use Euroclear or Clearstream and that purchase Bonds from DTC participants for credit to Euroclear participants or Clearstream participants should note that these trades will automatically fail on the sale side unless affirmative action is taken. At least three techniques should be readily available to eliminate this potential problem:

(1) borrowing through Euroclear or Clearstream for one day (until the purchase side of the day trade is reflected in their Euroclear account or Clearstream account) in accordance with the clearing system's customary procedures;

(2) borrowing the Bonds in the United States from a DTC participant no later than one day prior to settlement, which would give the Bonds sufficient time to be reflected in the borrower's Euroclear account or Clearstream account in order to settle the sale side of the trade; or

(3) staggering the value dates for the buy and sell sides of the trade so that the value date for the purchase from the DTC participant is at least one day prior to the value date for the sale to the Euroclear participants or Clearstream participants.

Trading between Euroclear or Clearstream seller and DTC purchaser. Due to the time zone differences in their favour, Euroclear participants or Clearstream participants may employ their customary procedures for transactions in which Bonds are to be transferred by the respective clearing system to another DTC participant. The seller must send instructions to Euroclear or Clearstream through a participant at least one business day prior to settlement. In these cases, Euroclear or Clearstream will credit the Bonds to the DTC participant's account against payment. Payment will include interest accrued on the Bonds from and including the last interest payment date to and excluding the settlement date, on the basis of a calendar year consisting of twelve 30-day calendar months. For transactions settling on the 31st day of the month, payment will include interest accrued to the Bonds excluding the first day of the following month. Payment will then be made to the DTC participant's account against delivery of the Bonds. The payment will then be reflected in the account of the Euroclear participant or Clearstream participant the following day, and receipt of the cash proceeds in the Euroclear or Clearstream participant's account will be back-valued to the value date (which would be the preceding day when settlement occurs in New York). If the Euroclear participant or Clearstream participant has a line of credit with its respective clearing system and elects to draw on such line of credit in anticipation of receipt of the sale proceeds in its account, the back-valuation may substantially reduce or offset any overdraft charges incurred over the one-day period. If settlement is not completed on the intended value date (i.e., the trade fails), receipt of the cash proceeds in the Euroclear or Clearstream participant's account would instead be valued on the actual settlement date.

As in the case with respect to sales by a DTC participant to a Euroclear or Clearstream participant, participants in Euroclear and Clearstream will have their accounts credited the day after their settlement date. See "— Trading between DTC seller and Euroclear or Clearstream purchaser" above.

TRANSFER RESTRICTIONS

Because of the following restrictions, purchasers are advised to consult legal counsel prior to making any offer, resale, pledge or other transfer of the Regulation S Bonds or the Rule 144A Bonds.

This offering is being made in reliance on Rule 144A under the Securities Act and Regulation S under the Securities Act. The Bonds and the Guarantee have not been, and will not be, registered under the Securities Act or with any securities regulatory authority of any State in the United States or any other jurisdiction, and may only be offered or sold (a) within the United States to QIBs in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 144A and (b) to non-US persons outside the United States in reliance on Regulation S under the Securities Act, and in each case in accordance with any other applicable law.

Rule 144A Bonds

Each purchaser of the Bonds and the Guarantee within the United States pursuant to Rule 144A, by accepting delivery of this Offering Circular, will be deemed to have represented, agreed and acknowledged that it has received such information as it deems necessary to make an investment decision and that:

- It is (a) a QIB within the meaning of Rule 144A, (b) acquiring such Bonds and the Guarantee for its own account or for the account of one or more QIBs, (c) not acquiring the Bonds and the Guarantee with a view to further distribute such Bonds, and (d) aware, and each beneficial owner of such Bonds and the Guarantee has been advised, that the sale of such Bonds and the Guarantee to it is being made in reliance on Rule 144A.

- It understands that such Bonds and the Guarantee have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state or other jurisdiction of the United States and may not be offered, resold, pledged or otherwise transferred except (a) in accordance with Rule 144A to a person that the holder and any person acting on its behalf reasonably believe is a QIB purchasing for its own account or for the account of a QIB, (b) in an offshore transaction in accordance with Rule 903 or Rule 904 of Regulation S, (c) pursuant to an exemption from registration under the Securities Act provided by Rule 144 thereunder (if available) or (d) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable securities laws of the States of the United States; and the purchaser will, and each subsequent holder is required to, notify any subsequent purchaser of the Bonds and the Guarantee of the resale restrictions referred to in this clause (2).

- It acknowledges that the Bonds and the Guarantee offered and sold hereby in the manner set forth in paragraph (1) above are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act, are being offered and sold in a transaction not involving any public offering in the United States within the meaning of the Securities Act and that no representation is made as to the availability of the exemption provided by Rule 144 for resales of the Bonds and the Guarantee.

- It understands that any offer, sale, pledge or other transfer of the Bonds and the Guarantee made other than in compliance with the above-stated restrictions may not be recognised by the Company.

- The Company, the Registrar, the Joint Bookrunners and their respective affiliates, and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements. If it is acquiring any Bonds and the Guarantee for the account of one or more QIBs, it represents that it has sole investment discretion with respect to each such account and that it has full power to make (and does make) the foregoing acknowledgments, representations and agreements on behalf of each such account.

- It understands that the Bonds offered in reliance on Rule 144A will be represented by the Restricted Global Certificates. Before any interest in the Restricted Global Certificates may be offered, sold, pledged or otherwise transferred to a person who takes delivery in the form of an interest in the Unrestricted Global Certificates, it will be required to provide a Transfer Agent with a written certification (in the form provided in the Agency Agreement) as to compliance with applicable securities laws.

- It understands that such Bonds and the Guarantee, unless otherwise agreed between the Company and the Trustee in accordance with applicable law, will bear a legend to the following effect:

THIS BOND AND THE GUARANTEE IN RESPECT HEREOF, HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, (THE "SECURITIES ACT") OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (1) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, (2) IN ACCORDANCE WITH RULE 144A UNDER THE SECURITIES ACT TO A PERSON THAT THE HOLDER AND ANY PERSON ACTING ON ITS BEHALF REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER, (3) IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH RULE 903 OR RULE 904 OF REGULATION S UNDER THE SECURITIES ACT, (4) PURSUANT TO RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (5) PURSUANT TO ANY OTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE HOLDER OF THIS BOND WILL, AND EACH SUBSEQUENT HOLDER IS REQUIRED TO, NOTIFY ANY PURCHASER OF THIS BOND OF THE RESALE RESTRICTIONS REFERRED TO ABOVE.

Regulation S Bonds

Each purchaser of Bonds and the Guarantee offered hereby in reliance on Regulation S under the Securities Act, by accepting delivery of this Offering Circular and the Bonds and the Guarantee, will be deemed to have represented, agreed and acknowledged that it has received such information as it deems necessary to make an investment decision and that:

- It understands that such Bonds and the Guarantee have not been and will not be registered under the Securities Act, and such Bonds and the Guarantee are being offered and sold in reliance on Regulation S.

- It is, or at the time the Bonds and the Guarantee are purchased will be, the beneficial owner of such Bonds and the Guarantee and (a) it is purchasing the Bonds and the Guarantee in an offshore transaction (within the meaning of Regulation S); (b) it is not an affiliate of the Company or a person acting on behalf of such an affiliate and (c) it is not a US person (as defined in Regulation S under the Securities Act) and is located outside the United States and will continue to be located outside the United States at the time the buy order is originated.

- It will not offer, sell, pledge or transfer Bonds and the Guarantee, except in accordance with the Securities Act and any applicable laws of the states of the United States and any other jurisdiction.

- The Company, the Registrar, the Joint Bookrunners and their affiliates, and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements.

It understands that the Bonds and the Guarantee offered in reliance on Regulation S will be represented by the Unrestricted Global Certificates. For the period until and including the 40th day after the commencement of the offering, any interest in the Unrestricted Global Certificates may be offered, sold, pledged or otherwise transferred to a US person or a person located in the United States or a person who takes delivery in the form of an interest in the Restricted Global Certificate, provided that it will be required to provide a Transfer Agent with a written certification (in the form provided in the Agency Agreement) to the effect that the transferee is a "qualified institutional buyer" (as defined in Rule 144A) and as to compliance with applicable securities laws.

It understands that such Bonds and the Guarantee will, unless otherwise agreed between the Company and the Trustee in accordance with applicable law, will bear a legend to the following effect: **This bond and the Guarantee in respect hereof, has not been and will not be registered under the United States Securities Act of 1933 (the "Securities Act") or with any securities regulatory authority of any state or other jurisdiction of the United States and may not be offered, sold, pledged or otherwise transferred in the United States or to, for the account or benefit of, any united states person except pursuant to an available exemption from the registration requirements of the Securities Act and all applicable state securities laws. Terms used above have the meanings given to them in Regulation S under the Securities Act.**

TAXATION

Prospective purchasers of the Bonds are advised to consult their tax advisers as to the tax consequences, under the tax laws of the country in which they are resident, of a purchase of Bonds including, without limitation, the consequences of receipt of interest and premium, if any, on the Bonds and a sale or redemption of, the Bonds or any interest therein

Certain United Kingdom Taxation Considerations

The following is a general description of certain UK tax considerations relating to the Bonds. It does not purport to be a complete analysis of all tax considerations relating to the Bonds and it does not generally deal with the tax position of prospective Bondholders who may be subject to tax in a jurisdiction other than the UK. It relates to the position of persons who hold Bonds as an investment and who are the absolute beneficial owners of the same and some aspects do not apply to certain classes of taxpayer (such as dealers in securities, Bondholders who are connected with the Issuer for relevant tax purposes or those who are treated for tax purposes as having received their Bonds by reason of their employment). Prospective Bondholders should seek their own professional advice as to their tax position. This summary is based on the Issuer's understanding of UK tax law and HM Revenue & Customs practice as in effect on the date of this Offering Circular and is subject to any change in such law or practice that may take effect after such date (possibly with retrospective effect).

PROSPECTIVE PURCHASERS OF BONDS WHO MAY BE SUBJECT TO TAX IN ANY JURISDICTION OTHER THAN THE UK, OR WHO HAVE ANY DOUBT WHATSOEVER AS TO THEIR TAX POSITION SHOULD CONSULT AN APPROPRIATE PROFESSIONAL ADVISER.

Interest on the Bonds

The Bonds will constitute "quoted Eurobonds" within the meaning of section 987 of the Income Tax Act 2007 (the "Act") as long as they are and continue to be listed on a "recognised stock exchange" within the meaning of section 1005 of the Act. SGX-ST is a "recognised stock exchange" for these purposes. The Bonds will be treated as listed on SGX-ST if the Bonds are included in the official list of, and are admitted to trading on (which, in the case of SGX-ST, means quoted on), the Main Board of SGX-ST.

Provided, therefore, that the Bonds are and remain so listed and quoted, payments of interest on the Bonds will be made without deduction or withholding for or on account of UK income tax.

If the Bonds are not, or cease to be, so listed, generally an amount must be deducted or withheld for or on account of UK income tax at the basic rate (currently 20%), subject to any direction to the contrary by HM Revenue and Customs under an applicable double taxation treaty, and except that the deduction or withholding obligation is disapplied in respect of payments of interest to Bondholders who the Issuer reasonably believes are either UK resident companies or non-UK resident companies carrying on a trade in the UK through a permanent establishment which is, in each case, within the charge to UK corporation tax and to which the interest is attributable, or are partnerships consisting entirely of such persons (unless, in each such case, HM Revenue and Customs directs otherwise), or where any other relevant exception, exemption or relief applies. Any premium payable on redemption may be treated as a payment of interest for UK tax purposes and may accordingly be subject to the withholding tax treatment described above.

Interest on the Bonds will constitute UK source income for UK tax purposes and may be subject to UK income tax or UK corporation tax (as appropriate) by assessment (including self-assessment) even where paid without deduction or withholding for or on account of UK tax. However, interest with a UK source received without deduction or withholding for or on account of UK income tax will not be chargeable to UK tax in the hands of a Bondholder who is not resident for tax purposes in the UK unless that Bondholder: (i) is not a company and carries on a trade, profession or vocation in the UK through a UK branch or agency, or is a company and carries on a trade in the UK through a UK permanent establishment and the interest is received in connection with, or the Bonds are attributable to, that branch or agency or permanent establishment (as applicable); or (ii) is a trustee in certain circumstances. There are exemptions for interest received by certain categories of agent (such as some brokers and investment managers). The provisions of an applicable double tax treaty may also be relevant for such Bondholders.

Payments by the Guarantor

If the Guarantor makes any payments in respect of interest on the Bonds (or other amounts due under the Bonds other than the repayment of amounts subscribed for the Bonds), it is possible that such payments may be subject to deduction or withholding for or on account of UK income tax at the basic rate (currently 20 per cent), subject to any claim which could be made under an applicable double taxation treaty. Such payments by a guarantor may not be eligible for the quoted Eurobonds exemption described above.

Provision of information

In certain circumstances, HM Revenue and Customs has the power to require any person in the UK (i) paying interest to, or receiving interest on behalf of another person who is an individual; or (ii) paying amounts due on redemption of any Bonds which constitute deeply discounted securities as defined in Chapter 8 of Part 4 of the Income Tax (Trading and Other Income) Act 2005 to, or receiving such amounts on behalf of, another person who is an individual, to disclose the name and address of that Bondholder and to provide information regarding the amounts paid to him or received on his behalf. In relation to the payment or receipt of interest, these provisions will apply whether or not the interest has been paid subject to withholding or deduction for or on account of UK income tax and whether or not the Bondholder is resident in the UK for UK taxation purposes. Where the Bondholder is not so resident, the details provided to HM Revenue and Customs may, in certain cases, be passed on to the tax authorities of the jurisdiction in which the Bondholder is resident for taxation purposes.

Transfer and redemption of the Bonds

UK corporation taxpayers

In general, Bondholders who are within the charge to UK corporation tax in respect of the Bonds will be treated for tax purposes as realising profits, gains or losses (including exchange gains and losses) in respect of the Bonds on a basis which is broadly in accordance with their statutory accounting treatment so long as that accounting treatment is in accordance with generally accepted accounting practice as that term is defined for the relevant tax purposes. Such profits, gains and losses will be taken into account in computing taxable income for UK corporation tax purposes.

Other UK taxpayers

It is not entirely certain whether or not the Bonds will be treated as "deeply discounted securities" for the purposes of Chapter 8 of Part 4 of the Income Tax (Trading and Other Income) Act 2005. Accordingly, Bondholders are advised to consult their own professional advisers in respect of this issue.

If the Bonds are treated as "deeply discounted securities" for the purposes of Part 4, Chapter 8 of the Income Tax (Trading and Other Income) Act 2005, Bondholders who are not within the charge to UK corporation tax and who are resident for tax purposes in the United Kingdom, or who carry on a trade, profession or vocation in the UK through a branch or agency to which the Bonds are attributable, may be subject to UK tax on income on a disposal of the Bonds (including a disposal occurring on redemption of Bonds). In such a case, no chargeable gain or allowable loss would arise on a disposal of a Bond by a Bondholder (including a disposal occurring on redemption) nor should the accrued income profits and losses regime (as set out below) apply to Bondholders on such a disposal.

If the Bonds are not treated as "deeply discounted securities" for the purposes of Part 4, Chapter 8 of the Income Tax (Trading and Other Income) Act 2005, a disposal of the Bonds (including a disposal occurring on redemption) by an individual Bondholder who is resident for tax purposes in the United Kingdom, or who carries on a trade, profession or vocation in the UK through a branch or agency to which the Bonds are attributable, may give rise to a chargeable gain or allowable loss for the purposes of the UK taxation of chargeable gains. In calculating any gain or loss accordingly, a taxable profit can arise even where the amount received in a non-sterling currency is the same as, or less than, the amount paid in that currency for the Bond. Special rules may apply to individuals who have ceased to be resident in the United Kingdom and who dispose of their Bonds before becoming once again resident in the United Kingdom.

The provisions of the "accrued income profits and losses" regime (formerly known as the "accrued income scheme") (the "Regime") may apply to Bondholders who are subject to UK income tax in relation to the Bonds. On a transfer of securities with accrued interest, the Regime can, in certain circumstances, apply to deem the transferor to receive an amount of income equal to the accrued interest and to treat the deemed or actual interest subsequently received by the transferee as reduced by a corresponding amount. Generally, persons who are not resident in the UK and who do not carry on a trade in the UK through a branch or agency to which the Bonds are attributable will not be subject to the provisions of these rules. Bondholders are advised to consult their own professional advisers for further information about the rules relating to the Regime.

Stamp duty and stamp duty reserve tax. No UK stamp duty or stamp duty reserve tax should be payable on issue, transfer or redemption of the Bonds.

US Federal Income Tax Considerations

The following discussion is a summary of certain material US federal income tax consequences of the purchase, ownership and disposition of the Bonds by a US holder (defined below), (except for discussions of FATCA (as defined below under "— *Foreign Account Tax Compliance Act*"), which apply to all holders), but does not purport to be a complete analysis of all potential tax effects. This summary is based upon the US Internal Revenue Code of 1986, as amended (the "Code"), Treasury regulations issued or proposed thereunder, and judicial and administrative interpretations thereof, each of the date hereof, and all of which are subject to change, possibly with retroactive effect. This discussion does not address all of the US federal income tax consequences that may be relevant to a US holder in light of such US holder's particular circumstances, including the impact of the unearned income Medicare contribution tax or the alternative minimum tax, or to US holders subject to special rules, such as certain financial institutions, US expatriates, insurance companies, dealers in securities or currencies, traders in securities, US holders whose functional currency is not the US dollar, tax-exempt entities, regulated investment companies, real estate investment trusts, partnerships or other pass-through entities, persons that are resident in or have a permanent establishment in a jurisdiction outside the United States, persons holding the Bonds as part of a "straddle," "hedge," "conversion transaction" or other integrated transaction, and persons subject to special tax accounting rules as a result of any item of gross income with respect to the Bonds being taken into account in an applicable financial statement. In addition, this discussion does not address state or local tax consequences and is limited to persons who purchase Bonds for cash pursuant to this Offering Circular at original issue, at their "issue price" (the first price at which a substantial part of the Bonds are sold to the public for cash, excluding sales to bond houses, brokers or similar persons or organisations acting in the capacity of underwriters, placement agents or wholesalers) and who hold the Bonds as capital assets within the meaning of Section 1221 of the Code (generally for investment).

For purposes of this discussion, a "US holder" is a beneficial owner of a Bond that is, for US federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation created or organised in the United States or under the laws of the United States, any state thereof or the District of Columbia;
- any estate the income of which is subject to US federal income taxation regardless of its source; or
- any trust if (i) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust, or (ii) a valid election is in place to treat the trust as a United States person.

If an entity or arrangement treated as a partnership for US federal income tax purposes holds Bonds, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. A holder that is a partnership, and partners in such partnerships, should consult their tax advisers regarding the tax consequences of the purchase, ownership and disposition of Bonds.

Prospective purchasers of Bonds should consult their tax advisers concerning the tax consequences of the purchase, ownership and disposition of the Bonds in light of their particular circumstances, including the application of the US federal income tax considerations discussed below, as well as the application of state, local, foreign or other tax laws.

Payments of Interest

It is expected, and the following discussion assumes, that the Bonds will be issued with original issue discount that is less than a statutorily defined *de minimis* amount. Payments of stated interest on the Bonds generally will be taxable to a US holder as ordinary income at the time that such payments are received or accrued, in accordance with such US holder's method of accounting for US federal income tax purposes.

Interest income on a Bond generally will constitute foreign source income and generally will be considered "passive category income" for purposes of the foreign tax credit limitation rules.

Should any foreign tax be withheld, the amount withheld and the gross amount of any additional amounts paid to a US holder as a result of such withholding as described in "Terms and Conditions of the Bonds — Taxation" (such amounts, "Additional Amounts"), will be included in such US holder's income as ordinary income at the time such amount is deemed paid, received or accrued in accordance with such US holder's method of tax accounting. Foreign withholding tax paid at the rate applicable to a US holder would, subject to limitations and conditions, be treated as foreign income tax eligible for credit against such US holder's US federal income tax liability or, at such US holder's election, eligible for deductions in computing taxable income. US holders should consult their tax advisers regarding the creditability or deductibility of any withholding taxes. Any Additional Amounts would generally constitute foreign source income.

Sale, Exchange, Redemption or Other Disposition of Bonds

Generally, upon the sale, exchange, redemption or other disposition of a Bond, a US holder will recognise taxable gain or loss equal to the difference between the amount realised on the sale, exchange, redemption or other disposition (less any amount attributable to accrued but unpaid interest not previously included in income, which will be taxable as discussed above) and such US holder's adjusted tax basis in the Bond. A US holder's adjusted tax basis in a Bond generally will equal the cost of such Bond to such US holder, less any principal payments received by the US holder.

Such gain or loss generally will be US source capital gain or loss, and will be long-term capital gain or loss if at the time of the sale, exchange, redemption or other disposition the Bond has been held by such US holder for more than one year. Long-term capital gain recognised by a non-corporate US holder will generally be subject to taxation at a reduced rate. The deductibility of capital losses is subject to limitation.

Information Reporting and Backup Withholding

In general, payments made in the United States or through certain US-related financial intermediaries of interest or principal and the proceeds from sales of Bonds held by a US holder will be required to be reported to the US Internal Revenue Service (the "IRS") unless the US holder is an exempt recipient and when required, demonstrates this fact. In addition, a US holder that is not an exempt recipient may be subject to backup withholding unless it provides a taxpayer identification number and otherwise complies with applicable certification requirements.

Backup withholding is not an additional tax. Amounts withheld as backup withholding may be credited against a US holder's US federal income tax liability and may entitle the US holder to a refund, provided that the appropriate information is timely furnished to the IRS.

Individuals that own "specified foreign financial assets" with an aggregate value in excess of certain thresholds are generally required to file an information report (on IRS Form 8938) with respect to such assets with their tax returns. If a US holder does not file a required IRS Form 8938, such holder may be subject to substantial penalties and the statute of limitations on the assessment and collection of all US federal income taxes of such holder for the related tax year may not close before the date which is three years after the date on which such report is filed. The Bonds generally will constitute specified foreign financial assets subject to these reporting requirements, unless the Bonds are held in certain accounts maintained by certain financial institutions. Under certain circumstances, an entity may be treated as an individual for purposes of these rules.

Foreign Account Tax Compliance Act

Pursuant to Sections 1471 through 1474 of the Code (commonly referred to as "FATCA") and subject to the proposed regulations discussed below, a "foreign financial institution" may be required to withhold US tax on certain "foreign passthru payments" to the extent such payments are treated as attributable to certain U.S. source payments. Obligations issued on or prior to the date that is six months after the date on which applicable final regulations defining foreign passthru payments are published in the Federal Register generally would be "grandfathered" unless materially modified after such date. Accordingly, if the Issuer is treated as a foreign financial institution, FATCA could apply to payments on the Bonds if there is a significant modification of the Bonds for US federal income tax purposes after the expiration of this grandfathering period. Under recently proposed regulations, any withholding on foreign passthru payments on Bonds that are not otherwise grandfathered would apply to passthru payments made on or after the date that is two years after the date of filing with the Federal Register of applicable final regulations defining foreign passthru payments. Taxpayers generally may rely on these proposed regulations until final regulations are issued. Non-US governments have entered into agreements with the United States (and additional non-US governments are expected to enter into such agreements) to implement FATCA in a manner that alters the rules described herein. Holders should consult their own tax advisers on how these rules may apply to their investment in the Bonds. In the event any withholding under FATCA is imposed with respect to any payments on the Bonds, there will be no additional amounts payable to compensate for the withheld amount.

PLAN OF DISTRIBUTION

Each of the Joint Bookrunners has, pursuant to a subscription agreement dated 11 April 2019 (the "Subscription Agreement"), severally and not jointly agreed with the Company and the Issuer, subject to the satisfaction of certain conditions, to subscribe for the principal amount of the Bonds set forth opposite its name below.

Joint Bookrunners	Principal Amount of 2023 Bonds	Principal Amount of 2026 Bonds
Credit Suisse (Hong Kong) Limited	$133,333,000	$200,000,000
J.P. Morgan Securities Plc	$133,333,000	$200,000,000
Standard Chartered Bank	$133,334,000	$200,000,000
Total	**$400,000,000**	**$600,000,000**

The Subscription Agreement provides that the Joint Bookrunners will purchase all the Bonds if they purchase any of the Bonds. The Subscription Agreement entitles the Joint Global Coordinators and Joint Lead Managers on behalf of the Joint Bookrunners to terminate the Subscription Agreement in certain circumstances prior to payment being made to the Issuer. The Company and the Issuer, jointly and severally, have under the Subscription Agreement agreed to indemnify the Joint Bookrunners against certain liabilities. The Joint Bookrunners may offer and sell the Bonds through certain of their affiliates. The Joint Bookrunners or certain of their affiliates may purchase Bonds and be allocated Bonds for asset management and/or proprietary purposes but not with a view to distribution.

Neither the Company or the Issuer, nor any person acting on behalf of any of them will, from the date of this Offering Circular until the date 30 days after the date of this Offering Circular, without the prior written consent of the Joint Bookrunners, issue, offer, sell, contract to sell, pledge or otherwise dispose of (or publicly announce any such issuance, offer, sale or disposal) non-equity-linked debt securities issued or guaranteed (other than guarantees in respect of Indian Rupee denominated non-equity linked debt securities) by the Company or the Issuer and having a maturity of more than one year from the date of issue.

The Bonds are a new issue of securities with no established trading market. The Issuer has obtained in-principle approval for the listing of the Bonds on the SGX-ST. In connection with this offering, the Stabilising Manager or any of its affiliates (or persons acting on behalf of the Stabilising Manager) may, to the extent permitted by laws and regulations, over-allot or effect transactions with a view to supporting the market price of the Bonds at a level higher than that which might otherwise prevail for a limited time after the issue date of the Bonds. However, there is no assurance that the Stabilising Manager or any of its affiliates (or persons acting on behalf of the Stabilising Manager) will undertake any stabilisation action. Any stabilising action may begin on or after the date on which adequate public disclosure of the terms of the offer of the Bonds is made and, if begun, may be ended at any time, but it must end no later than the earlier of 30 days after the issue date of the Bonds and 60 days after the date of the allotment of the Bonds. Any stabilisation action must be conducted by the Stabilising Manager or any of its affiliates (or persons acting on behalf of the Stabilising Manager or any of its affiliates) in accordance with all applicable laws and rules.

The Joint Bookrunners and their respective affiliates have, in the past, provided banking, investment banking and advisory services for the Company and the Group for which they have received customary fees and expenses. Any or all of the Joint Bookrunners and their respective affiliates may, from time to time, engage in transactions with and perform services for the Company, its subsidiaries and to affiliates in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. See "Use of Proceeds." It is expected that the Joint Bookrunners and their respective affiliates will continue to provide such services to, and enter into such transactions with, the Company and its subsidiaries and affiliates in the future.

In connection with the offering of the Bonds, each Joint Bookrunner and/or its affiliate(s) may act as an investor for its own account and may take up Bonds in the offering and in that capacity may retain, purchase or sell for its own account such securities and any securities of the Company or related investments and may offer or sell such securities or other investments otherwise than in connection with the offering. Accordingly, references herein to the Bonds being offered should be read as including any offering of the Bonds to the Joint Bookrunners and/or their affiliates acting in such capacity. Such persons do not intend to disclose the extent of any such investment or transactions otherwise than in accordance with any legal or regulatory obligation to do so.

It is expected that delivery of beneficial interests in the Bonds will be made through the facilities of DTC on or about 23 April 2019, which will be the seventh business day following the initial sale of the Bonds. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade Bonds prior to the second business day before the delivery of the Bonds will be required, by virtue of the fact that the Bonds initially will settle on a delayed basis, to agree to a delayed settlement cycle at the time of any such trade to prevent a failed settlement. Purchasers of Bonds who wish to make such trades should consult their advisers.

Public Offer Selling Restriction under the Prospectus Directive

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), each Joint Bookrunner, severally and not jointly, represents and agrees that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "Relevant Implementation Date") it has not made and will not make an offer of the Bonds which are the subject of the offering contemplated by the Offering Circular to the public in that Relevant Member State except that it may, with effect from and including the Relevant Implementation Date, make an offer of such Bonds to the public in that Relevant Member State:

- at any time to any legal entity which is a qualified investor as defined in the Prospectus Directive;

- at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the relevant bookrunner nominated by the Issuer for any such offer; or

- at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of the Bonds referred to in subparagraphs (a) to (c) above shall require the Issuer or any Joint Bookrunner to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of the Bonds to the public" in relation to any of the Bonds in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the Bonds to be offered so as to enable an investor to decide to purchase or subscribe the Bonds, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State, and the expression "Prospectus Directive" means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU) and includes any relevant implementing measure in the Relevant Member State.

Hong Kong

Each Joint Bookrunner represents and agrees that:

- it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Bonds (except for Bonds which are a "structured product" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong ("SFO")) other than (i) to "professional investors" as defined in the SFO and any rules made under the SFO or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "C(WUMP)O") or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and

- it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Bonds, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Bonds which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

India

The Bonds will not be offered or sold, directly or indirectly, in India or to, or for the account or benefit of, any resident in India. Each Joint Bookrunner has represented, warranted and agreed that this Offering Circular has not been and will not be registered as a prospectus or a statement in lieu of prospectus in respect of a public offer or an information memorandum or private placement offer cum application letter or any other offering material with the Registrar of Companies in India in accordance with the Indian Companies Act, 2013, as amended, and other applicable laws in India for the time being in force. This Offering Circular has not been and will not be reviewed or approved by any regulatory authority in India or Indian stock exchange. This Offering Circular and the Bonds are not and should not be construed as an advertisement, invitation, offer or sale of any securities whether by way of private placement or to the public in India.

Indonesia

Each Joint Global Coordinator, Joint Lead Manager and Joint Bookrunner has represented and agreed that the offer of the Bonds shall not constitute a public offering under Law No. 8 of 1995 regarding Capital Markets. Under Indonesian law, the public offering means the offer of securities in Indonesia or to Indonesian citizens through mass media or to more than 100 Indonesian parties in Indonesia (foreign and/or Indonesian parties) or sale of securities to more than 50 Indonesian parties in Indonesia (foreign and/or Indonesian parties) within certain values and period of time and the Bonds are not being offered or sold and may not be offered or sold, directly or indirectly, in the Republic of Indonesia, except as permitted by the Capital Markets Law (Law 8 of 1995 on Capital Markets).

Japan

The Bonds have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended, the "Financial Instruments and Exchange Act"). Accordingly, each Joint Bookrunner represents and agrees that it has not, directly or indirectly, offered or sold and will not, directly or indirectly, offer or sell any Bonds in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organised under the laws of Japan), or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other relevant laws and regulations of Japan.

Malaysia

Each Joint Global Coordinator, Joint Lead Manager and Joint Bookrunner:

i. acknowledges that the issue of, offer for subscription or purchase of, or invitation to subscribe for or purchase the Bonds may only be made exclusively:

   (1) at the primary level to (1) persons falling within Part I of Schedule 6 and Part I of Schedule 7 and Schedule 8 or Section 257(3) of the Capital Markets and Services Act 2007 ("CMSA"), read together with Schedule 9 or Section 257(3) of the CMSA; and (2) persons falling within the categories of excluded offers or invitation of securities and excluded offers or invitations of sukuk set out in section 13(5)(a) and section 13(5)(b) of the Labuan Islamic Financial Services and Securities Act 2010 ("LIFSSA"); and

   (2) at the secondary level to (1) persons falling within Part I of Schedule 6 or Section 229(1)(b) and Schedule 8 or Section 257(3) of the CMSA read together with Schedule 9 or Section 257(3) of the CMSA; and (2) persons falling within the categories of excluded offers or invitation of securities set out in section 13(5)(a) of the LIFSSA; and

ii. represents, warrants and agrees that it has not offered, sold or issued an invitation to purchase or subscribe and will not offer, sell or issue an invitation to purchase or subscribe, the Bonds, and that it has not circulated or distributed and will not circulate or distribute the Offering Circular or any other offering document or material relating to the Bonds, directly or indirectly, to persons or parties other than those described in paragraph (i)(a) above.

Singapore

Each Joint Bookrunner acknowledges that the Offering Circular has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each Joint Bookrunner represents and agrees that it has not offered or sold any Bonds or caused the Bonds to be made the subject of an invitation for subscription or purchase and will not offer or sell any Bonds or cause the Bonds to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, the Offering Circular or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of any Bonds, whether directly or indirectly, to any person in Singapore other than:

- to an institutional investor (as defined in Section 4A of the SFA pursuant to Section 274 of the SFA;

- to a relevant person (as defined in section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or

- otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

- Where the Bonds are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Bonds pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

- where no consideration is or will be given for the transfer;

- where the transfer is by operation of law;

- pursuant to Section 276(7) of the SFA; or

- as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification: In connection with Section 309B of the SFA and the CMP Regulations 2018, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Bonds are 'prescribed capital markets products' (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

United Kingdom

Each of the Joint Bookrunners represents and agrees that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any Bonds in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Bonds in, from or otherwise involving the United Kingdom.

United States

The Bonds and the Guarantee have not been and will not be registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in accordance with Regulation S under Regulation S or pursuant to an exemption from the registration requirements of the Securities Act. Each Joint Bookrunner represents that it has offered and sold the Bonds and the Guarantee, and agrees that it will offer and sell the Bonds and the Guarantee (i) as part of their distribution at any time and (ii) otherwise until 40 days after the later of the commencement of the offering and the Closing Date, only in accordance with Rule 903 of Regulation S or Rule 144A as set forth below. Accordingly, neither it, its affiliates nor any persons acting on its or their behalf have engaged or will engage in any directed selling efforts with respect to the Bonds and the Guarantee, and it and they have complied and will comply with the offering restrictions requirement of Regulation S. Each Joint Bookrunner agrees that, at or prior to confirmation of sale of the Bonds and the Guarantee (other than a sale pursuant to Rule 144A), it will have sent to each distributor, dealer or person receiving a selling concession, fee or other remuneration that purchases the Bonds and the Guarantee from it during the distribution compliance period a confirmation or notice to substantially the following effect:

"The securities covered hereby have not been registered under the U.S. Securities Act of 1933 (the "Securities Act") and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons (i) as part of their distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the offering and the closing date of the offering, except in either case in accordance with Regulation S or Rule 144A under the Securities Act. Terms used above have the meanings given to them by Regulation S under the Securities Act."

Terms used in this paragraph have the meanings given to them by Regulation S.

Each Joint Bookrunner represents and agrees that neither it nor any of its affiliates (as defined in Rule 501(b) of Regulation D under the Securities Act ("Regulation D")), nor any person acting on its or their behalf has engaged or will engage in any form of general solicitation or general advertising (within the meaning of Regulation D) in connection with any offer and sale of the Bonds and the Guarantee in the United States.

The Joint Bookrunners may directly or through their respective U.S. broker-dealer affiliates arrange only for the offer and resale of the Bonds and the Guarantee in the United States only to qualified institutional buyers in accordance with Rule 144A.

Prohibition of Sales to EEA Retail Investors

Each Joint Bookrunner has represented and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Bonds which are the subject of the offering contemplated by this Offering Circular in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision:

- the expression "retail investor" means a person who is one (or more) of the following:
  - o a retail client as defined in point (11) of MiFID II; or
  - o a customer within the meaning of Directive 2002/92/EC (as amended, the "Insurance Mediation Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
  - o not a qualified investor as defined in the EU Prospectus Directive; and
- the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Bonds to be offered so as to enable an investor to decide to purchase or subscribe the Bonds.

LEGAL MATTERS

Certain legal matters with respect to the Bonds will be passed upon for the Issuer and Vedanta the Company by Latham & Watkins LLP as to matters of English law and US federal securities law. Certain legal matters will be passed upon for the Joint Bookrunners by Linklaters Singapore Pte. Ltd. with respect to English law and US federal securities law. Certain legal matters with respect to the Bonds will be passed upon for the Issuer and the Company by Khaitan & Co as to Indian law.

INDEPENDENT AUDITORS

The consolidated financial statements of Vedanta Resources Limited as of and for the years ended 31 March 2017 and 31 March 2018 included elsewhere in this Offering Circular have been audited by Ernst & Young LLP, independent auditors, as stated in their reports included elsewhere in this Offering Circular. Ernst & Young LLP is a member of the Institute of Chartered Accountants in England & Wales.

The consolidated financial statements of Vedanta Resources plc as of and for the year ended 31 March 2016 incorporated in this Offering Circular have been audited by Deloitte LLP, independent auditors, as stated in their reports incorporated elsewhere in this Offering Circular. Deloitte LLP is registered to carry out audit work in the UK and Ireland by the Institute of Chartered Accountants in England and Wales.

The audit reports of Ernst & Young LLP, with respect to the Company's consolidated financial statements as of and for the fiscal years ended 31 March 2017 and 2018 in accordance with guidance issued by The Institute of Chartered Accountants in England and Wales, include the following limitations: "This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditors' report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed".

The audit report of Deloitte LLP, with respect to the Company's consolidated financial statements as of and for the fiscal year ended 31 March 2016 in accordance with guidance issued by The Institute of Chartered Accountants in England and Wales, include the following limitations: "This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditors' report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed."

EXPERTS

The information included in this Offering Circular regarding Ore Reserves is based on estimates determined by Vedanta.

- The Mineral Resources and Ore Reserves of KCM's Konkola, Nchanga and Nampundwe mines were audited as of 31 March 2018, by SRK Consulting (South Africa) (Pty) Ltd and are reported in accordance with the terms and definitions of the SAMREC Code (2016). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources of CMT's copper mines are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of HZL's mines were audited as of 31 March 2018 by SRK Consulting (UK) Limited and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of Black Mountain Mining's mines are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the SAMREC Code (2016). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Ore Reserves of Skorpion were audited by AMC Consultants Ltd. as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Ore Reserves of BALCO's mines were audited by Geo Solutions Private Limited as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012). The details of the responsible Competent Persons are included in Annex C of the Offering Circular.

- The Mineral Resources and Ore Reserves of the iron ore mines of Vedanta Limited and its subsidiary, SRL, are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012).

- The Mineral Resources of Scorpion are derived from management estimates as of 31 March 2018 and are reported in accordance with the terms and definitions of the JORC Code (2012).

- During the year ended 31 March 2018, the Group recognised an impairment charge in respect of the exploratory assets in West Africa (Western Cluster, Liberia) on account of low iron ore prices, geo-political factors and no plans for any substantive expenditure resulting in continued uncertainty in the project. Therefore, the Company did not get certification of reserves and resources for the current period.

DeGolyer and MacNaughton have independently estimated the information included in this Offering Circular regarding the proved, probable, and possible reserves and contingent resources of Vedanta Limited as of 31 March 2018 according to the PRMS approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers. DeGolyer and MacNaughton has independently estimated the information included in this Offering Circular regarding the proved, probable, and possible reserves and contingent resources of the Company's oil and gas assets in Rajasthan as of 31 October 2018 according to the PRMS approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The information included in this Offering Circular regarding the proved, probable and possible oil, condensate, and sales gas reserves and the contingent and prospective resources owned by Vedanta Limited in India is based on estimates determined by Vedanta Limited.

DEFINITIONS AND GLOSSARY OF TECHNICAL TERMS

Definitions

The following definitions apply throughout this Offering Circular unless the context requires otherwise:

"**AAI**"	Aluminium Association of India
"**Act**"	Income Tax Act 2007 of the UK
"**ADSs**"	American Depositary Shares
"**Affiliate**"	a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, a specified person. A person shall be deemed to control another person if such first person possesses, directly or indirectly, the power to direct, or cause the direction of, the management and policies of such other person, whether through the ownership of voting securities, by contract or otherwise
"**Agency Agreement**"	the Agency agreement to be dated on or about the Closing Date among the Issuer, the Guarantor, the Trustee and the Principal Agent
"**Agarwal family**"	Messrs. Anil Agarwal, Dwarka Prasad Agarwal and Agnivesh Agarwal, any of their parents, spouses, children, siblings and their children of Vedanta, and the families of any such person
"**Air Act**"	Air (Prevention and Control of Pollution) Act, 1981 of India, as amended
"**aluminium business**"	the business of Vedanta comprising the aluminium operations as further described in "Business — Description of the Businesses — Aluminium Business"
"**Annual Financial Statements**"	the consolidated audited financial statements for the Company as of and for fiscal years ended 31 March 2016 and 2017
"**associated undertakings**"	has the meaning ascribed to it under Part 36 of the Companies Act
"**AT&C**"	Aggregate Technical and Commercial
"**Aurubis**"	The Aurubis Group
"**BALCO**"	Bharat Aluminium Company Limited, a company incorporated in India
"**BHP Billiton**"	BHP Billiton Limited
"**Binani Zinc**"	Binani Zinc Limited
"**Bloomberg**"	Bloomberg L.P.
"**Board**"	the Board of Directors of the Company

"**Bondholders**"	Holders of the Bonds
"**BSE**"	BSE Limited
"**CAGR**"	Compound annual growth rate
"**Cairn**"	Oil and Gas business of Vedanta Limited
"**Cairn Energy**"	Cairn Energy plc, a company incorporated in England & Wales
"**Cairn Energy Group**"	Cairn Energy and its subsidiaries
"**Cairn India**"	Erstwhile Cairn India Limited, a company incorporated in India, which merged with Vedanta Limited pursuant to the Scheme
"**Cairn India Group**"	Erstwhile Cairn India and its erstwhile subsidiaries, which are now subsidiaries of Vedanta Limited pursuant to the Scheme
"**Cairn India Shares**"	Ordinary shares of ₹10 each in the share capital of Cairn India
"**CEA**"	the Central Electricity Authority of India
"**CEC**"	Copperbelt Energy Corporation PLC, a public company in Lusaka, Zambia
"**CHALCO**"	Aluminium Corporation of China Limited
"**CIS**"	Commonwealth of Independent States
"**Clearstream**"	Clearstream Banking, S.A.
"**CMT**"	Copper Mines of Tasmania Pty Ltd, a company incorporated in Tasmania, Australia
"**Coal India**"	Coal India Limited, the government-owned coal monopoly in India
"**Codelco**"	Corporación Nacional del Cobre
"**Command Petroleum**"	Command Petroleum (India) Pty Ltd.
"**Commission**"	US Securities and Exchange Commission
"**Companies Act**"	the United Kingdom Companies Act 2006, as amended
"**Conclave**"	Conclave PTC Limited, the trustee of the Trust
"**copper business**"	the business of Vedanta comprising the copper operations as further described in "Business — Description of the Businesses — Copper Business"
"**CRISIL**"	CRISIL Limited

“**CRO**”	Chingola Refractory Ore
“**CUKHL**”	Cairn UK Holdings Limited, a company incorporated in England and Wales
“**Development Agreement**”	the development agreement dated 5 November 2004 between KCM and the Government of Zambia
“**DGH**”	Directorate General of Hydrocarbons
“**Directors**”	the Executive Directors and Non-executive Directors of the Company
“**DTC**”	The Depository Trust Company
“**EBITDA**”	Earnings before interest, tax, depreciation and amortization
“**Essel**”	Essel Mining and Industries Ltd
“**EU**”	the European Union as established by the Treaty on European Union
“**Euroclear**”	Euroclear Bank S.A./N.V.
“**Exchange Act**”	United States Securities Exchange Act of 1934, as amended
“**Executive Directors**”	Messrs. Anil Agarwal, Srinivasan Venkatakrishnan and Navin Agarwal
“**Factories Act**”	Factories Act, 1948, as amended, of India
“**Finsider**”	Finsider International Company Limited, a company incorporated in England and Wales
“**fiscal**”	the financial year ended or ending 31 March of that year
“**Freeport-McMoran**”	Freeport McMoran Copper and Gold Corporation
“**FCA**”	Financial Conduct Authority of the United Kingdom
“**FSMA**”	the United Kingdom Financial Services and Markets Act 2000, as amended
“**GDP**”	gross domestic product
“**Global Certificates**”	the Restricted Global Certificates and the Unrestricted Global Certificates
“**GoI**”	Government of India
“**GRIDCO**”	Grid Corporation of Odisha Limited, a nominee of the State Government of Odisha
“**Group**”	Vedanta and its subsidiaries on a consolidated basis

"**GSPCB**"	Goa State Pollution Control Board
"**Guarantor**"	Vedanta Resources Limited
"**Hindalco**"	Hindalco Industries Limited
"**HZL**"	Hindustan Zinc Limited, a company incorporated in India
"**IAS**"	International Accounting Standards
"**IFRS**"	International Financial Reporting Standards
"**ILZDA**"	India Lead Zinc Development Association
"**Income Tax Act**"	Income Tax Act, 1961, as amended of India
"**INDAL**"	Indian Aluminium Company Limited
"**Ind AS**"	Indian Accounting Standards
"**India**"	Republic of India
"**Internal Revenue Code**"	US Internal Revenue Code of 1986, as amended
"**IOCL**"	Indian Oil Corporation Limited
"**iron ore business**"	the business of Vedanta comprising the iron ore operations as further described in "Business — Description of the Businesses — Iron Ore Business"
"**IRS**"	US Internal Revenue Service
"**ISO**"	International Standards Organisation. ISO 14001 refers to the international standard for environmental management systems published by the ISO in 1996
"**Issuer**"	Vedanta Resources Finance II PLC
"**Joint Global Coordinators, Joint Lead Managers and Joint Bookrunners**"	Credit Suisse (Hong Kong) Limited, J.P. Morgan Securities plc and Standard Chartered Bank
"**JPY**"	Japanese Yen
"**Kapasan Project**"	the implementation of a 100,000 tpa greenfield zinc smelter plan at Kapasan, State of Rajasthan, by HZL under the terms of SOVL's shareholders' agreement
"**KCM**"	Konkola Copper Mines plc, a company incorporated in Zambia
"**KDMP**"	Konkola Deep Mining Project

"**LIBOR**"	London Interbank Offering Rate
"**Lisheen**"	Lisheen Mine Partnership and its subsidiaries
"**LME**"	the London Metal Exchange Limited
"**LML**"	the four large-scale mining licences granted to KCM by the Republic of Zambia on 31 March 2000, each of which has a term of 25 years
"**LOB**"	Lower Ore Body, a stratigraphic horizon for mineralisation
"**LTIP**"	Vedanta Resources Long-Term Incentive Plan
"**MALCO**"	Madras Aluminium Company Limited a company incorporated in India
"**MBA Fields**"	the Mangala, Bhagyam and Aishwariya fields located in the Rajasthan Block
"**MCLR**"	Marginal Cost of Funds based Lending Rate
"**MCD Rules**"	Mineral Conservation and Development Rules, 1988, as amended, of India
"**Mitsui**"	Mitsui & Co.
"**MMDR Act**"	Mines and Minerals (Development and Regulations) Act, 1957 of India, as amended
"**MoEF**"	Ministry of Environment and Forest of the GoI
"**Monte Cello**"	Monte Cello BV, a company incorporated in The Netherlands
"**Moody's**"	Moody's Investors Service, Inc.
"**MoP**"	Ministry of Power of the GoI
"**MoPNG**"	Ministry of Petroleum and Natural Gas of the GoI
"**MOU**"	Memorandum of Understanding
"**MPT**"	Mangala Processing Terminal
"**MSPL**"	Mineral Sales Private Limited
"**NELP**"	New Exploration Licensing Policy
"**NMDC**"	National Mineral Development Corporation
"**No. 1 shaft**"	the mining operations by underground methods focusing on the shaft system of the Kirila Bombwe South ore body

"**No. 3 shaft**"	the mining operations by underground methods focusing on the shaft system of the Kirila Bombwe North ore body
"**Non-executive Directors**"	Messrs. Edward Story, Geoffrey Green, Deepak Parekh, Ravi Rajagopal and Ekaterina Zotova
"**Noon Buying Rate**"	the noon buying rate in New York City for cable transfer of such foreign currency as certified for customs purposes by the Federal Reserve Bank of New York
"**NSE**"	the National Stock Exchange of India Limited
"**NTPC**"	National Thermal Power Corporation Limited
"**NYSE**"	New York Stock Exchange
"**OHSAS**"	Occupational Health and Safety Assessment Series
"**OIDA Cess**"	Indian Oil Industry (Development) Act 1974, as amended
"**OMC**"	Odisha Mining Corporation Limited
"**ONGC**"	The Oil and Natural Gas Corporation Limited
"**Ordinary Shares**"	ordinary shares of $0.10 each in the Company
"**PGCIL**"	Power Grid Corporation India Limited
"**Phase II**"	the second phase of development of the Rajasthan Block, including the development of Bhagyam and Aishwariya fields and the construction and installation of the Salaya to Bhogat section of the Pipeline
"**Pipeline**"	the heated pipeline for the transportation of crude oil produced at the Rajasthan Block of approximately 600 km
"**Platts**"	Platts, McGraw Hill Financial, a global provider of energy, petrochemicals, metals and agriculture information, including benchmark price assessments for commodity markets
"**PPAs**"	power purchase agreements
"**Principal Agent**"	Citibank, N.A., London Branch
"**PRMS**"	Petroleum Resources Management System
"**QIB**"	qualified institutional buyer within the meaning of Rule 144A
"**Rajasthan Block**"	Block RJ-ON-90/1
"**Rajasthan Block PSC**"	The PSC between the GoI and a consortium consisting of ONGC, SIPD and Vedanta Limited in relation to the Rajasthan Block

"**Ravva Block**"	Block PKGM-1
"**Ravva PSC**"	the production sharing contract for the exploration, development and production of the Ravva Block
"**RBI**"	Reserve Bank of India
"**RBI Reference Rate**"	the exchange rates certified by the Reserve Bank of India
"**Readmission**"	Admission of the Ordinary Shares to the Official List and to trading on the LSE's main market for listed securities becoming effective in accordance with, respectively, the Listing Rules and the Admission and Disclosure Standards
"**Registrar**"	Citibank, N.A., London Branch
"**Regulation S**"	Regulation S under the Securities Act
"**Regulation S Bonds**"	the Bonds which are offered and sold outside the United States to non-US persons in reliance on Regulation S
"**Relationship Agreement**"	the agreement between the Company, Volcan Investments Limited and members of the Agarwal family which had originally been entered into at the time of the Company's listing in 2003 and was subsequently amended in 2011 and 2014 to regulate the ongoing relationship between them, the principal purpose of which is to ensure that the Group is capable of carrying on business independently of Volcan, the Agarwal family and their associates. This agreement terminated automatically when Vedanta delisted from the London Stock Exchange
"**Restricted Global Certificates**"	the restricted global certificates in restricted form initially representing the Rule 144A Bonds
"**Richter**"	Richter Holding Ltd.
"**Rio Tinto**"	Rio Tinto plc
"**Rio Tinto Alcan**"	Rio Tinto Alcan Ltd.
"**Rule 144A**"	Rule 144A under the Securities Act
"**Rule 144A Bonds**"	the Bonds which are offered and sold in the United States to QIBs in reliance on Rule 144A
"**Scheme**"	Scheme of arrangement under Indian law, Cairn India merged with Vedanta Limited. For details, see "Summary"
"**SEBI**"	Securities and Exchange Board of India
"**SEBs**"	State Electricity Boards in India
"**Securities Act**"	United States Securities Act of 1933, as amended

"**Securities Act Legend**"	has the meaning as ascribed to in the Trust Deed
"**SEPCO**"	Shandong Electric Power Construction Corporation
"**SFA**"	Securities and Futures Act, Chapter 289 of Singapore
"**SGL**"	Sesa Goa Limited, a company incorporated in India
"**SGX-ST**"	Singapore Exchange Securities Trading Limited
"**SIL**"	Sesa Industries Limited, a company incorporated in India, which was formerly the subsidiary of SGL, which has since amalgamated with SGL with effect from 14 February 2011 and the appointment date of 1 April 2005
"**SIPD**"	Shell India Production Development B.V.
"**Skorpion**"	Skorpion Mining Company (Pty) Ltd and its subsidiaries
"**SOVL**"	Sterlite Opportunities and Ventures Limited, now merged with and into Sterlite
"**SRK SA**"	independent consulting firm SRK Consulting (South Africa) Pty Ltd.
"**SRK UK**"	independent consulting firm SRK Consulting (UK) Limited
"**SRL**"	Sesa Resources Limited (previously known as V.S. Dempo & Co. Private Limited)
"**S&P**"	Standard & Poor's Ratings Services, a division of McGraw-Hill Companies, Inc.
"**Sterlite**"	Sterlite Industries (India) Limited, now merged into Vedanta Limited
"**Sterlite Energy**"	Sterlite Energy Limited, a company incorporated in India
"**STL**"	Sterlite Technologies Limited, a company incorporated in India
"**Tax Department**"	the Indian Income Tax Department
"**TCM**"	Thalanga Copper Mines Pty Ltd, a company incorporated in Victoria, Australia
"**TLP**"	tailings leach plant
"**TNPCB**"	Tamil Nadu Pollution Control Board
"**Trust**"	Anil Agarwal Discretionary Trust
"**Trust Deed**"	the trust deed to be dated on or about the Closing Date between the Issuer, the Guarantor and the Trustee

"**Trustee**"	Citicorp International Limited
"**TSEHL**"	Twin Star Energy Holdings Limited, a company incorporated in Mauritius
"**Twin Star**"	Twin Star Holdings Limited, a company incorporated in Mauritius
"**UC RUSAL**"	United Company RUSAL Ltd.
"**TSPL**"	Talwandi Sabo Power Limited
"**UK Corporate Governance Code**"	The UK Corporate Governance Code issued by the Financial Reporting Council of the UK in September 2016
"**Unaudited Interim Condensed Financial Statements**"	The unaudited condensed consolidated financial statements for the Company as of and for the nine months ended 31 December 2018
"**Unrestricted Global Certificates**"	the unrestricted global certificates in registered form initially representing the Regulation S Bonds
"**USGS**"	US Geological Survey, a science agency for the US Department of the Interior with a mission to provide for the provision of reliable scientific information to describe and understand the Earth; minimise loss of life and property from natural disasters; manage water, biological, energy, and Mineral Resources; and enhance and protect quality of life
"**Vedanta**"	Vedanta and its subsidiaries and "member of Vedanta" shall be construed accordingly
"**Vedanta Limited**"	Vedanta Limited, a company incorporated in India
"**Vedanta Limited Group**"	Vedanta Limited and its subsidiaries
"**Volcan**"	Volcan Investments Limited, a company incorporated in the Bahamas
"**VRHL**"	Vedanta Resources Holdings Limited, a company incorporated in England and Wales
"**Water Act**"	Water (Prevention and Control of Pollution) Act, 1974 of India
"**Water Cess Act**"	Water (Prevention and Control of Pollution) Cess Act, 1977 of India
"**WCA**"	Workmen's Compensation Act, 1923 of India
"**Zambia**"	the Republic of Zambia
"**ZCI**"	Zambia Copper Investments Ltd, a company incorporated in Zambia
"**ZESCO**"	Zambia Electricity Supply Corporation Limited

"**zinc business**"	the business of Vedanta comprising the zinc operations as further described in "Business — Description of the Businesses — Zinc Business"

Terms and Definitions of the SAMREC Code (2016)

"**Mineral (Ore) Reserve**"	the economically mineable material derived from a Measured or Indicated Mineral Resource or both. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project and a Life of Mine Plan for an operation must have been completed, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors.
"**Proved Mineral (Ore) Reserve**"	the economically mineable material derived from a Measured Mineral Resource. It is estimated with a high level of confidence. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project or a Life of Mine Plan for an operation must have been carried out, including Circular, mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.
"**Probable Mineral (Ore) Reserve**"	the economically mineable material derived from a Measured or Indicated Mineral Resource or both. It is estimated with a lower level of confidence than a Proved Mineral Reserve. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project or a Life of Mine Plan for an operation must have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.
"**Mineral Resource**"	a concentration or occurrence of material of economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, or estimated from specific geological evidence, sampling and knowledge interpreted from an appropriately constrained and portrayed geological model. Mineral Resources are subdivided, and must be so reported, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated or Measured categories.

"**Measured Mineral Resource**"	that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable information from exploration, sampling and testing of material from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.
"**Indicated Mineral Resource**"	that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on information from exploration, sampling and testing of material gathered from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological or grade continuity but are spaced closely enough for continuity to be assumed.
"**Inferred Mineral Resource**"	that part of a Mineral Resource for which volume or tonnage, grade and mineral content can be estimated with only a low level of confidence. It is inferred from geological evidence and sampling and assumed but not verified geologically or through analysis of grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited in scope or of uncertain quality and reliability.

Terms and Definitions of the JORC Code (2012)

"**Ore Reserves**"	those portions of Mineral Resources that, after the application of all Modifying Factors, result in an estimated tonnage and grade which, in the opinion of the Competent Person making the estimates, can be the basis of a technically and economically viable project, after taking account of material relevant Modifying Factors. Deriving an Ore Reserve without a mine design or mine plan through a process of factoring of the Mineral Resource is unacceptable.
"**Proved Ore Reserve**"	the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.
"**Probable Ore Reserve**"	the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.
"**Mineral Resource**"	a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

"**Measured Mineral Resource**" — that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

"**Indicated Mineral Resource**" — that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

"**Inferred Mineral Resource**" — that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Glossary of Technical Terms

The following definitions shall apply to the technical terms used herein:

"**2D**" — two dimensional

"**2P**" — gross proved plus probable reserves

"**3D**" — three dimensional

"**4D**" — four dimensional

"**alloy**" — a compound of two or more metals

"**alumina**" — the calcined product from an alumina refinery containing at least 98% aluminium oxide (Al2O3)

"**anode**" — the electrode by which current enters the cell. For copper refining, the impure copper is used as an anode. For zinc refining, lead anodes are used. For aluminium refining, a carbon anode is used

"**anode slime**" — a deposit of insoluble residue formed from the dissolution of the anode in commercial electrolysis. In copper refining, this slime contains the precious metals that are recovered from it

"**API**" — a specific gravity scale developed by the American Petroleum Institute for measuring the relative density of various petroleum liquids

"**AS**" — acid soluble (pertaining to copper)

"**ASP**"	alkaline surfactant polymer
"**assay**"	a test to determine the level of a particular element in a sample
"**asset capacity**"	the maximum throughput of fixed facilities such as a processing plant or material handling system, which can vary over the life of the facility from the initial nameplate capacity
"**bboe**"	billion barrels of oil equivalent
"**boepd**"	barrels of oil equivalent per day
"**bopd**"	barrels of oil per day
"**bauxite**"	a general term for a rock composed of a mixture of hydrated aluminium oxides and hydroxides and generally contaminated with compounds of iron; it is the main ore from which aluminium is produced
"**Bayer process**"	this is the principal industrial means of refining bauxite to produce alumina. In the Bayer process, bauxite is washed with a hot solution of sodium hydroxide at 175°C (digestion). This converts the alumina to aluminium hydroxide which dissolves in the hydroxide solution. The other components of bauxite do not dissolve and are filtered from the solution as solid impurities (clarification). The mixture of solid impurities is called red mud, and presents a disposal problem. Next, the hydroxide solution is cooled, and the dissolved aluminium hydroxide precipitates out as a white, fluffy residue. When then heated to 1,050°C, the aluminium hydroxide decomposes to alumina (calcination), giving off water vapour in the process. A large amount of the alumina so produced is then subsequently smelted in order to produce aluminium
"**beneficiation**"	beneficiation is a variety of processes whereby minerals suitable for further processing or direct use are separated from extracted ore
"**Blast Hole Mining method**"	this mining method involves the drilling of blast holes within an ore block in an upward and/or downward direction which are then filled with explosives. These explosives are set off in stages to break up the ore block in order to extract it from the mine. The broken ore is removed by loading and transportation equipment at the mine. The cavity in the ore block is filled with mill tailing and cement to maintain the stability of the mine
"**brownfield**"	development project to upgrade, modify or further develop an existing property
"**bwpd**"	barrels of water per day
"**calcined**"	to be heated to a high temperature, but below the melting or fusing point causing loss of moisture, reduction or oxidation or thermal decomposition (a chemical reaction where a single compound breaks up into two or more simpler compounds or elements when heated)

"**cathode**"	the cathode is the conductor through which electricity leaves the cell. For copper refining, the cathode is where the refined copper is deposited. For aluminium smelting, the cathode is known as the pot lining
"**cells**"	cells are the containers in which the electrolytic process for formation of metal takes place. For aluminium smelting, these are known as pots
"**concentrate**"	material which has been processed to increase the percentage of the valuable mineral to facilitate transportation and downstream processing
"**copper concentrate**"	a product of the flotation process with a copper content typically ranging between 24% and 40%
"**CPP**"	captive power plant
"**cut-off grade**"	the lowest grade of mineralised material considered economic to mine; cut-off grade is used in the calculation of the Ore Reserves for a given deposit
"**Darcy**"	a darcy unit, a unit to measure permeability
"**DCQ**"	daily contract quantity
"**de-bottlenecking**"	the removal of a constraint on production by increasing the productivity of one part of an operation
"**deposit**"	a deposit is a concentration (or occurrence) of material of possible economic interest, in or on the earth's crust, that may include mineralised material that cannot be estimated with sufficient confidence to be classified in the Inferred category. Portions of a deposit, that do not have reasonable and realistic prospects for eventual economic extraction are not included in a Mineral Resource
"**Development**"	activities related to a mineral deposit commencing at the point economically recoverable reserves can reasonably be estimated to exist and generally continuing until commercial production begins
"**dmt**"	dry metric tonnes
"**dmtu**"	dry metric tonne unit. Iron ore prices are quoted in dmtu
"**DOC**"	declaration of commerciality
"**DORS II**"	Dynamic Ore Reserve System II; an in-house system developed to calculate the Nchanga underground reserves by applying the grade factor to the resource based on the percentage of ore drawn and forecasts of the grades to be mined
"**Draft**"	with respect to a ship's hull, the vertical distance between the waterline and the bottom of the hull (keel), with the thickness of the hull included

"**DTH**"	down the hole; a drilling method in all application segments including blasthole, water well, foundation, oil and gas, cooling systems, and drilling for heat exchange pumps
"**dwt**"	dead weight tonnes; refers to the maximum amount of tonnes of cargo a ship is able to carry
"**economic feasibility of the reserves**"	the degree on the other hand categorising the resources under economic, marginally economic and sub-economic according to the relationship between prices and extraction costs and technological exploitability
"**EOR**"	enhanced oil recovery
"**exploration**"	prospecting, sampling, mapping, drilling and other work Involved in searching for ore
"**EUR**"	estimated ultimate recovery
"**g/t**"	grams per tonne
"**Fe**"	symbol for the chemical element, iron
"**flotation**"	a wet chemistry process by which particular minerals are induced to become attached to bubbles and to float, while other minerals sink
"**flue gas**"	gas that exits to the atmosphere via a flue, which is a pipe or channel for conveying exhaust gases from a fireplace, oven, furnace, boiler or steam generator
"**FOB**"	Free on Board
"**footwall**"	the rock which lies below the ore
"**frame contracts**"	prospecting, sampling, mapping, drilling and other work involved in searching for ore
"**GAMI technology**"	technology from Guiyang Aluminium — Magnesium Design & Research Institute of China. In the GAMI technology, pots are cut into the circuit by taking complete power outage. This involves loss of production as well as regular operational disturbances to pot operation. Fuses are designed to bypass the line current, until the pot was cut into the circuit. After a calculated safe period of time, the fuses melted resulting in the pot coming into potline circuit. The GAMI technology potline has a capacity for producing initially 245,000 tpa aluminium
"**GBA**"	gas balancing agreement
"**Geostatistics**"	geostatistics is a branch of statistics used to predict probability distributions of ore grades for mining operations
"**grade**"	proportion (by weight) of the valuable element within the mineralised rock

"**greenfield**"	new development project on previously undeveloped land that is built from scratch
"**GW**"	gigawatt, a unit of electrical energy equal to 1 billion watts
"**HG**"	high grade; an international standard of grading for zinc ingots
"**hydrometallurgical**"	the treatment of metal or the separation of metal from ores and ore concentrates by liquid processes, such as leaching, extraction and precipitation to extract and recover metals from their ores
"**IPP**"	independent power plant
"**IsaProcess(TM)**"	an electrolytic refining process developed by MIM Holdings Ltd.'s Process Technologies
"**IsaSmelt(TM)**"	a lance-based intensive bath smelting technology developed by MIM Holdings Ltd.'s Process Technologies
"**JORC Code (2012)**"	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition, prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia
"**Kcal/kg**"	thousands of calories per kilogramme, a measurement of energy per unit mass
"**Koepe winder**"	a system where the winding drum is replaced by a large wheel or sheave. Both cages are connected to the same rope, which passes around some 200 degrees of the sheave in a groove of friction material. The Koepe sheave may be mounted on the ground adjacent to the headgear or in a tower over the shaft. The drive to the rope is the frictional resistance between the rope and the sheave. It requires the use of a balance rope. It is often used for hoisting heavy loads from deep shafts and has the advantage that the large inertia of the ordinary winding drum is avoided. The system has been widely used in Europe for many years, and some large projects in the UK are being equipped with winders of this type
"**km**"	kilometres
"**km^2**"	square kilometres
"**kt**"	kilotonnes
"**ktpa**"	kilotonnes per annum
"**ktpm**"	thousand tonnes per month
"**KV**"	kilovolts

"**kVA**"	kilovolt-ampere
"**kWh**"	kilowatt-hours
"**lb**"	imperial pound (mass) equivalent to 0.4536 kilograms
"**leaching**"	extracting a soluble metallic compound from an ore by selectively dissolving it in a suitable solvent
"**lead concentrate**"	product of the flotation process with a lead content typically ranging between 50% and 70%
"**life of mine**"	the remaining life of a mine in years calculated by deducting the scheduled production rates (i.e. the rate at which material will be removed from the mine, from the current defined reserves)
"**m^3**"	cubic metres
"**MAT**"	minimum alternate tax
"**metcoke**"	metallurgical coke which is produced by the carbonisation of coals or coal blends at temperatures up to 1,400 K (1,127 degrees Celsius) to produce a macroporous carbon material of high strength and relatively large lump size
"**mill**"	a plant in which ore is treated and metals are recovered or prepared for smelting; also a revolving drum used for the grinding of ores in preparation for treatment
"**million oz**"	millions of ounces
"**mineral**"	a natural, inorganic, homogeneous material that can be expressed by a chemical formula
"**mineralisation**"	the process by which minerals are introduced into a rock. More generally, a term applied to accumulations of potentially economic or related minerals in quantities ranging from anomalous to economically recoverable
"**Million Units**"	Million kilo watt hours
"**mm**"	millimetres
"**mmbbls**"	million barrels
"**mmboe**"	million barrels of oil equivalent
"**mmbtu**"	million British thermal units
"**mmscfd**"	million standard cubic feet per day

"**mt**"	metric tonnes
"**mtpa**"	million tonnes per annum
"**MW**"	megawatt, a unit of electrical energy equal to one million watts
"**OIIP**"	oil initially in place
"**open-pit mine**"	a mine that is entirely on the surface. Also referred to as an open-cut or opencast mine
"**ore**"	a mineral or mineral aggregate containing precious or useful minerals in such quantities, grade and chemical combination to make extraction economic
"**overburden**"	waste material overlying ore in an open-pit mine
"**pH**"	potential of Hydrogen; a measure of the acidity or alkalinity of a solution
"**pig iron**"	pig iron is raw iron that is the immediate product of smelting iron ore with coke and limestone in a blast furnace
"**plant**"	fixed or moveable equipment required in the process of winning or processing the ore
"**plant load factor**"	in relation to a given period, is expressed as the percentage of total kilowatt hours per unit (Kwh) generated at generator terminals to installed capacity, expressed in kilowatts (Kw) multiplied by number of hours in that period
"**ppm**"	parts per million (in relation to silver)
"**Properzi**"	technology for fabricating wire, sheets and ingots sold by Continuous Properzi S.p.A., Italy
"**Properzi CCR**"	Properzi Continuously Cast and Rolled; a copper rod technology from Continuous-Properzi S.p.A. to produce copper rods
"**PSC**"	production sharing contracts. These contracts are a common type of contract signed between a government and a resource extraction company (or group of companies) concerning how much of the resource (usually oil) extracted from the country each will receive
"**PSU**"	public sector undertaking
"**PTRR**"	post tax rate of return regime
"**PW**"	Prime Western; an international standard of grading for zinc ingots

"**Pyrometallurgical**"	pertaining to metallurgical operations that involve processing temperatures above ambient conditions, generally involving chemical reactions as distinct from metal casting substantially which involves only a physical transformation, such as, solidification
"**Rc**"	refining charge; the price paid by mining companies to smelters for refining the contained precious metals (and copper) in their concentrates to produce a payable metal. The Rc is based on the payable metal content (after deductions)
"**refining**"	the final process of upgrading of the metal quality, although for aluminium, it is the intermediate stage of converting bauxite to alumina
"**refining charge**"	the fees charged by a refinery for purifying crude metallic products
"**RLE**"	roast-leach-electro win; a process utilised in many hydrometallurgical zinc smelters whereby zinc concentrate is first roasted to remove the Sulphur content, which comes out in the form of Sulphur Dioxide gas, and then subjected to leaching and electrolysis
"**RoM**"	run of mine, which includes all material mined including the waste
"**SAG**"	semi-autogenous
"**SAMREC Code (2016)**"	the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves which sets out minimum standards, recommendations and guidelines for public reporting of exploration results, Mineral Resources and Mineral Reserves in South Africa
"**SCF**"	slag cleaning furnace
"**SHG**"	Special High Grade; an international standard of grading for zinc ingots
"**slag**"	the vitreous mass separated from the fused metals in the smelting process
"**SLOS**"	sub land open stopping
"**smelting**"	a thermal process whereby molten metal is liberated from a concentrate, with impurities separating into a lighter slag
"**SNIF degasser**"	a spinning nozzle inert flotation (SNIF) in-line degassing/filtration system for treatment of molten aluminium
"**spot market**"	a market in which commodities are bought and sold for cash and delivered immediately
"**spot price**"	the current price of a metal for immediate delivery
"**STOIIP**"	stock tank oil initially in place

"**stope**"	the underground excavation within the ore body where the main production takes place; depending on the ore body qualities, stopes can range from 5 kt to 2 mt
"**strip ratio**"	the number of units of waste material in a surface mine which must be removed in order to extract one unit of ore
"**sustaining capital expenditure**"	capital expenditure to maintain Vedanta's operating capacity
"**SX-EW**"	solvent extraction/electro winning
"**synchronise**"/ "**synchronisation**"	Synchronisation is the process of matching the speed and frequency of a generator or other source to a running network necessary to commence operations at an electricity-generating power plant
"**t**" or "**tonne**"	metric tonne equivalent to 2,204.62 lb or 1,000 kilograms
"**tailing dam**"	a low-lying depression used to confine tailings, the prime function of which is to allow enough time for heavy metals to settle out or for cyanide to be destroyed before water is discharged into the local watershed
"**Tc**"	treatment charge
"**TcRc**"	treatment charge and refining charge levied by smelters and refineries for the smelting and refining of copper concentrate from mines into copper metal
"**TCu**"	total copper
"**toll smelter**"	a smelter that is independent of the concentrate supplier and charges a fee for smelting the concentrate
"**total production**"	that part of production at mines and operations in which subsidiaries of the Company have an interest; in this Offering Circular, unless expressly stated otherwise, production also refers to total production
"**total reserves**"	that part of the reserves from a mine in which subsidiaries of the Company have an interest; in this Offering Circular, unless expressly stated otherwise, reserves also refer to total reserves
"**tpa**"	tonnes per annum
"**Vertical Crater Retreat method**"	a comparatively new method of blast hole mining in which only large diameter in-the-hole drills are used to blast down horizontal slices of ore into an opening below the block of ore being mined
"**VSS technology**"	Vertical Stud Soderberg technology; a method of primary aluminium reduction using the Soderberg process in which the electrical current is introduced to self-baking anodes by steel rods, or studs, inserted into the top of a monolithic anode

"**Whittle 4X multi-element optimisation software**"	this software is used for strategic planning and provides information which is used to determine the life of an open pit mine. This software helps define the economically workable limits of an open pit mine and provides a template for the pit design. Using this template, the KCM Group is able to determine the quantity of waste that is required to be mined in order to extract a known quantity of copper ore
"**zinc concentrate**"	product of flotation process with a zinc content typically ranging between 45% and 60%

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

* Certain references in the consolidated financial statements refer to sections in annual reports, which are not included or incorporated by reference in this Offering Circular.

Vedanta Resources Limited

Interim results for the nine months ended 31 December 2018

Financial highlights

- Revenue of US$10.6 billion, down 2% y-o-y, primarily due to shutdown of Tuticorin smelter offset by ramp up of Aluminium, Acquisition of ESL and improved commodity prices
- EBITDA of US$2.5 billion, down 7% y-o-y, primarily due to shutdown of Tuticorin smelter, input commodity inflation partially offset by improved volumes at Aluminium and better commodity prices
- EBITDA◊ margin excluding custom smelting of 28% in nine months ended 31 December 2018 (Nine months ended 31 December 2017: 34%)
- Loss Attributable to equity holders of the parent (before special items) at US$ 275 million (Nine months ended 31 December 2017: profit of US$ 105 million)
- Gross debt of US$ 16.5 billion, an increase of US$ 1.3 billion over the last nine months primarily due to acquisition of Electrosteel and temporary borrowing at HZL
- Net debt◊ of US$ 11.9 billion, increased by US$ 2.3 billion in the last nine months due to special dividends paid by subsidiaries and acquisition of Electrosteel
- Moody's revised the outlook on Company's Corporate Family Rating (CFR) from Ba3 stable to Ba3 negative
- S&P revised the outlook on Company's Rating from B+ stable to B+ negative

Business highlights

Zinc India:

- Mined metal production at 691 kt flat y-o-y post closure of open cast operations, record underground production at 691kt up 31% y-o-y
- Record lead metal production at 145kt, up 23% y-o-y
- Record refined silver production at 15.7 mn ounces, up 26% y-o-y

Zinc International:

- First shipment made from Gamsberg in December 2018
- Gamsberg project launched by the President of South Africa on 28 February 2019

Oil & Gas:

- Average gross production of 189 kboepd in nine months FY 2019, up 3% y-o-y
- 8 development drilling rigs as on December 2018, 64 wells drilled, and 17 wells hooked up during nine months ended 31 December 2018 in Rajasthan

Aluminium:

- Record aluminium production at 1,478kt, up 23% y-o-y
- Record Alumina production from Lanjigarh refinery at 1,077kt, up 25% y-o-y

Power:

- 1980 MW TSPL plant achieved record availability of 89% in nine months FY2019

Copper India:

- Filed Writ Petition with Madras High Court on 1st March 2019 as per directive from Hon'ble Supreme Court

Copper Zambia:

- Integrated metal production at 72kt, up 10% y-o-y
- Custom production at 73kt, down 19% y-o-y due to low concentrate availability in the region

Iron Ore:

- Goa operations remain suspended due to statewide directive from the Supreme Court; continue to engage with the Government for resumption of mining operations
- Production of saleable ore at Karnataka at 3.2 million tonnes, up 57% y-o-y

Steel:

- Exit monthly hot metal production run rate of 1.5 Mtpa

Consolidated Group results table *(US$ million)*

Consolidated Group results	**Nine months ended 31 December 2018**	**Nine months ended 31 December 2017**	**% Change**
Revenue	10,602	10,831	(2)%
EBITDA◊	2,517	2,698	(7)%
EBITDA margin◊	24%	25%	-
EBITDA margin excluding custom smelting (%)◊	28%	34%	-
Operating profit before special items	1,426	1,904	(25)%
Profit/(loss) Attributable to equity holders of the parent (before special items)	(275)	105	-
Profit/(loss) attributable to equity holders of the parent (after special items)	(260)	(257)	1%
Underlying attributable profit/(loss)◊	(246)	106	-
ROCE %◊	11.6%	14.6%	-
Dividend (US cents per share)	**-**	**24**	**-**

◊ Indicates alternate performance measures that are defined in detail in "Other Information".

CONDENSED CONSOLIDATED INCOME STATEMENT

(US$ million except as stated)

		Nine months ended 31 December 2018 (Unaudited)			Nine months ended 31 December 2017 (Unaudited)		
	Note	Before Special items	Special items	Total	Before Special items	Special items	Total
Revenue		10,601.8	-	10,601.8	10,830.7	-	10,830.7
Cost of sales		(8,681.8)	-	(8,681.8)	(8,495.3)	45.8	(8,449.5)
Gross profit		**1,920.0**	**-**	**1,920.0**	**2,335.4**	**45.8**	**2,381.2**
Other operating income		112.7	-	112.7	53.6	-	53.6
Distribution costs		(209.9)	-	(209.9)	(194.0)	-	(194.0)
Administrative expenses		(396.4)	-	(396.4)	(291.0)	-	(291.0)
Impairment reversal/ (charge)	5	-	38.1	38.1	-	(772.1)	(772.1)
Operating profit / (loss)		**1,426.4**	**38.1**	**1,464.5**	**1,904.0**	**(726.3)**	**1,177.7**
Investment revenue		275.6	-	275.6	341.8	-	341.8
Finance costs	5	(956.9)	8.6	(948.3)	(955.9)	(108.1)	(1,064.0)
Other gains and (losses) [net]	6	(65.7)	-	(65.7)	(8.9)	(7.0)	(15.9)
Profit / (loss) before taxation (a)		**679.4**	**46.7**	**726.1**	**1,281.0**	**(841.4)**	**439.6**
Net tax (expense)/ credit (b)	7	**(542.1)**	**(16.3)**	**(558.4)**	**(387.3)**	**220.3**	**(167.0)**
Profit/ (loss) for the period from continuing operations (a+b)		**137.3**	**30.4**	**167.7**	**893.7**	**(621.1)**	**272.6**
Attributable to:							
Equity holders of the parent		(275.0)	15.3	(259.7)	105.2	(362.6)	(257.4)
Non-controlling interests		412.3	15.1	427.4	788.5	(258.5)	530.0
Profit/ (loss) for the period from continuing operations (a+b)		**137.3**	**30.4**	**167.7**	**893.7**	**(621.1)**	**272.6**

CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(US$ million)

	Nine months ended 31 December 2018 (Unaudited)	Nine months ended 31 December 2017 (Unaudited)
Profit for the period from operations	**167.7**	**272.6**
Items that will not be reclassified subsequently to income statement:		
Remeasurement of net defined benefit plans	(4.0)	(2.8)
Tax effects on net defined benefit plans	2.9	1.5
Loss on fair value of financial asset investments	(1.3)	-
Total (a)	**(2.4)**	**(1.3)**
Items that may be reclassified subsequently to income statement:		
Exchange differences arising on translation of foreign operations	(667.8)	170.6
Gain on fair value of available-for-sale financial assets	-	12.4
Cumulative gains/(losses) of cash flow hedges	19.7	(68.2)
Tax effects arising on cash flow hedges	(8.6)	21.9
Gain on cash flow hedges recycled to income statement	(14.9)	(0.4)
Tax effects arising on cash flow hedges recycled to income statement	4.9	0.1
Total (b)	**(666.7)**	**136.4**
Other comprehensive (loss)/ income for the period (a+b)	**(669.1)**	**135.1**
Total comprehensive (loss)/ income for the period	**(501.4)**	**407.7**
Attributable to:		
Equity holders of the parent	(519.2)	(205.6)
Non-controlling interests	17.8	613.3
Total comprehensive (loss)/ income for the period	**(501.4)**	**407.7**

CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(US$ million)

	Note	As at 31 December 2018 (Unaudited)	As at 31 March 2018 (Audited)
Assets			
Non-current assets			
Goodwill		12.2	12.2
Intangible assets		108.8	123.1
Property, plant and equipment		17,551.1	17,727.3
Leasehold land		52.2	57.0
Financial asset investment	10	592.5	24.5
Non-current tax assets		522.9	521.1
Other non-current assets		973.4	659.2
Deferred tax assets		767.8	916.7
		20,580.9	**20,041.1**
Current assets			
Inventories		2,144.3	2,037.7
Trade and other receivables		1,649.9	1,526.9
Financial instruments (derivatives)		44.8	24.0
Current tax assets		0.8	2.2
Liquid investments	10	3,640.3	4,807.8
Cash and cash equivalents	10	707.2	798.7
		8,187.3	**9,197.3**
Total assets		**28,768.2**	**29,238.4**
Liabilities			
Current liabilities			
Short-term borrowings	10	(5,497.9)	(5,460.3)
Trade and other payables		(5,699.3)	(6,077.5)
Financial instruments (derivatives)		(51.8)	(22.1)
Retirement benefits		(16.1)	(18.0)
Provisions		(16.5)	(22.1)
Current tax liabilities		(53.5)	(53.9)
		(11,335.1)	**(11,653.9)**
Net current liabilities		**(3,147.8)**	**(2,456.6)**
Non-current liabilities			
Medium and long-term borrowings	10	(11,004.1)	(9,733.5)
Trade and other payables		(207.7)	(118.0)
Financial instruments (derivatives)		(11.6)	(18.1)
Deferred tax liabilities		(773.6)	(748.5)
Retirement benefits		(63.7)	(62.4)
Provisions		(355.6)	(351.8)
Non-equity non-controlling interests		(11.9)	(11.9)
		(12,428.2)	**(11,044.2)**
Total liabilities		**(23,763.3)**	**(22,698.1)**
Net assets		**5,004.9**	**6,540.3**
Equity			
Share capital	15	28.5	30.4
Share premium		201.5	201.5
Treasury shares		-	(558.3)
Share-based payment reserve		-	13.3
Hedging reserve		(93.1)	(92.5)
Other reserves		(129.5)	155.2
Retained earnings		(962.4)	(78.8)
Equity attributable to equity holders of the parent		**(955.0)**	**(329.2)**
Non-controlling interests		5,959.9	6,869.5
Total equity		**5,004.9**	**6,540.3**

The interim condensed consolidated financial statements of Vedanta Resources Limited (formerly Vedanta Resources plc) were approved by the Board of Directors on 3rd April 2019 and signed on their behalf by:

Srinivasan Venkatakrishnan
Chief Executive Officer

CONDENSED CONSOLIDATED CASH FLOW STATEMENT

(US$ million)

	Note	Nine months ended 31 December 2018 (Unaudited)	Nine months ended 31 December 2017 (Unaudited)
Operating activities			
Profit before taxation		726.1	439.6
Adjustments for:			
Depreciation and amortisation		1,090.9	794.2
Investment revenues		(275.6)	(341.8)
Finance costs		948.3	1,064.0
Other gains and losses [net]	6	65.7	15.9
Loss on disposal of PP&E		7.2	0.7
Write-off of unsuccessful exploration costs		0.4	0.2
Share-based payment charge		13.2	15.4
Impairment (reversal)/charge (net)		(38.1)	772.1
Other non-cash items		(0.5)	-
Operating cash flows before movements in working capital		**2,537.6**	**2,760.3**
Increase in inventories		(111.0)	(634.1)
Increase in receivables		(545.8)	(670.4)
(Decrease)/Increase in payables		(435.6)	667.0
Cash generated from operations		**1,445.2**	**2,122.8**
Dividend received		3.9	2.3
Interest income received		103.4	202.2
Interest paid		(1,007.9)	(1,028.4)
Income taxes paid		(476.5)	(359.2)
Dividends paid		(112.9)	(164.4)
Net cash (outflow)/ inflow from operating activities		**(44.8)**	**775.3**
Cash flows from investing activities			
Purchases of property, plant and equipment and intangibles		(1,014.7)	(654.6)
Proceeds from disposal of property, plant and equipment		7.2	1.6
Proceeds from redemption of liquid investments	10	10,482.4	12,235.2
Purchases of liquid investments	10	(9,358.6)	(9,683.1)
Purchases of financial asset investments	10	(200.0)	
Acquisition through business combination		(788.3)	(134.1)
Net cash (used in)/ from investing activities		**(872.0)**	**1,765.0**
Cash flows from financing activities			
Issue of ordinary shares		0.4	0.3
Purchase of shares under DSBP scheme		-	(2.4)
Dividends paid to non-controlling interests of subsidiaries		(982.0)	(664.0)
Acquisition of additional interests in subsidiary/ share purchase by subsidiary		(20.6)	(31.4)
Sale of treasury shares		18.6	-
Exercise of stock options in subsidiary		1.0	6.0
Proceeds from/ (Repayment of) working capital loans (net)		544.8	(29.6)
Proceeds from other short-term borrowings		706.5	2,619.7
Repayment of other short-term borrowings		(1,961.1)	(6,890.0)
Buyback of non-convertible bond		-	(1,128.5)
Proceeds from medium and long-term borrowings		2,970.6	3,363.8
Repayment of medium and long-term borrowings		(377.2)	(1,150.9)
Net cash from /(used in) financing activities		**901.0**	**(3,907.0)**
Net decrease in cash and cash equivalents		**(15.8)**	**(1,366.7)**
Effect of foreign exchange rate changes		(75.7)	18.3
Cash and cash equivalents at beginning of period		798.7	1,682.2
Cash and cash equivalents at end of period		**707.2**	**333.8**

CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the nine months ended 31 December 2018 (Unaudited)

(US$ million)

	Attributable to equity holders of the parent									
	Share capital	Share premium	Treasury Shares**	Share-based payment reserves	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling Interests	Total equity
At 1 April 2018	**30.4**	**201.5**	**(558.3)**	**13.3**	**(92.5)**	**155.2**	**(78.8)**	**(329.2)**	**6,869.5**	**6,540.3**
Profit / (loss) for the period	-	-	-	-	-	-	(259.7)	(259.7)	427.4	167.7
Other comprehensive loss for the period	-	-	-	-	(0.6)	(258.9)	-	(259.5)	(409.6)	(669.1)
Total comprehensive income / (loss)for the period	**-**	**-**	**-**	**-**	**(0.6)**	**(258.9)**	**(259.7)**	**(519.2)**	**17.8**	**(501.4)**
Transfers	-	-	-	-	-	(25.8)	25.8	-	-	-
Dividends paid	-	-	-	-	-	-	(112.9)	(112.9)	(961.5)	(1,074.4)
Sale/cancellation of treasury shares	(2.3)	-	556.9	-	-	-	(536.0)	18.6	-	18.6
Exercise of stock options	0.4	-	1.4	(18.8)	-	-	17.4	0.4	-	0.4
Recognition of share based payment	-	-	-	5.5	-	-	-	5.5	-	5.5
Non-controlling interest on business combination (Note 4a)	-	-	-	-	-	-	-	-	29.1	29.1
Change in fair value of put option liability/conversion option asset/ derecognition of non controlling interest	-	-	-	-	-	-	(7.1)	(7.1)	5.9	(1.2)
Other changes in non-controlling interests*	-	-	-	-	-	-	(11.1)	(11.1)	(0.9)	(12.0)
At 31 December 2018 (Unaudited)	**28.5**	**201.5**	**-**	**-**	**(93.1)**	**(129.5)**	**(962.4)**	**(955.0)**	**5,959.9**	**5,004.9**

* *Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and share based payment charge by subsidiaries.*

** *Refer Note 15*

For the year ended 31 March 2018 (Audited)

(US$ million)

	Attributable to equity holders of the parent									
	Share capital (Note 15)	**Share premium**	**Treasury Shares**	**Share-based payment reserves**	**Hedging reserve**	**Other reserves[1]**	**Retained earnings**	**Total**	**Non-controlling Interests**	**Total equity**
At 1 April 2017	**30.1**	**201.5**	**(557.9)**	**28.2**	**(90.9)**	**140.5**	**(160.0)**	**(408.5)**	**6,423.1**	**6,014.6**
Profit/(loss) for the year	-	-	-	-	-	-	238.6	238.6	1,236.2	1,474.8
Other comprehensive income/(loss) for the year	-	-	-	-	(1.6)	34.0	-	32.4	39.5	71.9
Total comprehensive income/(loss) for the year	**-**	**-**	**-**	**-**	**(1.6)**	**34.0**	**238.6**	**271.0**	**1,275.7**	**1,546.7**
Acquisition of shares under DSBP scheme	-	-	(0.9)	-	-	-	(1.5)	(2.4)	-	(2.4)
Transfers	-	-	-	-	-	(19.3)	19.3	-	-	-
Dividends paid/ payable	-	-	-	-	-	-	(164.4)	(164.4)	(828.3)	(992.7)
Exercise of stock options	0.3	-	0.5	(27.0)	-	-	26.5	0.3	-	0.3
Recognition of share-based payment	-	-	-	12.1	-	-	-	12.1	-	12.1
Non-controlling interest on business combination (Note 4b)	-	-	-	-	-	-	-	-	17.1	17.1
Recognition of put option liability/derecognition of non controlling interest	-	-	-	-	-	-	(15.0)	(15.0)	(21.6)	(36.6)
Other changes in non-controlling interests*	-	-	-	-	-	-	(22.3)	(22.3)	3.5	(18.8)
At 31 March 2018	**30.4**	**201.5**	**(558.3)**	**13.3**	**(92.5)**	**155.2**	**(78.8)**	**(329.2)**	**6,869.5**	**6,540.3**

* *Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and share based payment charge by subsidiaries.*

For the nine months ended 31 December 2017 (Unaudited)

(US$ million)

	Attributable to equity holders of the parent									
	Share capital	Share premium	Treasury Shares	Share-based payment reserves	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling Interests	Total equity
At 1 April 2017	**30.1**	**201.5**	**(557.9)**	**28.2**	**(90.9)**	**140.5**	**(160.0)**	**(408.5)**	**6,423.1**	**6,014.6**
Profit / (loss) for the period	-	-	-	-	-	-	(257.4)	(257.4)	530.0	272.6
Other comprehensive income /(loss) for the period	-	-	-	-	(17.2)	69.0	-	51.8	83.3	135.1
Total comprehensive income / (loss)for the period	**-**	**-**	**-**	**-**	**(17.2)**	**69.0**	**(257.4)**	**(205.6)**	**613.3**	**407.7**
Acquisition of shares under DSBP scheme	-	-	(0.9)	-	-	-	(1.5)	(2.4)	-	(2.4)
Transfers	-	-	-	-	-	(29.4)	29.4	-	-	-
Dividends paid/ payable	-	-	-	-	-	-	(164.4)	(164.4)	(55.3)	(219.7)
Exercise of stock options	0.2	-	0.4	(0.8)	-	-	0.4	0.2	-	0.2
Recognition of share based payment	-	-	-	10.7	-	-	-	10.7	-	10.7
Other changes in non-controlling interests*	-	-	-	-	-	-	(10.9)	(10.9)	(9.7)	(20.6)
At 31 December 2017 (Unaudited)	**30.3**	**201.5**	**(558.4)**	**38.1**	**(108.1)**	**180.1**	**(564.4)**	**(780.9)**	**6,971.4**	**6,190.5**

1 *Other reserves comprise the currency translation reserve, merger reserve, investment revaluation reserve, debenture redemption reserve, capital redemption reserve and the general reserves established in the statutory accounts of the Group's subsidiaries.*

* *Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and share based payment charge by subsidiaries.*

NOTES TO THE FINANCIAL INFORMATION

1. Presentation of Financial Statements

General Information

Vedanta Resources Limited (formerly Vedanta Resources Plc) ('Company' or 'Vedanta') is a company incorporated and domiciled in the United Kingdom. The Company and its consolidated subsidiaries (collectively referred as "Group") is a diversified global natural resources major.

Buy back and delisting of Vedanta Resources plc shares:

On 31 July 2018, the Independent Committee of the Board of Vedanta and Volcan announced that they had reached an agreement on the terms of a recommended cash offer for Vedanta Resources plc pursuant to which Volcan would acquire the remaining issued and to be issued share capital of Vedanta not currently owned or controlled by Volcan. Under the terms of the Volcan Offer, Vedanta's shareholders received $10.89 per share in cash for each Vedanta's share. The offer price implied an equivalent value of 825 pence per Vedanta's share based on the exchange rate of £:US$ of 1.3203 as at 29 June 2018. In addition, Vedanta's shareholders were entitled to receive the dividend of $0.41 per Vedanta's share in respect of the year ended 31 March 2018.

The Volcan Offer was declared unconditional in all respects on 3 September 2018 and Volcan announced that Vedanta had applied for its shares to be cancelled from listing on the Official List of the UK Listing Authority and to trading on the main market for listed securities of the London Stock Exchange, such cancellation took effect on 1 October 2018.

On 27 September 2018, Volcan announced that it had received valid acceptances in respect of 86,487,585 Vedanta shares, representing approximately 91.61 % in value and in voting rights of the Vedanta shares to which the Offer relates. Consequently, Volcan was able to implement the procedure under Chapter 3 of Part 28 of the Companies Act 2006 to compulsorily acquire all of the outstanding Vedanta shares which it does not already hold or has not already acquired, contracted to acquire or in respect of which it has not already received valid acceptances (the "Compulsory Acquisition"). The transfer of Vedanta shares in accordance with the Compulsory Acquisition completed on 9 November 2018.

In addition, at the General Meeting of Vedanta shareholders held on 1 October 2018, the resolution put to shareholders in relation to the re-registration of Vedanta to a private limited company was duly passed on a poll. Re-registration of Vedanta as a private limited company became effective on 29 October 2018 pursuant to which the name has been changed to Vedanta Resources Limited.

Following the delisting of the Company's shares from the Official list of the London Stock Exchange, 6,904,995 ordinary shares of US 10 Cents each, which were issued on the conversion of certain convertible bonds issued by one of Vedanta's subsidiaries and held through a global depositary receipt (GDR), were redeemed and the GDR listing was cancelled.

Basis of Preparation

The interim condensed consolidated financial statements for the nine months ended 31 December 2018 have been prepared in accordance with International Accounting Standard (IAS) 34 Interim Financial Reporting as adopted by the European Union ('EU').

The interim condensed consolidated financial statements do not include all of the information and disclosures required in the annual financial statements, and should be read in conjunction with the Group's annual financial statements for the year ended 31 March 2018, which were prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU. The interim condensed consolidated financial statements do not constitute statutory accounts as defined in section 434 of the Companies Act 2006. The financial information for the full year is based on the statutory accounts for the financial year ended 31 March 2018. A copy of the statutory accounts for that year has been delivered to the Registrar of Companies. The auditor's report on those accounts was unqualified, did not include a reference to any matters to which the auditor drew attention by way of an emphasis of matter and did not contain a statement under sections 498 (2) or (3) of the Companies Act 2006.

The set of condensed consolidated financial statements included in the interim financial report has been prepared using the going concern basis of accounting.

Certain comparative figures appearing in these interim condensed consolidated financial statements have been regrouped and/or reclassified to better reflect the nature of those items.

2(a). Accounting policies

The interim condensed consolidated financial statements are prepared using the same accounting policies as applied in the audited 31 March 2018 financial statements except for those mentioned below.

2(b). Application of new and revised standards

The Group has adopted, with effect from 01 April 2018, the following new and revised standards and interpretations. Their adoption has not had any significant impact on the amounts reported in the interim condensed consolidated financial statements.

IFRS 15 Revenue from Contracts with Customers

The Group has adopted IFRS 15 Revenue from contracts with Customers with effect from 1 April , 2018 which outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The standard replaces most of the current revenue recognition guidance. The core principle of the new standard is for companies to recognize revenue when the control of the goods and services is transferred to the customer as against the transfer of risk and rewards. As per the Group's current revenue recognition practices, transfer of control happens at the same point as transfer of risk and rewards thus not effecting the revenue recognition. The amount of revenue recognised reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

Under this standard, services provided post transfer of control of goods are treated as separate performance obligation and requires proportionate revenue to be deferred along with associated costs and to be recognized over the period of service. The Group provides shipping and insurances services after the date of transfer of control of goods and therefore has identified it as a separate performance obligation. As per the result of evaluation of contracts of the relevant revenue streams, it is concluded that the impact of this change is immaterial to the Group and hence no accounting changes have been done.

The Group has products which are provisionally priced at the date revenue is recognised. Revenue in respect of such contracts are recognised when control passes to the customer and is measured at the amount the entity expects to be entitled – being the estimate of the price expected to be received at the end of the measurement period. Post transfer of control of goods, subsequent movements in provisional pricing are accounted for in accordance with IFRS 9 "Financial Instruments" rather than IFRS 15 and therefore the IFRS 15 rules on variable consideration do not apply. These 'provisional pricing' adjustments i.e. the consideration received post transfer of control has been included in total revenue on the face of the Consolidated Income statement. The accounting for revenue under IFRS 15 does not, therefore, represent a substantive change from the Group's previous practice for recognising revenue from sales to customers.

The Group has adopted the modified transitional approach as permitted by the standard under which the comparative financial information is not restated. The accounting changes required by the standard are not having material effect on the Group's financial statements and no transitional adjustment is recognised in retained earnings at 1 April, 2018.

IFRS 9 Financial Instruments

IFRS 9 has reduced the complexity of the current rules on financial instruments as mandated in IAS 39. It has fewer classification and measurement categories as compared to IAS 39. It eliminates the rule-based requirement of segregating embedded derivatives from financial assets and tainting rules pertaining to held to maturity investments. For financial assets which are debt instruments, IFRS 9 establishes a principle-based approach for classification based on cash flow characteristics of the asset and the business model in which an asset is held. For an investment in an equity instrument which is not held for trading, IFRS 9 permits an irrevocable election, on initial recognition, on an individual share-by- share basis, to present all fair value changes from the investment in other comprehensive income. No amount recognized in other comprehensive income on such equity investment would ever be reclassified to profit or loss. It requires the entity, which chooses to designate a liability as at fair value through profit or loss, to present the portion of the fair value change attributable to the entity's own credit risk in the other comprehensive income. IFRS 9 replaces the 'incurred loss model' in IAS 39 with an 'expected credit loss' model. The measurement uses a dual measurement approach, under which the loss allowance is measured as either 12 month expected credit losses or lifetime expected credit losses. The standard also introduces new presentation and disclosure requirements.

For transition, the Group has elected to apply the limited exemptions in IFRS 9 relating to the classification, measurement and impairment requirements for financial assets and accordingly has not restated comparative periods.

The Group has adopted IFRS 9 from 01 April 2018. The areas impacted on adopting IFRS 9 on the Group are detailed below.

Classification and measurement

The measurement and accounting treatment of the Group's financial assets is materially unchanged with the exception of equity securities previously categorised as available for sale. These will be held at fair value through other comprehensive income, meaning the recycling of gains and losses on disposal and impairment losses is no longer permitted for this category.

Impairment

Based on the Group's assessment, under expected credit loss model, the impairment of financial assets held at amortised cost does not have a material impact on the Group's results, given the low exposure to counterparty default risk as a result of the credit risk management processes that are in place.

Hedge accounting

The Group has adopted the IFRS 9 hedge accounting requirements. The adoption of the new standard has no effect on the amounts recognised in relation to the existing hedging arrangements.

IAS 23: Borrowings Costs: The amendment clarifies that an entity considers any borrowings made specifically for the purpose of obtaining a qualifying asset as part of the general borrowings, when substantially all of the activities necessary to prepare that asset for its intended use or sale are complete. The amendment is applicable to borrowing costs incurred on or after the beginning of the annual reporting period in which the entity first applies those amendments. The Group has applied the amendment prospectively from the current reporting year i.e. for the borrowing costs incurred on or after 01 April 2018.

Based on the Amendment, the Group has now capitalized certain borrowing costs as general borrowings in qualifying assets, that were previously considered specific in nature by the Group and hence ineligible for these qualifying assets. This has resulted in capitalization of interest expense of US$ 40.0 million for the nine months ended 31 December 2018 with a consequent impact on net profit before tax for the period.

The change did not have any significant impact on the Group's consolidated statement of financial position and the consolidated cash flow statement.

IFRIC 22: Foreign Currency Transactions and Advance Consideration: The Interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which an entity initially recognises the non-monetary asset or non-monetary liability arising from the advance consideration. This Interpretation does not have any impact on the Group's consolidated financial statements as the Group applies the same accounting practice.

IFRS 2 Share-based Payment: The IASB issued amendments to IFRS 2 that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled. These amendments do not have any impact on the Group's consolidated financial statements.

Standards issued but not yet effective

IFRS 16 – Leases

IFRS 16, Leases, replaces the existing standard on accounting for leases, IAS 17. The Group will adopt IFRS 16 from 1 April 2019 under the modified retrospective approach, and accordingly the comparative figures will not be restated. For contracts in place at this date, the Group will continue to apply its existing definition of leases under current accounting standards ("grandfathering"), instead of reassessing whether existing contracts are or contain a lease at the date of application of the new standard.

This standard introduces a single lessee accounting model and requires a lessee to recognize a 'right of use asset' (ROU) and a corresponding 'lease liability' for all leases with the exception of short-term (under 12 months) and low-value leases. Lease costs will be recognised in the income statement over the lease term in the form of depreciation on the ROU asset and finance charges representing the unwinding of the discount on the lease liability. In contrast, the accounting requirements for lessors remain largely unchanged.

The Standard, in addition to increasing the Group's recognised assets and liabilities, impacts the classification and timing of expenses and consequently the classification between cash flow from operating activities and cash flow from financing activities. Many commonly used financial ratios and performance metrics, using existing definitions, will also be impacted including net debt, gearing, EBITDA, unit costs and operating cash flows. The Group is in an advanced stage of completion of its assessment of the effects of implementation of IFRS 16 and the results so far do not indicate that there would be any material impact on the Group's Financial Statements.

For leases that have been classified to date as operating leases in accordance with IAS 17, the lease liability will be recognised at the present value of the remaining lease payments, discounted using the incremental borrowing rate as on 1 April 2019. The right-of-use asset will generally be measured at the amount of the lease liability adjusted for advance payments and accrued liabilities from the previous financial year.

Information on the undiscounted amount of the Group's operating lease commitments under IAS 17 'Leases', the current leasing standard, is disclosed in note 11 A. 'Commitments'.

2.(c) Foreign Exchange Rate

The following exchange rate to US dollar ($) has been applied:

	Average rate for nine months ended 31 December 2018	Average rate for nine months ended 31 December 2017	As at 31 December 2018	As at 31 March 2018
Indian rupee	69.68	64.49	69.79	65.04

3. Segment Information

The Group is a diversified natural resources Group engaged in exploring, extracting and processing minerals and oil and gas. We produce zinc, lead, silver, copper, aluminium, iron ore, oil and gas and commercial power and have a presence across India, Zambia, South Africa, Namibia, UAE, Ireland, Australia, Liberia, Japan, South Korea and Taiwan. The Group is also in the business of port operations and manufacturing of glass substrate and steel.

The Group's reportable segments defined in accordance with IFRS 8 are as follows:

- Zinc-India
- Zinc-International
- Oil and Gas
- Iron Ore
- Copper-India / Australia
- Copper-Zambia
- Aluminium
- Power

'Others' segment mainly comprises of port/berth, steel and glass substrate business and those segments which do not meet the quantitative threshold for separate reporting.

Management monitors the operating results of reportable segments for the purpose of making decisions about resources to be allocated and for assessing performance. Segment performance is evaluated based on the EBITDA of each segment. Business segment financial data includes certain corporate costs, which have been allocated on an appropriate basis. Inter-segment sales are charged based on prevailing market prices except for power segment sales to aluminium segment amounting to US$ 9.7 million for the nine months ended 31 December 2018 (31 December 2017: US$ 20.4 million), which were at cost.

The following tables present revenue and profit information for the nine months ended 31 December 2018 and 31 December 2017 and certain asset and liability information regarding the Group's reportable segments as at 31 December 2018 and year ended 31 March 2018. Items after operating profit are not allocated by segment.

(a) Reportable segments

Nine months ended 31 December 2018

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Others	Elimination	Total operations
REVENUE											
Sales to external customers	2,203.7	249.1	1,441.9	295.3	1,138.9	818.2	3,296.7	698.0	460.0	-	10,601.8
Inter-segment sales	-	-	-	0.6	0.0	50.2	2.5	0.0	5.1	(58.4)	-
Segment revenue	**2,203.7**	**249.1**	**1,441.9**	**295.9**	**1,138.9**	**868.4**	**3,299.2**	**698.0**	**465.1**	**(58.4)**	**10,601.8**
Segment Result											
EBITDA[1]	1,122.4	44.0	845.0	56.4	(23.9)	(44.2)	259.5	167.4	90.7	-	2,517.3
Depreciation and amortisation[2]	(190.0)	(38.9)	(463.0)	(23.8)	(16.3)	(80.5)	(171.1)	(65.6)	(41.7)	-	(1,090.9)
Operating profit/(loss) before special items	**932.4**	**5.1**	**382.0**	**32.6**	**(40.2)**	**(124.7)**	**88.4**	**101.8**	**49.0**	**-**	**1,426.4**
Investment revenue											275.6
Finance costs											(956.9)
Other gains and (losses) [net]											(65.7)
Special items											46.7
PROFIT BEFORE TAXATION											**726.1**
Segments assets	2,709.5	860.2	3,967.0	540.0	1,195.4	1,886.7	7,168.6	2,791.5	1,277.0	-	22,395.9
Financial asset investments											592.5
Deferred tax assets											767.8
Liquid investments											3,640.3
Cash and cash equivalents											707.2
Tax assets											523.7
Others											140.8
TOTAL ASSETS											**28,768.2**
Segment liabilities	(438.5)	(141.9)	(1,361.2)	(146.6)	(499.0)	(632.8)	(2,176.7)	(233.4)	(150.6)	-	(5,780.7)
Short-term borrowings											(5,497.9)
Current tax liabilities											(53.5)
Medium and long-term borrowings											(11,004.1)
Deferred tax liabilities											(773.6)
Others											(653.5)
TOTAL LIABILITIES											**(23,763.3)**
Other segment information											
Additions to property, plant and equipment including intangible assets**	386.1	158.8	344.4	3.1	29.0	24.8	206.3	3.2	705.8		1,861.5
Impairment reversal/ (losses)[3]	-	-	38.1	-	-	-		-	-		38.1

Nine months ended 31 December 2017

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Others	Elimination	Total operations
REVENUE											
Sales to external customers	2,407.6	406.9	1,052.4	317.7	2,663.9	918.7	2,472.2	579.8	11.5	-	10,830.7
Inter-segment sales	-	-	-	3.5	0.4	56.1	2.8	23.1	1.5	(87.4)	-
Segment revenue	**2,407.6**	**406.9**	**1,052.4**	**321.2**	**2,664.3**	**974.8**	**2,475.0**	**602.9**	**13.0**	**(87.4)**	**10,830.7**
Segment Result											
EBITDA[1]	1,336.4	179.9	609.7	22.0	109.6	35.1	219.0	166.1	20.4	-	2,698.2
Depreciation and amortisation[2]	(115.4)	(20.5)	(304.4)	(55.1)	(18.3)	(84.5)	(135.6)	(56.9)	(3.5)	-	(794.2)
Operating profit/(loss) before special items	**1,221.0**	**159.4**	**305.3**	**(33.1)**	**91.3**	**(49.4)**	**83.4**	**109.2**	**16.9**	**-**	**1,904.0**
Investment revenue											341.8
Finance costs											(955.9)
Other gains and (losses) [net]											(8.9)
Special items											(841.4)
PROFIT BEFORE TAXATION											**439.6**
Other segment information											
Additions to property, plant and equipment including intangible assets**	299.4	161.2	98.6	9.9	31.6	17.9	107.8	2.2	237.2	-	965.8
Impairment reversal/ (losses) [3]	-	-	(16.9)	(755.2)	-	-	-	-	-	-	(772.1)

As at 31 March 2018

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Others	Elimination	Total operations
Segments assets	2,575.2	862.0	3,706.0	613.2	1,447.0	2,017.2	7,440.4	2,950.3	424.0	-	22,035.3
Financial asset investments											24.5
Deferred tax assets											916.7
Liquid investments											4,807.8
Cash and cash equivalents											798.7
Tax assets											523.3
Others											132.1
TOTAL ASSETS											**29,238.4**
Segment liabilities	(637.6)	(170.3)	(851.3)	(249.8)	(1,367.8)	(757.6)	(2,061.0)	(268.2)	(30.5)	-	(6,394.1)
Short-term borrowings											(5,460.3)
Current tax liabilities											(53.9)
Medium and long-term borrowings											(9,733.5)
Deferred tax liabilities											(748.5)
Others											(307.8)
TOTAL LIABILITIES											**(22,698.1)**

1 *EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.*

2 *Depreciation and amortisation is also provided to the chief operating decision maker on a regular basis.*

3 *Included under special items (Note 5).*

4 *Revenue for nine months ended 31 December 2018 for the Zinc segment includes revenue with respect to Lead and Silver and the Others segment includes revenue from sale of steel products aggregating to US$ 389.5 million, US$ 272.1 million and US$ 365.3 million respectively. Other than these the disclosure for disaggregated revenue per product in terms of IFRS 15 is not materially different from what has been disclosed herein above.*

** *Including acquisition through business combination.*

4. Business Combination and Others

a) Electrosteel Steels Limited

On 4 June 2018, the Group, through its subsidiary Vedanta Star Limited (VSL) acquired management control over Electrosteel Steels Limited (ESL) as the previous board of directors of ESL was reconstituted on that date. Further, on 15 June 2018, pursuant to the allotment of shares to VSL, the Group holds 90% of the paid up share capital of ESL through VSL. The acquisition will complement the Company's existing Iron Ore business as the vertical integration of steel manufacturing capabilities has the potential to generate significant efficiencies. ESL was admitted under corporate insolvency resolution process in terms of the Insolvency and Bankruptcy Code, 2016 of India. The financial results of ESL from the date of acquisition to 31 December 2018 have been included in the Consolidated Financial Statements of the Group.

Considering the time involved in the valuation and complexities involved in the acquired business, the Group is still in the process of finalizing the fair valuation, which is expected to be finalized within the permitted period of one year from the date of acquisition. As a result, the effects of the same have been accounted for on a provisional basis, as permitted by IFRS 3.

The fair value of the identifiable assets and liabilities of ESL as at the date of the acquisition were provisionally estimated as below:

(US$ million)

Particulars	Provisional Fair Value
Property, Plant and Equipment	698.0
Intangible assets	0.1
Non-current tax assets	0.8
Other non-current assets	2.6
Non-current assets	**701.5**
Inventories	121.3
Trade and other receivables	43.4
Liquid investments	82.0
Cash and cash equivalents	0.4
Current Assets	**247.1**
Total Assets (A)	**948.6**
Liabilities	
Short-term borrowings	1.0
Trade and other payables	127.9
Provisions (Current)	0.4
Provisions (Non-current)	1.5
Total Liabilities (B)	**130.8**
Net Assets (C=A-B)	**817.8**
Satisfied by:	
Cash Consideration Paid for Debt acquired	527.0
Cash Consideration Paid for Equity acquired	261.7
Total Purchase Consideration (D)	**788.7**
Non-Controlling interest on acquisition (10% of net assets after adjustment of borrowings from immediate parent of US$ 527.0 million) (E)	29.1
Bargain Gain/Goodwill (C-D-E)	**-**
Acquisition costs	**(2.7)**

Since the date of acquisition, ESL has contributed US$ 375.2 million and US$ 13.3 million to the Group revenue and profit before taxation respectively for the nine months ended 31 December 2018. If ESL had been acquired at the beginning of the year, the Group revenue would have been US$ 10,698.2 million and the profit before taxation of the Group would have been US$ 721.9 million.

Non-controlling interest has been measured at the non-controlling interest's proportionate share of ESL's identifiable net assets

(b) Avanstrate Inc.

(a) On 28 December 2017, the Group acquired 51.63% equity stake in AvanStrate Inc. (ASI) for a cash consideration of JPY 1 million ($ 0.01 million) and acquired debts for JPY 17,058 million ($ 150.8 million). Additionally, a loan of JPY 814.8 million ($7.2 million) was extended to ASI. ASI is involved in manufacturing of glass substrate. Provisional fair values that were determined as at 31 March 2018 for consolidation were finalised during the current period.

As per the shareholding agreement (SHA) entered with the other majority shareholder holding 46.6% in ASI, the Group has call option, conversion option to convert part of its debt given to ASI into equity of ASI as well as it has issued put option to the other majority shareholder. These are exercisable as per the terms mentioned in the SHA.

The final fair value of the identifiable assets and liabilities of ASI as adjusted for measurement period adjustments as at the date of the acquisition were as follows. The comparative period amounts have been restated accordingly.

(US$ million)

Particulars	Provisional Fair Value	Fair Value Adjustments	Fair Value at Acquisition
Property, Plant and Equipment	242.2	-	242.2
Intangible assets	32.1	-	32.1
Deferred tax assets	19.7	-	19.7
Other non-current assets	6.4	-	6.4
Non-Current Assets	**300.4**	**-**	**300.4**
Inventories	21.6	-	21.6
Trade and other receivables	36.0	-	36.0
Cash and cash equivalents	23.6	-	23.6
Current Assets	**81.2**	**-**	**81.2**
Total Assets (A)	**381.6**	**-**	**381.6**
Medium and long term borrowings (excluding borrowings from immediate parent)	98.7	-	98.7
Deferred tax liabilities	77.5	5.3	82.8
Trade and other payables	23.6	-	23.6
Total Liabilities (B)	**199.8**	**5.3**	**205.1**
Net Assets (C=A-B)	**181.8**	**(5.3)**	**176.5**
Satisfied by:			
Cash Consideration Paid for 51.63% stake & Debt acquired	158.0	-	158.0
Less: Fair Value of Conversion option asset on debt acquired net of the fair value of Put option liability towards acquisition of Non-controlling interests	-	(16.8)	(16.8)
Total Purchase Consideration (D)	**158.0**	**(16.8)**	**141.2**
Non-Controlling interest on acquisition (48.37% of net assets after adjustment of fair value of borrowings from immediate parent of US$ 158.0 million) (E)	11.5	5.6	17.1
Bargain Gain (C-D-E)	**12.3**	**5.9**	**18.2**
Acquisition costs	**(7.0)**	**-**	**(7.0)**

The gross carrying amount of trade and other receivables equals the fair value of trade and other receivables. None of the trade and other receivables was impaired and the full contractual amounts were expected to be realised. Property, plant and equipment have been valued using cost approach - cost of reproduction new (CRN) method. For estimating CRN, appropriate indices were used to develop trend factors that have been applied on the acquisition/historical costs of the different assets over the period during which the asset has been commissioned or in other words life spent. The estimated CRN was further adjusted for applicable physical deterioration to arrive at fair value. The physical deterioration was based on the estimated age and remaining useful life. Fair value of assumed debt was determined using yield-method, wherein, the expected cash flows including interest component and principal repayments have been discounted at an appropriate market interest rate.

Non-controlling interest has been measured at the non-controlling interest's proportionate share of ASI's identifiable net assets.

(c) Acquisition of new hydrocarbon blocks

In August, 2018, Vedanta Limited was awarded 41 hydrocarbon blocks out of 55 blocks auctioned under the open acreage licensing policy (OALP) by Government of India (GOI). The blocks awarded to Vedanta Limited comprise of 33 onshore and 8 offshore blocks. Vedanta Limited will share a specified proportion of the net revenue from each block with GOI and has entered into 41 separate revenue sharing contracts (RSC) on 1 October 2018.

(d) The Government of India, acting through the Directorate General of Hydrocarbons, Ministry of Petroleum and Natural Gas (the "GoI"), in October 2018, has granted its approval for an extension of the Production Sharing Contract (PSC) for the Rajasthan Block, RJ-ON-90/1 (the "RJ Block"), for a period of ten years with effect from 15 May 2020. Such extension has been granted by the GoI, pursuant to its policy dated 07 April 2017 for extension of Pre-New Exploration Licensing Policy ("Pre-NELP") Exploration Blocks PSCs signed by the GoI (the "Pre-NELP Extension Policy"), subject to certain conditions. The applicability of the Pre-NELP Extension Policy to the RJ Block PSC is currently sub judice. The effects of the same have been accounted for from the date of approval and consequently, the depletion charge for the period is lower by US$ 24.6 million.

5. Special items

(US$ million)

	Nine months ended 31 December 2018			Nine months ended 31 December 2017		
	Special items	**Tax effect of Special items**	**Special items after tax**	**Special items**	**Tax effect of Special items**	**Special items after tax**
Reversal of provision of DMF[1]	-	-	-	45.8	(15.6)	30.2
Gross profit special items	**-**	**-**	**-**	**45.8**	**(15.6)**	**30.2**
Impairment (charge)/ reversal of oil and gas assets[2]	38.1	(13.3)	24.8	(16.9)	5.9	(11.0)
Impairment of iron ore assets[3]	-	-	-	(755.2)	224.0	(531.2)
Total impairment charge	**38.1**	**(13.3)**	**24.8**	**(772.1)**	**229.9**	**(542.2)**
Operating special items	**38.1**	**(13.3)**	**24.8**	**(726.3)**	**214.3**	**(512.0)**
Financing special items[4]	8.6	(3.0)	5.6	(108.1)	6.0	(102.1)
Acquisition expenses[5]	-	-	-	(7.0)	-	(7.0)
Special items	**46.7**	**(16.3)**	**30.4**	**(841.4)**	**220.3**	**(621.1)**

1 *During the nine months ended 31 December 2017, the Group had recognised the reversal of provisions of US$ 45.8 million relating to contribution to the District Mineral Foundation pursuant to a favourable order by the Honourable Supreme Court of India.*

2 *During the nine months ended 31 December 2018, the Group has recognized an impairment reversal of US$ 38.1 million following the start of commercial production in Krishna Godavari Onshore block.*

During the nine months ended 31 December 2017, the Group had recognized an impairment charge of US$ 16.9 million representing the carrying value of assets relating to exploratory wells in Block PR-OSN-2004/1 which was relinquished during the year ended 31 March 2018.

3 *During the nine months ended 31 December 2017, the Group had recognized an impairment charge of US$ 755.2 million as against the net carrying value of US$ 926.9 million on its iron ore assets in Goa in the iron ore segment pursuant to an order passed by the Hon'ble Supreme Court of India on 07 February 2018 cancelling the second renewal of the mining leases granted by the State of Goa in 2014-15 to all miners including Vedanta.*

4 *During the nine months ended 31 December 2018, the Group has partly reversed the provision for interest of US$ 8.6 million for dues towards SSNP pursuant to the Honourable Supreme Court of India order.*

During the nine months ended 31 December 2017, the Group had recognised US $ 90.6 million loss as financing special items arising on the bond buybacks completed during the period. Additionally, the Group recognized a charge pursuant to unfavourable arbitration order of US$17.5 million.

5 *On 28 December 2017, the Group through its wholly owned subsidiary, acquired 51.6% equity stake in AvanStrate Inc. (ASI) for a cash consideration of JPY 1 million ($ 0.01 million) and acquired debts for JPY 17,058 million ($ 150.8 million) and incurred acquisition expenses of US$ 7.0 million. Additionally, a loan of JPY 814.8 million ($7.2 million) was extended to ASI. The transaction was accounted for on a provisional basis in the financial statements under IFRS 3 for the nine months ended 31 December 2017. (Refer Note 4b).*

6. Other gains and (losses) [net]

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Gross foreign exchange losses	(60.8)	(3.3)
Qualifying exchange losses capitalised	-	-
Net foreign exchange losses	**(60.8)**	**(3.3)**
Change in fair value of financial liabilities measured at fair value	(0.8)	(0.8)
Net gain/(loss) arising on qualifying hedges and non-qualifying hedges	(4.1)	(4.8)
Acquisition expenses	-	(7.0)
	(65.7)	**(15.9)**

7. Income tax expense

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Current tax:		
Current Tax on profit for the period	447.9	327.0
(Credit)/ charge in respect of current tax for earlier years	(0.8)	2.5
Total current tax	**447.1**	**329.5**
Deferred tax:		
Origination and reversal of temporary differences*	96.6	44.9
(Credit)/ charge in respect of deferred tax for earlier years	(1.6)	12.9
Charge/ (credit) in respect of Special items	16.3	(220.3)
Total deferred tax	**111.3**	**(162.5)**
Net tax expense	**558.4**	**167.0**
Profit before taxation	**726.1**	**439.6**
Effective tax rate	**76.9%**	**38.0%**

* *Deferred tax charge for the nine months ended 31 December 2018 includes US$ 121.0 million (31 December 2017: US$ Nil million) representing reversal of deferred tax asset created on carry forward losses not expected to be utilised during the statutory permitted period. It also includes US$ 158.0 million (31 December 2017: US$ 42.0 million) tax on undistributed profits of a subsidiary. Effective tax rate excluding these items for the nine months ended 31 December 2018 is 38.5% (31 December 2017: 28.4 %).*

Tax expense

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Tax effect of special items (Note 5)	16.3	(220.3)
Tax expense – others	542.1	387.3
Net tax expense	**558.4**	**167.0**

8. Underlying Attributable Profit/(Loss) for the period

Underlying earnings is an alternative earnings measure, which the management considers to be a useful additional measure of the Group's performance. The Group's underlying profit/loss is the loss for the period after adding back special items, other losses/(gains) [net] (Note 6) and their resultant tax (including taxes classified as special items) and non-controlling interest effects. This is a non-GAAP measure.

(US$ million)

	Note	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Loss for the period attributable to equity holders of the parent		(259.7)	(257.4)
Special items	*5*	(46.7)	841.4
Other (gains)/losses [net]	*6*	65.7	8.9
Tax and non-controlling interest effect of special items (including taxes classified as special items) and other gains/ (losses) [net]		(5.7)	(486.5)
Underlying attributable (loss)/ profit for the period		**(246.4)**	**106.4**

9. Dividends

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Amounts paid as distributions to equity holders:		
Equity dividends on ordinary shares :		
Final dividend for FY 2016–17: 35.0 US cents per share	-	96.9
Interim dividend during FY 2017-18: 24.0 US cents per share	-	67.5
Final dividend for FY 2017-18: 41.0 US cents per share	114.6	-
Total	**114.6**	**164.4**

The proposed interim dividend for the nine months ended 31 December 2018 was Nil US cents per share (31 December 2017: Nil US cents).

10. Movement in net debt[1]

(US$ million)

	Cash and cash equivalents	Liquid Investments	Financial asset investment net of related liabilities[1]	Total cash and investments	Debt due within one year: Debt carrying value	Debt due after one year: Debt carrying value	Total Net Debt
At 1 April 2018	798.7	4,807.8	-	5,606.5	(5,460.3)	(9,733.5)	(9,587.3)
Cash flow	(16.2)	(1,123.8)	200.0	(940.0)	710.0	(2,593.4)	(2,823.4)
Other non-cash changes[2]	-	140.0	28.4	168.4	(1,089.5)	1,067.3	146.2
Net debt on acquisition through business combination	0.4	82.0	-	82.4	(1.0)	-	81.4
Foreign exchange currency translation differences	(75.7)	(265.7)	-	(341.4)	342.9	255.5	257.0
At 31 December 2018	**707.2**	**3,640.3**	**228.4**	**4,575.9**	**(5,497.9)**	**(11,004.1)**	**(11,926.1)**

(US$ million)

	Cash and cash equivalents	Liquid Investments	Total cash and liquid investments	Debt due within one year: Debt carrying value	Debt due after one year: Debt carrying value	Total Net Debt
At 1 April 2017	1,682.2	8,043.0	9,725.2	(7,658.5)	(10,570.2)	(8,503.5)
Cash flow	(1,366.7)	(2,552.1)	(3,918.8)	4,299.9	(1,084.4)	(703.3)
Other non-cash changes[2]	-	137.4	137.4	(1,670.1)	1,480.1	(52.6)
Foreign exchange currency translation differences	18.3	78.7	97.0	(65.9)	(74.9)	(43.8)
At 31 December 2017	**333.8**	**5,707.0**	**6,040.8**	**(5,094.6)**	**(10,249.4)**	**(9,303.2)**

1 *Net debt is a Non-IFRS measure and represents total debt after fair value adjustments under IAS 32 and IFRS 9 as reduced by cash and cash equivalents, liquid investments and structured investment, net of the deferred consideration payable for such investments (referred above as Financial asset investment net of related liabilities), if any.*

2 *Other non-cash changes comprise of amortisation of borrowing costs, foreign exchange difference on net debt and reclassification between debt due within one year and debt due after one year. It also includes US$168.4 million (31 December 2017: US$137.4 million) of fair value movement in investments and accrued interest on investments.*

Debt securities issued/repaid during the period

In April 2018, TSPL issued non-convertible debentures (NCDs) of US$ 143.3 million at an interest rate of 8.55%. These NCDs are secured by way of first pari-passu charge on the movable and/or immovable property, plant and equipment, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in April, 2021. As at 31 December 2018, the carrying value is US$ 143.3 million.

In April 2018, Vedanta Limited issued NCDs of US$ 236.3 million at an interest rate of 8.50%. These NCDs are secured by way of first pari-passu charge on all present and future movable fixed assets of 2400 MW (600 MW*4) Power Plant of Vedanta Limited at Jharsuguda location, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in June 2021. As at 31 December 2018, the carrying value is US$ 236.3 million.

In April 2018, Vedanta Limited issued NCDs of US$ 336.5 million at an interest rate of 8.50%. These NCDs are secured by way of first pari-passu charge on all present and future movable fixed assets of 2400 MW (600 MW*4) Power Plant of Vedanta Limited at Jharsuguda location, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in April 2021. As at 31 December 2018, the carrying value is US$ 336.5 million.

In April 2018, Vedanta Limited issued NCDs of US$ 143.3 million at an interest rate of 9.18%. These NCDs are secured by way of first pari-passu charge on all present and future movable fixed assets of 2400 MW (600 MW*4) Power Plant of Vedanta Limited at Jharsuguda location, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in July 2021. As at 31 December 2018, the carrying value is US$ 143.3 million.

In July 2018, TSPL issued NCDs of US$ 143.2 million at an interest rate of 9.23%. These NCDs are secured by way of first pari-passu charge on the movable and/or immovable property, plant and equipment, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in July 2021. As at 31 December 2018, the carrying value is US$ 143.2 million.

In November, 2018, TSPL issued NCD's of US$ 138.0 million at an interest rate of 9.00%. These NCDs are secured by way of first pari-passu charge on the moveable and/or immovable property, plant and equipment, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs are due for repayment in November, 2020. As at December 31, 2018, the carrying value is US$ 138.0 million.

In March 2015, TSPL issued NCDs of US$ 50.0 million at an interest rate of 8.91%. These NCDs were secured by way of first pari-passu charge on the movable and/or immovable property, plant and equipment, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1.1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs have been fully repaid in April 2018.

In April 2015, TSPL issued NCDs of US$ 103.8 million at an interest rate of 8.91%. These NCDs are secured by way of first pari-passu charge on the movable and/or immovable property, plant and equipment, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1.1 time of the aggregate face value of debentures outstanding at any point of time. The NCDs have been fully repaid in April 2018.

In July 2013, Vedanta Limited issued NCDs of US$ 115.3 million at an interest rate of 9.17%. These NCDs are secured by way of first pari-passu charge on the whole of the movable property, plant and equipments of the 1.6 MTPA Aluminium Smelter along with 1215 MW captive power plant in Jharsuguda and 1 MTPA alumina refinery along with 75 MW co-generation plant in Lanjigarh, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1.25 time of the aggregate face value of debentures outstanding at any point of time. The NCDs have been fully repaid in July 2018.

In July 2013, Vedanta Limited issued NCDs of US$ 69.2 million at an interest rate of 9.17%. These NCDs are secured by way of first pari-passu charge on the whole of the movable property, plant and equipments of the 1.6 MTPA Aluminium Smelter along with 1215 MW captive power plant in Jharsuguda and 1 MTPA alumina refinery along with 75 MW co-generation plant in Lanjigarh, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1.25 time of the aggregate face value of debentures outstanding at any point of time. The NCDs have been fully repaid in July 2018.

In April 2013, Vedanta Limited issued NCDs of US$ 384.4 million at an interest rate of 9.10%. These were secured by way of first pari-passu charge on both present and future movable fixed assets 2400 MW (600 MW*4) Jharsuguda Power Plant. The same have been have fully repaid in April 2018.

11. Other Disclosures

A. Commitments

The Group has a number of continuing operational and financial commitments in the normal course of business including:

- Exploratory mining commitments;
- Oil and gas commitments;
- Mining commitments arising under production sharing agreements; and
- Completion of the construction of certain assets.

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Capital commitments contracted but not provided	1,913.9	1,936.3

Commitments primarily related to the expansion projects:

	As at 31 December 2018	As at 31 March 2018
Oil & Gas sector		
Cairn India	784.5	668.3
Aluminium sector		
Lanjigarh Refinery (Phase II) 5.0 MTPA	204.5	205.2
Jharsuguda 1.25 MTPA smelter	70.6	75.5
Zinc sector		
Zinc India (mines expansion)	276.1	305.1
Gamsberg mining & milling project	33.2	162.5
Copper sector		
Tuticorin Smelter 400 KTPA	400.7	424.0
Others	144.3	95.7
Total	**1,913.9**	**1,936.3**

Commitments related to the minimum work programme (Other than capital commitment):

	As at 31 December 2018	As at 31 March 2018
Oil & Gas sector		
Cairn India	551.0	0

B. Guarantees

Companies within the Group provide guarantees within the normal course of business.

A summary of the most significant guarantees is set out below:

As at 31 December 2018, guarantees of US$ 768.3 million were advanced in the normal course of business (31 March 2018: US$ 308.2 million). The Group has also entered into guarantees and bonds advanced to the customs authorities in India of US$ 97.9 million relating to the export and payment of import duties on purchases of raw material and capital goods (31 March 2018: US$ 107.3 million).

Cairn PSC guarantee to Government

The Group has provided Parent Company guarantee for the Cairn India Group's obligation under the Production Sharing Contract ('PSC').

Vedanta Limited has provided various other guarantees under the Company's bank facilities for the Company's share of minimum work programme commitments of US$ 339.2 million included in the above outstanding amount of guarantees as of 31 December 2018 (31 March 2018: US$ 26.2 million).

C. Export Obligations

The Indian entities of the Group have export obligations of US$ 682.1 million (31 March 2018: US$ 1,904.2 million) on account of concessional rates of import duty paid on capital goods under the Export Promotion Capital Goods Scheme and under the Advance Licence Scheme for the import of raw material laid down by the Government of India.

In the event of the Group's inability to meet its obligations, the Group's liability would be US$ 95.4 million (31 March 2018: US$ 169.3 million) reduced in proportion to actual exports, plus applicable interest.

The Group has given bonds of US$ 208.4 million (31 March 2018: US$ 226.3 million) to custom authorities against these export obligations.

D. Contingencies

The Group discloses the following legal and tax cases as contingent liabilities.

HZL: Department of Mines and Geology

The Department of Mines and Geology of the State of Rajasthan issued several show cause notices in August, September and October 2006 to HZL, totalling US$ 47.8 million (31 March 2018: US$ 51.3 million) as at 31 December 2018. These notices alleged unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan during the period from July 1968 to March 2006. HZL believes it is unlikely that the claim will lead to a future obligation and thus no provision has been made in the financial statements. HZL had filed appeals (writ petitions) in the High Court of Rajasthan in Jodhpur. The High Court restrained the Department of Mines and Geology from undertaking any coercive measures to recover the penalty. Central Government has also been made a party to the case and the matter is likely to be listed now for hearing after completion of pleadings by the Central Government.

Richter and Westglobe: Income Tax

The Group, through its subsidiaries Richter Holdings Limited and Westglobe Limited, in 2007 acquired the entire stake in Finsider International Company Limited (FICL) based in the United Kingdom which held 51% shares of Sesa Goa Ltd, an Indian Company. In October 2013, the Indian Tax Authorities (Tax Authorities) have served an order on Richter and Westglobe for alleged failure to deduct withholding tax on capital gains on the indirect acquisition of shares in April 2007.

The Tax Authorities determined the liability for such non-deduction of tax as US$ 125.5 million (31 March 2018: US$ 134.7 million) in the case of Richter and US$ 83.7 million (31 March 2018: US$ 89.8 million) in the case of Westglobe, comprising tax and interest as at 31 December 2018. Richter and Westglobe filed appeals before the first appellate authority. Appeals (writ petitions) were filed in the High Court of Karnataka challenging the constitutional validity of retrospective amendments made by the Finance Act 2012 and in particular the imposition of obligations to deduct tax on payments made against an already concluded transaction. The Karnataka High Court passed interim orders and directed that the adjudication of liability (TDS quantum and interest) shall no longer remain in force since the tax department passed the orders on merits travelling beyond the limited issue of jurisdiction. The jurisdiction issue will be heard by the High Court.

In another similar matter, ITAT in the case of Cairn UK Holdings Limited held that being a retrospective transaction, interest would not be levied. As a result of the above order from ITAT, the Group now considers the risk in respect of the interest portion of claim to be remote. Accordingly, the Group has revised the contingent liability to US$ 73.1 million in the case of Richter and US$ 48.7 million in the case of Westglobe.

Vedanta Limited (Erstwhile Cairn India Limited): Income tax

In March 2014, Vedanta Limited (notice was served on Cairn India Limited which subsequently merged with Vedanta Limited, accordingly now referred to as Vedanta Limited) received a show cause notice from the Indian Tax Authorities ('Tax Authorities') for not deducting withholding tax on the payments made to Cairn UK Holdings Limited (CUHL), for acquiring shares of Cairn India Holdings Limited (CIHL), as part of their internal reorganisation. The Tax Authorities have stated in the notice that a short-term capital gain has accrued to CUHL on transfer of the shares of CIHL to Vedanta Limited, in the financial year 2006–2007, on which tax should have been withheld by Vedanta Limited. Pursuant to this various replies were filed with the Tax Authorities. After several hearings, the Income Tax Authority, in March 2015, issued an order holding Vedanta Limited as 'assessee in default' and raised a demand totalling US$ 2,936.5 million (including interest of US$ 1,468.3 million). Vedanta Limited had filed an appeal before the First Appellate Authority, Commissioner of Income Tax (Appeals) which vide order dated 3 July 2017 confirmed the tax demand against Vedanta Limited. Vedanta Limited has challenged the Commissioner of Income Tax's (Appeals) order before the Income Tax Appellate Tribunal (ITAT).

Vedanta Limited also filed a writ petition before the Delhi High Court wherein it has raised several points for assailing the aforementioned Income Tax Authority's order. The matter is pending for adjudication before the Honourable Delhi High Court.

Separately CUHL, on whom the primary liability of tax lies, has received an Order from the ITAT holding that the transaction is taxable in view of the clarification made in the Act but also acknowledged that being a retrospective transaction, interest would not be levied. Hence affirming a demand of US$ 1,468.2 million excluding the interest portion that had previously been claimed. The tax department has appealed this order before the Delhi High Court. As a result of the above order from ITAT, the Group now considers the risk in respect of the interest portion of claim to be remote. Further, as per the recent recovery notice dated 12 October 2018 received from the Tax Recovery Officer (TRO) appointed for CUHL, tax demand of CUHL of approx. US$ 715.8 million along with interest is outstanding. Further, in the said notice, tax department has also instructed to remit the preference shares redemption amount including dividend payable thereon to the TRO. Amount aggregating to US$ 87.0 million has been paid to the TRO on 26 October 2018 thus reducing the liability to US$ 628.8 million. Vedanta has also paid interim dividend of FY 2018-19 of US$ 0.6 million to the TRO on 22 November 2018. Accordingly, the Group has revised the contingent liability to US$ 628.2 million (31 March 2018: US$ 1,404.9 million). In the event, the case is finally decided against the Company, along with interest, the potential liability would be US$ 2,936.5 million. Separately, but in connection with this litigation, the Company has filed a Notice of Claim against the Government of India ('GOI') under the UK India Bilateral Investment Treaty (the BIT). The International Arbitration Tribunal recently passed a favourable order on jurisdiction and now the matter will be heard on merits – the hearing is scheduled in April–May 2019. The Government of India has challenged the jurisdiction order of Arbitration Tribunal before the High Court of Singapore.

Ravva Joint Venture arbitration proceedings

ONGC Carry

The Ravva Production Sharing Contract (PSC) obliges the contractor parties to pay a proportionate share of ONGC's exploration, development, production and contract costs in consideration for ONGC's payment of costs related to the construction and other activities it conducted in Ravva prior to the effective date of the Ravva PSC (the ONGC Carry). The question as to how the ONGC Carry is to be recovered and calculated, along with other issues, was submitted to an International Arbitration Tribunal in August 2002 which rendered a decision on the ONGC Carry in favour of the contractor parties (including Vedanta Limited (Cairn India Limited which subsequently merged with Vedanta Limited, accordingly now referred to as Vedanta Limited)) whereas four other issues were decided in favour of Government of India (GOI) in October 2004 (Partial Award). The GOI then proceeded to challenge the ONGC Carry decision before the Malaysian courts, as Kuala Lumpur was the seat of the arbitration. The Federal Court of Malaysia upheld the Partial Award. As the Partial Award did not quantify the sums, therefore, contractor parties approached the same Arbitral Tribunal to pass a Final Award in the subject matter since it had retained the jurisdiction to do so. The Arbitral Tribunal was reconstituted and the Final Award was passed in October 2016 in Vedanta Limited's favour. GOI's challenge of the Final Award has been dismissed by the Malaysian High Court and the next appellate court in Malaysia i.e. Malaysian Court of Appeal. GOI has now filed an appeal at Federal Court of Malaysia. The matter was heard on 28 February 2019 and the Federal Court dismissed GOI's leave to appeal. Vedanta Limited has also filed for the enforcement of the Partial Award and Final Award with Delhi High Court.

Base Development Cost

Ravva joint venture had received a claim from the Ministry of Petroleum and Natural Gas, Government of India (GOI) for the period from 2000-2005 for US$ 129.0 million for an alleged underpayment of profit petroleum (by recovering higher Base Development Costs ("BDC") against the cap imposed in the PSC) to the Indian Government, out of which, Vedanta Limited's (Cairn India Limited which subsequently merged with Vedanta Limited, accordingly now referred to as Vedanta Limited) share will be US$ 29.0 million plus interest. Joint venture partners initiated the arbitration proceedings and Arbitration Tribunal published the Award allowing Claimants (including Vedanta Limited) to recover the development costs spent to the tune of US$ 278.0 million and disallowed over run of US$ 22.3 million spent in respect of BDC along with 50% legal costs. High Court of Kuala Lumpur as well as Court of Appeal dismissed Government of India's (GOI) application of setting aside the part of the Award. GOI challenge to the same before the Federal Court, Kuala Lumpur was also dismissed by the Federal Court on 17 May 2016. Vedanta Limited has filed an application for enforcement of award before Delhi High Court.

In connection with the above two matters, Group has recently received an order dated 22 October 2018 from the Govt of India directing oil marketing companies (OMCs) who are the offtakers for Ravva to divert the sale proceeds to Government's account. GOI alleges that the Ravva JV has short paid profit petroleum of US$ 314.0 million (Vedanta Limited's share approximately - US$ 92.9 million) on account of the two disputed issues of ONGC Carry and BDC matters, as these have not been enforced. Against an interim application, filed by Vedanta Limited and other joint venture partner, seeking stay of such action from GOI, before the Court, where enforcement petitions for both matters are pending, the Court directed the OMCs to deposit above sums to the Court for both BDC and Carry matters. However, Vedanta Limited (and other joint venture partner) has been given the liberty to seek withdrawal of the proportionate amounts (fallen due as of the date of Court Order) from the court upon furnishing a bank guarantee (BG) of commensurate value. The Interim Application is pending for adjudication.

While the Group does not believe the GOI will be successful in its challenge, if the Arbitral Awards in above matters are reversed and such reversals are binding, Group would be liable for approximately US$ 92.9 million plus interest (31 March 2018: US$ 92.9 million plus interest).

Proceedings related to the imposition of entry tax

Vedanta Limited and other Group companies i.e. Bharat Aluminium Company Limited (BALCO) and Hindustan Zinc Limited (HZL) challenged the constitutional validity of the local statutes and related notifications in the states of Chhattisgarh, Odisha and Rajasthan pertaining to the levy of entry tax on the entry of goods brought into the respective states from outside.

Post some contradictory orders of High Courts across India adjudicating on similar challenges, the Supreme Court referred the matters to a nine judge bench. Post a detailed hearing, although the bench rejected the compensatory nature of tax as a ground of challenge, it maintained status quo with respect to all other issues which have been left open for adjudication by regular benches hearing the matters.

Following the order of the nine judge bench, the regular bench of the Supreme Court proceeded with hearing the matters. The regular bench remanded the entry tax matters relating to the issue of discrimination against domestic goods bought from other States to the respective High Courts for final determination but retained the issue of jurisdiction for levy on imported goods, for determination by the regular bench of the Supreme Court. Following the order of the Supreme Court, the Group filed writ petitions in respective High Courts.

On 9 October 2017, the Supreme Court has held that states have the jurisdiction to levy entry tax on imported goods. With this Supreme Court judgment, imported goods will rank pari passu with domestic goods for the purpose of levy of Entry tax. Vedanta Limited and its subsidiaries have amended their appeals (writ petitions) in Odisha and Chhattisgarh to include imported goods as well. With respect to Rajasthan, the State Government has filed a counter petition in the Rajasthan High Court, whereby it has admitted that it does not intend to levy the entry tax on imported goods.

The issue pertaining to the levy of entry tax on the movement of goods into a Special Economic Zone (SEZ) remains pending before the Odisha High Court. The Group has challenged the levy of entry tax on any movement of goods into SEZ based on the definition of 'local area' under the Odisha Entry Tax Act which is very clear and does not include a SEZ. In addition, the Government of Odisha further through its SEZ Policy 2015 and the operational guidelines for administration of this policy dated 22 August 2016, exempted the entry tax levy on SEZ operations.

The total claims against Vedanta Limited and its subsidiaries are US$ 184.3 million (31 March 2018: US$ 203.0 million) net of provisions made.

BALCO: Challenge against imposition of Energy Development Cess

BALCO challenged the imposition of Energy Development Cess levied on generators and distributors of electrical energy @ 10 paise per unit on the electrical energy sold or supplied before the High Court on the grounds that the Cess is effectively on production and not on consumption or sale since the figures of consumption are not taken into account and the Cess is discriminatory since captive power plants are required to pay @ 10 paise while the State Electricity Board is required to pay @ 5 paise. The High Court of Chhattisgarh by order dated 15 December 2006 declared the provisions imposing ED Cess on CPPs as discriminatory and therefore ultra vires the Constitution. The company has sought refund of ED Cess paid till March 2006 amounting to US$ 4.9 million.

The State of Chhattisgarh moved an SLP in the Supreme Court and whilst issuing notice has stayed the refund of the Cess already deposited and the Supreme Court has also directed the State of Chhattisgarh to raise the bills but no coercive action be taken for recovery for the same. Final argument in this matter started before the Supreme Court. In case the Supreme Court overturns the decision of the High Court, BALCO would be liable to pay an additional amount of US$ 104.3 million (31 March 2018: US$ 100.8 million) and the company may have to bear a charge of US$ 109.2 million (31 March 2018: US$ 106.1 million).

South Africa Carry Cost

As part of the farm-in agreement for Block 1, the Group was required to carry its joint venture partner, Petro SA, up to a gross expenditure of US$ 100.0 million for a work programme including 3D and 2D seismic studies and at least one exploration well. The Group has spent US$ 38.1 million towards exploration expenditure and a minimum carry of US$ 61.9 million (including drilling one well) was outstanding at the end of the initial exploration period. The Group had sought an extension for execution of deed for entry into the second renewal phase of the exploration period with a request to maintain status quo of the prior approvals due to uncertainty in the proposed changes in fiscal terms impacting the Group financial interest in the block. The same was granted by the South African authority subject to risk of exploration right getting expired on account of recent High Court judgments. The Group had provided for the requisite damages as applicable under the South African Regulations.

During Q2, FY 2018-19, Group has received letter from PASA (Petroleum Agency SA) that exploration right has lapsed through effluxion of time, in line with past judicial precedents and asked to submit a closure application. The Group along with Petro SA has filed the closure application on 19 September 2018. Pending disposal of Company's application the obligation for the aforesaid carry cost of US$ 61.9 million (31 March 2018: US$ 62.0 million) has been assessed as possible and disclosed as a contingency.

Class actions against KCM on behalf of Zambian nationals

Vedanta and KCM had challenged the jurisdiction of the English courts to hear and adjudicate the claims by Zambian residents in relation to KCM's operations in Zambia. The allegations relate to claims of personal injury, significant pollution, environmental damage and claims for aggravated and exemplary damages and for injunctive relief. These allegations are currently defended by KCM. On 27 May 2016, the English High Court of Justice, Queen's Bench Division, Technology and Construction Court ruled that the English courts have jurisdiction to hear and adjudicate the claims. Vedanta and KCM appealed this ruling.

The English Court of Appeal released a judgement on 13 October 2017, dismissing this appeal and ruling that the English courts have jurisdiction to hear and adjudicate the claims. This judgement was solely related to the jurisdiction of the English courts to hear these claims.

Vedanta and KCM had sought permission from the Supreme Court of London to appeal the Court's decision, which was granted by the Supreme Court on 23 March 2018.

The UK Supreme Court hearing on jurisdiction of the UK courts to adjudicate the substantive claims was heard on 15 and 16 January, 2019. Both parties presented their arguments and submissions on the days. The Court's ruling on the Jurisdiction question has been reserved.

There has been no hearing or proceeding in any court on the merits of any of these claims to date, none has been scheduled, and the amount of the claims has not been specified. Given the stage of proceedings the amount is presently not quantifiable.

Miscellaneous disputes- Income tax

The Group is involved in various tax disputes amounting to US$ 1,210.5 million (31 March 2018: US$ 1,074.6 million) relating to income tax for the periods for which initial assessments have been completed. These mainly relate to the disallowance of tax holiday for 100% Export Oriented Undertaking under section 10B of the Income Tax Act, 1961, disallowance of tax holiday benefit on production of gas under section 80IB of the Income Tax Act, 1961, tax holiday for undertakings located in certain notified areas under section 80IC of the Income Tax Act, 1961, disallowance of tax holiday benefit for power plants under section 80IA of the Income Tax Act, 1961, on account of depreciation disallowances, disallowance under section 14A of the Income Tax Act and interest thereon which are pending at various appellate levels. There are similar matters pending initial assessment by the tax authorities for subsequent years and additional demands, if any, can be determined only once such assessments are completed.

The Group believes that these disallowances are not tenable and accordingly no provision is considered necessary.

Miscellaneous disputes- Others

The Group is subject to various claims and exposures which arise in the ordinary course of conducting and financing its business from the excise, indirect tax authorities and others. These claims and exposures mostly relate to the assessable values of sales and purchases or to incomplete documentation supporting the companies' returns or other claims.

The approximate value of claims (excluding the items as set out separately above) against the Group companies total US$ 596.5 million (31 March 2018: US$ 542.9 million).

The Group considers that it can take steps such that the risks can be mitigated and that there are no significant unprovided liabilities arising.

E. Other Matters

(i) In July 2017, the Appellate Tribunal for Electricity dismissed the appeal filed by one of the Group's subsidiaries, Talwandi Sabo Power Limited (TSPL) with respect to the interpretation of how the calorific value of coal and costs associated with it should be determined. However, APTEL had allowed payment of shunting and unloading charges. TSPL has filed the appeal before the Honourable Supreme Court, which by an order dated 7 March 2018 has decided the matter in favour of TSPL. PSPCL has not paid the due amount as per the direction of the Supreme court. Therefore, TSPL filed its contempt petition before the Supreme court. The matter is pending for adjudication. The outstanding trade receivables in relation to this dispute as at 31 December 2018 is US$ 150.0 million (31 March 2018: US$ 123.3 million).

In another matter relating to assessment of whether there has been a change in law following the execution of the Power Purchase Agreement, the Appellate Tribunal for Electricity has dismissed the appeal in July 2017 filed by TSPL. TSPL has filed an appeal before the Honourable Supreme Court to seek relief which is yet to be listed. The outstanding trade receivables in relation to this dispute and other matters as at 31 December 2018 is US$ 73.2 million (US$ 59.3 million as at 31 March 2018). The Group, based on external legal opinion and its own assessment of the merits of the case, remains confident that it is highly probable that the Supreme Court will uphold TSPL's appeal and has thus continued to treat these balances as recoverable.

Additionally, at Vedanta Limited no amount as at 31 December 2018 (31 March 2018: US$111.8 million) was outstanding on account of certain disputes relating to computation of tariffs and differential revenues recognised with respect to tariffs pending finalisation by the state regulatory commission.

The customer has however raised certain claims on the company in respect of short supply of power for which a Minutes of Meeting has been signed with the customer. Pending ratification by Odisha Electricity Regulatory Commission (OERC) and adjudication on certain issues related to the claim, the Company has provided US$ 31.2 million based on best estimate by the management.

(ii) Vedanta Limited's application for renewal of Consent to Operate (CTO) for existing copper smelter was rejected by Tamil Nadu Pollution Control Board (TNPCB) in April 2018. Subsequently the Government of Tamil Nadu issued directions to seal the existing copper smelter plant permanently.

Vedanta Limited has appealed before the National Green Tribunal (NGT). NGT vide its order on 15 December 2018 has set aside the impugned orders and directed the TNPCB to pass fresh orders for renewal of consent and authorization to handle hazardous substances, subject to appropriate conditions for protection of environment in accordance with law. The State of

Tamil Nadu and TNPCB approached Supreme Court in Civil Appeals on 02 January 2019 challenging the judgment of NGT dated 15 December 2018 and the previously passed judgment of NGT dated 08 August 2013. The Supreme Court vide its judgment dated 18 February 2019 set aside the judgments of NGT dated 15 December 2018 and 08 August 2013 on the basis of maintainability alone.

Vedanta Limited has filed a writ petition before Madras High Court challenging the various orders passed against the company in 2018 and 2013. The case was heard on 01 March 2019 wherein the company pressed for interim relief for care and maintenance of the plant. The Madras High Court has directed the State of Tamil Nadu and TNPCB to file their counter to our petition for interim relief and has posted the matter on 23 April 2019.

Further, the High Court of Madras in a Public Interest Litigation held that the application for renewal of the Environmental Clearance (EC) for the Expansion Project shall be processed after a mandatory public hearing and in the interim ordered Vedanta Limited to cease construction and all other activities on the site with immediate effect. Ministry of Environment and Forests (MoEF) has delisted the expansion project since the matter is sub judice. However, in the meanwhile, SIPCOT cancelled the land allotted for the proposed Expansion Project and TNPCB issued order directing the withdrawal of the Consent to Establish (CTE) which was valid till 31 March 2023.

Vedanta Limited has approached Madras High Court by way of writ petition challenging the cancellation of lease deeds by SIPCOT pursuant to which an interim stay has been granted. The company has also filed Appeals before the TNPCB Appellate Authority challenging withdrawal of CTE by the TNPCB, the matter is pending for adjudication.

As per Vedanta Limited's assessment, it is in compliance with the applicable regulations and hence does not expect any material adjustments to these financial results as a consequence of the above actions.

(iii) Electrosteel Steels Limited had filed application for renewal of Consent to Operate ('CTO') on 24 August 2017 for the period of five years which was denied by Jharkhand State Pollution Control Board ('JSPCB') on 23 August 2018. Hon'ble High Court of Jharkhand has extended a stay on the order of denial of CTO by JSPCB and continued their interim order to allow the operations till next hearing. Hon'ble High Court has also extended stay against order of Ministry of Environment, Forests and Climate Change (MOEF) dated 20 September 2018 in respect of environment clearance. Presently the stay has been extended till 16 May 2019.

(iv) Pursuant to Management Committee recommendation and minutes of Empowered Committee of Secretaries (ECS) filed by GoI, Vedanta Limited had considered cost recovery of US$ 250.6 million in FY2017-18, being the cost incurred over the initially approved FDP of Pipeline Project. Vedanta Limited's claim for the resultant profit petroleum of US$ 43.0 million, which had been previously paid, has been disputed by the GoI. The Group believes that it has a good case on merits to recover the amount and has therefore treated it as a recoverable amount.

Operating Lease commitments: As lessee

(i) Operating leases are in relation to the office premises, office equipment and other assets, some of which are cancellable and some are non-cancellable. There is an escalation clause in the lease agreements during the primary lease period. There are no restrictions imposed by lease arrangements and there are no sub-leases. There are no contingent rents. The total of the future minimum lease payments under non-cancellable leases are as under:

(US$ million)

Particulars	As at 31 December 2018	As at 31 March 2018
Within one year of the balance sheet date	0.4	0.6
Within two to five years from the balance sheet date	0.7	0.8
Total	**1.1**	**1.4**

Lease payments recognised as expenses during the period ended 31 December 2018, on non-cancellable leases, is US$ 0.3 million (31 December 2017: US$ 0.1 million).

(ii) TSPL has ascertained that the Power Purchase Agreement (PPA) entered with Punjab State Power Corporation Limited (PSPCL) qualifies to be an operating lease under IAS 17 'Leases'. Based on the assessment that the lease payments by PSPCL are subject to variations on account of various factors like availability of coal, water, etc., the management has determined the entire consideration receivable under the PPA relating to recovery of capacity charges towards capital cost to be contingent rent under IAS 17. The contingent rent recognised as revenue in the consolidated income statement during the period ended 31 December 2018 and 31 December 2017 is US$ 145.4 million and US$ 130.7 million respectively.

12. Financial instruments

Financial assets and liabilities

The following tables present the carrying value and fair value of each category of financial assets and liabilities as at 31 December 2018 and 31 March 2018:

(US$ million)

As at 31 December 2018	Fair value through profit or loss	Fair value through other comprehensive income	Derivatives designated as hedging instruments	Amortised cost	Total carrying value	Total fair value
Financial Assets						
Financial instruments (derivatives)	16.3	-	28.5	-	44.8	44.8
Financial asset investments held at fair value	570.9	21.6	-	-	592.5	592.5
Liquid investments						
- Bank deposits	-	-	-	188.3	188.3	188.3
- Other investments	3,452.0	-	-	-	3,452.0	3,452.0
Cash and cash equivalents	-	-	-	707.2	707.2	707.2
Trade and other receivables	-	-	-	944.0	944.0	944.0
Other non-current assets	-	-	-	701.1	701.1	701.1
Total	**4,039.2**	**21.6**	**28.5**	**2,540.6**	**6,629.9**	**6,629.9**

(US$ million)

As at 31 December 2018	Fair value through profit or loss	Derivatives designated as hedging instruments	Amortised cost	Others*	Total carrying value	Total fair value
Financial Liabilities						
Financial instruments (derivatives)	63.4	-	-	-	**63.4**	**63.4**
Trade and other payables	-	-	4,859.9	21.2	**4,881.1**	**4,881.1**
Borrowings	-	-	16,502.0	-	**16,502.0**	**16,194.1**
Total	**63.4**	**-**	**21,361.9**	**21.2**	**21,446.5**	**21,138.6**

(US$ million)

As at 31 March 2018	Held for trading	Loans and receivables	Available for sale	Derivatives	Total carrying value	Total fair value
Financial Assets						
Financial instruments (derivatives)	-	-	-	24.0	24.0	24.0
Financial asset investments held at fair value	-	-	24.5	-	24.5	24.5
Liquid investments						
- Bank deposits	-	482.5	-	-	482.5	482.5
- Other investments	4,325.3	-	-	-	4,325.3	4,325.3
Cash and cash equivalents	-	798.7	-	-	798.7	798.7
Trade and other receivables	-	829.7	-	-	829.7	829.7
Other non-current assets	-	371.5	-	-	371.5	371.5
Total	**4,325.3**	**2,482.4**	**24.5**	**24.0**	**6,856.2**	**6,856.2**

(US$ million)

As at 31 March 2018	Amortized cost	Derivatives	Others*	Total carrying value	Total fair value
Financial Liabilities					
Financial instruments (derivatives)	-	(40.2)	-	(40.2)	(40.2)
Trade and other payables	(4,693.1)	-	(21.2)	(4,714.3)	(4,714.3)
Borrowings	(15,193.8)	-	-	(15,193.8)	(15,310.5)
Total	**(19,886.9)**	**(40.2)**	**(21.2)**	**(19,948.3)**	**(20,065.0)**

* *Represents put option liability accounted for at fair value - Refer Note 4(b)*

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

The below tables summarise the categories of financial assets and liabilities as at 31 December 2018 and 31 March 2018 measured at fair value:

(US$ million)

	As at 31 December 2018		
	Level 1	**Level 2**	**Level 3**
Financial assets			
At fair value through profit or loss			
- Liquid Investments	467.8	2,984.2	-
- Financial asset investments held at fair value	-	570.9	-
- Financial instruments (derivatives)	-	16.3	-
At fair value through other comprehensive income			
- Financial asset investments held at fair value	20.0	-	1.6
Derivatives designated as hedging instruments			
- Financial instruments (derivatives)	-	28.5	-
Total	**487.8**	**3,599.9**	**1.6**
Financial liabilities			
At fair value through profit or loss			
- Financial instruments (derivatives)	-	63.4	-
Derivatives designated as hedging instruments			
- Financial instruments (derivatives)	-	0.0	-
Trade and other payables- Put option liability with non controlling interest (refer note 4b)	-	-	21.2
Total	**-**	**63.4**	**21.2**

(US$ million)

	As at 31 March 2018		
	Level 1	**Level 2**	**Level 3**
Financial assets			
At fair value through profit or loss			
- Held for trading	1,163.3	3,162.0	-
- Financial instruments (derivatives)	-	24.0	-
Available-for-sale investments			
- Financial asset investments held at fair value	22.9	-	1.6
Total	**1,186.2**	**3,186.0**	**1.6**
Financial liabilities			
At fair value through profit or loss/ designated for hedging			
- Financial instruments (derivatives)	-	40.2	-
Trade and other payables-- Put option liability with non controlling interest (refer note 4b)	-	-	21.2
Total	**-**	**40.2**	**21.2**

The below table summarizes the fair value of financial liabilities which are carried at amortised cost other than those where carrying value is determined to be the fair value as at 31 December 2018 and 31 March 2018:

(US$ million)

	As at 31 December 2018	As at 31 March 2018
	Level 2	**Level 2**
Financial Liabilities		
-Borrowings	10,696.2	9,850.2
Total	10,696.2	9,850.2

The fair value of the financial assets and liabilities are at the amount that would be received to sell an asset and paid to transfer a liability in an orderly transaction between market participants at the measurement date. The following methods and assumptions were used to estimate the fair values:

- Investments traded in active markets are determined by reference to quotes from the financial institutions; for example: Net asset value (NAV) for investments in mutual funds declared by mutual fund house. For other listed securities traded in markets which are not active, the quoted price is used wherever the pricing mechanism is same as for other marketable securities traded in active markets. Other current investments are valued by referring to market inputs including quotes, trades, poll, primary issuances for securities and /or underlying securities issued by the same or similar issuer for similar maturities and movement in benchmark security, etc.
- Trade and other receivables, cash and cash equivalents (including restricted cash and cash equivalents), bank deposits, trade and other payables and short-term borrowings: approximate their carrying amounts largely due to the short-term maturities of these instruments.
- Other non-current financial assets and financial liabilities: Fair value is calculated using a discounted cash flow model with market assumptions, unless the carrying value is considered to approximate to fair value.
- Long-term fixed-rate and variable rate borrowings: Fair value has been determined by the Group based on parameters such as interest rates, specific country risk factors, and the risk characteristics of the financed project. Listed bonds are fair valued based on the prevailing market price. For all other long-term fixed-rate and variable-rate borrowings, either the carrying amount approximates the fair value, or fair value has been estimated by discounting

the expected future cash flows using a discount rate equivalent to the risk-free rate of return adjusted for the appropriate credit spread.

- Quoted financial asset investments: Fair value is derived from quoted market prices in active markets.
- Derivative financial assets/liabilities: The Group enters into derivative financial instruments with various counterparties. Interest rate swaps, foreign exchange forward contracts and commodity forward contracts are valued using valuation techniques, which employs the use of market observable inputs. The most frequently applied valuation techniques by the Group include forward pricing and swap models, using present value calculations. The models incorporate various inputs including the foreign exchange spot and forward rates, yield curves of the respective currencies, interest rate curves and forward rate curves of the underlying commodity. Commodity contracts are valued using the forward LME rates of commodities actively traded on the listed metal exchange i.e. London Metal Exchange, United Kingdom (UK).

For all other financial instruments, the carrying amount is either the fair value, or approximates the fair value.

The changes in counterparty credit risk had no material effect on the hedge effectiveness assessment for derivatives designated in hedge relationship and the value of other financial instruments recognised at fair value.

The estimated fair value amounts as at 31 December 2018 have been measured as at that date. As such, the fair values of these financial instruments subsequent to reporting date may be different than the amounts reported at each period end.

13. Share Transactions

Call Options

a. Hindustan Zinc Limited (HZL)

Pursuant to the Government of India's policy of divestment, the Group in April 2002 acquired 26% equity interest in HZL from the Government of India. Under the terms of the Shareholder's Agreement ('SHA'), the Group had two call options to purchase all of the Government of India's shares in HZL at fair market value. The Group exercised the first call option on 29 August 2003 and acquired an additional 18.9% of HZL's issued share capital. The Group also acquired an additional 20% of the equity capital in HZL through an open offer, increasing its shareholding to 64.9%. The second call option provides the Group the right to acquire the Government of India's remaining 29.5% share in HZL. This call option is subject to the right of the Government of India to sell 3.5% of HZL shares to HZL employees. The Group exercised the second call option on 21 July 2009. The Government of India disputed the validity of the call option and has refused to act upon the second call option. Consequently the Group invoked arbitration which is in the early stages. The matter is pending for adjudication. The Government of India without prejudice to the position on the Put/Call option issue has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route. Meanwhile, the Supreme Court has, in January 2016, directed status quo pertaining to disinvestment of Government of India's residual shareholding in a public interest petition filed which is currently pending and sub-judice.

b. BALCO

Pursuant to the Government of India's policy of divestment, the Group in March 2001 acquired 51% equity interest in BALCO from the Government of India. Under the terms of the SHA, the Group has a call option to purchase the Government of India's remaining ownership interest in BALCO at any point from 2 March 2004. The Group exercised this option on 19 March 2004. However, the Government of India has contested the valuation and validity of the option and contended that the clauses of the SHA violate the (Indian) Companies Act, 1956 by restricting the rights of the Government of India to transfer its shares and that as a result such provisions of the

SHA were null and void. In the arbitration filed by the Group, the arbitral tribunal by a majority award rejected the claims of the Group on the grounds that the clauses relating to the call option, the right of first refusal, the 'tag-along' rights and the restriction on the transfer of shares violate the (Indian) Companies Act, 1956 and are not enforceable. The Group has challenged the validity of the majority award in the High Court of Delhi and sought for setting aside the arbitration award to the extent that it holds these clauses ineffective and inoperative. The Government of India also filed an application before the High Court of Delhi to partially set aside the arbitral award in respect of certain matters involving valuation. Meanwhile, the Government of India without prejudice to its position on the Put/Call option issue has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route.

In view of the lack of resolution on the options, the non-response to the exercise and valuation request from the Government of India, the resultant uncertainty surrounding the potential transaction and the valuation of the consideration payable, the Group considers the strike price of the options to be at fair value, and hence the call options have not been recognised in the financial statements.

14. Related party transactions

The information below sets out transactions and balances between the Group and various related parties in the normal course of business for the nine months ended 31 December 2018.

Sterlite Technologies Limited ('STL')

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Sales to STL	0.1	9.3
Purchases	-	0.1
Dividend income	-	0.1

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Net amounts receivable	0.1	0.8
Net amounts payable	0.0	-
Investment in equity Share	20.0	22.9

Sterlite Technologies Limited is related by virtue of having the same controlling party as the Group, namely Volcan.

Sterlite Power Transmission limited ('SPTL').

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Sales to SPTL	107.6	121.2
Purchases	0.2	1.0
Reimbursement from SPTL	0.0	-
Net Interest Received	0.0	-

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Investment in equity Share	1.6	1.6
Net amounts receivable	0.1	0.8
Net amounts payable	0.8	0.5

Sterlite Power Transmission limited ('SPTL') is related by virtue of having the same controlling party as the Group, namely Volcan.

Volcan Investments Limited ("Volcan")

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Dividend paid	73.3	110.4
Recovery of expenses	0.1	0.2
Interest paid on bonds held by Volcan	1.2	4.4
Bonds redeemed during the period	-	82.1
Purchase of structured investment*	540.9	-

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Net amount receivable	0.1	0.6
Value of bonds held by Volcan	21.0	21.0
Interest payable on bonds held	0.1	0.5
Fair value of structured investment*	570.9	-
Deferred consideration payable*	342.5	-

Volcan Investments Limited is a related party of the Group by virtue of being an ultimate controlling party of the Group.

Bank guarantee has been provided by the Group on behalf of Volcan in favour of Income tax department, India as collateral in respect of certain tax disputes of Volcan. The guarantee amount is US$ 16.5 million (31 December 2017 : US$ 18.0 million).

Pursuant to a buy back offer by Volcan, the Group has rendered 1.7 million shares held by its separate investment trust to Volcan and received US$ 18.6 million as consideration towards the same.

*In December 2018, as part of its cash management activities, Cairn India Holdings Limited (CIHL), a step-down subsidiary of the Company, entered into a tripartite agreement with Volcan and one of its subsidiaries. Under the agreement CIHL purchased an economic interest in a structured investment for the equity shares of Anglo American Plc (AA Plc), a company listed on the London Stock Exchange, from Volcan for a total consideration of US$ 540.9 million (of which US$ 200.0 million has been paid up to 31 December 2018), determined based on an independent third-party valuation. The ownership of the underlying shares, and the associated voting interests, remained with Volcan and the investment would mature in two tranches in April 2020 and October 2020. As part of the agreement, CIHL also received a put option from the aforesaid subsidiary the value of which, both at the time of the entering into the initial contract and on the balance sheet date, was not material. Subsequent to the Balance sheet date, certain terms of the aforesaid agreement were modified, and it was converted into a biparty agreement between CIHL and Volcan. The revision in the terms did not have any material effect on the fair value of the instrument.

As per the revised agreement, if the share price of AA plc remain above the Put exercise price, CIHL would be entitled to an amount determined based on the share price of AA plc multiplied by 14.6 million and 10.1 million shares respectively on the aforementioned two maturity dates. Alternatively, CIHL also has an option to realise the instrument for US$ 347.0 million and US$ 240.0 million on the respective maturity dates.

India Grid Trust

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Investment in equity shares at period end	16.0	18.8

India Grid Trust is a related party of the Group on the basis that the ultimate controlling party of the Group, Volcan Investments Limited, exercises significant influence.

Vedanta Medical Research Foundation

(US$ million)

	Nine months ended 31 December 2018	Nine months ended 31 December 2017
Donation	13.3	8.8
Guarantees given during the period (net of relinquishment)	0.9	-

(US$ million)

	As at 31 December 2018	As at 31 March 2018
Guarantees given balance at period end	5.9	5.3

Vedanta Medical Research Foundation is a related party of the Group on the basis that key management personnel of the Group exercise significant influence.

15. Share capital

Share capital as at 31 December 2018 amounted to US$28.5 million. During the nine months ended 31 December 2018, 3,762,142 shares were issued to the employees pursuant to the Vedanta Performance Share Plan. In addition, 22,502,483 Treasury shares, equivalent to US$ 490.6 million were cancelled. As a result, the number of Ordinary shares in issue has decreased from that at 31 March 2018 to 285,246,698 shares.

16. Subsequent events

There are no material adjusting or non-adjusting subsequent events, except as already disclosed in Note 11 E (ii) relating to Vedanta Limited's CTO (Copper operations) and Note 14 relating to structured investment.

Alternative performance measures (APMs) are denoted by ◊ where applicable.

◊ APM terminology*	Closest equivalent IFRS measure	Adjustments to reconcile to primary statements
EBITDA	Operating profit/(loss) before special items	Operating Profit/(Loss) before special items Add: Depreciation & Amortisation
EBITDA margin (%)	No direct equivalent	Not applicable
Adjusted revenue	Revenue	Revenue Less: revenue of custom smelting operations at our Copper & Zinc business
Adjusted EBITDA	Operating profit/(loss) before special items	EBITDA Less: EBITDA of custom smelting operations at our Copper & Zinc business
EBITDA margin excluding custom smelting	No direct equivalent	Not applicable
Underlying profit/(loss)	Attributable Profit/(loss) before special items	Attributable profit/(loss) before special items Less: NCI share in other gains/(losses) (net of tax)
Free cash flow	Net cash flow from operating activities	Net Cash flow from operating activities Less: purchases of property, plant and equipment and intangibles Add: proceeds on disposal of property, plant and equipment Add: Dividend paid and dividend distribution tax paid Add/less: Other non-cash adjustments
Net debt	Net debt represents total debt after fair value adjustments as reduced by cash and cash equivalents, liquid investments and structured investment, net of the deferred consideration payable for such investments, if any.	No Adjustments
ROCE	No direct Equivalent	Not Applicable

* *Glossary and definition section includes further description as relevant.*

ROCE for nine months ended 31 December 2018 is calculated based on the working summarised below.

Particulars	*Last twelve months ended 31 December 2018*
Operating Profits before special items	2,303
Less: Cash Tax Outflow	(420)
Return on Capital Employed (a)	1,883

Opening Capital Employed (b)	15,494
Closing Capital Employed (c)	16,931
Average Capital Employed (d) = (a+b)/2	16,212
ROCE (a/d)	11.6%

GLOSSARY AND DEFINITIONS

Aluminium Business

The aluminium business of the Group, comprising of its fully-integrated bauxite mining, alumina refining and aluminium smelting operations in India, and trading through the Bharat Aluminium Company Limited and Jharsuguda Aluminium (a division of Vedanta Limited), in India

Attributable Profit

Profit for the financial year before dividends attributable to the equity shareholders of Vedanta Resources Limited (formerly Vedanta Resources plc).

BALCO

Bharat Aluminium Company Limited, a company incorporated in India.

Businesses

The Aluminium Business, the Copper Business, the Zinc, lead, silver, Iron ore, Power, Oil & Gas Business and Steel together

Cairn India

Erstwhile Cairn India Limited and its subsidiaries

Capital Employed

Net assets before Net (Debt)/Cash

Company or Vedanta

Vedanta Resources Limited (formerly Vedanta Resources plc)

Company financial statements

The condensed consolidated financial statements for the Company and the Group for the period ended 31 December 2018

Copper Business

The copper business of the Group, comprising:

A copper smelter, two refineries and two copper rod plants in India, trading through Vedanta Limited, a company incorporated in India;

One copper mine in Australia, trading through Copper Mines of Tasmania Pty Limited, a company incorporated in Australia; and

An integrated operation in Zambia consisting of three mines, a leaching plant and a smelter, trading through Konkola Copper Mines PLC, a company incorporated in Zambia

Copper India

Copper Division of Vedanta Limited comprising of a copper smelter, two refineries and two copper rod plants in India.

DMF

District Mineral Fund

DMT

Dry metric tonne

Dollar or $

United States Dollars, the currency of the United States of America

EBITDA

EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.

EBITDA Margin

EBITDA as a percentage of turnover

Financial Statements or Group financial statements

The condensed consolidated financial statements for the Company and the Group for the period ended 31 December 2018

FY

Financial year i.e. April to March.

GAAP, including UK GAAP

Generally Accepted Accounting Principles, the common set of accounting principles, standards and procedures that companies use to compile their financial statements in their respective local territories

Group

The Company and its subsidiary undertakings and, where appropriate, its associate undertaking

HZL

Hindustan Zinc Limited, a company incorporated in India

IAS

International Accounting Standards

IFRIC

IFRS Interpretations Committee

IFRS

International Financial Reporting Standards

INR

Indian Rupees

IPP

Independent power plant

Iron Ore Sesa

Iron ore Division of Vedanta Limited, comprising of a Iron ore mines in Goa and Karnataka in India.

Jharsuguda Aluminium

Aluminium Division of Vedanta Limited, comprising of an aluminium refining and smelting facilities at Jharsuguda and Lanjigarh in Odisha in India.

KCM or Konkola Copper Mines

Konkola Copper Mines PLC, a company incorporated in Zambia

KTPA

Thousand tonnes per annum

LME

London Metals Exchange

London Stock Exchange

London Stock Exchange plc

MIC

Metal in concentrate

mt or tonnes

Metric tonnes

MU

million Units

MW

Megawatts of electrical power

Net (Debt)/Cash

Net debt is a Non-IFRS measure and represents total debt after fair value adjustments under IAS 32 and IFRS 9 as reduced by cash and cash equivalents, liquid investments and structured investment, net of the deferred consideration payable for such investments (referred as Financial asset investment net of related liabilities), if any.

Oil & Gas business

Oil & Gas division of Vedanta Limited, is involved in the business of exploration, development and production of Oil & Gas.

PBT

Profit before tax

PPE

Property plant and equipment

PSC

A "production sharing contract" by which the Government of India grants a license to a company or consortium of companies (the 'Contractor") to explore for and produce any hydrocarbons found within a specified area and for a specified period, incorporating specified obligations in respect of such activities and a mechanism to ensure an appropriate sharing of the profits arising there from (if any) between the Government and the Contractor.

Return on Capital Employed or ROCE

Operating profit before special items net of tax outflow, as a ratio of average capital employed

STL

Sterlite Technologies Limited, a company incorporated in India

Special items

Items which derive from events and transactions that need to be disclosed separately by virtue of their size or nature

tpa

Metric tonnes per annum

TSPL

Talwandi Sabo Power Limited, a company incorporated in India

Vedanta Limited (formerly known as Sesa Sterlite Limited/ Sesa Goa Limited)

Vedanta Limited, a company incorporated in India engaged in the business of Oil & Gas exploration and production, copper smelting, Iron Ore mining, Alumina & Aluminium production and Energy generation.

Volcan

Volcan Investments Limited, a company incorporated in the Bahamas

Independent Auditors' Report

To the members of Vedanta Resources plc

Opinion

In our opinion:

- Vedanta Resources plc's Group financial statements and parent Company financial statements (the financial statements) give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 March 2018 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including FRS 101 Reduced Disclosure Framework; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006, and, as regards the Group financial statements, Article 4 of the IAS Regulation.

What we have audited

The Group and parent Company financial statements of Vedanta Resources plc for the year ended 31 March 2018 comprise:

Group	Parent Company
the Consolidated Income Statement; the Consolidated Statement of Comprehensive Income; the Consolidated Statement of Financial Position; the Consolidated Cash Flow Statement; the Consolidated Statement of Changes in Equity; and the related Notes 1 to 45 to the Group financial statements.	the Company Balance Sheet; the Company Statement of Changes in Equity; and the related Notes 1 to 11 to the Company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 Reduced Disclosure Framework (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Group and parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Use of our report

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Conclusions relating to principal risks, going concern and viability statement

We have nothing to report in respect of the following information in the Annual Report, in relation to which the ISAs (UK) require us to report to you whether we have anything material to add or draw attention to:

- the disclosures in the Annual Report set out on pages 34–41 that describe the principal risks and explain how they are being managed or mitigated;
- the Directors' confirmation set out on page 34 in the Annual Report that they have carried out a robust assessment of the principal risks facing the entity, including those that would threaten its business model, future performance, solvency or liquidity;
- the Directors' statement set out on page 152 in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the entity's ability to continue to do so over a period of at least 12 months from the date of approval of the financial statements
- whether the Directors' statement in relation to going concern required under the Listing Rules in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit; or
- the Directors' explanation set out on page 152 in the Annual Report as to how they have assessed the prospects of the entity, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the entity will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Overview of our audit approach

Materiality	• Overall Group materiality of $81 million which represents approximately 2% of EBITDA. • EBITDA represents an earnings-based measure for determining materiality and we consider this to be the most relevant performance measure to the users of the financial statements.
Audit scope	• We performed an audit of the complete financial information of 11 components and audit procedures on specific balances for a further four components. • The components where we performed full or specific audit procedures accounted for 94% of EBITDA, 91% of revenue and 92% of total assets. • For the remaining 42 components in the Group we have performed limited procedures appropriate to respond to the risk of material misstatement. • We have obtained an understanding of the entity-level controls of the Group which assists us in identifying and assessing risks of material misstatement due to fraud or error, as well as assisting us in determining the most appropriate audit strategy.
What has changed	• In the current year the tax and legal claim matters, which were previously classified as two separate key audit matters, have been combined under the heading claims and exposures relating to taxation and litigation. This is due to their similarity in nature as both tax and legal claims tend to be settled through a similar legal process. • We considered the recoverability of disputed receivables as a new key audit matter in the current year. We have split revenue recognition from the recoverability of receivables as the audit risks and related audit response for each were different. In addition, we have placed an increased focus on receivables where the balance is under dispute rather than general trade receivables. However, this does not indicate an increased risk in either of these matters.

Independent Auditors' Report continued
To the members of Vedanta Resources plc

Key audit matters
Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in our opinion thereon, and we do not provide a separate opinion on these matters.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Recoverability of property, plant and equipment and Exploration & Evaluation assets Refer to the Audit Committee Report page 120; Accounting policies pages 171–172; and Note 17 of the Consolidated Financial Statements page 197		
At 31 March 2018 the carrying value of property, plant and equipment (PP&E) was $17,727 million (2017: $16,751 million), including $2,327 million of Evaluation and Exploration (E&E) assets (2017: $1,400 million). Recoverability of PP&E and E&E assets has been identified as a key audit matter due to: ● The significance of the carrying value of the assets being assessed. ● The size of recent impairment charges and reversals. ● The recent challenges in respect of the Group's licences to operate in certain jurisdictions. ● The assessment of the recoverable amount of the Group's Cash Generating Units (CGUs) involves significant judgements about the future cash flow forecasts and the discount rate that is applied. We focused our effort on those CGU's with impairment and impairment reversal indicators. The key judgements centred on forecast production profiles, forecast volumes, prices and discount rate assumptions. The following impairment was identified in the current year: ● Vedanta Limited Iron Ore: The Supreme Court judgment stipulating the cessation of operations in Goa from 16 March 2018 resulting in an impairment of $758.5 million (see Note 5). In addition, the following impairment reversal was identified: ● Vedanta Limited Oil and Gas: At the Rajasthan block there was a significant increase in viable reserves due to the implementation of an enhanced extraction process. A total $1,447.4 million impairment reversal was recorded (see Note 5). The overall Group impairment (including reversal of impairment) risk has increased in the current year due to the significant charges and reversal recognised during the year.	In addressing this key audit matter procedures were performed by both our group and component teams. Macroeconomic assumptions and consistency of approach were ensured by the group team with location specific inputs addressed by component teams. **To address this key audit matter we have:** ● Critically assessed through an analysis of internal and external factors impacting the entity, whether there were any indicators of impairment (or reversal of impairment) in line with IAS 36 for PP&E and IFRS 6 for E&E assets across the Group. ● Specifically in relation to the CGUs where impairment and impairment reversal indicators were identified, we have obtained and evaluated the valuation models used to determine the recoverable amount by challenging the key assumptions used by management including: – Considering forecasted volumes in relation to asset development plans. – Critically assessing management's forecasting accuracy by comparing prior year forecasts to actual results and assessing the potential impact of any variances. – Corroborating the price assumptions used in the models against analyst consensus. – Testing the appropriateness of the weighted average cost of capital used to discount the impairment models through engaging our internal valuations experts. – Testing the integrity of the models together with their clerical accuracy. ● We assessed the competence and objectivity of the Group's external experts, to satisfy ourselves that these parties are appropriate in their roles within the estimation process. We performed full and specific scope audit procedures over this risk area in 11 components (full and specific scope), which covered 97% of the risk amount. Triggers were identified in four locations (including Iron Ore and Vedanta Oil and Gas) where full impairment tests were prepared and audit procedures were performed over these valuation models.	We are satisfied that the impairment reversal in relation to the Oil and Gas CGU's and the impairment of the CGU's impacted by the Goa ruling are fairly stated and that there are no further impairments or impairment reversals at other CGUs in the Group. We conclude that the related disclosures as per IAS 36 are appropriately presented in the financial statements.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Accounting for assets under construction Refer to the Audit Committee Report page 120; Accounting policies page 170; and Note 17 of the Consolidated Financial Statements page 197		
At 31 March 2018 the carrying value of assets under construction was $2,255 million (2017: $2,366 million). Accounting for assets under construction has been identified as a key audit matter due to: • the significant judgement involved in assessing when an asset is available for use as intended by management. At this point, revenue and operating costs associated to the asset cease to be capitalised to the statement of financial position and depreciation should commence. • Multiple construction projects across the Group that have been previously placed on hold or for which completion is taking longer than expected. There is therefore a risk relating to the viability of these projects and thus the recoverability of the balance. Additionally, we considered recent impairment charges recognised in respect of assets under construction which resulted from changes in project plans. The risk has decreased in the current year due to some significant projects being commissioned in the current year and some projects, previously put on hold, restarting construction.	We performed our audit procedures on the asset under construction balances across the Group. Due to the local considerations impacting our assessments our procedures were performed predominantly by the component teams under the direction and supervision of the group engagement team. **To address this key audit matter we have:** • Considered the stage of completion of ongoing projects specifically in relation to ascertaining when the assets will be available for use as intended by management. • Assessed project timelines by tracking project progress against forecast spend and management budgets. • Assessed the accounting treatment of testing costs during the testing phase where applicable. • Ensured costs associated with assets which came into production in the year cease to be capitalised and depreciation charges commenced. • Assessed the viability and recoverability of long outstanding projects and performed inspections to confirm that the machinery and material related to these projects is not obsolete. We performed audit procedures over this risk area in nine components (full and specific scope), which covered 98% of the balance impacted by this risk.	Based on our evaluation of the asset under construction projects and other procedures performed, we are satisfied that projects completed in the current year have been treated in accordance with IAS 16 and that the overall assets under construction balances are recoverable.
Revenue recognition Refer to the Audit Committee Report page 120; Accounting policies pages 168–169; and Note 4 of the Consolidated Financial Statements page 187		
For the year ended 31 March 2018 the Group recognised revenue from operations of $15,359 million (2017: $11,520 million). Revenue recognition has been identified as a key audit matter due to the diverse and complex revenue streams across the Group. We have identified the following key areas for consideration: • Complex calculation of power tariff agreements with Grid Corporation of Odisha Limited (GRIDCO) and Punjab State Power Corporation Limited (PSPCL). • Complexity associated with the calculation of profit petroleum within the Vedanta Limited Oil & Gas division. • Cut-off: The variety of terms that define when title, risk and rewards are transferred to the customer, as well as the high value of the transactions, give rise to the risk that revenue is not recognised in the correct period. • Measurement: At the end of each reporting period there are a number of contracts that are either provisionally priced or subject to hedging arrangements through forward contracts. These calculations are based on estimations and susceptible to potential manipulation. The level of risk has remained the same compared to the prior year but has been split from the receivables matter as the related audit risks and audit response for each were different.	We performed our audit procedures across the Group's revenue streams considering the revenue recognition policies. Our procedures were performed mainly by the component teams under the direction and supervision of the Group engagement team. **To address this key audit matter we have:** • Performed walkthroughs of the revenue recognition processes at each full scope component and assessed the design effectiveness of key controls. • Tested the controls, including IT controls, over the revenue recognition process to confirm operating effectiveness. • Inspected the term of the agreements to assess the reasonability of the inputs used in the calculation of the power tariff in respect of the revenue recognised for GRIDCO and PSPCL. Other procedures relating to the revenue of the Power division are mentioned in the recoverability of disputed receivables section. • Inspected the terms of Vedanta Oil & Gas' profit sharing agreements and tested the underlying cost recovery and profit petroleum calculation used by management. • Selected a sample of sales across the Group made pre and post year end, agreeing the date of revenue recognition to third party support, such as bills of lading, to confirm sales are recognised according to contract conditions. • Examined invoice samples with complex shipping terms to ensure that revenue has been recognised appropriately. • Re-calculated the provisional pricing adjustments and validated the prices used to third party data. • For the zinc and lead price forwards taken out during the year, we involved our specialists to inspect the hedging documentation, and tested any resulting realised and unrealised loss, including the agreement of market forward rates used in determining the unrealised fair value loss at year end. We performed audit procedures over this risk area in nine full scope components, where revenue was present, which covered 92% of the revenue balance impacted by this risk.	Based on the procedures performed we consider revenue to be fairly stated in the financial statements.

Independent Auditors' Report continued

To the members of Vedanta Resources plc

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Recoverability of disputed receivables Refer to the Audit Committee Report page 121; Accounting policies page 176; and Note 38 and Note 41 of the Consolidated Financial Statements on pages 232–237 and page 240 respectively		
At 31 March 2018 the value of disputed receivables to which we identified additional risk was $590 million (2017: $367 million). There are entities within the Group that have significant receivables for which the recovery is subject to increased risk due to disagreements over the quantification or timing of the balance. Some of these balances are subject to litigation. The risk is specifically related to the PSPCL (TPSL), GRIDCO (Vedanta Limited Power) and the Zambian Revenue Authority (KCM VAT) receivables. These receivables also all have long outstanding elements of their balance. The level of risk has remained the same compared to the prior year but has been split from the revenue recognition matter as the related audit risks and audit response for each were different.	In addressing this key audit matter procedures were performed by the component teams under the direction and supervision of the group engagement team. **To address this key audit matter we have:** • Assessed the recoverability of the GRIDCO and PSPCL receivables by: – Inspecting the relevant state regulatory commission, appellate tribunal and Supreme Court rulings. – Examining the underlying power purchase agreements. – Inspecting external legal opinions in respect of the merits of the cases. – Holding meetings with the external lawyers where applicable to determine the basis of their conclusions in respect of cases. • Assessed the recoverability of the KCM VAT receivables by: – Involving our tax specialists to assess the basis of the refunds claimed. – Inspecting correspondence with the Tax Authority and assessing the availability of any potential future tax offset arrangements. – Substantiating any subsequent refunds that have been received post-year end to appropriate supporting documentation. – Reviewing press releases made by the Tax Authority which highlight the intentions of the Tax Authority related to refunds of VAT in Zambia. We performed audit procedures over this risk area in three full scope components, which covered 100% of the risk amount.	Based on the procedures performed we consider the disputed receivables to be fairly stated in the financial statements.
Claims and exposures relating to taxation and litigation Refer to the Audit Committee Report page 121; Accounting policies pages 173 and 174; and Note 38 of the Consolidated Financial Statements pages 232–237		
The Group has disclosed in Note 38 contingent liabilities of $3,618 million for tax and legal claims (2017: $5,713 million) of which $2,704 million (2017: $4,352 million) relates to income tax matters. Taxation and litigation exposures have been identified as a key audit matter due to the large number of complex tax and legal claims across the Group, particularly in relation to the operations located in India. There is significant judgement required by management in assessing the exposure of each case and thus a risk that such cases may not be adequately provided for or disclosed. Recent material tax cases have included: • In 2015 a demand was received by the former Cairn India Limited (CIL) ordering payment to the Tax Authority of withholding taxes not paid on the acquisition of Cairn India. Based on information received during the year the Group have reassessed this exposure and have removed the interest portion. • In the current year, the Supreme Court in India upheld the constitutional validity of entry tax on imported goods. The Group's potential exposure in respect of entry tax as a whole is $201 million. We focused on this matter because of the potential financial impact on the financial statements. Additionally, the treatment of taxation and litigation cases require significant judgement due to the complexity of the cases, timescales for resolution and the need to negotiate with various authorities. We consider the level of risk to have remained unchanged compared to the prior year.	Our procedures were performed centrally where cases impacted a number of components. For location-specific issues, component teams undertook the majority of the procedures under the direction and supervision of the Group audit team. **To address this key audit matter we have:** • Obtained the Group legal and tax summary and critically assessed management's position through discussions with the Head of Legal, Head of Tax and operational management, on both the probability of success in significant cases, and the magnitude of any potential loss. • Inspected external legal opinions (where considered necessary) and other evidence to corroborate management's assessment of the risk profile in respect of legal claims. • Engaged internal tax specialists to technically appraise the tax positions taken by management with respect to local tax issues. • Ensured that the management assessment of similar cases is consistent across the Group or that differences in positions are adequately justified. • Assessed the relevant disclosures made within the financial statements to ensure they appropriately reflect the facts and circumstances of the respective tax and legal exposures and are in accordance with the requirements of IAS 37. We performed audit procedures over this risk area in 11 full scope components, which covered 98% of the risk amount.	We are satisfied the accounting treatment in respect of potential tax exposures and legal cases is appropriate based on our procedures performed. We conclude that the related disclosures are appropriately presented in the financial statements.

Our application of materiality

The scope of our work is influenced by materiality. We apply the concept of materiality in planning and performing the audit, in evaluating the effect of identified misstatements on the audit and in forming our audit opinion.

As we develop our audit strategy, we determine materiality at the overall level and at the individual account level (referred to as our 'performance materiality').

Materiality	Performance materiality	Reporting threshold
$81 million	$41 million	$4.1 million

Materiality

The magnitude of an omission or misstatement that, individually or in the aggregate, could reasonably be expected to influence the economic decisions of the users of the financial statements. Materiality provides a basis for determining the nature and extent of our audit procedures.

We determined materiality for the Group to be $81 million (2017: $64 million), which is approximately 2% (2017: 2%) of EBITDA. The higher materiality threshold was due to an increase in Group EBITDA to $4,051 million (2017: $3,191 million) driven by higher commodity prices and increased volumes in certain components compared to the prior year. Our materiality amount provides a basis for determining the nature and extent of risk assessment procedures, identifying and assessing the risk of material misstatement and determining the nature and extent of further audit procedures. Materiality is assessed on both quantitative and qualitative grounds. With respect to disclosure and presentational matters, amounts in excess of the quantitative thresholds above may not be adjusted if their effect is not considered to be material on a qualitative basis.

Rationale for basis

We believe that EBITDA provides us with an earnings-based measure that is significant to users of the financial statements on which we could set our materiality. EBITDA is a key performance indicator for the Group and is also a key metric used by the Group in the assessment of the performance of management. We also noted that market and analyst commentary on the performance of the Group uses EBITDA as a key metric. We therefore considered EBITDA to be the most appropriate performance metric on which to base our materiality calculation as we considered that to be the most relevant performance measure to the stakeholders of the entity.

We determined materiality for the parent Company to be $13.1 million (2017: $10.7 million), which is 1% (2017: 1%) of equity.

Performance materiality

The application of materiality at the individual account or balance level. It is set at an amount to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality.

We set our performance materiality at 50% of planning materiality calculated as $41 million (2017: $32 million). This was based upon our overall risk analysis, our assessment of the Group's control environment, the short reporting cycle and the number and amounts of individual misstatements (corrected and uncorrected) identified in the prior periods as well as the nature of misstatements.

Audit work at component locations for the purpose of obtaining audit coverage over significant financial statement accounts is undertaken based on a percentage of total performance materiality. The performance materiality set for each component is based on the relative scale and risk of the component to the Group as a whole and our assessment of the risk of misstatement at that component. In the current year, the range of performance materiality allocated to components was $6.8 million to $22.0 million (2017: $5.0 million to $14.9 million).

Reporting threshold

An amount below which identified misstatements are considered as being clearly trivial.

We agreed with the Audit Committee that we would report to them all uncorrected audit differences in excess of $4.1 million (2017: 0.8 million), which is set at 5% of planning materiality, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. In the prior year we were requested by the Audit Committee to report to the previous auditors' threshold.

We evaluate any uncorrected misstatements against both the quantitative measures of materiality discussed above and in light of other relevant qualitative considerations in forming our opinion.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Group's and the parent Company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Vedanta Resources plc Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

Independent Auditors' Report continued

To the members of Vedanta Resources plc

Tailoring the scope

Our assessment of audit risk, our evaluation of materiality and our allocation of performance materiality determine our audit scope for each entity within the Group. Taken together, this enables us to form an opinion on the consolidated financial statements. We take into account size, risk profile, the organisation of the Group and effectiveness of Group-wide controls, changes in the business environment and other factors such as recent internal audit results when assessing the level of work to be performed at each entity.

The Group has decentralised processes and controls over the key areas of our audit focus with responsibility lying with component management for the majority of estimation processes and significant risk areas. We have tailored our audit response accordingly and thus for the majority of our focus areas, audit procedures were undertaken directly by the component audit teams, including testing on the verification of operational data and other routine processes, under the direction and supervision of the Group engagement team.

In assessing the risk of material misstatement to the Group financial statements, and to ensure we had adequate quantitative coverage of significant accounts in the financial statements, of the 57 reporting components of the Group, we selected 15 components covering entities within India, Zambia and South Africa which represent the principal business units within the Group.

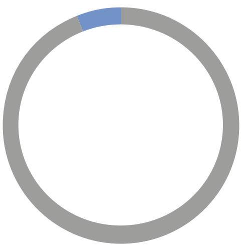
Of the 15 components selected, we performed an audit of the complete financial information of 11 components (full scope components) which were selected based on their size or risk characteristics. For the remaining four components ('specific components'), we performed audit procedures on specific accounts within that component that we considered had the potential for the greatest impact on the significant accounts in the financial statements either because of the size of these accounts or their risk profile.

The reporting components where we performed audit procedures accounted for 94% (2017: 100%) of the Group's EBITDA, 91% (2017: 99%) of the Group's revenue and 92% (2017: 90%) of the Group's total assets. For the current year, the full scope components contributed 94% (2017: 99%) of the Group's EBITDA, 91% (2017: 99%) of the Group's revenue and 90% (2017: 85%) of the Group's total assets. The specific scope components contributed 0% (2017: 1%) of the Group's EBITDA, 0% (2017: 0%) of the Group's revenue and 2% (2017: 5%) of the Group's total assets. The audit scope of these components may not have included testing of all significant accounts of the component but will have contributed to the coverage of the specified significant accounts tested for the Group. The charts below illustrate the coverage obtained from the work performed by our audit teams.

Of the remaining 42 components that together represent 6% of the Group's EBITDA, none are individually greater than 2% of the Group's EBITDA. For these components, we performed other procedures, including analytical reviews, consolidation adjustment audit procedures and in some instances completed statutory financial statement audits. This ensured we responded appropriately to any potential risks of material misstatement to the Group financial statements.

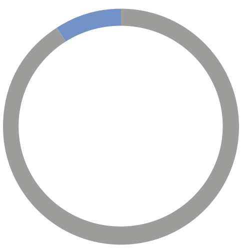
We have obtained an understanding of the entity level controls of the Group as a whole which assisted us in identifying and assessing risks of material misstatement due to fraud or error, as well as assisting us in determining the most appropriate audit strategy.

EBITDA



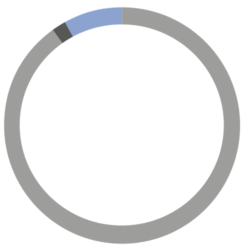
Full	94%
Specific	0%
Other	6%

Revenue



Full	91%
Specific	0%
Other	9%

Total assets



Full	90%
Specific	2%
Other	8%

* Investments in companies within the Group have been eliminated in the calculation of the coverage of total assets.

Changes from the prior year

In the current year the scoping for Black Mountain Mining has changed from full scope to a specific scope component for PP&E. This is due to the relatively small contribution to Group EBITDA, with the focus remaining on the Gamsberg project asset under construction balance. Namibia Holdings Limited scoping has changed from full scope component to a review scope component as a result of its smaller contribution to the Group EBITDA. Due to the downgrade to risk in respect of the entity and its minimal contribution to the Group's metrics, Fujairah Gold has been classified as an other scope component rather than a full scope component.

Integrated team structure

The overall audit strategy is determined by the senior statutory auditor, Mirco Bardella. The senior statutory auditor is based in the UK however, since Group management and many operations reside in India, the Group audit team includes members from both the UK and India. The senior statutory auditor visited India three times during the current year's audit and members of the Group audit team in both jurisdictions work together as an integrated team throughout the audit process. Whilst in India, he focused his time on the significant risk and judgement areas of the audit, interactions with management and Group and component teams. During the current year's audit he reviewed key working papers and met with key representatives of the integrated and Indian component audit teams for certain full scope components to discuss the audit approach and issues arising from their work.

Involvement with component teams

In establishing our overall approach to the Group audit, we determined the split of work that needed to be undertaken at each of the components by the Group audit engagement team, or by component auditors from other EY global network firms operating under the Group team instruction.

It was concluded that audit procedures on 10 full scope components would be performed directly by the component audit team and the procedures on one full scope component, the parent Company, would be performed by the Group audit team. The Group team reviewed the work performed by components and ensured sufficient audit evidence had been obtained as a basis to form part of our opinion on the Group as a whole. In addition the integrated Group team also included key members of certain full scope components ensuring knowledge was transferred effectively through the team. The work on specific scope components was either performed by the Group audit team directly or by a component team and reviewed by the Group audit team.

The Group audit team established a programme of planned visits. During the current year's audit cycle, visits were undertaken by senior members of the Group audit team to certain component teams in India together with the team in Zambia. These visits involved key members of the Group audit team meeting with local management and discussing the audit approach with the component teams together with any issues arising from their work. In addition, the Group audit team participated in key discussions, via conference calls with all full and specific scope entities.

Other information

The other information comprises the information included in the Annual Report other than the financial statements and our auditor's report thereon. The Directors are responsible for the other information.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report in this regard.

In this context, we also have nothing to report in regard to our responsibility to specifically address the following items in the other information and to report as uncorrected material misstatements of the other information where we conclude that those items meet the following conditions:

- **Fair, balanced and understandable set out on page 151** – the statement given by the Directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- **Audit Committee reporting set out on pages 117–124** – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; or
- **Directors' statement of compliance with the UK Corporate Governance Code set out on page 105** – the parts of the Directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the Group and the parent Company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report or the Directors' Report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Independent Auditors' Report continued

To the members of Vedanta Resources plc

Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement set out on page 151, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

The objectives of our audit, in respect to fraud, are: to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and to respond appropriately to fraud or suspected fraud identified during the audit. However, the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the Group and determined that the most significant which are directly relevant to specific assertions in the financial statements are those related to the report framework (IFRS, the Companies Act 2006 and UK Corporate Governance Code) and the mining licence and relevant tax compliance regulations in India, South Africa, Zambia and other jurisdictions in which the Group operates.
- We understood how Vedanta Resources plc is complying with those frameworks by making enquiries of management, internal audit, those responsible for legal and compliance procedures and the Company Secretary. We corroborated our enquiries through our review of Board minutes and papers provided to the Audit Committee.
- We assessed the susceptibility of the Group's financial statements to material misstatement, including how fraud might occur by meeting with management from various parts of the business to understand where it is considered there was a susceptibility to fraud. We also considered performance targets and their propensity to influence efforts made by management to manage earnings. We considered the programmes and controls that the Group has established to address risks identified, or that otherwise prevent, deter and detect fraud; and how senior management monitors those programmes and controls. Where instances of risk behaviour patterns were identified, we performed additional audit procedures to address each identified risk. These procedures included testing manual journals and review of key contracts and were designed to provide reasonable assurance that the financial statements were free of material fraud or error.
- Based on this understanding we designed our audit procedures to identify non-compliance with such laws and regulations identified in the paragraphs above. Our procedures involved: journal entry testing, with a focus on manual consolidation journals and journals indicating large or unusual transactions based on our understanding of the business; enquiries of legal counsel, Group management, internal audit and relevant members of management at full and specific scope components; and focused testing, as referred to in the key audit matters section above.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at https://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Other matters we are required to address

- We were officially appointed by the Company on 5 August 2016 at the AGM to audit the financial statements for the year ending 31 March 2017 and subsequent financial periods.
- The period of total uninterrupted engagement including previous renewals and reappointments is two years, covering the years ending 31 March 2017 to 31 March 2018.
- The non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the parent Company and we remain independent of the Group and the parent Company in conducting the audit.
- The audit opinion is consistent with the additional report to the Audit Committee.

Mirco Bardella (Senior Statutory Auditor)
for and on behalf of Ernst & Young LLP, Statutory Auditor
London
22 May 2018

Notes

- The maintenance and integrity of the Vedanta Resources plc web site is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the web site
- Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Consolidated Income Statement

For the year ended 31 March 2018

(US$ million except as stated)	Note	Year ended 31 March 2018 Before special items	special items	Total	Year ended 31 March 2017 Before special items	Special items	Total
Revenue	4	15,358.7	–	15,358.7	11,520.1	–	11,520.1
Cost of sales	5	(11,973.6)	33.1	(11,940.5)	(8,789.2)	–	(8,789.2)
Gross profit		**3,385.1**	**33.1**	**3,418.2**	**2,730.9**	**–**	**2,730.9**
Other operating income		89.2	–	89.2	73.4	–	73.4
Distribution costs		(276.5)	–	(276.5)	(274.9)	–	(274.9)
Administrative expenses		(417.3)	–	(417.3)	(368.8)	–	(368.8)
Impairment (charge)/reversal, loss on PP&E	5	–	649.9	649.9	–	(17.3)	(17.3)
Operating profit/(loss)		**2,780.5**	**683.0**	**3,463.5**	**2,160.6**	**(17.3)**	**2,143.3**
Investment revenue	6	465.1	–	465.1	642.6	–	642.6
Finance costs	7	(1,342.6)	(108.2)	(1,450.8)	(1,340.6)	(41.6)	(1,382.2)
Other gains and (losses) [net]	8	(1.0)	5.3	4.3	(23.8)	–	(23.8)
Profit/(loss) before taxation (a)		**1,902.0**	**580.1**	**2,482.1**	**1,438.8**	**(58.9)**	**1,379.9**
Net tax expense (b)	12	**(674.7)**	**(338.5)**	**(1,013.2)**	**(495.4)**	**(4.9)**	**(500.3)**
Profit/(loss) for the year from continuing operations (a+b)		**1,227.3**	**241.6**	**1,468.9**	**943.4**	**(63.8)**	**879.6**
Attributable to:							
Equity holders of the parent		162.6	73.0	235.6	34.8	(57.5)	(22.7)
Non-controlling interests		1,064.7	168.6	1,233.3	908.6	(6.3)	902.3
Profit/(loss) for the year from continuing operations		**1,227.3**	**241.6**	**1,468.9**	**943.4**	**(63.8)**	**879.6**
Earnings/(loss) per share (US cents)							
Basic earnings/(loss) per ordinary share	13	58.5	26.3	84.8	12.6	(20.8)	(8.2)
Diluted earnings/(loss) per ordinary share	13	56.9	25.9	82.8	12.3	(20.8)	(8.2)

Consolidated Statement of Comprehensive Income

For the year ended 31 March 2018

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Profit for the year from continuing operations	**1,468.9**	**879.6**
Items that will not be reclassified subsequently to income statement:		
Remeasurement of net defined benefit plans (Note 33)	1.1	(0.8)
Tax effects on net defined benefit plans	0.5	0.6
Total (a)	**1.6**	**(0.2)**
Items that may be reclassified subsequently to income statement:		
Exchange differences arising on translation of foreign operations	56.9	216.3
Gain in fair value of available-for-sale financial assets (Note 18)	13.9	4.1
Cumulative (losses)/gains of cash flow hedges	(62.4)	9.5
Tax effects arising on cash flow hedges	24.4	(5.7)
Losses/(gains) on cash flow hedges recycled to income statement	54.8	(12.2)
Tax effects arising on cash flow hedges recycled to income statement	(19.0)	4.2
Total (b)	**68.6**	**216.2**
Other comprehensive income for the year (a+b)	**70.2**	**216.0**
Total comprehensive income for the year	**1,539.1**	**1,095.6**
Attributable to:		
Equity holders of the parent	267.1	64.5
Non-controlling interests	1,272.0	1,031.1
Total comprehensive income for the year	**1,539.1**	**1,095.6**

Consolidated Statement of Financial Position

As at 31 March 2018

(US$ million)	Note	As at 31 March 2018	As at 31 March 2017
Assets			
Non-current assets			
Goodwill	15	12.2	16.6
Intangible assets	16	123.1	95.6
Property, plant and equipment	17	17,727.3	16,750.8
Leasehold land		57.0	55.3
Financial asset investments	18	24.5	10.7
Non-current tax assets	31	521.1	434.6
Other non-current assets	19	659.2	544.4
Financial instruments (derivatives)	29	–	0.6
Deferred tax assets	31	916.7	1,111.0
		20,041.1	**19,019.6**
Current assets			
Inventories	20	2,037.7	1,670.1
Trade and other receivables	21	1,526.9	1,084.8
Financial instruments (derivatives)	29	24.0	1.6
Current tax assets		2.2	2.1
Liquid investments	22	4,807.8	8,043.0
Cash and cash equivalents	23	798.7	1,682.2
		9,197.3	**12,483.8**
Total assets		**29,238.4**	**31,503.4**
Liabilities			
Current liabilities			
Short-term borrowings	24	(5,460.3)	(7,658.5)
Trade and other payables	27a	(6,077.5)	(6,223.4)
Financial instruments (derivatives)	29	(22.1)	(126.9)
Retirement benefits	33	(18.0)	(7.5)
Provisions	30	(22.1)	(17.5)
Current tax liabilities		(53.9)	(37.8)
		(11,653.9)	**(14,071.6)**
Net current liabilities		**(2,456.6)**	**(1,587.8)**
Non-current liabilities			
Medium and long-term borrowings	24	(9,733.5)	(10,570.2)
Trade and other payables	27b	(142.8)	(68.5)
Financial instruments (derivatives)	29	(18.1)	(8.6)
Deferred tax liabilities	31	(743.0)	(371.1)
Retirement benefits	33	(62.4)	(59.6)
Provisions	30	(351.8)	(327.3)
Non-equity non-controlling interests	25	(11.9)	(11.9)
		(11,063.5)	**(11,417.2)**
Total liabilities		**(22,717.4)**	**(25,488.8)**
Net assets		**6,521.0**	**6,014.6**
Equity			
Share capital	35	30.4	30.1
Share premium		201.5	201.5
Treasury shares	35	(558.3)	(557.9)
Share-based payment reserve	32	13.3	28.2
Hedging reserve		(92.5)	(90.9)
Other reserves		154.3	140.5
Retained earnings		(87.5)	(160.0)
Equity attributable to equity holders of the parent		**(338.8)**	**(408.5)**
Non-controlling interests	36	6,859.8	6,423.1
Total equity		**6,521.0**	**6,014.6**

Financial Statements of Vedanta Resources plc with registration number 4740415 were approved by the Board of Directors on 22 May 2018 and signed on their behalf by

Navin Agarwal
Executive Vice Chairman

Consolidated Cash Flow Statement

For the year ended 31 March 2018

(US$ million)	Note	Year ended 31 March 2018	Year ended 31 March 2017
Operating activities			
Profit before taxation		2,482.1	1,379.9
Adjustments for:			
Depreciation and amortisation		1,270.7	1,030.5
Investment revenues		(465.1)	(642.6)
Finance costs		1,450.8	1,382.2
Other gains and (losses) [net]		(4.3)	23.8
(Profit)/loss on disposal of PP&E		(0.5)	5.2
Write-off of unsuccessful exploration costs		–	6.5
Share-based payment charge		19.5	13.4
Impairment charge/reversal (net), loss on PP&E		(649.9)	17.3
Other non-cash items		10.0	3.5
Operating cash flows before movements in working capital		**4,113.3**	**3,219.7**
Increase in inventories		(354.5)	(266.7)
(Increase)/decrease in receivables		(606.5)	18.8
Increase in payables		261.7	522.3
Cash generated from operations		**3,414.0**	**3,494.1**
Dividend received		4.0	0.1
Interest income received		223.5	298.0
Interest paid		(1,415.6)	(1,417.5)
Income taxes paid		(567.2)	(778.7)
Dividends paid		(164.4)	(138.4)
Net cash inflow from operating activities		**1,494.3**	**1,457.6**
Cash flows from investing activities			
Purchases of property, plant and equipment and intangibles		(1,104.3)	(873.9)
Proceeds on disposal of property, plant and equipment		10.4	25.2
Proceeds from redemption of liquid investments	26	16,863.0	15,284.8
Purchases of liquid investments	26	(13,421.5)	(14,363.3)
Acquisition through business combination	11	(134.4)	–
Net cash from investing activities		**2,213.2**	**72.8**
Cash flows from financing activities			
Issue of ordinary shares		0.3	0.0
Purchase of shares under DSBP scheme		(2.4)	(2.0)
Dividends paid to non-controlling interests of subsidiaries		(1,414.4)	(1,393.3)
Acquisition of additional interests in subsidiary/share purchase by subsidiary		(31.4)	(21.4)
Exercise of stock options in subsidiary		5.2	2.9
(Repayment of)/proceeds from working capital loan (net)	26	(612.2)	1,709.1
Proceeds from other short-term borrowings	26	1,115.4	3,193.8
Repayment of other short-term borrowings	26	(4,362.4)	(4,324.0)
Buyback of non-convertible bond	26	(1,128.5)	(858.5)
Proceeds from medium and long-term borrowings	26	3,640.2	2,146.4
Repayment of medium and long-term borrowings	26	(1,816.9)	(205.9)
Buyback of convertible bond	26	–	(590.3)
Net cash used in financing activities		**(4,607.1)**	**(343.2)**
Net (decrease)/increase in cash and cash equivalents		(899.6)	1,187.2
Effect of foreign exchange rate changes		16.1	66.7
Cash and cash equivalents at beginning of the year		1,682.2	428.3
Cash and cash equivalents at end of the year	**23 & 26**	**798.7**	**1,682.2**

Consolidated Statement of Changes in Equity

For the year ended 31 March 2018

(US$ million)	Share capital (Note 35)	Share premium	Treasury shares	Share–based payment reserves	Hedging reserve	Other reserves	Retained earnings	Total	Non–controlling Interests	Total equity
	Attributable to equity holders of the Company									
At 1 April 2017	**30.1**	**201.5**	**(557.9)**	**28.2**	**(90.9)**	**140.5**	**(160.0)**	**(408.5)**	**6,423.1**	**6,014.6**
Profit/(loss) for the year	–	–	–	–	–	–	235.6	235.6	1,233.3	1,468.9
Other comprehensive income/(loss) for the year	–	–	–	–	(1.6)	33.1	–	31.5	38.7	70.2
Total comprehensive income/(loss) for the year	**–**	**–**	**–**	**–**	**(1.6)**	**33.1**	**235.6**	**267.1**	**1,272.0**	**1,539.1**
Acquisition of shares under DSBP scheme	–	–	(0.9)	–	–	–	(1.5)	(2.4)	–	(2.4)
Transfers[1]	–	–	–	–	–	(19.3)	19.3	–	–	–
Dividends paid/ payable (Note 14)	–	–	–	–	–	–	(164.4)	(164.4)	(828.3)	(992.7)
Exercise of stock options	0.3	–	0.5	(27.0)	–	–	26.5	0.3	–	0.3
Recognition of share-based payment (Note 32)	–	–	–	12.1	–	–	–	12.1	–	12.1
Non-controlling interest on business combination (Note 11)	–	–	–	–	–	–	–	–	11.5	11.5
Recognition of put option liability/derecognition of non controlling interest (Note 27 b)	–	–	–	–	–	–	(20.7)	(20.7)	(22.0)	(42.7)
Other changes in non-controlling interests*	–	–	–	–	–	–	(22.3)	(22.3)	3.5	(18.8)
At 31 March 2018	**30.4**	**201.5**	**(558.3)**	**13.3**	**(92.5)**	**154.3**	**(87.5)**	**(338.8)**	**6,859.8**	**6,521.0**

* Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and share-based payment charge by subsidiaries.

(US$ million)	Share capital (Note 35)	Share premium	Treasury shares	Share-based payment reserves	Convertible bond reserve	Hedging reserve	Other reserves	Retained earnings	Total	Non-controlling Interests	Total equity
	Attributable to equity holders of the Company										
At 1 April 2016	**30.1**	**201.5**	**(557.2)**	**29.9**	**6.0**	**(87.7)**	**(1.4)**	**(334.0)**	**(712.8)**	**7,565.2**	**6,852.4**
Profit for the year	–	–	–	–	–	–	–	(22.7)	(22.7)	902.3	879.6
Other comprehensive income for the year	–	–	–	–	–	(3.2)	90.4	–	87.2	128.8	216.0
Total comprehensive income/(loss) for the year	**–**	**–**	**–**	**–**	**–**	**(3.2)**	**90.4**	**(22.7)**	**64.5**	**1,031.1**	**1,095.6**
Acquisition of shares under DSBP scheme	–	–	(0.8)	–	–	–	–	(1.2)	(2.0)	–	(2.0)
Convertible bond transfer	–	–	–	–	(6.0)	–	–	6.0	–	–	–
Transfers[1]	–	–	–	–	–	–	51.5	(51.5)	–	–	–
Dividends paid/ payable (Note 14)	–	–	–	–	–	–	–	(137.5)	(137.5)	(1,340.1)	(1,477.6)
Exercise of stock options	0.0	–	0.1	(15.1)	–	–	–	15.0	–	–	0.0
Recognition of share-based payment (Note 32)	–	–	–	13.4	–	–	–	–	13.4	–	13.4
Change in non-controlling interest-merger (Note 42)	–	–	–	–	–	–	–	368.4	368.4	(817.1)	(448.7)
Other changes in non-controlling interests*	–	–	–	–	–	–	–	(2.5)	(2.5)	(16.0)	(18.5)
At 31 March 2017	**30.1**	**201.5**	**(557.9)**	**28.2**	**–**	**(90.9)**	**140.5**	**(160.0)**	**(408.5)**	**6,423.1**	**6,014.6**

* Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and additional stake purchased during the year in erstwhile Cairn India Limited and share-based payment charge by subsidiaries.

Consolidated Statement of Changes in Equity continued

For the year ended 31 March 2018

OTHER RESERVES COMPRISE

(US$ million)	Currency translation reserve	Merger reserve[2]	Investment revaluation reserve	Other reserves[3]	Total
At 1 April 2016	**(2,255.2)**	**4.4**	**4.1**	**2,245.3**	**(1.4)**
Exchange differences on translation of foreign operations	87.9	–	–	–	87.9
Gain in fair value of available-for-sale financial assets	–	–	2.5	–	2.5
Remeasurements	–	–	–	–	0.0
Transfer from/(to) retained earnings[1]	–	–	–	51.5	51.5
At 1 April 2017	**(2,167.3)**	**4.4**	**6.6**	**2,296.8**	**140.5**
Exchange differences on translation of foreign operations	25.5	–	–	–	25.5
Gain in fair value of available-for-sale financial assets	–	–	6.9	–	6.9
Remeasurements	–	–	–	0.7	0.7
Transfer from/(to) retained earnings[1]	–	–	–	(19.3)	(19.3)
At 31 March 2018	**(2,141.8)**	**4.4**	**13.5**	**2,278.2**	**154.3**

1 Transfer to other reserve during the year ended 31 March 2018 includes US$3.5 million of legal reserve and withdrawal of US$22.8 million from debenture redemption reserve (31 March 2017: US$51.5 million of debenture redemption reserve).

2 The merger reserve arose on incorporation of the Company during the year ended 31 March 2004. The investment in Twin Star had a carrying amount value of US$20.0 million in the accounts of Volcan. As required by the Companies Act 1985, Section 132, upon issue of 156,000,000 ordinary shares to Volcan, Twin Star's issued share capital and share premium account have been eliminated and a merger reserve of US$4.4 million arose, being the difference between the carrying value of the investment in Twin Star in Volcan's accounts and the nominal value of the shares issued to Volcan.

3 Other reserves includes legal reserves of US$3.8 million (31 March 2017: US$0.3 million), debenture redemption reserve of US$156.2 million (31 March 2017: US$178.9 million) and balance mainly includes general reserve. Debenture redemption reserve is required to be created under the Indian Companies Act from annual profits until such debentures are redeemed. Legal reserve is required to be created by Fujairah Gold by appropriation of 10% of profits each year until the balance reaches 50% of the paid-up share capital. This reserve is not available for distribution except in circumstances stipulated by the Articles of Incorporation. Under the erstwhile Indian Companies Act, 1956, general reserve was created in relation to Group's Indian subsidiaries through an annual transfer of net income to general reserve at a specified percentage in accordance with applicable regulations. The purpose of these transfers is to ensure that the total dividend distribution is less than total distributable reserves for that year. The said requirement was dispensed with w.e.f. 1 April 2013 and there are no restrictions of use of these reserves.

Notes to the Financial Statements
As at and for the year ended 31 March 2018

1. Presentation of financial statements

General information
Vedanta Resources plc ('Company' or 'VRplc') is a company incorporated and domiciled in the United Kingdom and is a London listed diversified global natural resources major. The Group produces aluminium, copper, zinc, lead, silver, iron ore, oil & gas, commercial energy and glass substrate. Vedanta has operations in India, Zambia, Namibia, South Africa, Ireland, Liberia, UAE, Japan, South Korea, Taiwan and Australia. These financial statements are presented in US dollars being the functional currency of the Company and all values are rounded to one decimal of the nearest million except where otherwise indicated.

Compliance with applicable law and IFRS
The financial statements have been prepared in accordance with those parts of the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards (IFRS), Article 4 of the IAS Regulation and IFRS as adopted by the European Union and related interpretations.

Basis of preparation and basis of measurement
The financial statements have been prepared on a going concern basis using historical cost convention, except for derivative financial instruments, available-for-sale financial assets, liquid investments which are remeasured at fair value at the end of each reporting period and defined benefit obligations measured in accordance with IAS 19, as explained in the accounting policies below.

Certain comparative figures appearing in these consolidated financial statements have been regrouped and/or reclassified to better reflect the nature of those items.

Parent Company financial statements
The financial statements of the parent Company, Vedanta Resources plc, incorporated in the United Kingdom, have been prepared in accordance with FRS 101 and UK company law. The Company financial statements and associated notes have been presented separately.

2(a) Accounting policies

(i) Basis of consolidation
Subsidiaries:
The consolidated financial statements incorporate the results of the Company and all its subsidiaries (the 'Group'), being the companies that it controls. Control is evidenced where the Group has power over the investee, is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Power is demonstrated through existing rights that give the ability to direct relevant activities, which significantly affect the entity returns.

The financial statements of subsidiaries are prepared for the same reporting year as the parent Company. Where necessary, adjustments are made to the financial statements of subsidiaries to align the accounting policies in line with accounting policies of the Group.

For non-wholly owned subsidiaries, a share of the profit/(loss) for the financial year and net assets is attributed to the non-controlling interests as shown in the Consolidated Income Statement, Consolidated Statement of Comprehensive Income and Consolidated Statement of Financial Position.

Liability for put option issued to non-controlling interests which do not grant present access to ownership interest to the Group is recognised at present value of the redemption amount, and is reclassified from equity. At the end of each reporting period, the non-controlling interests subject to put option is derecognised and the difference between the amount derecognised and present value of the redemption amount, which is recorded as a financial liability, is accounted for as an equity transaction.

For acquisitions of additional interests in subsidiaries, where there is no change in control, the Group recognises a reduction to the non-controlling interest of the respective subsidiary with the difference between this figure and the cash paid, inclusive of transaction fees, being recognised in equity. In addition, upon dilution of controlling interests the difference between the cash received from sale or listing of the subsidiary shares and the increase to non-controlling interest is also recognised in equity. The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

Intra-Group balances and transactions and any unrealised profits arising from intra-Group transactions are eliminated. Unrealised losses are eliminated unless costs cannot be recovered.

Joint arrangements
A joint arrangement is an arrangement of which two or more parties have joint control. Joint control is considered when there is contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. Investments in joint arrangements are classified as either joint operations or joint venture. The classification depends on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangement. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement, have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Group has joint operations within its Oil & Gas segment and participates in several unincorporated joint operations which involve the joint control of assets used in oil and gas exploration and producing activities. The Group accounts for its share of assets, liabilities, income and expenditure of joint ventures in which the Group holds an interest. Liabilities in unincorporated joint ventures, where the Group is the operator, is accounted for at gross values (including share of other partners) with a corresponding receivable from the venture partners. These have been included in the financial statements under the appropriate headings.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

Investments in associates:

Investments in associates are accounted for using the equity method. An associate is an entity over which the Group is in a position to exercise significant influence over operating and financial policies. Goodwill arising on the acquisition of associates is included in the carrying value of investments in the associate. Investment in associates is initially recorded at the cost to the Group and then, in subsequent periods, the carrying value is adjusted to reflect the Group's share of the associate's consolidated post-acquisition profits or losses, other changes to the associate's net assets and is further adjusted for impairment losses, if any. The Consolidated Income Statement and Consolidated Statements of Comprehensive Income include the Group's share of associate's results, except where the associate is generating losses, share of such losses in excess of the Group's interest in that associate are not recognised. Losses recognised under the equity method in excess of the Group's investment in ordinary shares are applied to the other components of the Group's interest that forms part of Group's net investment in the associate in the reverse order of their seniority (i.e. priority in liquidation).

If the Group's share of losses in an associate equals or exceeds its interests in the associate, the Group discontinues the recognition of further losses. Additional losses are provided for, only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Unrealised gains arising from transactions with associates are eliminated against the investment to the extent of the Group's interest in the associate. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

(ii) Business combinations

Acquisitions are accounted for under the acquisition method. The acquiree's identifiable assets, liabilities and contingent liabilities that meet the conditions for recognition are recognised at their fair value at the acquisition date, except certain assets and liabilities required to be measured as per the applicable standards.

Excess of fair value of purchase consideration and the acquisition date non-controlling interest over the acquisition date fair value of identifiable assets acquired and liabilities assumed is recognised as goodwill. Goodwill arising on acquisitions is reviewed for impairment annually. Where the fair values of the identifiable assets and liabilities exceed the cost of acquisition, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the surplus is credited to the income statement in the period of acquisition. Where it is not possible to complete the determination of fair values by the date on which the first post-acquisition financial statements are approved, a provisional assessment of fair value is made and any adjustments required to those provisional fair values are finalised within 12 months of the acquisition date.

The Group makes adjustments to the provisional fair value amounts recognised at the date of acquisition to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognised as of that date. The Group applies the measurement period adjustments retrospectively to the consolidated financial statements to reflect the measurement period adjustments as retrospectively recorded on the date of the acquisition as if measurement period adjustments had been recorded initially at the date of acquisition.

Any non-controlling interest in an acquiree is measured at fair value or as the non-controlling interest's proportionate share of the acquiree's net identifiable assets. This accounting choice is made on a transaction by transaction basis.

Acquisition expenses are charged to the income statement.

If the Group acquires a group of assets in a company that does not constitute a business combination in accordance with IFRS 3 Business Combinations, the cost of the acquired group of assets is allocated to the individual identifiable assets acquired based on their relative fair value.

(iii) Revenue recognition

Revenues are measured at the fair value of the consideration received or receivable, net of discounts, volume rebates, outgoing sales taxes, goods and service tax, excise duty and other indirect taxes. Revenues from sales are recognised when all significant risks and rewards of ownership of the commodity sold are transferred to the customer and the commodity has been delivered to the shipping agent. Revenues from sale of by-products are included in revenue.

Certain of the Group's sales contracts provide for provisional pricing based on the price on the London Metal Exchange (LME), as specified in the contract, when shipped. Final settlement of the price is based on the applicable price for a specified future period. The Group's provisionally priced sales are marked to market using the relevant forward prices for the future period specified in the contract and is adjusted in revenue.

Revenue from oil, gas and condensate sales represent the Group's share of oil, gas and condensate production, recognised on a direct entitlement basis, when significant risks and rewards of ownership are transferred to the buyers. Direct entitlement basis represents entitlement to variable physical volumes of hydrocarbons, representing recovery of the costs incurred and a stipulated share of the production remaining after such cost recovery. The stipulated share of production is arrived at after reducing government's share of profit petroleum which is accounted for when the obligation (legal or constructive) in respect of the same arises.

Revenue from sale of power is recognised when delivered and measured based on rates as per bilateral contractual agreements with buyers and at a rate arrived at based on the principles laid down under the relevant Tariff Regulations as notified by the regulatory bodies, as applicable.

2(a) Accounting policies continued

Where the Group acts as a port operator, revenues and costs relating to each construction contract of service concession arrangements are recognised over the period of each arrangement only to the extent of costs incurred that are probable of recovery. Revenues and costs relating to operating phase of the port contract are measured at the fair value of the consideration received or receivable for the services provided.

Revenue from rendering of services is recognised on the basis of work performed.

Interest income

Interest income from debt instruments is recognised using the effective interest rate method. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the gross carrying amount of a financial asset. When calculating the effective interest rate, the Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses.

Dividends

Dividend income is recognised in the income statement only when the right to receive payment is established, provided it is probable that the economic benefits associated with the dividend will flow to the Group, and the amount of the dividend can be measured reliably.

(iv) Special items

Special items are those items that management considers, by virtue of their size or incidence (including but not limited to impairment charges and acquisition and restructuring related costs), should be disclosed separately to ensure that the financial information allows an understanding of the underlying performance of the business in the year, so as to facilitate comparison with prior periods. Also tax charges related to special items and certain one-time tax effects are considered special. Such items are material by nature or amount to the year's result and require separate disclosure in accordance with IFRS. The determination as to which items should be disclosed separately requires a degree of judgement.

(v) Intangible assets

Intangible assets are measured at cost less accumulated amortisation and accumulated impairment losses, if any. The Group determines the amortisation period as the period over which the future economic benefits will flow to the Group after taking into account all relevant facts and circumstances. Amortisation method, residual values and estimated useful life of intangible assets are reviewed annually or more frequently if events or changes in circumstances indicate a potential impairment.

Intangible assets arising out of service concession arrangements are accounted for as intangible assets where the Group has a contractual right to charge users of services when the projects are completed and is measured at the cost determined as the fair value of the consideration received or receivable of such construction services. Such assets are amortised on straight-line basis over the balance of licence period. The concession period is 30 years from the date of the award.

Software is amortised over the estimated useful life of five years. Technological know-how and the acquired brand are amortised over the estimated useful life of ten years.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset are recognised in the Consolidated Income Statement when the asset is derecognised.

(vi) Property, plant and equipment (PP&E)

Relating to mineral assets – Mining properties and leases

The costs of mining properties and leases, which include the costs of acquiring and developing mining properties and mineral rights, are capitalised as property, plant and equipment under the heading 'Mining properties and leases' in the year in which they are incurred.

When a decision is taken that a mining property is viable for commercial production (i.e. when the Group determines that the mining property will provide sufficient and sustainable returns relative to the risk and decides to proceed with the mine development), all further pre-production primary development expenditure other than land, buildings, plant and equipment is capitalised as part of the cost of the mining property until the mining property is capable of commercial production.

The stripping cost incurred during the production phase of a surface mine are deferred to the extent the current period stripping cost exceeds the average period stripping cost over the life of mine and is recognised as an asset if such cost provides a benefit in terms of improved access to ore in future periods and certain criteria are met.

When the benefit from the stripping costs are realised in the current period, the stripping costs are accounted for as the cost of inventory. If the costs of inventory produced and the stripping activity asset are not separately identifiable, a relevant production measure is used to allocate the production stripping costs between the inventory produced and the stripping activity asset. The Company uses the expected volume of waste compared with the actual volume of waste extracted for a given value of ore/mineral production for the purpose of determining the cost of the stripping activity asset. Deferred stripping costs are included in mining properties within Property, plant and equipment and disclosed as a part of mining properties. After initial recognition, the stripping activity asset is depreciated on a unit of production method over the expected useful life of the identified component of the ore body.

In circumstances where a mining property is abandoned, the cumulative capitalised costs relating to the property are written off in the period in which it occurs i.e. when the Group determines that the mining property will not provide sufficient and sustainable returns relative to the risks and the Group decides not to proceed with the mine development.

Commercial reserves are proved and probable reserves as defined by the 'JORC' Code, 'MORC' Code or 'SAMREC' Code. Changes in the commercial reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

Relating to oil and gas assets – Developing/producing assets
For oil and gas assets, a successful efforts-based accounting policy is followed.

All costs incurred after the technical feasibility and commercial viability of producing hydrocarbons has been demonstrated are capitalised within property, plant and equipment – development/producing assets (oil & gas properties) on a field-by-field basis. Subsequent expenditure is capitalised only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

Net proceeds from any disposal of development/producing assets are credited against the previously capitalised cost. A gain or loss on disposal of a development/producing asset is recognised in the income statement to the extent that the net proceeds exceed or are less than the appropriate portion of the net capitalised costs of the asset.

Exploration and evaluation assets
Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore, are capitalised as property, plant and equipment and stated at cost less impairment, if any. Exploration and evaluation assets are transferred to the appropriate category of property, plant and equipment when the technical feasibility and commercial viability has been determined. Exploration and evaluation assets are assessed for impairment and impairment loss, if any, is recognised prior to reclassification.

Exploration expenditure includes all direct and allocated indirect expenditure associated with finding specific mineral resources which includes depreciation and applicable operating costs of related support equipment and facilities and other costs of exploration activities:
- Acquisition costs – costs associated with acquisition of licences and rights to explore, including related professional fees.
- General exploration costs – costs of surveys and studies, rights of access to properties to conduct those studies (e.g. costs incurred for environment clearance, defence clearance, etc.), and salaries and other expenses of geologists, geophysical crews and other personnel conducting those studies.
- Costs of exploratory drilling and equipping exploratory and appraisal wells.

Exploration expenditure incurred in the process of determining oil and gas exploration targets is capitalised initially within property, plant and equipment-exploration and evaluation assets and subsequently allocated to drilling activities (under oil and gas properties and/or exploration and evaluation assets as appropriate). Exploration drilling costs are initially capitalised on a well-by-well basis until the success or otherwise of the well has been established. The success or failure of each exploration effort is judged on a well-by-well basis. Drilling costs are written off on completion of a well unless the results indicate that hydrocarbon reserves exist and there is a reasonable prospect that these reserves are commercial.

Following appraisal of successful exploration wells, if commercial reserves are established and technical feasibility for extraction demonstrated, then the related capitalised exploration costs are transferred into a single field cost centre within property, plant and equipment – development/producing assets (oil and gas properties) after testing for impairment. Where results of exploration drilling indicate the presence of hydrocarbons which are ultimately not considered commercially viable, all related costs are written off to the income statement.

Expenditure incurred on the acquisition of a licence interest is initially capitalised on a licence-by-licence basis. Costs are held and are not amortised or depreciated, within exploration and evaluation assets until such time as the exploration phase on the licence area is complete or commercial reserves have been discovered.

Net proceeds from any disposal of an exploration asset are initially credited against the previously capitalised costs. Any surplus/deficit is recognised in the income statement.

Other property, plant and equipment
The initial cost of property, plant and equipment comprises its purchase price, including import duties and non-refundable purchase taxes, and any directly attributable costs of bringing an asset to working condition and location for its intended use. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. If significant parts of an item of property, plant and equipment have different useful lives, then they are accounted for as separate items (major components) of property, plant and equipment. All other expenses on existing property, plant and equipment, including day-to-day repair and maintenance expenditure and cost of replacing parts, are charged to the income statement for the period during which such expenses are incurred.

Gains and losses on disposal of an item of property, plant and equipment computed as the difference between the net disposal proceeds and the carrying amount of the asset is included in the income statement when the asset is derecognised. Major inspection and overhaul expenditure is capitalised, if the recognition criteria are met.

(vii) Assets under construction
Assets in the course of construction are capitalised in the assets under construction account. At the point when an asset is capable of operating in the manner intended by management, the cost of construction is transferred to the appropriate category of property, plant and equipment. Costs (net of income) associated with the commissioning of an asset and any obligatory decommissioning costs are capitalised until the period of commissioning has been completed and the asset is ready for its intended use.

(viii) Depreciation and amortisation
Mining properties and other assets in the course of development or construction, freehold land and goodwill are not depreciated or amortised.

2(a) Accounting policies continued

Relating to mining properties

The capitalised mining properties are amortised on a unit-of-production basis over the total estimated remaining commercial reserves of each property or group of properties and are subject to impairment review. Costs used in the unit of production calculation comprise the net book value of capitalised costs plus the estimated future capital expenditure required to access the commercial reserves. Changes in the estimates of commercial reserves or future capital expenditure are dealt with prospectively.

Leasehold land and buildings are depreciated on a straight-line basis over the period of the lease or, if shorter, their useful economic life.

Relating to oil & gas assets

All expenditure carried within each field is depreciated from the commencement of production on a unit of production basis, which is the ratio of oil & gas production in the period to the estimated quantities of commercial reserves at the end of the period plus the production in the period, generally on a field-by-field basis or group of fields which are reliant on common infrastructure.

Commercial reserves are proven and probable oil and gas reserves, which are defined as the estimated quantities of crude oil, natural gas and natural gas liquids which geological, geophysical and engineering data demonstrate with a specified degree of certainty to be recoverable in future years from known reservoirs and which are considered commercially producible.

Costs used in the unit of production calculation comprise the net book value of capitalised costs plus the estimated future field development costs required to access the commercial reserves. Changes in the estimates of commercial reserves or future field development costs are dealt with prospectively.

Others

Other buildings, plant and equipment, office equipment and fixtures, and motor vehicles are stated at cost less accumulated depreciation and any provision for impairment. Depreciation commences when the assets are ready for their intended use. Depreciation is provided at rates calculated to write off the cost, less estimated residual value, of each asset on a straight-line basis over its expected useful life, as follows:

Buildings operations and administration	30–60 years
Plant and machinery	15–40 years
Office equipment and fixtures	5–10 years
Motor vehicles	8–10 years

Major inspection and overhaul costs are depreciated over the estimated life of the economic benefit to be derived from such costs. The carrying amount of the remaining previous overhaul cost is charged to the income statement if the next overhaul is undertaken earlier than the previously estimated life of the economic benefit.

The Group reviews the residual value and useful life of an asset at least at each financial year end and, if expectations differ from previous estimates, the change is accounted for as a change in accounting estimate.

(ix) Non-current assets held for sale

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the asset (or disposal group) is available for immediate sale in its present condition. Management must be committed to the sale which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets and disposal groups classified as held for sale are not depreciated and are measured at the lower of carrying amount and fair value less costs to sell. Such assets and disposal groups are presented separately on the face of the Consolidated Statements of Financial Position.

(x) Impairment

Financial assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate. An impairment loss in respect of an available-for-sale financial asset is calculated by reference to its fair value.

Significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics. All impairment losses are recognised in the consolidated statements of income. Any cumulative loss in respect of an available-for-sale financial asset recognised previously in the Consolidated Statements of Comprehensive Income is transferred to the Consolidated Statements of Income on recognition of impairment. An impairment loss is reversed, if the reversal can be related objectively to an event occurring after the impairment loss was recognised. For financial assets measured at amortised cost and available-for-sale financial assets that are debt securities, the reversal is recognised in the Consolidated Statements of Income. For available-for-sale financial assets that are equity securities, the change in fair value is recognised directly in the Consolidated Statement of Comprehensive Income.

In respect of trade and other receivables, the Group would not provide for impairment losses unless the Company is satisfied that no recovery of the amount owing is possible; at that point the amounts are considered irrecoverable and are written off against the financial asset directly.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

Non-financial assets

Impairment charges and reversals are assessed at the level of cash-generating units. A cash-generating unit (CGU) is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or group of assets.

Formal impairment tests are carried out at the year end for goodwill. In addition, formal impairment tests for all assets are performed when there is an indication of impairment. The Group conducts an internal review of asset values annually, which is used as a source of information to assess for any indications of impairment or reversal of previously recognised impairment losses. Internal and external factors, such as worse economic performance than expected, changes in expected future prices, costs and other market factors are also monitored to assess for indications of impairment or reversal of previously recognised impairment losses.

If any such indication exists then an impairment review is undertaken, the recoverable amount is calculated, as the higher of fair value less costs of disposal and the asset's value in use.

Fair value less costs of disposal is the price that would be received to sell the asset in an orderly transaction between market participants less costs of disposal and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general. Fair value for mineral and oil and gas assets is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal, using assumptions that an independent market participant may take into account. These cash flows are discounted at an appropriate post-tax discount rate to arrive at the net present value.

Value in use is determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset in its present form and its eventual disposal. The cash flows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which estimates of future cash flows have not been adjusted. Value in use is determined by applying assumptions specific to the Group's continued use and cannot take into account future development. These assumptions are different to those used in calculating fair value and consequently the value in use calculation is likely to give a different result to a fair value calculation.

The carrying amount of the CGU is determined on a basis consistent with the way the recoverable amount of the CGU is determined. The carrying amount is net of deferred tax liability recognised in the fair value of the assets acquired in a business combination.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount. An impairment loss is recognised in the Consolidated Income Statement.

Any reversal of the previously recognised impairment loss is limited to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had previously been recognised except if initially attributed to goodwill.

Exploration and evaluation assets:

In assessing whether there is any indication that an exploration and evaluation asset may be impaired, the Company considers, as a minimum, the following indicators:

- the period for which the entity has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned;
- exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area;
- sufficient data exists to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale; and
- reserve information prepared annually by external experts.

When a potential impairment is identified, an assessment is performed for each area of interest in conjunction with the group of operating assets (representing a cash-generating unit) to which the exploration and evaluation assets is attributed. Exploration areas in which reserves have been discovered but require major capital expenditure before production can begin, are continually evaluated to ensure that commercial quantities of reserves exist or to ensure that additional exploration work is underway or planned. To the extent that capitalised expenditure is no longer expected to be recovered, it is charged to the income statement.

(xi) Government grants

Government grants are not recognised until there is a reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received. Government grants relating to tangible fixed assets are deducted in calculating the carrying amount of the assets and recognised in the Consolidated Income Statement over the expected useful lives of the assets concerned as a reduced depreciation expense. Other grants (including grants related to revenue) are credited to the Consolidated Income Statement on a systematic basis as and when the related expenditure is incurred.

2(a) Accounting policies continued

(xii) Inventories

Inventories and work-in-progress are stated at the lower of cost and net realisable value.

Cost is determined on the following basis:

- Purchased copper concentrate is recorded at cost on a first-in, first-out (FIFO) basis; all other materials including stores and spares are valued on weighted average basis; except in the Oil and Gas business where stores and spares are valued on a FIFO basis.
- Finished products are valued at raw material cost plus costs of conversion, comprising labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity and are moved out of inventory on a FIFO basis, however, cost of finished goods of oil and condensate is determined on a quarterly weighted average basis.
- By-products and scrap are valued at net realisable value. Net realisable value is determined based on estimated selling price, less further costs expected to be incurred to completion and disposal.

(xiii) Taxation

Tax expense represents the sum of current tax and deferred tax.

Current tax is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the reporting date and includes any adjustment to tax payable in respect of previous years.

Subject to the exceptions below, deferred tax is provided, using the balance sheet method, on all temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes and on carry forward of unused tax credits and unused tax losses:

- Tax payable on the future remittance of the past earnings of subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future;
- Deferred income tax is not recognised on initial recognition as well as on the impairment of goodwill which is not deductible for tax purposes or on the initial recognition of an asset or liability in a transaction that is not a business combination, which at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- Deferred tax assets including MAT are recognised only to the extent that it is more likely than not that they will be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date. Tax relating to items recognised outside profit or loss is recognised outside profit or loss (either in other comprehensive income or equity).

The carrying amount of deferred tax assets is reviewed at each reporting date and is adjusted to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the asset to be recovered.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Deferred tax is provided on temporary differences arising on acquisitions that are categorised as business combinations. Deferred tax is recognised at acquisition as part of the assessment of the fair value of assets and liabilities acquired. Subsequently deferred tax is charged or credited in the income statement/other comprehensive income as the underlying temporary difference is reversed.

(xiv) Retirement benefit schemes

The Group operates or participates in a number of defined benefits and contribution schemes, the assets of which are (where funded) held in separately administered funds.

For defined benefit schemes the cost of providing benefits under the plans is determined by actuarial valuation each year separately for each plan using the projected unit credit method by third party qualified actuaries.

Remeasurement including effects of asset ceiling and return on plan assets (excluding amounts included in interest on the net defined benefit liability) and actuarial gains and losses arising in the year are recognised in full in other comprehensive income and are not recycled to the income statement.

Past service costs are recognised in the income statement on the earlier of:

- the date of the plan amendment or curtailment, and
- the date that the Group recognises related restructuring costs.

Net interest is calculated by applying a discount rate to the net defined benefit liability or asset at the beginning of the period. Defined benefit costs are split into current service cost, past service cost, net interest expense or income, and gains and losses on curtailments or settlements.

Current service cost and past service costs are recognised within cost of sales and administrative expenses and distribution expenses. Net interest expense or income is recognised within finance costs.

For defined contribution schemes, the amount charged to the income statement in respect of pension costs and other post-retirement benefits are the contributions payable in the year, recognised as and when the employee renders related service.

The Group reassessed its accounting for death-in-service obligations with respect to the recognition of these liabilities. The Group had previously accounted for these liabilities as defined benefit schemes and the cost of providing benefits under the plans was determined by an actuarial valuation each year, which was performed separately for each plan using the projected unit credit method by third party qualified actuaries.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

On 1 April 2017, the Group elected to derecognise these liabilities, as the Group believes that a present obligation does not exist with regards to these liabilities. The Group applied the change in policy retrospectively, but have not adjusted the prior year figures in these financial statements as they are not material.

(xv) Share-based payments

Certain employees (including Executive Directors) of the Group receive part of their remuneration in the form of share-based payment transactions, whereby employees render services in exchange for shares or rights over shares ('equity-settled transactions').

The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards is determined with the assistance of an external valuer and the fair value at the grant date is expensed on a proportionate basis over the vesting period based on the Group's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations.

The resultant increase in equity is recorded in share-based payment reserve.

In case of cash-settled transactions, a liability is recognised for the fair value of cash-settled transactions. The fair value is measured initially and at each reporting date up to and including the settlement date, with changes in fair value recognised in employee benefits expense. The fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The fair value is determined with the assistance of an external valuer.

(xvi) Provisions, contingent liabilities and contingent assets

Provisions represent liabilities for which the amount or timing is uncertain. Provisions are recognised when the Group has a present obligation (legal or constructive), as a result of past events, and it is probable that an outflow of resources, that can be reliably estimated, will be required to settle such an obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows to net present value using an appropriate pre-tax discount rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Unwinding of the discount is recognised in the income statement as a finance cost. Provisions are reviewed at each reporting date and are adjusted to reflect the current best estimate.

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Group does not recognise a contingent liability but discloses its existence in the consolidated financial statements.

Contingent assets are not recognised but disclosed in the financial statements when an inflow of economic benefit is probable.

(xvii) Restoration, rehabilitation and environmental costs

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production of a mine or oil fields. Such costs, discounted to net present value, are provided for and a corresponding amount is capitalised at the start of each project, as soon as the obligation to incur such costs arises. These costs are charged to the income statement over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision. The cost estimates are reviewed periodically and are adjusted to reflect known developments which may have an impact on the cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, changes to lives of operations, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the lives of the assets to which they relate. The unwinding of the discount is shown as a finance cost in the income statement.

Costs for restoration of subsequent site damage which is caused on an ongoing basis during production are provided for at their net present value and charged to the income statement as extraction progresses. Where the costs of site restoration are not anticipated to be material, they are expensed as incurred.

(xviii) Leases

Determining whether an arrangement contains a lease

At inception of an arrangement, the Group determines whether the arrangement is or contains a lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

At inception or on reassessment of an arrangement that contains a lease, the Group separates payments and other consideration required by the arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a finance lease that it is impracticable to separate the payments reliably, then an asset and a liability are recognised at an amount equal to the fair value of the underlying asset; subsequently the liability is reduced as payments are made and an imputed finance cost on the liability is recognised using the Group's incremental borrowing rate.

2(a) Accounting policies continued

Group as a lessee

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Group is classified as a finance lease.

Finance leases are capitalised at the commencement of the lease at the inception date fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognised in finance costs in the income statement, unless they are directly attributable to qualifying assets, in which case they are capitalised in accordance with the Group's general policy on the borrowing costs. Contingent rentals are recognised as expenses in the periods in which they are incurred.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

Operating lease payments are recognised as an expense in the income statement on a straight-line basis over the lease term.

Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from an operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Company's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

(xix) Foreign currency translation

The functional currency for each entity in the Group is determined as the currency of the primary economic environment in which it operates. For all principal operating subsidiaries, the functional currency is normally the local currency of the country in which they operate with the exception of KCM and the Oil and Gas business which has a US dollar functional currency as that is the currency of primary economic environment in which they operate. In the financial statements of individual Group companies, transactions in currencies other than the functional currency are translated into the functional currency at the exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies are translated into the functional currency at exchange rates prevailing on the reporting date. Non-monetary assets and liabilities denominated in other currencies and measured at historical cost or fair value are translated at the exchange rates prevailing on the dates on which such values were determined.

All exchange differences are included in the income statement, except, where the monetary item is designated as an effective hedging instrument of the currency risk of designated forecast sales which are recognised in the other comprehensive income. These include the exchange differences on foreign currency borrowings relating to the asset under construction, and for future productive use, and are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings.

For the purposes of consolidation, the income statement items of those businesses for which the US dollar is not the functional currency are translated into US dollars at the average rates of exchange during the year/exchange rates as on the date of transaction. The related Consolidated Statements of Financial Position are translated into US dollars at the rates as at the reporting date. Exchange differences arising on translation are recognised in the Consolidated Statements of Comprehensive Income. On disposal of such entities, the deferred cumulative exchange differences recognised in equity relating to that particular foreign operation are recognised in the Consolidated Income Statement.

(xx) Financial asset investments

Financial asset investments are classified as available-for-sale under IAS 39 and are initially recorded at fair value plus transaction costs that are directly attributable to the acquisition of financial asset investments and then remeasured at subsequent reporting dates to fair value. Unrealised gains and losses on financial asset investments are recognised through other comprehensive income. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Investments in equity instruments are recorded in non-current assets unless they are expected to be sold within one year.

The Group assesses at each reporting date whether there is objective evidence that a financial asset or a group of financial assets is impaired. An impairment exists if one or more events that has occurred since the initial recognition of the asset (an incurred 'loss event') has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

(xxi) Liquid investments

Liquid investments represent short-term investments that do not meet the definition of cash and cash equivalents for one or more of the following reasons:

- They have a maturity profile greater than 90 days;
- They may be subject to a greater risk of changes in value than cash;
- They are held for investment purposes.

These include Short-term marketable securities and other Bank Deposits.

Short-term marketable securities are categorised as held for trading and are initially recognised at fair value with any gains or losses arising on remeasurement recognised in the Consolidated Income Statement.

Other bank deposits are subsequently measured at amortised cost using the effective interest method.

(xxii) Cash and cash equivalents

Cash and cash equivalents in the Statement of Financial Position comprise cash at bank and in hand, short-term deposits with banks and short-term highly liquid investments that are readily convertible into cash which are subject to insignificant risk of changes in value and are held for the purpose of meeting short-term cash commitments.

(xxiii) Trade receivables

Trade receivables are stated at their transaction value as reduced by appropriate allowances for estimated irrecoverable amounts. An allowance for impairment of trade receivables is made where there is an event, which based on previous experience, is an indication of a reduction in the recoverability of the carrying value of the trade receivables.

Trade receivables are subsequently measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised on non-current receivables on specific items by applying the effective interest rate method.

(xxiv) Trade payables

Trade and other payables are recognised at their transaction cost, which is its fair value, and subsequently measured at amortised cost except for the put option liability that is measured at fair value.

(xxv) Bills of exchange payable

The Group enters into arrangements whereby financial institutions make direct payments to suppliers for raw materials and project materials. The financial institutions are subsequently repaid by the company at a later date providing working capital timing benefits. These are normally settled up to 12 months (for raw materials) and up to 36 months (for project materials). Where these arrangements are for raw materials with a maturity of up to 12 months, the economic substance of the transaction is determined to be operating in nature and these are recognised as bills of exchange (under Trade and other payables). Where these arrangements are for project materials with a maturity up to 36 months, the economic substance of the transaction is determined to be financing in nature, and these are classified as projects buyers' credit within borrowings in the Statement of Financial Position. Interest expense on these are recognised in the finance cost.

(xxvi) Equity instruments

Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

(xxvii) Borrowings

Interest bearing loans and overdrafts are recorded initially at the fair value. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis and charged to the income statement using the effective interest method. They are netted against the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

(xxiii) Convertible bonds

Convertible bonds denominated in the functional currency of the issuing entity are accounted for as compound instruments. The equity components and the liability components are separated out on the date of the issue. The equity component is recognised in a separate reserve and is not subsequently remeasured. The liability component (net of transaction cost) is held at amortised cost. The interest expense on the liability component is calculated by applying the effective interest rate, being the prevailing market interest rate at the date of issuance for similar non-convertible debt. The difference between this amount and interest paid is added to the carrying amount of the liability component.

Convertible bonds not denominated in the functional currency of the issuing entity or where a cash conversion option exists, are split into two components: a debt component and a component representing the embedded derivative in the convertible bond. The debt component represents a liability for future coupon payments and the redemption of the principal amount. The embedded derivative, a financial liability, represents the value of the option that bondholders have to convert into ordinary shares. At inception the embedded derivative is recorded at fair value and the remaining balance, after deducting a share of issue costs, is recorded as the debt component. Subsequently, the debt component is measured at amortised cost and the embedded derivative is measured at fair value at each balance sheet date with the change in the fair value recognised in the income statement. The embedded derivative and the debt component are disclosed together and the current/non-current classification follows the classification of the debt component which is the host contract.

2(a) Accounting policies continued

(xxix) Borrowing costs

Borrowing cost includes interest expense as per effective interest rate (EIR) and exchange differences arising from foreign currency borrowings to the extent they are regarded as an adjustment to the interest cost.

Borrowing costs directly relating to the acquisition, construction or production of a qualifying capital project under construction are capitalised and added to the project cost during construction until such time that the assets are substantially ready for their intended use i.e. when they are capable of commercial production. Borrowing costs relating to the construction phase of a service concession arrangement are capitalised as part of the cost of the intangible asset. Where funds are borrowed specifically to finance a qualifying capital project, the amount capitalised represents the actual borrowing costs incurred. Where surplus funds are available out of money borrowed specifically to finance a project, the income generated from such short-term investments is deducted from the total capitalised borrowing cost. Where the funds used to finance a project form part of general borrowings, the amount capitalised is calculated using a weighted average of rates applicable to relevant general borrowings of the Group during the year.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

Capitalisation of interest on borrowings related to construction or development projects is ceased when substantially all the activities that are necessary to make the assets ready for their intended use are complete or when delays occur outside of the normal course of business.

EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial liability or a shorter period, where appropriate, to the amortised cost of a financial liability. When calculating the effective interest rate, the Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options).

(xxx) Current and non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification. An asset is classified as current when it satisfies any of the following criteria:

- it is expected to be realised in, or is intended for sale or consumption in, the Group's normal operating cycle;
- it is held primarily for the purpose of being traded;
- it is expected to be realised within 12 months after the reporting date; or
- it is cash or cash equivalent unless it is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting date.

All other assets are classified as non-current.

A liability is classified as current when it satisfies any of the following criteria:

- it is expected to be settled in the Group's normal operating cycle;
- it is held primarily for the purpose of being traded;
- it is due to be settled within 12 months after the reporting date; or
- the Group does not have an unconditional right to defer settlement of the liability for at least 12 months after the reporting date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current only.

(xxxi) Financial instruments fair valued through profit and loss

Held for trading financial assets

Financial assets are classified as held for trading if they have been acquired principally for the purpose of selling in the near term. The change in fair value of trading investments incorporates any dividend and interest earned on the held for trading investments and is accounted for in the income statement.

Derivative financial instruments

In order to hedge its exposure to foreign exchange, interest rate and commodity price risks, the Group enters into forward contracts, option contracts, swap contracts and other derivative financial instruments. The Group does not hold derivative financial instruments for speculative purposes.

Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are remeasured at their fair value at subsequent balance sheet dates. The resultant gains or losses are recognised in the income statement unless these are designated as effective hedging instruments.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(a) Accounting policies continued

(xxxii) Hedge accounting

At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognised in the income statement immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. Hedge accounting is discontinued when the Group revokes the hedge relationship, the hedging instrument or hedged item expires or is sold, terminated, or exercised or no longer meets the criteria for hedge accounting.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recorded in the Consolidated Statements of Comprehensive Income. The gain or loss relating to the ineffective portion is recognised immediately in the income statement. Amounts recognised in the Consolidated Statement of Comprehensive Income are transferred to the income statement when the hedged transaction affects profit or loss, such as when the hedged financial income or financial expense is recognised or when a forecast transaction occurs. When the hedged item is a non-financial asset, the amount recognised in the Consolidated Statement of Comprehensive Income is transferred to the carrying amount of the asset when it is recognised. Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in the Consolidated Statement of Comprehensive Income is transferred to the income statement.

Hedge of net investment in foreign operation

For derivative instruments that are designated and qualify as a hedge of a net investment in a foreign operation, the gain or loss is reported in the Consolidated Statement of Comprehensive Income as part of the exchange difference on translation of foreign operations to the extent it is effective. Any ineffective portions of net investment hedges are recognised in the income statement immediately. Under a hedge of a net investment, the cumulative gain or loss remains in the Consolidated Statement of Comprehensive Income when the hedging instrument expires or is sold, terminated or exercised, or when the hedge no longer qualifies for hedge accounting or the Group revokes designation of the hedge relationship. The cumulative gain or loss is recognised in the income statement as part of the gain/loss on disposal when the net investment in the foreign operation is disposed.

Derivative financial instruments that do not qualify for hedge accounting are marked to market at the financial position date and gains or losses are recognised in the income statement immediately.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of host contracts and the host contracts are not carried at fair value with unrealised gains or losses recognised in the income statement.

2(b) Application of new and revised standards

The Group has adopted with effect from 1 April 2017, the following new amendments and pronouncements.

IAS 7 Statement of Cash Flows

Narrow-scope amendments: The amendments introduce an additional disclosure that will enable users of financial statements to evaluate changes in liabilities arising from financing activities. The required disclosure is given in Note 26.

Amendments to IAS 12

Recognition of Deferred Tax Assets for Unrealised Losses: These amendments clarify that unrealised losses on debt instruments measured at fair value for financial reporting purposes but at cost for tax purposes can give rise to a deductible temporary difference and how such a temporary difference should be assessed in determining whether a deferred tax asset should be recognised. This does not have any significant impact on the amounts reported in the financial statements.

Amendments to IFRS 12 Disclosure of Interests in Other Entities issued in the Annual Improvements Cycle 2014–2016

The amendments to IFRS 12 introduced in the 2014–2016 annual improvement cycle clarify that all requirements of that Standard (other than those covered by an existing exemption from disclosure of summarised financial information on interests in subsidiaries, joint ventures and associates) apply to interests classified as held for sale or discontinued operations in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations. This does not have any impact on the financial statements.

The Group has not early adopted any other amendments, standards or interpretations that have been issued but are not yet effective. The Group plans to adopt new amendments, standards or interpretations as and when they become they effective.

2(b) Application of new and revised standards continued

Recently issued accounting pronouncements and not effective for the year ended 31 March 2018:

Standards not yet effective for the financial statements for the year ended 31 March 2018	Effective for annual periods beginning on or after
Amendments to IAS 40 – Transfers of Investment Property	1 January 2018*
Amendments to IFRS 2 – Classification and measurement of Share-Based Payment Transactions	1 January 2018
Amendments to IFRS 4 – Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts	1 January 2018
Annual Improvements to IFRSs 2014–2016 Cycle	1 January 2018
IFRS 9 Financial Instruments	1 January 2018
IFRS 15 Revenue from Contracts with Customers	1 January 2018
IFRIC 22 Foreign Currency Transactions and Advance Consideration	1 January 2018
IFRS 16 Leases	1 January 2019
Amendments to IAS 28 – Long-term Interests in Associates and Joint Ventures	1 January 2019*
Amendments to IAS 19 – Plan Amendment, Curtailment or Settlement	1 January 2019*
IFRIC 23 Uncertainty over Income Tax Treatments	1 January 2019*
Annual Improvements to IFRSs 2015–2017 Cycle	1 January 2019*
IFRS 17 Insurance Contracts	1 January 2021*

* Subject to EU endorsement

Except specifically covered below, the Group is evaluating the requirements of these standards, improvements and amendments and has not yet determined the impact on financial statements.

IFRS 9 Financial Instruments

In July 2014, the International Accounting Standards Board issued the final version of IFRS 9, Financial Instruments. The standard reduces the complexity of the current rules on financial instruments as mandated in IAS 39. IFRS 9 has fewer classification and measurement categories as compared to IAS 39. It eliminates the rule-based requirement of segregating embedded derivatives from financial assets and tainting rules pertaining to held to maturity investments. For financial assets which are debt instruments, IFRS 9 establishes a principle based approach for classification based on cash flow characteristics of the asset and the business model in which an asset is held. For an investment in an equity instrument which is not held for trading, IFRS 9 permits an irrevocable election, on initial recognition, on an individual share-by-share basis, to present all fair value changes from the investment in other comprehensive income. No amount recognised in other comprehensive income on such equity investment would ever be reclassified to profit or loss. It requires the entity, which chooses to designate a liability as at fair value through profit or loss, to present the portion of the fair value change attributable to the entity's own credit risk in the other comprehensive income. IFRS 9 replaces the 'incurred loss model' in IAS 39 with an 'expected credit loss' model. The measurement uses a dual measurement approach, under which the loss allowance is measured as either 12-month expected credit losses or lifetime expected credit losses. The standard also introduces new presentation and disclosure requirements. The effective date for the adoption of IFRS 9 is annual periods beginning on or after 1 January 2018, though early adoption is permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

The Group has completed its assessment of the effects of transition to IFRS 9 and will adopt the same from 1 April 2018. The areas impacted on adopting IFRS 9 on the Group are detailed below.

Classification and measurement

IFRS 9 establishes a principle-based approach for classification of financial assets based on cash flow characteristics of the asset and the business model in which an asset is held. The measurement and accounting treatment of the Group's financial assets is materially unchanged with the exception of equity securities previously categorised as available-for-sale. These will be held at fair value through other comprehensive income, meaning the recycling of gains and losses on disposal and impairment losses is no longer permitted for this category.

Impairment

Based on the Group's assessment, under the expected credit loss model, the impairment of financial assets held at amortised cost is not expected to have a material impact on the Group's results, given the low exposure to counterparty default risk as a result of the credit risk management processes that are in place.

Hedge accounting

The Group plans to adopt the IFRS 9 hedge accounting requirements. The adoption of the new standard would have no effect on the amounts recognised in relation to the existing hedging arrangements.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(b) Application of new and revised standards continued

IFRS 15 Revenue from Contracts with Customers

IFRS 15 Revenue from Contracts with Customers outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The standard replaces most of the current revenue recognition guidance. The core principle of the new standard is for companies to recognise revenue when the control of the goods and services is transferred to the customer as against the transfer of risk and rewards. The amount of revenue recognised should reflect the consideration to which the company expects to be entitled in exchange for those goods or services. The new standard also will result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively including service revenues and contract modifications and improved guidance for multiple element arrangements. The new standard comes into effect for the annual reporting periods beginning on or after 1 January 2018 with early application permitted.

In order to identify the potential impact of the standard on the Group's consolidated financial statements, the Group has analysed contracts of the relevant revenue streams of the Group. The work done is focused on evaluating the contractual arrangements across the Group's principal revenue streams, particularly key terms and conditions which may impact the timing of revenue recognition and measurement of revenue.

Based on the work carried out, the impact in implementing IFRS 15 on the Group results is detailed below:

On the basis of the analysis conducted, the new standard would result in identification of freight and insurance services as a separate performance obligation implying segregation of revenue on account of sale of goods and sale of services. The revenue on account of these services is required to be deferred along with the associated costs and recognised over time as this obligation is fulfilled.

The Group has products which are provisionally priced at the date revenue is recognised. Revenue in respect of such contracts will be recognised when control passes to the customer and will be measured at the amount the entity expects to be entitled – being the estimate of the price expected to be received at the end of the measurement period. Post transfer of control of goods, provisional pricing features will be accounted in accordance with IFRS 9 'Financial Instruments' rather than IFRS 15 and therefore the IFRS 15 rules on variable consideration do not apply. These 'provisional pricing' adjustments i.e. the consideration received post transfer of control will continue to be included in consolidated revenue on the face of the income statement and these would be disclosed by way of note to the financial statements.

The implementation of changes required as per IFRS 15 as mentioned above is identified to be not materially affecting the current recognition and measurement of revenues, though there would be significant additional disclosure requirements for the Group to comply with.

The Group will adopt the modified transitional approach to implementation where any transitional adjustment is recognised in retained earnings at 1 April 2018 without adjustment of comparatives and the new standard will only be applied to contracts that remain in force at that date.

IFRS 16 Leases

IFRS 16 Leases, specifies recognition, measurement and disclosure criteria for leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. The new standard will come into effect for annual reporting periods beginning on or after 1 January 2019. Earlier application is permitted if IFRS 15 Revenue from Contracts with Customers has also been applied. The Group is currently in the process of determining the potential impact of adopting the above standard and expects to implement the same from 1 April 2019.

2(c) Significant accounting estimates and judgements

The preparation of financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities at the date of these consolidated financial statements and the reported amounts of revenues and expenses for the years presented. These judgements and estimates are based on management's best knowledge of the relevant facts and circumstances, having regard to previous experience, but actual results may differ materially from the amounts included in the financial statements.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and future periods affected.

The information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the financial statements are as given below:

Significant Estimates:

(i) Oil & Gas reserves

Oil & Gas reserves are estimated on a proved and probable entitlement interest basis. Proven and probable reserves are estimated using standard recognised evaluation techniques. The estimate is reviewed annually. Future development costs are estimated taking into account the level of development required to produce the reserves by reference to operators, where applicable, and internal engineers.

Net entitlement reserves estimates are subsequently calculated using the Group's current oil price and cost recovery assumptions, in line with the relevant agreements.

Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or oil & gas prices could impact the depreciation rates, carrying value of assets and environmental and restoration provisions.

2(c) Significant accounting estimates and judgements continued

(ii) Carrying value of exploration and evaluation oil and gas assets

The recoverability of a project is assessed under IFRS 6. Exploration assets are assessed by comparing the carrying value to higher of fair value less cost of disposal or value in use, if an impairment indicator exists. Change to the valuation of exploration assets is an area of judgement. Further details on the Group's accounting policies on this are set out in accounting policy above. The amounts for exploration and evaluation assets represent active exploration projects. These amounts will be written off to the income statement as exploration costs unless commercial reserves are established, or the determination process is not completed and there are no indications of impairment. The outcome of ongoing exploration, and therefore whether the carrying value of exploration and evaluation assets will ultimately be recovered, is inherently uncertain.

Details of impairment charge/reversal impact and the assumptions used are disclosed in Note 5.

(iii) Carrying value of developing/producing oil and gas assets

Management perform impairment tests on the Group's developing/producing oil and gas assets where indicators of impairment or impairment reversal of previous recorded impairment are identified in accordance with IAS 36.

The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumption	Basis
Future production	Proved and probable reserves, resource estimates and, in certain cases, expansion projects
Commodity prices	Management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analysts' forecast
Discount to price	Management's best estimate based on historical prevailing discount
Extension of PSC	Assumed that PSC for Rajasthan block would be extended till 2030 on the expected commercial terms as per the announced government policy
Discount rates	Cost of capital risk-adjusted for the risk specific to the asset/CGU

Any subsequent changes to cash flows due to changes in the above mentioned factors could impact the carrying value of the assets.

Details of impairment charge/reversal impact and the assumptions and sensitivities used are disclosed in Note 5.

(iv) Mining properties and leases

The carrying value of mining property and leases is arrived at by depreciating the assets over the life of the mine using the unit of production method based on proved and probable reserves. The estimate of reserves is subject to assumptions relating to life of the mine and may change when new information becomes available. Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or commodity prices could thus impact the carrying values of mining properties and leases and environmental and restoration provisions.

In the current year the Group has reassessed the parameters for mine development depletion including cost to complete at HZL, which has resulted in an additional depletion charge of $57.3 million for the current year.

Management performs impairment tests when there is an indication of impairment or impairment reversal. The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumptions	Basis
Future production	Proved and probable reserves, resource estimates (with an appropriate conversion factor) considering the expected permitted mining volumes and, in certain cases, expansion projects
Commodity prices	Management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analysts' forecast
Exchange rates	Management best estimate benchmarked with external sources of information
Discount rates	Cost of capital risk-adjusted for the risk specific to the asset/CGU

Details of impairment charge are disclosed in Note 5.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

2(c) Significant accounting estimates and judgements continued

(v) Assessment of impairment at Lanjigarh Refinery

During financial year 2015-16, the Group has received the necessary approvals for expansion of the Lanjigarh refinery to 4 million tonnes per annum (MTPA). Accordingly, second stream operations were commenced in Alumina refinery from April 2016 and the refinery was debottlenecked to nameplate capacity of 2 MTPA in this year. We continue to explore the feasibility of expanding our alumina refinery capacity, from 2 to 4 million and then up to 6 million tonnes per annum, subject to bauxite availability and regulatory approvals.

The State of Odisha has abundant bauxite resources and given the initiatives by the Government of Odisha, management is confident that bauxite will be made available in the short to medium term. The Group has entered into agreements with various suppliers internationally and domestically to ensure the availability of bauxite to run its refinery.

Recoverability value assessment during the previous year ended 31 March 2017 including sensitivity analysis on the key assumptions indicated recoverable value exceeds the carrying value. No negative developments have occurred since the previous year and accordingly, it is not expected that the carrying amount would exceed the recoverable amount and hence the recoverable value for the year ended 31 March 2018 was not re-determined.

As at 31 March 2018, the carrying amount of property, plant and equipment related to alumina refinery operations at Lanjigarh and related mining assets is US$1,043.5 million (31 March 2017 : US$1,099.4 million).

(vi) Assessment of impairment of Goa iron ore mines:

Pursuant to an order passed by the Honourable Supreme Court of India on 7 February 2018, the second renewal of the mining leases granted by the State of Goa in 2014–15 to all miners including Vedanta were cancelled. Consequently, all mining operations stopped with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environmental clearances are granted in accordance with the provisions of The Mines and Minerals (Development and Regulation) (MMDR) Act. Significant uncertainty exists over the resumption of mining at Goa under the current leases. The Group has assessed the recoverable value of all its assets and liabilities associated with existing mining leases which led to a non-cash impairment charge in March 2018. Details of this impairment charge and method of estimating recoverable value is disclosed in Note 5.

(vii) Assessment of impairment at Konkola Copper Mines (KCM)

The KCM operations in Zambia have experienced lower equipment availability, throughput constraints and other operational challenges including production ramp-up. Due to these factors, the Group has reviewed the carrying value of its property, plant and equipment at KCM as at balance sheet date, estimated the recoverable amounts of the assets and concluded that there was no impairment because the recoverable amount (estimated based on fair value less costs of disposal) exceeded the carrying amounts.

The Group has also carried out a sensitivity analysis on key variables like movement in copper prices, discount rate and production. Based on the sensitivity analysis, the recoverable amount is still expected to exceed the carrying value.

The carrying value of assets as at 31 March 2018 is US$1,575.8 million (31 March 2017: US$1,663.6 million).

(viii) Restoration, rehabilitation and environmental costs

Provision is made for costs associated with restoration and rehabilitation of mining sites as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of extractive industries and they are normally incurred at the end of the life of the mine or oil fields. The costs are estimated on an annual basis on the basis of mine closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalised as soon as the obligation to incur such costs arises. The provision for decommissioning oil and gas assets is based on the current estimate of the costs for removing and decommissioning producing facilities, the forecast timing and currency of settlement of decommissioning liabilities and the appropriate discount rate.

A corresponding provision is created on the liability side. The capitalised asset is charged to the income statement over the life of the operation through the depreciation of the asset and the provision is increased each period via unwinding the discount on the provision. Management estimates are based on local legislation and/or other agreements. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology. Details of such provision are set out in Note 30.

(ix) Provisions and liabilities

Provisions and liabilities are recognised in the period when it becomes probable that there will be a future outflow of funds resulting from past operations or events that can be reasonably estimated. The timing of recognition requires the application of judgement to existing facts and circumstances which may be subject to change especially when taken in the context of the legal environment in India. The actual cash outflows may take place over many years in the future and hence the carrying amounts of provisions and liabilities are regularly reviewed and adjusted to take into account the changing circumstances and other factors that influence the provisions and liabilities. This is set out in Note 30.

(x) The HZL and BALCO call options

The Group had exercised its call option to acquire the remaining 49% interest in BALCO and 29.5% interest in HZL. The Government of India has, however, contested the validity of the options and disputed their valuation performed in terms of the relevant agreements, the details of which are set out in Note 40. In view of the lack of resolution on the options, the non-response to the exercise and valuation request from the Government of India, the resultant uncertainty surrounding the potential transaction and the valuation of the consideration payable, the Group considers the strike price of the options to be at fair value; accordingly, the value; of the option would be nil, and hence, the call options have not been recognised in the financial statements.

2(c) Significant accounting estimates and judgements continued

(xi) Recoverability of deferred tax and other income tax assets

The Group has carry forward tax losses, unabsorbed depreciation and MAT credit that are available for offset against future taxable profit. Deferred tax assets are recognised only to the extent that it is probable that taxable profit will be available against which the unused tax losses or tax credits can be utilised. This involves an assessment of when those assets are likely to reverse, and a judgement as to whether or not there will be sufficient taxable profits available to offset the assets. This requires assumptions regarding future profitability, which is inherently uncertain. To the extent assumptions regarding future profitability change, there can be an increase or decrease in the amounts recognised in respect of deferred tax assets and consequential impact in the income statement.

Additionally, the Group has tax receivables on account of refund arising on account of past amalgamation and relating to various tax disputes. The recoverability of these receivables involve application of judgement as to the ultimate outcome of the tax assessment and litigations. This pertains to the application of the legislation, which in certain cases is based upon management's interpretation of country specific tax law, in particular India, and the likelihood of settlement. Management uses in-house and external legal professionals to make informed decisions.

The details of MAT assets (recognised and unrecognised) are set out in Note 31.

(xii) Copper operations India

The annual consent to operate (CTO) under the Air and Water Acts for copper smelter in India was rejected by the State Pollution Control Board on 9 April 2018 for want of further clarifications and consequently, the operations have presently been suspended. The Company has filed an appeal in the Tribunal. Even though there can be no assurance regarding the final outcome of the process, as per the Company's assessment, it is in compliance with the applicable regulations and expects the renewal of CTO in the next few months.

The carrying value of assets as at 31 March 2018 is US$256.3 million.

Judgements:

(i) Assessment of IFRIC 4 – Determining whether an arrangement contains a lease

The Group has ascertained that the Power Purchase Agreement (PPA) entered into between one of the Subsidiary and a State Grid qualifies to be an operating lease under IAS 17 'Leases'. Accordingly, the consideration receivable under the PPA relating to recovery of capacity charges towards capital cost have been recognised as operating lease rentals and in respect of variable cost that includes fuel costs, operations and maintenance etc. is considered as revenue from sale of products/services.

Significant judgement is required in segregating the capacity charges due from the State Grid, between fixed and contingent payments. The Group has determined that since the capacity charges under the PPA are based on the number of units of electricity made available by its Subsidiary which would be subject to variation on account of various factors like availability of coal and water for the plant, there are no fixed minimum payments under the PPA, which requires it to be accounted for on a straight-line basis. The contingent rents recognised are disclosed in Note 38.

(ii) Contingencies

In the normal course of business, contingent liabilities may arise from litigation, taxation and other claims against the Group. A tax provision is recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle that obligation.

Where it is management's assessment that the outcome cannot be reliably quantified or is uncertain, the claims are disclosed as contingent liabilities unless the likelihood of an adverse outcome is remote. Such liabilities are disclosed in the notes but are not provided for in the financial statements.

When considering the classification of legal or tax cases as probable, possible or remote, there is judgement involved. This pertains to the application of the legislation, which in certain cases is based upon management's interpretation of country specific applicable law, in particular India, and the likelihood of settlement. Management uses in-house and external legal professionals to make informed decisions.

Although there can be no assurance regarding the final outcome of the legal proceedings, the Group does not expect them to have a materially adverse impact on the Group's financial position or profitability. These are set out in Note 38.

(iii) Revenue recognition and receivable recovery in relation to the Power division

In certain cases, the Group's Power customers are disputing various contractual provisions of Power Purchase Agreements (PPA). Significant judgement is required in both assessing the tariff to be charged under the PPA in accordance with IAS 18 and to assess the recoverability of withheld revenue currently accounted for as receivables.

In assessing this critical judgement, management considered favourable external legal opinions the Group has obtained in relation to the claims and favourable court judgements in the related matter. In addition, the fact that the contracts are with government-owned companies implies the credit risk is low. Refer Note 38.

(iv) Special items

Special items are those items that management considers, by virtue of their size or incidence (including but not limited to impairment charges and acquisition and restructuring related costs), should be disclosed separately to ensure that the financial information allows an understanding of the underlying performance of the business in the year, so as to facilitate comparison with prior periods. Also tax charges related to special items and certain one-time tax effects are considered special. Such items are material by nature or amount to the year's result and require separate disclosure in accordance with IFRS.

The determination as to which items should be disclosed separately requires a degree of judgement. The details of special items is set out in Note 5.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

3. Segment information

The Group is a diversified natural resources Group engaged in exploring, extracting and processing minerals and oil and gas. We produce zinc, lead, silver, copper, aluminium, iron ore, oil and gas, commercial power and glass substrate and have a presence across India, Zambia, South Africa, Namibia, UAE, Ireland, Australia, Liberia, Japan, South Korea and Taiwan. The Group is also in the business of port operations and manufacturing of glass substrate.

The Group's reportable segments defined in accordance with IFRS 8 are as follows:

- Zinc – India
- Zinc – International
- Oil & Gas
- Iron Ore
- Copper-India/Australia
- Copper-Zambia
- Aluminium
- Power

'Others' segment mainly comprises of port/berth and glass substrate business and those segments which do not meet the quantitative threshold for separate reporting.

Management monitors the operating results of reportable segments for the purpose of making decisions about resources to be allocated and for assessing performance. Segment performance is evaluated based on the EBITDA of each segment. Business segment financial data includes certain corporate costs, which have been allocated on an appropriate basis. Inter-segment sales are charged based on prevailing market prices.

The following tables present revenue and profit information and certain asset and liability information regarding the Group's reportable segments for the years ended 31 March 2018 and 31 March 2017. Items after operating profit are not allocated by segment.

3. Segment information continued

(a) Reportable segments

Year ended 31 March 2018

(US$ million)	Zinc-India	Zinc-International	Oil & Gas	Iron Ore	Copper-India*/ Australia	Copper-Zambia	Aluminium	Power	Others	Elimination	Total operations
REVENUE											
Sales to external customers	3,368.7	534.7	1,479.6	483.4	3,832.3	1,181.3	3,583.7	853.6	41.4	–	15,358.7
Inter-segment sales[1]	–	–	–	4.1	0.4	101.7	3.9	23.4	1.9	(135.4)	–
Segment revenue	**3,368.7**	**534.7**	**1,479.6**	**487.5**	**3,832.7**	**1,283.0**	**3,587.6**	**877.0**	**43.3**	**(135.4)**	**15,358.7**
Segment result											
EBITDA[2]	1,902.8	219.5	849.1	57.3	200.6	73.2	452.4	258.9	37.4	–	4,051.2
Depreciation and amortisation[3]	(232.9)	(28.3)	(461.3)	(68.6)	(24.9)	(111.8)	(256.9)	(75.1)	(10.9)	–	(1,270.7)
Operating profit/(loss) before special items	**1,669.9**	**191.2**	**387.8**	**(11.3)**	**175.7**	**(38.6)**	**195.5**	**183.8**	**26.5**	**–**	**2,780.5**
Investment revenue											465.1
Finance costs											(1,342.6)
Other gains and (losses) net											(1.0)
Special items											580.1
PROFIT BEFORE TAXATION											**2,482.1**
Segment assets	2,575.2	862.0	3,706.0	613.2	1,447.0	2,017.2	7,440.4	2,950.3	424.0	–	22,035.3
Financial asset investments											24.5
Deferred tax assets											916.7
Liquid investments											4,807.8
Cash and cash equivalents											798.7
Tax assets											523.3
Others											132.1
TOTAL ASSETS											**29,238.4**
Segment liabilities	(637.6)	(170.3)	(851.3)	(249.8)	(1,367.8)	(757.6)	(2,061.0)	(268.2)	(30.5)	–	(6,394.1)
Short-term borrowings											(5,460.3)
Current tax liabilities											(53.9)
Medium and long-term borrowings											(9,733.5)
Deferred tax liabilities											(743.0)
Others											(332.6)
TOTAL LIABILITIES											**(22,717.4)**
Other segment information											
Additions to property, plant and equipment including intangible assets**	473.0	254.7	162.6	21.6	84.1	27.4	221.0	11.1	281.4		1,536.9
Impairment reversal/(losses)[4]	–	–	1,447.4	(758.5)	–	–	–	–	–	–	688.9

* The annual consent to operate (CTO) under the Air and Water Acts for copper smelters in India was rejected by the State Pollution Control Board on 9 April 2018 for want of further clarification and consequently the operations have presently been suspended. The matter is presently pending in Tribunal.

** Including acquisition through business combination.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

3. Segment information continued

Year ended 31 March 2017

(US$ million)	Zinc-India	Zinc-International	Oil & Gas	Iron Ore	Copper-India/Australia	Copper-Zambia	Aluminium	Power	Others	Elimination	Total operations
REVENUE											
Sales to external customers	2,521.9	332.4	1,222.7	609.3	3,131.4	830.1	2,037.1	822.6	12.6	–	11,520.1
Inter-segment sales[1]	3.1	–	–	6.1	2.3	44.2	2.9	13.3	1.0	(72.9)	–
Segment revenue	**2,525.0**	**332.4**	**1,222.7**	**615.4**	**3,133.7**	**874.3**	**2,040.0**	**835.9**	**13.6**	**(72.9)**	**11,520.1**
Segment result EBITDA[2]	1,423.2	138.3	597.2	194.2	252.2	5.9	344.2	244.8	(8.9)	–	3,191.1
Depreciation and amortisation[3]	(149.2)	(27.5)	(411.0)	(69.9)	(28.9)	(113.3)	(141.0)	(88.2)	(1.5)	–	(1,030.5)
Operating profit/(loss) before special items	**1,274.0**	**110.8**	**186.2**	**124.3**	**223.3**	**(107.4)**	**203.2**	**156.6**	**(10.4)**	**–**	**2,160.6**
Investment revenue											642.6
Finance costs											(1,340.6)
Other gains and (losses) net											(23.8)
Special items	–	–	–	–	–	–	–	–	–	–	(58.9)
PROFIT BEFORE TAXATION											**1,379.9**
Segment assets	2,422.7	553.2	2,548.9	1,409.0	1,183.5	2,006.8	7,103.5	2,837.5	85.6	–	20,150.7
Financial asset investments											10.7
Deferred tax assets											1,111.0
Liquid investments											8,043.0
Cash and cash equivalents											1,682.2
Tax assets											436.7
Others											69.1
TOTAL ASSETS											**31,503.4**
Segment liabilities	(615.7)	(173.7)	(716.7)	(228.2)	(1,708.1)	(570.0)	(1,561.5)	(266.0)	(25.9)	–	(5,865.8)
Short-term borrowings											(7,658.5)
Current tax liabilities											(37.8)
Medium and long-term borrowings											(10,570.2)
Deferred tax liabilities											(371.1)
Others											(985.4)
TOTAL LIABILITIES											**(25,488.8)**
Other segment information											
Additions to property, plant and equipment including intangible assets	325.1	74.6	151.9	11.5	24.9	28.3	280.6	82.0	0.5	–	979.4
Impairment reversal/(losses)[4]	–	–	12.6	–	–	–	(29.9)	–	–		(17.3)

3. Segment information continued

1 Transfer prices for inter-segment sales are on an arm's length basis in a manner similar to transactions with third parties. However, inter-segment sales at BALCO amounting to US$20.6 million for the year ended 31 March 2018 (31 March 2017 US$6.2 million), is at cost.
2 EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.
3 Depreciation and amortisation is also provided to the chief operating decision maker on a regular basis.
4 Included under special items (Note 5).

(b) Geographical segmental analysis

The Group's operations are located in India, Zambia, Namibia, South Africa, UAE, Liberia, Ireland, Australia, Japan, South Korea and Taiwan. The following table provides an analysis of the Group's sales by region in which the customer is located, irrespective of the origin of the goods.

(US$ million)	**Year ended 31 March 2018**	**Percentage**	Year ended 31 March 2017	Percentage
India	8,262.1	54%	6,712.1	58%
China	2,184.7	14%	1,501.9	13%
UAE	620.5	4%	716.5	6%
Malaysia	827.8	5%	431.2	4%
Others	3,463.6	23%	2,158.4	19%
Total	**15,358.7**	**100%**	**11,520.1**	**100%**

The following is an analysis of the carrying amount of non-current assets, and additions to property, plant and equipment, analysed by the country in which the assets are located. No material non-current assets are located in the United Kingdom and no significant additions to property, plant and equipment have been made there.

	Carrying amount of non-current assets[1]	
(US$ million)	**As at 31 March 2018**	As at 31 March 2017
India	16,045.1	15,496.6
Zambia	1,623.6	1,639.0
Namibia	170.7	112.7
South Africa	570.1	322.3
Taiwan	188.4	–
Others	130.5	27.5
Total	**18,728.4**	**17,598.1**

1 Non-current assets do not include deferred tax assets, derivative assets, financial asset investments and other non-current financial assets.

Information about major customers

No customer contributed 10% or more to the Group's revenue during the year ended 31 March 2018 and 31 March 2017.

4. Total revenue

(US$ million)	**Year ended 31 March 2018**	Year ended 31 March 2017
Sale of products (including excise duty)	15,426.7	11,998.7
Less: Excise duty	(163.9)	(588.2)
Sale of products (net of excise duty)	**15,262.8**	**11,410.5**
Sale of services	31.2	71.4
Export incentives	64.7	38.2
Total revenue	**15,358.7**	**11,520.1**

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

5. Special items

(US$ million)	Note	Year ended 31 March 2018 Special items	Tax effect of special items	Special items after tax	Year ended 31 March 2017 Special items	Tax effect of special items	Special items after tax
Reversal of provision of DMF[1]		45.8	(15.9)	29.9	–	–	–
Gratuity-change in limits[2]		(12.7)	2.9	(9.8)	–	–	–
Gross profit special items		**33.1**	**(13.0)**	**20.1**	**–**	**–**	**–**
Impairment reversal of Oil and Gas assets[3]		1,447.4	(569.9)	877.5	12.6	(4.9)	7.7
Impairment of Iron Ore assets[4]		(758.5)	224.6	(533.9)	–	–	–
Impairment of assets under construction- Aluminium[5]		–	–	–	(29.9)	–	(29.9)
Total impairment charge		**688.9**	**(345.3)**	**343.6**	**(17.3)**	**(4.9)**	**(22.2)**
Loss on unusable assets under construction – Aluminium[5]		(39.0)	13.6	(25.4)	–	–	–
Operating special items		**683.0**	**(344.7)**	**338.3**	**(17.3)**	**(4.9)**	**(22.2)**
Financing special items[6]		(108.2)	6.2	(102.0)	(41.6)	–	(41.6)
Bargain gain net of acquisition cost[7]		5.3	–	5.3	–	–	–
Special items		**580.1**	**(338.5)**	**241.6**	**(58.9)**	**(4.9)**	**(63.8)**

1 During the year ended 31 March 2018, the Group has recognised the reversal of provisions of US$45.8 million relating to contribution to the District Mineral Foundation. Effective 12 January 2015, the Mines and Minerals Development and Regulation Act, 1957 prescribed the establishment of the District Mineral Foundation (DMF) in any district affected by mining related operations. The provisions required contribution of an amount equivalent to a percentage of royalty not exceeding one-third thereof, as may be prescribed by the Central Government of India. The rates were prescribed on 17 September 2015 for minerals other than coal, lignite and sand and on 20 October 2015 for coal, lignite and sand as amended on 31 August 2016. The Supreme Court order dated 13 October 2017 has determined the prospective applicability of the contributions from the date of the notification fixing such rate of contribution and hence DMF would be effective;
a) for minerals other than coal, lignite and sand from the date when the rates were prescribed by the Central Government; and;
b) for coal, lignite and sand, DMF would be effective from the date when the rates were prescribed by the Central Government of India or from the date on which the DMF was established by the State Government by a notification, whichever is later.
Pursuant to the aforesaid order, the Group has recognised a reversal of DMF provision for the period for which DMF is no longer leviable.

2 The Indian subsidiaries of the Company participate in a defined benefit plan (the 'Gratuity Plan') covering certain categories of employees. In a few of these companies, the maximum liability was capped at the statutory prescribed limit of INR 1 million (US$0.2 million). Consequent to the increase in the statutory limit to INR 2 million (US$0.3 million), the increase in provision representing past service cost has been recognised as special items.

3 During the year ended 31 March 2018, the Group has recognised net impairment reversal of US$1,447.4 million on its assets in the oil and gas segment comprising of:
a) reversal of previously recorded impairment charge of US$1,464.5 million relating to Rajasthan oil and gas block ('CGU') mainly following the progress on key Growth Projects expected to result in the enhanced recovery of resources in a commercially viable manner leading to a higher forecast of oil production and adoption of an integrated development strategy for various projects leading to savings in cost. Of this reversal, US$499.9 million reversal has been recorded against oil and gas properties and US$964.6 million reversal has been recorded against exploratory and evaluation assets. The recoverable amount of the CGU, US$2,514.0 million (March 2017: US$2,007.0 million), was determined based on the fair value less costs of disposal approach, a Level-3 valuation technique in the fair value hierarchy, as it more accurately reflects the recoverable amount based on our view of the assumptions that would be used by a market participant. This is based on the cash flows expected to be generated by the projected oil and natural gas production profiles up to the expected dates of cessation of production sharing contract (PSC)/cessation of production from each producing field based on current estimates of reserves and risked resources. Reserves assumptions for fair value less costs of disposal discounted cash flow tests consider all reserves that a market participant would consider when valuing the asset, which are usually broader in scope than the reserves used in a value-in-use test. Discounted cash flow analysis used to calculate fair value less costs of disposal use assumption for oil price of US$62 per barrel for FY2019 (March 2017: US$58 per barrel) and scales up to the long-term nominal price of US$65 per barrel over the next three years thereafter (March 2017: US$70 per barrel) derived from a consensus of various analyst recommendations. Thereafter, these have been escalated at a rate of 2.5% per annum (March 2017: 2.5% per annum). The cash flows are discounted using the post-tax nominal discount rate of 10.1% (March 2017: 10.2%) derived from the post-tax weighted average cost of capital after factoring in the risks ascribed to PSC extension including successful implementation of key Growth Projects. Based on the sensitivities carried out by the Group, change in crude price assumptions by US$ 1/bbl and changes to discount rate by 0.5% would lead to a change in recoverable value by US$64 million and US$53 million respectively.
b) Impairment charge of US$17.1 million representing the carrying value of assets relating to exploratory wells in Block PR-OSN-2004/1 which has been relinquished during the year.
During the year ended 31 March 2017, the Group has recognised net impairment reversal of US$12.6 million relating to Rajasthan block net of the charge in relation to change in the decommissioning liability due to change in discount rate in the previous year. Of this net reversal, US$63.0 million charge has been recorded against Oil & Gas properties and US$75.6 million reversal has been recorded against exploratory and evaluation assets.

5. Special items continued

4 During the year ended 31 March 2018, the Group has recognised an impairment charge of US$758.5 million as against the net carrying value of US$865.0 million on its iron ore assets in Goa in the Iron Ore segment. Pursuant to an order passed by the Hon'ble Supreme Court of India on 7 February 2018, the second renewal of the mining leases granted by the State of Goa in 2014–15 to all miners including Vedanta were cancelled. Consequently, all mining operations stopped with effect from 16 March 2018 until fresh mining leases (not fresh renewals or other renewals) and fresh environmental clearances are granted in accordance with the provisions of The Mines and Minerals (Development and Regulation) (MMDR) Act.
Significant uncertainty exists over the resumption of mining at Goa under the current leases. The Group has assessed the recoverable value of all its assets and liabilities associated with existing mining leases which led to a non-cash impairment charge in March 2018. The recoverable value of the mining reserve (grouped under 'mining property and leases') has been assessed as Nil, as there is no reasonable certainty towards re-award of these mining leases. Similarly, upon consideration of past precedence, the provision for restoration and rehabilitation with respect to these mines has been assessed as Nil, as the Group believes that the same would be carried out by the future successful bidder at the time of mine closure. The net recoverable value of other assets and liabilities has been assessed at US$114.0 million based on the fair value less cost of sales methodology using a Level 3 valuation technique. The fair value was determined based on the estimated selling price of the individual assets using depreciated replacement cost method.

5 During the year ended 31 March 2018, the Group has recognised a loss of US$39.0 million relating to certain items of capital work-in-progress at the aluminium operations, which are no longer expected to be used.
During the year ended 31 March 2017, the Group has recognised a US$29.9 million impairment charge relating to certain old items of capital work-in-progress at the Alumina refinery operations.

6 a) During the year ended 31 March 2018, the Group has recognised US$90.6 million loss as financing costs arising on the bond buybacks completed during the year. Similarly, during the year ended 31 March 2017, the Group has reclassified US$41.6 million as a special item under finance cost arising on the bond buybacks completed during the year then ended.
b) Charge pursuant to unfavourable arbitration order – US$17.6 million (Refer Note 38 – Vedanta Limited: Contractor claim)

7 On 28 December 2017, the Group through its wholly owned subsidiary, acquired 51.6% equity stake in AvanStrate Inc. (ASI) for a cash consideration of JPY 1 million ($0.01 million) and acquired debts for JPY 17,058 million ($150.8 million) and incurred acquisition expenses of US$7.0 million. Additionally, a loan of JPY 814.8 million ($7.2 million) was extended to ASI. The transaction has been accounted for on a provisional basis in the financial statements under IFRS 3 and the resultant bargain purchase gain, net of US$7.0 million of acquisition expenses, has been recorded in the income statement.

6. Investment revenue

(US$ million)	**Year ended 31 March 2018**	Year ended 31 March 2017
Fair value gain on financial assets held for trading	258.1	483.5
Interest income:		
Interest – financial assets held for trading	108.5	87.3
Interest – bank deposits	21.0	26.5
Interest – loans and receivables	71.6	48.3
Dividend income:		
Dividend – available-for-sale investments	–	0.1
Dividend – financial assets held for trading	4.0	–
Foreign exchange gain/(loss) (net)	1.9	(3.1)
	465.1	**642.6**

7. Finance costs

(US$ million)	**Year ended 31 March 2018**	Year ended 31 March 2017
Interest on bonds and other borrowings	1,203.8	1,210.0
Coupon interest on convertible bonds	–	15.5
Accretive interest on convertible bonds	–	3.1
Other borrowing and finance costs (including bank charges)	172.0	186.3
Total interest cost	**1,375.8**	**1,414.9**
Unwinding of discount on provisions (Note 30)	13.0	13.0
Net interest on defined benefit arrangements	7.9	12.4
Special items (Note 5)	108.2	41.6
Capitalisation of finance costs/borrowing costs (Note 17)	(54.1)	(99.7)
	1,450.8	**1,382.2**

All borrowing costs are capitalised using rates based on specific borrowings with the interest rate of 8.1% per annum.

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As at and for the year ended 31 March 2018

8. Other gains and (losses) (net)

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Gross foreign exchange (losses)	(11.0)	(16.4)
Qualifying exchange losses capitalised (Note 17)	–	1.9
Net foreign exchange (losses)	**(11.0)**	**(14.5)**
Change in fair value of financial liabilities measured at fair value	(1.1)	(0.4)
Net (loss)/gain arising on qualifying hedges and non-qualifying hedges	11.1	(8.9)
Bargain gain net of acquisition cost (Note 5)	5.3	–
	4.3	**(23.8)**

9(a). Profit/(loss) for the year has been stated after charging/(crediting):

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Depreciation and amortisation	1,270.7	1,030.5
Costs of inventories recognised as an expense	5,533.0	3,586.2
Auditor's remuneration for audit services (Note 28)	2.5	2.2
Research and development	1.3	1.2
Net loss/(profit) on disposal of property, plant and equipment	(0.5)	5.2
Provision for receivables*	75.6	3.8
Impairment of assets	692.9	29.9
Impairment reversal of oil & gas assets	(1,447.4)	(12.6)
Employee costs	630.7	591.1

* Includes provision of US$65.6 million relating to Iron Ore business recognised as special items (refer Note 5).

9(b). Exchange gain/(loss) recognised in the Consolidated Income Statement:

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Cost of sales	44.8	6.4
Investment revenue	1.9	(3.1)
Other gains and losses	(11.0)	(14.5)
Total	**35.7**	**(11.2)**

10. Employee numbers and costs

*Average number of persons employed by the Group in the year**

Class of business	Year ended 31 March 2018	Year ended 31 March 2017
Zinc	6,035	6,170
– India	4,506	4,556
– International	1,529	1,614
Iron Ore	2,869	2,928
Copper	7,724	7,994
– India/Australia	1,162	1,196
– Zambia	6,562	6,798
Aluminium	6,296	5,684
Power	223	335
Oil & Gas	1,780	1,763
Other	156	161
	25,083	**25,035**

10. Employee numbers and costs continued

Costs incurred during the year in respect of employees and Executive Directors

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Salaries and wages	544.0	531.5
Defined contribution pension scheme costs (Note 33)	16.4	13.8
Defined benefit pension scheme costs (Note 33)	37.1	29.5
Share-based payments charge	20.5	16.3
Gratuity – Special items (Note 5)	12.7	–
	630.7	**591.1**

* Non-IFRS measure.

11. Business Combination

On 28 December 2017, the Group acquired 51.63% equity stake in AvanStrate Inc. (ASI) for a cash consideration of JPY 1 million (US$0.01 million) and acquired debts for JPY 17,058 million (US$150.8 million). Additionally, a loan of JPY 814.8 million (US$7.2 million) was extended to ASI. ASI is involved in manufacturing of glass substrate. The financial results of ASI from the date of acquisition to 31 March 2018 have been included in the Consolidated Financial Statements of the Group.

As per the shareholding agreement (SHA) entered with the other majority shareholder holding 46.6% in ASI, the Group has a call option, conversion option to convert part of its debt given to ASI into equity of ASI as well as it has issued put option to the other majority shareholder. These are exercisable as per the terms mentioned in the SHA.

The fair values and business combination have been accounted for on a provisional basis under IFRS 3, in so far as it relates to property, plant and equipment and other intangible assets, and the resultant bargain gain as computed below has been recognised in the Consolidated Income Statement.

The fair value of the identifiable assets and liabilities of ASI as at the date of the acquisition were provisionally estimated as below:

(US$ million) Particulars	Provisional fair value
Property, plant and equipment	242.2
Intangible assets	32.1
Deferred tax assets	19.7
Other non-current assets	6.4
Non-current assets	**300.4**
Inventories	21.6
Trade and other receivables	36.0
Cash and cash equivalents	23.6
Current assets	**81.2**
Total assets (A)	**381.6**
Medium and long-term borrowings (excluding borrowings from immediate parent)	98.7
Deferred tax liabilities	77.5
Trade and other payables	23.6
Total liabilities (B)	**199.8**
Net assets (A-B)	**181.8**
Satisfied by:	
Cash consideration paid for 51.63% stake and debt acquired	158.0
Non-controlling interest on acquisition (48.37% of net assets after adjustment of fair value of borrowings from immediate parent of US$158.0 million)	11.5
Bargain gain	**12.3**
Acquisition costs	**(7.0)**

The gross carrying amount of trade and other receivables equals the fair value of trade and other receivables. None of the trade and other receivables was impaired and the full contractual amounts were expected to be realised. Property, plant and equipment have been valued using the cost approach – cost of reproduction based on new (CRN) method. For estimating CRN, appropriate indices were used to develop trend factors that have been applied on the acquisition/historical costs of the different assets over the period during which the asset has been commissioned or, in other words, life spent. The estimated CRN was further adjusted for applicable physical deterioration to arrive at fair value. The physical deterioration was based on the estimated age and remaining useful life. Fair value of assumed debt was determined using the yield-method, wherein, the expected cash flows including interest component and principal repayments have been discounted at an appropriate market interest rate.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

11. Business Combination continued

Since the date of acquisition, ASI has contributed US$23.3 million to the Group revenue and has reduced the profit before taxation by US$10.8 million (including impact of borrowings from the immediate parent) for the year ended 31 March 2018. If ASI had been acquired at the beginning of the year, the Group revenue would have been US$15,465.8 million and the profit before taxation of the Group would have been US$2,477.9 million.

Non-controlling interest has been measured at the non-controlling interest's proportionate share of ASI's identifiable net assets.

12. Tax

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Current tax:		
Current tax on profit for the year	515.6	589.5
Charge/(credit) in respect of current tax for earlier years	6.1	(1.5)
Total current tax	**521.7**	**588.0**
Deferred tax: (Note 31)		
Origination and reversal of temporary differences	140.0	(83.0)
Charge in respect of deferred tax for earlier years	13.0	(9.6)
Charge in respect of special items (Note 5)	338.5	4.9
Total deferred tax	**491.5**	**(87.7)**
Net tax expense	**1013.2**	**500.3**
Effective tax rate	**40.8%**	**36.2%**

Tax expense

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Tax effect of special items (Note 5)	338.5	4.9
Tax expense – others	674.7	495.4
Net tax expense	**1,013.2**	**500.3**

A reconciliation of income tax expense applicable to accounting profit/(loss) before tax at the Indian statutory income tax rate to income tax expense/(credit) at the Group's effective income tax rate for the year ended 31 March 2018 is as follows. Given the majority of the Group's operations are located in India, the reconciliation has been carried out from the Indian statutory income tax rate.

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Accounting profit before tax	2,482.1	1,379.9
Indian statutory income tax rate	34.608%	34.608%
Tax at local statutory income tax rate	**859.0**	**477.6**
Disallowable expenses	21.0	58.0
Non-taxable income	(37.4)	(96.5)
Tax holidays and similar exemptions	(157.5)	(204.8)
Effect of tax rates differences of subsidiaries operating in other jurisdictions	72.9	76.1
Dividend distribution tax	62.7	244.5
Unrecognised tax assets (net)	165.2	149.2
Changes in deferred tax balances due to change in income tax rate from 34.608% to 34.944%	11.5	–
Capital gains subject to lower tax rate	(11.8)	(68.0)
Investment allowances	–	(74.7)
Charge/(credit) in respect of previous years	19.1	(11.1)
Others	8.5	(50.0)
Total	**1,013.2**	**500.3**

Certain businesses of the Group within India are eligible for specified tax incentives which are included in the table above as tax holidays and similar exemptions. Most of such tax exemptions are relevant for the companies operating in India. These are briefly described as under:

12. Tax continued

The location-based exemption

In order to boost industrial and economic development in undeveloped regions, provided certain conditions are met, profits of newly established undertakings located in certain areas in India may benefit from a tax holiday. Such a tax holiday works to exempt 100% of the profits for the first five years from the commencement of the tax holiday, and 30% of profits for the subsequent five years. This deduction is available only for units established up to 31 March 2012. However, such an undertaking would continue to be subject to the Minimum Alternative tax ('MAT').

The Group has such types of undertakings at Haridwar and Pantnagar, which are part of Hindustan Zinc Limited (Zinc India). In the current year, Haridwar and Pantnagar units are eligible for deduction at 30% of taxable profits.

Sectoral benefit – power plants

To encourage the establishment of certain power plants, provided certain conditions are met, tax incentives exist to exempt 100% of profits and gains for any ten consecutive years within the 15-year period following commencement of the power plant's operation. The Group currently has total operational capacity of 8.4 Giga Watts (GW) of thermal-based power generation facilities and wind power capacity of 274 Mega Watts (MW). However, such undertakings generating power would continue to be subject to the MAT provisions.

The Group has power plants which benefit from such deductions at various locations of Hindustan Zinc Limited (where such benefits have been drawn), and Talwandi Sabo Power Limited, Vedanta Limited and Bharat Aluminium Company Limited (where no benefit has been drawn).

The Group operates a zinc refinery in the Export Processing Zone, Namibia which has been granted tax exempt status by the Namibian government.

In addition, the subsidiaries incorporated in Mauritius are eligible for tax credit to the extent of 80% of the applicable tax rate on foreign source income.

The total effect of such tax holidays and exemptions was US$157.5 million for the year ended 31 March 2018 (31 March 2017: US$204.8 million).

13. Earnings/(loss) per share

Basic earnings/loss per share amounts are calculated by dividing net profit/loss for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Weighted average number of treasury shares, 24,373,820 (2017: 24,347,664) outstanding during the year are excluded from the total outstanding shares for the calculation of EPS.

Diluted earnings per share amounts are calculated by dividing the net profit attributable to ordinary equity holders of the parent (after adjusting for the impact of share options issued by the subsidiary) by the weighted average number of ordinary shares outstanding during the year (adjusted for the effects of dilutive options). The following reflects the income and share data used in the basic and diluted earnings per share computations:

(US$ million)	**Year ended 31 March 2018**	Year ended 31 March 2017
Net profit/(loss) attributable to equity holders of the parent	235.6	(22.7)

Earnings/(loss) per share based on profit/(loss) for the year

(US$ million except as stated)	**Year ended 31 March 2018**	Year ended 31 March 2017
Profit/(loss) for the year attributable to equity holders of the parent	235.6	(22.7)
Weighted average number of shares of the Company in issue (million)	277.7	277.3
Earnings/(loss) per share on profit/(loss) for the year (US cents per share)	**84.8**	**(8.2)**

Computation of adjusted weighted average number of shares

	Year ended 31 March 2018	Year ended 31 March 2017
Weighted average number of ordinary shares for basic earnings per share (million)	277.7	277.3
Effect of dilution:		
Potential ordinary shares relating to share option awards	4.7	5.0
Adjusted weighted average number of shares of the Company in issue (million)	**282.4**	**282.3**

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

13. Earnings/(loss) per share continued

Computation of adjusted profit/(loss) attributable to equity holders of the parent

	Year ended 31 March 2018	Year ended 31 March 2017
Profit/(loss) for the year attributable to equity holders of the parent	235.6	(22.7)
Effect of dilution:		
Reduction in attributable profit on account of stock options of subsidiary	(1.8)	–
Adjusted profit/(loss) for the year attributable to equity holders of the parent (US$ million)	**233.8**	**(22.7)**

Diluted earnings/(loss) per share on profit/(loss) for the year

(US$ million except as stated)	Year ended 31 March 2018	Year ended 31 March 2017
Adjusted profit/(loss) for the year attributable to equity holders of the parent	233.8	(22.7)
Adjusted weighted average number of shares of the Company in issue (million)	282.4	277.3
Diluted earnings/(loss) per share on profit/(loss) for the year (US cents per share)	**82.8**	**(8.2)**

The outstanding awards of 4.7 million as at 31 March 2018 under the LTIP are reflected in the diluted earnings per share through an increased number of weighted average shares.

For the year ended 31 March 2017, the effect of 5.0 million potential ordinary shares, which relate to share option awards under the LTIP scheme, on the attributable loss for the year was anti-dilutive and thus these shares were not considered in determining diluted loss per share.

The loss for the previous year would have decreased if holders of the convertible bonds in Vedanta had exercised their right to convert their bond holdings into Vedanta equity as this conversion would have lowered interest payable on the convertible bond. The adjustment in respect of the convertible bonds had an anti-dilutive impact on the number of shares and earnings/loss and thus diluted EPS is not disclosed.

Earnings/(loss) per share based on underlying profit/(loss) for the year (Non-GAAP)

Underlying earnings is an alternative earnings measure, which the management considers to be a useful additional measure of the Group's performance. The Group's underlying profit/loss is the loss for the year after adding back special items, other losses/(gains) [net] (Note 8) and their resultant tax (including taxes classified as special items) and non-controlling interest effects. This is a non-GAAP measure.

(US$ million)	Note	Year ended 31 March 2018	Year ended 31 March 2017
Profit/(loss) for the year attributable to equity holders of the parent		235.6	(22.7)
Special items	5	(580.1)	58.9
Other gains/(losses) [net]	8	1.0	23.8
Tax and non-controlling interest effect of special items (including taxes classified as special items) and other gains/(losses) [net]		505.3	(15.4)
Underlying attributable profit/(loss) for the year		**161.8**	**44.6**
Reduction in attributable profit on account of stock options of subsidiary		(1.8)	–
Adjusted underlying profit for the year		160.0	44.6

Basic earnings per share on underlying profit for the year (Non-GAAP)

(US$ million except as stated)	Year ended 31 March 2018	Year ended 31 March 2017
Underlying profit for the year	161.8	44.6
Weighted average number of shares of the Company in issue (million)	277.7	277.3
Earnings/(loss) per share on underlying profit for the year (US cents per share)	**58.3**	**16.1**

13. Earnings/(loss) per share continued

Diluted earnings per share on underlying profit for the year (Non-GAAP)

(US$ million except as stated)	Year ended 31 March 2018	Year ended 31 March 2017
Adjusted underlying profit for the year	160.0	44.6
Adjusted weighted average number of shares of the Company in issue (million)	282.4	282.3
Diluted earnings/(loss) per share on underlying profit for the year (US cents per share)	**56.7**	**15.8**

The outstanding awards of 4.7 million under the LTIP (31 March 2017: 5.0 million) are reflected in the diluted underlying earnings per share through an increased number of weighted average shares.

The profit for the previous year would have increased if holders of the convertible bonds in Vedanta had exercised their right to convert their bond holdings into Vedanta equity. The impact on profit for the previous year of this conversion would have lowered interest payable on the convertible bond. The adjustment in respect of the convertible bonds had an anti-dilutive impact on the number of shares and earnings/loss and thus diluted EPS is not disclosed.

14. Dividends

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Amounts recognised as distributions to equity holders:		
Equity dividends on ordinary shares:		
Final dividend for FY 2016–17: 35.0 US cents per share (FY 2015–16: 30.0 US cents per share)	96.9	82.4
Interim dividend paid during the year: 24.0 US cents per share (FY 2016–17: 20.0 US cents per share)	67.5	55.1
Proposed for approval at AGM		
Equity dividends on ordinary shares:		
Final dividend for FY 2017–2018: 41.0 US cents per share (FY 2016–2017: 35.0 US cents per share)	114.6	96.9

15. Goodwill

(US$ million)	As at 31 March 2018	As at 31 March 2017
Cost (gross carrying amount)	16.6	16.6
Impairment losses	(4.4)	–
Net carrying amount at 31 March	**12.2**	**16.6**

Goodwill is allocated for impairment testing purposes to the following CGU's. The allocation of goodwill to CGU's is as follows:

- US$12.2 million Copper India (as at 31 March 2018 and 31 March 2017)
- US$4.4 million (as at 31 March 2017) – impaired during the year – refer to Note 5

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired.

The Company has undertaken an impairment review of goodwill of US$12.2 million as at 31 March 2018. The carrying amount of goodwill allocated to the relevant cash generating unit is considered to be insignificant in comparison with the total carrying value of the cash generating unit. The carrying amount of goodwill was evaluated using the higher of fair value less cost of disposal ('FVLCD') or value in use based on discounted future cash flows of the cash generating unit to which the goodwill pertains and comparing this to the total carrying value of the relevant cash generating units. It was determined that the carrying amount of goodwill is not impaired and nor was impairment indicated following a reasonably possible change in a key assumption.

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As at and for the year ended 31 March 2018

16. Intangible assets

Intangible assets include Port concession rights to operate a general cargo berth for handling coal at the outer harbour of the Visakhapatnam port on the east coast of India, software licences, technological know-how, acquired brand and others.

(US$ million)	Port concession rights[1]	Software licence	Others[2]	Total
Cost				
As at 1 April 2016	**91.5**	**10.5**	**9.3**	**111.3**
Addition	0.4	7.1	0.8	8.3
Disposal	(1.0)	(0.6)	–	(1.6)
Foreign exchange differences	2.1	0.6	0.2	2.9
As at 1 April 2017	**93.0**	**17.6**	**10.3**	**120.9**
Addition	0.1	0.9	0.2	1.2
Disposal	(0.3)	(1.2)	–	(1.5)
Acquisition through business combination (Note 11)	–	0.2	31.9	32.1
Foreign exchange differences	(0.3)	0.2	1.9	1.8
As at 31 March 2018	**92.5**	**17.7**	**44.3**	**154.5**
Accumulated amortisation				
As at 1 April 2016	**10.4**	**8.0**	**0.7**	**19.1**
Charge for the year	3.4	2.4	0.4	6.2
Disposal	(0.1)	(0.6)	–	(0.7)
Foreign exchange differences	0.3	0.4	–	0.7
As at 1 April 2017	**14.0**	**10.2**	**1.1**	**25.3**
Charge for the year	3.5	3.9	–	7.4
Disposal	–	(1.2)	–	(1.2)
Foreign exchange differences	(0.1)	0.1	(0.1)	(0.1)
As at 31 March 2018	**17.4**	**13.0**	**1.0**	**31.4**
Net book value				
As at 1 April 2016	81.1	2.5	8.6	92.2
As at 1 April 2017	79.0	7.4	9.2	95.6
As at 31 March 2018	**75.1**	**4.7**	**43.3**	**123.1**

1 Vizag General Cargo Berth Private Limited (VGCB), a special purpose vehicle, was incorporated for the coal berth mechanisation and upgrades at Visakhapatnam port. VGCB is wholly owned by Vedanta Limited. The project is to be carried out on a design, build, finance, operate, transfer basis and the concession agreement between Visakhapatnam Port and VGCB was signed in June 2010. In October 2010, VGCB was awarded with the concession after fulfilling conditions stipulated as a precedent to the concession agreement. Visakhapatnam Port has provided, in lieu of licence fee an exclusive licence to VGCB for designing, engineering, financing, constructing, equipping, operating, maintaining, and replacing the project/project facilities and services. The concession period is 30 years from the date of the award of the concession. The capacity of upgraded berth would be 10.18 mmtpa and that the Vishakhapatnam Port would be entitled to receive 38.10% share of the gross revenue as royalty. VGCB is entitled to recover a tariff from the user(s) of the project facilities and services as per its tariff notification. The tariff rates are linked to the Wholesale Price Index (WPI) and would accordingly be adjusted as specified in the concession agreement every year. The ownership of all infrastructure assets, buildings, structures, berths, wharfs, equipment and other immovable and movable assets constructed, installed, located, created or provided by VGCB at the project site and/or in the port's assets pursuant to concession agreement would be with VGCB until expiry of this concession agreement. The cost of any repair, replacement or restoration of the project facilities and services shall be borne by VGCB during the concession period. VGCB has to transfer all its rights, titles and interest in the project facilities and services free of cost to Visakhapatnam Port at the end of the concession period.

2 Others include technological know-how and acquired brand relating to the acquisition of AvanStrate Inc.

17. Property, plant and equipment

(US$ million)	Mining property and leases	Land and buildings	Plant and equipment[1]	Assets under construction	Oil & Gas properties	Exploratory and evaluation assets	Others	Total
Cost								
At 1 April 2016	**2,615.5**	**1,646.0**	**11,421.2**	**3,409.2**	**9,770.2**	**9,983.1**	**149.5**	**38,994.7**
Additions	141.6	19.4	226.1	419.9	151.1	–	13.0	971.1
Transfers	8.0	15.4	1,492.0	(1,382.3)	–	(140.2)	7.1	–
Reclassification	77.1	–	(43.8)	(29.3)	–	–	(33.3)	(29.3)
Unsuccessful exploration costs	–	–	–	–	–	(6.5)	–	(6.5)
Disposals	(54.8)	(8.1)	(63.6)	(18.0)	–	–	(38.6)	(183.1)
Foreign exchange differences	75.9	43.6	295.4	45.1	–	–	15.9	475.9
At 1 April 2017	**2,863.3**	**1,716.3**	**13,327.3**	**2,444.6**	**9,921.3**	**9,836.4**	**113.6**	**40,222.8**
Additions	252.2	24.5	341.2	474.9	138.7	19.6	10.3	1,261.4
Transfers	11.1	3.8	552.1	(568.2)	30.8	(30.8)	1.2	–
Disposal	–	(0.7)	(142.2)	(15.7)	(2.2)	(9.8)	(2.9)	(173.5)
Acquisition through business combination (Note 11)	–	49.2	163.1	26.8	–	–	3.1	242.2
Foreign exchange differences	53.4	12.9	33.6	16.3	–	–	2.4	118.6
At 31 March 2018	**3,180.0**	**1,806.0**	**14,275.1**	**2,378.7**	**10,088.6**	**9,815.4**	**127.7**	**41,671.5**
Accumulated depreciation, amortisation and impairment								
At 1 April 2016	**1,300.9**	**284.7**	**3,676.1**	**46.4**	**8,539.0**	**8,511.9**	**39.0**	**22,398.0**
Charge for the year	125.4	65.0	410.9	–	409.7	–	11.3	1,022.3
Disposal	(54.8)	(7.3)	(24.2)	–	–	–	(37.9)	(124.2)
Reclassification	23.0	1.0	(30.5)	–	–	–	6.5	–
Impairment/(impairment reversal) of assets (Note 5)	–	–	–	29.9	63.0	(75.6)	–	17.3
Foreign exchange differences	30.8	13.6	100.1	2.0	–	–	12.1	158.6
At 1 April 2017	**1,425.3**	**357.0**	**4,132.4**	**78.3**	**9,011.7**	**8,436.3**	**31.0**	**23,472.0**
Charge for the year	182.7	51.7	557.4	–	460.7	–	10.8	1,263.3
Disposal	–	–	(125.1)	–	(2.2)	–	(1.3)	(128.6)
Reclassification	–	–	0.4	–	–	–	(0.4)	–
Impairment/(impairment reversal) of assets (Note 5)	638.3	12.8	28.7	45.5	(499.9)	(947.5)	0.5	(721.6)
Foreign exchange differences	11.5	9.6	37.2	(0.4)	–	–	1.2	59.1
At 31 March 2018	**2,257.8**	**431.1**	**4,631.0**	**123.4**	**8,970.3**	**7,488.8**	**41.8**	**23,944.2**
Net book value								
At 1 April 2016	1,314.6	1,361.3	7,745.1	3,362.8	1,231.2	1,471.2	110.5	16,596.7
At 1 April 2017	1,438.0	1,359.3	9,194.9	2,366.3	909.6	1,400.1	82.6	16,750.8
At 31 March 2018	**922.2**	**1,374.9**	**9,644.1**	**2,255.3**	**1,118.3**	**2,326.6**	**85.9**	**17,727.3**

1 Plant and equipment include refineries, smelters, power plants and related facilities. Other tangible fixed assets include office equipment and fixtures, and light vehicles. At 31 March 2018, land with a carrying value of US$166.2 million (31 March 2017: US$131.1 million) was not depreciated.
2 During the year ended 31 March 2018, interest and foreign exchange losses capitalised was US$54.1 million (31 March 2017: US$101.6 million).
3 Certain property, plant and equipment are pledged as collateral against borrowings, the details related to which have been described in Note 24 on Borrowings.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

18. Financial asset investments

Financial asset investments represent investments classified and accounted for as available-for-sale investments

Available-for-sale investments

(US$ million)	As at 31 March 2018	As at 31 March 2017
At 1 April	10.7	6.5
Movements in fair value	13.9	4.1
Exchange difference	(0.1)	0.1
At 31 March	**24.5**	**10.7**

Financial asset investment represents quoted investments in equity shares that present the Group with an opportunity for returns through dividend income and gains in value. These securities are held at fair value based on market prices. These are classified as non-current as on 31 March 2018 and 31 March 2017.

19. Other non-current assets

(US$ million)	As at 31 March 2018	As at 31 March 2017
Site restoration fund	61.3	50.5
Others[1,2]	310.2	248.7
Financial (A)	**371.5**	**299.2**
Deposits with government authorities	164.0	57.5
Claims and other receivables	123.7	187.7
Non-financial (B)	**287.7**	**245.2**
Total (A+B)	**659.2**	**544.4**

1 Includes trade receivables in Power business (Refer to Note 38 – Other Matters).
2 Includes US$15.9 million of restricted bank deposits maintained as debt service reserve account (31 March 2017: Nil).

20. Inventories

(US$ million)	As at 31 March 2018	As at 31 March 2017
Raw materials and consumables	1,329.4	896.6
Work-in-progress	578.2	585.1
Finished goods	130.1	188.4
	2,037.7	**1,670.1**

Inventories with a carrying amount of US$1,251.3 million (31 March 2017: US$790.4 million) have been pledged as security against certain bank borrowings of the Group.

Inventory held at net realisable value amounted to US$168.2 million (31 March 2017: US$71.0 million). The write-down of inventories amounts to US$6.8 million (31 March 2017: US$2.2 million) and has been charged to the consolidated income statement.

21. Trade and other receivables

(US$ million)	As at 31 March 2018	As at 31 March 2017
Trade receivables[1]	644.3	387.4
Trade receivables from related parties	3.7	1.5
Cash call/receivables from joint operations	98.8	130.3
Other receivables	82.9	34.4
Financial (A)	**829.7**	**553.6**
Balance with Government authorities	233.1	231.8
Advances for supplies	309.0	183.1
Other receivables	155.1	116.3
Non-financial (B)	**697.2**	**531.2**
Total (A+B)	**1,526.9**	**1,084.8**

1 Refer Note 38 – Other matters.

The credit period given to customers ranges from zero to 90 days. Other receivables, under non-financial, primarily include excise balances, customs balances, advances to suppliers and claims receivables.

22. Liquid investments

(US$ million)	As at 31 March 2018	As at 31 March 2017
Bank deposits[1]	482.5	882.6
Other investments	4,325.3	7,160.4
	4,807.8	**8,043.0**

1 Includes US$48.7 million of restricted bank deposits for closure costs/for securing banking facilities. The amount in the prior year relates to US$59.0 million of bank deposits for securing banking facilities. It also includes US$8.9 million of restricted bank deposits maintained as debt service reserve account (31 March 2017: US$7.9 million).

Bank deposits are made for periods of between three months and one year depending on the cash requirements of the companies within the Group and earn interest at the respective fixed deposit rates.

Other investments include mutual fund investments and investment in bonds which are held for trading and recorded at fair value with changes in fair value reported through the income statement. These investments do not qualify for recognition as cash and cash equivalents due to their maturity period and risk of change in value of the investments. Refer to Note 29 for further details.

23. Cash and cash equivalents

(US$ million)	As at 31 March 2018	As at 31 March 2017
Cash and cash equivalents consist of the following:		
Cash at bank and in hand	604.8	1,323.7
Short-term deposits	158.3	185.3
Restricted cash and cash equivalents[1]	35.6	173.2
Total	**798.7**	**1,682.2**

1 Restricted cash and cash equivalents includes US$35.6 million (31 March 2017: US$156.0 million) kept in a specified bank account to be utilised solely for the purposes of payment of dividends to non-controlling shareholders, which is being carried as a current liability. Of the same, US$21.8 million (31 March 2017: US$99.0 million) has been utilised to pay dividends to the non-controlling shareholders subsequent to the Balance Sheet date. Restricted cash and cash equivalents as at 31 March 2017 further includes US$17.2 million kept in short-term deposits under lien, which can be utilised by the Group for the repayment of bills of exchange facilities against which these have been pledged as security.

Short-term deposits are made for periods of between one day and three months, depending on the immediate cash requirements of the Group, and earn interest at the respective short-term deposit rates.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

24. Borrowings

(US$ million)	As at 31 March 2018	As at 31 March 2017
Short-term borrowings consist of:		
Banks and financial institutions	**3,606.7**	**5,587.9**
Current portion of medium and long-term borrowings	1,853.6	2,070.6
Short-term borrowings (A)	**5,460.3**	**7,658.5**
Medium and long-term borrowings consist of:		
Banks and financial institutions	5,892.0	6,595.5
Bonds	3,360.1	3,457.6
Non-convertible debentures	1,779.2	2,109.1
Preference shares (Note 42)	462.8	464.2
Other	93.0	14.4
Medium and long-term borrowings	**11,587.1**	**12,640.8**
Less: Current portion of medium and long-term borrowings	(1,853.6)	(2,070.6)
Medium and long-term borrowings, net of current portion (B)	**9,733.5**	**10,570.2**
Total (A+B)	**15,193.8**	**18,228.7**

At 31 March 2018, the Group had available US$613.0 million (31 March 2017: US$911.0 million) of undrawn committed borrowing facilities in respect of which all conditions precedent had been met. The Group facilities are subject to certain financial and non-financial covenants. The primary covenants which must be complied with include fixed charge cover ratio, net borrowing to EBITDA ratio, total net assets to borrowings ratio and net interest expense to EBITDA ratio.

Details of the bonds and non-convertible debentures issued by the Group have been provided below:

(US$ million)	As at 31 March 2018	As at 31 March 2017
Particulars		
Bonds:		
6.125% bonds due August 2024	991.7	–
9.50% bonds due July 2018*	–	361.1
6.00% bonds due January 2019	223.6	744.3
8.25% bonds due June 2021	640.0	865.4
6.375% bonds due July 2022	993.2	991.5
7.125% bonds due June 2023	494.1	495.3
0.23% bonds due December 2032 (Repayable in 10 instalments)	17.5	–
	3,360.1	**3,457.6**

* The bond has been pre-paid during the year.

24. Borrowings continued

(US$ million)	As at 31 March 2018	As at 31 March 2017
Non-convertible debentures		
9.24% NCDs due December 2022*	–	77.1
7.60% NCDs due May 2019	53.7	–
9.10% NCDs due April 2018**	384.4	385.6
9.17% NCDs due July 2018**	184.5	185.1
9.45% NCDs due August 2020	307.5	308.5
7.80% NCDs due December 2020	76.9	–
9.24% NCDs due October 2022*	–	77.1
9.40% NCDs due November 2022*	–	77.1
9.40% NCDs due December 2022*	–	77.1
9.36% NCDs due October 2017	–	150.4
9.36% NCDs due December 2017	–	81.0
7.90% NCDs due March 2020**	30.7	–
8.00% NCDs due July 2020	46.1	–
10.25% NCDs due August 2017	–	77.1
7.85% NCDs due August 2020	76.9	–
9.70% NCDs due September 2017	–	27.8
9.27% NCDs due November 2017	–	30.8
8.91% NCDs due April 2018	153.7	153.9
8.20% NCDs due November 2019	46.1	46.3
7.75% NCDs due September 2019	38.4	38.6
8.25% NCDs due September 2020	65.3	–
8.65% NCDs due September 2019	23.1	23.1
8.70% NCDs due April 2020	92.2	92.5
8.75% NCDs due April 2021	38.4	38.6
8.75% NCDs due September 2021	38.4	38.6
8.25% NCDs due October 2019	46.1	46.3
7.95% NCDs due April 2020**	46.1	46.3
7.50% NCDs due November 2019**	30.7	30.2
	1,779.2	**2,109.1**

* The NCDs have been pre-paid during the year.
** The debenture holders of these NCDs and the Company have put and call option at the end of 5 years from the respective date of the allotment of the NCDs.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

24. Borrowings continued

Security details

The Group has taken borrowings in various countries towards the funding of its acquisitions and working capital requirements. The borrowings comprise of funding arrangements from various banks and financial institutions taken by the parent and subsidiaries. Out of the total borrowings of US$15,193.8 million (31 March 2017: US$18,228.7 million) shown above, total secured borrowings are US$5,655.1 million (31 March 2017: US$6,161.7 million) and unsecured borrowings are US$9,538.7 million (31 March 2017: US$12,067.0 million). The details of security provided by the Group in various countries, to various lenders on the assets of the parent and subsidiaries are as follows:

(US$ million)

Facility category	Security details	As at 31 March 2018	As at 31 March 2017
Buyers credit (grouped under banks and financial institutions)	First pari passu charge on the entire current assets of Vedanta Limited, both present and future. First pari passu charge on all rights, title, claim and benefit in all the whole of the current assets of the borrower, both present and future, including stock and raw material, stock in process, semi-finished, finished goods and stores and spares not relating to plant and machinery (consumable stores and spares).	19.3	–
	Secured by first charge on entire stock of raw material, semi-finished goods, finished goods, consumable stores and spares and such other movables including book debts and bills of Vedanta Limited's Iron Ore division at Goa and charge on Iron Ore Goa's all other current assets including outstanding monies and receivables on pari passu basis.	0.3	–
	Other secured buyers credit.	–	115.4
Cash credit (grouped under banks and financial institutions)	Secured by first pari passu charge on current assets, present and future of Vedanta Limited.	47.3	102.1
	Secured by hypothecation of stock of raw materials, work-in-progress, semi-finished, finished products, consumable stores and spares, bills receivables, book debts and all other movables, both present and future in BALCO. The charges rank pari passu among banks under the multiple banking arrangements, for fund and non-fund based facilities.	0.1	0.1
	First pari passu charge on the entire current assets of Vedanta Limited, both present and future. First pari passu charge on all rights, title, claim and benefit in all the whole of the current assets of the borrower, both present and future, including stock and raw material, stock in process, semi-finished, finished goods and stores and spares not relating to plant and machinery (consumable stores and spares).	98.2	–
	Secured by first charge on entire stock of raw material, semi-finished goods, finished goods, consumable stores and spares and all book debts of Vedanta Limited's Iron Ore division at Goa on pari passu basis.	25.6	25.5
	Secured by a first pari passu charge on all present and future inventories, book debts and all other current assets of TSPL.	90.5	–
	Secured by hypothecation of stock of raw materials, work-in-progress, semi-finished, finished products, consumable stores and spares, bills receivables, book debts and all other movables, both present and future in BALCO. The charges rank pari passu among banks under the multiple banking arrangements, both for fund based and non-fund based facilities.	26.2	–

24. Borrowings continued

(US$ million)

Facility category	Security details	As at 31 March 2018	As at 31 March 2017
External commercial borrowings (grouped under banks and financial institutions)	The facility is secured by first pari passu charge on all movable property, plant and equipments related to power plants and aluminium smelters located at Korba both present and future along with secured lenders.	74.7	73.9
	The facility is secured by first pari passu charge on all movable project assets related to the 1200 MW power project and 3.25 LTPA Smelter project both present and future along with secured lenders at BALCO.	50.0	49.8
	Other secured external commercial borrowings.	–	233.2
Non-convertible debentures	a) Secured by way of movable fixed assets in relation to the Lanjigarh Refinery Expansion Project including 210 MW Power Project for the Lanjigarh Refinery Expansion Project at Lanjigarh, Orissa.	568.8	647.6
	b) Secured by way of 'movable fixed assets' in relation to the 1.6 MTPA aluminium smelter along with 1215 MW (135MW * 9) captive power plant located in Jharsuguda and 1 MTPA alumina refinery along with 90 MW co-generation power plant located at Lanjigarh in Odisha State and shall include all present movable plant and machinery, machinery spares, tools and accessories, fixtures, mechanical and electrical equipment, machinery and all other movable fixed assets and all estate, right, title, interest, property, claims and demands whatsoever in relation to assets.		
	c) The whole of the movable fixed assets of the 1.6 MTPA aluminium smelter along with 1215 MW captive power plant in Jharsuguda and 1 MTPA alumina refinery along with 75 MW co-generation plant in Lanjigarh, including its movable plant and machinery, capital works-in-process, machinery spares, tools and accessories, and other movable fixed assets.		
	First pari passu charge on the movable fixed assets both present and future of 2400 MW (600 MW*4) Jharsuguda power plant.	384.3	385.5
	Secured by way of first ranking pari passu charge on movable fixed assets in relation to the Lanjigarh Refinery Expansion Project (having capacity beyond 2 MTPA and up to 6 MTPA) situated at Lanjigarh, Orissa. The Lanjigarh Refinery Expansion Project shall specifically exclude the '1 MTPA alumina refinery of the Company along with 90 MW power plant in Lanjigarh' and all its related capacity expansions.	238.3	239.1
	Secured by way of movable fixed assets of the Lanjigarh Refinery Expansion Project including 210 MW Power Project for the Lanjigarh Refinery Expansion Project with a minimum security cover of 1 time of the outstanding amount of the debenture.	130.6	–
	Secured by first pari passu charge over plant, property, equipment (excluding coal block) of BALCO.	76.8	–
	Secured by first pari passu charge on movable and/or immovable fixed assets of TSPL with a minimum asset cover of 1 time during the tenure of NCD.	161.4	84.8
	Secured by first pari passu charge on movable and/or immovable fixed assets of TSPL with a minimum asset cover of 1.1 times during the tenure of NCD.	153.7	212.5
	Secured by way of first pari passu charge on the specific movable and/or immovable property, plant and equipment of VGCB, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1 time of the aggregate face value of bonds outstanding at any point of time.	65.3	–
	Other secured non-convertible debentures.	–	539.6

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

24. Borrowings continued

Facility category	Security details	As at 31 March 2018	(US$ million) As at 31 March 2017
Term loans (grouped under banks and financial institutions)	Secured by first pari passu charge on fixed assets of TSPL both present and future.	626.6	561.4
	Secured by first pari passu charge by way of hypothecation on the entire movable property, plant and equipment (including WIP) of the Aluminium and Power Project, both present and future except for assets acquired under buyer's credit where there is a second charge; and mortgage by deposit of documents of title of the land pertaining to the property, plant and equipment. Aluminium and Power Project shall mean the manufacturing facilities comprising of (i) alumina refinery having output of 1 MTPA along with co-generation captive power plant with an aggregate capacity of 75 MW at Lanjigarh, Orissa, (ii) aluminium smelter having an output of 1.6 MTPA along with a 1215 (9x135) MW CPP at Jharsuguda, Orissa.	314.9	410.1
	Secured by creating first pari passu charge by way of hypothecation of the movable property, plant and equipment except for assets acquired under buyer's credit where there is a second charge, and mortgage on all the immovable property, plant and equipment of the Aluminium division of Vedanta Limited, both present and future, including leasehold land.	848.7	1,433.1
	Secured by a first pari passu charge by way of hypothecation on the entire movable property, plant and equipment (including CWIP) of the project at Vedanta Limited's Jharsuguda Aluminium division except for assets acquired under buyer's credit where there is a second charge, both present and future; and mortgage by deposit of documents of title of the land pertaining to the property, plant and equipment.	290.6	299.5
	Secured by aggregate of the net property, plant and equipment of the Aluminium division and the Lanjigarh Expansion Project reduced by the outstanding amount of other borrowings having first pari passu charge on the property, plant and equipment of the Aluminium division and the Lanjigarh Expansion Project except for assets acquired under buyer's credit where there is a second charge.	189.6	192.0
	Secured by first pari passu charge on moveable property, plant and equipment (except for coal block) of the Company.	232.3	–
	Secured by first pari passu charge on all present and future moveable fixed assets including but not limited to plant and machinery, spares, tools and accessories of borrower (excluding of coal block assets) by way of a deed of hypothecation.	151.9	–
	Secured by charge on Cairn Energy Hydrocarbons Limited's (CEH) all banks accounts, cash and investments, all receivables and current assets (but excluding any shares issued to CEH by its subsidiaries, all of its rights, title and interest in and to Production Sharing Contract and all of its fixed assets of any nature).	426.3	–
	Secured against company assets of KCM.	293.4	–
	Other secured term loans.	–	556.5
Others	Secured by way of first charge over AvanStrate's asset.	69.4	–
	Total	**5,655.1**	6,161.7

25. Non-equity non-controlling interests

As at 31 March 2018, non-equity non-controlling interests amounts to US$11.9 million (31 March 2017: US$11.9 million), being deferred shares in KCM held by ZCCM. The deferred shares have no voting rights or rights to KCM's dividends, but are entitled on a winding up to a return of up to US$0.99 per share once all of KCM's ordinary shares have received a distribution equal to their par value and any share premium created on their issue and which remains distributable to them.

The deferred shares are held at historic cost, being the fair value attributed to them at the time of initial acquisition of KCM in the year ended 31 March 2005. They are classified as non-current liabilities as they are repayable only on the winding up of KCM, for an amount different than the pro rata share of net assets upon liquidation. The shares have been valued at US$0.99 per share, which is the maximum amount payable to the deferred shareholders. These deferred shares have not been discounted as the effect would not be material.

26. Movement in net debt[1]

(US$ million)	Cash and cash equivalents	Liquid investments	Total cash and liquid investments	Debt due within one year: Debt carrying value	Debt due after one year: Debt carrying value	Debt due after one year: Debt-related derivatives[2]	Total net debt
At 1 April 2016	**428.3**	**8,508.2**	**8,936.5**	**(4,313.8)**	**(11,949.5)**	**(2.0)**	**(7,328.8)**
Cash flow	1,187.2	(921.5)	265.7	74.1	(1,144.6)	–	(804.8)
Other non-cash changes[3]	–	321.0	321.0	(3,266.6)	2,643.4	2.0	(300.2)
Foreign exchange currency translation differences	66.7	135.3	202.0	(152.2)	(119.5)	–	(69.7)
At 1 April 2017	**1,682.2**	**8,043.0**	**9,725.2**	**(7,658.5)**	**(10,570.2)**	**–**	**(8,503.5)**
Cash flow	(923.2)	(3,441.5)	(4,364.7)	3,859.2	(694.8)	–	(1,200.3)
Net debt on acquisition through business combination (Note 11)	23.6	–	23.6	–	(98.7)	–	(75.1)
Other non-cash changes[3]	–	208.8	208.8	(1,668.6)	1627.5	–	167.7
Foreign exchange currency translation differences	16.1	(2.5)	13.6	7.6	2.7	–	23.9
At 31 March 2018	**798.7**	**4,807.8**	**5,606.5**	**(5,460.3)**	**(9,733.5)**	**–**	**(9,587.3)**

1 Net debt is a Non-IFRS measure and represents total debt after fair value adjustments under IAS 32 and 39 as reduced by cash and cash equivalents and liquid investments.
2 Debt related derivatives exclude derivative financial assets and liabilities relating to commodity contracts and forward foreign currency contracts.
3 Other non-cash changes comprises of interest accretion on convertible bonds, amortisation of borrowing costs, foreign exchange difference on net debt and preference shares issued on merger and reclassification between debt due within one year and debt due after one year. It also includes US$208.8 million (31 March 2017: US$321.0 million) of fair value movement in investments and accrued interest on investments.

27. Trade and other payables

(a) Current trade and other payables

(US$ million)	**As at 31 March 2018**	As at 31 March 2017
Bills of exchange	1,447.8	1,550.8
Dividend payable to NCI	46.1	671.6
Trade payables	1,652.8	1,515.8
Project creditors	507.7	578.8
Other payables	1,008.5	729.8
Financial (A)	**4,662.9**	**5,046.8**
Statutory liabilities	453.4	308.2
Advance from customers[1]	886.4	783.9
Other payables	74.8	84.5
Non-financial (B)	**1,414.6**	**1,176.6**
Total (A+B)	**6,077.5**	**6,223.4**

Non-interest bearing trade payables are normally settled on 60 to 90-day terms.

Interest bearing trade and other payables amount to US$1,447.8 million (31 March 2017: US$1,550.8 million).

Bills of exchange are interest-bearing liabilities and are normally settled within a period of 12 months. These represent arrangements whereby operational suppliers of raw materials are paid by financial institutions, with the Company recognising the liability for settlement with the institutions at a later date.

The fair values of the trade and other payables are not materially different from the carrying values presented.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

27. Trade and other payables continued

(b) Non-current trade and other payables

(US$ million)	As at 31 March 2018	As at 31 March 2017
Security deposits and retentions	1.5	0.2
Project creditors	19.2	47.1
Put option liability with non-controlling interests[2]	45.9	–
Others	9.5	21.2
Financial (A)	**76.1**	**68.5**
Advance from customers[1]	66.7	–
Non-financial (B)	**66.7**	**–**
Total (A+B)	**142.8**	**68.5**

1 Advance from customers include amounts received under long term supply agreements. The advance payment plus a fixed rate of return/discount will be settled by supplying the respective commodity over a period up to 24 months under an agreed delivery schedule as per the terms of the respective agreements. As these are contracts that the Group expects, and has the ability, to fulfil through delivery of a non-financial item, these are recognised as advance from customers and will be released to the income statement as the respective commodity is delivered under the agreements. The portion of the advance that is expected to be settled within the next 12 months has been classified as a current liability.

2 The non-controlling shareholders of ASI have an option to offload their shareholding to the Group. The option is exercisable after 5 years from the date of acquisition at a price higher of US$0.757 per share and the fair market value of the share. Therefore, the liability is carried at higher of the two. Subsequent changes to the put option liability are treated as equity transaction and hence accounted for in equity.

28. Auditor's remuneration

The table below shows the fees payable globally to the Company's auditor, Ernst & Young LLP, for statutory external audit and audit related services, as well as fees paid to other accountancy firms for statutory external audit and audit related services in each of the two years ended 31 March:

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Fees payable to the Company's auditor for the audit of Vedanta Resources plc annual accounts	0.7	0.7
The audit of the Company's subsidiaries pursuant to legislation	1.8	1.5
Total audit fees	**2.5**	**2.2**
Fees payable to the Company's auditor and their associates for other services to the Group		
Other services pursuant to legislation[1]	1.8	1.8
Tax services[2]	0.1	0.0
Corporate finance services[3]	0.8	0.7
Other services[4]	0.4	0.2
Total non-audit fees	**3.1**	**2.7**
Total fees paid to the Company's auditor	**5.6**	**4.9**
Audit fees payable to other auditors of the Group's subsidiaries	0.0	0.0
Non-audit fees payable to other auditors of the Group's subsidiaries	–	–
Total fees paid to other auditors	**0.0**	**0.0**

1 Other services pursuant to legislation principally comprise assurance services, being quarterly reviews of the Group's subsidiaries results and the half year review of the Group's results.

2 Tax services principally comprise certification and assurance services as required by Indian and overseas tax regulations.

3 Corporate finance services principally comprise services in connection with debt raising transactions, Group simplification and other acquisition related certifications. These assurance-related services are ordinarily provided by the auditor.

4 Includes certification related services.

29. Financial instruments

Financial assets and liabilities

The following tables present the carrying value and fair value of each category of financial assets and liabilities as at 31 March 2018 and 31 March 2017:

(US$ million) As at 31 March 2018	Held for trading	Loans and receivables	Available-for-sale	Derivatives	Total carrying value	Total fair value
Financial assets						
Financial instruments (derivatives)	–	–	–	24.0	24.0	24.0
Financial asset investments held at fair value	–	–	24.5	–	24.5	24.5
Liquid investments						
– Bank deposits	–	482.5	–	–	482.5	482.5
– Other investments	4,325.3	–	–	–	4,325.3	4,325.3
Cash and cash equivalents	–	798.7	–	–	798.7	798.7
Trade and other receivables	–	829.7	–	–	829.7	829.7
Other non-current assets	–	371.5	–	–	371.5	371.5
Total	**4,325.3**	**2,482.4**	**24.5**	**24.0**	**6,856.2**	**6,856.2**

(US$ million) As at 31 March 2018	Amortised cost	Derivatives	Others*	Total carrying value	Total fair value
Financial liabilities					
Financial instruments (derivatives)	–	(40.2)	–	(40.2)	(40.2)
Trade and other payables	(4,693.1)	–	(45.9)	(4,739.0)	(4,739.0)
Borrowings	(15,193.8)	–	–	(15,193.8)	(15,310.5)
Total	**(19,886.9)**	**(40.2)**	**(45.9)**	**(19,973.0)**	**(20,089.7)**

* Represents put option liability accounted for at fair value – refer to Note 27(b).

(US$ million) As at 31 March 2017	Held for trading	Loans and receivables	Available-for-sale	Derivatives	Total carrying value	Total fair value
Financial assets						
Financial instruments (derivatives)	–	–	–	2.2	2.2	2.2
Financial asset investments held at fair value	–	–	10.7	–	10.7	10.7
Liquid investments						
– Bank deposits	–	882.6	–	–	882.6	882.6
– Other investments	7,160.4	–	–	–	7,160.4	7,160.4
Cash and cash equivalents	–	1,682.2	–	–	1,682.2	1,682.2
Trade and other receivables	–	553.6	–	–	553.6	553.6
Other non-current assets	–	299.2	–	–	299.2	299.2
Total	**7,160.4**	**3,417.6**	**10.7**	**2.2**	**10,590.9**	**10,590.9**

(US$ million) As at 31 March 2017	Amortised cost	Derivatives	Total carrying value	Total fair value
Financial liabilities				
Financial instruments (derivatives)	–	(135.5)	(135.5)	(135.5)
Trade and other payables	(5,115.3)	–	(5,115.3)	(5,115.3)
Borrowings	(18,228.7)	–	(18,228.7)	(18,374.5)
Total	**(23,344.0)**	**(135.5)**	**(23,479.5)**	**(23,625.3)**

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

29. Financial instruments continued

The below tables summarise the categories of financial assets and liabilities as at 31 March 2018 and 31 March 2017 measured at fair value:

(US$ million)	As at 31 March 2018 Level 1	Level 2	Level 3
Financial assets			
At fair value through profit or loss			
– Held for trading	1,163.3	3,162.0	–
– Financial instruments (derivatives)		24.0	
Available-for-sale investments			
– Financial asset investments held at fair value	22.9	–	1.6
Total	**1,186.2**	**3,186.0**	**1.6**
Financial liabilities			
At fair value through profit or loss/designated for hedging			
– Financial instruments (derivatives)	–	40.2	–
Trade and other payables	–	–	45.9
Total	**–**	**40.2**	**45.9**

	As at 31 March 2017 Level 1	Level 2	Level 3
Financial assets			
At fair value through profit or loss			
– Held for trading	2,891.9	4,268.5	–
– Financial instruments (derivatives)	–	2.2	–
Available-for-sale investments			
– Financial asset investments held at fair value	9.2	–	1.5
Total	**2,901.1**	**4,270.7**	**1.5**
Financial liabilities			
At fair value through profit or loss/designated for hedging			
– Financial instruments (derivatives)	–	135.5	–
Total	**–**	**135.5**	**–**

The below table summarises the fair value of financial liabilities other than those where carrying value is determined to be the fair value and which are carried at amortised cost as at 31 March 2018 and 31 March 2017:

(US$ million)	As at 31 March 2018 Level 1	Level 2	As at 31 March 2017 Level 1	Level 2
Financial liabilities				
– Borrowings	(3,444.2)	(11,866.3)	(3,622.8)	(14,751.7)
Total	**(3,444.2)**	**(11,866.3)**	**(3,622.8)**	**(14,751.7)**

The fair value of the financial assets and liabilities are at the amount that would be received to sell an asset and paid to transfer a liability in an orderly transaction between market participants at the measurement date. The following methods and assumptions were used to estimate the fair values:

- Investments traded in active markets are determined by reference to quotes from the financial institutions; for example: Net asset value (NAV) for investments in mutual funds declared by mutual fund house. For other listed securities traded in markets which are not active, the quoted price is used wherever the pricing mechanism is the same as for other marketable securities traded in active markets. Other current investments are valued on the basis of market trades, poll and primary issuances for securities issued by the same or similar issuer and for similar maturities or based on the applicable spread movement for the security derived based on the aforementioned factor(s).
- Trade and other receivables, cash and cash equivalents (including restricted cash and cash equivalents), bank deposits, trade and other payables and short-term borrowings: Approximate their carrying amounts largely due to the short-term maturities of these instruments.
- Other non-current financial assets and financial liabilities: Fair value is calculated using a discounted cash flow model with market assumptions, unless the carrying value is considered to approximate to fair value.
- Long-term fixed-rate and variable rate borrowings: Fair value has been determined by the Group based on parameters such as interest rates, specific country risk factors, and the risk characteristics of the financed project. Listed bonds are fair valued based on the prevailing market price. For all other long-term fixed-rate and variable-rate borrowings, either the carrying amount approximates the fair value, or fair value has been estimated by discounting the expected future cash flows using a discount rate equivalent to the risk-free rate of return adjusted for the appropriate credit spread.

29. Financial instruments continued

- Quoted available-for-sale financial asset investments: Fair value is derived from quoted market prices in active markets.
- Derivative financial assets/liabilities: The Group enters into derivative financial instruments with various counterparties. Interest rate swaps, foreign exchange forward contracts and commodity forward contracts are valued using valuation techniques, which employs the use of market observable inputs. The most frequently applied valuation techniques by the Group include forward pricing and swap models, using present value calculations. The models incorporate various inputs including the foreign exchange spot and forward rates, yield curves of the respective currencies, interest rate curves and forward rate curves of the underlying commodity. Commodity contracts are valued using the forward LME rates of commodities actively traded on the listed metal exchange i.e. London Metal Exchange, United Kingdom (UK).

For all other financial instruments, the carrying amount is either the fair value, or approximates the fair value.

The changes in counterparty credit risk had no material effect on the hedge effectiveness assessment for derivatives designated in hedge relationship and the value of other financial instruments recognised at fair value.

The estimated fair value amounts as at 31 March 2018 have been measured as at that date. As such, the fair values of these financial instruments subsequent to reporting date may be different than the amounts reported at each year-end.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

Risk management framework
The Group's businesses are subject to several risks and uncertainties including financial risks.

The Group's documented risk management polices act as an effective tool in mitigating the various financial risks to which the businesses are exposed to in the course of their daily operations. The risk management policies cover areas such as liquidity risk, commodity price risk, foreign exchange risk, interest rate risk, counterparty credit risk and capital management.

Risks are identified at both the corporate and individual subsidiary level with active involvement of senior management. Each operating subsidiary in the Group has in place risk management processes which are in line with the Group's policy. Each significant risk has a designated 'owner' within the Group at an appropriate senior level. The potential financial impact of the risk and its likelihood of a negative outcome are regularly updated.

The risk management process is coordinated by the Management Assurance function and is regularly reviewed by the Group's Audit Committee. The Audit Committee is aided by the other committees of the Board including the Risk Management Committee, which meets regularly to review risks as well as the progress against the planned actions. Key business decisions are discussed at the periodic meetings of the Executive Committee. The overall internal control environment and risk management programme including financial risk management is reviewed by the Audit Committee on behalf of the Board.

The risk management framework aims to:
- improve financial risk awareness and risk transparency
- identify, control and monitor key risks
- identify risk accumulations
- provide management with reliable information on the Group's risk situation
- improve financial returns

Treasury management
Treasury management focuses on liability management, capital protection, liquidity maintenance and yield maximisation. The treasury policies are approved by the Committee of the Board. Daily treasury operations of the subsidiary companies are managed by their respective finance teams within the framework of the overall Group treasury policies. Long-term fund-raising including strategic treasury initiatives are managed jointly by the business treasury team and the central team at corporate treasury while short-term funding for routine working capital requirements is delegated to subsidiary companies. A monthly reporting system exists to inform senior management of the Group's investments and debt position, exposure to currency, commodity and interest rate risk and their mitigants including the derivative position. The Group has a strong system of internal control which enables effective monitoring of adherence to Group's policies. The internal control measures are effectively supplemented by regular internal audits.

The investment portfolio at the Group is independently reviewed by CRISIL Limited and Group portfolio has been rated as Tier I or 'Very Good' meaning highest safety. The investments are made keeping in mind safety, liquidity and yield maximisation.

The Group uses derivative instruments to manage the exposure in foreign currency exchange rates, interest rates and commodity prices. The Group does not acquire or issue derivative financial instruments for trading or speculative purposes. The Group does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts, interest rate and currency swaps and these are subject to the Group's policies.

Commodity risk
The Group is exposed to the movement of base metal commodity prices on the London Metal Exchange. Any decline in the prices of the base metals that the Group produces and sells will have an immediate and direct impact on the profitability of the businesses. As a general policy, the Group aims to sell the products at prevailing market prices. The commodity price risk in import of input commodities such as Copper Concentrate and Alumina, for our Copper and Aluminium business respectively, is hedged on a back-to-back basis ensuring no price risk for the business. Hedging is used primarily as a risk management tool and, in some cases, to secure future cash flows in cases of high volatility by entering into forward contracts or similar instruments. The hedging activities are subject to strict limits set out by the Board and to a strictly defined internal control and monitoring mechanism. Decisions relating to hedging of commodities are taken at the Executive Committee level, the basis clearly laid down in guidelines.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

29. Financial instruments continued

Whilst the Group aims to achieve average LME prices for a month or a year, average realised prices may not necessarily reflect the LME price movements because of a variety of reasons such as uneven sales during the year and timing of shipments.

The Group is also exposed to the movement of the international crude oil price and the discount in the price of Rajasthan crude oil to the Brent price.

Financial instruments with a commodity price risk are entered into in relation to the following activities:
- economic hedging of prices realised on commodity contracts
- cash flow hedging of revenues and forecasted highly probable transactions

Aluminium

The requirement of the primary raw material, alumina, is partly met from own sources and the rest is purchased primarily on negotiated price terms. Sales prices are linked to the LME prices. At present, the Group, on selective basis, hedges the aluminium content in outsourced alumina to protect its margins.

The Group also enters into hedging arrangements for its aluminium sales to realise average month of sale LME prices.

Copper

The Group's custom smelting copper operations at Tuticorin are benefited by a natural hedge except to the extent of a possible mismatch in quotation periods between the purchase of concentrate and the sale of finished copper. The Group's policy on custom smelting is to generate margins from Treatment charges/Refining charges or TcRc, improving operational efficiencies, minimising conversion cost, generating a premium over LME on sale of finished copper, sale of by-products and from achieving import parity on domestic sales. Hence, mismatches in quotation periods are managed to ensure that the gains or losses are minimised. The Group hedges this variability of LME prices through forward contracts and tries to make the LME price a pass-through cost between purchases of copper concentrate and sales of finished products, both of which are linked to the LME price.

TcRc is a major source of income for the Indian copper smelting operations. Fluctuation in TcRc is influenced by factors including demand and supply conditions prevailing in the market for mine output. The Group's Copper business has a strategy of securing a majority of its concentrate feed requirement under long-term contracts with mines.

KCM is largely an integrated copper producer and whenever hedging is done, it is with an intention to protect the Group from price fluctuations in copper. KCM also engages in hedging for its custom smelting operations in line with the Group's policy on custom smelting at Tuticorin, as explained above.

Zinc, lead and silver

The sales prices are linked to the LME prices. The Group also enters into hedging arrangements for its Zinc, Lead and Silver sales to realise average month of sale LME prices.

Zinc International

Raw material for zinc and lead is mined in Namibia and South Africa with sales prices linked to the LME prices.

Iron ore

The Group sells its Iron Ore production from Goa on the prevailing market prices and from Karnataka through the e-auction route as mandated by State Government of Karnataka in India.

Oil & Gas

The prices of various crude oils are based upon the price of the key physical benchmark crude oil such as Dated Brent, West Texas Intermediate, and Dubai/Oman, etc. The crude oil prices move based upon market factors like supply and demand. The regional producers price their crude basis these benchmark crude with a premium or discount over the benchmark based upon quality differential and competitiveness of various grades.

Natural gas markets are evolving differently in important geographical markets. There is no single global market for natural gas. This could be owing to difficulties in large-scale transportation over long distances as compared to crude oil. Globally, there are three main regional hubs for pricing of natural gas, which are USA (Henry Hub Prices), UK (NBP Price) and Japan (imported gas price, mostly linked to crude oil).

Provisionally priced financial instruments

On 31 March 2018, the value of net financial liabilities linked to commodities (excluding derivatives) accounted for on provisional prices was US$467.6 million (31 March 2017: liability of US$465.5 million). These instruments are subject to price movements at the time of final settlement and the final price of these instruments will be determined in the financial year beginning 1 April 2018.

29. Financial instruments continued

Set out below is the impact of a 10% increase in LME prices on pre-tax profit/(loss) for the year and pre-tax equity as a result of changes in value of the Group's commodity financial instruments:

For the year ended 31 March 2018:

(US$ million except as stated) Commodity price sensitivity	Total exposure	Effect on pre-tax profit/(loss) of a 10% increase in the LME	Effect on pre-tax equity of a 10% increase in the LME
Copper	(568.1)	(56.8)	–

For the year ended 31 March 2017:

(US$ million except as stated) Commodity price sensitivity	Total exposure	Effect on profit/(loss) of a 10% increase in the LME 31 March 2017	Effect on total equity of a 10% increase in the LME 31 March 2017
Copper	(543.0)	(54.3)	–

The above sensitivities are based on volumes, costs, exchange rates and other variables and provide the estimated impact of a change in LME prices on profit and equity assuming that all other variables remain constant. A 10% decrease in LME prices would have an equal and opposite effect on the Group's financial statements.

Included above is also the impact of a 10% increase in closing copper LME for provisionally priced copper concentrate purchased at Vedanta Limited Copper division custom smelting operations of US$56.6 million (31 March 2017: US$48.2 million), which is pass-through in nature and as such will not have any impact on the profitability.

Financial risk:

The Group's Board approved financial risk policies include monitoring, measuring and mitigating the liquidity, currency, interest rate and counterparty risk. The Group does not engage in speculative treasury activity but seeks to manage risk and optimise interest and commodity pricing through proven financial instruments.

(a) Liquidity risk

The Group requires funds both for short-term operational needs as well as for long-term investment programmes mainly in growth Projects. The Group generates sufficient cash flows from the current operations which together with the available cash and cash equivalents and liquid investments provide liquidity both in the short term as well as in the long term. Anticipated future cash flows, together with undrawn fund based committed facilities of US$613.0 million, and cash and liquid investments of US$5,606.5 million as at 31 March 2018, are expected to be sufficient the meet the liquidity requirement of the Group in the near future.

During FY2018, Moody's upgraded the Group's corporate family ratings from B1/Stable to Ba3/Stable on account of improved operating performance and significant reduction in gross debt which led to improved financial metrics. S&P has maintained their rating at B+/Stable. The Group remains committed to maintain a healthy liquidity, a low gearing ratio, deleveraging and strengthening the balance sheet.

The maturity profile of the Group's financial liabilities based on the remaining period from the balance sheet date to the contractual maturity date is given in the table below. The figures reflect the contractual undiscounted cash obligation of the Group:

At 31 March 2018

(US$ million) Payment due by period	< 1 year	1–3 years	3–5 years	> 5 years	Total
Trade and other payables[1]	4,469.0	30.2	45.9	–	4,545.1
Bank and other borrowings[2]	6,425.6	4,163.5	4,823.4	2,956.2	18,368.7
Derivative liabilities	22.1	18.1	–	–	40.2
Total	**10,916.7**	**4,211.8**	**4,869.3**	**2,956.2**	**22,954.0**

At 31 March 2017

(US$ million) Payment due by period	< 1 year	1–3 years	3–5 years	> 5 years	Total
Trade and other payables[1]	4,827.0	38.3	–	30.2	4,895.5
Bank and other borrowings[2]	8,780.3	5,387.9	4,508.7	2,735.0	21,411.9
Derivative liabilities	126.9	8.6	–	–	135.5
Total	**13,734.2**	**5,434.8**	**4,508.7**	**2,765.2**	**26,442.9**

1 Excludes accrued interest which has been included with borrowings.
2 Includes medium and long-term borrowings, short-term borrowings and committed interest payments.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

29. Financial instruments continued

At 31 March 2018, the Group had access to following funding facilities:

(US$ million) As at 31 March 2018	Total facility	Drawn	Undrawn
Fund/non-fund based	12,003.4	10,256.2	1,747.2
Total	**12,003.4**	**10,256.2**	**1,747.2**

(US$ million) As at 31 March 2017	Total facility	Drawn	Undrawn
Fund/non-fund based	11,905.5	10,283.7	1,621.8
Total	**11,905.5**	**10,283.7**	**1,621.8**

(b) Foreign currency risk

Fluctuations in foreign currency exchange rates may have an impact on the Consolidated Income Statement, the Consolidated Statements of Change in Equity, where any transaction references more than one currency or where assets/liabilities are denominated in a currency other than the functional currency of the respective consolidated entities.

Considering the countries and economic environment in which the Group operates, its operations are subject to risks arising from the fluctuations primarily in the US dollar, Australian dollar, Namibian dollar, AED, ZAR, GBP, INR, JPY and Euro against the functional currencies of its subsidiaries.

Exposures on foreign currency loans are managed through the Group-wide hedging policy, which is reviewed periodically to ensure that the results from fluctuating currency exchange rates are appropriately managed.

The Group's presentation currency is the US dollar. The majority of the assets are located in India and the Indian rupee is the functional currency for the Indian operating subsidiaries except for Oil and Gas business. Natural hedges available in the business are identified at each entity level and hedges are placed only for the net exposure. Short-term net exposures are hedged progressively based on their maturity. A more conservative approach has been adopted for project expenditures to avoid budget overruns, where cost of the project is calculated taking into account the hedge cost. However, all new long-term borrowing exposures are being hedged. The hedge mechanisms are reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed. The following analysis is based on the gross exposure as at the reporting date which could affect the Consolidated Income Statement. The exposure summarised below is mitigated by some of the derivative contracts entered into by the Group as disclosed under the section on 'Derivative financial instruments'.

The carrying amount of the Group's financial assets and liabilities in different currencies are as follows:

	At 31 March 2018		At 31 March 2017	
(US$ million)	Financial assets	Financial liabilities	Financial assets	Financial liabilities
USD	1,220.6	10,164.0	1,551.9	11,624.7
INR	5,490.1	9,473.6	8,951.4	11,727.6
Kwacha	–	11.8	0.2	31.0
EURO	6.3	68.8	27.9	41.6
ZAR	15.9	53.2	19.0	29.3
NAD	33.9	23.7	12.1	16.0
Others	89.4	177.9	28.4	9.3
Total	**6,856.2**	**19,973.0**	**10,590.9**	**23,479.5**

The Group's exposure to foreign currency arises where a Group company holds monetary assets and liabilities denominated in a currency different to the functional currency of that entity, with USD (US dollar) being the major non-functional currency of the Group's main operating subsidiaries.

The foreign exchange rate sensitivities calculated by aggregation of the net foreign exchange rate exposure with a simultaneous parallel shift in foreign exchange rates in the currencies by 10% against the functional currencies of the respective entities.

29. Financial instruments continued

Set out below is the impact of a 10% strengthening in the functional currencies of the respective entities on pre-tax profit/(loss) and pre-tax equity arising as a result of the revaluation of the Group's foreign currency financial assets/liabilities:

(US$ million)	31 March 2018 Closing exchange rate	Effect on pre-tax profit/(loss) of 10% increase in currency	Effect on pre-tax equity of 10% increase in currency
USD	65.0441	233.8	–

(US$ million)	31 March 2017 Closing exchange rate	Effect on pre-tax profit/(loss) of 10% increase in currency	Effect on pre-tax equity of 10% increase in currency
USD	64.8386	317.3	–

A 10% weakening of the functional currencies of the respective entities would have an equal and opposite effect on the Group's financial statements.

(c) Interest rate risk

At 31 March 2018, the Group's net debt of US$9,587.3 million (31 March 2017: US$8,503.5 million net debt) comprises cash, cash equivalents and liquid investments of US$5,606.5 million (31 March 2017: US$9,725.2 million) offset by debt of US$15,193.8 million (31 March 2017: US$18,228.7 million).

The Group is exposed to interest rate risk on short-term and long-term floating rate instruments and on the refinancing of fixed rate debt. The Group's policy is to maintain a balance of fixed and floating interest rate borrowings and the proportion of fixed and floating rate debt is determined by current market interest rates. The borrowings of the Group are principally denominated in Indian rupees and US dollars with mix of fixed and floating rates of interest. The USD floating rate debt is linked to US dollar LIBOR and INR floating rate debt to bank's base rates. The Group has a policy of selectively using interest rate swaps, option contracts and other derivative instruments to manage its exposure to interest rate movements. These exposures are reviewed by appropriate levels of management on a monthly basis.

The Group invests cash and liquid investments in short-term deposits and debt mutual funds, some of which generate a tax-free return, to achieve the Group's goal of maintaining liquidity, carrying manageable risk and achieving satisfactory returns.

Floating rate financial assets are largely mutual fund investments which have debt securities as underlying assets. The returns from these financial assets are linked to market interest rate movements; however, the counterparty invests in the agreed securities with known maturity tenure and return and hence has manageable risk.

The exposure of the Group's financial assets to interest rate risk is as follows:

	At 31 March 2018			At 31 March 2017		
(US$ million)	Floating rate financial assets	Fixed rate financial assets	Non-interest bearing financial assets	Floating rate financial assets	Fixed rate financial assets	Non-interest bearing financial assets
Financial assets	3,021.5	2,259.7	1,551.0	5,379.4	3,043.0	2,166.3
Derivative assets	–	–	24.0	–	–	2.2
Total financial assets	**3,021.5**	**2,259.7**	**1,575.0**	**5,379.4**	**3,043.0**	**2,168.5**

The exposure of the Group's financial liabilities to interest rate risk is as follows:

	At 31 March 2018			At 31 March 2017		
(US$ million)	Floating rate financial liabilities	Fixed rate financial liabilities	Non-interest bearing financial liabilities	Floating rate financial liabilities	Fixed rate financial liabilities	Non-interest bearing financial liabilities
Financial liabilities	6,483.0	10,211.1	3,238.7	8,253.5	11,896.7	3,193.8
Derivative liabilities	–	–	40.2		–	135.5
Total financial liabilities	**6,483.0**	**10,211.1**	**3,278.9**	**8,253.5**	**11,896.7**	**3.329.3**

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

29. Financial instruments continued

The weighted average interest rate on the fixed rate financial liabilities is 6.8% (31 March 2017: 7.5%) and the weighted average period for which the rate is fixed is 2.5 years (31 March 2017: 2.4 years).

Considering the net debt position as at 31 March 2018 and the investment in bank deposits, corporate bonds and debt mutual funds, any increase in interest rates would result in a net loss and any decrease in interest rates would result in a net gain. The sensitivity analysis below has been determined based on the exposure to interest rates for financial instruments at the balance sheet date.

The below table illustrates the impact of a 0.5% to 2.0% increase in the interest the rate of floating rate financial assets/liabilities (net) on profit/(loss) and equity and represents management's assessment of the possible change in interest rates. The year end balances are not necessarily representative of the average debt outstanding during the year. This analysis also assumes that all other variables, in particular foreign currency rates, remain constant.

At 31 March 2018:

(US$ million) Increase in interest rates	**Effect on pre-tax profit/(loss) during the year ended 31 March 2018**	Effect on pre-tax profit/(loss) during the year ended 31 March 2017
0.5%	(17.3)	(14.4)
1.0%	(34.6)	(28.7)
2.0%	(69.2)	(57.5)

A reduction in interest rates would have an equal and opposite effect on the Group's financial statements.

(d) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral, where appropriate, as a means of mitigating the risk of financial loss from defaults.

The Group is exposed to credit risk from trade receivables, cash and cash equivalents, liquid investments and other financial instruments.

The Group has clearly defined policies to mitigate counterparty risks. For short-term investments, counterparty limits are in place to limit the amount of credit exposure to any one counterparty. This, therefore, results in diversification of credit risk for our mutual fund and bond investments. For derivative and financial instruments, the Group attempts to limit the credit risk by only dealing with reputable banks and financial institutions.

Credit risk on receivables is limited as almost all credit sales are against letters of credit and guarantees of banks of national standing. Moreover, given the diverse nature of the Group's businesses trade receivables are spread over a number of customers with no significant concentration of credit risk. During the year ended 31 March 2018 and 31 March 2017, no single customer accounted for 10% or more of the Group's net sales or for any of the Group's primary businesses. The history of trade receivables shows a negligible provision for bad and doubtful debts. Therefore, the Group does not expect any material risk on account of non-performance by any of our counterparties.

The Group's maximum gross exposure to credit risk at 31 March 2018 is US$6,856.2 million (31 March 2017: US$10,590.9 million).

Of the year end trade and other receivable balance the following, though overdue, are expected to be realised in the normal course of business and hence, are not considered impaired as at 31 March:

(US$ million)	**2018**	2017
Neither past due nor impaired	585.1	248.4
Past due but not impaired		
– Less than 1 month	125.9	130.6
– Between 1–3 months	59.9	34.0
– Between 3–12 months	111.9	199.3
– Greater than 12 months	238.0	188.6
Total	**1,120.8**	**800.9**

29. Financial instruments continued

Derivative financial instruments

The Group uses derivative instruments as part of its management of exposure to fluctuations in foreign currency exchange rates, interest rates and commodity prices. The Group does not acquire or issue derivative financial instruments for trading or speculative purposes. The Group does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts and these are subject to the Group guidelines and policies.

The fair value of all derivatives is separately recorded on the balance sheet within other financial assets (derivatives) and other financial liabilities (derivatives), current and non-current. Derivatives that are designated as hedges are classified as current or non-current depending on the maturity of the derivative.

The use of derivatives can give rise to credit and market risk. The Group tries to control credit risk as far as possible by only entering into contracts with reputable banks and financial institutions. The use of derivative instruments is subject to limits, authorities and regular monitoring by appropriate levels of management. The limits, authorities and monitoring systems are periodically reviewed by management and the Board. The market risk on derivatives is mitigated by changes in the valuation of the underlying assets, liabilities or transactions, as derivatives are used only for risk management purposes.

Embedded derivatives

Derivatives embedded in other financial instruments or other contracts are treated as separate derivative contracts, when their risks and characteristics are not closely related to those of their host contracts.

Cash flow hedges

The Group enters into forward exchange and commodity price contracts for hedging highly probable forecast transactions and accounts for them as cash flow hedges and states them at fair value. Subsequent changes in fair value are recognised in other comprehensive income until the hedged transaction occurs, at which time, the respective gain or losses are reclassified to the Consolidated Income Statement. These hedges have been effective for the year ended 31 March 2018.

The Group uses foreign exchange contracts from time to time to optimise currency risk exposure on its foreign currency transactions. The Group hedged part of its foreign currency exposure on capital commitments during fiscal year 2018. Fair value changes on such forward contracts are recognised in the Consolidated Statement of Comprehensive Income.

The majority of cash flow hedges taken out by the Group during the year comprise non-derivative hedging instruments for hedging the foreign exchange rate of highly probable forecast transactions and commodity price contracts for hedging the commodity price risk of highly probable forecast transactions.

The cash flows related to above are expected to occur during the year ending 31 March 2019 and consequently may impact the Consolidated Income Statement for that year depending upon the change in the commodity prices and foreign exchange rates movements. For cash flow hedges regarded as basis adjustments to initial carrying value of the property, plant and equipment, the depreciation on the basis adjustments made is expected to affect the Consolidated Income Statement over the expected useful life of the property, plant and equipment.

Fair value hedges

The fair value hedges relate to forward covers taken to hedge currency exposure and commodity price risks.

The Group's sales are on a quotational period basis, generally one month to three months after the date of delivery at a customer's facility. The Group enters into forward contracts for the respective quotational period to hedge its commodity price risk based on average LME prices. Gains and losses on these hedge transactions are substantially offset by the amount of gains or losses on the underlying sales. Net gains and losses are recognised in the income statement.

The Group uses foreign exchange contracts from time to time to optimise currency risk exposure on its foreign currency transactions. Fair value changes on such forward contracts are recognised in the Consolidated Income Statement.

Non-qualifying/economic hedge

The Group enters into derivative contracts which are not designated as hedges for accounting purposes, but provide an economic hedge of a particular transaction risk or a risk component of a transaction. Hedging instruments include copper, aluminium and zinc future contracts on the LME and certain other derivative instruments. Fair value changes on such derivative instruments are recognised in the Consolidated Income Statement.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

29. Financial instruments continued

The fair value of the Group's open derivative positions at 31 March 2018, recorded within financial instruments (derivative), is as follows:

	As at 31 March 2018		As at 31 March 2017	
(US$ million)	Liability	Asset	Liability	Asset
Current				
Cash flow hedges				
– Commodity contracts	(14.6)	18.2	(13.2)	0.1
– Forward foreign currency contracts	–	0.1	(2.1)	0.1
Fair value hedges				
– Commodity contracts	(0.1)	0.7	(0.5)	–
– Forward foreign currency contracts	(1.4)	2.2	(82.1)	–
Non-qualifying hedges				
– Commodity contracts	(2.3)	0.6	(3.7)	1.4
– Forward foreign currency contracts	(3.5)	2.1	(25.1)	–
– Other (foreign currency swap)	(0.2)	0.1	(0.2)	–
Total	**(22.1)**	**24.0**	**(126.9)**	**1.6**
Non-current				
Fair value hedges				
– Forward foreign currency contracts	(16.4)	–	(8.6)	0.6
Non-qualifying hedges				
– Commodity contracts	(0.1)	–	–	–
– Forward foreign currency contracts	(1.6)	–	–	–
Total	**(18.1)**	**–**	**(8.6)**	**0.6**
Grand total	**(40.2)**	**24.0**	**(135.5)**	**2.2**

Hedging reserve reconciliation

(US$ million)	Hedging reserves	Non-controlling interests	Total
At 1 April 2016	**(87.7)**	**(52.6)**	**(140.3)**
Amount recognised in OCI	3.3	0.5	3.8
Amount transferred to income statement	(5.0)	(3.0)	(8.0)
Exchange difference	(1.5)	(0.9)	(2.4)
At 1 April 2017	**(90.9)**	**(56.0)**	**(146.9)**
Amount recognised in OCI	(13.7)	(24.3)	(38.0)
Amount transferred to income statement	12.2	23.6	35.8
Exchange difference	(0.1)	(0.1)	(0.2)
At 31 March 2018	**(92.5)**	**(56.8)**	**(149.3)**

30. Provisions

(US$ million)	Restoration, rehabilitation and environmental	KCM Copper price participation	Other	Total
At 1 April 2016	**191.7**	**102.0**	**25.8**	**319.5**
Additions	4.1	–	12.5	16.6
Amounts used	(12.8)	(6.0)	(1.2)	(20.0)
Unwinding of discount (Note 7)	12.6	0.4	–	13.0
Change in estimates	112.4	–	–	112.4
Reclassifications to trade payables	–	(96.3)	(4.4)	(100.7)
Exchange differences	8.8	(0.1)	(4.7)	4.0
At 1 April 2017	**316.8**	**–**	**28.0**	**344.8**
Additions	8.1	–	6.4	14.5
Amounts used	(1.0)	–	–	(1.0)
Unused amounts reversed	(9.5)	–	–	(9.5)
Unwinding of discount (Note 7)	13.0	–	–	13.0
Change in estimates	23.1	–	–	23.1
Reclassified during the year	(6.1)	–	(12.5)	(18.6)
Exchange differences	3.4	–	0.2	3.6
Acquisition through business combination	4.0	–	–	4.0
At 31 March 2018	**351.8**	**–**	**22.1**	**373.9**
Current 2018	7.8	–	14.3	22.1
Non-current 2018	344.0	–	7.8	351.8
	351.8	**–**	**22.1**	**373.9**
Current 2017	9.8	–	7.7	17.5
Non-current 2017	307.0	–	20.3	327.3
	316.8	**–**	**28.0**	**344.8**

Restoration, rehabilitation and environmental
The provisions for restoration, rehabilitation and environmental liabilities represent the management's best estimate of the costs which will be incurred in the future to meet the Group's obligations under existing Indian, Australian, Zambian, Namibian, South African and Irish law and the terms of the Group's mining and other licences and contractual arrangements. These amounts are calculated by considering discount rates within the range of 2% to 12%, and become payable on closure of mines and are expected to be incurred over a period of one to 30 years. The discount rates at major units are in the range of 2% to 12% at Zinc International and of 2% to 4% at the Oil & Gas division.

Within India, the principal restoration and rehabilitation provisions are recorded within Cairn India where a legal obligation exists relating to the oil and gas fields, where costs are expected to be incurred in restoring the site of production facilities at the end of the producing life of an oil field. The Group recognises the full cost of site restoration as a liability when the obligation to rectify environmental damage arises.

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production from a producing field.

KCM copper price participation
KCM and ZCCM-IH, through a consent order recorded in the English Court, agreed to settle the price participation payments in stages and consequently US$96.3 million had been reclassified to trade payables during the previous year.

Subsequently, during the current year, the London High Court has given a ruling that ZCCM-IH is entitled to its claim on interest at an accelerated rate for US$25.0 million.

Accordingly, the Company has recognised, an additional charge of US$25.0 million for the year.

Others
Others include provision for deferred cash liability. The expected period of settlement of deferred cash liability is 2 to 3 years.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

31. Non-current tax assets and deferred tax (assets)/liabilities

Non-current tax assets of US$521.1 million (31 March 2017: US$434.6 million) mainly represents income tax receivable from Indian tax authorities by Vedanta Limited relating to the refund arising consequent to the Scheme of Amalgamation & Arrangement made effective in August 2013 pursuant to approval by the jurisdiction High Court and receivables relating to matters in tax disputes in Group companies including tax holiday claim.

The Group has accrued significant amounts of deferred tax. The majority of the deferred tax liability represents accelerated tax relief for the depreciation of capital expenditure and the fair value uplifts created on acquisitions, net of losses carried forward by Vedanta Limited (post reorganisation) and MAT credits carried forward in Vedanta Limited, Cairn Energy Hydrocarbons Limited and Hindustan Zinc Limited.

The amounts of deferred tax on temporary differences, recognised or not recognised, in the Consolidated Statement of Financial Position is as follows:

Deferred tax (assets)/liabilities
For the year ended 31 March 2018

(US$ million)	Opening balance as at 1 April 2017	Charged/ (credited) to income statement	Charged/ (credited) to OCI	Deferred tax on acquisition through business combination (Refer Note 11)	Exchange difference transferred to translation of foreign operation	Total as at 31 March 2018
Property, plant and equipment, Exploration and Evaluation and other intangible assets	2,178.9	297.5	–	(3.3)	10.4	2,483.5
Unabsorbed depreciation/business loss	(989.3)	72.5	–	–	1.5	(915.3)
Voluntary retirement scheme	(7.4)	1.0	–	–	0.0	(6.4)
Employee benefits	(28.1)	1.7	(0.5)	–	(0.4)	(27.3)
Fair value of derivative assets/liabilities	(4.7)	1.4	(5.4)	–	0.1	(8.6)
Fair value of other assets/liabilities	176.6	(96.5)	–	61.1	4.3	145.5
MAT credit	(1,915.6)	200.3	–	–	11.3	(1,704.0)
Other temporary differences	(150.3)	13.6	–	–	(4.4)	(141.1)
Total	**(739.9)**	**491.5**	**(5.9)**	**57.8**	**22.8**	**(173.7)**

Unused tax losses/unused tax credit on which no deferred tax asset has been recognised:

As at 31 March 2018

(US$ million)	Within one year	Greater than one year, less than five years	Greater than five years	No expiry date	Total
Unutilised business losses	614.5	865.9	2.2	1,601.6	3,084.2
Unabsorbed depreciation	–	–	–	25.3	25.3
Capital losses	19.6	21.8	–	–	41.4
Unused tax credit	–	–	46.1	1.3	47.4
Total	**634.1**	**887.7**	**48.3**	**1,628.2**	**3,198.3**

31. Non-current tax assets and deferred tax (assets)/liabilities continued

Deferred tax asset/liabilities
For the year ended 31 March 2017

(US$ million)	Opening balance as at 1 April 2016	Charged/ (credited) to income statement	Charged/ (credited) to OCI	Exchange difference transferred to translation of foreign operation	Total as at 31 March 2017
Property, plant and equipment, Exploration and Evaluation and other intangible assets	2,175.0	(33.1)	–	37.0	2,178.9
Unabsorbed depreciation/business loss	(816.1)	(156.8)	–	(16.4)	(989.3)
Voluntary retirement scheme	(8.9)	1.7	–	(0.2)	(7.4)
Employee benefits	(23.9)	(3.3)	(0.6)	(0.3)	(28.1)
Fair value of derivative assets/liabilities	(2.2)	(3.9)	1.5	(0.1)	(4.7)
Fair value of other assets/liabilities	134.2	37.8	–	4.6	176.6
MAT credit	(1,966.7)	96.4	–	(45.3)	(1,915.6)
Other temporary differences	(126.6)	(26.5)	–	2.8	(150.3)
Total	**(635.2)**	**(87.7)**	**0.9**	**(17.9)**	**(739.9)**

Unused tax losses/unused tax credit on which no deferred tax asset has been recognised:

For the year ended 31 March 2017

(US$ million)	Within one year	Greater than one year, less than five years	Greater than five years	No expiry date	Total
Unutilised business losses	470.3	1,268.7	–	1,520.3	3,259.3
Unabsorbed depreciation	–	–	–	37.0	37.0
Capital losses	–	–	–	–	–
Unused tax credit	–	–	45.6	1.3	46.9
Total	**470.3**	**1,268.7**	**45.6**	**1,558.6**	**3,343.2**

No deferred tax asset has been recognised on these unutilised tax losses as there is no evidence that sufficient taxable profit will be available in future against which they can be utilised by the respective entities.

Deferred tax assets and liabilities have been offset where they arise in the same legal entity and taxing jurisdiction but not otherwise. Accordingly, the net deferred tax (assets)/liability has been disclosed in the Consolidated Statement of Financial Position as follows:

(US$ million)	**As at 31 March 2018**	As at 31 March 2017
Deferred tax assets	(916.7)	(1,111.0)
Deferred tax liabilities	743.0	371.1
Net deferred tax (assets)/liabilities	**(173.7)**	**(739.9)**

Unrecognised MAT credit

(US$ million)	**As at 31 March 2018**	As at 31 March 2017
2023	2.1	2.1
2024	8.0	8.0
2025	7.9	8.0
2026	15.9	16.0
2027	9.8	9.8
2028	1.2	1.2
2029	0.6	0.5
2032	0.6	–
Total	**46.1**	**45.6**

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

31. Non-current tax assets and deferred tax (assets)/liabilities continued

Deferred tax assets in the Group have been recognised to the extent there are sufficient taxable temporary differences relating to the same taxation authority and the same taxable entity which are expected to reverse.

MAT credits are taxes paid to Indian tax authorities which can be offset against future tax liabilities, subject to certain restrictions, within a period of 15 years from the year of origination. The Group recognises MAT assets only to the extent it expects to realise the same within the prescribed period.

The Group has not recognised any deferred tax liabilities for taxes that would be payable on the Group's share in unremitted earnings of certain of its subsidiaries because the Group controls when the liability will be incurred and it is probable that the liability will not be incurred in the foreseeable future. The amount of the Group's share of unremitted earnings are US$4,830.0 million, US$5,160.4 million as at 31 March 2018 and 31 March 2017 respectively.

32. Share-based payments

Employee share schemes

The Group aims to provide superior rewards for outstanding performance and a high proportion of 'at risk' remuneration for Executive Directors. Three employee share schemes were approved by shareholders on listing in 2003. In 2014, the Board introduced a Performance Share Plan ('PSP') which is the primary arrangement under which share-based incentives are provided to the Executive Directors and the wider management group. In 2015, the Board also introduced a Deferred Share Bonus Plan (DSBP). In 2016, Vedanta Limited (subsidiary of Vedanta Resources plc) introduced an Employee Stock Option Scheme 2016 (ESOS), which was approved by the Vedanta Limited shareholders.

The Vedanta Resources Long-Term Incentive Plan (the 'LTIP') and Employee Share Ownership Plan (the 'ESOP') and Performance Share Plan (the 'PSP')

The maximum value of shares that can be conditionally awarded to an Executive Director in a year is 150% of annual salary. In respect of Mr Navin Agarwal and Mr Tom Albanese, salary means the aggregate of their salary payable by Vedanta Resources plc and their cost to the Company (CTC) payable by Vedanta Limited. The maximum value of shares that can be awarded to members of the wider management group is calculated by reference to the grade average CTC and individual grade of the employee. The performance conditions attaching to outstanding awards are as follows:

PSP – dependent on the level of employee, part of these awards will be subject to a continued service condition only with the remainder measured in terms of total shareholder return ('TSR') (being the movement in a company's share price plus reinvested dividends), is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group or groups of peer companies at the end of the performance period and as moderated by the Remuneration Committee. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounding down to the nearest whole share.

Vedanta's TSR performance against comparator group

	(% of award vesting)
Below median	–
At median	30
At or above upper quintile	100

The performance condition is measured by taking the Company's TSR over the three months immediately preceding the date of grant and over the three months immediately preceding the end of the performance period, and comparing its performance with that of the comparator group or groups. The information to enable this calculation to be carried out on behalf of the Remuneration Committee ('the Committee') is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has outperformed a group or groups of industry peers, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.

Initial awards under the PSP were granted on 17 November 2014. The Company issued further awards on 1 January 2015 and subsequently on 30 December 2015 and 12 May 2016. All these plans were equity-settled. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed. On 2 March 2017 and 14 November 2017 the Company also launched cash-based plans under the same scheme. In the cash-based scheme launched in November 2017, business performance set against business plan for the financial year is included as an additional condition.

ESOP – measured in terms of business performance set against business plan for the financial year comprising operational deliverables, enabler parameters and sustainability performance specific to each company. The vesting schedule is graded over three years and varies from company to company with a minimum vesting of 30% triggering at either 80% or 85% business score. In another tranche, the vesting schedule is staggered over a period of three years from the date of grant, with 70% vesting based on the achievement of business performance and the remaining 30% based on continued employment with the Group until the end of the third year.

Initial awards under the ESOP were granted on 24 September 2012 with further awards being made on 16 May 2013. The exercise price of the awards is 10 US cents per share and the performance period is one year.

The exercise period is six months from the date of vesting.

32. Share-based payments continued

LTIP

Measured in terms of total shareholder return ('TSR') (being the movement in a company's share price plus reinvested dividends), is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group of peer companies (adapted comparator group) at the end of the performance period and as moderated by the Remuneration Committee. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounded down to the nearest whole share.

Vedanta's TSR performance against adapted comparator group

	(% of award vesting)
Below median	–
At median	40
At or above upper quartile	100

The performance condition is measured by taking the Company's TSR over the four weeks immediately preceding the date of grant and over the four weeks immediately preceding the end of the performance period, and comparing its performance with that of the comparator group described above. The information to enable this calculation to be carried out on behalf of the Remuneration Committee ('the Committee') is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has outperformed a group or groups of industries peers, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.

Initial awards under the LTIP were granted on 26 February 2004. In FY2017, the Company issued awards under the LTIP scheme on 11 November 2016. During the current year, the Company further issued awards under this scheme on 14 November 2017. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed.

The Vedanta Resources Deferred Share Bonus Plan (the 'DSBP')

In 2015, Vedanta introduced the DSBP, with initial awards being made in May 2015 and August 2015. In 2016, fresh awards were granted in May 2016 and September 2016. Further, in 2017, fresh awards were granted in June 2017 and August 2017. Under the plan, a portion of the annual bonus is deferred into shares and the awards granted under this scheme are not subject to any performance conditions, but only to service conditions being met. The vesting schedule is staggered over a period of one to three years. In the case of the DSBP, the shares are purchased from the open market and allotted to employees, officers and directors. As on 31 March 2018, the options outstanding under the DSBP scheme are 440,780.

In general, the awards will be settled in equity. The awards are accounted for in accordance with the requirements applying to equity settled, share-based payment transactions. The fair value of each award on the day of grant is equal to the average of the middle market quotations of its share price for 5 dealing days before the grant date.

Further details on these schemes are available in the Remuneration Report of the Annual Report.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

32. Share-based payments continued

The details of share options for the year ended 31 March 2018 and 31 March 2017 is presented below:

Year of grant	Exercise date	Exercise price US cents per share	Options outstanding 1 April 2017	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2018
2014	17 November 2017 – 17 May 2018	10	4,247,283	–	(120,483)	(963,690)	(26,79,770)	483,340
2015	1 January 2018 – 1 July 2018	10	21,500	–	(6,000)	(6,655)	–	8,845
2015	30 December 2018 – 30 June 2019	10	4,930,183	–	(430,857)	–	–	4,499,326
2016	12 May 2019 – 12 November 2019	10	32,000	–	–	–	–	32,000
2016	11 November 2019 – 11 May 2020	10	475,000	–	(103,056)	–	–	371,944
2017	2 March 2020 – 2 September 2020 (cash-based plan)	–	678,550	–	(50,890)	–	–	627,660
2017	14 November 2020 – 14 May 2020 (cash-based plan)	–	–	805,900	(25,720)	–	–	780,180
2017	14 November 2020 – 14 May 2020	10	–	300,670	–	–	–	300,670
			10,384,516	**1,106,570**	**(737,006)**	**(970,345)**	**(26,79,770)**	**7,103,965**

Year of grant	Exercise date	Exercise price US cents per share	Options outstanding 1 April 2016	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2017
2011	1 October 2014 – 1 April 2015*	10	3,200	–	–	–	(3,200)	–
2012	1 January 2015 – 1 July 2015*	10	2,800	–	–	–	(2,800)	–
2012	1 April 2015 – 1 October 2015*	10	1,760	–	(1,080)	–	(680)	–
2012	24 September 2013 – 24 March 2016*	10	74,750	–	(16,749)	–	(58,001)	–
2013	16 May 2014 – 16 November 2016	10	781,997	–	(66,227)	–	(715,770)	–
2014	17 November 2017 – 17 May 2018	10	4,658,329	–	(411,046)	–	–	4,247,283
2015	1 January 2018 – 1 July 2018	10	21,500	–	–	–	–	21,500
2015	30 December 2018 – 30 June 2019	10	5,418,842	–	(488,659)	–	–	4,930,183
2016	12 May 2019 – 12 November 2019	10	–	32,000	–	–	–	32,000
2016	11 November 2019 – 11 May 2020	10	–	475,000	–	–	–	475,000
2017	2 March 2020 – 2 September 2020 (cash-based plan)	–	–	679,270	(720)	–	–	678,550
			10,963,178	**1,186,270**	**(984,481)**	**–**	**(780,451)**	**10,384,516**

* The exercise period of the schemes expiring before 31 March 2016 was extended up to June 2016.

In the year ended 31 March 2018, 1,707,351 options lapsed in total (year ended 31 March 2017: 984,481) and 2,679,770 options exercised (year ended 31 March 2017: 780,451). As at 31 March 2018, 7,103,965 options remained outstanding and 492,185 options were exercisable at the year end. The weighted average share price for the share options exercised during the year ended 31 March 2018 was GBP 7.44 (year ended 31 March 2017: GBP 4.82). The weighted average maturity period for the options outstanding as on 31 March 2018 is 18 months (year ended 31 March 2017: 23 months).

Most of the share-based awards of the Group are equity-settled as defined by IFRS 2 'Share-based Payment'. The fair value of these awards has been determined at the date of grant of the award allowing for the effect of any market-based performance conditions. This fair value, adjusted by the Group's estimate of the number of awards that will eventually vest as a result of non-market conditions, is expensed on a straight-line basis over the vesting period. Where an award is cash-settled the fair value is recalculated at each reporting date until the liability is settled.

The fair values were calculated using the Stochastic valuation model with suitable modifications to allow for the specific performance conditions of the respective schemes. The inputs to the model include the share price at date of grant, exercise price, expected volatility, expected dividends, expected term and the risk-free rate of interest. Expected volatility has been calculated using historical return indices over the period to the date of grant that is commensurate with the performance period of the award. The volatilities of the industry peers have been modelled based on historical movements in the return indices over the period to the date of grant which is also commensurate with the performance period for the option. The history of return indices is used to determine the volatility and correlation of share prices for the comparator companies and is needed for the Stochastic valuation model to estimate their future TSR performance relative to the Company's TSR performance. All options are assumed to be exercised immediately after vesting.

32. Share-based payments continued

The assumptions used in the calculations of the charge in respect of the PSP/LTIP awards granted during the year ended 31 March 2018 and 31 March 2017 are set out below:

	Year ended 31 March 2018 PSP/LTIP		Year ended 31 March 2017 PSP/LTIP		
	November 2017	November 2017	March 2017	November 2016	May 2016
Number of instruments	805,900	300,670	679,270	475,000	32,000
Exercise price	US$0.10	US$0.10	US$0.10	US$0.10	US$0.10
Share price at the date of grant	GBP7.8	GBP7.8	GBP8.92	GBP8.22	GBP3.45
Contractual life	3 years	3 years	3 years	3 years	3 years
Expected volatility	61.33%	61.33%	66.3%	63.5%	61.4%
Expected option life	3 years	3 years	3 years	3 years	3 years
Expected dividends	5.77%	5.77%	4.6%	4.8%	6.0%
Risk-free interest rate	0.51%	0.51%	0.10%	0.31%	0.38%
Expected annual forfeitures	10%p.a.	10%p.a.	10%p.a.	10%p.a.	10%p.a.
Fair value per option granted	GBP3.1/GBP6.6	GBP3.1	GBP5.6/GBP7.8	GBP5.15	GBP1.80

The Group recognised total expenses of US$12.1 million (including expenses on DSBP of US$1.9 million) and US$13.4 million (including expenses on DSBP of US$1.6 million) related to equity-settled-share-based payment transactions in the year ended 31 March 2018 and 31 March 2017 respectively.

The total expense recognised on account of cash-settled share-based plans during the year ended 31 March 2018 is US$1.0 million (31 March 2017 : US$0.1 million) and the carrying value of cash-settled share-based compensation liability as at 31 March 2018 is US$1.1 million.

The Vedanta Limited Employee Stock Option Scheme (ESOS) 2016

During the year 2016, Vedanta Limited (subsidiary of Vedanta Resources plc) introduced an Employee Stock Option Scheme 2016 (ESOS), which was approved by the Vedanta Limited shareholders. The maximum value of shares that can be conditionally awarded to an Executive Committee in a year is 125% of annual salary. The maximum value of options that can be awarded to members of the wider management group is calculated by reference to the grade average CTC and individual grade of the employee. The performance conditions attached to the award is measured by comparing the Company's performance in terms of TSR over the performance period with the performance of the companies as defined in the scheme. The extent to which an award vests will depend on Vedanta Limited's TSR rank against a group or groups of peer companies at the end of the performance period and as moderated by the Remuneration Committee. Dependent on the level of employee, part of these awards will be subject to a continued service condition only with the remainder measured in terms of TSR. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounding down to the nearest whole share.

Vedanta's TSR performance against comparator group

	(% of award vesting)
Below median	–
At median	30
At or above upper decile	100

The performance condition is measured by taking Vedanta Limited's TSR at the start and end of the performance period (without averaging), and comparing its performance with that of the comparator group or groups. The information to enable this calculation to be carried out on behalf of the Remuneration Committee (the Committee) is provided by the Company's advisers. The Committee considers that this performance condition, which requires that Vedanta Limited's total return has outperformed a group of industry peers, provides a reasonable alignment of the interests of participants with those of the shareholders.

Initial awards under the ESOS were granted on 15 December 2016. Further, in 2017 fresh awards were granted in September 2017, October 2017 and November 2017. The exercise price of the awards is 1 INR per share and the performance period is three years, with no re-testing being allowed. However, in the scheme launched in November 2017 business performance set against business plan for the financial year is included as an additional condition.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

32. Share-based payments continued

The details of share options for the year ended 31 March 2018 and 31 March 2017 is presented below:

Year of grant	Exercise Date	Options outstanding 1 April 2017	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding 31 March 2018
2017	15 December 2016 – 14 December 2019	7,803,400	–	(704,798)	–	–	7,098,602
2018	1 September 2017 – 31 August 2020	–	10,048,650	(431,310)	–	–	9,617,340
2018	16 October 2017 – 15 October 2020	–	11,570	–	–	–	11,570
2018	1 November 2017 – 31 October 2020	–	28,740	–	–	–	28,740
		7,803,400	**10,088,960**	**(1,136,108)**	**–**	**–**	**16,756,252**

Year of grant	Exercise Date	Options outstanding 1 April 2016	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding 31 March 2017
2016	15 December 2016 – 14 December 2019	–	8,000,000	(196,600)	–	–	7,803,400
		–	**8,000,000**	**(196,600)**	**–**	**–**	**7,803,400**

In the year ended 31 March 2018, 1,136,108 options lapsed. As at 31 March 2018, 16,756,252 options remained outstanding.

The fair value of all awards has been determined at the date of grant of the award allowing for the effect of any market-based performance conditions. This fair value, adjusted by the Group's estimate of the number of awards that will eventually vest as a result of non-market conditions, is expensed on a straight-line basis over the vesting period.

The fair values were calculated using the Stochastic valuation model with suitable modifications to allow for the specific performance conditions of the respective schemes. The inputs to the model include the share price at date of grant, exercise price, expected volatility, expected dividends, expected term and the risk-free rate of interest. Expected volatility has been calculated using historical return indices over the period to date of grant that is commensurate with the performance period of the award. The volatilities of the industry peers have been modelled based on historical movements in the return indices over the period to date of grant which is also commensurate with the performance period for the option. The history of return indices is used to determine the volatility and correlation of share prices for the comparator companies and is needed for the Stochastic valuation model to estimate their future TSR performance relative to Vedanta Limited's TSR performance. All options are assumed to be exercised immediately after vesting.

The assumptions used in the calculations of the charge in respect of the ESOS awards granted during the year ended 31 March 2018 and 31 March 2017 are set out below:

	March 2018 ESOS September, October & November 2017	March 2017 ESOS December 2016
Number of instruments	10,081,350	8,000,000
Exercise price	INR 1	INR 1
Share price at the date of grant	INR 308.9	INR 235.9
Contractual life	3 years	3 years
Expected volatility	48%	48%
Expected option life	3 years	3 years
Expected dividends	3.7%	3.2%
Risk-free interest rate	6.5%	6.5%
Expected annual forfeitures	10% p.a.	10% p.a.
Fair value per option granted	INR 275.3/INR 161.1	INR 213.6/INR 82.8

The Group recognised total expenses of US$7.4 million (2017: US$1.0 million) related to equity-settled, share-based plan under the above scheme in the year ended 31 March 2018.

33. Retirement benefits

The Group participates in defined contribution and benefit schemes, the assets of which are held (where funded) in separately administered funds.

For defined contribution schemes the amount charged to the Consolidated Income Statement is the total amount of contributions payable in the year.

For defined benefit schemes, the cost of providing benefits under the plans is determined by actuarial valuation separately each year for each plan using the projected unit credit method by independent qualified actuaries as at the year end. Remeasurement gains and losses arising in the year are recognised in full in the Consolidated Statement of Comprehensive Income for the year.

(i) Defined contribution schemes

The Group contributed a total of US$16.4 million and US$13.8 million for the years ended March 31 2018 and 2017 respectively, to the following defined contribution plans.

Indian pension schemes

Central Recognised Provident Fund

In accordance with the Indian Provident Fund Act, employees are entitled to receive benefits under the Provident Fund. Both the employee and the employer make monthly contributions to the plan at a pre-determined rate (12%) of an employee's basic salary. All employees have an option to make additional voluntary contributions. These contributions are made to the fund administered and managed by the Government of India (GOI) or to independently managed and approved funds. The Group has no further obligations under the fund managed by the GOI beyond its monthly contributions which are charged to the Consolidated Income Statement in the period they are incurred. Where the contributions are made to independently managed and approved funds, shortfall in actual return, if any, from the return guaranteed by the State are made by the employer. There is no such shortfall in the actual return for independently managed funds for the year ended 31 March 2018 and 31 March 2017.

The benefits are paid to employees on their retirement or resignation from the Group.

Superannuation

Superannuation, another pension scheme applicable in India, is applicable only to executives in grade M4 and above. However, in case of the Cairn India Group and Iron Ore segment, the benefit is applicable to all executives. In Cairn India, it is applicable from the second year of employment. Certain companies hold policies with the Life Insurance Corporation of India (LIC), to which they contribute a fixed amount relating to superannuation, and the pension annuity is met by the LIC as required, taking into consideration the contributions made. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Pension Fund

The Pension Fund was established in 1995 and is managed by the Government of India. The employee makes no contribution to this fund but the employer makes a contribution of 8.33% of salary each month subject to a specified ceiling per employee. This must be provided for every permanent employee on the payroll.

At the age of superannuation, contributions cease and the individual receives a monthly payment based on the level of contributions through the years, and on their salary scale at the time they retire, subject to a maximum ceiling of salary level. The Government funds these payments, thus the Group has no additional liability beyond the contributions that it makes, regardless of whether the central fund is in surplus or deficit.

Australian Pension Scheme

The Group also operates defined contribution pension schemes in Australia. The contribution of a proportion of an employee's salary into a superannuation fund is a compulsory legal requirement in Australia. The employer contributes 9.5% of the employee's gross remuneration where the employee is covered by the industrial agreement and 12.5% of the basic remuneration for all other employees, into the employee's fund of choice. All employees have the option to make additional voluntary contributions.

Zambian Pension Scheme

The KCM Pension Scheme is applicable to full-time permanent employees of KCM (subject to the fulfilment of certain eligibility criteria). The management of the scheme is vested in the trustees consisting of representatives of the employer and the members. The employer makes a monthly contribution of 5% to the KCM Pension Scheme and the member makes a monthly contribution of 5%.

All contributions to the KCM Pension Scheme in respect of a member cease to be payable when the member attains normal retirement age of 55 years, or upon leaving the service of the employer, or when the member is permanently medically incapable of performing duties in the service of the employer. Upon such cessation of contribution on the grounds of normal retirement, or being rendered medically incapable of performing duties, or early voluntary retirement, the member is entitled to receive his accrued pension. The member is allowed to commute his/her accrued pension subject to certain rules and regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Skorpion Zinc Provident Fund, Namibia

The Skorpion Zinc Provident Fund is a defined contribution fund and is compulsory to all full-time employees under the age of 60. Company contribution to the fund is a fixed percentage of 9% per month of pensionable salary, whilst the employee contributes 7% with the option of making additional contributions, over and above the normal contribution, up to a maximum of 12%.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

33. Retirement benefits continued

Normal retirement age is 60 years and benefit payable is the member's fund credit which is equal to all employer and employee contributions plus interest. The same applies when an employee resigns from Skorpion Zinc. The Fund provides disability cover which is equal to the member's fund credit and a death cover of 2 times annual salary in the event of death before retirement.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Black Mountain (Pty) Limited, South Africa Pension and Provident Funds

Black Mountain Mining (Pty) Ltd has two retirement funds, both administered by Alexander Forbes, a registered financial service provider. Both funds form part of the Alexander Forbes umbrella fund and are defined contribution funds.

Membership of both funds is compulsory for all permanent employees under the age of 60.

Lisheen Mine, Ireland Pension Funds

Lisheen Pension Plan is for all employees. Lisheen pays 5% and employees pays 5% with the option to make Additional Voluntary Contributions ('AVC's') if desired. Executive contributions are 15% by Lisheen and a minimum of 5% by the employee with the option to make AVC's if desired. Death benefit is three times salary for employees and four times salary for executives. Pension and life cover ceases at 65. On wind-up of the pension schemes, the benefits will be paid out to the remaining members in accordance with the scheme rules and Irish Revenue tax regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

(ii) Defined benefit schemes

(a) Contribution to provident fund trust (the trusts) of Iron Ore division, BALCO, HZL, SRL and SMCL

The provident funds of Iron ore division, BALCO, HZL, SRL and SMCL are exempted under section 17 of The Employees Provident Fund and Miscellaneous Provisions Act, 1952. Conditions for grant of exemption stipulate that the employer shall make good deficiency, if any, between the return guaranteed by the statute and actual earning of the Fund. Based on actuarial valuation in accordance with IAS 19 and the Guidance note issued by the Institute of Actuaries of India for interest rate guarantee of exempted provident fund liability of employees, there is no interest shortfall that is required to be met by the Iron Ore division, BALCO, HZL, SRL and SMCL as at 31 March 2018 and 31 March 2017. Having regard to the assets of the fund and the return in the investments, the Group does not expect any deficiency in the foreseeable future. The Group contributed a total of US$9.7 million and US$8.3 million for the years ended 31 March 2018 and 2017 respectively in relation to the independently managed and approved funds. The present value of obligation and the fair value of plan assets of the trust are summarised below.

(US$ million) particulars	**As at 31 March 2018**	As at 31 March 2017
Fair value of plan assets of trusts	232.8	205.6
Present value of defined benefit obligation	(225.9)	(202.2)
Net liability from defined benefit scheme	–	–

	% allocation of plan assets of the trust Particulars	
	Year ended 31 March 2018	Year ended 31 March 2017
Government securities	71.2	77.2
Debentures/bonds	28.0	22.6
Fixed deposits	0.2	0.2
Equity instruments	0.6	–
	100.0	**100.0**

(b) Post-retirement medical benefits:

The Group has a scheme of post-retirement medical benefits for employees at BMM and BALCO. Based on an actuarial valuation conducted as at year end, a provision is recognised in full for the benefit obligation. The obligation relating to post-retirement medical benefits as at 31 March 2018 was US$10.0 million (reclassified US$5.5 million from provisions during the current year). The obligation under this plan is unfunded. The Group considers these amounts as not material and accordingly has not provided further disclosures as required by IAS 19 (Revised 2011) 'Employee benefits'. The remeasurement gain and net interest on the obligation of post-retirement medical benefits of US$0.7 million and US$0.5 million for the year ended 31 March 2018 have been recognised in other comprehensive income and finance cost respectively.

33. Retirement benefits continued

(c) Post-employment benefits:

India – Gratuity Plan

The Indian subsidiaries of the Company contribute to a defined benefit plan (the Gratuity Plan) covering certain categories of employees. The Gratuity Plan provides a lump sum payment to vested employees at retirement, disability or termination of employment being an amount based on the respective employee's last drawn salary and the number of years of employment with the Group.

Based on actuarial valuations conducted as at year end using the projected unit credit method, a provision is recognised in full for the benefit obligation over and above the funds held in the Gratuity Plan. For entities where the plan is unfunded, full provision is recognised in the Consolidated Statements of Financial Position.

The Iron Ore division of Vedanta Limited, Sesa Resources Limited, Sesa Mining Corporation, Limited and Hindustan Zinc Limited have constituted a trust recognised by Indian income tax authorities for gratuity to employees. Contributions to the trust are funded with Life Insurance Corporation of India (LIC), ICICI Prudential Life Insurance Company Limited and HDFC Standard Life Insurance.

Zambia

Specified permanent employees of KCM are entitled to receive medical and retirement severance benefits. This comprises two months' basic pay for every completed year of service with an earliest service start date of 1 July 2004. Under this scheme, benefits are provided based on final pensionable pay and a full actuarial valuation of the scheme is carried out on an annual basis. The accruals are not contributed to any fund and are in the form of provisions in KCM's accounts.

On the death of an employee during service, a lump sum amount is paid to his or her dependants. This amount is equal to 60 months' basic pay for employees who joined before 1 April 2000 and 30 months' basic pay for employees who joined on or after 1 April 2000. For fixed term contract employees, the benefit payable on death is 30 months' basic pay.

As at 31 March 2018, membership of pension schemes across Vedanta Limited, BALCO, HZL, TSPL, and KCM stood at 22,941 employees (31 March 2017: 22,054). The deficits, principal actuarial assumptions and other aspects of these schemes are disclosed in further detail in notes given below.

Amounts of US$70.4 million and US$67.1 million in respect of defined benefit schemes were outstanding as at 31 March 2018 and 31 March 2017 respectively.

Contributions to all pension schemes in the year ending 31 March 2019 are expected to be around US$6.1 million. (Actual contribution during the year ended 31 March 2018: US$5.0 million.)

Principal actuarial assumptions

Principal actuarial assumptions used to calculate the defined benefit schemes' liabilities are:

Particulars	Year ended 31 March 2018	Year ended 31 March 2017
Discount rate	7.7% to 18.50%	7.6% to 22.95%
Salary increases	2% to 15%	5.0 %to 15%

In India, the mortality tables used, assume that a person aged 60 at the end of the balance sheet date has a future life expectancy of 19 years.

Assumptions regarding mortality for Indian entities are based on the mortality table of 'Indian Assured Lives Mortality (2006–2008)', published by the Institute of Actuaries of India.

Assumptions regarding mortality for KCM are based on World Health Organisation Life Tables for 1999 applicable to Zambia, which has been taken as a reference point. Based on this, a mortality table which is appropriate for the workers of Konkola Copper Mines plc has been derived.

Balance sheet recognition

(US$ million) Particulars	As at 31 March 2018	As at 31 March 2017
Fair value of pension scheme assets	52.1	49.1
Present value of pension scheme liabilities	(122.5)	(116.2)
Net liability arising from defined benefit obligations	(70.4)	(67.1)

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

33. Retirement benefits continued

Amounts recognised in income statement in respect of defined benefit schemes:

(US$ million) Particulars	Year ended 31 March 2018	Year ended 31 March 2017
Current and past service cost	20.0	8.8
Net interest cost	7.4	12.4
Total charge to the income statement	**27.4**	**21.2**

Amounts recognised in the Statement of Comprehensive Income:

(US$ million) Particulars	Year ended 31 March 2018	Year ended 31 March 2017
Actuarial gains/(losses) on defined benefit obligation	0.6	(1.0)
Actuarial (gains)/losses on plan asset (excluding amount included in net interest cost)	0.2	(0.2)
Remeasurement of the net defined benefit liability (gains)/losses	**(0.4)**	**0.8**

Movements in the present value of defined benefit obligations

The movement during the year ended 31 March 2018 of the present value of the defined benefit obligation was as follows:

(US$ million) Particulars	As at 31 March 2018	As at 31 March 2017
Opening balance	(116.2)	(110.0)
Current and past service cost	(20.0)	(8.8)
Gratuity benefits paid	7.7	10.2
Derecognition of death benefit obligation during the year	23.4	–
Reclassification from provisions	(7.0)	–
Interest cost of scheme liabilities	(11.2)	(16.1)
Remeasurement gains/(losses)	0.6	(1.0)
Foreign exchange differences	0.2	9.5
Closing balance	**(122.5)**	**(116.2)**

Movements in the fair value of plan assets

(US$ million) Particulars	As at 31 March 2018	As at 31 March 2017
Opening balance	49.1	43.5
Contributions received	5.0	7.1
Benefits paid	(5.4)	(5.8)
Remeasurement gains/(losses)	(0.2)	0.2
Interest income	3.8	3.7
Foreign exchange differences	(0.2)	0.4
Closing balance	**52.1**	**49.1**

33. Retirement benefits continued

All the plan assets of the Group are invested in the qualified insurance policies.

Sensitivity analysis

Below is the sensitivity analysis determined for significant actuarial assumptions for the determination of defined benefit obligations and based on reasonably possible changes of the respective assumptions occurring at the end of reporting year while holding all other assumptions constant.

(US$ million)	Increase/ (decrease) in defined benefit obligation
Discount rate	
Increase by 0.50%	(3.2)
Decrease by 0.50%	3.3
Salary increase	
Increase by 0.50%	3.0
Decrease by 0.50%	(2.9)

The above sensitivity analysis may not be representative of the actual benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Risk analysis

The Group is exposed to a number of risks in the defined benefit plans. Most significant risks pertaining to defined benefits plans and management estimation of the impact of these risks are as follows:

Investment risk

Most of the Indian defined benefit plans are funded with Life Insurance Corporation of India. The Group does not have any liberty to manage the fund provided to Life Insurance Corporation of India.

The present value of the defined benefit plan liability is calculated using a discount rate determined by reference to Government of India bonds for the Group's Indian operations. If the return on plan asset is below this rate, it will create a plan deficit.

Interest risk

A decrease in the interest rate on plan assets will increase the plan liability.

Longevity risk/Life expectancy

The present value of the defined benefit plan liability is calculated by reference to the best estimate of the mortality of plan participants both during and at the end of the employment. An increase in the life expectancy of the plan participants will increase the plan liability.

Salary growth risk

The present value of the defined benefit plan liability is calculated by reference to the future salaries of plan participants. An increase in the salary of the plan participants will increase the plan liability.

34. Capital management

The Group's objectives when managing capital are to safeguard continuity, maintain a strong credit rating and healthy capital ratios in order to support its business and provide adequate return to shareholders through continuing growth.

The Group sets the amount of capital required on the basis of annual business and long-term operating plans which include capital and other strategic investments. The funding requirement is met through a mixture of equity, internal accruals, convertible bonds and other long-term and short-term borrowings.

The Group monitors capital using a gearing ratio, being the ratio of net debt as a percentage of total capital.

(US$ million)	**As at 31 March 2018**	As at 31 March 2017
Total equity	6,521.0	6,014.6
Net debt	9,587.3	8,503.5
Total capital	16,108.3	14,518.1
Gearing ratio	**59.5%**	**58.6%**

The increase in the gearing ratio compared to 2017 ratio is primarily due to increase in net debt pursuant to special dividend paid by a subsidiary of the Company.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

35. Share capital

Shares in issue	As at 31 March 2018 Number	As at 31 March 2018 Paid up amount (US$ million)	As at 31 March 2017 Number	As at 31 March 2017 Paid up amount (US$ million)
Ordinary shares of 10 US cents each	303,987,039	30.4	301,300,825	30.1
Deferred shares of £1 each	50,000	–	50,000	–
	304,037,039	**30.4**	**301,350,825**	**30.1**

Rights and obligations attaching to shares

The rights and obligations attaching to the ordinary and deferred shares are set out in the Articles.

During the year ended 31 March 2018, the Company issued 2,686,214 shares at par value of 10 US cents per share to the employees pursuant to the Vedanta Performance Share Plan (31 March 2017: 778,027 shares).

The holders of deferred shares do not have the right to receive notice of any general meeting of the Company nor the right to attend, speak or vote at any such general meeting. The deferred shares have no rights to dividends and, on a winding-up or other return of capital, entitle the holder only to the payment of the amounts paid on such shares after repayment to the holders of ordinary shares of the nominal amount paid up on the ordinary shares plus the payment of £100,000 per ordinary share. Of the 50,000 deferred shares, one deferred share was issued at par and has been fully paid, and 49,999 deferred shares were each paid up as to one-quarter of their nominal value.

As on 31 March 2018, 6,904,995 ordinary shares which were issued on the conversion of certain convertible bonds issued by one of the Group's subsidiaries are held through Global Depositary Receipts and carry no voting rights. Apart from the above, each ordinary share carries the right to one vote at general meetings of the Company and is entitled to dividends.

At 31 March 2018, the total number of treasury shares held was 24,369,395 (31 March 2017: 24,370,066). Out of these, 1,704,333 shares, which had previously been purchased under Vedanta's Buyback Programme, were held by an independent company, Gorey Investments Limited (Gorey) and this company will not vote on these shares. These shares purchased by Gorey are treated as treasury shares.

36. Non-controlling interests ('NCI')

The Group consists of a parent Company, Vedanta Resources Plc, incorporated in the UK and a number of subsidiaries held directly and indirectly by the Group which operate and are incorporated around the world. Note 44 to the financial statements lists details of the interests in the subsidiaries.

Non-controlling interests that are material to the Group relate to Hindustan Zinc Limited (HZL), Cairn India Holdings Limited (CIHL) and its subsidiaries and Vedanta Limited.

As at 31 March 2018, NCIs hold an economic interest of 67.38%, 49.75% and 49.75% respectively in HZL, CIHL and its wholly owned subsidiaries, and Vedanta Limited. In ASI (partly owned subsidiary of CIHL), the NCI's economic interest is 74.06%. The respective NCI holdings as at 31 March 2017 were 67.46% and 49.87% in HZL and Vedanta Limited respectively.

Pursuant to the merger of Cairn India Limited with Vedanta Limited, the NCI holding in CIHL as at 31 March 2017 was 49.87%.

Principal place of business of HZL, CIHL and its subsidiaries and Vedanta Limited is set out under Note 44.

36. Non-controlling interests ('NCI') continued

The table below shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests:

The summarised financial information below is on a 100% basis and before inter-company eliminations.

(US$ million) Particulars	Year ended 31 March 2018 HZL	CIHL and its subsidiaries	Vedanta Limited	Others**	Total	Year ended 31 March 2017 HZL	Cairn India	Vedanta Limited	Others**	Total
Profit/(loss) attributable to NCI	968.1	251.5	508.0	(494.3)	1,233.3	771.6	284.3	454.0	(607.6)	902.3
Equity attributable to NCI	3,772.1	1,021.7	6,258.4	(4,192.4)	6,859.8	3,254.7	–	6,888.6*	(3,720.2)	6,423.1
Dividends paid/payable to NCI	(221.4)	–	(606.9)	–	(828.3)	(781.7)	(40.5)	(517.9)	–	(1,340.1)

* Includes erstwhile Cairn India Limited merged with Vedanta Limited in March 2017.
** Others consist of investment subsidiaries of Vedanta Limited, other individual non-material subsidiaries and consolidation adjustments.

Summarised financial information in respect of the components of the Group including subsidiaries that have material non-controlling interests is set out below:

(US$ million) Particulars	As at 31 March 2018 HZL	CIHL and its subsidiaries	Vedanta Limited	Others**	Total	As at 31 March 2017 HZL	CIHL and its subsidiaries	Vedanta Limited*	Others	Total
Non-current assets	2,830.3	2,413.2	19,046.7	(4,249.1)	20,041.1	2,621.5	2,679.2	14,161.2	(442.3)	19,019.6
Current assets	3,712.3	1,105.5	3,573.6	805.9	9,197.3	5,337.6	1,411.9	2,988.8	2,745.5	12,483.8
Current liabilities	(912.9)	(408.0)	(7,625.6)	(2,707.4)	(11,653.9)	(3,102.8)	(183.2)	(7,375.1)	(3,410.5)	(14,071.6)
Non-current liabilities	(31.2)	(1,124.8)	(2,414.7)	(7,492.8)	(11,063.5)	(31.5)	(81.6)	(3,380.7)	(7,923.4)	(11,417.2)
Net assets	**5,598.5**	**1,985.9**	**12,580.0**	**(13,643.4)**	**6,521.0**	**4,824.8**	**3,826.3**	**6,394.2**	**(9,030.7)**	**6,014.6**

* Includes erstwhile Cairn India Limited now merged with Vedanta Limited in March 2017.
** Others consist of investment subsidiaries of Vedanta Limited, other individual non-material subsidiaries and consolidation adjustments.

(US$ million) Particulars	Year ended 31 March 2018 HZL	CIHL and its subsidiaries	Vedanta Limited	Others**	Total	Year ended 31 March 2017 HZL	Cairn India	Vedanta Limited	Others**	Total
Revenue	3,393.9	714.0	7,030.2	4,220.6	15,358.7	2,551.3	1,222.7	4,786.2	2,959.9	11,520.1
Profit/(loss) for the year	1,436.8	511.7	1,021.1	(1,500.7)	1,468.9	1,305.4	456.3	1,226.3	(2,108.4)	879.6
Other comprehensive income/(loss)***	(6.2)	–	7.1	12.4	13.3	(0.6)	1.0	1.8	(1.7)	0.5

** Others consist of investment subsidiaries of Vedanta Limited, other individual non-material subsidiaries and consolidation adjustments.
*** Excluding exchange differences arising on translation of foreign operations

The effect of changes in ownership interests in subsidiaries that did not result in a loss of control is as follows:

(US$ million) As at 31 March 2018	HZL	CIHL and its subsidiaries	Vedanta Limited	Others	Total
Changes in NCI due to merger (Note 42)	–	–	–	–	–
Other changes in non-controlling interests	–	(10.5)	3.5	–	(7.0)

(US$ million) As at 31 March 2017	HZL	Cairn	Vedanta Limited	Others	Total
Changes in NCI due to merger (Note 42)	403.7	(1,001.7)	813.4	(1,032.5)	(817.1)
Other changes in non-controlling interests	–	0.9	(16.9)	–	(16.0)

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37. Joint arrangements

Joint operations

The Group's principal licence interests in its oil and gas business are joint operations. The principal licence interests for the year ended 31 March 2018 and 31 March 2017 are as follows:

Oil & Gas blocks/fields	Area	Participating Interest
Operating blocks		
Ravva block	Krishna Godavari	22.50%
CB-OS/2 – Exploration	Cambay Offshore	60.00%
CB-OS/2 – Development and production	Cambay Offshore	40.00%
RJ-ON-90/1 – Exploration	Rajasthan Onshore	100.00%
RJ-ON-90/1 – Development and production	Rajasthan Onshore	70.00%
KG-OSN-2009/3	Krishna Godavari Offshore	100.00%
South Africa Block 1	Orange Basin South Africa Offshore	60.00%
Relinquished blocks		
PR-OSN-2004/1[1]	Palar Basin Offshore	35.00%
Non-operating blocks		
KG-ONN-2003/1[2]	Krishna Godavari Onshore	49.00%

1 Relinquished on 30 June 2017.
2 Operatorship has been transferred to Oil and Natural Gas Corporation (ONGC) w.e.f. July 7, 2014.

38. Commitments, guarantees, contingencies and other disclosures

Commitments

The Group has a number of continuing operational and financial commitments in the normal course of business including:

- Exploratory mining commitments;
- Oil and gas commitments;
- Mining commitments arising under production sharing agreements; and
- Completion of the construction of certain assets.

(US$ million)	As at 31 March 2018	As at 31 March 2017
Capital commitments contracted but not provided	1,893.4	1,351.5

Commitments primarily related to the expansion projects:

	As at 31 March 2018	As at 31 March 2017
Oil & Gas sector		
Cairn India	668.3	22.0
Aluminium sector		
BALCO-325 KTPA smelter and 1200 MW power plant (4 x 300 MW)	33.9	50.2
Lanjigarh Refinery (Phase II) 5.0 MTPA	205.2	249.0
Jharsuguda 1.25 MTPA smelter	75.5	332.9
Power sector		
Jharsuguda 2400 MW Power Plant	15.0	32.8
Zinc sector		
Zinc India (mines expansion)	305.1	239.7
Gamsberg mining and milling project	162.5	206.0
Copper sector		
Tuticorin Smelter 400 KTPA	424.0	217.6
Others	3.9	1.3
Total	**1,893.4**	**1,351.5**

38. Commitments, guarantees, contingencies and other disclosures continued

Guarantees

Companies within the Group provide guarantees within the normal course of business.

A summary of the most significant guarantees is set out below:

As at 31 March 2018, US$308.2 million of guarantees were advanced to banks, suppliers etc. in the normal course of business (31 March 2017: US$281.0 million). The Group has also entered into guarantees and bonds advanced to the customs authorities in India of US$107.3 million (31 March 2017: US$67.7 million) relating to the export and payment of import duties on purchases of raw material and capital goods.

Cairn PSC guarantee to Government

The Group has provided Parent Company guarantee for the Cairn India Group's obligation under the Production Sharing Contract ('PSC').

Vedanta Limited has provided various other guarantees under the Cairn India Group's bank facilities for the Cairn India Group's share of minimum work programme commitments of US$26.2 million included in the above outstanding as of 31 March 2018 (31 March 2017: US$19.9 million).

Export obligations

The Indian entities of the Group have export obligations of US$1,904.2 million (31 March 2017: US$2,647.3 million) on account of concessional rates of import duty paid on capital goods under the Export Promotion Capital Goods Scheme and under the Advance Licence Scheme for import of raw material laid down by the Government of India.

In the event of the Group's inability to meet its obligations, the Group's liability would be US$169.3 million (31 March 2017: US$261.7 million), reduced in proportion to actual exports, plus applicable interest.

The Group has given bonds of US$226.3 million (31 March 2017: US$258.6 million) to custom authorities against these export obligations.

Contingencies

The Group discloses the following legal and tax cases as contingent liabilities.

HZL: Department of Mines and Geology

The Department of Mines and Geology of the State of Rajasthan issued several show cause notices in August, September and October 2006 to HZL, totalling US$51.3 million as at 31 March 2018 and 31 March 2017. These notices alleged unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan during the period from July 1968 to March 2006. HZL believes it is unlikely that the claim will lead to a future obligation and thus no provision has been made in the financial statements. HZL had filed appeals (writ petitions) in the High Court of Rajasthan in Jodhpur. The High Court restrained the Department of Mines and Geology from undertaking any coercive measures to recover the penalty. Central Government has also been made a party to the case and the matter is likely to be listed now for hearing after completion of pleadings by the Central Government.

Richter and Westglobe: Income tax

The Group, through its subsidiaries Richter Holdings Limited and Westglobe Limited, in 2007 acquired the entire stake in Finsider International Company Limited (FICL) based in the United Kingdom which held 51% shares of Sesa Goa Ltd, an Indian Company. In October 2013, the Indian Tax Authorities (Tax Authorities) have served an order on Richter and Westglobe for alleged failure to deduct withholding tax on capital gains on the indirect acquisition of shares in April 2007.

The Tax Authorities determined the liability for such non-deduction of tax as US$134.7 million in the case of Richter and US$89.8 million in the case of Westglobe, comprising tax and interest as at 31 March 2018 and 31 March 2017. Richter and Westglobe filed appeals before the first appellate authority. Appeals (writ petitions) were filed in the High Court of Karnataka challenging the constitutional validity of retrospective amendments made by the Finance Act 2012 and in particular the imposition of obligations to deduct tax on payments made against an already concluded transaction. The Karnataka High Court passed interim orders and directed that the adjudication of liability (TDS quantum and interest) shall no longer remain in force since the tax department passed the orders on merits travelling beyond the limited issue of jurisdiction. The jurisdiction issue will be heard by the High Court.

Erstwhile Cairn India Limited: Income tax

In March 2014, Cairn India Limited (referred to as Cairn India) received a show cause notice from the Indian Tax Authorities ('Tax Authorities') for not deducting withholding tax on the payments made to Cairn UK Holdings Limited (CUHL), for acquiring shares of Cairn India Holdings Limited (CIHL), as part of their internal reorganisation. The Tax Authorities have stated in the notice that a short-term capital gain has accrued to CUHL on transfer of the shares of CIHL to Cairn India, in the financial year 2006–2007, on which tax should have been withheld by Cairn India. Pursuant to this various replies were filed with the Tax Authorities.

Cairn India also filed a writ petition before the Delhi High Court wherein it has raised several points for assailing the aforementioned Income Tax Authority's order. The matter is next listed for hearing on 6 July 2018 before the Honourable Delhi High Court.

After several hearings, the Income Tax Authority, in March 2015, issued an order holding Cairn India as 'assessee in default' and raised a demand totalling US$3,150.9 million (including interest of US$1,575.4 million). Cairn India had filed an appeal before the First Appellate Authority, Commissioner of Income Tax (Appeals) which vide order dated 3 July 2017 confirmed the tax demand against Cairn India. Cairn India has challenged the Commissioner of Income Tax's (Appeals) order before the Income Tax Appellate Tribunal (ITAT).

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

38. Commitments, guarantees, contingencies and other disclosures continued

Separately CUHL, on whom the primary liability of tax lies, has received an Order from the ITAT holding that the transaction is taxable in view of the clarification made in the Act but also acknowledged that being a retrospective transaction, interest would not be levied. Hence affirming a demand of US$1,575.5 million excluding the interest portion that had previously been claimed. The tax department is appealing this order.

As a result of the above order from ITAT, the Group now considers the risk in respect of the interest portion of claim to be remote. Further, as per the recent attachment notice received from the Tax Recovery Officer appointed for CUHL, they have adjusted the dividend of US$102.6 million which was due to CUHL and was recovered by the tax department. Vedanta Limited has further remitted additional dividend of US$68.0 million further reducing the principal liability to US$1,404.9 million. Accordingly, the Group has revised the contingent liability to US$1,404.9 million.

Additionally, the tax department has initiated the process of selling the attached CUHL investment in equity and preference shares of Vedanta Limited valuing US$937.8 million based on the quoted price as at 31 March 2018.

In the event, the case is finally decided against Cairn India, along with interest, the potential liability would be US$3,150.9 million.

Separately, but in connection with this litigation, Vedanta Resources plc has filed a Notice of Claim against the Government of India ('GOI') under the UK India Bilateral Investment Treaty (the BIT). The International Arbitration Tribunal recently passed a favourable order on jurisdiction and now the matter will be heard on merits – the hearing is scheduled in April–May 2019. The Government of India has challenged the jurisdiction order of Arbitration Tribunal before the High Court of Singapore.

Vedanta Limited: Contractor claim

Shenzhen Shandong Nuclear Power Construction Co. Limited ('SSNP') subsequent to terminating the EPC contract invoked arbitration as per the contract alleging non-payment of their dues towards construction of a 210 MW co-generation power plant for the 6 MTPA expansion project, and filed a claim of US$252.4 million. SSNP also filed a petition under Section 9 of the Arbitration and Conciliation Act, 1996 before the Bombay High Court requesting for interim relief. The Bombay High Court initially dismissed their petition, but on a further appeal by SSNP, the Division Bench of the Bombay High Court directed Vedanta Limited to deposit a bank guarantee for an amount of US$28.7 million as a security, being a prima facie representation of the claim, until arbitration proceedings are completed. Vedanta Limited has deposited a bank guarantee of an equivalent amount. Based on the assessment, the Company had booked the liability for US$30.7 million in earlier years.

On 9 November 2017, the Arbitral Tribunal has pronounced the award in favour of SSNP for US$34.0 million along with the interest and cost of US$18.1 million (@ 9% p.a. from date of filing petition, i.e. 18 April 2012). The amount is payable subject to SSNP handing over all the plant drawings to the Company. Given the Company was already carrying a part provision it recognised additional liability of US$21.4 million including interest and cost making the total liability towards SSNP as US$52.1 million. The additional amount recognised in the income statement includes US$17.6 million which has been presented under special items.

The company has challenged the award under section 34 of The Arbitration and Conciliation Act, 1996, which was dismissed. Subsequently, the company has filed an appeal under section 37 of The Arbitration and Conciliation Act, 1996 with the Delhi High Court. The court has granted a stay subject to deposit of the award amount, which has been complied by the Company. The hearing on the arguments in the matter have been completed and the matter has now been reserved for orders.

Ravva Joint Venture arbitration proceedings: ONGC Carry

Cairn India Limited (referred to as Cairn India) is involved in a dispute against the Government of India relating to the recovery of contractual costs in terms of calculation of payments that the contractor party were required to make in connection with the Ravva field.

The Ravva Production Sharing Contract PSC obliges the contractor parties to pay a proportionate share of ONGC's exploration, development, production and contract costs in consideration for ONGC's payment of costs related to the construction and other activities it conducted in Ravva prior to the effective date of the Ravva PSC (the ONGC Carry). The question as to how the ONGC Carry is to be recovered and calculated, along with other issues, was submitted to an International Arbitration Tribunal in August 2002 which rendered a decision on the ONGC Carry in favour of the contractor parties whereas four other issues were decided in favour of GOI in October 2004 (Partial Award).

The GOI then proceeded to challenge the ONGC Carry decision before the Malaysian courts, as Kuala Lumpur was the seat of the arbitration. The Federal Court of Malaysia which adjudicated the matter on 11 October 2011, upheld the Partial Award. Per the decision of the Arbitral Tribunal, the contractor parties and GOI were required to arrive at a quantification of the sums relatable to each of the issues under the Partial Award.

Pursuant to the decision of the Federal Court, the contractor parties approached the Ministry of Petroleum and Natural Gas (MoPNG) to implement the Partial Award while reconciling the statement of accounts as outlined in the Partial Award.

However, MoPNG on 10 July 2014 proceeded to issue a Show Cause Notice alleging that since the Partial Award has not been enforced, the profit petroleum share of GOI has been short-paid. MoPNG threatened to recover the amount from the sale proceeds payable by the oil marketing companies to the contractor parties. The contractor party replied to the Show Cause Notice taking various legal contentions.

38. Commitments, guarantees, contingencies and other disclosures continued

As the Partial Award did not quantify the sums, therefore, contractor parties approached the same Arbitral Tribunal to pass a Final Award in the subject matter since it had retained the jurisdiction to do so. The Arbitral Tribunal was reconstituted and the Final Award was passed in October 2016 in Cairn India's favour. GOI's challenge of the Final Award was dismissed by the Malaysian High Court. GOI has challenged the decision before the Court of Appeal, the procedural hearing for which is scheduled on 30 August 2018. Further, Cairn India has also filed for the enforcement of the Partial Award and Final Award with Delhi High Court which is scheduled to be heard on 4 September 2018. While Cairn India does not believe the GOI will be successful in its challenge, if the Arbitral Award is reversed and such reversal is binding, Cairn India could be liable for approximately US$63.9 million plus interest.

Proceedings related to the Imposition of Entry Tax

Vedanta Limited and other Group companies i.e. Bharat Aluminium Company Limited (BALCO) and Hindustan Zinc Limited (HZL) challenged the constitutional validity of the local statutes and related notifications in the states of Chhattisgarh, Odisha and Rajasthan pertaining to the levy of entry tax on the entry of goods brought into the respective states from outside.

Post some contradictory orders of High Courts across India adjudicating on similar challenges, the Supreme Court referred the matters to a nine judge bench. Post a detailed hearing, although the bench rejected the compensatory nature of tax as a ground of challenge, it maintained status quo with respect to all other issues which have been left open for adjudication by regular benches hearing the matters.

Following the order of the nine judge bench, the regular bench of the Supreme Court proceeded with hearing the matters. The regular bench remanded the entry tax matters relating to the issue of discrimination against domestic goods bought from other States to the respective High Courts for final determination but retained the issue of jurisdiction for levy on imported goods, for determination by the regular bench of the Supreme Court. Following the order of the Supreme Court, the Group filed writ petitions in respective High Courts.

On 9 October 2017, the Supreme Court has held that states have the jurisdiction to levy entry tax on imported goods. With this Supreme Court judgment, imported goods will rank pari passu with domestic goods for the purpose of levy of Entry tax. Vedanta Limited and its subsidiaries have amended their appeals (writ petitions) in Orissa and Chhattisgarh to include imported goods as well. With respect to Rajasthan, the State Government has filed a counter petition in the Rajasthan High Court, whereby it has admitted that it does not intend to levy the entry tax on imported goods.

The issue pertaining to the levy of entry tax on the movement of goods into a Special Economic Zone (SEZ) remains pending before the Odisha High Court. The Group has challenged the levy of entry tax on any movement of goods into an SEZ based on the definition of 'local area' under the Odisha Entry Tax Act which is very clear and does not include an SEZ. In addition, the Government of Odisha further through its SEZ Policy 2015 and the operational guidelines for administration of this policy dated 22 August 2016, exempted the entry tax levy on SEZ operations.

The total claims against Vedanta Limited and its subsidiaries are US$203.0 million (31 March 2017: US$165.0 million).

TSPL: Proceedings related to claim for Liquidated Damages

TSPL entered into a long-term PPA with PSPCL for the supply of power. Due to delays in the fulfilment of certain obligations by PSPCL as per the PPA and force majeure events, there was a delay in completion of the project as per the PPA timelines. TSPL has received notices of claims from PSPCL seeking payment of Liquidated damages (LD) for delay in commissioning of Unit I, II and III totalling to US$146.4 million as on 31 March 2018 and 31 March 2017.

During the financial year 2014–15, PSPCL had invoked the Performance Bank Guarantee (PBG) of US$23.1 million to recover the LD on account of delay in the Commercial Operation Date (COD). Against the PBG, invocation stay was granted by PSERC and this was later upheld by APTEL as well. The matter was referred to arbitration by a panel of three Arbitrators. The arbitration proceedings have concluded and the order was passed on 18 September 2017 in TSPL's favour. The said claim of US$146.4 million was part of contingent liability as on 31 March 2017, however pursuant to the order passed, the claim has been considered to be resolved with no exposure remaining for the Company. PSPCL has filed a Sec 34 Application, which is to be listed on 27 July 2018.

BALCO: Challenge against imposition of Energy Development Cess

BALCO challenged the imposition of Energy Development Cess levied on generators and distributors of electrical energy @ 10 paise per unit on the electrical energy sold or supplied before the High Court on the grounds that the Cess is effectively on production and not on consumption or sale since the figures of consumption are not taken into account and the Cess is discriminatory since captive power plants are required to pay @ 10 paise while the State Electricity Board is required to pay @ 5 paise. The High Court of Chhattisgarh by order dated 15 December 2006 declared the provisions imposing ED Cess on CPPs as discriminatory and therefore ultra vires the Constitution. The Company has sought refund of ED Cess paid till March 2006 amounting to US$5.3 million.

The State of Chhattisgarh moved an SLP in the Supreme Court and whilst issuing notice has stayed the refund of the Cess already deposited and the Supreme Court has also directed the State of Chhattisgarh to raise the bills but no coercive action be taken for recovery for the same. Final argument in this matter started before the Supreme Court. In case the Supreme Court overturns the decision of the High Court, BALCO would be liable to pay an additional amount of US$100.8 million (31 March 2017: US$88.6 million) and the Company may have to bear a charge of US$106.1 million (31 March 2017: US$88.6 million).

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

38. Commitments, guarantees, contingencies and other disclosures continued

South Africa Carry Cost

As part of the farm-in agreement for Block 1, the Group was required to carry its joint venture partner, Petro SA, up to a gross expenditure of US$100.0 million for a work programme including 3D and 2D seismic studies and at least one exploration well. The Group has spent US$38.0 million towards exploration expenditure and a minimum carry of US$62.0 million (including drilling one well) was outstanding at the end of the initial exploration period. The Group had sought an extension for execution of deed for entry into the second renewal phase of the exploration period with a request to maintain status quo of the prior approvals due to uncertainty in the proposed changes in fiscal terms impacting the Group financial interest in the block. The same was granted by the South African authority subject to risk of exploration right getting expired on account of recent High Court judgments. After assessing past judicial precedents followed by independent legal advice, the Group has provided for the requisite damages as applicable under the South African Regulations and obligation for the aforesaid carry cost of US$62.0 million has been assessed as possible and disclosed as a contingency.

Class actions against KCM on behalf of Zambian nationals

Vedanta and KCM had challenged the jurisdiction of the English courts to hear and adjudicate the claims by Zambian residents in relation to KCM's operations in Zambia. The allegations relate to claims of personal injury, significant pollution, environmental damage and claims for aggravated and exemplary damages and for injunctive relief. These allegations are currently defended by KCM. On 27 May 2016, the English High Court of Justice, Queen's Bench Division, Technology and Construction Court ruled that the English courts have jurisdiction to hear and adjudicate the claims. Vedanta and KCM appealed this ruling.

The English Court of Appeal released a judgement on 13 October 2017, dismissing this appeal and ruling that the English courts have jurisdiction to hear and adjudicate the claims. This judgement relates solely to the jurisdiction of the English courts to hear these claims.

Vedanta and KCM had sought permission from the Supreme Court of London to appeal the Court's decision, which has been granted by the Supreme Court on 23 March 2018.

There has been no hearing or proceeding in any court on the merits of any of these claims to date, none has been scheduled, and the amount of the claims has not been specified. Given the stage of proceedings the amount is presently not quantifiable.

Miscellaneous disputes-Income Tax

The Group is involved in various tax disputes amounting to US$1,074.6 million (31 March 2017: US$966.3 million) relating to income tax. These mainly relate to the disallowance of tax holiday for 100% Export Oriented Undertaking under section 10B of the Income Tax Act, 1961, disallowance of tax holiday benefit on production of gas under section 80IB of the Income Tax Act, 1961, tax holiday for undertakings located in certain notified areas under section 80IC of the Income Tax Act, 1961, disallowance of tax holiday benefit for power plants under section 80IA of the Income Tax Act, 1961, on account of depreciation disallowances, disallowance under section 14A of the Income Tax Act and interest thereon which are pending at various appellate levels.

The Group believes that these disallowances are not tenable and accordingly no provision is considered necessary.

Miscellaneous other disputes

The Group is subject to various claims and exposures which arise in the ordinary course of conducting and financing its business from the excise, indirect tax authorities and others. These claims and exposures mostly relate to the assessable values of sales and purchases or to incomplete documentation supporting the companies' returns or other claims.

The approximate value of claims (excluding the items as set out separately above) against the Group companies total US$571.9 million (31 March 2017: US$623.4 million).

The Group considers that it can take steps such that the risks can be mitigated and that there will be no significant unprovided liabilities arising.

Other Matters

In July 2017, the Appellate Tribunal for Electricity dismissed the appeal filed by one of the Group's subsidiaries, Talwandi Sabo Power Limited (TSPL) with respect to the interpretation of how the calorific value of coal and costs associated with it should be determined. TSPL has filed the appeal before the Honourable Supreme Court, which by an order dated 7 March 2018 has decided the matter in favour of the Company. The outstanding trade receivables in relation to this dispute as at 31 March 2018 is US$123.3 million (US$90.0 million as at 31 March 2017). This was classified as other non-current asset as at 31 March 2017 which has been reclassified to trade and other receivables as at 31 March 2018.

In another matter relating to assessment of whether there has been a change in law following the execution of the Power Purchase Agreement, the Appellate Tribunal for Electricity has dismissed the appeal in July 2017 filed by TSPL. TSPL has filed an appeal before the Honourable Supreme Court to seek relief which is yet to be listed. The outstanding trade receivables in relation to this dispute and other matters as at 31 March 2018 is US$59.3 million (US$40.2 million as at 31 March 2017). The Group, based on external legal opinion and its own assessment of the merits of the case, remains confident that it is highly probable that the Supreme Court will uphold TSPL's appeal and has thus continued to treat these balances as recoverable.

Additionally, at Vedanta Limited US$111.8 million as at 31 March 2018 (31 March 2017: US$113.2 million) were outstanding on account of certain disputes with another customer relating to computation of tariffs and differential revenues recognised with respect to tariffs pending finalisation by the state regulatory commission.

38. Commitments, guarantees, contingencies and other disclosures continued

Operating Lease commitments: As lessee

(i) Operating leases are in relation to the office premises, office equipment and other assets, some of which are cancellable and some are non-cancellable. There is an escalation clause in the lease agreements during the primary lease period. There are no restrictions imposed by lease arrangements and there are no sub-leases. There are no contingent rents. The total of the future minimum lease payments under non-cancellable leases are as under:

(US$ million) Particulars	As at 31 March 2018	As at 31 March 2017
Within one year of the balance sheet date	0.6	0.4
Within two to five years from the balance sheet date	0.8	0.4
Total	**1.4**	**0.8**

Lease payments recognised as expenses during the year ended 31 March 2018, on non-cancellable leases, is US$0.2 million (31 March 2017: US$1.1 million).

(ii) TSPL has ascertained that the Power Purchase Agreement (PPA) entered with Punjab State Power Corporation Limited (PSPCL) qualifies to be an operating lease under IAS 17 'Leases'. Based on the assessment that the lease payments by PSPCL are subject to variations on account of various factors like availability of coal, water, etc., the management has determined the entire consideration receivable under the PPA relating to recovery of capacity charges towards capital cost to be contingent rent under IAS 17. The contingent rent recognised as revenue in the statement of profit and loss during the year ended 31 March 2018 and 31 March 2017 is US$190.0 million and US$188.9 million respectively.

39. Related party transactions

The information below sets out transactions and balances between the Group and various related parties in the normal course of business for the year ended 31 March 2018.

Sterlite Technologies Limited ('STL')

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Sales to STL	10.8	127.8
Recovery of expenses	–	0.0
Purchases	0.1	2.6
Net interest income	–	1.3
Net amounts receivable at year end	0.8	4.0
Net amounts payable at year end	–	0.2
Outstanding advance received at year end	–	2.1
Dividend income	0.1	0.1
Investment in equity share	22.9	9.2

Sterlite Technologies Limited is related by virtue of having the same controlling party as the Group, namely Volcan. Pursuant to the terms of the Shared Services Agreement dated 5 December 2003 entered into by the Company and STL, the Company provides various commercial services in relation to STL's businesses on an arm's length basis and at normal commercial terms. For the year ended 31 March 2018, the commercial services provided to STL were performed by certain senior employees of the Group on terms set out in the Shared Services Agreement. The services provided to STL in this year amounted to US$0.04 million (31 March 2017: US$0.03 million).

Sterlite Power Transmission Limited ('SPTL')

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Sales to SPTL	175.1	2.6
Purchases	2.0	0.4
Other income from SPTL	0.0	–
Net interest received	0.1	–
Net amounts receivable at year end	0.8	–
Investment in equity share	1.6	1.5
Net amounts payable at year end	0.5	–

Sterlite Power Transmission Limited is related by virtue of having the same controlling party as the Group, namely Volcan.

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As at and for the year ended 31 March 2018

39. Related party transactions continued

Vedanta Foundation

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Donation*	0.0	10.2
Net advance given at year end	0.8	–

* Donation for 31 March 2017 includes donation in kind, having fair market value of US$1.7 million.

The Vedanta Foundation is a registered not-for-profit entity with a broad focus mainly on education, nutrition and livelihood. The Vedanta Foundation is a related party as it is controlled by members of the Agarwal family who control Volcan. Volcan is also the majority shareholder of Vedanta Resources plc.

Sesa Goa Community Foundation Limited

Following the acquisition of erstwhile Sea Goa Limited, the Sesa Goa Community Foundation Limited, a charitable institution, became a related party of the Group on the basis that key management personnel of the Group have significant influence on the Sesa Goa Community Foundation Limited. During the year ended 31 March 2018, US$0.8 million (31 March 2017: US$0.3 million) was paid to the Sesa Goa Community Foundation Limited.

Sterlite Iron and Steel Limited

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Loan given/repaid	0.0	0.0
Loan balance receivable at year end	0.7	0.7
Net amount receivable at year end (including interest and advance given)	1.9	1.9
Net interest income	0.1	0.1

Sterlite Iron and Steel Limited is a related party by virtue of having the same controlling party as the Group, namely Volcan.

Vedanta Medical Research Foundation

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Donation	12.8	5.2
Guarantees given balance at year end	5.3	–
Guarantees given during the year	5.3	–

Vedanta Medical Research Foundation is a related party of the Group on the basis that key management personnel of the Group exercise significant influence.

Volcan Investments Limited

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Net amount receivable at the year end	0.6	0.4
Recovery of expenses	0.3	0.2
Dividend paid	110.6	93.7

Volcan Investments Limited is a related party of the Group by virtue of being an ultimate controlling party of the Group.

Bank guarantee has been provided by the Group on behalf of Volcan in favour of the Income tax department, India as collateral in respect of certain tax disputes of Volcan. The guarantee amount is US$17.7 million (31 March 2017: US$17.7 million).

Volcan Investments Limited is a related party of the Group by virtue of being an ultimate controlling party of the Group.

Cairn Foundation

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Net amount payable at the year end	1.7	2.8
Donation	2.5	1.8

Cairn Foundation, though not a related party as per the definition under IAS 24, related party disclosure has been included by way of a voluntary disclosure, following the best corporate governance practices.

39. Related party transactions continued

India Grid Trust

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Dividend income	1.2	–
Investment redeemed during the year	0.1	–
Investment in equity share at year end	18.8	–

India Grid Trust is a related party of the Group on the basis that the ultimate controlling party of the Group, Volcan Investments Limited, exercises significant influence.

Associates

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Investment made during the year	0.0	–
Investment redeemed during the year	0.1	–
Loan balance receivable at year end	1.2	1.0

Post-Retirement employees benefit trust

Details of transactions during the year with post-retirement employee benefit trusts. The below mentioned trusts are related parties because these are employee trusts.

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
BALCO Employees Provident Fund Trust	2.0	2.4
Hindustan Zinc Ltd. Employee Contributory Provident Fund Trust	4.7	4.6
Sesa Group Employees Provident Fund	0.7	0.9
Sesa Resources Limited Employees Provident Fund	0.1	0.1
Sesa Mining Corporate Limited Employees Provident Fund	0.2	0.1
HZL Employee Group Gratuity Trust	2.5	3.8
Sesa Group Employees Gratuity Fund and Sesa Group Executives Gratuity Fund	0.2	0.8
Sesa Resources Limited Employees Gratuity Fund	0.0	0.1
Sesa Mining Corporation Limited Employees Gratuity Fund	0.0	0.1
HZL Superannuation Fund	0.4	0.3
Sesa Group Executives Superannuation Scheme	0.3	0.2
Sesa Resources Limited and Sesa Mining Corporation Limited Employees Superannuation Fund	0.0	0.0

Details of balance payable at the end of the year to post-retirement employee benefit trusts.

(US$ million)	As at 31 March 2018	As at 31 March 2017
BALCO Employees Provident Fund Trust	0.8	0.7
Hindustan Zinc Ltd. Employee Contributory Provident Fund Trust	1.4	0.4
Sesa Group Employees Provident Fund	0.3	0.2
Sesa Resources Limited Employees Provident Fund	0.0	0.0
Sesa Mining Corporate Limited Employees Provident Fund	0.0	0.0
HZL Superannuation Fund	0.0	0.0
Sesa Group Executives Superannuation Scheme	0.0	0.1
Sesa Resources Limited and Sesa Mining Corporation Limited Employees Superannuation Fund	0.0	0.0

Remuneration of Key Management Personnel

(US$ million)	Year ended 31 March 2018	Year ended 31 March 2017
Short-term employee benefits	19.5	20.0
Post-employment benefits	0.7	1.0
Share-based payments	5.5	3.9
	25.7	**24.9**
Compensation for Non-Executive Directors	0.9	0.9
Commission/sitting fees to KMP	0.0	0.0

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including any director (whether executive or otherwise).

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

39. Related party transactions continued

Other related party#

(US$ million)	(US$ million) Year ended 31 March 2018	(US$ million) Year ended 31 March 2017
Salary paid to relative	1.2	1.2
Commission/sitting fees to relatives of KMP	0.0	0.0

close relative of the Executive Chairman.

40. Share Transactions Call Options

a. HZL

Pursuant to the Government of India's policy of divestment, the Group in April 2002 acquired 26% equity interest in HZL from the Government of India. Under the terms of the Shareholder's Agreement ('SHA'), the Group had two call options to purchase all of the Government of India's shares in HZL at fair market value. The Group exercised the first call option on 29 August 2003 and acquired an additional 18.9% of HZL's issued share capital. The Group also acquired an additional 20% of the equity capital in HZL through an open offer, increasing its shareholding to 64.9%. The second call option provides the Group the right to acquire the Government of India's remaining 29.5% share in HZL. This call option is subject to the right of the Government of India to sell 3.5% of HZL shares to HZL employees. The Group exercised the second call option on 21 July 2009. The Government of India disputed the validity of the call option and has refused to act upon the second call option. Consequently the Group invoked arbitration which is in the early stages. The next date of hearing is scheduled for 24 November 2018. The Government of India without prejudice to the position on the Put/Call option issue has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route. Meanwhile, the Supreme Court has, in January 2016, directed status quo pertaining to disinvestment of Government of India's residual shareholding in a public interest petition filed which is currently pending and sub-judice.

b. BALCO

Pursuant to the Government of India's policy of divestment, the Group in March 2001 acquired 51% equity interest in BALCO from the Government of India. Under the terms of the SHA, the Group has a call option to purchase the Government of India's remaining ownership interest in BALCO at any point from 2 March 2004. The Group exercised this option on 19 March 2004. However, the Government of India has contested the valuation and validity of the option and contended that the clauses of the SHA violate the (Indian) Companies Act, 1956 by restricting the rights of the Government of India to transfer its shares and that as a result such provisions of the SHA were null and void. In the arbitration filed by the Group, the arbitral tribunal by a majority award rejected the claims of the Group on the grounds that the clauses relating to the call option, the right of first refusal, the 'tag-along' rights and the restriction on the transfer of shares violate the (Indian) Companies Act, 1956 and are not enforceable. The Group has challenged the validity of the majority award in the High Court of Delhi and sought for setting aside the arbitration award to the extent that it holds these clauses ineffective and inoperative. The Government of India also filed an application before the High Court of Delhi to partially set aside the arbitral award in respect of certain matters involving valuation. The matter is currently scheduled for hearing by the Delhi High Court on 3 July 2018. Meanwhile, the Government of India without prejudice to its position on the Put/Call option issue has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route.

In view of the lack of resolution on the options, the non-response to the exercise and valuation request from the Government of India, the resultant uncertainty surrounding the potential transaction and the valuation of the consideration payable, the Group considers the strike price of the options to be at fair value, and hence the call options have not been recognised in the financial statements.

41. Konkola Copper Mines: Value Added Tax

As of 31 March 2018, backlog Value Added Tax (falling under older VAT rule 18 regime) on inputs amounting to US$72 million (31 March 2017 : US$71 million) for 10 month's period between October 2013 to December 2014 was pending for refund from the Government of Republic of Zambia (GRZ). Based on various VAT audits to the satisfaction of Zambia Revenue Authority (ZRA), KCM was granted refunds for US$56 million in FY2017.

During FY2018, Government of Republic of Zambia have initiated an industry-wide audit of governance and documentations surrounding VAT rules through independent professional audit firms in order to have a more comprehensive review of compliance and governance in VAT regime between 1 January 2013 to 31 December 2015.

The Company believes the new comprehensive review would only reaffirm the position of its compliance, given positive outcomes in earlier audits as conducted by ZRA. Accordingly, the Company does not recognise any provision against the carrying amount of this receivable, however due to delays in start of the comprehensive assessment, the VAT receivables of US$72 million related to the period under audit has been reclassified to 'Other non-current assets' in the Statement of Financial Position as at 31 March 2018.

42. Group Restructuring

Consequent to the receipt of all substantive approvals for the merger of Cairn India Limited with Vedanta Limited on 27 March 2017, the merger was accounted for in the financial year ended 31 March 2017. As per the terms of the scheme, upon the merger becoming effective, non-controlling i.e. public shareholders of Cairn India Limited received one equity share in Vedanta Limited of face value Re 1 each (US$0.0) and four 7.5% Redeemable Preference Shares in Vedanta Limited of INR10 each (US$0.2) for each equity share held in Cairn India Limited. No shares were issued to Vedanta Limited or any of its subsidiaries for their shareholding in Cairn India Limited. Cairn India Limited ceased to be a separate legal entity with effect from 11 April 2017.

The above had resulted in a decrease in the shareholding of the Company in Vedanta Limited (merged entity) from 62.85% to 50.13% and an increase in the shareholdings of erstwhile Cairn India Limited's subsidiaries from 37.64% to 50.13%. Given the Company continues to control Vedanta Limited, this was accounted for as an equity transaction with no gain or loss recognised in the income statement.

43. Subsequent events

There are no material adjusting or non-adjusting subsequent events, except as disclosed in Note 2 (c)(xii) and below.

Vedanta Limited's resolution plan to acquire Electrosteel Steels Limited (ESL) was approved by the National Company Law Tribunal (NCLT) in India on 17 April 2018 and the Competition Commission of India has subsequently approved the acquisition of ESL by Vedanta Limited. Further, the proposed acquisition was approved by the shareholders of the Company on 18 May 2018. In regard to an appeal filed before it, the National Company Law Appellate Tribunal (NCLAT) has directed that pending final resolution, status quo on ESL as on 1 May 2018 is to be maintained until the appeal is resolved. The Steering Committee, already constituted, shall continue to run the operations of ESL until final resolution.

44. List of Subsidiaries

The financial statements comprise the financial statements of the following subsidiaries:

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	The Company's economic percentage holding 31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	Immediate percentage holding 31 March 2017
Direct Subsidiaries of the Parent Company								
Vedanta Resources Holding Limited ('VRHL')	Holding company	5th Floor, 6 St. Andrew Street, London EC4A 3AE	100.00%	100.00%	United Kingdom	VR plc	100.00%	100.00%
Vedanta Resources Jersey Limited ('VRJL')	Investment company	47 Esplanade, St. Helier, Jersey JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Resources Jersey II Limited ('VRJL-II')	Investment company	47 Esplanade, St. Helier, Jersey JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Finance (Jersey) Limited ('VFJL')	Investment company	47 Esplanade, St. Helier, Jersey JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Jersey Investments Limited ('VJIL')	Investment company	13 Castle Street, St. Helier, Jersey JE4 5UT Channel Islands	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Indirect Subsidiaries of the Parent Company								
Vedanta Limited	Copper smelting, Iron Ore mining, Aluminium mining, refining and smelting, Power generation, Oil and Gas exploration, and production	Vedanta Limited 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai–400093, Maharashtra, India	50.25%	50.13%	India	Twin Star	37.20%	37.11%
Bharat Aluminium Company Limited ('BALCO')	Aluminium mining and smelting	Aluminium Sadan, 2nd Floor, Core-6-Scope Complex, 7 Lodi Road, New Delhi-110 003	25.63%	25.56%	India	Vedanta Limited	51.00%	51.00%
Copper Mines of Tasmania Pty Limited ('CMT')	Copper mining	C/O Henry Davis York, 44 Martin Place, Sydney, New South Wales	50.25%	50.13%	Australia	MCBV	100.00%	100.00%
Fujairah Gold FZC	Gold and Silver processing	P.O. Box 3992, Fujairah, United Arab Emirates	50.25%	50.13%	UAE	MEL	100.00%	100.00%
Hindustan Zinc Limited ('HZL')	Zinc mining and smelting	Yashad Bhawan, Udaipur (Rajasthan) – 313004	32.62%	32.54%	India	Vedanta Limited	64.92%	64.92%

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44. List of Subsidiaries continued

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	The Company's economic percentage holding 31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	Immediate percentage holding 31 March 2017
Monte Cello BV ('MCBV')	Holding company	WTC Schipol Airport, Tower B, 5th Floor, Schipol Boulevard 231, 1118 BH Schipol, The Netherlands	50.25%	50.13%	Netherlands	Vedanta Limited	100.00%	100.00%
Monte Cello Corporation NV (MCNV')	Holding company	Kaya Flamboyan 3c, Curaçao, Netherlands Antilles	100.00%	100.00%	Curaçao	Twin Star	100.00%	100.00%
Konkola Copper Mines PLC ('KCM')	Copper mining and smelting	Private Bag KCM (C) 2000, Stand M 1408, Fern Avenue, Chingola	79.42%	79.42%	Zambia	VRHL	79.42%	79.42%
KCM Smelter Co Limited	Production and marketing of copper slimes	Private Bag KCM (C) 2000, Stand M 1408, Fern Avenue, Chingola	79.42%	79.42%	Zambia	KCM	79.42%	79.42%
Sesa Resources Limited ('SRL')	Iron ore	Sesa Ghor, 20 EDC Complex, Patto, Panaji (Goa)-403001	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%
Sesa Mining Corporation Limited	Iron ore	Sesa Ghor, 20 EDC Complex, Patto, Panaji (Goa)-403001	50.25%	50.13%	India	SRL	100.00%	100.00%
Thalanga Copper Mines Pty Limited ('TCM')	Copper mining	C/o Henry Davis York, 44 Martin Place, Sydney, New South Wales	50.25%	50.13%	Australia	MCBV	100.00%	100.00%
Twin Star Holdings Limited ('Twin Star')	Holding company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	100.00%	100.00%	Mauritius	VRHL	100.00%	100.00%
MALCO Energy Limited ('MEL')	Power generation	SIPCOT Industrial Complex, Madurai Bypass Road, Thoothukudi (Tamil Nadu) – 628 002	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%
Richter Holding Limited ('Richter')	Investment company	66, Ippocratous Street, 1015 Nicosia, Cyprus	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Westglobe Limited	Investment company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	100.00%	100.00%	Mauritius	Richter	100.00%	100.00%
Finsider International Company Limited	Investment company	5th Floor, 6 St. Andrew Street, London EC4A 3AE	100.00%	100.00%	United Kingdom	Richter	60.00%	60.00%
Vedanta Resources Finance Limited ('VRFL')	Investment company	5th Floor, 6 St. Andrew Street, London EC4A 3AE	100.00%	100.00%	United Kingdom	VRHL	100.00%	100.00%
Vedanta Resources Cyprus Limited ('VRCL')	Investment company	66, Ippocratous Street, 1015 Nicosia, Cyprus	100.00%	100.00%	Cyprus	VRFL	100.00%	100.00%

44. List of Subsidiaries continued

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	The Company's economic percentage holding 31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	Immediate percentage holding 31 March 2017
Welter Trading Limited ('Welter')	Investment company	28th Oktovriou Street, 205 Louloupis Court, 1st Floor P.C. 3035, Limassol, Cyprus	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Lakomasko B.V.	Investment company	Herengracht 458, 1017 CA Amsterdam, The Netherlands	50.25%	50.13%	Netherlands	THL Zinc Holding B.V.	100.00%	100.00%
THL Zinc Ventures Limited	Investment company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	Vedanta Limited	100.00%	100.00%
Twin Star Energy Holdings Limited ('TEHL')[1]	Holding company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	BFL	100.00%	100.00%
THL Zinc Limited	Investment company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	THL Zinc Ventures Ltd	100.00%	100.00%
Sterlite (USA) Inc.	Investment company	Corporation Service Company, 2711 Centerville Road, Suite 400, City of Wilmington, Country of New Castle, Delaware, 19808	50.25%	50.13%	USA	Vedanta Limited	100.00%	100.00%
Talwandi Sabo Power Limited	Power generation	Vill. Banawala, Mansa – Talwandi Sabo Road, Distt. Mansa, Punjab – 151302	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%
Twin Star Mauritius Holdings Limited ('TMHL')[1]	Holding company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	TEHL	100.00%	100.00%
THL Zinc Namibia Holdings (Pty) Limited ('VNHL)	Mining and Exploration	24 Orban Street, Klein Windhoek, Windhoek	50.25%	50.13%	Namibia	THL Zinc Ltd	100.00%	100.00%
Skorpion Zinc (Pty) Limited ('SZPL')	Acquisition of immovable and movable properties	24 Orban Street, Klein Windhoek, Windhoek	50.25%	50.13%	Namibia	VNHL	100.00%	100.00%
Namzinc (Pty) Limited ('SZ')	Mining	24 Orban Street, Klein Windhoek, Windhoek	50.25%	50.13%	Namibia	SZPL	100.00%	100.00%
Skorpion Mining Company (Pty) Limited ('NZ')	Mining	24 Orban Street, Klein Windhoek, Windhoek	50.25%	50.13%	Namibia	SZPL	100.00%	100.00%

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Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	The Company's economic percentage holding 31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	Immediate percentage holding 31 March 2017
Amica Guesthouse (Pty) Ltd	Accommodation and catering services	24 Orban Street, Klein Windhoek, Windhoek	50.25%	50.13%	Namibia	SZPL	100.00%	100.00%
Rosh Pinah Healthcare (Pty) Ltd	Leasing out of medical equipment and building and conducting services related thereto	24 Ondye Drive, Rosh Pinah	34.67%	34.59%	Namibia	SZPL	69.00%	69.00%
Black Mountain Mining (Pty) Ltd	Mining	24 Orban Street, Klein Windhoek, Windhoek	37.19%	37.10%	South Africa	THL Zinc Ltd	74.00%	74.00%
THL Zinc Holding BV	Investment company	Penge Road, Aggeneys	50.25%	50.13%	Netherlands	Vedanta Limited	100.00%	100.00%
Lisheen Mine Partnership	Mining Partnership Firm	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLML	50.00%	50.00%
Vedanta Lisheen Holdings Limited ('VLHL')	Investment Company	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	THL Zinc Holding BV	100.00%	100.00%
Vedanta Exploration Ireland Limited	Exploration Company	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLHL	100.00%	100.00%
Vedanta Lisheen Mining Limited ('VLML')	Mining	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Mining Limited	Mining	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Finance Limited	Investment Company	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLHL	100.00%	100.00%
Lisheen Milling Limited	Manufacturing	Killoran, Moyne, Thurles, Co. Tipperary	50.25%	50.13%	Ireland	VLHL	100.00%	100.00%
Vizag General Cargo Berth Private Limited	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%
Paradip Multi Cargo Berth Private Limited	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%

44. List of Subsidiaries continued

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	The Company's economic percentage holding 31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	Immediate percentage holding 31 March 2017
Sterlite Ports Limited ('SPL')	Infrastructure	Sterlite Industries[I] Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.25%	50.13%	India	Vedanta Limited	100.00%	100.00%
Maritime Ventures Private Limited	Infrastructure	Sterlite Industries[I] Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.25%	50.13%	India	SPL	100.00%	100.00%
Goa Sea Ports Private Limited	Infrastructure	Sterlite Industries[I] Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.25%	50.13%	India	SPL	100.00%	100.00%
Bloom Fountain Limited ('BFL')	Operating (Iron Ore) and Investment Company	C/o SGG Corporate Services Limited, Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	Vedanta Limited	100.00%	100.00%
Western Cluster Limited	Mining Company	Amir Building, 18th Street, Sinkor, Tubman Boulevard, Sinkor, Monrovia, Liberia, West Africa	50.25%	50.13%	Liberia	BFL	100.00%	100.00%
Sesa Sterlite Mauritius Holdings Limited[1]	Investment company	C/o SGG Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.25%	50.13%	Mauritius	BFL	100.00%	100.00%
Vedanta Finance UK Limited	Investment company	5th Floor, 6 St. Andrew Street, London EC4A 3AE	100.00%	100.00%	United Kingdom	Welter	100.00%	100.00%
Valliant (Jersey) Limited	Investment Company	47 Esplanade, St. Helier, Jersey JE1 0BD Channel Islands	100.00%	100.00%	Jersey(CI)	VRJL-II	100.00%	100.00%
Cairn India Holdings Limited	Investment company	4th Floor, 22–24 New Street, St. Paul's Gate, St. Helier, Jersey JE1 4TR Channel Islands	50.25%	50.13%	Jersey	Vedanta Limited	100.00%	100.00%
Cairn Energy Hydrocarbons Ltd	Oil & gas exploration, development and production	Summit House, 4–5 Mitchell Street, Edinburgh EH6 7BD, Scotland	50.25%	50.13%	Scotland	Cairn India Holdings Limited	100.00%	100.00%

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Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding 31 March 2018	31 March 2017	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2018	31 March 2017
Cairn Exploration (No. 2) Limited	Oil & gas exploration, development and production	Summit House, 4-5 Mitchell Street, Edinburgh EH6 7BD, Scotland	50.25%	50.13%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Gujarat Block 1 Limited	Oil & gas exploration, development and production	Summit House, 4–5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.25%	50.13%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Discovery Limited	Oil & gas exploration, development and production	Summit House, 4–5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.25%	50.13%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy India Pty Limited	Oil & gas exploration, development and production	Level 12, 680 George Street, Sydney NSW 2000, Australia	50.25%	50.13%	Australia	Cairn India Holdings Limited	100.00%	100.00%
CIG Mauritius Holdings Private Limited	Investment company	Abax Corporate Services Ltd. 6th Floor, Tower A, 1 CyberCity, Ebene, Mauritius	50.25%	50.13%	Mauritius	Cairn Energy Hydrocarbons Limited	100.00%	100.00%
CIG Mauritius Private Limited	Investment company	Abax Corporate Services Ltd. 6th Floor, Tower A, 1 CyberCity, Ebene, Mauritius	50.25%	50.13%	Mauritius	CIG Mauritius Holding Private Limited	100.00%	100.00%
Cairn Lanka Private Limited	Oil & gas exploration, development and production	Level 27, West Tower, World Trade Centre, Echelon Square, Colombo 1, Sri Lanka	50.25%	50.13%	Sri Lanka	CIG Mauritius Pvt Ltd	100.00%	100.00%
Cairn South Africa Pty Limited	Oil & gas exploration, development and production	22 Bree Street, Cape Town, 8001, South Africa	50.25%	50.13%	South Africa	Cairn Energy Hydrocarbons Limited	100.00%	100.00%
Avanstrate (Japan) Inc. ('ASI')[2]	LCD glass substrate manufacturing	1-11-1 Nishi-Gotanda, Shinagawa-ku, Tokyo, Japan	25.63%	–	Japan	Avanstrate (Japan) Inc.	51.63%	–
Avanstrate Korea[2]	LCD glass substrate manufacturing	84, Hyeongoksandan-ro, Cheongbuk-myeon, Pyeongtaek-city, Gyeonggi-province 451–831, South Korea	25.63%	–	South Korea	Avanstrate (Japan) Inc.	100%	–
Avanstrate Taiwan[2]	LCD glass substrate manufacturing	No 8, Industry 3rd Road, Annan District, Tainan 709–55, Taiwan, R.O.C.	25.63%	–	Taiwan	Avanstrate (Japan) Inc.	100%	–

1 Under liquidation.
2 On 28 December 2017, the Group through its wholly owned subsidiary, acquired 51.6% equity stake in AvanStrate Inc. (ASI) (Refer to Note 5).
3 Subsequent to the balance sheet date, Vedanta Star Limited, a 100% subsidiary of Vedanta Limited was incorporated on 23 April 2018.

The Group owns directly or indirectly through subsidiaries, more than half of the voting power of all of its subsidiaries as mentioned in the list above, and has power over the subsidiaries, is exposed or has rights, to variable returns from its involvement with the subsidiaries and has the ability to affect those returns through its power over the subsidiaries.

45. Ultimate controlling party

At 31 March 2018, the ultimate controlling party of the Group was Volcan, which is controlled by persons related to the Executive Chairman, Mr Anil Agarwal. Volcan is incorporated in the Bahamas, and does not produce Group accounts.

Company Balance Sheet
As at 31 March 2018

(US$ million)	Note	As at 31 March 2018	As at 31 March 2017
Fixed assets			
Tangible assets	2	0.1	0.1
Investments in subsidiaries	3	1,226.3	1,226.3
Investment in preference shares of subsidiaries	4	–	4.7
Financial asset investment	5	0.2	0.3
		1,226.6	**1,231.4**
Current assets			
Debtors due within one year	6	2,207.0	2,151.4
Debtors due after one year	6	2,565.0	2,358.8
Investments	7	8.9	14.6
Cash and cash equivalents		54.3	0.9
		4,835.2	**4,525.7**
Creditors: amounts falling due within one year			
Trade and other creditors	8	(77.1)	(88.4)
External borrowings	8	(252.0)	(173.8)
Loan from subsidiary	8	–	(176.5)
		(329.1)	**(438.7)**
Net current assets		**4,506.1**	**4,087.0**
Total assets less current liabilities		**5,732.7**	**5,318.4**
Creditors: amounts falling due after one year			
Loan from subsidiary	9	(176.5)	–
External borrowings	9	(4,237.1)	(4,250.8)
		(4,413.6)	**(4,250.8)**
Net assets		**1,319.1**	**1,067.6**
Capital and reserves			
Called up share capital		30.4	30.1
Share premium account		201.5	201.5
Share-based payment reserve		13.3	28.2
Other reserves		(2.1)	(2.0)
Treasury shares		(490.6)	(490.6)
Profit and loss account		1,566.6	1,300.4
Equity shareholders' funds		**1,319.1**	**1,067.6**

The separate Financial Statements of Vedanta Resources plc, registration number 4740415 were approved by the Board of Directors on 22 May 2018 and signed on its behalf by

Navin Agarwal
Executive Vice Chairman

Company Statement of Changes in Equity

For the year ended 31 March 2018

(US$ million)	Share capital*	Share premium	Share-based payment reserve	Treasury Shares**	Retained earnings	Other Reserves	Total
Equity shareholders' funds at 1 April 2017	**30.1**	**201.5**	**28.2**	**(490.6)**	**1,300.4**	**(2.0)**	**1,067.6**
Profit for the year	–	–	–	–	407.0	–	407.0
Dividends paid (Note 14 of Group financial statements)	–	–	–	–	(165.4)***	–	(165.4)
Exercise of stock options (Note 32 of Group financial statements)	0.3	–	(27.0)	–	27.0	–	0.3
Recognition of share-based payments (Note 32 of Group financial statements)	–	–	12.1	–	–	–	12.1
Gift to Employees Benefit Trust****	–	–	–	–	(2.4)	–	(2.4)
Movement in fair value of financial asset investment	–	–	–	–	–	(0.1)	(0.1)
Equity shareholders' funds as at 31 March 2018	**30.4**	**201.5**	**13.3**	**(490.6)**	**1,566.6**	**(2.1)**	**1,319.1**

(US$ million)	Share capital*	Share premium	Share-based payment reserve	Convertible bond reserve	Treasury Shares**	Retained earnings	Other Reserves	Total
Equity shareholders' funds at 1 April 2016	**30.1**	**201.5**	**29.9**	**10.8**	**(490.6)**	**724.6**	**(2.2)**	**504.1**
Profit for the year	–	–	–	–	–	690.2	–	690.2
Dividends paid (Note 14 of Group financial statements)	–	–	–	–	–	(138.4)***	–	(138.4)
Exercise of stock options (Note 32 of Group financial statements)	0.0	–	(15.1)	–	–	15.1	–	0.0
Recognition of share-based payments (Note 32 of Group financial statements)	–	–	13.4	–	–	–	–	13.4
Gift to Employees Benefit Trust****	–	–	–	–	–	(1.9)	–	(1.9)
Convertible bond transfer (Note 28 of Group financial statements)	–	–	–	(10.8)	–	10.8	–	–
Movement in fair value of financial asset investment	–	–	–	–	–	–	0.2	0.2
Equity shareholders' funds as at 31 March 2017	**30.1**	**201.5**	**28.2**	**–**	**(490.6)**	**1,300.4**	**(2.0)**	**1,067.6**

* For details, refer Note 35 of Group financial statements.

** At 31 March 2018, the total number of treasury shares held by the Company was 22,502,483 (31 March 2017: 22,502,483).

*** Total dividends of US$165.4 million (2017:US$138.4) million includes dividend of US$1.0 million (US$0.9 million) paid to a separate investment trust which is consolidated in the Group's financial statements with that element of dividends paid by the Company being eliminated (Refer to Note 14 of Group financial statements).

**** Gift to Employees Benefit Trust relates to net purchase of treasury shares under the employee Deferred Share Bonus Plan (Refer to Note 32 of Group financial statements).

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

1. Company accounting policies

Basis of Accounting

The Company meets the definition of a qualifying entity under Financial Reporting Standard 100 'Application of Financial Reporting Requirements' (FRS 100) issued by the Financial Reporting Council and in accordance with 101 Reduced Disclosure Framework (FRS 101). Accordingly, these financial statements have been prepared on a going concern basis and in accordance with the provisions of the UK Companies Act 2006 and applicable UK accounting standards.

These financial statements have been prepared under the historical cost convention.

As permitted by section 408 of the Companies Act 2006, the profit and loss account of the Company is not presented as part of these financial statements. The profit after tax for the year of the Company amounted to US$407.0 million (2017: Profit US$690.2 million)

These financial statements are presented in US dollars being the functional currency of the Company.

In these financial statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

- The requirements of paragraph 38, 134 and 136 of IAS 1 'Presentation of Financial Statements'
- The requirements of IAS 7 'Statement of Cash Flows';
- The requirements of IFRS 7 'Financial Instruments : Disclosures';
- The requirements of Paragraph 17 of IAS 24 'Related party disclosures';
- The requirements of IAS 24, 'Related party disclosures' to disclose related party transactions entered into between two or more members of a group, provided that any subsidiary which is a party to the transaction is wholly owned by such a member;
- The requirements of Paragraph 30 and 31 of IAS 8 'Accounting policies, changes in accounting estimates and errors' in relation to standards not yet effective.

Significant accounting policies

Investments in subsidiaries

Investments in subsidiaries represent equity holdings in subsidiaries except preference shares, valued at cost less any provision for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable.

Investment in preference shares of subsidiaries

Investments in preference shares of subsidiaries are stated at fair value. The fair value is represented by the face value of the preference shares as the investments are redeemable at any time for their face value at the option of the Company.

Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise of cash at bank, short-term bank deposits and cash in hand.

Financial asset investments

Financial asset investments are classified as available-for-sale under IAS 39 and are initially recorded at cost and then remeasured at subsequent reporting dates to fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Currency translation

Transactions in currencies other than the functional currency of the Company, being US dollars, are translated into US dollars at the spot exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies at the balance sheet date are translated into US dollars at year end exchange rates, or at a contractual rate if applicable.

Tangible fixed assets

Tangible fixed assets are stated at cost less accumulated depreciation and provision for impairment.

Deferred taxation

Deferred taxation is provided in full on all timing differences that result in an obligation at the balance sheet date to pay more tax, or a right to pay less tax, at a future date, subject to the recoverability of deferred tax assets. Deferred tax assets and liabilities are not discounted.

Share-based payments

The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards are determined with the assistance of an external valuer and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Company's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations. No adjustment is made to the fair value after the vesting date even if the awards are forfeited or not exercised. Amounts recharged to subsidiaries in respect of awards granted to employees of subsidiaries are recognised as intercompany debtors/creditors until repaid.

The resultant increase in equity is recorded in share-based payment reserve.

In case of cash-settled transactions, a liability is recognised for the fair value of cash-settled transactions. The fair value is measured initially and at each reporting date up to and including the settlement date, with changes in fair value recognised in employee benefits expense. The fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The fair value is determined with the assistance of an external valuer.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

1. Company accounting policies continued

Borrowings

Interest bearing loans are recorded at the net proceeds received i.e. net of direct transaction costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on accruals basis and charged to the profit and loss account using the effective interest method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Convertible Bonds

The Convertible bond issued by VRJL and VRJL-II are accounted for as a compound instrument. The gross proceeds (net of issue costs) were lent to the Company by VRJL and VRJL-II. The equity component has been recognised in a separate reserve of the Company and is not subsequently remeasured. The recognition of the equity component by the Company acts to reduce the payable to VRJL and VRJL-II which arises once the gross proceeds are borrowed. The liability component is held at amortised cost. The interest expensed on the liability component is calculated by applying an effective interest rate. The difference between interest expensed and interest paid is added to the carrying amount of the liability component.

Financial instruments

The Company has elected to take the exemption provided in paragraph 8 of FRS 101 in respect of these parent Company financial statements. Full disclosures are provided in Note 29 to the financial statements of the Group for the year ended 31 March 2018.

Derivative financial instruments

Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are remeasured at their fair value at subsequent balance sheet dates.

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the profit and loss account. The hedged item is recorded at fair value and any gain or loss is recorded in the profit and loss account and is offset by the gain or loss from the change in the fair value of the derivative.

Derivative financial instruments that do not qualify for hedge accounting are marked to market at the balance sheet date and gains or losses are recognised in the profit and loss account immediately.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting.

Cash flow statement

The Company financial statements are prepared under FRS 101, which does not require application of IAS 7. Accordingly, the Company does not present the individual company cash flow statement.

Financial guarantees

Guarantees issued by the Company on behalf of subsidiaries are designated as 'Insurance Contracts'. Accordingly, these are shown as contingent liabilities. (Note 10)

Debtors

Debtors are stated at their nominal value as reduced by appropriate allowance for estimated irrecoverable amounts. An allowance for impairment for debtors is made where there is an indication of a reduction in the recoverability of the carrying value of the debtor.

Creditors

Creditors are stated at their nominal value.

2. Company tangible fixed assets

(US$ million)	
Cost	
At 1 April 2016	**2.3**
Additions	0.0
At 31 March 2017	2.3
Additions	0.1
At 31 March 2018	**2.4**
Accumulated depreciation	
At 1 April 2016	**2.1**
Charge for the period	0.1
At 31 March 2017	2.2
Charge for the period	0.1
At 31 March 2018	**2.3**
Net book value	
At 1 April 2016	0.2
At 31 March 2017	0.1
At 31 March 2018	**0.1**

3. Investments in subsidiaries

(US$ million)	
Cost	
At 1 April 2016	1,226.3
At 1 April 2017	**1,226.3**
At 31 March 2018	**1,226.3**

At 31 March 2018, the Company held 157,538,524 shares in Vedanta Resources Holdings Limited ('VRHL') (March 2017: 157,538,524 shares), being 100% of VRHL's issued equity share capital. The Company also held one deferred share in VRHL (March 2017: one). At 31 March 2018, the Company held two shares in Vedanta Finance Jersey Limited ('VFJL') (March 2017: two), two shares in Vedanta Resources Jersey Limited ('VRJL') (March 2017: two), two shares in Vedanta Resources Jersey II Limited ('VRJL-II') (March 2017: two), two shares in Vedanta Jersey Investment Limited ('VJIL') (March 2017: two), being 100% of its issued equity share capital.

VRHL is an intermediary holding company incorporated in the United Kingdom (Note 44 of the financial statements of the Group) and registered in England and Wales. VFJL, VRJL, VJIL and VRJL-II are companies, registered and incorporated in Jersey, established to raise funds for the Vedanta Group.

4. Investment in preference shares of subsidiaries

(US$ million)	
Fair value	
At 1 April 2017	**4.7**
Additions	–
Redemption	(4.7)
At 31 March 2018	**–**
At 1 April 2016	**4.7**
Additions	–
Redemption	–
At 31 March 2017	**4.7**

As at 31 March 2018, the Company held nil preference shares in Vedanta Resources Jersey Limited (VRJL) (31 March 2017: 47 preference shares). During the year, all the preference shares have been redeemed by VRJL.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

5. Financial asset investment

(US$ million)	
Fair value	
At 1 April 2017	**0.3**
Fair value movement	(0.1)
At 31 March 2018	**0.2**
At 1 April 2016	**0.1**
Fair value movement	0.2
At 31 March 2017	**0.3**

The investment relates to an equity investment in the shares of Victoria Gold Corporation. At 31 March 2018, the investment in Victoria Gold Corporation was revalued and loss of US$0.1 million (2017: gain of US$0.2 million) was recognised in equity.

6. Company debtors

(US$ million)	As at 31 March 2018	As at 31 March 2017
Amounts due from subsidiary undertakings	4,771.0	4,509.4
Prepayments and accrued income	0.9	0.5
Other taxes	0.1	0.3
Total	**4,772.0**	**4,510.2**
Debtors due within one year	2,207.0	2,151.4
Debtors due after one year	2,565.0	2,358.8
Total	**4,772.0**	**4,510.2**

Amounts due from subsidiary undertakings

At 31 March 2018, the Company had loans due from VRHL of US$2,110.4 million (2017: US$1,790.3 million) which represented the funds being loaned for funding the subsidiaries. Out of the total loan, US$1,423.4 million bears interest 6.82%, US$500.0 million at 5.8%, US$140.0 million at US$LIBOR plus 385 basis points and US$47.0 million at 9.7%.

At 31 March 2018, the Company had loans of US$2,270.3 million (2017: US$1,757.1 million) due from Vedanta Resources Jersey II Limited (VRJL-II). Out of the total loan, US$522.9 million bears interest at 6.82%, US$1,200.0 million at 6.50%, US$121.4 million at LIBOR plus 300 basis points, US$60.0 million at 6.5%, US$121.0 million at 6.75% and US$245.0 million at 6 months US$LIBOR plus 430 basis points.

At 31 March 2018, the Company had loans of US$83.9 million (2017: US$125.0 million) due from Vedanta Resources Jersey Limited (VRJL) bearing interest at 6.75%.

The Company was owed US$298.5 million (2017: US$344.9 million) of accrued interest from VRHL and VRJL-II and VRJL.

As at 31 March 2018, the Company had dividend receivable from VRHL of US$ NIL million (2017: US$475.0 million).

In addition to the loans, the Company was also owed US$7.9 million (2017: US$17.0 million) of other receivables from Group companies.

7. Company current asset investments

(US$ million)	As at 31 March 2018	As at 31 March 2017
Bank term deposits	8.9	14.6
Total	**8.9**	**14.6**

8. Company creditors: amounts falling due within one year

(US$ million)	As at 31 March 2018	As at 31 March 2017
Accruals	(77.1)	(88.4)
Loan from subsidiary (Note 9)	–	(176.5)
Term loans	–	(173.8)
Bonds:		
6% bonds due in January 2019	(252.0)	–
Total	**(329.1)**	**(438.7)**

8. Company creditors: amounts falling due within one year continued

As at 31 March 2017 loans from subsidiaries included a loan of US$176.5 million due to Vedanta Finance UK Limited. During the year, its maturity has been extended to January 2021 and the rate of interest has been amended to US$LIBOR plus 410 basis points. Accordingly, the loan has been reclassified to creditors falling due after one year.

In April 2013, the Company entered into a Standby Letter of Credit agreement arranged by Axis Bank for an amount of US$150.0 million at a commission of 1% per annum payable quarterly. This facility was funded by the Bank of India to the extent of US$148.5 million with interest rate at three months US$LIBOR plus 290 basis points. The facility was payable in two equal annual instalments starting April 2017. During the year, the total amount outstanding under this facility of US$148.5 million was repaid out of which US$74.2 million was shown under creditors falling due within one year and US$74.3 million was shown under creditors falling due after one year respectively in the previous year.

In December 2013, the Company entered into a facility agreement with the Bank of India for borrowing up to US$100 million at an interest rate of US$LIBOR plus 357 basis points repayable to the extent of 50% in October 2017 and balance in January 2018. During the year, the Company repaid the total amount outstanding under this facility.

9. Company creditors: amounts falling due after one year

(US$ million)	As at 31 March 2018	As at 31 March 2017
Loan from subsidiary (Note 8)	(176.5)	–
Term loans	(1,087.7)	(716.8)
Bonds:		
6.125% bonds due August 2024	(991.7)	–
9.50% bonds due July 2018*	–	(378.8)
8.25% bonds due June 2021*	(667.4)	(895.1)
6.375% bonds due July 2022	(993.2)	(991.5)
7.125% bonds due May 2023	(497.1)	(496.5)
6% bonds due January 2019*	(252.0)	(772.1)
Less: current maturities (Note 8)		
6% bonds due January 2019	252.0	–
Total	**(4,413.6)**	**(4,250.8)**

* Prepaid fully/partially during the current year.

Term loans are made up of the following loans that the Company has entered into:

- In March 2015, the Company entered into a facility agreement with State Bank of India for borrowing up to US$350.0 million. US$100.0 million is repayable in March 2020 and bears interest at a rate of US$LIBOR plus 370 basis points. US$250.0 million bears interest at a rate of US$LIBOR plus 403 basis points repayable in two instalments being US$100.0 million due in June 2021 and US$150.0 million in June 2022. As at 31 March 2018, the outstanding amount under this facility is US$350.0 million.
- In January 2016, the Company entered into a facility agreement with State Bank of India for borrowing up to US$300.0 million. US$120.0 million is repayable in February 2022 and bears interest at a rate of US$LIBOR plus 450 basis points. US$180.0 million is repayable in February 2023 and bears interest at a rate of US$LIBOR plus 453 basis points. As at 31 March 2018, the outstanding amount under this facility is US$300.0 million.
- During the current year, the Company entered into a facility agreement with Syndicate Bank for borrowing up to US$100.0 million and bears interest at a rate of 3 months US$LIBOR plus 325 basis points. US$1.0 million is repayable in November 2021 and US$99.0 repayable in November 2022. As at 31 March 2018, the outstanding amount under this facility is US$100.0 million.
- During the current year, the Company entered into facility agreements with Yes Bank in different tranches for borrowings up to US$150.0 million and bears interest at a rate of 3 months US$LIBOR plus 299 basis points. US$15.0 million is repayable in July 2020, US$20.0 million is repayable in January 2021, US$25.0 million is repayable in July 2021, US$40.0 million is repayable in January 2022 and US$50.0 million is repayable in July 2022. As at 31 March 2018, the outstanding amount under this facility is US$150.0 million.
- During the current year, the Company entered into facility agreements with State Bank of India in different tranches for borrowings up to US$200.0 million and bears interest at a rate of US$LIBOR plus 339 basis points. The loan is repayable in January 2025. As at 31 March 2018, the outstanding amount under this facility is US$200.0 million.

Notes to the Financial Statements continued

As at and for the year ended 31 March 2018

10. Company contingent liabilities

The Company has given a corporate guarantee to Konkola Copper Mines for an amount of US$689.1 million (2017: US$709.0 million).

The Company has guaranteed US$170.0 million (out of which, US$34.0 million has been repaid during the year) (2017: US$170.0 million) for a loan facility entered by Valliant Jersey Limited with ICICI bank and US$180.0 million for loan facility entered by Vedanta Finance Jersey Limited (VFJL) with ICICI bank which has been fully repaid during the year (2017: US$120.6 million).

The Company has guaranteed US$500.0 million for a syndicated facility agreement entered by its subsidiary, Welter Trading Limited with Standard Chartered Bank as facility agent. The loan has been fully repaid during the year (2017: US$500.0 million).

The Company has guaranteed US$500.0 million for loan facility entered by Monte Cello NV with ICICI bank. The loan has been fully repaid during the year (2017: US$500.0 million).

The Company has guaranteed US$100.0 million for revolving credit facility entered by Twin Star Holdings Limited with First Abu Dhabi Bank PJSC as facility agent. (2017: US$80.0 million).

The Company has guaranteed US$500.0 million for a syndicated facility entered by Twin Star Holdings Limited with Axis Bank as lead arranger and facility agent. During the year, US$100.0 million was repaid under this facility. (2017: US$500 million).

The Company has guaranteed US$1,200.0 million for a syndicated facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank as facility agent. During the previous years US$600.0 million has been repaid and during the year the balance US$600.0 million has been repaid. Hence, the guarantee stands withdrawn. (2017: US$600.0 million).

The Company has guaranteed US$500.0 million for a loan facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank and First Gulf Bank PJSC of which $250.0 million is under a commodity murabaha structure (Islamic financing) and balance $250.0 million is under a conventional loan structure. During the previous years, US$50.0 million has been repaid and during the year the balance US$450 million has been repaid (2017: US$450.0 million).

The Company has guaranteed US$1,250.0 million for a loan facility entered by its subsidiaries THL Zinc Limited with Cairn India Holdings Limited (Intercompany loan). During the year, the guarantee has been withdrawn. (2017: US$1,250.0 million).

The Company has guaranteed US$900.0 million for a loan facility entered by its subsidiaries Twin Star Mauritius Holdings Limited with Fujairah Gold FZC (Intercompany loan). During the year, the guarantee has been withdrawn. (2017: US$900.0 million).

The Company has provided a guarantee for the Cairn India Group's (now merged with Vedanta Limited) obligation under the Production Sharing Contract ('PSC').

The Company has provided guarantee for the redeemable preference shares issued by its subsidiary Twin Star Mauritius Holdings Limited to its intermediate parent Bloom Fountain Limited amounting to US$2,200.0 million. During the year, the guarantee has been withdrawn. (2017: US$2,200.0 million).

During the year, the Company has guaranteed US$180.0 million for a facility agreement entered by Vedanta Resources Jersey II Limited with Yes Bank as facility agent. (2017: Nil).

During the year, the Company has guaranteed US$100.0 million for a facility agreement entered by Welter Trading Limited with Axis Bank as facility agent. (2017: Nil).

During the year, the Company has guaranteed US$575.0 million for a facility agreement entered by Twin Star Holdings Limited with Citicorp International Limited as facility agent. (2017: Nil).

During the year, the Company has guaranteed US$100.0 million for a facility agreement entered by Twin Star Holdings Limited with First Abu Dhabi Bank PJSC as facility agent. US$80.0 million was drawn under this facility and US$8.0 million was repaid during the year. (2017: Nil).

11. Related party transactions

During the year the Company entered into transactions, in the ordinary course of business, with other related parties. The Company has taken advantage of the exemption under paragraph 8(k) of FRS 101 not to disclose transactions with wholly owned subsidiaries. Transactions entered into and trading balances outstanding at 31 March with other related parties, are as follows:

(US$ millions) Name of Company	Relationship	Nature of transaction	2018	2017
Vedanta Limited	Subsidiary	Management and Brand Fees charged	53.1	8.8
Konkola Copper Mines Plc	Subsidiary	Management and Guarantee Fees charged	2.7	2.9
Sterlite Technologies Limited	Related Party	Management Fees charged	0.0	0.0
Volcan Investments Limited	Holding Company	Dividend paid	110.6	93.7
Vedanta Limited	Subsidiary	Receipt of Service	(0.5)	(0.5)
Vedanta Limited	Subsidiary	(Reimbursement)/Payment of expenses	(1.7)	0.1
Vedanta Limited	Subsidiary	Recovery against share option expense	7.6	9.4
Konkola Copper Mines Plc	Subsidiary	Recovery against share option expense	1.3	1.7
Copper Mines of Tasmania Pty Limited	Subsidiary	Recovery against share option expense	0.0	0.0
Fujariah Gold FZC	Subsidiary	Recovery against share option expense	0.1	0.1
Vedanta Lisheen Holdings Limited	Subsidiary	Recovery against share option expense	0.0	(0.0)
Namzinc Pty Limited	Subsidiary	Recovery against share option expense	0.0	(0.2)
Black Mountain Mining (Pty) Limited	Subsidiary	Recovery against share option expense	0.3	0.1
Western Cluster Limited	Subsidiary	Recovery against share option expense	0.0	0.0
Twin Star Mauritius Holdings Limited*	Subsidiary	Reimbursement of Expenses	0.0	0.1
Twin Star Energy Holdings Limited*	Subsidiary	Reimbursement of Expenses	0.1	0.0
THL Zinc Limited	Subsidiary	Reimbursement of Expenses	0.0	0.0
THL Zinc Ventures Limited	Subsidiary	Reimbursement of Expenses	0.0	0.0
Konkola Copper Mines Plc	Subsidiary	Reimbursement of Expenses	0.3	0.7
Cairn India Holdings Limited	Subsidiary	Reimbursement of Expenses	0.8	0.0
Sesa Sterlite Mauritius Holdings Limited*	Subsidiary	Reimbursement of Expenses	0.0	–

Outstanding balances

(US$ millions) Name of Company	Relationship	Nature of transaction	2018	2017
Vedanta Limited	Subsidiary	(Payable)/Receivable	(7.6)	3.2
Konkola Copper Mines Plc	Subsidiary	Receivable	12.0	7.7
Sterlite Technologies Limited	Related Party	Receivable	0.1	0.1
Copper Mines of Tasmania Pty Limited	Subsidiary	Receivable	0.0	0.0
Fujariah Gold FZC	Subsidiary	(Payable)/Receivable	0.0	0.1
Vedanta Lisheen Holdings Limited	Subsidiary	(Payable)	(0.0)	(0.0)
Namzinc Pty Limited	Subsidiary	(Payable)	(0.1)	(0.1)
Black Mountain Mining (Pty) Limited	Subsidiary	Receivable/(Payable)	0.3	(0.0)
Western Cluster Limited	Subsidiary	Receivable	0.1	0.1
Twin Star Mauritius Holdings Limited*	Subsidiary	Receivable	–	0.1
Twin Star Energy Holdings Limited*	Subsidiary	Receivable	–	0.1
THL Zinc Limited	Subsidiary	Receivable	–	0.0
THL Zinc Ventures Limited	Subsidiary	Receivable	0.0	0.0
Monte Cello BV	Subsidiary	(Payable)	(1.0)	(1.0)
Cairn India Holdings Limited	Subsidiary	Receivable	0.8	–
Sesa Sterlite Mauritius Holdings Limited*	Subsidiary	Receivable	0.0	–
Bloom Fountain Limited*	Subsidiary	Receivable	0.1	–

* During the year, Twin Star Mauritius Holdings Limited, Twin Star Energy Holdings Limited and Sesa Sterlite Mauritius Holdings Limited have filed for liquidation and have assigned their payables to the Company to their parent company, Bloom Fountain Limited.

Five Year Summary

Summary Consolidated Income Statement

(US$ million except as stated)	Year ended 31 March 18	Year ended 31 March 17	Year ended 31 March 16	Year ended 31 March 15	Year ended 31 March 14[1]
Revenue	15,358.7	11,520.1	10,737.9	12,878.7	12,945.0
EBITDA	**4,051.2**	**3,191.1**	**2,336.4**	**3,741.2**	**4,491.2**
Depreciation and amortisation	(1,270.7)	(1,030.5)	(1,455.2)	(2,005.7)	(2,203.1)
Special items	683.0	(17.3)	(5,210.1)	(6,744.2)	(138.0)
Operating profit	**3,463.5**	**2,143.3**	**(4,328.9)**	**(5,008.7)**	**2,150.1**
Net finance (costs)/investment revenues	(981.4)	(763.4)	(655.1)	(631.5)	(1,032.0)
Profit before taxation	**2,482.1**	**1,379.9**	**(4,984.0)**	**(5,640.2)**	**1,118.1**
Net tax credit/(expense)	(1,013.2)	(500.3)	1,481.9	1,852.5	(128.7)
Profit after taxation	**1,468.9**	**879.6**	**(3,502.1)**	**(3,787.7)**	**989.4**
Non-controlling interests	1,233.3	(902.3)	1,664.7	1,989.1	(1,185.4)
Profit attributable to equity shareholders in parent	**235.6**	**(22.7)**	**(1,837.4)**	**(1,798.6)**	**(196.0)**
Dividends	(182.1)	(137.5)	(110.6)	(171.3)	(162.5)
Retained (loss)/profit	**53.5**	**(160.2)**	**(1,948.0)**	**(1,969.9)**	**(358.5)**
Basic earnings per share (US cents per share)					
On profit for the financial year	84.8	(8.2)	(665.8)	(654.5)	(71.7)
On Underlying Profit for the financial year	58.3	16.1	(131.9)	(14.2)	14.7
Dividend per share (US cents per share)	65.0	55.0	30.0	63.0	61.0

1 Restated

Summary Consolidated Statement of Financial Position

(US$ million except as stated)	31 March 2018	31 March 2017	31 March 2016	31 March 2015	31 March 2014
Goodwill	12.2	16.6	16.6	16.6	16.6
Intangible assets	123.1	95.6	92.2	101.9	108.6
Property, plant and equipment	17,727.3	16,750.8	16,647.8	23,352.0	31,043.5
Financial asset investments	24.5	10.7	6.5	4.2	1.7
Total	**17,887.1**	**16,873.7**	**16,763.1**	**23,474.7**	**31,170.4**
Stocks	2,037.7	1,670.1	1,365.8	1,605.7	1,742.5
Debtors	1,526.9	1,084.8	1,344.3	1,839.2	1,739.9
Cash and Liquid Investments	5,606.5	9,725.2	8,936.5	8,209.8	8,937.9
Total	**9,171.1**	**12,480.1**	**11,646.6**	**11,654.7**	**12,420.3**
Short-term borrowings	(5,460.3)	(7,658.5)	(4,313.8)	(3,179.2)	(4,358.5)
Other current liabilities	(6,193.6)	(6,413.1)	(6,097.8)	(5,003.4)	(4,931.5)
Total current liabilities	**(11,653.9)**	**(14,071.6)**	**(10,411.6)**	**(8,182.6)**	**(9,290.0)**
Net current assets	**(2,456.4)**	**(1,587.8)**	**1,288.8**	**3,528.8**	**3,541.9**
Total assets less current liabilities	**17,584.7**	**17,431.8**	**19,907.7**	**28,806.3**	**36,084.3**
Long-term borrowings	(9,733.5)	(10,570.2)	(11,949.5)	(13,488.6)	(12,512.7)
Other long-term liabilities	(160.9)	(77.1)	(224.7)	(194.4)	(230.7)
Provisions and deferred tax assets	(1,157.2)	(758.0)	(869.2)	(2,854.0)	(5,354.2)
Total long term liabilities	**(11,051.6)**	**(11,405.3)**	**(13,043.4)**	**(16,537.0)**	**(18,097.6)**
Equity Non-controlling interests	(6,859.4)	(6,423.1)	(7,565.2)	(10,654.3)	(13,964.4)
Non-equity Non-controlling interest	(11.9)	(11.9)	(11.9)	(11.9)	(11.9)
Net assets attributable to the equity holders of the parent	**(338.2)**	**(408.5)**	**(712.8)**	**1,603.1**	**4,010.4**

Turnover

(US$ million)	2018	2017	2016	2015	2014
Zinc	3,903.4	2,857.4	2,502.5	2,943.9	2,856.8
India	3,368.7	2,525.0	2,111.0	2,357.0	2,195.4
International	534.7	332.4	391.5	586.9	661.4
Oil & Gas	1,479.6	1,222.7	1,322.3	2,397.5	3,092.8
Iron Ore	487.5	615.4	350.0	326.5	267.1
Copper	5,115.7	4,008.0	4,169.7	4,777.8	4,676.2
India/Australia	3,832.7	3,133.7	3,197.2	3,700.7	3,404.8
Zambia	1,283.0	874.3	972.5	1,077.1	1,271.4
Aluminium	3,587.6	2,040.0	1,694.3	2,081.9	1,785.4
Power	877.0	835.9	707.5	588.1	622.7
Other	(92.1)	(59.3)	(8.4)	(237.0)	(355.0)
Group	15,358.7	11,520.1	10,737.9	12,878.7	12,945.0

EBITDA

(US$ million)	2018	2017	2016	2015	2014
Zinc	2,122.3	1,561.5	1,063.1	1,373.3	1,358.4
India	1,902.8	1,423.2	995.0	1,192.5	1,145.0
International	219.5	138.3	68.1	180.8	213.4
Oil & Gas	849.1	597.2	570.4	1,476.8	2,347.0
Iron Ore	57.3	194.2	73.4	31.4	(24.2)
Copper	273.8	258.1	318.7	277.2	354.2
India/Australia	200.6	252.2	336.6	281.0	197.9
Zambia	73.2	5.9	(17.9)	(3.8)	156.3
Aluminium	452.4	344.2	106.7	415.5	287.3
Power	258.9	244.8	196.3	153.8	168.4
Other	37.4	(8.9)	7.8	13.2	0.1
Group	4,051.2	3,191.1	2,336.4	3,741.2	4,491.2

EBITDA Margin

(%)	2018	2017	2016	2015	2014
Zinc	54	55	42	47	48
India	56	56	47	51	52
International	41	42	17	31	32
Oil & Gas	57	49	43	62	76
Iron Ore	12	32	21	10	(9)
Copper	5	6	8	6	8
India/Australia	5	8	11	8	6
Zambia	6	1	(2)	(0)	12
Aluminium	13	17	6	20	16
Power	25[1]	29	28	26	27
Group	26	28	22	29	35

1 Excluding one-offs.

Five Year Summary continued

Production

(000's MT)	2018	2017	2016	2015	2014
Aluminium	1,675	1,213	923	877	794
BALCO[1]	569	427	332	324	252
Jharsuguda Aluminium[2]	1,106	786	592	553	542
Copper	599	582	566	531	471
Copper India	403	402	384	362	294
KCM	195	180	182	169	177
Iron Ore (WMT)	7,903	12,300	5,630	667	1,577
Zinc total	876	757	841	836	874
HZL	791	672	759	734	749
Skorpion	84	85	82	102	125
Zinc and Lead MIC	72	70	144	209	239
BMM	72	70	63	59	67
Lisheen	–	–	81	150	172
Oil & Gas – gross production (mmboe)	67.7	69.3	74.6	77.3	79.8
Oil & Gas – working interest (mmboe)	43.3	44.2	46.9	48.4	50.1

1 BALCO – including trial run production of 16 KT in 2018 and 47 in 2017.
2 Jharsuguda – including trial run production of 62 KT in 2018 and 95 in 2017.

Cash costs of production in US cents

(US cents/lb)	2018	2017	2016	2015	2014
Aluminium – BALCO	87.2	68.3	75.3	89.0	80.8
Aluminium – Jharsuguda	84.7	65.3	68.9	73.9	72.6
Copper India	5.7	5.0	5.7	6.4	9.7
Copper – KCM	239.1	208.6	197.9	257.7	238.4
Zinc including royalty – HZL	61.9	52.4	47.4	49.6	44.7
Zinc without royalty – HZL	44.3	37.6	36.5	39.4	37.4
Zinc COP – Skorpion	84.7	75.1	73.8	70.1	56.7
Zinc COP – BMM	58.8	51.1	62.7	74.3	52.2
Zinc COP – Lisheen	0.0	0.0	56.7	52.8	50.1
Oil & Gas (Opex) (US$/boe)	6.6	6.2	6.5	6.2	4.1

Cash costs of production in INR

(INR/mt)	2018	2017	2016	2015	2014
Aluminium – BALCO	123,947	101,051	108,629	119,922	107,728
Aluminium – Jharsuguda	120,349	96,622	99,408	99,676	96,893
Copper India	8,112	9,047	8,203	8,639	12,994
Zinc including royalty	87,971	77,454	68,408	66,805	59,561
Zinc without royalty	62,882	55,679	52,629	53,071	49,834

Capital expenditure

(US$ million)	2018	2017	2016	2015	2014
Sustaining	385.0	145.4	184.9	221.4	321.6
Expansion	819.8	668.2	565.8	1,530.8	1,424.7
Total capital expenditure	**1,204.8**	**813.6**	**750.7**	**1,752.2**	**1,746.3**

Net cash/(debt)

(US$ million)	**2018**	2017	2016	2015	2014
Zinc	3,507	3,881	5,415	5,073	4,514
India	3,411	3,741	5,318	4,937	4,345
International	96	140	97	137	169
Oil & Gas	754	4,185	3,240	2,857	3,912
Iron Ore	(176)	(404)	(459)	(634)	(512)
Copper	(382)	(496)	(494)	(705)	(882)
India/Australia	(7)	57	132	33	(159)
Zambia	(375)	(553)	(627)	(738)	(723)
Aluminium	(4,400)	(5,098)	(4,131)	(4,068)	(3,204)
Power	(1,693)	(1,574)	(1,802)	(1,577)	(737)
Other	(7,197)	(8,997)	(9,096)	(9,406)	(11,010)
Group	(9,587)	(8,503)	(7,329)	(8,460)	(7,920)

Gearing

(%)	**2018**	2017	2016	2015	2014
Gearing	60%	59%	52%	41%	31%

Group Free Cash Flow

(US$ million)	**2018**	2017	2016	2015	2014
Group Free Cash Flow after Capital Creditors	1,745.0	2,211.8	2,338.7	2,578.0	2,695.0
Group Free Cash Flow after Project Capex	925.2	1,543.6	1,772.9	1,047.3	1,269.9

Capital employed

(US$ million)	**2018**	2017	2016	2015	2014
Average capital employed	15,313	14,350	17,448	23,312	26,694

ROCE

(%)	**2018**	2017	2016	2015	2014
ROCE	14.9%	12.8%	3.4%	5.2%	5.6%

Production and Reserves Summary

Copper

Copper Production Summary

Facility	Product	Year ended 31 March 2018 mt	Year ended 31 March 2017 mt
Tuticorin	Copper anode	328,076	400,620
	Sulphuric acid	1,033,250	1,043,748
	Phosphoric acid	191,746	200,119
	Copper cathode	216,749	216,119
	Copper rods	67,207	71,178
Silvassa	Copper cathode	186,418	186,611
	Copper rods	135,332	136,352
KCM	Finished Copper	195,337	179,837

Copper Mining Summary

		Ore mined		Copper concentrate		Copper in concentrate	
Mine	Type of mine	31 March 2018 mt	31 March 2017 mt	31 March 2018 mt	31 March 2017 mt	31 March 2018 mt	31 March 2017 mt
Mt Lyell (CMT)	Underground	–	–	–	–	–	–
Konkola & NUG (KCM)	Underground	**4,726,590**	3,182,001	**218,085**	173,794	**49,780**	47,854

Copper Mine Resource and Reserve Summary

		Resources				Reserves	
Mine	Type of mine	Measured and indicated million mt	Copper grade %	Inferred million mt	Copper grade %	Proved and probable reserves million mt	Copper grade %
Mt Lyell (CMT)	Underground	29.6	1.09	30	1.06	–	–
Konkola (KCM)	Underground	147.8	1.86	319.8	3.07	223.6	1.18

Resources are additional to Reserves

Aluminium, Alumina and Bauxite

Aluminium Production Summary

Company	Year ended 31 March 2018 mt	Year ended 31 March 2017 mt
BALCO	569,050	427,079
Jharsuguda Aluminium	1,106,041	786,323

Alumina Production Summary

Company	Year ended 31 March 2018 mt	Year ended 31 March 2017 mt
Jharsuguda Aluminium	1,209,314	1,207,957

Bauxite Production Summary

Company	Year ended 31 March 2018 mt	Year ended 31 March 2017 mt
BALCO – Mainpat	589,320	73,170
BALCO – Bodai Daldali	581,920	1,065,300

Bauxite Mine Resource and Reserve Summary

Mine	Resources: Measured and indicated million mt	Resources: Aluminium grade %	Resources: Inferred million mt	Resources: Aluminium grade %	Reserves: Proved and probable reserves million mt	Reserves: Aluminium grade %
BALCO						
Mainpat	9.1	44.7	1.0	45.5	5.2	43.2
Bodai-Daldali	5.3	44.5	0.9	46.2	2.8	42.8
Total BALCO	**14.4**	**44.6**	**1.9**	**45.8**	**8.1**	**43.1**
MALCO						
Kolli Hills and Yercaud	0.8	44.0			0.2	43.0

Resources are additional to Reserves.

Hindustan Zinc

Zinc and Lead Production Summary:

Company	**Year ended 31 March 2018 mt**	Year ended 31 March 2017 mt
HZL		
Zinc	791,461	671,988
Lead	168,247	139,009

Zinc and Lead Mining Summary:
a) Metal mined and metal concentrate

Mine	Type of mine	Ore mined: **31 March 2018 mt**	Ore mined: 31 March 2017 mt	Zinc concentrate: **31 March 2018 mt**	Zinc concentrate: 31 March 2017 mt	Lead concentrate: **31 March 2018 mt**	Lead concentrate: 31 March 2017 mt	Bulk concentrate: **31 March 2018 mt**	Bulk concentrate: 31 March 2017 mt
Rampura Agucha[1]	Open cut	29,63,564	4,321,192	606,700	1,121,463	57,198	92,228	–	–
Rampura Agucha	Underground	20,78,623	13,79,746	456,938	–	33,997	–	–	–
Rajpura Dariba	Underground	895,568	745,534	76,495	65,012	18,394	14,851	–	–
Sindesar Khurd	Underground	45,00,000	3,664,768	326,890	230,677	146,148	109,007	–	–
Zawar	Underground	21,76,111	1,770,000	51,288	3,441	32,849	3,088	41,697	113,015
Total		**12,613,866**	**11,881,240**	**1,518,310**	**1,420,593**	**288,585**	**219,174**	**41,697**	**113,015**

1 Includes development ore MT from Kayar.

b) Metal in Concentrate (MIC)

Mine	Type of mine	Zinc concentrate: **31 March 2018 mt**	Zinc concentrate: 31 March 2017 mt	Lead concentrate: **31 March 2018 mt**	Lead concentrate: 31 March 2017 mt
Rampura Agucha	Open cut & Underground	532,998	568,724	52,355	54,705
Rajpura Dariba	Underground	37,237	31,799	7,100	6,082
Sindesar Khurd	Underground	162,709	116,944	84,070	60,203
Zawar	Underground	40,071	38,497	30,842	30,029
Total		**773,015**	**755,964**	**174,368**	**151,019**

Production and Reserves Summary continued

Zinc and Lead Mine Resource and Reserve Summary
Zinc India

Mine	Resources						Reserves		
	Measured and indicated million mt	Zinc grade %	Lead grade %	Inferred million mt	Zinc grade %	Lead grade %	Proved and probable reserves million mt	Zinc grade %	Lead grade %
Rampura Agucha	16.2	15.0	1.9	34.3	10.0	2.6	46.0	13.8	1.9
Rajpura Dariba	22.9	6.9	2.1	27.8	6.4	1.8	9.3	4.9	1.7
Zawar	22.3	4.8	1.8	67.8	4.6	2.6	10.4	3.0	2.1
Kayad	1.5	14.3	2.0	1.3	4.6	1.9	5.5	5.6	0.8
Sindesar Khurd	15.8	4.8	3.0	75.6	3.6	1.8	34.6	4.0	3.0
Bamnia Kalan	5.4	4.5	1.6	14.7	3.7	1.8	–	–	–
Total	**84.1**	**7.5**	**2.1**	**221.5**	**5.3**	**2.2**	**105.7**	**8.3**	**2.2**

Resources are additional to Reserves.

Zinc International

Mine	Resources						Reserves		
	Measured and indicated million mt	Zinc grade %	Lead grade %	Inferred million mt	Zinc grade %	Lead grade %	Proved and probable reserves million mt	Zinc grade %	Lead grade %
Skorpion	2.92	9.12	–	1.84	8.65	–	2.74	9.88	–
BMM									
– Deeps	10.60	2.88	2.97	–	–	–	5.59	2.98	2.24
– Swartberg	35.68	0.84	3.70	26.49	2.19	3.04	2.33	0.62	3.26
– Gamsberg	97.91	6.20	0.54	64.36	7.81	0.52	53.18	6.63	0.51

Resources are additional to Reserves.

Zinc Production Summary:

Company	**Year ended 31 March 2018 mt**	Year ended 31 March 2017 mt
Skorpion	84,215	85,427

Zinc and Lead Mining Summary:
a) Metal mined and metal concentrate

Mine	Type of mine	Ore mined		Zinc concentrate		Lead concentrate	
		31 March 2018 mt	31 March 2017 mt	**31 March 2018 mt**	31 March 2017 mt	**31 March 2018 mt**	31 March 2017 mt
Skorpion	Open Cast	537,066	1,206,176	–	–	–	–
BMM	Underground	1,605,892	1,590,600	55,501	58,005	65,381	59,518
Total	**Underground**	**2,142,958**	**2,796,776**	**55,501**	**58,005**	**65,381**	**59,518**

b) Metal in Concentrate (MIC)

Mine	Type of mine	Zinc in concentrate		Lead in concentrate	
		31 March 2018 mt	31 March 2017 mt	**31 March 2018 mt**	31 March 2017 mt
BMM	Underground	27,175	28,708	45,113	41,770

Iron Ore

Iron Ore Production Summary

Company	Year ended 31 March 2018 million wmt	Year ended 31 March 2017 million wmt
Vedanta Limited		
Saleable Iron Ore	7.9	12.3
Goa	4.3	8.8
Karnataka	2.3	2.3
Dempo	1.3	1.2

Iron Ore Resource and Reserve Summary

	Resources				Reserves	
Mine	Measured and indicated million mt	Iron ore grade %	Inferred million mt	Iron ore grade %	Proved and probable reserves million mt	Iron ore grade %
Iron ore Karnataka	43.8	43.6	10.5	42.9	45.9	54.1

During the year ended 31 March 2018, The Honourable Supreme Court of India issued a judgment directing that all mining operations in the state of Goa were to cease with effect from 16 March 2018. Pursuant to this order, we halted our mining activities. The Company has taken an impairment (non-cash item) of US$534 million net of taxes (US$758 million gross of taxes) pursuant to this order. This is mainly related to mining reserves. Therefore, the Company has not shown any Reserves and Resources related to Iron Ore Goa.

Oil & Gas

The Oil & Gas reserves data set out below are estimated on the basis set out in the section headed 'Presentation of Information'.

Cairn India

The Company's gross reserve estimates are updated at least annually based on the forecast of production profiles, determined on an asset-by-asset basis, using appropriate petroleum engineering techniques. The estimates of reserves and resources have been derived in accordance with the Society for 'Petroleum Engineers Petroleum Resources Management System (2007)'. The changes to the reserves are generally on account of future development projects, application of technologies such as enhanced oil recovery techniques and true up of the estimates. The management's internal estimates of hydrocarbon reserves and resources at the period end, based on the current terms of the PSCs, are as follows:

	Gross proved and probable hydrocarbons initially in place (mmboe)		Gross proved and probable reserves and resources (mmboe)		Net working interest proved and probable reserves and resources (mmboe)	
Particulars	**31 March 2018**	31 March 2017	**31 March 2018**	31 March 2017	**31 March 2018**	31 March 2017
Rajasthan MBA Fields	2,288	2,197	371	410	260	287
Rajasthan MBA EOR	–	–	335	272	235	191
Rajasthan Block Other Fields	3,460	4,034	430	478	301	334
Ravva Fields	733	696	45	41	10	9
CBOS/2 Fields	251	225	34	23	13	9
Other fields	335	335	48	48	24	24
Total	**7,066**	**7,486**	**1,263**	**1,273**	**842**	**854**

The Company's net working interest proved and probable reserves is as follows:

	Proved and Probable reserves		Proved and Probable reserves	
Particulars	Oil (mmstb)	Gas (bscf)	Oil (mmstb)	Gas (bscf)
Reserves as of 1 April 2016*	**160.20**	**55.05**	**144.73**	**28.47**
Additions/revision during the year	(4.81)	(2.48)	(1.60)	(8.83)
Production during the year	(43.43)	(4.84)	(43.43)	(4.84)
Reserves as of 31 March 2017**	**111.96**	**47.73**	**99.70**	**14.80**
Additions/revision during the year	27.68	12.01	13.44	20.95
Production during the year	(41.86)	(8.42)	(41.86)	(8.42)
Reserves as of 31 March 2018***	**97.78**	**51.32**	**71.27**	**27.32**

* Includes probable oil reserves of 40.05 mmstb (of which 27.31 mmstb is developed) and probable gas reserves of 29.80 bscf (of which 5.81 bscf is developed).
** Includes probable oil reserves of 32.37 mmstb (of which 20.62 mmstb is developed) and probable gas reserves of 37.84 bscf (of which 4.92 bscf is developed).
*** Includes probable oil reserves of 26.77 mmstb (of which 5.00 mmstb is developed) and probable gas reserves of 25.12 bscf (of which 4.17 bscf is developed).

Production and Reserves Summary continued

Source of information:
In respect of all businesses, the information has been certified by geologist on behalf of Group management.

Basis of Preparation
Ore reserves and mineral resources reported herein comply with the 'The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves', other than those relating to Konkola Copper Mines plc ('KCM') which complies with the South African Code for Reporting of Mineral Reserves and Mineral Resources (the 'SAMREC Code'). The former code is prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists, and Minerals Council of Australia, and is commonly referred to as the 'JORC Code'. As at the date of this document, the editions of the JORC and SAMREC Codes in force are dated December 2004 and March 2000, respectively. The JORC and SAMREC Codes recognise a fundamental distinction between resources and reserves.

The terms and definitions in the SAMREC Code are consistent with those used in the JORC Code with minor differences in terminology – the JORC Code uses the term Ore Reserve whilst the SAMREC Code uses the term Mineral Reserve. For the purposes of ore and mineral resources reported herein, the term ore resources have been used throughout.

Oil and Gas reserves and resources have been prepared according to the Petroleum Resources Management Systems (PRMS) approved in March 2007 by the Society of Petroleum Engineers, the world Petroleum Council, the American Association of Petroleum Geologist, and the Society of Petroleum Evaluation Engineers.

Mineral resources are based on mineral occurrences quantified on the basis of geological data and an assumed cut-off grade, and are divided into Measured, Indicated and Inferred categories reflecting decreasing confidence in geological and/or grade continuity. The reporting of resource estimates carries the implication that there are reasonable prospects for eventual economic exploitation. An Ore or Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource. It includes the effect of dilution and losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, need to have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors.

These assessments demonstrate at the time of reporting that extraction could be reasonably justified. Ore Reserves are sub-divided in order of decreasing confidence into Proved Ore Reserves and Probable Ore Reserves.

The Measured and Indicated mineral resources have been reported as being inclusive of those mineral resources modified to produce the ore reserves, in addition to the ore reserves. The resource and reserve estimates provided herein comply with the resource and reserve definitions of the JORC Code, other than those relating to KCM which comply with the SAMREC Code.

Other Information

Alternative performance measures

Introduction

Vedanta Group is committed to providing timely and clear information on financial and operational performance to investors, lenders and other external parties, in the form of Annual Reports, disclosures, RNS feeds and other communications. We regard high standards of disclosure as critical to business success.

Alternative Performance Measure (APM) is an evaluation metric of financial performance, financial position or cash flows that is not defined or specified under International Financial Reporting Standards (IFRS).

The APMs used by the group fall under two categories:

- Financial APMs: These financial metrics are usually derived from financial statements, prepared in accordance with IFRS. Certain financials metrics cannot be directly derived from the financial statements as they contain additional information such as profit estimates or projections, impact of macro-economic factors and changes in regulatory environment on financial performance.
- Non-Financial APMs: These metrics incorporate non-financial information that management believes is useful in assessing the performance of the Group.

APMs are not uniformly defined by all the companies, including those in the Group's industry. APM's should be considered in addition to, and not a substitute for or as superior to, measures of financial performance, financial position or cash flows reported in accordance with IFRS.

Purpose

The Group uses APMs to improve comparability of information between reporting periods and business units, either by adjusting for uncontrollable or one-off factors which impacts upon IFRS measures or, by aggregating measures, to aid the user of the Annual Report in understanding the activity taking place across the Group's portfolio.

APMs are used to provide valuable insight to analysts and investors along with Generally Accepted Accounting Practices (GAAP). We believe these measures assist in providing a holistic view of the Company's performance.

Alternative performance measures (APMs) are denoted by ◊ where applicable.

◊ APM terminology*	Closest equivalent IFRS measure	Adjustments to reconcile to primary statements
EBITDA	Operating profit/(loss) before special items	Operating Profit/(Loss) before special items Add: Depreciation & Amortisation
EBITDA margin (%)	No direct equivalent	Not applicable
Adjusted revenue	Revenue	Revenue Less: revenue of custom smelting operations at our Copper & Zinc business
Adjusted EBITDA	Operating profit/(loss) before special items	EBITDA Less: EBITDA of custom smelting operations at our Copper & Zinc business
Adjusted EBITDA margin	No direct equivalent	Not applicable
Underlying profit/(loss)	Attributable profit/(loss) before special items	Attributable profit/(loss) before special items Less: NCI share in other gains/(losses) (net of tax)
Underlying earnings per share	Basic earnings per share before special items	Underlying attributable profit/(loss) divided by weighted average number of shares of the company in issue
Project Capex	Expenditure on Property, Plant and Equipment (PPE)	Gross Addition to PPE Less: Gross disposals to PPE Add: Accumulated Depreciation on disposals Less: Decommissioning liability Less: Sustaining Capex
Free cash flow	Net cash flow from operating activities	Net Cash flow from operating activities Less: purchases of property, plant and equipment and intangibles less proceeds on disposal of property, plant and equipment Add: Dividend paid and dividend distribution tax paid Add/less: Other non-cash adjustments
Net debt	Borrowings and debt related derivatives Less: cash and cash equivalents and liquid investment	No Adjustments
ROCE	No direct Equivalent	Not Applicable

* Glossary and definition section includes further description as relevant.

Other Information continued

ROCE for FY2018 is calculated based on the working summarised below. The same method is used to calculate the ROCE for all previous years (stated at other places in the report).

Particulars	Year ended 31 March 2018
Operating profit before special items	2,781
Less: cash tax outflow	(498)
Operating profit after tax (a)	2,283
Opening capital employed (b)	14,518
Closing capital employed (c)	16,108
Average capital employed (d) = (a+b)/2	15,313
ROCE (a)/(d)	**14.9%**

Glossary and Definitions

Adapted Comparator Group
The new comparator group of companies used for the purpose of comparing TSR performance in relation to the LTIP, adopted by the Remuneration Committee on 1 February 2006 and replacing the previous comparator group comprising companies constituting the FTSE Worldwide Mining Index (excluding precious metals)

AGM or Annual General Meeting
The annual general meeting of the Company

Aluminium business
The Aluminium business of the Group, comprising of its fully-integrated bauxite mining, alumina refining and aluminium smelting operations in India, and trading through the Bharat Aluminium Company Limited and Jharsuguda Aluminium (a division of Vedanta Limited), in India

Articles of Association
The Articles of Association of Vedanta Resources plc

Attributable Profit
Profit for the financial year before dividends attributable to the equity shareholders of Vedanta Resources plc

BALCO
Bharat Aluminium Company Limited, a company incorporated in India.

BMM
Black Mountain Mining Pty

Board or Vedanta Board
The Board of Directors of the Company

Board Committees
The committees reporting to the Board: Audit, Remuneration, Nominations, and Sustainability, each with its own terms of reference

Businesses
The Aluminium business, the Copper business, the Zinc, Lead, Silver, Iron Ore, Power and Oil & Gas business together

Cairn India
Erstwhile Cairn India Limited and its subsidiaries

Capital Employed
Net assets before Net (Debt)/Cash

Capex
Capital expenditure

CEO
Chief Executive Officer

CFO
Chief Financial Officer

CII
Confederation of Indian Industries

CO_2
Carbon dioxide

CMT
Copper Mines of Tasmania Pty Limited, a company incorporated in Australia

Company or Vedanta
Vedanta Resources plc

Company financial statements
The audited financial statements for the Company for the year ended 31 March 2018 as defined in the Independent Auditor's Report on the individual Company Financial Statements to the members of Vedanta Resources plc

Copper business
The copper business of the Group, comprising:

- A Copper smelter, two refineries and two copper rod plants in India, trading through Vedanta Limited, a company incorporated in India;
- One copper mine in Australia, trading through Copper Mines of Tasmania Pty Limited, a company incorporated in Australia; and
- An integrated operation in Zambia consisting of three mines, a leaching plant and a smelter, trading through Konkola Copper Mines PLC, a company incorporated in Zambia.

Copper India
Copper Division of Vedanta Limited comprising of a copper smelter, two refineries and two copper rod plants in India

Cents/lb
US cents per pound

CRRI
Central Road Research Institute

CRISIL
CRISIL Limited (a S&P Subsidiary) is a rating agency incorporated in India

CSR
Corporate social responsibility

CTC
Cost to company, the basic remuneration of executives, which represents an aggregate figure encompassing basic pay, pension contributions and allowances

CY
Calendar year

DDT
Dividend distribution tax

Deferred shares
Deferred shares of £1.00 each in the Company

DFS
Detailed feasibility study

DGMS
Director General of Mine Safety in the Government of India

Directors
The Directors of the Company

DMF
District Mineral Fund

DMT
Dry metric tonne

Dollar or $
United States dollars, the currency of the United States of America

EAC
Expert advisory committee

Glossary and Definitions continued

EBITDA
EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.

EBITDA Margin
EBITDA as a percentage of turnover

Economic Holdings or Economic Interest
The economic holdings/interest are derived by combining the Group's direct and indirect shareholdings in the operating companies. The Group's Economic Holdings/Interest is the basis on which the Attributable Profit and net assets are determined in the consolidated accounts

E&OHSAS
Environment and occupational health and safety assessment standards

E&OHS
Environment and occupational health and safety management system

EPS
Earnings per ordinary share

ESOP
Employee share option plan

ESP
Electrostatic precipitator

Executive Committee
The Executive Committee to whom the Board has delegated operational management. It comprises of the Chief Executive Officer and the senior management of the Group

Executive Directors
The Executive Directors of the Company

Expansion Capital Expenditure
Capital expenditure that increases the Group's operating capacity

Financial Statements or Group financial statements
The consolidated financial statements for the Company and the Group for the year ended 31 March 2018 as defined in the Independent Auditor's Report to the members of Vedanta Resources plc

FY
Financial year i.e. April to March

GAAP, including UK GAAP
Generally Accepted Accounting Principles, the common set of accounting principles, standards and procedures that companies use to compile their financial statements in their respective local territories

GDP
Gross domestic product

Gearing
Net Debt as a percentage of Capital Employed

GJ
Giga joule

Government or Indian Government
The Government of the Republic of India

Gratuity
A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

Group
The Company and its subsidiary undertakings and, where appropriate, its associate undertaking

Gross finance costs
Finance costs before capitalisation of borrowing costs

HIIP
Hydrocarbons Initially in Place

HSE
Health, safety and environment

HZL
Hindustan Zinc Limited, a company incorporated in India

IAS
International Accounting Standards

IFRIC
IFRS Interpretations Committee

IFRS
International Financial Reporting Standards

INR
Indian Rupees

Interest cover
EBITDA divided by gross finance costs (including capitalised interest) excluding accretive interest on convertible bonds, unwinding of discount on provisions, interest on defined benefit arrangements less investment revenue

IPP
Independent power plant

Iron Ore Sesa
Iron Ore Division of Vedanta Limited, comprising of a Iron ore mines in Goa and Karnataka in India

Jharsuguda Aluminium
Aluminium Division of Vedanta Limited, comprising of an aluminium refining and smelting facilities at Jharsuguda and Lanjigarh in Odisha in India.

KCM or Konkola Copper Mines
Konkola Copper Mines PLC, a company incorporated in Zambia

Key Result Areas or KRAs
For the purpose of the remuneration report, specific personal targets set as an incentive to achieve short-term goals for the purpose of awarding bonuses, thereby linking individual performance to corporate performance

KPIs
Key performance indicators

KTPA
Thousand tonnes per annum

Kwh
Kilo-watt hour

LIBOR
London inter bank offered rate

LIC
Life Insurance Corporation

Listing or IPO (Initial Public Offering)
The listing of the Company's ordinary shares on the London Stock Exchange on 10 December 2003

Listing Particulars
The listing particulars dated 5 December 2003 issued by the Company in connection with its Listing or revised listing filled in 2011

Listing Rules
The listing rules of the Financial Services Authority, with which companies with securities that are listed in the UK must comply

LME
London Metals Exchange

London Stock Exchange
London Stock Exchange plc

Lost time injury
An accident/injury forcing the employee/contractor to remain away from his/her work beyond the day of the accident

LTIFR
Lost time injury frequency rate: the number of lost time injuries per million man hours worked

LTIP
The Vedanta Resources Long-Term Incentive Plan or Long-Term Incentive Plan

MALCO
The Madras Aluminium Company Limited, a company incorporated in India

Management Assurance Services (MAS)
The function through which the Group's internal audit activities are managed

MAT
Minimum alternative tax

MBA
Mangala, Bhagyam, Aishwariya oil fields in Rajasthan

MIC
Metal in concentrate

MOEF
The Ministry of Environment, Forests and Climate change of the Government of the Republic of India

mt or tonnes
Metric tonnes

MU
million Units

MW
Megawatts of electrical power

NCCBM
National Council of Cement and Building Materials

Net (Debt)/Cash
Total debt after fair value adjustments under IAS 32 and 39, cash and cash equivalents, liquid investments and debt related derivative

NGO
Non-governmental organisation

Non-Executive Directors
The Non-Executive Directors of the Company

Oil & Gas business
Oil & Gas division of Vedanta Limited, is involved in the business of exploration, development and production of Oil & Gas

Ordinary Shares
Ordinary shares of 10 US cents each in the Company

ONGC
Oil and Natural Gas Corporation Limited, a company incorporated in India

OPEC
Organisation of the Petroleum Exporting Countries

PBT
Profit before tax

PPE
Property plant and equipment

Provident Fund
A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

PSC
A 'production sharing contract' by which the Government of India grants a license to a company or consortium of companies (the 'Contractor') to explore for and produce any hydrocarbons found within a specified area and for a specified period, incorporating specified obligations in respect of such activities and a mechanism to ensure an appropriate sharing of the profits arising there from (if any) between the Government and the Contractor

PSP
The Vedanta Resources Performance Share Plan

Recycled water
Water released during mining or processing and then used in operational activities

Relationship Agreement
The agreement between the Company, Volcan Investments Limited and members of the Agarwal family which had originally been entered into at the time of the Company's listing in 2003 and was subsequently amended in 2011 and 2014 to regulate the ongoing relationship between them, the principal purpose of which is to ensure that the Group is capable of carrying on business independently of Volcan, the Agarwal family and their associates

Return on Capital Employed or ROCE
Operating profit before special items net of tax outflow, as a ratio of average capital employed

RO
Reverse osmosis

Senior Management Group
For the purpose of the remuneration report, the key operational and functional heads within the Group

SEWT
Sterlite Employee Welfare Trust, a long-term investment plan for Sterlite senior management

SHGs
Self help groups

Glossary and Definitions continued

SBU
Strategic Business Unit

SEBI
Securities and Exchange Board of India

STL
Sterlite Technologies Limited, a company incorporated in India

Special items
Items which derive from events and transactions that need to be disclosed separately by virtue of their size or nature (refer to Note 2(A) (IV) special items of accounting policies)

Sterling, GBP or £
The currency of the United Kingdom

Superannuation fund
A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

Sustaining Capital Expenditure
Capital expenditure to maintain the Group's operating capacity

TCM
Thalanga Copper Mines Pty Limited, a company incorporated in Australia

TC/RC
Treatment charge/refining charge being the terms used to set the smelting and refining costs

TGT
Tail gas treatment

TLP
Tail Leaching Plant

tpa
Metric tonnes per annum

TPM
Tonne per month

TSPL
Talwandi Sabo Power Limited, a company incorporated in India

TSR
Total shareholder return, being the movement in the Company's share price plus reinvested dividends

Twin Star
Twin Star Holdings Limited, a company incorporated in Mauritius

Twin Star Holdings Group
Twin Star and its subsidiaries and associated undertaking

US cents
United States cents

UK Corporate Governance Code or the Code
The UK Corporate Governance Code 2014 issued by the Financial Reporting Council

Vedanta Limited (formerly known as Sesa Sterlite Limited/Sesa Goa Limited)
Vedanta Limited, a company incorporated in India engaged in the business of oil & gas exploration and production, copper smelting, iron ore mining, alumina & aluminium production and Energy generation

VFJL
Vedanta Finance (Jersey) Limited, a company incorporated in Jersey

VGCB
Vizag General Cargo Berth Private Limited, a company incorporated in India

Volcan
Volcan Investments Limited, a company incorporated in the Bahamas

VRCL
Vedanta Resources Cyprus Limited, a company incorporated in Cyprus

VRFL
Vedanta Resources Finance Limited, a company incorporated in the United Kingdom

VRHL
Vedanta Resources Holdings Limited, a company incorporated in the United Kingdom

Water Used for Primary Activities
Total new or make-up water entering the operation and used for the operation's primary activities; primary activities are those in which the operation engages to produce its product

WBCSD
World Business Council for Sustainable Development

ZCI
Zambia Copper Investment Limited, a company incorporated in Bermuda

ZCCM
ZCCM Investments Holdings plc, a company incorporated in Zambia

ZRA
Zambia Revenue Authority

Shareholder Information

Shareholder interests as at 31 March 2018

	2018	2017
Number of shareholders	1,938	2,158
Number of shares in issue	303,987,039	300,522,798

By size of holding

	Shareholders %		Shares %	
	2018	2017	2018	2017
500 and under	51.86	52.61	0.07	0.07
501 to 1,000	12.28	12.38	0.06	0.06
1,001 to 10,000	20.79	20.78	0.44	0.45
10,001 to 100,000	9.29	8.80	2.28	2.02
100,001 to 1,000,000	4.54	4.20	8.78	8.52
Over 1,000,000	1.24	1.23	88.37	88.87
	100.00	**100.00**	**100.00**	**100.00**

Company website
The Company's half-year and Annual Reports and results announcements are available on our website at www.vedantaresources.com. Shareholders can also access on the website the latest information about the Company and press announcements as they are released, together with details of future events and who to contact for further information.

Registrar
For information about the Annual General Meeting, shareholdings and dividends and to report changes in personal details, shareholders should contact:

Computershare Investor Services PLC
The Pavilions
Bridgwater Road
Bristol
BS99 6ZZ
United Kingdom
Telephone: +44 (0)370 707 1388
Email: web.queries@computershare.co.uk

Computershare provide a free self-service website, Investor Centre, through which you can view your share balance, change your address, view your dividend payment and tax information and update your payment instructions. For further information, visit www.investorcentre.co.uk.

Beware of share fraud
Shareholders should be very wary of any unsolicited calls or correspondence offering to buy or sell shares at a discounted price. These calls are typically from fraudsters operating 'boiler rooms'. Boiler rooms use increasingly sophisticated means to approach investors and often leave their victims out of pocket. If you are concerned that you may have been targeted by fraudsters, please contact the FCA Consumer Helpline on 0800 111 6768 (freephone) or 0300 500 8082 from the UK or +44 207 066 1000 from outside the UK.

Dividend Mandate and Currency Option
The Registrar can arrange for the dividends declared by the Company to be paid directly into a shareholder's UK bank account. To take advantage of this facility, please contact the Registrar who will provide a Dividend Mandate Form. This arrangement is only available in respect of dividends paid in UK pounds sterling. Consequently, you may only take advantage of this arrangement if you have also completed a Currency Election Form and returned it together with the Dividend Mandate Form to the registrar by 23 July 2018. If you have already completed and returned a Currency Election Form and/or a Dividend Mandate Form, you need take no further action. Currency election and dividend mandate forms are also available online through the Investor Centre service www.investorcentre.co.uk.

INDEPENDENT AUDITORS' REPORT
TO THE MEMBERS OF VEDANTA RESOURCES PLC

We present our audit report on the Group and Company financial statements (as defined below) of Vedanta Resources plc, which comprise the Group primary statements and related notes set out on pages 166 to 242 and the Company primary statements and related notes set out on pages 243 to 250.

OUR OPINION ON THE FINANCIAL STATEMENTS
In our opinion:

- Vedanta Resources plc's Group financial statements and Parent Company financial statements (the "financial statements") give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 March 2017 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the Parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including FRS 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

WHAT WE HAVE AUDITED
The Group and Parent Company financial statements of Vedanta Resources plc for the year ended 31 March 2017 comprise:

Group	Parent company
the Consolidated Income Statement;	the Company Balance Sheet; and
the Consolidated Statement of Comprehensive Income;	the related notes 46 to 59 to the financial statements.
the Consolidated Statement of Financial Position;	
the Consolidated Cash Flow Statement;	
the Consolidated Statement of Changes in Equity; and	
the related notes 1 to 45 to the financial statements.	

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 101 "Reduced Disclosure Framework"

OVERVIEW OF OUR AUDIT APPROACH
The following areas were highlighted as audit focus areas for the year ended 31 March 2017 audit:

Materiality	• Overall Group materiality of \$64m which represents approximately 2% of EBITDA. • EBITDA represents a less volatile metric than profit before tax for determining materiality and we consider this to be the most relevant performance measure to the stakeholders of the entity.
Audit scope	• We performed an audit of the complete financial information of 14 components and audit procedures on specific balances for a further 4 components. • The components where we performed full or specific audit procedures accounted for 100% of EBITDA, 99% of revenue and 90% of total assets. • For the remaining 40 components in the Group we have performed limited procedures appropriate to respond to the risk of material misstatement. • We have obtained an understanding of the entity-level controls of the Group which assists us in identifying and assessing risks of material misstatement due to fraud or error, as well as assisting us in determining the most appropriate audit strategy.
What has changed	• This is our first year of auditing Vedanta Resources plc. Our scope is broadly consistent with that adopted by the previous auditor. The main change was the removal of the Lisheen mine following its operational closure in November 2015. • Accounting for assets under construction was considered a new focus area for our audit. This was due to the ageing of certain assets under construction as at 31 March 2017 and a number of projects entering commercial production in the year.

OUR ASSESSMENT OF FOCUS AREAS
We identified the risk areas to be included with our audit opinion based on issues that had the greatest impact on the financial statements and which involved the most of senior team member involvement. Further details of why we identified issues as areas of focus and our audit response are set out in the table below. This is not a complete list of all the procedures we performed in respect of these areas nor is it a complete list of all the risks identified in our audit.

We identified the risk and focus areas described below as those that had the greatest effect on our overall audit strategy, the allocation of resources in the audit and the direction of the efforts of the audit team. In addressing these risks, we have performed the procedures below which were designed in the context of the financial statements as a whole and, consequently, we do not express any opinion on these individual areas.

CHANGES FROM THE PRIOR YEAR

As this is our first year as external auditors of the Group, the starting point for our audit focus areas were the same as those identified by Deloitte for the year ended 31 March 2016. The audit focus areas have since been amended following our experience gained from the understanding of developments in the business, and time spent during the year end audit.

Audit focus area	Our audit approach	What we reported to the Audit Committee
Revenue recognition and receivable recoverability Refer to the Audit Committee Report on pages 123 to 128 and the disclosures in notes 2b and 4 of the Group financial statements on pages 185 to 189 and 192.		
Group revenue: $11,520m (2016: $10,738m) Revenue recognition and receivable recoverability has been identified as an audit focus area due to the diverse and complex revenue streams across the Group. We have identified the following key areas for consideration: • complex calculation of power tariff agreements and associated disputed receivables outstanding with Grid Corporation of Odisha Limited (“GRIDCO”) and Punjab State Power Corporation Limited (“PSPCL”). • calculation of revenue due to complexity associated with the calculation of profit petroleum at the Cairn India oil and gas joint ventures. • determination of when risks and rewards have transferred, especially in relation to determining to which accounting period sales relate. • correct accounting treatment of differing shipping terms across the Group. • measurement of revenue due to provisional pricing agreements where prices are only finalised after the balance sheet date. The risk has increased in the current year due to increased disputed receivable balances across the Group, particularly in the power division.	We performed our audit procedures across the Group’s revenue streams considering the revenue recognition policies and receivable recoverability. Our procedures were performed mainly by the component teams under the direction and supervision of the UK Group engagement team. To address this focus area we have: • performed walkthroughs of the revenue recognition processes at each full scope component and assessed the design effectiveness of key controls. • assessed the recoverability of the GRIDCO and PSPCL trade receivables by: – inspecting the state regulatory commission and appellate tribunal rulings. – examining the underlying power purchase agreements. – Inspecting external legal opinions in respect of the merits of the cases. • reviewed the terms of Cairn’s profit sharing agreements and tested the underlying cost recovery and profit petroleum calculations. This included challenging the aging profile of current unapproved cost receivables to test recoverability. • selected a sample of sales across the Group made pre and post year end, agreeing the date of revenue recognition to third party support, such as bills of lading, to confirm sales are recognised in the correct period. • examined invoice samples with complex shipping terms to ensure that revenue has been recognised appropriately. • re-calculated the value of provisional pricing adjustments and validated the prices used to third party data.	Based on the procedures performed we consider revenue recognition and the recoverability of receivables to be fairly stated in the financial statements.

Audit focus area	Our audit approach	What we reported to the Audit Committee
Accounting for assets under construction Refer to the Audit Committee Report on pages 123 to 128 and the disclosures in note 17 of the Group financial statements on page 201		
Group Assets under construction: $2,366m (2016: $3,363m) Accounting for assets under construction has been identified as an audit focus area due to:	We performed our audit procedures across the asset under construction balances across the Group. Due to the local considerations impacting our assessments our procedures were performed predominantly by the component teams	Based on our evaluation of the asset under construction projects and other procedures performed, we are comfortable that projects completed in the current year have been treated in accordance with IAS 16 and that long outstanding balances are recoverable.

• the significant judgment involved in assessing when an asset is available for use as intended by management. At this point, revenue and operating costs associated to the asset cease to be capitalised to the statement of financial position and depreciation should commence. • Multiple construction projects across the Group that have been placed on hold. There is therefore a risk relating to the viability of these projects and thus the recoverability of the balance. Additionally we considered recent impairment charges recognised in respect of assets under construction where licences have expired or projects have ceased. The risk has increased in the current year due to some significant projects being commissioned in the current year as well as the increased ageing of projects on hold and awaiting approval.	under the direction and supervision of the UK Group engagement team. To address this focus area we have: • considered the stage of completion of ongoing projects specifically in relation to ascertaining when the assets will be available for use as intended by management. • assessed project timelines by tracking project progress against forecast spend and management budgets. • assessed the accounting treatment of testing revenue and associated costs during the testing phase where applicable. • ensured costs associated to assets which came into production in the year cease to be capitalised and depreciation charges commenced. • assessed the viability and recoverability of long outstanding projects and performed inspections to confirm that the machinery and material related to these projects is not obsolete.	

Audit focus area	Our audit approach	What we reported to the Audit Committee
Litigation, environmental and regulatory risk Refer to the Audit Committee Report on pages 123 to 128 and the disclosures in note 38 of the Group financial statements on pages 231 to 234		
The Group has disclosed in note 38 contingent liabilities of $1,361m for litigation, environmental and regulatory matters excluding income tax figures. Litigation, environmental and regulatory risk has been identified as an area of audit focus due to the large number of complex legal claims across the Group and impact to the Group's operations of potential non-compliance with environmental and regulatory requirements. There is significant judgment required by management in classifying each case as probable, possible or remote as per IAS 37 and thus a risk that such cases may not be adequately provided for or disclosed. It is not unusual in the jurisdictions in which the company operates for claims to remain outstanding for a number of years, with the complex regulatory environment and regulators focusing on the environmental and social impacts of the operations. Any adverse litigation may have a material impact on both the solvency and liquidity as well as the reputation of the Group. The risk has not increased or decreased in the current year.	At both a component team and group level, we have understood and tested management's process for identifying and assessing litigation, environmental and regulatory risk. To address this focus area we have: • obtained the Group legal summary and critically assessed management's position through discussions with the head of legal and operational management, on both the probability of success in significant cases, and the magnitude of any potential loss. • inspected external legal opinions (where considered necessary) and other evidence to corroborate management's assessment of the risk profile in respect of legal claims. • considered the terms and conditions of applicable licences, environmental exposures and regulatory requirements and performed procedures to gain assurance over compliance with these terms. • assessed the appropriateness of legal provisions and disclosures included in the Group financial statements and thus ensured adequate disclosure in accordance with IAS 37.	We are satisfied the accounting treatment in respect of legal cases is appropriate based on our procedures performed.

Audit focus area	Our audit approach	What we reported to the Audit Committee
Taxation claims and exposures Refer to the Audit Committee Report on pages 123 to 128 and the disclosures in note 38 of the Group financial statements on pages 231 to 234		

The Group has disclosed contingent liabilities of $4,352m for income tax claims and exposures. Taxation claims and exposures have been identified as an audit focus area due to the large number of tax claims across the Group, particularly in relation to the operations located in India. There is significant judgment required by management in assessing the exposure of each tax case and thus a risk that such cases may not be adequately provided for or disclosed. Recent material tax cases have included: • In the current year, the Supreme Court in India upheld the constitutional validity for each state to levy an entry tax. The Groups potential exposure in respect of this matter is $165 million. • In 2015 a demand was received by Cairn India Limited (CIL) ordering payment to the Tax Authority of withholding taxes not paid on the acquisition of Cairn India. Management judgment is also required in assessing the recoverability of the Minimum Alternative Tax (MAT) asset, which is based on forecasted future profits. We focused on this area because of the potential financial impact on the Consolidated financial statements and the judgements involved. We consider the risk to have remained high in the current year.	Our procedures were performed centrally where tax cases impacted a number of components. For location specific issues component teams undertook the majority of the procedures under the direction and supervision of the Group audit team. To address this focus area we have: • obtained the Group tax summary and challenged management through discussions with the head of tax and operational management, on both the probability of success in significant cases, and the magnitude of any potential loss. • inspected external legal opinions and correspondence with tax authorities (where applicable) to corroborate management's risk classification. • engaged internal tax specialists to technically appraise the tax positions taken by management with respect to local tax issues. • reviewed and challenged the assumptions used in the model by management in justifying the recoverability of deferred tax and MAT assets. In challenging these assumptions we took account of actual results, external data and market conditions. • ensured that the management assessment of similar cases is aligned across the Group or that differences in positions are adequately justified. • assessed the appropriateness of tax provisions and disclosures made in the Group financial statements in respect of tax claims and exposures.	We are satisfied the accounting treatment in respect of potential tax exposures is appropriate based on our procedures performed.

Audit focus area	Our audit approach	What we reported to the Audit Committee
Recoverability of property, plant and equipment and E&E assets Refer to the Audit Committee Report on pages 123 to 128 and the disclosures in notes 2b and 17 of the Group financial statements on pages 185 to 189 and 201		
Group property, plant and equipment: $16,806m (2016: $16,648m) including, Group E&E assets: $1,400m (2016: $1,471m) Recoverability of fixed and Exploration and evaluation (E&E) assets has been identified as an audit focus area due to the significance of the carrying value of the assets being assessed, the number and size of recent impairments, the current economic environment in the Group's operating jurisdictions and because the assessment of the recoverable amount of the Group's Cash Generating Units ("CGUs") involves significant judgements about the future results of the business and the discount rates applied to future cash flow forecasts. In particular we focused our effort on those CGU's with impairment indicators. The key judgment centred on forecast volumes. No impairment charges were recorded in the year.	In addressing this area of focus audit procedures were performed by both our Group and Component teams. Macroeconomic assumptions and consistency of approach was ensured by the Group team with location specific inputs addressed by component teams. To address this focus area we have: • critically assessed, whether there were any indicators of impairment (or reversal of impairment) in line with IAS 36 for fixed assets and IFRS 6 for E&E assets across the Group. • specifically in relation to the CGUs where impairment and impairment reversal indicators were assessed, we have obtained and evaluated the valuation models used to determine the recoverable amount by challenging the key assumptions used by management including: – considering forecasted volumes in relation to asset development plans.	Overall we are comfortable that the key assumptions used in the Cairn India impairment reversal models fall within a reasonable range and that there are no impairments at other CGUs in the Group. Management have also reflected known changes in the circumstances of the CGUs in their forecast for forthcoming periods.

We also focused our effort on the Rajasthan and Ravva blocks at Cairn India for which an impairment reversal, net of the impact of an adjustment in the decommissioning liability relating to a prior year and associated impact on the asset (note 30), has been recognised in the year. The key judgments relate to the forecast long term Brent crude price and the weighted average cost of capital. A net $13m impairment reversal was recorded in relation to the Rajasthan block. The overall Group impairment risk has decreased in the current year due to improved zinc, oil and aluminium prices.	– critically assessing management's forecasting accuracy by comparing prior year forecasts to actual results. – corroborating the price assumptions used in the models against the analyst consensus. – testing the appropriateness of the weighted average cost of capital used to discount the impairment models through engaging our internal valuations experts. –

OUR APPLICATION OF MATERIALITY
The scope of our work is influenced by materiality. We apply the concept of materiality in planning and performing the audit, in evaluating the effect of identified misstatements on the audit and in forming our audit opinion.

As we develop our audit strategy, we determine materiality at the overall level and at the individual account level (referred to as our 'performance materiality').

Materiality $64 million **Performance materiality $32 million** **Reporting threshold $0.8 million**

MATERIALITY
The magnitude of an omission or misstatement that, individually or in the aggregate, could reasonably be expected to influence the economic decisions of the users of the financial statements. Materiality provides a basis for determining the nature and extent of our audit procedures.

We determined materiality for the Group to be $64 million (Deloitte 2016: $40 million), which is 2% of EBITDA. The higher materiality threshold was due to an increase in Group EBITDA to $3,191m (2016: $2,336m) driven by higher commodity prices and increased volumes in certain components compared to the prior year. Our materiality amount provides a basis for determining the nature and extent of risk assessment procedures, identifying and assessing the risk of material misstatement and determining the nature and extent of further audit procedures. Materiality is assessed on both quantitative and qualitative grounds. With respect to disclosure and presentational matters, amounts in excess of the quantitative thresholds above may not be adjusted if their effect is not considered to be material on a qualitative basis.

RATIONALE FOR BASIS
We have used an earnings based measure as our basis of materiality. It was considered inappropriate to calculate materiality using Group profit or loss before tax due to the historic volatility of this metric. EBITDA is a key performance indicator for the Group and is also a key metric used by the Group in the assessment of the performance of management. We also noted that market and analyst commentary on the performance of the Group uses EBITDA as a key metric. We therefore, considered EBITDA, to be the most appropriate performance metric on which to base our materiality calculation as we considered that to be the most relevant performance measure to the stakeholders of the entity.

PERFORMANCE MATERIALITY
The application of materiality at the individual account or balance level. It is set at an amount to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality.

We set our performance materiality at 50% of planning materiality calculated as $32 million. This was based upon our overall risk analysis, our assessment of the Group's control environment, the short reporting cycle, potential for misstatements and the fact this is a first year audit engagement.

Audit work at component locations for the purpose of obtaining audit coverage over significant financial statement accounts is undertaken based on a percentage of total performance materiality. The performance materiality set for each component is based on the relative scale and risk of the component to the Group as a whole and our assessment of the risk of misstatement at that component. In the current year, the range of performance materiality allocated to components was $5 million to $19 million.

REPORTING THRESHOLD
An amount below which identified misstatements are considered as being clearly trivial.

We agreed with the Audit Committee that we would report to them all uncorrected audit differences in excess of $0.8

million (Deloitte 2016 $0.8 million) in line with the prior year threshold as requested by the Audit Committee. In addition, we have reported any difference below that threshold that, in our view, warranted reporting on qualitative grounds.

We evaluate any uncorrected misstatements against both the quantitative measures of materiality discussed above and in light of other relevant qualitative considerations in forming our opinion.

SCOPE OF THE AUDIT OF THE FINANCIAL STATEMENTS
An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of whether the accounting policies are appropriate to the Group's and the parent company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Vedanta Resources plc Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

TAILORING THE SCOPE
Our assessment of audit risk, our evaluation of materiality and our allocation of performance materiality determine our audit scope for each entity within the Group. Taken together, this enables us to form an opinion on the consolidated financial statements. We take into account size, risk profile, the organisation of the Group and effectiveness of Group-wide controls, changes in the business environment and other factors such as recent internal audit results when assessing the level of work to be performed at each entity.

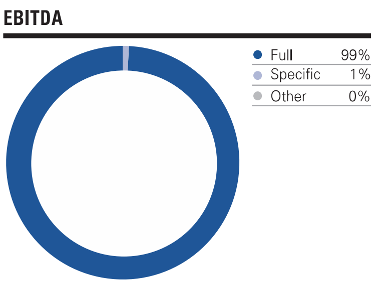
In assessing the risk of material misstatement to the Group financial statements and to ensure we had adequate quantitative coverage of significant accounts in the financial statements, we focused our Group audit scope on 18 out of the 58 Group components. Of these selected components 14 were subject to a full audit, in India, Namibia, Zambia, South Africa and the UAE. The remaining 4 components were subject to an audit of specified account balances that we considered had the potential for the greatest impact on the Group financial statements. We have also considered requirements for certain local statutory audits to be finalised before our audit report date in determining our audit scope which increased the total coverage.

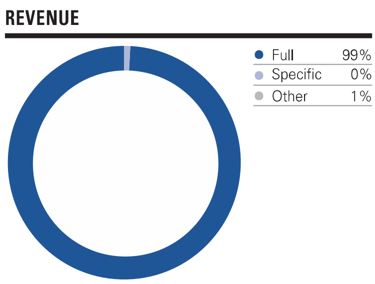
For the current year, the full scope components contributed 99% of the Group's EBITDA, 99% of the Group's Revenue and 85% of the Group's Total assets. The specific scope components contributed 1% of the Group's EBITDA, 0% of the Group's Revenue and 5% of the Group's Total assets. The audit scope of these components may not have included testing of all significant accounts of the component but will have contributed to the coverage of significant accounts tested for the Group.

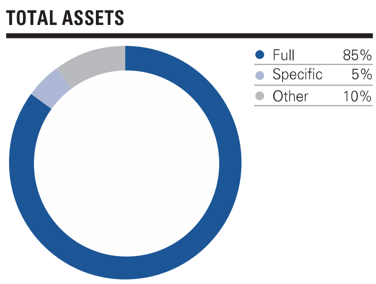
For the remaining 40 components that together represent 0% of the Group's EBITDA we performed other procedures, including analytical reviews, reviews of internal audit reports, consolidation adjustment audit procedures and statutory financial statement audits. This ensured we responded appropriately to any potential risks of material misstatement to the Group financial statements.

We have obtained an understanding of the entity-level controls of the Group as a whole which assisted us in identifying and assessing risks of material misstatement due to fraud or error, as well as assisting us in determining the most appropriate audit strategy.

The charts below illustrate the coverage obtained from the work performed by our audit teams.







CHANGES FROM THE PRIOR YEAR
This is our first year of auditing Vedanta Resources plc. Our scope is broadly consistent with that adopted by the previous auditor. The main change was the removal of the Lisheen mine following its operational closure in November 2015.

INTEGRATED TEAM STRUCTURE
The overall audit strategy is determined by the senior statutory auditor, Mirco Bardella. The senior statutory auditor is based in the UK however, since Group management and many operations reside in India, the Group audit team

includes members from both the UK and India. The senior statutory auditor visited India four times during the current year's audit and members of the Group audit team in both jurisdictions work together as an integrated team throughout the audit process. Whilst in India, he focused his time on the audit focus areas, interactions with management and Group and component teams. During the current year's audit he reviewed key working papers and met with key representatives of the integrated and Indian component audit teams for all full scope components to discuss the audit approach and issues arising from their work.

INVOLVEMENT WITH COMPONENT TEAMS

In establishing our overall approach to the Group audit, we determined the split of work that needed to be undertaken at each of the components by the Group audit engagement team, or by component auditors from other EY global network firms operating under the Group team instruction.

It was concluded that audit procedures on all of the 14 full scope components would be performed directly by the component audit team. The Group team reviewed this work and ensured sufficient audit evidence had been obtained as a basis to form part of our opinion on the Group as a whole. In addition the integrated Group team also included key members of certain full scope components ensuring knowledge was transferred effectively through the team. The work on all of the specific scope components was performed by the Group audit team directly.

The Group audit team established a programme of planned visits. During the current year's audit cycle, visits were undertaken by senior members of the Group audit team to certain component teams in India together with teams in Zambia, Namibia and South Africa. These visits involved key members of the Group audit team meeting with local management and discussing the audit approach with the Component teams together with any issues arising from their work. In addition members from all of the Indian based component teams physically attended a global planning event with the Group team. Additionally the Group audit team participated in key discussions, via conference calls with all full scope entities.

RESPECTIVE RESPONSIBILITIES OF DIRECTORS AND AUDITOR

As explained more fully in the Directors' Responsibilities Statement set out on page 155, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion:

- the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006; and
- based on the work undertaken in the course of the audit:
  - the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.
  - the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

ISAs (UK and Ireland) reporting	We are required to report to you if, in our opinion, financial and non-financial information in the annual report is: • materially inconsistent with the information in the audited financial statements; or • apparently materially incorrect based on, or materially inconsistent with, our knowledge of the Group acquired in the course of performing our audit; or • otherwise misleading. In particular, we are required to report whether we have identified any inconsistencies between our knowledge acquired in the course of performing the audit and the directors' statement (included on page 155 of the Annual Report) that they consider the annual report and accounts taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the entity's performance, business model and strategy; and whether the annual report appropriately addresses those matters that we communicated to the audit committee that we consider should have been disclosed.	We have no exceptions to report.
Companies Act 2006 reporting	In light of the knowledge and understanding of the Company and its environment obtained in the course of the audit, we have identified no material misstatements in the Strategic Report or the Directors' Report set out on pages 02–155 of the	We have no exceptions to report.

	Annual Report. We are required to report to you if, in our opinion: • adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or • the parent company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or • certain disclosures of directors' remuneration specified by law are not made; or • we have not received all the information and explanations we require for our audit.	
Listing Rules review requirements	We are required to review: • the directors' statement in relation to going concern, set out on page 154, and longer-term viability, set out on page 68; • the part of the Corporate Governance Statement relating to the company's compliance with the provisions of the UK Corporate Governance Code specified for our review.	We have no exceptions to report.

STATEMENT ON THE DIRECTORS' ASSESSMENT OF THE PRINCIPAL RISKS THAT WOULD THREATEN THE SOLVENCY OR LIQUIDITY OF THE ENTITY

ISAs (UK and Ireland) reporting	We are required to give a statement as to whether we have anything material to add or to draw attention to in relation to: • the directors' confirmation in the annual report that they have carried out a robust assessment of the principal risks facing the entity, including those that would threaten its business model, future performance, solvency or liquidity; • the disclosures in the annual report that describe those risks and explain how they are being managed or mitigated; • the directors' statement in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the entity's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements; and • the directors' explanation in the annual report as to how they have assessed the prospects of the entity, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the entity will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.	We have nothing material to add or to draw attention to.

Mirco Bardella
(senior statutory auditor)

for and on behalf of Ernst & Young LLP, Statutory Auditor
London
23 May 2017

Notes:
- The maintenance and integrity of the Vedanta Resources plc web site is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the web site.
- Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

CONSOLIDATED INCOME STATEMENT

(US$ million except as stated)

		Year ended 31 March 2017			Year ended 31 March 2016		
	Note	Before Special items	Special items	Total	Before Special items	Special items	Total
Revenue	4	11,520.1	-	11,520.1	10,737.9	-	10,737.9
Cost of sales		(8,789.2)	-	(8,789.2)	(9,241.1)	-	(9,241.1)
Gross profit		**2,730.9**	**-**	**2,730.9**	**1,496.8**	**-**	**1,496.8**
Other operating income		73.4	-	73.4	101.7	-	101.7
Distribution costs		(274.9)	-	(274.9)	(223.8)	-	(223.8)
Administrative expenses		(368.8)	-	(368.8)	(493.5)	-	(493.5)
Special items	5	-	(17.3)	(17.3)	-	(5,210.1)	(5,210.1)
Operating profit/ (loss)		**2,160.6**	**(17.3)**	**2,143.3**	**881.2**	**(5,210.1)**	**(4,328.9)**
Investment revenue	6	642.6	-	642.6	697.8	-	697.8
Finance costs	7	(1,382.2)	-	(1,382.2)	(1,280.4)	-	(1,280.4)
Other gains and (losses) [net]	8	(23.8)	-	(23.8)	(72.5)	-	(72.5)
Profit/ (loss) before taxation (a)		**1,397.2**	**(17.3)**	**1,379.9**	**226.1**	**(5,210.1)**	**(4,984.0)**
Tax credit/(expense)- special items	12	-	(4.9)	(4.9)	-	1,737.4	1,737.4
Net tax expense– others	12	(495.4)	-	(495.4)	(255.5)	-	(255.5)
Net tax credit/ (expense) (b)	12	**(495.4)**	**(4.9)**	**(500.3)**	**(255.5)**	**1,737.4**	**1,481.9**
Profit/ (loss) for the year from continuing operations (a+b)		**901.8**	**(22.2)**	**879.6**	**(29.4)**	**(3,472.7)**	**(3,502.1)**
Attributable to:							
Equity holders of the parent		(6.8)	(15.9)	(22.7)	(392.9)	(1,444.5)	(1,837.4)
Non-controlling interests		908.6	(6.3)	902.3	363.5	(2,028.2)	(1,664.7)
Profit/ (loss) for the year from continuing operations		**901.8**	**(22.2)**	**879.6**	**(29.4)**	**(3,472.7)**	**(3,502.1)**
Loss per share (US cents)							
Basic loss per ordinary share	13	(2.5)	(5.7)	(8.2)	(142.4)	(523.4)	(665.8)
Diluted loss per ordinary share	13	(2.5)	(5.7)	(8.2)	(142.4)	(523.4)	(665.8)

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Profit/(Loss) for the year from continuing operations	**879.6**	**(3,502.1)**
Income and expenses recognised directly in equity:		
Items that will not be reclassified subsequently to income statement:		
Remeasurement of net defined benefit plans	(0.8)	8.0
Tax effects on net defined benefit plans	0.6	(2.5)
Total (a)	**(0.2)**	**5.5**
Items that may be reclassified subsequently to income statement:		
Exchange differences arising on translation of foreign operations	216.3	(810.2)
Gain in fair value of available-for-sale financial assets (note 18)	4.1	2.3
Cumulative Gains/(Losses) of cash flow hedges	9.5	(24.5)
Tax effects arising on cash flow hedges	(5.7)	(2.8)
Gain on cash flow hedges recycled to income statement	(12.2)	(3.0)
Tax effects arising on cash flow hedges recycled to income statement	4.2	1.6
Total (b)	**216.2**	**(836.6)**
Other comprehensive income/(loss) for the year (a+b)	216.0	(831.1)
Total comprehensive income/(loss) for the year	**1,095.6**	**(4,333.2)**
Attributable to:		
Equity holders of the parent	64.5	(2,223.6)
Non-controlling interests	1,031.1	(2,109.6)
Total comprehensive income/ (loss) for the year	**1,095.6**	**(4,333.2)**

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(US$ million)

	Note	As at 31 March 2017	As at 31 March 2016
Assets			
Non-current assets			
Goodwill	15	16.6	16.6
Intangible assets	16	95.6	92.2
Property, plant and equipment	17	16,806.1	16,647.8
Financial asset investments	18	10.7	6.5
Non-current tax assets	31	434.6	361.7
Other non-current assets	19	544.4	237.9
Financial instruments (derivatives)	29	0.6	0.8
Deferred tax assets	31	1,111.0	1,255.4
		19,019.6	**18,618.9**
Current assets			
Inventories	20	1,670.1	1,365.8
Trade and other receivables	21	1,084.8	1,344.3
Financial instruments (derivatives)	29	1.6	18.3
Current tax assets		2.1	35.5
Liquid investments	22	8,043.0	8,508.2
Cash and cash equivalents	23	1,682.2	428.3
		12,483.8	**11,700.4**
Total assets		**31,503.4**	**30,319.3**
Liabilities			
Current liabilities			
Short term borrowings	24	(7,658.5)	(3,726.6)
Convertible bonds	28	-	(587.2)
Trade and other payables	27a	(6,223.4)	(5,876.1)
Financial instruments (derivatives)	29	(126.9)	(67.7)
Retirement benefits	33	(7.5)	(4.9)
Provisions	30	(17.5)	(132.1)
Current tax liabilities		(37.8)	(17.0)
		(14,071.6)	**(10,411.6)**
Net current (liabilities)/assets		**(1,587.8)**	**1,288.8**
Non-current liabilities			
Medium and long-term borrowings	24	(10,570.2)	(11,949.5)
Trade and other payables	27b	(68.5)	(223.5)
Financial instruments (derivatives)	29	(8.6)	(1.2)
Deferred tax liabilities	31	(371.1)	(620.2)
Retirement benefits	33	(59.6)	(61.6)
Provisions	30	(327.3)	(187.4)
Non equity non-controlling interests	25	(11.9)	(11.9)
		(11,417.2)	**(13,055.3)**
Total liabilities		**(25,488.8)**	**(23,466.9)**
Net assets		**6,014.6**	**6,852.4**
Equity			
Share capital	35	30.1	30.1
Share premium		201.5	201.5
Treasury shares		(557.9)	(557.2)
Share-based payment reserve	32	28.2	29.9
Convertible bond reserve		-	6.0
Hedging reserve		(90.9)	(87.7)
Other reserves		140.5	(1.4)
Retained earnings		(160.0)	(334.0)
Equity attributable to equity holders of the parent		(408.5)	(712.8)
Non-controlling interests	36	6,423.1	7,565.2

	Note	As at 31 March 2017	As at 31 March 2016
Total equity		**6,014.6**	**6,852.4**

Financial Statements of Vedanta Resources plc, registration number 4740415 were approved by the Board of Directors on 23rd May 2017 and signed on their behalf by

Tom Albanese – Chief Executive Officer

CONSOLIDATED CASH FLOW STATEMENT

For the year ended 31 March 2017

(US$ million)

	Note	Year ended 31 March 2017	Year ended 31 March 2016
Operating activities			
Profit / (loss) before taxation		1,379.9	(4,984.0)
Adjustments for:			
Depreciation and amortisation		1,030.5	1,455.2
Investment revenues		(642.6)	(697.8)
Finance costs		1,382.2	1,280.4
Other gains and (losses)[net]		23.8	72.5
(Profit) /loss on disposal of property, plant and equipment		5.2	1.5
Write-off of unsuccessful exploration costs		6.5	4.5
Share-based payment charge		13.4	15.6
Impairment charges		17.3	5,187.0
Other non-cash items		3.5	2.7
Operating cash flows before movements in working capital		**3,219.7**	**2,337.6**
(Increase) / decrease in inventories		(266.7)	163.7
Decrease in receivables		18.8	343.3
Increase in payables		522.3	657.4
Cash generated from operations		**3,494.1**	**3,502.0**
Dividend received		0.1	0.3
Interest income received		298.0	633.1
Interest paid		(1,417.5)	(1,268.4)
Income taxes paid		(778.7)	(354.7)
Dividends paid		(138.4)	(110.6)
Net cash inflow from operating activities		**1,457.6**	**2,401.7**
Cash flows from investing activities			
Purchases of property, plant and equipment and intangibles		(873.9)	(872.4)
Proceeds on disposal of property, plant and equipment		25.2	10.0
Proceeds from redemption of liquid investments	26	15,284.8	15,839.7
Purchases of liquid investments	26	(14,363.3)	(16,839.6)
Net cash from / (used in) investing activities		**72.8**	**(1,862.3)**
Cash flows from financing activities			
Issue of ordinary shares		0.0	0.1
Purchase of shares under DSBP scheme		(2.0)	(0.9)
Dividends paid to non-controlling interests of subsidiaries		(1,393.3)	(325.5)
Acquisition of additional interests in subsidiary/ share purchase by subsidiary		(18.5)	-
Proceeds from working capital loan	26	46.1	32.5
Proceeds from other short-term borrowings	26	11,335.8	6,353.2
Repayment of other short-term borrowings	26	(10,803.0)	(7,407.8)
Buyback of non-convertible bond	26	(858.5)	(7.0)
Proceeds from medium and long-term borrowings	26	2,146.4	2,383.2
Repayment of medium and long-term borrowings	26	(205.9)	(951.0)
Buyback/repayment of convertible bond		(590.3)	(523.6)
Net cash from / (used in) financing activities		**(343.2)**	**(446.8)**
Net increase / (decrease) in cash and cash equivalents		1,187.2	92.6
Effect of foreign exchange rate changes		66.7	(18.0)
Cash and cash equivalents at beginning of the year		428.3	353.7
Cash and cash equivalents at end of the year	23 & 26	**1,682.2**	**428.3**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(US$ million)

	Attributable to equity holders of the Company										
	Share capital (note 35)	**Share premium**	**Treasury Shares**	**Share-based payment reserves**	**Convertible bond reserve**	**Hedging reserve**	**Other reserves[1]**	**Retained earnings**	**Total**	**Non-controlling Interests**	**Total equity**
At 1 April 2016	**30.1**	**201.5**	**(557.2)**	**29.9**	**6.0**	**(87.7)**	**(1.4)**	**(334.0)**	**(712.8)**	**7,565.2**	**6,852.4**
Profit for the year	-	-	-	-	-	-	-	(22.7)	(22.7)	902.3	879.6
Other comprehensive income for the year	-	-	-	-	-	(3.2)	90.4	-	87.2	128.8	216.0
Total comprehensive income/(loss) for the year	-	-	-	-	-	**(3.2)**	**90.4**	**(22.7)**	**64.5**	**1,031.1**	**1,095.6**
Acquisition of shares under DSBP scheme	-	-	(0.8)	-	-	-	-	(1.2)	(2.0)	-	(2.0)
Convertible bond transfer (note 28)	-	-	-	-	(6.0)	-	-	6.0	-	-	-
Transfers[1]	-	-	-	-	-	-	51.5	(51.5)	-	-	-
Dividends paid/ payable (note 14)	-	-	-	-	-	-	-	(137.5)	(137.5)	(1,340.1)	(1,477.6)
Exercise of stock options	0.0	-	0.1	(15.1)	-	-	-	15.0	-	-	0.0
Recognition of share-based payment (note 32)	-	-	-	13.4	-	-	-	-	13.4	-	13.4
Change in non-controlling interest- merger (note 42)	-	-	-	-	-	-	-	368.4	368.4	(817.1)	(448.7)
Other changes in non-controlling interests*	-	-	-	-	-	-	-	(2.5)	(2.5)	(16.0)	(18.5)
At 31 March 2017	**30.1**	**201.5**	**(557.9)**	**28.2**	**-**	**(90.9)**	**140.5**	**(160.0)**	**(408.5)**	**6,423.1**	**6,014.6**

**Includes purchase of shares by Vedanta Limited through ESOP trust for its stock options and additional stake purchased during the year in erstwhile Cairn India Limited and share based payment charge by subsidiaries.*

(US$ million)

	Attributable to equity holders of the Company										
	Share capital (note 35)	Share premium	Treasury Shares	Share-based payment reserves	Convertible bond reserve	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling Interests	Total equity
At 1 April 2015	**30.0**	**198.5**	**(556.9)**	**27.4**	**38.4**	**(74.7)**	**339.9**	**1,600.5**	**1,603.1**	**10,654.3**	**12,257.4**
Loss for the year	-	-	-	-	-	-	-	(1,837.4)	(1,837.4)	(1,664.7)	(3,502.1)
Other comprehensive loss for the year	-	-	-	-	-	(13.0)	(373.2)	-	(386.2)	(444.9)	(831.1)
Total comprehensive loss for the year	-	-	-	-	-	**(13.0)**	**(373.2)**	**(1,837.4)**	**(2,223.6)**	**(2,109.6)**	**(4,333.2)**
Acquisition of shares under DSBP scheme	-	-	(0.3)	-	-	-	-	(0.6)	(0.9)	-	(0.9)
Convertible bond transfer (note 28)	-	-	-	-	(24.6)	-	-	24.6	-	-	-
Conversion of bond into equity	0.0	3.0	-	-	(0.1)	-	-	-	2.9	-	2.9
Convertible bond buy back	-	-	-	-	(7.7)	-	-	5.1	(2.6)	-	(2.6)
Transfers[1]	-	-	-	-	-	-	31.9	(31.9)	-	-	-
Dividends paid/ payable (note 14)	-	-	-	-	-	-	-	(110.6)	(110.6)	(979.5)	(1,090.1)
Exercise of LTIP awards	0.1	-	-	(13.1)	-	-	-	13.1	0.1	-	0.1
Recognition of share-based payment (note 32)	-	-	-	15.6	-	-	-	-	15.6	-	15.6
Others[3]	-	-	-	-		-	-	3.2	3.2		3.2
At 31 March 2016	**30.1**	**201.5**	**(557.2)**	**29.9**	**6.0**	**(87.7)**	**(1.4)**	**(334.0)**	**(712.8)**	**7,565.2**	**6,852.4**

OTHER RESERVES COMPRISE[1]

(US$ million)

	Currency translation reserve	Merger reserve[2]	Investment revaluation reserve	General reserves[4]	Total
At 1 April 2015	**(1,876.5)**	**4.4**	**2.6**	**2,209.4**	**339.9**
Exchange differences on translation of foreign operations	(378.7)	-	-	-	(378.7)
Gain in fair value of available-for-sale financial assets	-	-	1.5	-	1.5
Remeasurements	-	-	-	4.0	4.0
Transfer from retained earnings[1]	-	-	-	31.9	31.9
At 1 April 2016	**(2,255.2)**	**4.4**	**4.1**	**2,245.3**	**(1.4)**
Exchange differences on translation of foreign operations	87.9	-	-	-	87.9
Gain in fair value of available-for-sale financial assets	-	-	2.5	-	2.5
Remeasurements	-	-	-	0.0	0.0
Transfer from retained earnings[1]	-	-	-	51.5	51.5
At 31 March 2017	**(2,167.3)**	**4.4**	**6.6**	**2,296.8**	**140.5**

(1) Transfer to general reserve during the Year ended 31 March 2017 and 31 March 2016 includes US$51.5 million and US$31.9 million of debenture redemption reserve respectively.

(2) The merger reserve arose on incorporation of the Company during the year ended 31 March 2004. The investment in Twin Star had a carrying amount value of US$20.0 million in the accounts of Volcan. As required by the Companies Act 1985, Section 132, upon issue of 156,000,000 Ordinary shares to Volcan, Twin Star's issued share capital and share premium account have been eliminated and a merger reserve of US$4.4 million arose, being the difference between the carrying value of the investment in Twin Star in Volcan's accounts and the nominal value of the shares issued to Volcan.

(3) Others: US$3.2 million of tax refund received on appropriation of reserves in BALCO during the year 2015-16 (2016-17 : Nil).

(4) Under Indian law, a general reserve was created through an annual transfer of net income to general reserve at a specified percentage in accordance with applicable regulations. The purpose of these transfers is to ensure that the total dividend distribution is less than total distributable reserves for that year.

NOTES TO THE FINANCIAL STATEMENTS

1. Presentation of financial statements

General information

Vedanta Resources plc ('Company' or 'VRplc') is a company incorporated and domiciled in the United Kingdom and is a London listed diversified global natural resources major. The group produces aluminium, copper, zinc, lead, silver, iron ore, oil & gas and commercial energy. Vedanta has operations in India, Zambia, Namibia, South Africa, Ireland, Liberia, UAE and Australia. These financial statements are presented in US dollars being the functional currency of the Company and all values are rounded to one decimal of the nearest million except where otherwise indicated.

Compliance with applicable law and IFRS

The financial statements have been prepared in accordance with those parts of the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards (IFRS), Article 4 of the IAS Regulation and IFRS as adopted by the European Union and related interpretations.

Basis of preparation

The financial statements have been prepared on a historical cost basis, except for derivative financial instruments, available-for-sale financial assets, liquid investments and defined benefit pension obligations that have been measured at fair value as per the principles of Fair value measurement under IFRS 13 or IAS 19, as applicable.

The following Standards have been issued but are not yet effective up to the date of authorisation of these financial statements (and in some cases had not yet been adopted by EU):

Amendments resulting from Annual Improvements 2014-2016 Cycle: The amendments are effective for annual periods beginning on or after 1 January 2018, although entities are permitted to apply them earlier.

IAS 7 Statement of Cash Flows: Narrow-scope amendments: The amendments introduce an additional disclosure that will enable users of financial statements to evaluate changes in liabilities arising from financing activities. The Group will be required to provide information on movements in gross liabilities arising from financing activities in addition to the net debt reconciliation currently provided. The amendments are effective for annual periods beginning on or after 1 January 2017, although entities are permitted to apply them earlier.

Amendments to IAS 12: Recognition of Deferred Tax Assets for Unrealised Losses. These amendments on the recognition of deferred tax assets for unrealised losses clarify how to account for deferred tax assets related to debt instruments measured at fair value. The amendments are effective for annual periods beginning on or after 1 January 2017, although entities are permitted to apply them earlier.

IFRIC 22: Foreign Currency Transactions and Advance Consideration: not yet endorsed by the EU : The Interpretation, which was issued on 8 December 2016, addresses how to determine the date of a transaction for the purpose of determining the exchange rate to use on initial recognition of an asset, expense or income (or part of it) when a related non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration in a foreign currency is derecognised. The amendments are effective for annual periods beginning on or after 1 January 2018, although entities are permitted to apply them earlier.

IAS 40 Investment Property: Paragraph 57 has been amended to state that an entity shall transfer a property to, or from, investment property when, and only when, there is evidence of a change in use. A change of use occurs if property meets, or ceases to meet, the definition of investment property. A change in management's intentions for the use of a property by itself does not constitute evidence of a change in use. The list of evidence in paragraph 57(a) – (d) was designated as non-exhaustive list of examples instead of the previous exhaustive list. The amendments are effective for periods beginning on or after 1 January 2018. Earlier application is permitted.

IFRS 2 Share-based Payment: Few amendments to clarify the classification and measurement of share-based payment transactions have been issued. The amendments are effective for annual periods beginning on or after 1 January 2018. Earlier application is permitted. The amendments are to be applied prospectively. However, retrospective application is allowed if this is possible without the use of hindsight.

IFRS 4 Insurance Contracts: Amendments regarding the interaction of IFRS 4 and IFRS 9 has been issued. An entity choosing to apply the overlay approach retrospectively to qualifying financial assets does so when it first applies IFRS 9. An entity choosing to apply the deferral approach does so for annual periods beginning on or after 1 January 2018.

IFRS 9 – Financial Instruments

In July 2014,the International Accounting Standards Board issued the final version of IFRS 9, Financial Instruments. The standard reduces the complexity of the current rules on financial instruments as mandated in IAS 39. IFRS 9 has fewer classification and measurement categories as compared to IAS 39 and has eliminated the categories of held to maturity, available for sale and loans and receivables. Further it eliminates the rule based requirement of segregating embedded derivatives and tainting rules pertaining to held to maturity investments. For an investment in an equity instrument which is not held for trading, IFRS 9 permits an irrevocable election, on initial recognition, on an individual share-by- share basis,to present all fair value changes from the investment in other comprehensive income.No amount recognized in other comprehensive income would ever be reclassified to profit or loss. It requires the entity, which chooses to measure a liability at fair value,to present the portion of the fair value change attributable to the entity's own credit risk in the other comprehensive income. IFRS 9 replaces the 'incurred loss model' in IAS 39 with an 'expected credit loss'model. The measurement uses a dual measurement approach, under which the loss allowance is measured as either 12 month expected credit losses or lifetime expected credit losses. The standard also introduces new presentation and disclosure requirements. The effective date for adoption of IFRS 9 is annual periods beginning on or after 1 January 2018,though early adoption is permitted.

The indicative impacts of adopting IFRS 9 on the Group are as follows. The work is ongoing and additional impacts may be identified later in the implemenatation process.

- **Classification and measurement**: IFRS 9 establishes a principle based approach for classification of financial assets based on cash flow characteristics of the asset and the business model in which an asset is held. The Group anticipates no significant changes in the classification of financial assets and liabilities under this model.
- **Impairment**: Based on Group's initial assessment, the impairment of financial assets held at amortised cost is not expected to have material impact on the Group's results, given the low exposure to counterparty default risk as a result of the credit risk management processes that are in place.
- **Hedge accounting**: The adoption of the new standard would not materially change the amounts recognised in relation to existing hedging arrangements.

IFRS 15 – Revenue from Contracts with Customers

IFRS 15 – Revenue from contracts with Customers outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The standard replaces most current revenue recognition guidance. The core principle of the new standard is for companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. The new standard also will result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively including service revenues and contract modifications and improve guidance for multiple-element arrangements. The new Standard will come into effect for the annual reporting periods beginning on or after 1 January 2018 with early application permitted.

The indicative impacts of implementing IFRS 15 on the Group results are detailed below. The work is ongoing and additional impacts may be identified later in the implementation process.

- The timing of the recognition of revenue- The new standard introduces the concept of 'control' for revenue recognition, in contrast to the "risk and rewards" approach in IAS 18. Accordingly, the revenue recognition model will change from one based on the transfer of risk and reward of ownership to the transfer of control of ownership. The Group's revenue is predominantly derived from commodity sales, where the point of recognition is dependent on the contract sales terms, known as the International Commercial terms (Incoterms). As the transfer of risks and rewards generally coincides with the transfer of control at a point in time for the Incoterms as part of the Group's commodity sales arrangements, the timing and amount of revenue recognised for the sale of commodities is unlikely to be materially affected for the majority of sales.

IFRS 16 – Leases

IFRS 16- Leases, specifies recognition, measurement and disclosure criteria for leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. The new Standard will come into effect for annual reporting periods beginning on or after 1 January 2019. Earlier application is permitted if IFRS 15 Revenue from Contracts with Customers has also been applied.

The Group is currently in the process of determining the potential impact of adopting the above standard.

Adoption of new and revised standards and pronouncements:

The Group has adopted with effect from 1 April 2016, the following new amendment and pronouncements. Their adoption has not had any significant impact on the amounts reported in the financial statements.

- Amendments to IAS 1: Disclosure Initiative
- Annual Improvements to IFRSs: 2012-2014 Cycle
- Amendments to IAS 27: Equity method in separate financial statements
- Amendments to IAS 16 and IAS 38: Clarification of Acceptable Methods of Depreciation and Amortisation
- Amendments to IFRS 11: Accounting for Acquisitions of Interests in Joint Operations

- Amendment to IFRS 10, IFRS 12 and IAS 28: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture.
- Amendments to IFRS 10, IFRS 12 and IAS 28: Investment entities : Applying the Consolidation Exemption

The Group has not early adopted any other amendments, standards or interpretations that have been issued but are not yet effective.

Parent Company financial statements

The financial statements of the parent company, Vedanta Resources plc, incorporated in the United Kingdom, have been prepared in accordance with FRS 101 and UK company law. The Company financial statements and associated notes are presented in note 46 to 59.

2 (a) Accounting policies

(i) Basis of consolidation

Subsidiaries:

The consolidated financial information incorporates the results of the Company and all its subsidiaries (the "Group"), being the companies that it controls. Control is evidenced where the Company has power over the investee, is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Power is demonstrated through existing rights that give the ability to direct relevant activities, which significantly affect the entity returns.

The financial statements of subsidiaries are prepared for the same reporting year as the parent Company. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used into line with accounting policies used by the Group.

For non-wholly owned subsidiaries, a share of the profit for the financial year and net assets is attributed to the non-controlling interests as shown in the consolidated income statement, consolidated statement of comprehensive income and consolidated balance sheet.

For acquisitions of additional interests in subsidiaries, where there is no change in control, the Group recognises a reduction to the non-controlling interest of the respective subsidiary with the difference between this figure and the cash paid, inclusive of transaction fees, being recognised in equity. In addition, upon dilution of controlling interests the difference between the cash received from sale or listing of the subsidiary shares and the increase to non-controlling interest is also recognised in equity. The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

All intercompany balances and transactions, including unrealised profits arising from intra-Group transactions, have been eliminated in full. Unrealised losses are eliminated unless costs cannot be recovered.

Joint arrangements

A Joint arrangement is an arrangement of which two or more parties have joint control. Joint control is considered when there is contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

- The Group has Joint operations within its Oil & Gas segment, the Group participates in several unincorporated joint operations which involve the joint control of assets used in oil and gas exploration and producing activities. The Group accounts for its share of assets, liabilities, income and expenditure of joint ventures in which the Group holds an interest, classified in the appropriate balance sheet and income statement headings. In addition, where the Group acts as operator to the joint venture, the gross liabilities and receivables (including amounts due to or from non-operating partners) of the joint operations are included in the Group balance sheet.

(ii) Revenue recognition

Revenues are measured at the fair value of the consideration received or receivable , net of discounts, volume rebates, outgoing sales taxes excise duty and other indirect taxes. Revenues from sales are recognised when all significant risks and rewards of ownership of the commodity sold are transferred to the customer and the commodity has been delivered to the shipping agent. Revenues from sale of by-products are included in revenue.

Certain of the Group's sales contracts provide for provisional pricing based on the price on The London Metal Exchange ("LME"), as specified in the contract, when shipped. Final settlement of the price is based on the applicable price for a specified future period. The Group's provisionally priced sales are marked to market using the relevant forward prices for the future period specified in the contract and is adjusted in revenue.

- Revenue from oil, gas and condensate sales represent the Group's share of oil, gas and condensate production, recognised on a direct entitlement basis, and tolling income received for third party use of operating facilities and pipelines in accordance with agreements.
- Revenue from sale of power is recognised when delivered and measured based on rates as per bilateral contractual agreements with buyers and at rate arrived at based on the principles laid down under the relevant Tariff Regulations as notified by the regulatory bodies, as applicable.
- Where the Group acts as a port operator, revenues and costs relating to each construction contract of service concession arrangements are recognised over the period of each arrangement only to the extent of costs incurred that are probable of recovery. Revenues and costs relating to operating phase of the port contract are measured at the fair value of the consideration received or receivable for the services provided.
- Revenue from rendering of services is recognised on the basis of work performed.
- Dividend income recognised when the right to receive payment is established is accounted for as investment income in consolidated income statement.
- Interest income is recognised using the effective interest rate method, accounted for as investment income in consolidated income statement.
- The fair value gain/ (loss) in relation to financial assets held for trading is accounted for as investment income in consolidated income statement.

(iii) Special items

Special items are those items that management considers, by virtue of their size or incidence (including but not limited Impairment charges and acquisition and restructuring related costs), should be disclosed separately to ensure that the financial information allows an understanding of the underlying performance of the business in the year, so as to facilitate comparison with prior periods. Also tax charges related to Special items and certain one-time tax effects are considered Special. Such items are material by nature or amount to the year's result and require separate disclosure in accordance with IFRS. The determination as to which items should be disclosed separately requires a degree of judgement.

(iv) Business combinations

The results of subsidiaries acquired or sold during the year are consolidated for the periods from, or to, the date on which control passed. Acquisitions are accounted for under the acquisition method. The acquiree's identifiable assets, liabilities and contingent liabilities that meet the conditions for recognition are recognised at their fair value at the acquisition date, except certain assets and liabilities required to be measured as per the applicable standards.

The identifiable assets, liabilities and contingent liabilities of a subsidiary, which can be measured reliably, are recorded at their provisional fair values at the date of acquisition. The difference between the fair value of the consideration transferred (including contingent consideration and previously held non-controlling interests) and Group's share of the fair value of the identifiable net assets on acquisition is recognised as Goodwill. Goodwill arising on acquisitions is reviewed for impairment at least annually.

Where the fair values of the identifiable assets and liabilities exceed the cost of acquisition, the surplus is credited to the income statement in the Year of acquisition. If the fair value of the identifiable net assets acquired is in excess of the aggregate consideration transferred, the Group reassesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in statement of profit or loss and other comprehensive income.

Where it is not possible to complete the determination of fair values by the date on which the first post-acquisition financial statements are approved, a provisional assessment of fair values is made and any adjustments required to those provisional fair values, and the corresponding adjustments to purchased goodwill, are finalised within 12 months of the acquisition date.

Any non-controlling interest in an acquiree is measured at fair value or as the non-controlling interest's proportionate share of the acquiree's identifiable net assets, excluding goodwill. This accounting choice is made on a transaction-by-transaction basis.

Acquisition expenses are charged to the income statement.

If the Group acquires a group of assets or equity in a company that does not constitute a business combination in accordance with IFRS 3 Business Combinations (2008 revised), the cost of the acquired group of assets or equity is allocated to the individual identifiable assets acquired based on their relative fair value.

Common Control transactions

A business combination involving entities or businesses under common control is a business combination in which all of the combining entities or businesses are ultimately controlled by the same party or parties both before and after the business combination and the control is not transitory. The transactions between entities under common control are scoped out of IFRS 3 and there is no authoritative literature for these transactions under IFRS. As a result, the Group adopted accounting principles similar to the pooling-of-interest method based on the predecessor values. The assets and liabilities of the acquired entity are recognised at the book values recorded in the ultimate parent entity's consolidated financial statements with the exception of certain income tax and deferred tax benefits arising on account of the common control transaction but relating to previous years, which are recognised retrospectively. The components of equity of the acquired companies are added to the same components within

Group equity except that any share capital and investments in the books of the acquiring entity is cancelled and the differences, if any, is adjusted in the opening retained earnings. The Company's shares issued in consideration for the acquired companies are recognized from the moment the acquired companies are included in these financial statements and the financial statements of the commonly controlled entities would be combined, retrospectively, as if the transaction had occurred at the beginning of the earliest reporting period presented. However, the prior years' comparative information is only adjusted for periods during which the entities were under common control.

(v) Intangible assets

Intangibles assets are measured at cost less accumulated amortisation and accumulated impairment losses, if any. The Group determines the amortisation period as the period over which the future economic benefits will flow to the Group after taking into account all relevant facts and circumstances. Amortisation method, residual values and estimated useful life of intangible assets are reviewed annually or more frequently if events or changes in circumstances indicate a potential impairment.

Intangible assets arising out of service concession arrangements are accounted for as intangible assets where the Company has a contractual right to charge users of services when the projects are completed and is measured at the cost of such construction services completed. Such assets are amortised on straight line basis over the balance of license period, usually between 3 to 30 years.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset are recognised in the consolidated income statement when the asset is derecognised.

(vi) Property, plant and equipment

Relating to mineral assets- Mining properties and leases

The costs of mining properties and leases, which include the costs of acquiring and developing mining properties and mineral rights, are capitalised as property, plant and equipment under the heading 'Mining properties and leases' in the year in which they are incurred.

When a decision is taken that a mining property is viable for commercial production (i.e. when the Group determines that the mining property will provide sufficient and sustainable returns relative to the risk and decides to proceed with the development), all further pre-production primary development expenditure other than land, buildings, plant and equipment is capitalised as part of the cost of the mining property until the mining property is capable of commercial production. From that point, capitalised mining properties and lease costs are amortised on a unit-of-production basis over the total estimated remaining commercial reserves of each property or group of properties.

Exploration and evaluation assets acquired are recognised as assets at their cost of acquisition subject to meeting the commercial production criteria mentioned above and are subject to impairment review on an event of indication for impairment.

Exploration and evaluation expenditure incurred after obtaining the right to mine or the legal right to explore, is capitalised as property, plant and equipment and stated at cost less any impairment. Exploration and evaluation assets are transferred to the appropriate category of property, plant and equipment when the technical feasibility and commercial viability has been determined. Exploration and evaluation assets are assessed for impairment and impairment loss, if any, is recognised prior to reclassification. Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

Exploration expenditure includes all direct and allocated indirect expenditure associated with finding specific mineral resources which includes depreciation and applicable operating costs of related support equipment and facilities and other costs of exploration activities:

- Acquisition costs - costs associated with acquisition of licences and rights to explore, including related professional fees.
- General exploration costs - costs of surveys and studies, rights of access to properties to conduct those studies (e.g., costs incurred for environment clearance, defence clearance, etc.), and salaries and other expenses of geologists, geophysical crews and other personnel conducting those studies.
- Costs of exploratory drilling and equipping exploratory and appraisal wells.

The stripping cost incurred during the production phase of a surface mine are deferred to the extent the current period stripping cost exceeds the average period stripping cost over the life of mine and recognised as an asset if such cost provides a benefit in terms of improved access to ore in future periods and certain criteria are met. Deferred stripping costs are included in mining properties within Property, plant and equipment and disclosed as a part of mining properties. After initial recognition, the stripping activity asset is depreciated on a unit of production method over the expected useful life of the identified component of the ore body.

In circumstances where a mining property is abandoned, the cumulative capitalised costs relating to the property are written off in the period in which it occurs i.e. when the group determines that the mining property will not provide sufficient and sustainable returns relative to the risks and the group decides not to proceed with the mine development.

Commercial reserves are proved and probable reserves as defined by the 'JORC' Code and 'SAMREC' Code. Changes in the commercial reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Relating to oil and gas assets- Exploration & evaluation assets and developing/producing assets

For oil and gas assets a successful efforts based accounting policy is followed. Costs incurred prior to obtaining the legal rights to explore an area are expensed immediately to the income statement. Expenditure incurred on the acquisition of a licence interest is initially capitalised on a licence-by-licence basis. Costs are held, are not amortised or depreciated, within exploration and evaluation assets until such time as the exploration phase on the licence area is complete or commercial reserves have been discovered.

Exploration expenditure incurred in the process of determining oil and gas exploration targets is capitalised initially within property, plant and equipment- exploration and evaluation assets and subsequently allocated to drilling activities (under oil and gas properties and/or exploration and evaluation assets as appropriate). Exploration drilling costs are initially capitalised on a well-by-well basis until the success or otherwise of the well has been established. The success or failure of each exploration effort is judged on a well-by-well basis. Drilling costs are written off on completion of a well unless the results indicate that hydrocarbon reserves exist and there is a reasonable prospect that these reserves are commercial.

Following appraisal of successful exploration wells, if commercial reserves are established and technical feasibility for extraction demonstrated, then the related capitalised exploration costs are transferred into a single field cost centre within property, plant & equipment -

development/producing assets (oil and gas properties) after testing for impairment. Where results of exploration drilling indicate the presence of hydrocarbons which are ultimately not considered commercially viable, all related costs are written off to the income statement.

All costs incurred after the technical feasibility and commercial viability of producing hydrocarbons has been demonstrated are capitalised within property, plant & equipment - development/producing assets (oil and gas properties) on a field-by-field basis. Subsequent expenditure is capitalised only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

Net proceeds from any disposal of an exploration asset are initially credited against the previously capitalised costs. Any surplus proceeds are credited to the income statement. Net proceeds from any disposal of development/producing assets are credited against the previously capitalised cost. A gain or loss on disposal of a development/producing asset is recognised in the income statement to the extent that the net proceeds exceed or are less than the appropriate portion of the net capitalised costs of the asset.

Other property, plant and equipment

The initial cost of property, plant and equipment comprises its purchase price, including import duties and non-refundable purchase taxes, and any directly attributable costs of bringing an asset to working condition and location for its intended use, including relevant borrowing costs and any expected costs of decommissioning. This policy is set out under 'Borrowings Costs'. Expenditure incurred after the property, plant and equipment have been put into operation, such as repairs and maintenance, are charged to the income statement in the period in which the costs are incurred. Major shut-down and overhaul expenditure is capitalised as the activities undertaken improve the economic benefits expected to arise from the asset.

(vii) Assets under construction

Assets under construction are capitalised in the assets under construction account. At the point when an asset is operating at management's intended use, the cost of construction is transferred to the appropriate category of property, plant and equipment and depreciation commences (see below). Costs associated with the commissioning of an asset and any obligatory decommissioning costs are capitalised where the asset is available for use but incapable of operating at normal levels until a period of commissioning has been completed. Revenue generated from production during the trial period is capitalised. Borrowing costs and certain foreign exchange gains or losses are in certain circumstances capitalised in the cost of the asset under construction. This policy is set out under 'Borrowing Costs'.

(viii) Depreciation and amortisation

Relating to mining properties

Mining properties and other assets in the course of development or construction, freehold land and goodwill are not depreciated or amortised. Capitalised mining properties are depreciated and lease costs are amortised once commercial production commences, as described in "Property, plant and equipment – mining properties and leases". Leasehold land and buildings are depreciated on a straight-line basis over the period of the lease or, if shorter, their useful economic life.

Relating to oil and gas assets

All expenditure carried within each field is depreciated from the commencement of production on a unit of production basis, which is the ratio of oil and gas production in the period to the estimated quantities of commercial reserves at the end of the period plus the production in the period, generally on a field-by-field basis or group of fields which are reliant on common infrastructure.

Commercial reserves are proven and probable oil and gas reserves, which are defined as the estimated quantities of crude oil, natural gas and natural gas liquids which geological, geophysical and engineering data demonstrate with a specified degree of certainty to be recoverable in future years from known reservoirs and which are considered commercially producible. There should be a 50 per cent statistical probability that the actual quantity of recoverable reserves will be more than the amount estimated as proven and probable reserves and a 50 per cent statistical probability that it will be less.

Costs used in the unit of production calculation comprise the net book value of capitalised costs plus the estimated future field development costs required to access commercial reserves. Changes in the estimates of commercial reserves or future field development costs are dealt with prospectively.

Others

Other buildings, plant and equipment, office equipment and fixtures, and motor vehicles are stated at cost less accumulated depreciation and any provision for impairment. Depreciation commences when the assets are ready for their intended use. Depreciation is provided at rates calculated to write off the cost, less estimated residual value, of each asset on a straight-line basis over its expected useful life, as follows:

Buildings operations and administration	30-60 years
Plant and machinery	15-40 years
Office equipment and fixtures	5–10 years
Motor vehicles	8-10 years

The Group reviews the residual value and useful life of an asset annually and, if expectations differ from previous estimates, the change is accounted for as a change in accounting estimate.

Major overhaul costs are depreciated over the estimated life of the economic benefit to be derived from the overhaul. The carrying amount of the remaining previous overhaul cost is charged to the income statement if the next overhaul is undertaken earlier than the previously estimated life of the economic benefit.

Property, plant and equipment held for sale or which is part of a disposal Group held for sale is not depreciated. Property, plant and equipment held for sale is carried at the lower of its carrying value and fair value less disposal cost and is presented separately on the face of the balance sheet.

(ix) Impairment

Financial assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate. An impairment loss in respect of an available-for-sale financial asset is calculated by reference to its fair value.

Significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognized in the consolidated statements of income. Any cumulative loss in respect of an available-for-sale financial asset recognized previously in the consolidated statements of comprehensive income is transferred to the consolidated statements of income on recognition of impairment. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognized. For financial assets measured at amortised cost and available-for-sale financial assets that are debt securities, the reversal is recognized in the consolidated statements of income. For available-for-sale financial assets that are equity securities, the change in fair value is recognized directly in the consolidated income statement.

In respect of trade and other receivables, the Group would provide for impairment losses unless the Company is satisfied that no recovery of the amount owing is possible; at that point the amounts are considered irrecoverable and are written off against the financial asset directly.

Non-financial assets

Impairment charges and reversals are assessed at the level of cash-generating units. A cash-generating unit (CGU) is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or group of assets.

Formal impairment tests are carried out annually for goodwill. In addition, formal impairment tests for all assets are performed when there is an indication of impairment. The Group conducts an internal review of asset values annually, which is used as a source of information to assess for any indications of impairment or reversal of previously recognised impairment losses. Internal and external factors, such as worse economic performance than expected, changes in expected future prices, costs and other market factors are also monitored to assess for indications of impairment or reversal of previously recognised impairment losses.

If any such indication exists then an impairment review is undertaken, the recoverable amount is calculated, as the higher of fair value less costs of disposal and the asset's value in use.

Fair value less costs of disposal is the price that would be received to sell the asset in an orderly transaction between market participants less costs of disposal and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general. Fair value for mineral and oil and gas assets is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal, using assumptions that an independent market participant may take into account. These cash flows are discounted at an appropriate post-tax discount rate to arrive at the net present value.

Value in use is determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset in its present form and its eventual disposal. The cash flows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which estimates of future cash flows have not been adjusted. Value in use is determined by applying assumptions specific to the Group's continued use and cannot take into account future development. These assumptions are different to those used in calculating fair value and consequently the value in use calculation is likely to give a different result to a fair value calculation.

The carrying amount of the CGU is determined on a basis consistent with the way the recoverable amount of the CGU is determined. The carrying amount is net of deferred tax liability recognised in the fair value of the assets acquired in a business combination.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount. An impairment loss is recognised in the consolidated income statement.

Any reversal of the previously recognised impairment loss is limited to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had previously been recognised except if initially attributed to goodwill.

Exploration & evaluation assets:

In assessing whether there is any indication that an exploration and evaluation asset may be impaired, the company considers, as a minimum, the following indicators:

- the period for which the entity has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned;
- exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area;
- sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale; and
- reserve information prepared annually by external experts.

When a potential impairment is identified, an assessment is performed for each area of interest in conjunction with the group of operating assets (representing a cash-generating unit) to which the exploration and evaluation assets is attributed. Exploration areas in which reserves have been discovered but require major capital expenditure before production can begin, are continually evaluated to ensure that commercial quantities of reserves exist or to ensure that additional exploration work is under way or planned. To the extent that capitalised expenditure is no longer expected to be recovered, it is charged to the income statement.

(x) Non-current assets held for sale and discontinued operations

Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when a sale is highly probable from the date of classification, management are committed to the sale and the asset is available for immediate sale in its present condition. Non-current assets are classified as held for sale from the date these conditions are met and are measured at the lower of carrying amount and fair value (less costs to sell). Any resulting impairment loss that is material is recognised in the income statement as a special item. On classification as held for sale the assets are no longer depreciated and moved to current assets.

(xi) Government grants

Government grants related to assets, including non monetary grants at fair value, have been deducted in arriving at the carrying amount of the asset.

(xii) Inventories

Inventories and work-in-progress are stated at the lower of cost and net realisable value.

Cost is determined on the following basis:

- Purchased copper concentrate is recorded at cost on a first-in, first-out ("FIFO") basis; all other materials including stores and spares are valued on weighted average basis; except in Oil and Gas business where stores and spares are valued on a FIFO basis.

- Finished products are valued at raw material cost plus costs of conversion, comprising labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity; and by-products and scrap are valued at net realisable value.
- Net realisable value is determined based on estimated selling price, less further costs expected to be incurred to completion and disposal.

(xiii) Taxation

Tax expense represents the sum of tax currently payable and deferred tax.

Current tax is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided, using the balance sheet method, on all temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Exceptions to this principle are:

Tax payable on the future remittance of the past earnings of subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future;

Deferred income tax is not recognised on the impairment of goodwill which is not deductible for tax purposes or on the initial recognition of an asset or liability in a transaction that is not a business combination, which at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and

Deferred tax assets are recognised only to the extent that it is more likely than not that they will be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date. Tax relating to items recognised directly in other comprehensive income is recognised in the consolidated statements of comprehensive income and not in the income statement.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and is adjusted to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the asset to be recovered.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Deferred tax is provided on temporary differences arising on acquisitions that are categorised as Business Combinations. Deferred tax is recognised at acquisition as part of the assessment of the fair value of assets and liabilities acquired. Any deferred tax is charged or credited in the income statement/other comprehensive income as the underlying temporary difference is reversed.

(xiv) Retirement benefit schemes

The Group operates or participates in a number of defined benefits and contribution schemes, the assets of which are (where funded) held in separately administered funds.

For defined benefit schemes the cost of providing benefits under the plans is determined each year separately for each plan using the projected unit credit method by independent qualified actuaries.

Re-measurement gains and losses arising in the year are recognised in Other Comprehensive Income and are not recycled to the income statement.

Net interest is calculated by applying a discount rate to the net defined benefit liability or asset. Defined benefit costs are split into current service cost, past service cost, net interest expense or income and remeasurement.

Current service cost and past service costs is recognised within cost of sales and administrative expenses. Net interest expense or income is recognised within finance costs.

For defined contribution schemes, the amount charged to the income statement in respect of pension costs and other post-retirement benefits is the contributions payable in the year.

(xv) Share-based payments

Certain employees (including executive directors) of the Group receive part of their remuneration in the form of share-based payment transactions, whereby employees render services in exchange for shares or rights over shares ('equity-settled transactions').

The resultant increase in equity is recorded in share based payment reserve.

The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions are determined with the assistance of an external valuer and the fair value at the grant date is expensed on a proportionate basis over the vesting period based on the Group's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations.

In case of cash-settled transactions, a liability is recognised for the fair value of cash-settled transactions. The fair value is measured initially and at each reporting date up to and including the settlement date, with changes in fair value recognised in employee benefits expense. The fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The fair value is determined with the assistance of an external valuer.

(xvi) Provisions for liabilities and charges

Provisions are recognised when the Group has a present obligation (legal or constructive), as a result of past events, and it is probable that an outflow of resources, that can be reliably estimated, will be required to settle such an obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows to net present value using an appropriate pre-tax discount rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Unwinding of the discount is recognised in the income statement as a finance cost. Provisions are reviewed at each balance sheet date and are adjusted to reflect the current best estimate.

(xvii) Restoration, rehabilitation and environmental costs

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production of a mine or oil fields. Costs arising from the decommissioning of plant and other site preparation work are provided for based on their discounted net present value, with a corresponding amount being capitalised at the start of each project. The amount provided for is recognised, as soon as the obligation to incur such costs arises. These costs are charged to the income statement over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision. The cost estimates are reviewed periodically and are adjusted to reflect known developments which may have an impact on the cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the lives of the assets to which they relate. The unwinding of the discount is shown as a finance cost in the income statement.

Costs for restoration of subsequent site damage which is caused on an ongoing basis during production are provided for at their net present values and charged to the income statement as extraction progresses. Where the costs of site restoration are not anticipated to be significant, they are expensed as incurred.

(xviii) Operating leases

Group as a lessee

Rentals under operating leases are charged on a straight-line basis over the lease term, even if the payments are not made on such a basis.

Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

(xix) Finance leases

Assets held under finance leases are recognised as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the Balance Sheet as a finance lease obligation. Lease payments are apportioned between finance charges and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged to the Income Statement, unless they are directly attributable to qualifying assets, in which case they are capitalised in accordance with the Group's policy on borrowing costs.

(xx) Foreign currency translation

The functional currency for each entity in the Group is determined as the currency of the primary economic environment in which it operates. For all principal operating subsidiaries, the functional currency is the local currency of the country in which it operates with the exception of KCM and Oil and gas business which has a US Dollar functional currency as that is the currency of primary economic environment in which it operates. In the financial statements of individual Group companies, transactions in currencies other than the functional currency are translated into the functional currency at the exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies are translated into the functional currency at exchange rates prevailing on the balance sheet date. Non-monetary assets and liabilities denominated in other currencies and measured at historical cost or fair value are translated at the exchange rates prevailing on the dates on which such values were determined.

All exchange differences are included in the income statement, except, where the monetary item is designated as an effective hedging instrument of the currency risk of designated forecast sales. These include the exchange differences recognised in equity and exchange differences on foreign currency borrowings relating to asset under construction, and for future productive use, and are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings.

For the purposes of consolidation, the income statement items of those entities for which the US dollar is not the functional currency are translated into US dollars at the average rates of exchange during the period. The related consolidated statements of financial position are translated at the rates as at the reporting date. Exchange differences arising on translation are recognised in the consolidated statements of comprehensive income. On disposal of such entities the deferred cumulative exchange differences recognised in equity relating to that particular foreign operation are recognised in the consolidated statements of profit or loss.

(xxi) Financial asset investments

Financial asset investments are classified as available for sale under IAS 39 and are initially recorded at fair value plus transaction costs that are directly attributable to the acquisition of financial asset investments and then remeasured at subsequent reporting dates to fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Investments in equity instruments are recorded in non-current assets unless they are expected to be sold within one year.

Investments in unquoted equity instruments that do not have a market price and whose fair value cannot be reliably measured are measured at cost.

The Group assesses at each reporting date whether there is objective evidence that a financial asset or a group of financial assets is impaired. An impairment exists if one or more events that has occurred since the initial recognition of the asset (an incurred ‘loss event’) has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated.

(xxii) Liquid investments

Liquid investments represent short-term investments that do not meet the definition of cash and cash equivalents for one or more of the following reasons:

- They have a maturity profile greater than 90 days;
- They may be subject to a greater risk of changes in value than cash;
- They are held for investment purposes.

These include Short-term marketable securities and other Bank Deposits.

Short-term marketable securities are categorized as held for trading and are initially recognised at fair value with any gains or losses arising on remeasurement recognised in the consolidated statements of profit or loss.

Other bank deposits are subsequently measured at amortised cost using the effective interest method.

The value of trading investments incorporates any dividend and interest earned on the held for trading investments.

(xxiii) Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at bank and in hand, short-term deposits with banks and short-term highly liquid investments that are readily convertible into cash which are subject to insignificant risk of changes in value and are held for the purpose of meeting short-term cash commitments.

(xxiv) Trade receivables

Trade receivables are stated at their transaction value as reduced by appropriate allowances for estimated irrecoverable amounts. An allowance for impairment of trade receivables is made where there is an event, which based on previous experience, is an indication of a reduction in the recoverability of the carrying value of the trade receivables.

Trade receivables are subsequently measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised on non-current receivables on specific items by applying the effective interest rate method.

(xxv) Trade payables

Trade and other payables are recognised at their transaction cost, which is its fair value, and subsequently measured at amortised cost.

(xxvi) Bills of exchange payable

The Group enters into arrangements whereby financial institutions make direct payments to suppliers for raw materials and project materials. The financial institutions are subsequently repaid by the company at a later date providing working capital timing benefits. These are normally settled up to twelve months (for raw materials) and up to 36 months (for project materials). Where these arrangements are for raw materials with a maturity of up to twelve months, the economic substance of the transaction is determined to be operating in nature and these are recognised as Bills of exchange (under Trade and other payables). Where these arrangements are for project materials with a maturity up to thirty six months, the economic substance of the transaction is determined to be financing in nature, and these are classified as projects buyers' credit within borrowings in the statement of financial position.

(xxvii) Equity instruments

Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

(xxviii) Borrowings

Interest bearing loans and overdrafts are recorded at the fair value. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis and charged to the income statement using the effective interest method. They are netted against the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

(xxix)Convertible bonds

Convertible bonds denominated in the functional currency of the issuing entity are accounted for as compound instruments. The equity components and the liability components are separated out on the date of the issue. The equity component is recognised in a separate reserve and is not subsequently remeasured. The liability component (net of transaction cost) is held at amortised cost. The interest expense on the liability component is calculated by applying the effective interest rate, being the prevailing market interest rate at the date of issuance for similar non-convertible debt. The difference between this amount and interest paid is added to the carrying amount of the liability component.

Convertible bonds not denominated in the functional currency of the issuing entity or where a cash conversion option exists, are split into two components: a debt component and a component representing the embedded derivative in the convertible bond. The debt component represents a liability for future coupon payments and the redemption of the principal amount. The embedded derivative, a financial liability, represents the value of the option that bondholders have to convert into ordinary shares. At inception the embedded derivative is recorded at fair value and the remaining balance, after deducting a share of issue costs, is recorded as the debt component. Subsequently, the debt component is measured at amortised cost and the embedded derivative is measured at fair value at each balance sheet date with the change in the fair value recognised in the income statement. The embedded derivative and the debt component are disclosed together and the current/non-current classification follows the classification of the debt component which is the host contract.

(xxx) Borrowing costs

Borrowing costs directly relating to the acquisition, construction or production of a qualifying capital project under construction are capitalised and added to the project cost during construction until such time that the assets are substantially ready for their intended use in accordance with the Group policy which is when they are capable of commercial production. Where funds are borrowed specifically to finance a qualifying capital project, the amount capitalised represents the actual borrowing costs incurred. Where surplus funds are available out of money borrowed specifically to finance a project, the income generated from such short-term investments is also capitalised to reduce the total capitalised borrowing cost. Where the funds used to finance a project form part of general borrowings, the amount capitalised is calculated using a weighted average of rates applicable to relevant general borrowings of the Group during the year.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

Capitalisation of interest on borrowings related to construction or development projects is ceased when substantially all the activities that are necessary to make the assets ready for their intended use are complete or when delays occur outside of the normal course of business.

(xxxi) Available for sale financial assets

Equity shares held by the Group that are traded in an active market are classified as being available for sale (AFS) financial assets and are stated at fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement. Dividends received from investees accounted for as equity instruments are recognised in income statement when the right to receive the payment is established.

(xxxii) Financial instruments fair valued through profit and loss

Held for trading financial assets

Financial assets are classified as held for trading if they have been acquired principally for the purpose of selling in the near term. The change in fair value of trading investments incorporates any dividend and interest earned on the held for trading investments and is accounted for in the income statement.

Derivative financial instruments

In order to hedge its exposure to foreign exchange, interest rate and commodity price risks, the Group enters into forward contracts, option contracts, swap contracts and other derivative financial instruments. The Group does not hold derivative financial instruments for speculative purposes.

Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are re-measured at their fair value at subsequent balance sheet dates. The resultant gains or losses are recognised in the income statement unless these are designated as effective hedging instruments.

(xxxiii) Hedge accounting

The Group designates certain hedging instruments, which include derivatives and non-derivatives in respect of foreign currency risk, as either fair value hedges or cash flow hedges. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement. The hedged item is recorded at fair value and any gain or loss is recorded in the income statement and is offset by the gain or loss from the change in the fair value of the derivative.

Changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recorded in equity. This includes certain non-derivative liabilities that are designated as hedge of the foreign currency risk on future, highly probable, forecast sales. Amounts deferred in equity are recycled to the income statement in the periods when the hedged item is recognised in the income statement.

The gain or loss on hedging instruments relating to the effective portion of a net investment hedge is recognised in equity. The ineffective portion is recognised immediately in the income statement. Gains or losses accumulated in equity are reclassified to the income statement on disposal of the foreign operations to which they relate.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. Any cumulative gain or loss on the hedging instrument recognised in equity is kept in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is transferred to the income statement.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not carried at fair value with unrealised gains or losses recognised in the income statement.

For derivative instruments that are designated and qualify as a hedge of a net investment in a foreign operations, the gain or loss is reported in the consolidated statements of comprehensive income as part of the exchange difference on translation of foreign operations to the extent it is effective. Any ineffective portions of net investment hedges are recognized in other income/expense in the consolidated statement of profit or loss immediately. Under a hedge of a net investment, the cumulative gain or loss remains in the consolidated statements of comprehensive income when the hedging instrument expires or is sold, terminated or exercised, or when the hedge no longer qualifies for hedge accounting or the Group revokes designation of the hedge relationship. The cumulative gain or loss is recognised in the consolidated income statement as part of the gain / loss on disposal when the net investment in the foreign operation is disposed.

Derivative financial instruments that do not qualify for hedge accounting are marked to market at the financial position date and gains or losses are recognised in the consolidated income statement immediately.

2(b) Critical accounting judgment and estimation uncertainty

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions, that affect the application of accounting policies and the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities at the date of these consolidated financial statements and the reported amounts of revenues and expenses for the years presented. Actual results may differ from these estimates under different assumptions and conditions.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and future periods affected. The Group considers the following areas as the key sources of estimation uncertainty:

(i) Oil & Gas reserves

Oil & Gas reserves are estimated on a proved and probable entitlement interest basis. Proven and probable reserves are estimated using standard recognised evaluation techniques. The estimate is reviewed annually. Future development costs are estimated taking into account the level of development required to produce the reserves by reference to operators, where applicable, and internal engineers.

Net entitlement reserves estimates are subsequently calculated using the Group's current oil price and cost recovery assumptions, in line with the relevant agreements.

Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or commodity prices could impact the depreciation rates, carrying value of assets and environmental and restoration provisions.

(ii) Carrying value of exploration and evaluation Oil and gas assets

The recoverability of a project is assessed under IFRS 6. Exploration assets are assessed by comparing the carrying value to higher of fair value less cost of disposal or value in use. Change to the valuation of exploration assets is an area of judgement. Further details on the Group's accounting policies on this are set out in accounting policy above. The amounts for exploration and evaluation assets represent active exploration projects. These amounts will be written off to the income statement as exploration costs unless commercial reserves are established or the determination process is not completed and there are no indications of impairment. The outcome of ongoing exploration, and therefore whether the carrying value of exploration and evaluation assets will ultimately be recovered, is inherently uncertain.

Details of impairment charge/reversal impact and the assumptions used are disclosed in note 5.

(iii) Carrying value of developing/producing oil and gas assets

Management perform impairment tests on the Group's developing/producing oil and gas assets where indicators of impairment are identified in accordance with IAS 36.

The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumptions	Basis
Future production	proved and probable reserves, resource estimates and, in certain cases, expansion projects
Commodity prices	management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analyst forecast
Discount to price	management's best estimate based on historical prevailing discount
Extension of PSC	assumed that PSC for Rajasthan block would be extended till 2030 on the expected commercial terms
Discount rates	cost of capital risk-adjusted for the risk specific to the asset/ CGU

Any subsequent changes to cash flows due to changes in the above mentioned factors could impact the carrying value of the assets.

Details of impairment charge and the assumptions used are disclosed in note 5.

(iv) Mining properties and leases

The carrying value of mining property and leases is arrived at by depreciating the assets over the life of the mine using the unit of production method based on proved and probable reserves. The estimate of reserves is subject to assumptions relating to life of the mine and may change when new information becomes available. Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or commodity prices could thus impact the carrying values of mining properties and leases and environmental and restoration provisions.

Management performs impairment tests when there is an indication of impairment. The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumptions	Basis
Future production	proved and probable reserves, resource estimates (with an appropriate conversion factor) considering the expected permitted mining volumes and, in certain cases, expansion projects
Commodity prices	management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analyst forecast
Exchange rates	management best estimate benchmarked with external sources of information
Discount rates	cost of capital risk-adjusted for the risk specific to the asset/ CGU

Details of impairment charge are disclosed in note 5.

(v) Useful economic lives and impairment of other assets

Property, plant and equipment other than mining properties, oil and gas properties, and leases are depreciated over their useful economic lives. Management reviews the useful economic lives at least once a year and any changes could affect the depreciation rates prospectively and hence the asset carrying values. The Group also reviews its property, plant and equipment, including mining properties and leases, for possible impairment if there are events or changes in circumstances that indicate that carrying values of the assets may not be recoverable. In assessing the property, plant and equipment for impairment, factors leading to significant reduction in profits such as changes in commodity prices, the Group's business plans and changes in regulatory environment are taken into consideration. The carrying value of the assets of a cash generating unit (CGU) is compared with the recoverable amount of those assets, that is, the higher of fair value less costs of disposal and value in use. Recoverable value is based on the management estimates of commodity prices, market demand and supply, economic and regulatory climates, long-term plan, discount rates and other factors. Any subsequent changes to cash flow due to changes in the abovementioned factors could impact the carrying value of the assets.

(vi) Assessment of impairment at Lanjigarh Refinery

During the previous year, the Group has received the necessary approvals for expansion of the Lanjigarh refinery to 4 million tonnes per annum (MTPA). Approval for expansion from 4 MTPA to 6 MTPA is dependent upon certain conditions.

Accordingly, second stream operation has commenced in Alumina refinery from April 2016 thus, taking it to the debottlenecked capacity of 1.7 - 2.0 MTPA (contingent on bauxite quality). Further ramp up to 4 MTPA will be considered after tying up the local bauxite sources. The Group has considered the delay in tying up local bauxite sources as an indication of impairment. Hence, the Group has reviewed the carrying value of its property, plant and equipments at Lanjigarh as at balance sheet date, estimated the recoverable amounts of these assets and concluded that there was no impairment because the recoverable amount (estimated based on fair value less cost of disposal) exceeded the carrying amounts.

The key assumptions and estimates used in determining the fair value less cost of disposal of these assets were:

- The State of Odisha has abundant bauxite resources and given the initiatives by the Government of Odisha, management is confident that bauxite will be made available in the short to medium term. The company has entered into agreements with various suppliers internationally and domestically to ensure the availability of bauxite to run its refinery. In the initial years, the Company has assumed that bauxite will be purchased from third party suppliers in India and other countries, till the bauxite is sourced from own mines.
- The State of Odisha has taken certain measures including reservation of areas for mining operations or undertaking prospecting and constitution of Ministerial Committee for formulation of policy for supply of ores to Odisha based industries on long term basis. GOI has amended the existing MMDR Act. The major change is in the process of grant of concessions i.e. from First come First serve basis to more transparent process of auction and to expedite the grant process.
- Management expects that the conditions for construction of the alumina refinery beyond 4 MTPA will be fulfilled and it is assumed that the final unconditional approval for the expansion of the refinery would be received for commencement of production by fiscal 2020.

The government of Odisha has cancelled all the old reservations for mine allotment and has formed a more transparent process of auction of mines under the MMDR Act, which will improve the chances of local bauxite availability.

Management expects that the mining approvals for various local bauxite mines will be received.

The Group has carried out a sensitivity analysis on the key variables including delay in obtaining bauxite mining approval, depreciation of US dollar against Rupee, discount rate and London Metal Exchange aluminium prices. The most significant variable is the estimated timeframe for obtaining regulatory approval for the mining and/or gaining access to local bauxite. The sensitivity analysis indicates that even if regulatory approvals for mines /access to local bauxite are delayed by a year, the recoverable amount is still expected to exceed the carrying value and costs. As at March 31, 2017 the carrying amount of property plant and equipment related to alumina refinery operations at Lanjigarh and related mining assets is US$1,099.4 million (31 March 2016 : US$1,079.0 million).

(vii) Assessment of Impairment of Karnataka and Goa iron ore mines:

Karnataka mining

The mining ban in Karnataka was lifted on 17 April 2013 and the mining operations resumed in December 2013. The mining operations were suspended since August 2014 pending environment clearances. On execution of Mining Lease Deed and final forest clearance, the operations were resumed towards the end of February 2015. Currently the permissible extraction capacity is fixed at 2.29 MTPA which is based on lowest of Reserves and Resources (R & R) capacity, dumping capacity and road capacity as assessed by Indian Council of Forestry Research and Education. Subsequently, based on reassessment of R & R and other factors, the modified mining plan has been submitted to Indian Bureau of Mines in March 2016 for enhancement of production to 6 MTPA. Management has estimated the recoverable amounts of these assets considering the increase in the extraction capacity in FY 2018.

A delay of one year in increase in the allocated capacity would result in reduction in the recoverable amount by approximately 1% and the recoverable amount would continue to be sufficiently in excess of the carrying value.

The carrying value of assets as at 31 March 2017 is US$140.2 million (31 March 2016: US$145.6 million).

Goa mining

The Ministry of Environment and Forest revoked its earlier order which had kept the environment clearances for iron ore mines in Goa in abeyance. The State Government has issued a mining policy and has lifted the ban on Iron ore mining in Goa. The Group has been allocated with an interim annual mining quantity of 6.9 million tonnes per annum (MTPA) (out of the total interim mining cap of 20 MTPA for FY 2016) of saleable ore.

The Expert Committee, constituted by the Supreme Court of India for conducting the Macro-Environmental Impact Assessment study on the ceiling of annual extraction of iron ore mining in Goa has recommended the enhancement of mining cap to 30 MTPA. This has been recommended to be further enhanced to 37 MTPA after the review of Macro Environment Impact Assessment and augmenting the carrying capacity. The report is pending for consideration of Supreme Court. Post the Supreme Court clearance, the State Government will allocate the limits. It has been assumed that the allocation will be made based on the proportionate share of the current EC limits.

The mining operations resumed in October, 2015. Management has estimated the recoverable amounts of these assets considering the mining cap of 30 MTPA in FY 2018 and 37 MTPA from FY 2019 and onwards.

A delay of one year in increase in the mining cap to 30 MTPA and 37 MTPA would result in a reduction in the recoverable amount by approximately 4% and the recoverable amount would continue to be sufficiently in excess of the carrying value.

The carrying value of assets as at 31 March 2017 is US$635.2 million (31 March 2016: US$643.9 million).

Management has reviewed the carrying value of Karnataka and Goa mining assets as at the balance sheet date, estimated the recoverable amounts of these assets and concluded that there was no impairment as the recoverable amount (estimated based on fair value less costs of disposal) exceeded the carrying amounts.

The Group has also carried out a sensitivity analysis on key variables including delay in increase in the mining cap, movement in iron ore prices, discount rate and appreciation of rupee against US dollar. Based on the sensitivity analysis, the recoverable amount is still expected to exceed the carrying value.

Details of impairment charge are disclosed in note 5.

(viii) Assessment of Impairment at Konkola Copper Mines (KCM)

The KCM operations in Zambia have experienced, lower equipment availability, throughput constraints, and other operational challenges including production ramp up. Due to these factors, the Group has reviewed the carrying value of its property, plant and equipments at KCM as at balance sheet date, estimated the recoverable amounts of the assets and concluded that there was no impairment because the recoverable amount (estimated based on fair value less costs of disposal) exceeded the carrying amounts.

The Group has also carried out a sensitivity analysis on key variables like movement in copper prices, discount rate and production. Based on the sensitivity analysis, the recoverable amount is still expected to exceed the carrying value.

The carrying value of assets as at 31 March 2017 is US$1,663.6 million (31 March 2016: US$1,744.9 million).

(ix) Restoration, rehabilitation and environmental costs

Provision is made for costs associated with restoration and rehabilitation of mining sites as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of extractive industries and they are normally incurred at the end of the life of the mine or oil fields. The costs are estimated on an annual basis on the basis of mine closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalised as soon as the obligation to incur such costs arises. The critical accounting judgement is associated with calculating the provision for decommissioning oil and gas assets is based on the current estimate of the costs for removing and decommissioning producing facilities, the forecast timing and currency of settlement of decommissioning liabilities and the appropriate discount rate.

A corresponding provision is created on the liability side. The capitalised asset is charged to the income statement over the life of the operation through the depreciation of the asset and the provision is increased each period via unwinding the discount on the provision. Management estimates are based on local legislation and/or other agreements. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology.

(x) Provisions and liabilities

Provisions and liabilities are recognised in the period when it becomes probable that there will be a future outflow of funds resulting from past operations or events that can be reasonably estimated. The timing of recognition requires the application of judgement to existing facts and circumstances which may be subject to change especially when taken in the context of the legal environment in India. The actual cash outflows may take place over many years in the future and hence the carrying amounts of provisions and liabilities are regularly reviewed and adjusted to take into account the changing circumstances and other factors that influence the provisions and liabilities. This is set out in note 30.

(xi) Contingencies and commitments

In the normal course of business, contingent liabilities may arise from litigation, taxation and other claims against the Group. A tax provision is recognised when the group has a present obligation as a result of a past event, it is probable that the group will be required to settle that obligation.

Where it is management's assessment that the outcome cannot be reliably quantified or is uncertain the claims are disclosed as contingent liabilities unless the likelihood of an adverse outcome is remote. Such liabilities are disclosed in the notes but are not provided for in the financial statements.

When considering the classification of a legal or tax cases as probable, possible or remote there is judgement involved. This pertains to the application of the legislation, which in certain cases is based upon management's interpretation of country specific tax law, in particular India, and the likelihood of settlement. Management uses in-house and external legal professionals to inform their decision.

Although there can be no assurance regarding the final outcome of the legal proceedings, the Group does not expect them to have a materially adverse impact on the Group's financial position or profitability. These are set out in note 38.

(xii) The HZL and BALCO call options

The Group had exercised its call option to acquire the remaining 49% interest in BALCO and 29.5% interest in HZL. The Government of India has however, contested the validity of the options and disputed their valuation performed in terms of the relevant agreements the details of which are set out in note 40. In view of the lack of resolution on the options, the non-response to the exercise and valuation request from the Government of India, the resultant uncertainty surrounding the potential transaction and the valuation of the consideration payable, the Group considers the strike price of the options to be at fair value, accordingly, the value of the option would be nil, and hence, the call options have not been recognised in the financial statements.

(xiii) Assessment of IFRIC 4- Determining whether an arrangement contains a lease

The Group has ascertained that the Power Purchase Agreement (PPA) entered into between one of the Subsidiary and a State Grid qualifies to be an operating lease under IAS 17 "Leases". Accordingly, the consideration receivable under the PPA relating to recovery of capacity charges towards capital cost have been recognised as operating lease rentals and in respect of variable cost that includes fuel costs, operations and maintenance etc. is considered as revenue from sale of products/services.

Significant judgement is required in segregating the capacity charges due from State Grid, between fixed and contingent payments. The Group has determined that since the capacity charges under the PPA are based on the number of units of electricity made available by its Subsidiary which would be subject to variation on account of various factors like availability of coal and water for the plant, there are no fixed minimum payments under the PPA, which requires it to be accounted for on a straight line basis.

(xiv) Revenue recognition and receivable recovery in relation to the power division

In certain cases, the Group's power customers are disputing various contractual provisions of Power Purchase Agreements (PPA). Significant judgement is required in both assessing the tariff to be charged under the PPA in accordance with IAS 18 and to assess the recoverability of withheld revenue currently accounted for as receivables.

In assessing this critical judgment management considered favorable legal opinions the Group has obtained in relation to the claims and favorable court judgements in the related matter. In addition the fact that the contracts are with government owned companies implies the credit risk is low.

3. Segment information

The Group is diversified natural resources group engaged in exploring, extractive and processing minerals and oil and gas. We produce Zinc, Lead, Silver, Copper, Aluminium, Iron ore, Oil and gas and commercial power and have presence across India, Zambia, South Africa, Namibia, UAE, Ireland, Australia and Liberia. The Group is also in the business of port operations in India.

The Group's reportable segments defined in accordance with IFRS 8 are as follows:

- Zinc- India
- Zinc-International
- Oil & Gas
- Iron Ore
- Copper-India/Australia
- Copper-Zambia
- Aluminium
- Power

The components not meeting the quantitative threshold for reporting are being reported as 'Others'.

Management monitors the operating results of reportable segments for the purpose of making decisions about resources to be allocated and for assessing performance. Segment performance is evaluated based on the EBITDA of each segment. Business segment financial data includes certain corporate costs, which have been allocated on an appropriate basis. Intersegment sales are charged based on prevailing market prices.

The following tables present revenue and profit information and certain asset and liability information regarding the Group's reportable segments for the years ended 31 March 2017 and 31 March 2016. Items after operating profit are not allocated by segment.

(a) Reportable segments

Year ended 31 March 2017

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Total reportable segment	Others	Elimination	Total operations
REVENUE												
Sales to external customers	2,521.9	332.4	1,222.7	609.3	3,131.4	830.1	2,037.1	822.6	11,507.5	12.6	-	11,520.1
Inter-segment sales(3)	3.1	-	-	6.1	2.3	44.2	2.9	13.3	71.9	1.0	(72.9)	-
Segment revenue	**2,525.0**	**332.4**	**1,222.7**	**615.4**	**3,133.7**	**874.3**	**2,040.0**	**835.9**	**11,579.4**	**13.6**	**(72.9)**	**11,520.1**
Segment Result												
EBITDA(1)	1,423.2	138.3	597.2	194.2	252.2	5.9	344.2	244.8	3,200.0	(8.9)	-	3,191.1
Depreciation and amortisation(2)	(149.2)	(27.5)	(411.0)	(69.9)	(28.9)	(113.3)	(141.0)	(88.2)	(1,029.0)	(1.5)	-	(1,030.5)
Special items	-	-	12.6	-	-	-	(29.9)	-	(17.3)	-	-	(17.3)
Operating profit	**1,274.0**	**110.8**	**198.8**	**124.3**	**223.3**	**(107.4)**	**173.3**	**156.6**	**2,153.7**	**(10.4)**	**-**	**2,143.3**
Investment revenue												642.6
Finance costs												(1,382.2)
Other gains and (losses) [net]												(23.8)
PROFIT BEFORE TAXATION												**1,379.9**
Segments assets	2,422.7	553.2	2,548.9	1,409.0	1,183.5	2,006.8	7,103.5	2,837.5	20,065.1	85.6	-	20,150.7
Financial asset investments												10.7
Deferred tax assets												1,111.0
Liquid investments												8,043.0
Cash and cash equivalents												1,682.2
Tax assets												436.7
Others												69.1
TOTAL ASSETS												**31,503.4**
Segment liabilities	(615.7)	(173.7)	(716.7)	(228.2)	(1,708.1)	(570.0)	(1,561.5)	(266.0)	(5,839.9)	(25.9)	-	(5,865.8)
Short-term borrowings												(7,658.5)
Current tax liabilities												(37.8)
Medium and long-term borrowings												(10,570.2)
Deferred tax liabilities												(371.1)
Others												(985.4)
TOTAL LIABILITIES												**(25,488.8)**
Other segment information												
Additions to property, plant and equipment	324.2	72.3	151.9	10.5	24.2	28.2	285.8	79.0	976.1	-	-	976.1
Impairment losses	-	-	12.6	-	-	-	(29.9)	-	(17.3)	-		(17.3)

(1) *EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.*
(2) *Depreciation and amortisation is also provided to the chief operating decision maker on a regular basis.*

(3) Transfer prices for inter segment sales are on an arm's length basis in a manner similar to transactions with third parties. However, inter segment sales at BALCO amounting to US$6.2 million for the year ended 31 March 2017 (31 March 2016 US$6.6 million), is at cost

Year ended 31 March 2016

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Total reportable segment	Others	Elimination	Total operations
REVENUE												
Sales to external customers	2,111.0	391.5	1,322.3	341.8	3,196.8	966.7	1,692.3	691.7	10,714.1	23.8	-	10,737.9
Inter-segment sales[3]	-	-	-	8.2	0.4	5.8	2.0	15.8	32.2	-	(32.2)	-
Segment revenue	**2,111.0**	**391.5**	**1,322.3**	**350.0**	**3,197.2**	**972.5**	**1,694.3**	**707.5**	**10,746.3**	**23.8**	**(32.2)**	**10,737.9**
Segment Result												
EBITDA[1]	995.0	68.1	570.4	73.4	336.6	(17.9)	106.7	196.3	2,328.6	7.8	-	2,336.4
Depreciation and amortisation[2]	(119.9)	(56.4)	(826.3)	(62.5)	(32.3)	(179.5)	(101.8)	(74.1)	(1,452.8)	(2.4)	-	(1,455.2)
Special items	(4.6)	(0.3)	(4,934.2)	(252.4)	(7.6)	(0.5)	(10.5)	-	(5,210.1)	-	-	(5,210.1)
Operating profit / (loss)	**870.5**	**11.4**	**(5,190.1)**	**(241.5)**	**296.7**	**(197.9)**	**(5.6)**	**122.2**	**(4,334.3)**	**5.4**	**-**	**(4,328.9)**
Investment revenue												697.8
Finance costs												(1,280.4)
Other gains and (losses) [net]												(72.5)
LOSS BEFORE TAXATION												**(4,984.0)**
Segments assets	2,326.1	444.6	3,096.4	1,402.1	1,166.1	2,066.0	5,809.6	3,193.3	19,504.2	147.1	-	19,651.3
Financial asset investments												6.5
Deferred tax assets												1,255.4
Liquid investments												8,508.2
Cash and cash equivalents												428.3
Tax assets												397.2
Others												72.4
TOTAL ASSETS												**30,319.3**
Segment liabilities	(442.7)	(125.8)	(803.6)	(172.2)	(1,974.5)	(591.9)	(682.2)	(572.1)	(5,365.0)	(37.8)	-	(5,402.8)
Short-term borrowings												(4,313.8)
Current tax liabilities												(17.0)
Medium and long-term borrowings												(11,949.5)
Deferred tax liabilities												(620.2)
Others												(1,163.6)
TOTAL LIABILITIES												**(23,466.9)**
Other segment information												
Additions to property, plant and equipment	239.9	58.5	214.3	14.8	18.4	27.6	119.6	50.3	743.4	7.3	-	750.7
Impairment losses	-	-	(4,934.2)	(245.2)	(7.6)	-	-	-	-	-	-	(5,187.0)

* *The allocation of segment assets and liabilities has been revised to more accurately reflect how these are managed. Previous Year amounts have been reclassified to ensure consistency.*

3. Segment information (continued)

(b) Geographical segmental analysis

The Group's operations are located in India, Zambia, Namibia, South Africa, UAE, Liberia, Ireland, Australia and UAE. The following table provides an analysis of the Group's sales by region in which the customer is located, irrespective of the origin of the goods.

(US$ million)

	Year ended 31 March 2017	Percentage	Year ended 31 March 2016	*Percentage*
India	6,712.1	58%	6,807.8	63%
China	1,501.9	13%	747.8	7%
Middle East	974.2	9%	1,075.1	10%
Others	2,331.9	20%	2,107.2	20%
Total	**11,520.1**	**100%**	**10,737.9**	***100%***

The following is an analysis of the carrying amount of non-current assets, and additions to property, plant and equipment, analysed by the country in which the assets are located. No material non-current assets are located in the United Kingdom and no significant additions to property, plant and equipment have been made there.

(US$ million)

	Carrying amount of non-current assets(1)		Additions to property, plant and equipment	
	As at 31 March 2017	**As at 31 March 2016**	**Year ended 31 March 2017**	**Year ended 31 March 2016**
Australia	3.4	4.4	-	2.6
India	15,247.1	14,752.9	875.5	651.7
Zambia	1,770.9	1,863.3	28.2	27.6
Namibia	114.7	119.7	9.0	35.4
Ireland	6.0	6.7	-	-
South Africa	331.3	254.0	63.3	23.1
Sri Lanka	-	-	-	7.3
Other	-	-	0.1	3.0
Total	**17,473.4**	**17,001.0**	**976.1**	**750.7**

(1) Non-current assets do not include deferred tax assets, non-current tax assets and derivative assets.

Information about major customer

No customer contributed 10% or more to the Group's revenue during the Year ended 31 March 2017 and 31 March 2016.

4. Total Revenue

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Sale of products (including excise duty)	11,998.7	11,151.5
Less: Excise duty	(588.2)	(569.9)
Sale of products (net of excise duty)	11,410.5	**10,581.6**
Sale of services	71.4	102.8
Export incentives	38.2	53.5
Total Revenue	**11,520.1**	**10,737.9**

5. Special items

(US$ million)

	Year ended 31 March 2017			Year ended 31 March 2016		
	Special items	Tax effect of Special items/ Special tax items	Special items after tax	Special items	Tax effect of Special items/ Special tax items	Special items after tax
Impairment of oil & gas assets(1)(a)	12.6	(4.9)	9.7	(4,934.2)	1,903.3	(3,030.9)
Impairment of mining reserves and assets						
Iron ore(1)(b)	-	-	-	(245.2)	-	(245.2)
Copper(1)(c)				(7.6)	-	(7.6)
Aluminium(1)(d)	(29.9)	-	(29.9)	-	-	-
Total impairment charge	**(17.3)**	**(4.9)**	**(22.2)**	**(5,187.0)**	**1,903.3**	**(3,283.7)**
Voluntary retirement schemes (redundancy costs)(2)	-	-	-	(23.1)	7.9	(15.2)
Special tax item(3)	-	-	-	-	(173.8)	(173.8)
Special items	**(17.3)**	**(4.9)**	**(22.2)**	**(5,210.1)**	**1,737.4**	**(3,472.7)**

1a. *During the year ended 31 March 2017, the Group has recognized net impairment reversal of US$12.6 million relating to Rajasthan block net of the charge in relation to change in the decommissioning liability due to change in discount rate as explained in note 30. Of this net reversal, US$63.0 million charge has been recorded against oil and gas properties and US$75.6 million reversal has been recorded against exploratory and evaluation assets. During the year ended 31 March 2016, the Group had recognised impairment charge on its oil and gas assets of US$4,934.2 million mainly relating to Rajasthan block, triggered by the significant fall in the crude oil prices, prevailing discount of Rajasthan crude and adverse long term impact of revised cess. Of this charge, US$1,143.5 million had been recorded against oil and gas properties and US$3,790.7 million against exploratory and evaluation asset.*
The recoverable amount of the CGU, US$2,007.0 million (March 2016: US$2,204 million), was determined based on the fair value less costs of disposal approach, a level-3 valuation technique in the fair value hierarchy, as it more accurately reflects the recoverable amount based on our view of the assumptions that would be used by a market participant. This is based on the cash flows expected to be generated by the projected oil or natural gas production profiles up to the expected dates of cessation of production sharing contract (PSC)/cessation of production from each producing field based on current estimates of reserves and risked resources. Reserves assumptions for fair value less costs of disposal discounted cash flow tests consider all reserves that a market participant would consider when valuing the asset, which are usually broader in scope than the reserves used in a value-in-use test. Discounted cash flow analysis used to calculate fair value less costs of disposal uses assumption for oil price of US$54 per barrel for FY2018 (March 2016: US$51 per barrel) and the long-term nominal price of US$68 per barrel (March 2016: US$70 per barrel) derived from a consensus of various analyst recommendations. Thereafter, these have been escalated at a rate of 2.5% per annum. The cash flows are discounted using the post-tax nominal discount rate of 10.2% (March 2016: 11.0%) derived from the post-tax weighted average cost of capital. The impairment loss relates to the Oil & Gas business reportable segments.

1b. *During the year ended 31 March 2016, the Group had recognized US$227.5 million impairment charge in respect of the exploratory assets in West Africa (Western Cluster, Liberia) on account of low iron ore prices, geo-political factors and absence of plans for any substantive expenditure resulting in continued uncertainty in the project and an additional, US$17.7 million impairment charge in the carrying amount of idle assets grouped under assets under construction at Bellary, Karnataka in India.*

1c. *During theyear ended 31 March 2016, the Group had recognised US$7.6 million impairment charge relating to its operation in the Copper Mines of Tasmania Pty Ltd, Australia on account of extended care and maintenance, lower copper prices and continued uncertainty in start-up of operations.*

1d. *During the year ended 31 March 2017, the Group has recognised US $ 29.9 million impairment charge relating to certain old items of capital work-in-progress at the Alumina refinery operations.*

2. *US$23.1 million incurred under a Group wide voluntary retirement initiative across various Group entities during the year ended March 2016.*

3. *As a result of amendments to the Zambian Mining Tax regime, effective from 1 January 2015, the tax rate on integrated mining operations (excluding custom smelting mineral processing activities) was reduced from 30% to 0%. The deferred tax liability in relation to mining operations was subsequently reversed during the year ended 31 March 2016, resulting in a net credit to the income statement of US$52.8 million. Consequent to the subsequent amendments to the Zambian Mining Tax regime, effective from 1 July 2015 the tax rate on mining operations has been restored from 0% to 30%. Further, the set off of carried forward losses relating to mining operations has been restricted to a maximum of 50% of the income for the year. Accordingly, a total deferred tax charge of US$173.8 million resulting from the amendments had been recognised under 'Special tax items' during the year ended 31 March 2016.*

6. Investment revenue

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Fair value gain on financial assets held for trading	483.5	541.3
Interest Income:		
Interest - financial assets held for trading	87.3	69.5
Interest - bank deposits	26.5	55.1
Interest - loans and receivables	48.3	26.4
Dividend Income:		
Dividend - available for sale investments	0.1	0.1
Dividend - financial assets held for trading	-	0.3
Foreign exchange gain/(loss) (net)	(3.1)	5.1
	642.6	**697.8**

7. Finance costs

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Interest cost:		
Interest on bonds and other borrowings	1,210.0	1,101.3
Coupon interest on convertible bonds	15.5	62.4
Accretive Interest on convertible bonds	3.1	28.7
Unwinding of discount on provisions (note 30)	13.0	13.5
Other borrowing and finance costs (including bank charges)	186.3	160.3
Net interest on defined benefit arrangements	12.4	10.4
Loss on redemption of bonds/(Gain) on buy back of convertible bond	41.6	(20.6)
Capitalisation of finance costs/borrowing costs (note 17)	(99.7)	(75.6)
	1,382.2	**1,280.4**

All borrowing costs are capitalised using rates based on specific borrowings with the interests ranging between of 3.3% to 9.1% per annum.

8. Other gains and (losses) (net)

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Gross foreign exchange (losses)	(16.4)	(103.7)
Qualifying exchange losses capitalised (note 17)	1.9	10.1
Net foreign exchange (losses)	**(14.5)**	**(93.6)**
Change in fair value of financial liabilities measured at fair value	(0.4)	(0.9)
Net (loss)/ gain arising on qualifying hedges and non-qualifying hedges	(8.9)	22.0
	(23.8)	**(72.5)**

9(a). Profit/ (Loss) for the year has been stated after charging/ (crediting):

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Depreciation & amortisation	1,030.5	1,455.2
Costs of inventories recognised as an expense	3,808.4	3,708.0
Auditor's remuneration for audit services (note 11)	2.2	2.4
Research and development	1.2	0.8
Net Loss/ (profit) on disposal of Property plant and equipment	5.2	1.5
Provision for receivables	3.8	-
Impairment of mining reserves and assets	29.9	252.8
(Impairment reversal)/ impairment charge of oil & gas assets	(12.6)	4,934.2
Employee costs	591.1	639.7

9(b). Exchange gain/ (loss) recognised in the consolidated income statement :

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Cost of sales	6.4	(7.6)
Investment revenue	(3.1)	5.1
Other gains and losses	(14.5)	(93.6)
Total	**(11.2)**	**(96.1)**

10. Employee numbers and costs

Average number of persons employed by the Group in the year

Class of business	Year ended 31 March 2017	Year ended 31 March 2016
Zinc	6,170	6,780
- India	4,556	4,935
- International	1,614	1,845
Iron ore	2,928	3,034
Copper	7,994	8,273
- India/Australia	1,196	1,058
- Zambia	6,798	7,215
Aluminium	5,684	5,266
Power	335	334
Oil & Gas	1,763	1,527
Other	161	321
	25,035	**25,535**

Costs incurred during the year in respect of Employees and Executive Directors

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Salaries and wages	531.5	575.8
Defined contribution pension scheme costs (note 33)	22.1	30.1
Defined benefit pension scheme costs (note 33)	21.2	18.2
Share- based payments charge	16.3	15.6
	591.1	**639.7**

11. Auditor's remuneration

The table below shows the fees payable globally to the Company's auditor, Ernst & Young LLP (for year ended 31 March 2017) and Deloitte LLP (for year ended 31 March 2016), for statutory external audit and audit related services, as well as fees paid to other accountancy firms for statutory external audit and audit related services in each of the two years ended 31 March:

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Fees payable to the Company's auditor for the audit of Vedanta Resources plc annual accounts	0.7	0.6
The audit of the Company's subsidiaries pursuant to legislation	1.5	1.8
Total audit fees	**2.2**	**2.4**
Fees payable to the Company's auditor and their associates for other services to the Group		
Other services pursuant to legislation(1)	1.8	1.4
Tax services(2)	0.0	0.4
Corporate finance services(3)	0.7	0.7
Other services(4)	0.2	0.2
Total non-audit fees	**2.7**	**2.7**
Total fees paid to the Company's auditor	**4.9**	**5.1**
Audit fees payable to other auditors of the Group's subsidiaries	-	0.3
Non-audit fees payable to other auditors of the Group's subsidiaries	-	0.2
Total fees paid to other auditors	**-**	**0.5**

(1) *Other services pursuant to legislation principally comprise assurance services, being quarterly reviews of the Group's subsidiaries results and the half year review of the Group's results.*
(2) *Tax services principally comprise certification and assurance services as required by Indian and overseas tax regulations.*
(3) *Corporate finance services principally comprise Group simplification and other acquisition related certifications. These assurance-related services are ordinarily provided by the auditor.*
(4) *Includes certification related services.*

12. Tax

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Current tax:		
Current Tax on profit for the year	589.5	553.9
Charge/(credit) in respect of current tax for earlier years	(1.5)	(17.2)
Total current tax	**588.0**	**536.7**
Deferred tax: (Note 31)		
Origination and reversal of temporary differences	(83.0)	(293.7)
Charge in respect of deferred tax for earlier years	(9.6)	12.5
Charge / (credit) in respect of Special items (note 5)	4.9	(1,911.2)
Deferred tax charge/(reversal) due to change in tax regime in Zambia	-	173.8
Total deferred tax	**(87.7)**	**(2,018.6)**
Net tax expense/(credit)	**500.3**	**(1,481.9)**
Effective tax rate	36.2%	**29.7%**

Tax expense

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Tax effect of special items (note 5)	4.9	(1,911.2)
Deferred tax charge/(reversal) due to change in tax regime in Zambia (note 5)	-	173.8
Net tax expense/ (credit)	**4.9**	**(1,737.4)**
Tax expense – others	495.4	255.5
Net tax expense/ (credit)	**500.3**	**(1,481.9)**

A reconciliation of income tax expense applicable to accounting profit/ (loss) before tax at the Indian statutory income tax rate to income tax expense/ (credit) at the Group's effective income tax rate for the year ended 31 March 2017 is as follows. Given majority of the Group's operations are located in India, the reconciliation has been carried out from Indian statutory income tax rate.

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Accounting profit/(loss) before tax	1,379.9	**(4,984.0)**
Statutory income tax rate	34.608%	34.608%
Tax at local statutory income tax rate	477.6	(1,724.9)
Disallowable expenses	58.0	18.9
Non-taxable income	(147.6)	(111.4)
Tax holidays and similar exemptions	(204.8)	(311.0)
Effect of tax rates differences of subsidiaries operating in other jurisdictions	76.1	67.5
Impact of change in tax regime *	-	201.9
Dividend distribution tax	244.5	248.5
Unutilized tax losses net of utilization due to uncertainty	149.2	224.2
Investment allowances	(74.7)	(52.7)
Charge/(credit) in respect of previous years	(11.1)	(4.7)
Others	(66.9)	(38.2)
Total	500.3	**(1,481.9)**

* *Includes US$173.8 million due to change in tax regime in Zambia (note 5) and US$28.1 million due to change in Indian statutory rate from 33.99% to 34.61%*

Certain businesses of the Group within India are eligible for specified tax incentives which are included in the table above as tax holidays and similar exemptions. Most of such tax exemptions are relevant for the companies operating in India. These are briefly described as under:

The location based exemption

In order to boost industrial and economic development in undeveloped regions, provided certain conditions are met, profits of newly established undertakings located in certain areas in India may benefit from a tax holiday. Such a tax holiday works to exempt 100% of the profits for the first five years from the commencement of the tax holiday, and 30% of profits for the subsequent five years. This deduction is available only for units established up to 31 March 2012. However, such undertaking would continue to be subject to the Minimum Alternative tax ('MAT').

The Group has such types of undertakings at Haridwar and Pantnagar, which are part of Hindustan Zinc Limited (Zinc India). In the current year, Haridwar and Pantnagar units are eligible for deduction at 30% of taxable profits respectively.

Sectoral Benefit - Power Plants

To encourage the establishment of certain power plants, provided certain conditions are met, tax incentives exist to exempt 100% of profits and gains for any ten consecutive years within the 15 year period following commencement of the power plant's operation. The Group currently has total operational capacity of 8.4 Giga Watts (GW) of thermal based power generation facilities and wind power capacity of 274 MW. However, such undertakings generating power would continue to be subject to the MAT provisions.

The Group has power plants which benefit from such deductions, at various locations of Hindustan Zinc Limited (where such benefits has been drawn), Talwandi Sabo Power Limited, Vedanta Limited and Bharat Aluminium Company Limited (where no benefit has been drawn).

Sectoral benefit – oil & gas

Provided certain conditions are met, profits of newly constructed industrial undertakings engaged in the oil & gas sector may benefit from a deduction of 100% of the profits of the undertaking for a period of seven consecutive years. This deduction is only available to blocks licensed prior to 31 March 2011. However, such businesses would continue to be subject to the MAT provisions.

In the Group, Cairn India Limited benefits from such deductions. Previous year was the last year for claiming such benefit.

In addition, the subsidiaries incorporated in Mauritius are eligible for tax credit to the extent of 80% of the applicable tax rate on foreign source income.

The total effect of such tax holidays and exemptions was US$204.8 for the year ended 31 March 2017 (31 March 2016: US$311.0 million).

13. Earnings/ (loss) per share

Basic earnings/ loss per share amounts are calculated by dividing net profit/ loss for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Weighted average number of treasury shares, 24,347,664 (2016 : 24,231,160) outstanding during the year are excluded from the total outstanding shares for the calculation of EPS.

Diluted earnings per share amounts are calculated by dividing the net profit attributable to ordinary equity holders by the weighted average number of ordinary shares outstanding during the year (adjusted for the effects of dilutive options and the Group's convertible bonds). The following reflects the income and share data used in the basic and diluted earnings per share computations:

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Net loss attributable to equity holders of the parent	(22.7)	(1,837.4)

Computation of weighted average number of shares

	Year ended 31 March 2017	Year ended 31 March 2016
Weighted average number of ordinary shares for basic earnings per share (million)	277.3	276.0
Effect of dilution :		
Potential ordinary shares relating to share option awards	5.0	-
Adjusted weighted average number of shares of the Company in issue (million)	**282.3**	**276.0**

Loss per share based on loss for the year

Loss per share on loss for the year

(US$ million except as stated)

	Year ended 31 March 2017	Year ended 31 March 2016
Loss for the year attributable to equity holders of the parent (US$ million)	(22.7)	(1,837.4)
Weighted average number of shares of the Company in issue (million)	277.3	276.0
Loss per share on loss for the year (US cents per share)	**(8.2)**	**(665.8)**

Diluted loss per share on loss for the year

(US$ million except as stated)

	Year ended 31 March 2017	Year ended 31 March 2016
Loss for the year attributable to equity holders of the parent (US$ million)	(22.7)	(1,837.4)
Adjusted weighted average number of shares of the Company in issue (million)	277.3	276.0
Diluted loss per share on loss for the year (US cents per share)	**(8.2)**	**(665.8)**

The effect of 5.0 million (2016 : 6.8 million) potential ordinary shares, which relate to share option awards under the LTIP scheme, on the attributable loss for the year was anti-dilutive and thus these shares were not considered in determining diluted loss per share.

The loss for the year would have decreased if holders of the convertible bonds in Vedanta exercised their right to convert their bond holdings into Vedanta equity. The impact on loss for the year of this conversion would be the reduction in interest payable on the convertible bond.

The adjustment in respect of convertible bonds had an anti-dilutive impact on earnings and was thus not considered in determining diluted EPS.

Earnings/ (Loss) per share based on Underlying profit/ (loss) for the year (Non-GAAP)

Underlying earnings is an alternative earnings measure, which the management considers to be a useful additional measure of the Group's performance. The Group's Underlying profit/ loss is the loss for the year after adding back special items, other losses/(gains) [net] (note 8) and their resultant tax (including taxes classified as special items) and non-controlling interest effects. This is a Non-GAAP measure.

(US$ million)

	Note	Year ended 31 March 2017	Year ended 31 March 2016
Loss for the year attributable to equity holders of the parent		(22.7)	(1,837.4)
Special items	5	17.3	5,210.1
Other (gains)/losses [net]	8	23.8	72.5
Tax and non-controlling interest effect of special items (including taxes		(15.4)	(3,809.3)

classified as special items) and other losses/(gains)		
Underlying attributable profit/ (loss) for the year	**3.0**	**(364.1)**

Basic earnings/ (loss) per share on Underlying profit/ (loss) for the year (Non-GAAP)

(US$ million except as stated)

	Year ended 31 March 2017	Year ended 31 March 2016
Underlying profit/ (loss) for the year (US$ million)	3.0	(364.1)
Weighted average number of shares of the Company in issue (million)	277.3	276.0
Earnings/ (Loss) per share on Underlying loss for the year (US cents per share)	**1.1**	**(131.9)**

Diluted earnings/ (loss) per share on Underlying profit/ (loss) for the year (Non-GAAP)

(US$ million except as stated)

	Year ended 31 March 2017	Year ended 31 March 2016
Underlying profit/ (loss) for the year (US$ million)	3.0	(364.1)
Adjusted weighted average number of shares of the Company in issue (million)	282.3	276.0
Diluted earnings/ (Loss) per share on Underlying loss for the year (US cents per share)	**1.1**	**(131.9)**

The outstanding awards under the LTIP (5.0 million) are reflected in the diluted underlying earnings per share through an increased number of weighted average shares for the year ended 31 March 2017.

The effect of 6.8 million potential ordinary shares, which relate to share option awards under the LTIP scheme, on the attributable profit/(loss) for the year ended 31 March 2016 was anti-dilutive and thus these shares were not considered in determining diluted underlying loss per share.

The profit for the year would be decreased if holders of the convertible bonds in Vedanta exercised their right to convert their bond holdings into Vedanta equity. The impact on loss for the year of this conversion would be the reduction in interest payable on the convertible bond.

The adjustment in respect of convertible bonds had an anti-dilutive impact on earnings and was thus not considered in determining diluted underlying EPS for the year ended 31 March 2016.

14. Dividends

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Amounts recognised as distributions to equity holders:		
Equity dividends on ordinary shares:		
Final dividend for 2015-16: 30.0 US cents per share (2014-15: 40.0 US cents per share)	82.8	110.6
Interim dividend paid during the year: 20.0 US cents per share (2015-16: Nil)	55.6	-
Proposed for approval at AGM		
Equity dividends on ordinary shares:		
Final dividend for 2016-17: 35 US cents per share (2015-16: 30.0 US cents per share)	97.6	82.8

15. Goodwill

(US$ million)

	As at 31 March 2017	As at31 March 2016
Cost (gross carrying amount)	16.6	16.6
Accumulated impairment losses	-	-
Net carrying amount at 31 March	**16.6**	**16.6**

Goodwill is allocated for impairment testing purposes to the following CGU's. The allocation of goodwill to CGU's is as follows:

- US$12.2 million Copper India
- US$4.4 million arising on acquisition of Goa Energy Limited.

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired.

The Company has undertaken an impairment review of goodwill of US$16.6 million as at 31 March 2017. The carrying amount of goodwill allocated to the relevant cash generating unit is considered to be insignificant in comparison with the total carrying value of the cash generating unit. The carrying amount of goodwill was evaluated using the higher of Fair value less cost of disposal ('FVLCD') or value in use based on discounted future cash flows of the cash generating unit to which the goodwill pertains and comparing this to the total carrying value of the relevant cash generating units. It was determined that the carrying amount of goodwill is not impaired and nor was impairment indicated following a reasonably possible change in a key assumption.

16. Intangible assets

Intangible assets include Port concession rights to operate a general cargo berth for handling coal at the outer harbour of the Visakhapatnam port on the east coast of India, software licences and others.

(US$ million)

	Port concession rights(1)	Software license	Others	Total
Cost				
As at 1 April 2015	**96.7**	**10.6**	**8.0**	**115.3**
Addition	-	1.0	1.8	2.8
Foreign exchange differences	(5.2)	(1.1)	(0.5)	(6.8)
As at 1 April 2016	**91.5**	**10.5**	**9.3**	**111.3**
Addition	0.4	7.1	0.8	8.3
Disposal	(1.0)	(0.6)	-	(1.6)
Foreign exchange differences	2.1	0.6	0.2	2.9
As at 31 March 2017	**93.0**	**17.6**	**10.3**	**120.9**
Accumulated amortisation				
As at 1 April 2015	**7.3**	**5.3**	**0.8**	**13.4**
Charge for the year	3.5	3.2	-	6.7
Foreign exchange differences	(0.4)	(0.5)	(0.1)	(1.0)
As at 1 April 2016	**10.4**	**8.0**	**0.7**	**19.1**
Charge for the year	3.4	2.4	0.4	6.2
Disposal	(0.1)	(0.6)	-	(0.7)
Foreign exchange differences	0.3	0.4	-	0.7
As at 31 March 2017	**14.0**	**10.2**	**1.1**	**25.3**
Net book value				
As at 1 April 2015	89.4	5.3	7.2	101.9
As at 1 April 2016	81.1	2.5	8.6	92.2
As at 31 March 2017	**79.0**	**7.4**	**9.2**	**95.6**

(1) *Vizag General Cargo Berth Private Limited (VGCB), a special purpose vehicle, was incorporated for the coal berth mechanization and upgrades at Visakhapatnam port. VGCB is wholly owned by Vedanta Limited as on 31 March 2017 (99.99% as on 31 March 2016). The project is to be carried out on a design, build, finance, operate, transfer basis and the concession agreement between Visakhapatnam Port and VGCB was signed in June 2010. In October 2010, VGCB was awarded with the concession after fulfilling conditions stipulated as a precedent to the concession agreement. Visakhapatnam Port has provided, in lieu of license fee an exclusive license to VGCB for designing, engineering, financing, constructing, equipping, operating, maintaining, and replacing the project/project facilities and services. The concession Year is 30 years from the date of the award of the concession. The capacity of upgraded berth would be 10.18 mmtpa and that the Vishakhapatnam Port would be entitled to receive 38.10% share of the gross revenue as royalty. VGCB is entitled to recover a tariff from the user(s) of the project facilities and services as per its tariff notification. The tariff rates are linked to the Wholesale Price Index (WPI) and would accordingly be adjusted as specified in the concession agreement every year. The ownership of all infrastructure assets, buildings, structures, berths, wharfs, equipment and other immovable and movable assets constructed, installed, located, created or provided by VGCB at the project site and/or in the port's assets pursuant to concession agreement would be with VGCB until expiry of this concession agreement. The cost of any repair, replacement or restoration of the project facilities and services shall be borne by VGCB during the concession period. VGCB has to transfer all its rights, titles and interest in the project facilities and services free of cost to Visakhapatnam Port at the end of the concession period.*

17. Property, plant and equipment

(US$ million)

	Mining property and leases	Land and buildings	Plant and equipment[1]	Assets under construction	Oil & Gas properties	Exploratory and evaluation assets	Others	Total
Cost								
At 1 April 2015	**3,125.7**	**1,458.9**	**10,715.1**	**5,112.0**	**9,635.7**	**9,907.7**	**147.1**	**40,102.2**
Additions	121.1	20.9	129.0	249.7	134.5	79.9	15.6	750.7
Transfers	11.7	329.5	1,313.0	(1,673.8)	-	-	19.6	-
Unsuccessful exploration costs	-	-	-	-	-	(4.5)	-	(4.5)
Disposals[4]	(490.4)	(7.6)	(184.1)	-	-	-	-	(682.1)
Foreign exchange differences	(152.6)	(96.7)	(551.8)	(278.7)	-	-	(32.8)	(1,112.6)
At 1 April 2016	**2,615.5**	**1,705.0**	**11,421.2**	**3,409.2**	**9,770.2**	**9,983.1**	**149.5**	**39,053.7**
Additions	141.6	24.4	226.1	419.9	151.1	-	13.0	976.1
Transfers	8.0	15.4	1,492.0	(1,382.3)	-	(140.2)	7.1	-
Reclassification	77.1	-	(43.8)	(29.3)	-	-	(33.3)	(29.3)
Unsuccessful exploration costs	-	-	-	-	-	(6.5)	-	(6.5)
Disposal	(54.8)	(8.1)	(63.6)	(18.0)	-	-	(38.6)	(183.1)
Foreign exchange differences	75.9	45.1	295.4	45.1	-	-	15.9	477.4
At 31 March 2017	**2.863.3**	**1,781.8**	**13,327.3**	**2,444.6**	**9,921.3**	**9,836.4**	**113.6**	**40,288.3**
Accumulated depreciation, amortization and impairment								
At 1 April 2015	**1,695.5**	**288.8**	**3,607.0**	**28.8**	**6,577.6**	**4,493.6**	**58.9**	**16,750.2**
Charge for the year	155.9	37.1	433.6	-	817.9	-	4.0	1,448.5
Impairment of assets (note 5)	-	-	7.6	17.6	1,143.5	4,018.3	-	5,187.0
Disposal[4]	(490.4)	(6.6)	(173.6)	-	-	-	-	(670.6)
Foreign exchange differences	(60.1)	(26.7)	(198.5)	-	-	-	(23.9)	(309.2)
At 1 April 2016	**1,300.9**	**292.6**	**3,676.1**	**46.4**	**8,539.0**	**8,511.9**	**39.0**	**22,405.9**
Charge for the year	125.4	67.0	410.9	-	409.7	-	11.3	1,024.3
Disposal	(54.8)	(7.3)	(24.2)	-	-	-	(37.9)	(124.2)
Reclassification	23.0	1.0	(30.5)	-	-	-	6.5	-
Impairment/(impairment reversal) of assets (note 5)	-	-	-	29.9	63.0	(75.6)	-	17.3
Foreign exchange differences	30.8	13.9	100.1	2.0	-	-	12.1	158.9
At 31 March 2017	**1,425.3**	**367.2**	**4,132.4**	**78.3**	**9,011.7**	**8,436.3**	**31.0**	**23,482.2**
Net book value								
At 1 April 2015	1,430.2	1,170.1	7,108.1	5,083.2	3,058.1	5,414.1	88.2	23,352.0
At 1 April 2016	1,314.6	1,412.4	7,745.1	3,362.8	1,231.2	1,471.2	110.5	16,647.8
At 31 March 2017	**1,438.0**	**1,414.6**	**9,194.9**	**2,366.3**	**909.6**	**1,400.1**	**82.6**	**16,806.1**

(1) *Plant and equipment include refineries, smelters, power plants and related facilities. Other tangible fixed assets include office equipment and fixtures, and light vehicles. At 31 March 2017, land with a carrying value of US$131.1 million (31 March 2016: US$132.5 million) was not depreciated.*

(2) *During the year ended 31 March 2017, interest and foreign exchange losses capitalised was US$101.6 million (31 March 2016: US$85.7 million).*

(3) *Certain property, plant and equipment are pledged as collateral against borrowings, the details related to which have been described in note 24 on Borrowings.*

(4) *Subsequent to end of life of mines in Lisheen, US$585.0 million has been removed from gross block and US$580.7 million from accumulated depreciation during the year ended 31 March 2016.*

18. Financial asset investments

Financial asset investments represent investments classified and accounted for as available-for-sale investments

Available-for-sale investments

(US$ million)

	As at 31 March 2017	As at 31 March 2016
At 1 April	**6.5**	**4.2**
Movements in fair value	4.1	2.3
Exchange difference	0.1	-
At 31 March	**10.7**	**6.5**

Financial assets investment represents quoted investments in equity shares that present the Group with an opportunity for returns through dividend income and gains in value. These securities are held at fair value based on market prices. These are classified as non-current as on 31 March 2017.

19. Other non-current assets

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Site restoration fund	50.5	38.9
Others[(1)]	248.7	30.3
Financial (A)	**299.2**	**69.2**
Deposits with Government Authorities	57.5	99.8
Claims and other receivables	187.7	68.9
Non-financial (B)	**245.2**	**168.7**
Total (A+B)	**544.4**	**237.9**

(1) Includes receivables in Power business transferred from current to non-current during the year.

20. Inventories

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Raw materials and consumables	896.6	852.4
Work-in-progress	585.1	385.3
Finished goods	188.4	128.1
	1,670.1	**1,365.8**

Inventories with a carrying amount of US$790.4 million (2016: US$758.1 million) have been pledged as security against certain bank borrowings of the Group.

Inventory held at net realizable value amounted to US$71.0 million (2016: US$142.8 million). The write down of inventories amounts to US$2.2 million (2016: US$53.7 million) has been charged to income statement.

21. Trade and other receivables

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Trade receivables	387.4	406.6
Trade receivables from related parties	1.5	2.7
Cash call / receivables from joint operations	130.3	355.6
Other receivables	34.4	89.8
Financial (A)	**553.6**	**854.7**
Balance with Government authorities	231.8	264.0
Advances for supplies	183.1	113.9
Other receivables	116.3	111.7
Non Financial (B)	**531.2**	**489.6**
Total (A+B)	**1,084.8**	**1,344.3**

The credit period given to customers ranges from zero to 90 days. Other receivables, under non-financial primarily include excise balances, customs balances, advances to suppliers and claims receivables.

22. Liquid investments

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Bank deposits(1)	882.6	530.3
Other investments	7,160.4	7,977.9
	8,043.0	**8,508.2**

Includes US$28.3 million of restricted bank deposits for securing banking facilities. The amount in the prior year relates to US$28.2 million of bank deposits that are restricted as directed by courts in relation to a relief claim filed by a vendor.

Bank deposits are made for periods of between three months and one year depending on the cash requirements of the companies within the Group and earn interest at the respective fixed deposit rates.

Other investments include mutual fund investments which are held for trading and recorded at fair value with changes in fair value reported through the income statement. Investments in liquid schemes of mutual funds do not qualify for recognition as cash and cash equivalents due to their maturity period and risk of change in value of the investments.

23. Cash and cash equivalents

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Cash and cash equivalents consist of the following		
Cash at bank and in hand	1,323.7	217.2
Short-term deposits	185.3	166.3
Restricted cash and cash equivalents(1)	173.2	44.8
Total	**1,682.2**	**428.3**

(1) *Restricted cash and cash equivalents includes US$156.0 million (2016: US$44.8 million) kept in a specified bank account to be utilized solely for the purposes of payment of dividends to non-controlling shareholders, which is being carried as a current liability. Of the same, US$99.0 million (2016: US$Nil) has been utilized to pay dividends to the non-controlling shareholder subsequent to the Balance Sheet date. Restricted cash and cash equivalents further includes US$17.2 million (2016: US$Nil) kept in short term deposits under lien, which can be utilized by the Group for the repayment of bills of exchange facilities against which these have been pledged as security.*

Short-term deposits are made for periods of between one day and three months, depending on the immediate cash requirements of the Group, and earn interest at the respective short-term deposit rates.

24. Borrowings

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Short-term borrowings consist of:		
Banks and financial institutions	5,587.9	1,803.4
Current portion of medium and long-term borrowings	2,070.6	1,923.2
Short-term borrowings (A)	**7,658.5**	**3,726.6**
Medium and long-term borrowings consist of:		
Banks and financial institutions	6,595.5	8,139.4
Bonds	3,457.6	3,982.1
Non-convertible debentures	2,109.1	1,737.6
Preference shares (Note 42)	464.2	-
Other	14.4	13.6
Medium and Long-term borrowings	**12,640.8**	**13,872.7**
Less: Current portion of medium and long-term borrowings	(2,070.6)	(1,923.2)
Medium and Long-term borrowings, net of current portion (B)	**10,570.2**	**11,949.5**
Total (A+B)	**18,228.7**	**15,676.1**

At 31 March 2017, the Group had available US$911.0 million (2016: US$1,087.3 million) of undrawn committed borrowing facilities in respect of which all conditions precedent had been met. The group facilities are subject to certain financial and non-financial covenants. During the year ended 31 March 2016, the Group has agreed with the lenders for a moratorium period for testing of certain financial covenants and relaxed level for others. Certain of these financial covenants will be reset to their original levels beginning March 2019. The primary covenants which must be complied with include fixed charge cover ratio, net borrowing to EBITDA ratio, total net assets to borrowings ratio and net interest expense to EBITDA ratio.

Details of the bonds and Non-convertible debentures issued by the Group have been provided below-

(US$ million)

Particulars	As at 31 March 2017	As at 31 March 2016
Bonds :		
6.75% bonds due June, 2016	-	728.0
9.50% bonds due July, 2018	361.1	731.2
6.00% bonds due January, 2019	744.3	1,165.4
8.25% bonds due June, 2021	865.4	864.2
6.375% bonds due July, 2022	991.5	-
7.125% bonds due May, 2023	495.3	493.3
	3,457.6	**3,982.1**
Non-Convertible Debentures		
9.24% NCDs due December, 2022	77.1	75.4
9.10% NCDs due April, 2023	385.6	376.9
9.17% NCDs due July, 2023	185.1	180.9
9.70% NCDs due August, 2020	308.5	301.5
9.24% NCDs due October, 2022	77.1	75.4
9.40% NCDs due November, 2022	77.1	75.4
9.40% NCDs due December, 2022	77.1	75.4
9.36% NCDs due October, 2017	150.4	147.0
9.36% NCDs due December, 2017	81.0	79.1
8.60% NCDs due May, 2016	-	37.7
10.25% NCDs due August, 2017	77.1	75.4
9.60% NCDs due September, 2016	-	18.1
9.70% NCDs due September, 2017	27.8	27.1
9.27% NCDs due November, 2017	30.8	30.2
8.91% NCDs due April, 2018	153.9	150.8
8.20% NCDs due November, 2019	46.3	-
7.75% NCDs due September, 2019	38.6	-
9.00% NCDs due May, 2016	-	11.3
8.65% NCDs due September, 2019	23.1	-
8.70% NCDs due April, 2020	92.5	-
8.75% NCDs due April, 2021	38.6	-
8.75% NCDs due September, 2021	38.6	-
8.25% NCDs due October, 2019	46.3	-
7.95% NCDs due April, 2020	46.3	-
7.50% NCDs due November, 2019	30.2	-
	2,109.1	**1,737.6**

Security Details

The Group has taken borrowings in various countries towards funding of its acquisitions and working capital requirements. The borrowings comprise of funding arrangements from various banks and financial institutions taken by the parent and subsidiaries. Out of the total borrowings of US$18,228.7 million (2016: US$15,676.1 million) shown above total secured borrowings are US$6,037.8 million (2016: US$5,206.1 million) and unsecured borrowings are US$12,190.9 million (2016: US$10,470.0 million). The details of security provided by the Group in various countries, to various banks on the assets of Parent and subsidiaries are as follows:

(US$ million)

Facility Category	Security details	As at 31 March 2017	As at 31 March 2016
Buyers Credit	Secured by exclusive charge on the assets of Vedanta Limited's Jharsuguda Aluminium division imported under facility and first charge on Jharsuguda Aluminium's current assets on pari passu basis.	1.8	-
	Secured by first charge on pari passu basis on all the movable assets of TSPL.	110.7	85.7
	Secured by exclusive charge only on assets imported under the facility in Balco.	2.9	58.1
Cash credit	Secured by a charge on Inventory and Receivables of Vedanta Limited's copper division in India	3.7	3.3
	Secured by hypothecation of stock of raw materials, work-in-progress, semi-finished, finished products, consumable stores and spares, bills receivable, book debts and all other movables, both present and future in Balco. The charges ranks pari passu among banks under multiple banking arrangements, both for fund based and non-fund based facilities.	0.1	18.2
ECB	Secured by all present and future movable assets of Vedanta Limited's Jharsuguda Aluminium division including its movable plant and machinery, equipment, machinery spare tools and accessories.	99.9	299.2
	Secured by first pari passu charge over Fixed Assets of Balco with Minimum Security cover of 1.25 times	73.9	-
	Secured by first pari passu charges on Project assets related to 1200 MW Power Plant and 3.25 LTPA Smelter both present and future along with secured lenders in Balco.	49.8	49.6
	Secured by first pari passu charges on all the fixed assets (excluding land) of the 3.25 LTPA Aluminium Smelter along with a Thermal Power Plant of 1200 MW at Korba, both present and future along with secured lenders	133.3	200.0
NCD	The Principal together with interest (in respect of the amount so subscribed and issued) is secured by the first pari pasu charge over specific identified fixed asset of Vedanta Limited's iron ore division with the minimum security cover of 1.25 times.	231.3	226.1
	Secured by first pari passu charge over fixed assets (excluding leasehold properties) of Balco with Minimum Security cover of 1.25 times	77.1	75.4
	Secured by security cover of 1.25 times on the face value of outstanding debentures by way of charge on the assets of Vedanta Limited and/or assets of 2400 MW Thermal Power at Jharsuguda, Orissa at all times during the tenure of the debenture.	231.2	226.1
	Secured by way of first pari-passu charge on the specific movable and/or immovable Fixed Assets, as may be identified and notified by the Issuer to the Security Trustee from time to time, with minimum asset coverage of 1	1,033.1	934.7

	time of the aggregate face value of Bonds outstanding at any point of time. The whole of the movable fixed assets of the 1.6 MTPA Aluminium Smelter along with 1215 MW captive power plant in Jharsuguda and 1 MTPA alumina refinery along with 75 MW co-generation plant in Lanjigarh are covered		
	Secured by first pari passu charge over the fixed assets of Vedanta Limited's Lanjigarh Expansion and Lanjigarh 2 MTPA Assets with a minimum security cover of 1 times of the outstanding amount of the debenture	239.1	-
	Secured by first pari passu charge on all the movable fixed assets of TSPL both present and future, with a minimum asset cover of 1.1 times during the lifetime of the NCDs	297.3	207.7
Term Loans	Secured by first pari passu charge by way of hypothecation on the entire movable Fixed Assets (including WIP) of the Aluminium and Power Project, both present and future; and mortgage by deposit of documents of title of the land pertaining to the Fixed Assets. Aluminium and Power project shall mean the manufacturing facilities comprising of (i) alumina refinery having output of 1 MTPA along with co-generation captive power plant with an aggregate capacity of 75 MW at Lanjigarh, Orissa. (ii) aluminium smelter having an output of 1.6 MTPA along with a 1215 (9x135) MW CPP at Jharsuguda, Orissa.	410.1	-
	Secured by first charge on pari passu basis on all the movable assets of TSPL	561.4	351.5
	Secured by a first pari passu charge on movable & immovable fixed assets of Vedanta Limited's Refinery expansion Project (beyond 2 MTPA & upto 6 MTPA)	151.8	-
	Secured by creating first pari-passu charge by way of hypothecation of the movable fixed assets and mortgage on all the immovable fixed assets of the Aluminium Division of Vedanta Limited, both present and future, including leasehold land.	692.1	713.9
	Secured by creating first pari-passu charge by way of hypothecation of the movable fixed assets and mortgage on all the immovable fixed assets of the Aluminium Division of Vedanta Limited, both present and future, including leasehold land.	741.0	861.3
	Secured by a first pari passu charge by way of hypothecation on the entire movable fixed Assets (including CWIP) of the project at Vedanta Limited's Jharsuguda Aluminium division, both present and future; and mortgage by deposit of documents of title of the land pertaining to the fixed Assets.	299.5	296.4
	Secured by aggregate of the Net Fixed Assets of Aluminium Division and the Lanjigarh Expansion Project reduced by the outstanding amount of other borrowings having first pari passu charge on the fixed assets of Aluminium division and the Lanjigarh Expansion Project,	192.0	188.4
	Secured by creating first pari-passu charge by way of hypothecation of the movable fixed assets and mortgage on all the immovable fixed assets of the Aluminium Division of Vedanta Limited, both present and future, including leasehold land.	57.8	67.0
	Secured by 2nd pari passu charge on specific fixed assets of Vedanta Limited related to 2400 MW power project in Jharsuguda (except agricultural land)	67.4	103.4
	Secured by first pari passu charges on movable fixed assets (excluding Coal Block assets) both present and future along with secured lenders in Balco.	237.8	240.1
	Secured by collateral security of current assets of VGCB	41.7	-

Total	**6,037.8**	**5,206.1**

25. Non-equity non-controlling interests

As at 31 March 2017, non-equity non-controlling interests amounts to US$11.9 million (2016 : US$11.9 million), being deferred shares in KCM held by ZCCM. The deferred shares have no voting rights or rights to KCM's dividends, but are entitled on a winding up to a return of up to US$0.99 per share once all of KCM's ordinary shares have received a distribution equal to their par value and any share premium created on their issue and which remains distributable to them.

The deferred shares are held at historic cost, being the fair value attributed to them at the time of initial acquisition of KCM in the year ended 31 March 2005. They are classified as non-current liabilities as they are repayable only on the winding up of KCM, for an amount different than the pro rata share of net assets upon liquidation. The shares have been valued at US$0.99 per share, which is the maximum amount payable to the deferred shareholders. These deferred shares have not been discounted as the effect would not be material.

26. Movement in net debt[(1)]

(US$ million)

				Debt due within one year	Debt due after one year		
	Cash and cash equivalents	Liquid investments	Total cash and liquid investments	Debt carrying value	Debt carrying value	Debt-related derivatives[(2)]	Total Net Debt
At 1 April 2015	**353.7**	**7,856.1**	**8,209.8**	**(3,179.2)**	**(13,488.6)**	**(2.3)**	**(8,460.3)**
Cash flow	92.6	999.9	1,092.5	1,022.1	(901.6)	-	1,213.0
Other non-cash changes [(3)]	-	59.4	59.4	(2,280.6)	2,195.6	0.3	(25.3)
Foreign exchange differences	(18.0)	(407.2)	(425.2)	123.9	245.1	-	(56.2)
At 1 April 2016	**428.3**	**8,508.2**	**8,936.5**	**(4,313.8)**	**(11,949.5)**	**(2.0)**	**(7,328.8)**
Cash flow	1,187.2	(921.5)	265.7	74.1	(1,144.6)	-	(804.8)
Other non-cash changes[(3)]	-	321.0	321.0	(3,266.6)	2,643.4	2.0	(300.2)
Foreign exchange differences	66.7	135.3	202.0	(152.2)	(119.5)	-	(69.7)
At 31 March 2017	**1,682.2**	**8,043.0**	**9,725.2**	(7,658.5)	**(10,570.2)**	**-**	**(8,503.5)**

(1) Net debt being total debt and debt related derivative reduced by cash and cash equivalents and liquid investments, as carried at fair value under IAS 32 and 39.

(2) Debt related derivatives exclude derivative financial assets and liabilities relating to commodity contracts and forward foreign currency contracts.

(3) Other non-cash changes comprises of mark to market of embedded derivatives, interest accretion on convertible bonds, amortisation of borrowing costs, foreign exchange difference on net debt and preference shares to be issued on merger, for which there is no cash movement and reclassification between debt due within one year and debt due after one year. It also includes US$312.1 million (2016: US$59.4 million) of fair value movement in investments.

27. Trade and other payables

(a) Current trade and other payables

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Bills of exchange	1,550.8	1,500.0
Dividend payable to NCI	671.6	536.3
Trade payables	1,515.8	1,268.8
Project creditors	578.8	974.8
Other payables	729.8	576.3
Financial (A)	**5,046.8**	**4,856.2**
Dividend distribution tax payable	-	311.2
Statutory liabilities	308.2	180.6
Advance from customers(1)	783.9	396.8
Other payables	84.5	131.3
Non-Financial (B)	**1,176.6**	**1,019.9**
Total (A+B)	**6,223.4**	**5,876.1**

Non-interest bearing trade payables are normally settled on 60 to 90-day terms.

Interest bearing trade and other payables amount to US$1,550.8 million (2016: US$1,500.0 million).

Bills of exchange are interest-bearing liabilities and are normally settled within a period of twelve months. These represent arrangements whereby operational suppliers of raw materials are paid by financial institutions, with the Company recognising the liability for settlement with the institutions at a later date.

The fair values of the trade and other payables are not materially different from the carrying values presented.

(b) Non-current trade and other payables

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Security deposits and retentions	0.2	15.7
Project creditors	47.1	46.0
Others	21.2	3.7
Financial (A)	**68.5**	**65.4**
Advance from customers(1)	-	150.5
Others	-	7.6
Non- Financial (B)	-	158.1
Total (A+B)	**68.5**	**223.5**

(1) *Advance from customers include amounts received under long term supply agreements. The advance payment plus a fixed rate of return will be settled by supplying copper over a period up to twenty four months under an agreed delivery schedule as per the terms of the respective agreements. As these are contracts that the group expects, and has the ability, to fulfil through delivery of a non-financial item, these are recognised as advance from customers and will be released to the income statement as copper is delivered under the ag reements. The portion of the advance that is expected to be settled within the next 12 months has been classified as a current liability.*

28. Convertible bonds

A.

Vedanta Resource Jersey Limited ("VRJL") issued 5.5% US$1,250.0 million guaranteed convertible bonds on 13 July 2009. The bonds are first convertible into exchangeable redeemable preference shares to be issued by VRJL, which will then be automatically exchanged for ordinary shares of Vedanta Resources plc. The bondholders had the option to convert at any time from 24 August 2009 to 6 July 2016. Conversion options exercised before 15 August 2012 were convertible at US$36.5 per share. Conversion options exercised on or after 15 August 2012 were convertible at US$35.6 per share.

If the notes have not been converted, they will be redeemed at the option of the Company at any time on or after 28 July 2012 subject to certain conditions, or be redeemed at the option of the bondholders on 13 July 2014 or at the time of final maturity on 13 July 2016.

During the previous year in January 2016 and February 2016, the company bought back the convertible bonds of a face value of US$549.3 million and carrying value of US$541.6 million from market for a consideration of US$522.4million. The buyback consideration including buy back cost of US$1.1 million has been split between the liability and equity. Accordingly, US$2.6 million has been debited to convertible bond reserve and net gain of US$20.7 million has been recognised in the income statement.

During the year the company further bought back convertible bonds of a face value of US$67.4 million and repaid the balance US$514.8 million on its due date in July 2016.

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Opening liability	579.9	1096.4
Effective interest cost	17.5	90.1
Conversion of Convertible bonds	-	(2.9)
Repayment of Convertible bonds	(514.8)	-
Buy back of Convertible bonds	(67.4)	(541.6)
Coupon interest paid/ accrued	(15.2)	(62.1)
Closing liability	**-**	**579.9**

The interest charged for the year is calculated by applying an effective interest rate of 8.2% (March 2016: 8.2%).

The fair value of the convertible bond as at 31 March 2017 is Nil (March 2016: US$573.1 million).

B.

Vedanta Resource Jersey II Limited ("VRJL - II") issued 4.0% US$883 million guaranteed convertible bonds on 30 March 2010. The bonds were first convertible into exchangeable redeemable preference shares to be issued by VRJL-II, which will then be automatically exchanged for ordinary shares of Vedanta Resources plc. The bondholders have the option to convert at any time from 10 May 2010 to 23 March 2017. Conversion option exercised before 15 August 2012, were convertible at US$51.9 per share. Conversion Options exercised on or after 15 August 2012, are convertible at US$50.6 per share, as per the terms of offering circular.

If the notes have not been converted, they will be redeemed at the option of the Company at any time on or after 14 April 2013 subject to certain conditions, or be redeemed at the option of the bondholders on 29 April 2013 or on 30 March 2015 or at the time of final maturity on 30 March 2017.

During the year the company repaid US$8.1 million on its due date in March 2017.

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Opening liability	7.3	6.6
Effective interest cost	1.1	1.0
Repayment of Convertible Bonds	(8.1)	-
Coupon interest paid/accrued	(0.3)	(0.3)
Closing Liability	**-**	**7.3**

The interest charged for the year is calculated by applying an effective interest rate of 15.1% (2016: 15.1%).

The fair value of the convertible bond as at 31 March 2017 is Nil (March 2016: US$7.3 million).

Summary of convertible bond movements:

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Opening Liability	**587.2**	**1,103.0**
Effective interest cost	18.6	91.1
Coupon interest paid/ accrued	(15.5)	(62.4)
Repayment of bonds	(522.9)	-
Conversion of Convertible bonds	-	(2.9)
Buy back of Convertible bonds	(67.4)	(541.6)
Closing Liability	**-**	**587.2**

29. Financial instruments

The accounting classification of each category of financial instruments, and their carrying amounts, are set out below:

(US$ million)

As at 31 March 2017	Held for trading	Loans and receivables	Available for sale	Derivatives	Total carrying value	Total fair value
Financial Assets						
Financial instruments (derivatives)	-	-	-	2.2	**2.2**	**2.2**
Financial asset investments held at fair value	-	-	10.7	-	**10.7**	**10.7**
Liquid investments						
- Bank deposits	-	882.6	-	-	**882.6**	**882.6**
- Other investments	7,160.4	-	-	-	**7,160.4**	**7,160.4**
Cash and cash equivalents	-	1,682.2	-	-	**1,682.2**	**1,682.2**
Trade and other receivables	-	553.6	-	-	**553.6**	**553.6**
Other non-current assets	-	299.2	-	-	**299.2**	**299.2**
Total	**7,160.4**	**3,417.6**	**10.7**	**2.2**	**10,590.9**	**10,590.9**

As at 31 March 2017	Amortized cost	Derivatives	Total carrying value	Total fair value
Financial Liabilities				
Financial instruments (derivatives)	-	(135.5)	**(135.5)**	**(135.5)**
Trade and other payables	(5,115.3)	-	**(5,115.3)**	**(5,115.3)**
Borrowings	(18,228.7)	-	**(18,228.7)**	**(17,310.2)**
Total	**(23,344.0)**	**(135.5)**	**(23,479.5)**	**(22,561.0)**

(US$ million)

As at 31 March 2016	Held for trading	Loans and receivables	Available for sale	Derivatives	Total carrying value	Total fair value
Financial Assets						
Financial instruments (derivatives)	-	-	-	19.1	**19.1**	**19.1**
Financial asset investments held at fair value	-	-	6.5	-	**6.5**	**6.5**
Liquid investments						
- Bank deposits	-	530.3	-	-	**530.3**	**530.3**
- Other investments	7,977.9	-	-	-	**7,977.9**	**7,977.9**
Cash and cash equivalents	-	428.3	-	-	**428.3**	**428.3**
Trade and other receivables	-	854.7	-	-	**854.7**	**854.7**
Other non-current assets	-	69.2	-	-	**69.2**	**69.2**
Total	**7,977.9**	**1,882.5**	**6.5**	**19.1**	**9,886.0**	**9,886.0**

As at 31 March 2016	Amortized cost	Derivatives	Total carrying value	Total fair value
Financial Liabilities				
Financial instruments (derivatives)	-	(68.9)	**(68.9)**	**(68.9)**
Trade and other payables	(4,921.6)	-	**(4,921.6)**	**(4,921.6)**
Borrowings(1)	(16,263.3)	-	**(16,263.3)**	**(15,118.2)**
Total	**(21,184.9)**	**(68.9)**	**(21,253.8)**	**(20,108.7)**

(1) Includes amortised cost liability portion of convertible bonds US$587.2million.

IFRS 7 requires additional information regarding the methodologies employed to measure the fair value of financial instruments which are recognised or disclosed in the accounts. These methodologies are categorised per the standard as:

Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 fair value measurements are those derived from inputs other than quoted prices that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The below table summarises the categories of financial assets and liabilities measured at fair value:

(US$ million)

		As at 31 March 2017	
	Level 1	**Level 2**	**Level 3**
Financial assets			
At fair value through profit or loss			
- Held for trading	2,891.9	4,268.5	-
- Financial instruments (derivatives)	-	2.2	-
Available-for-sale investments			
- Financial asset investments held at fair value	9.2	-	1.5
Total	**2,901.1**	**4,270.7**	**1.5**
Financial liabilities			
At fair value through profit or loss/ designated for hedging			
- Financial instruments (derivatives)	-	135.5	-
Total	**-**	**135.5**	**-**

		As at 31 March 2016(1)
	Level 1	**Level 2**
Financial assets		
At fair value through profit or loss		
- Held for trading	3,473.7	4,504.2
- Financial instruments (derivatives)	-	19.1
Available-for-sale investments		
- Financial asset investments held at fair value	6.5	-
Total	**3,480.2**	**4,523.3**
Financial liabilities		
At fair value through profit or loss/ designated for hedging		
- Financial instruments (derivatives)	-	(68.9)
Total	**-**	**(68.9)**

(1) *Held for trading disclosure at 31 March 2016 has been restated to appropriately disclose the bonds valued using inputs other than quoted price as Level 2 rather than Level 1.*

There were no transfers between Level 1, Level 2 and Level 3 during the year.

Short-term marketable securities traded in active markets are determined by reference to quotes from the financial institutions; for example: Net asset value (NAV) for investments in mutual funds declared by mutual fund house. For other listed securities traded in markets which are not active, the quoted price is used wherever the pricing mechanism is same as for other marketable securities traded in active markets. Other short term marketable securities are valued on the basis of market trades, poll and primary issuances for securities issued by the same or similar issuer and for similar maturities or based on the applicable spread movement for the security derived based on the aforementioned factor(s).

Fair value of long-term fixed-rate and variable-rate borrowings have been determined by the Group based on parameters such as interest rates, specific country risk factors, and the risk characteristics of the financed project. Listed bonds are fair valued based on the prevailing market price. For all other long-term fixed-rate and variable-rate borrowings, either the carrying amount approximates the fair value, or fair value have been estimated by discounting the expected future cash flows using a discount rate equivalent to the risk free rate of return adjusted for the appropriate credit spread. For all other financial instruments, the carrying amount is either the fair value, or approximates the fair value.

The fair value of financial asset investments represents the market value of the quoted investments and other traded instruments. For other financials assets the carrying value is considered to approximate fair value.

The fair value of financial liabilities is the market value of the traded instruments, where applicable. Otherwise fair value is calculated using a discounted cash flow model with market assumptions, unless the carrying value is considered to approximate fair value.

The Group has no financial instruments with fair values that are determined by reference to significant unobservable inputs.

Derivative instruments and risk management

The Group's businesses are subject to several risks and uncertainties including financial risks.

The Group's documented risk management policies act as an effective tool in mitigating the various financial risks to which the businesses are exposed in the course of their daily operations. The risk management policies cover areas such as liquidity risk, commodity price risk, foreign exchange risk, interest rate risk, credit risk and capital management (the latter covered in note 34).

Risks are identified at both the corporate and individual subsidiary level with active involvement of senior management. Each operating subsidiary in the Group has in place risk management processes which are in line with the Group's policy. Each significant risk has a designated 'owner' within the Group at an appropriate senior level. The potential financial impact of the risk and its likelihood of a negative outcome are regularly updated. The risk management process is coordinated by the Management Assurance function and is regularly reviewed by the Group's Audit Committee. The Audit Committee is aided by the CFO Committee and the Risk Management Committee, which meets regularly to review risks as well as the progress against the planned actions. Key business decisions are discussed at the meetings of the CFO Committee and Executive Committee. The overall internal control environment and risk management programme including financial risk management is reviewed by the Audit Committee on behalf of the Board.

Treasury management

Treasury management focuses on liability management, capital protection, liquidity maintenance and yield maximisation. The treasury policies are approved by the Committee of the Board. Daily treasury operations of the subsidiary companies are managed by their respective finance teams within the framework of the overall Group treasury policies. Long-term fund raising including strategic treasury initiatives are handled by a central team while short-term funding for routine working capital requirements is delegated to subsidiary companies. A monthly reporting system exists to inform senior management of investments, debt, currency, commodity and interest rate derivatives. The Group has a strong system of internal control which enables effective monitoring of adherence to Group policies. The internal control measures are supplemented by regular internal audits.

The investment portfolio is independently reviewed by CRISIL Limited and our portfolio has been rated as "Very Good" meaning highest safety. The investments are made keeping in mind safety, liquidity and yield maximisation.

The Group uses derivative instruments to manage the exposure in foreign currency exchange rates, interest rates and commodity prices. The Group does not acquire or issue derivative financial instruments for trading or speculative purposes. The Group does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts and interest rate and currency swaps and these are in line with the Group policies.

Commodity risk

The Group is exposed to the movement of base metal commodity prices on the London Metal Exchange. Any decline in the prices of the base metals that the Group produces and sells will have an immediate and direct impact on the profitability of the businesses. As a general policy, the Group aims to sell the products at prevailing market prices. The commodity price risk in import of Copper Concentrate & Alumina is hedged on back-to back basis ensuring no price risk for the business. Entities with integrated operations aim to achieve the monthly average of the commodity prices for sales realization. Hedging is used primarily as a risk management tool to secure future cash flows in cases of high volatility by entering into forward contracts or similar instruments. The hedging activities are subject to strict limits set out by the Board and to a strictly defined internal control and monitoring mechanism. Decisions relating to hedging of commodities are taken at the Executive Committee level and with clearly laid down guidelines for their implementation by the subsidiaries.

Whilst the Group aims to achieve average LME prices for a month or a year, average realised prices may not necessarily reflect the LME price movements due to a variety of reasons such as uneven sales during the year and timing of shipments.

The Group is also exposed to the movement of international crude oil price and the discount in the price of Rajasthan crude oil to Brent price.

Copper

The Group’s custom smelting copper operations at Tuticorin is benefited by a natural hedge except to the extent of a possible mismatch in quotational periods between the purchase of concentrate and the sale of finished copper. The Group’s policy on custom smelting is to generate margins from Treatment charges /Refining charges, improving operational efficiencies, minimising conversion cost, generating a premium over LME on sale of finished copper, sale of by-products and from achieving import parity on domestic sales. Hence, mismatches in quotational periods are managed to ensure that the gains or losses are minimised. The Group hedges this variability of LME prices through forward contracts and tries to make the LME price a pass-through cost between purchases of copper concentrate and sales of finished products, both of which are linked to the LME price.

TC/RCs are a major source of income for the Indian copper smelting operations. Fluctuations in TC/RCs are influenced by factors including demand and supply conditions prevailing in the market for mine output. The Group’s copper business has a strategy of securing a majority of its concentrate feed requirement under long-term contracts with mines.

KCM is largely an integrated copper producer and whenever hedging is done it is with an intention to protect the Group from price fluctuations in copper. KCM also engages in hedging for its custom smelting operations in line with the Group’s policy on custom smelting at Tuticorin, as explained above.

Aluminium

The requirement of the primary raw material, alumina, is partly met from own sources and the rest is purchased primarily on negotiated price terms. Sales prices are linked to the LME prices. At present the Group on selective basis hedges the aluminium content in imported alumina to protect its margins.

The Group also enters into hedging arrangements for its aluminium sales to realise month of sale LME prices.

Zinc and lead

The sales prices are linked to the LME prices. The Group also enters into hedging arrangements for its Zinc and Lead sales to realise month of sale LME prices.

Iron ore

The Group Sells its Iron Ore production from Goa on the prevailing market prices and from Karnataka through e-auction route as mandated by State Government of Karnataka in India.

Oil and Gas

The prices of various crude oils are based upon the price of the key physical benchmark crude oil such as Dated Brent, West Texas Intermediate, and Dubai/Oman etc. The crude oil prices move based upon market factors like supply and demand. The regional producers price their crude basis these benchmark crude with a premium or discount over the benchmark based upon quality differential and competitiveness of various grades.

Natural gas markets are evolving differently in important geographical markets. There is no single global market for natural gas. This could be owing to difficulties in large-scale transportation over long distances as compared to crude oil. Globally, there are three main regional hubs for pricing of natural gas, which are USA (Henry Hub Prices), UK (NBP Price) and Japan (imported gas price, mostly linked to crude oil).

Provisionally priced financial instruments

On 31 March 2017, the value of net financial liabilities linked to commodities (excluding derivatives) accounted for on provisional prices was a liability of US$465.5 million (2016: liability of US$416.3 million). These instruments are subject to price movements at the time of final settlement and the final price of these instruments will be determined in the financial year beginning 1 April 2017.

Set out below is the impact of 10% increase in LME prices on profit/ (loss) for the year and total equity as a result of changes in value of the Group's commodity financial instruments as at 31 March 2017:

(US$ million except as stated)

Commodity price sensitivity	Closing LME as at 31 March 2017 US$	Effect on profit/(loss) of a 10% increase in the LME 31 March 2017 (US$ million)	Effect on total equity of a 10% increase in the LME 31 March 2017 *(US$ million)*
Copper	5,849.0	(54.3)	(54.3)
Zinc	2,782.5	0.5	0.5
Lead	2,310.0	1.1	1.1

(US$ million except as stated)

Commodity price sensitivity	Closing LME as at 31 March 2016 US$	Effect on profit/(loss) of a 10% increase in the LME 31 March 2016 (US$ million)	Effect on total equity of a 10% increase in the LME 31 March 2016 (US$ million)
Copper	4,855.5	(44.5)	(44.5)
Zinc	1,785.0	0.2	0.2
Lead	1,704.5	0.6	0.6

The above sensitivities are based on volumes, costs, exchange rates and other variables and provide the estimated impact of a change in LME prices on profit and equity assuming that all other variables remain constant. A 10% decrease in LME prices would have an equal and opposite effect on the Group's financial instruments.

Further, the impact of a 10% increase in closing copper LME for provisionally priced copper concentrate purchased at Vedanta Limited Copper division custom smelting operations is US$48.2 million (2016: US$50.0 million), which is pass through in nature and as such will not have any impact on the profitability.

Financial risk and sensitivities

The Group's Board approved financial risk policies comprise liquidity, currency, interest rate and counterparty risk. The Group does not engage in speculative treasury activity but seeks to manage risk and optimise interest and commodity pricing through proven financial instruments.

(a) Liquidity

The Group requires funds both for short-term operational needs as well as for long-term investment programmes mainly in growth projects. The Group generates sufficient cash flows from the current operations which together with the available cash and cash equivalents and liquid financial asset investments provide liquidity both in the short term as well as in the long term. Anticipated future cash flows, together with undrawn fund based committed facilities of US$911.0 million, and cash and liquid investments of US$9,725.2 million as at 31 March 2017, are expected to be sufficient to meet the liquidity requirement of the Group in the near future.

The Group's current corporate family ratings from Standard & Poor's and Moody's are B+/Stable Outlook (B/Stable as on March 31, 2016) and B1/ Stable Outlook (B2/Negative as on March 31, 2016), respectively. The rating upgrades during the year reflect the Group's improving financial and operating performance and improving commodity prices. The Group strives to maintain a healthy liquidity, gearing ratio and retains flexibility in the financing structure (Refer note 34).

The maturity profile of the Group's financial liabilities based on the remaining period from the balance sheet date to the contractual maturity date is given in the table below. The figures reflect the contractual undiscounted cash obligation of the Group:

At 31 March 2017

(US$ million)

Payment due by period	< 1 year	1-3 years	3-5 years	> 5 years	Total
Trade and other payables	5,046.8	38.3	-	30.2	5,115.3
Bank and other borrowings(1)	8,560.5	5,387.9	4,508.7	2,735.0	21,192.1
Derivative liabilities	126.9	8.6	-	-	135.5
Total	**13,734.2**	**5,434.8**	**4,508.7**	**2,765.2**	**26,442.9**

At 31 March 2016

(US$ million)

Payment due by period	< 1 year	1-3 years	3-5 years	> 5 years	Total
Trade and other payables	4,856.2	-	59.2	6.2	4,921.6
Bank and other borrowings(1)	4,711.2	7,614.2	3,465.7	3,388.3	19,179.4
Convertible bonds(1)	595.5	-	-	-	595.5
Derivative liabilities	67.7	1.2	-	-	68.9
Total	**10,230.6**	**7,615.4**	**3,524.9**	**3,394.5**	**24,765.4**

(1) Includes contractual interest payment based on interest rate prevailing at the end of the reporting period

At 31 March 2017, the Group had access to funding facilities (both fund based and non-fund based) of US$19,400.8 million, of which US$911.0 million fund based and US$710.8 million non-fund based, was not yet drawn, as set out below.

(US$ million)

Funding facilities	Total facility	Drawn	Undrawn
Less than 1 year	8,341.6	6,786.0	1,555.6
1-2 years	3,791.7	3,791.7	-

2-5 years and above	7,267.5	7,201.3	66.2
Total	**19,400.8**	**17,779.0**	**1,621.8**

At 31 March 2016, the Group had access to funding facilities (both fund based and non-fund based) of US$18,140.7 million of which US$1,087.3 million fund based and US$716.2 million non-fund based, was not yet drawn, as set out below.

(US$ million)

Funding facilities	Total facility	Drawn	Undrawn
Less than 1 year	6,104.2	4,310.0	1,794.2
1-2 years	2,642.7	2,642.7	-
2-5 years and above	9,393.8	9,384.5	9.3
Total	**18,140.7**	**16,337.2**	**1,803.5**

'Fund based' facilities represent contractual agreements for financial institutions to provide cash, such as cash credit limits and term loans, whereas 'non-fund based' facilities only give rise to an obligation to provide cash upon fulfilment of certain conditions, such as bank guarantees and letters of credit.

(b) Foreign currency

The Group's presentation currency is the US dollar. The majority of the assets are located in India and the Indian Rupee is the functional currency for the Indian operating subsidiaries except for Oil and Gas business where the functional currency is US Dollar. Exposures on foreign currency loans are managed through the foreign exchange hedging policy, which is reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed. Natural hedges available in the business are identified at each entity level and hedges are placed only for the net exposure. Short-term net exposures are hedged progressively based on their maturity. Longer exposures beyond one year for trade and other current account transactions are reviewed and hedges taken accordingly. However, all new exposures on account of long term borrowing are being hedged.

The carrying amount of the Group's financial assets and liabilities in different currencies are as follows:

(US$ million)

	At 31 March 2017		At 31 March 2016	
	Financial Assets	Financial liabilities	Financial Assets	Financial liabilities
USD	1,551.9	11,624.7	1,260.9	12,519.9
INR	8,951.4	11,727.6	8,524.6	8,502.5
Kwacha	0.2	31.0	0.8	120.9
AUD	2.1	1.2	0.4	9.3
CAD	-	0.2	-	0.1
EURO	27.9	41.6	46.6	47.4
ZAR	19.0	29.3	18.3	18.6
NAD	12.1	16.0	5.0	5.0
Others	26.3	7.9	29.4	30.1
Total	**10,590.9**	**23,479.5**	**9,886.0**	**21,253.8**

The Group's exposure to foreign currency arises where a Group company holds monetary assets and liabilities denominated in a currency different to the functional currency of that entity with USD (US Dollar)being the major foreign currency exposure of the Group's main operating subsidiaries. Set out below is the impact of a 10% change in the US dollar on profit/(loss) and equity arising as a result of the revaluation of the Group's foreign currency financial instruments:

(US$ million)

	31 March 2017		
	Closing exchange rate	**Effect of 10% strengthening of US dollar on net earning**	**Effect of 10% strengthening of US dollar on total equity**
INR	64.8386	(317.3)	(317.1)
Kwacha	9.6570	(2.2)	(2.2)

(US$ million)

	31 March 2016		
	Closing exchange rate	**Effect of 10% strengthening of US dollar on net earnings**	**Effect of 10% strengthening of US dollar on total equity**
INR	66.3329	(191.1)	(230.2)
Kwacha	7.5811	(10.1)	(10.1)

The sensitivities are based on financial assets and liabilities held at 31 March 2017 where balances are not denominated in the functional currency of the respective subsidiaries. The sensitivities do not take into account the Group's sales and costs and the results of the sensitivities could change due to other factors such as changes in the value of financial assets and liabilities as a result of non-foreign exchange influenced factors. A 10% depreciation of the US$ would have an equal and opposite effect on the Group's financial instruments.

(c) Interest rate risk

At 31 March 2017, the Group's net debt of US$8,503.5 million (2016: US$7,328.8 million net debt) comprises cash, cash equivalents and liquid investments of US$9,725.2 million (2016: US$8,936.5 million) offset by debt of US$18,228.7 million (2016: US$16,263.3 million) and debt derivative liability of Nil (2016 : US $ 2.0 million).

The Group is exposed to interest rate risk on short-term and long-term floating rate instruments and on the refinancing of fixed rate debt. The Group's policy is to maintain a balance of fixed and floating interest rate borrowings and the proportion of fixed and floating rate debt is determined by current market interest rates. As at 31 March 2017, 55% (2016: 48.0%) of the total debt was at a fixed rate and the balance was at a floating rate. The USD floating rate debt is linked to US dollar LIBOR and INR Floating rate debt to Bank's base rate. The Group also aims to opt for a higher proportion of long-term debt to fund growth projects to extend its maturity profile. The Group invests cash and liquid investments in short-term deposits and debt mutual funds, some of which generate a tax-free return, to achieve the Group's goal of maintaining liquidity, carrying manageable risk and achieving satisfactory returns.

Floating rate financial assets are largely mutual fund investments which have debt securities as underlying assets. The returns from these financial assets are linked to market interest rate movements; however the counterparty invests in the agreed securities with known maturity tenure and return and hence has manageable risk. Additionally, the investments portfolio is independently reviewed by CRISIL Limited, and our investment portfolio has been rated as "Very Good" meaning highest safety.

The exposure of the Group's financial assets to interest rate risk is as follows:

(US$ million)

	At 31 March 2017			At 31 March 2016		
	Floating rate financial assets	**Fixed rate financial assets**	**Non-interest bearing financial assets**	**Floating rate financial assets**	**Fixed rate financial assets**	**Non-interest bearing financial assets**
Financial assets	5,379.4	3,043.0	2,166.3	6,334.0	2,601.8	931.1
Derivative assets	-	-	2.2	-	-	19.1
Total financial assets	5,379.4	3,043.0	2,168.5	6.334.0	2,601.8	950.2

The exposure of the Group's financial liabilities to interest rate risk is as follows:

(US$ million)

	At 31 March 2017			At 31 March 2016		
	Floating rate financial liabilities	**Fixed rate financial liabilities**	**Non-interest bearing financial liabilities**	**Floating rate financial liabilities**	**Fixed rate financial liabilities**	**Non-interest bearing financial liabilities**
Financial liabilities	8,253.5	11,896.7	3,193.8	8,454.3	9,294.2	3,436.4
Derivative liabilities		-	135.5	-	-	68.9
Total financial liabilities	**8,253.5**	**11,896.7**	**3.329.3**	**8,454.3**	**9,294.2**	**3,505.3**

The weighted average interest rate on the fixed rate financial liabilities is 7.5% (2016: 8.2%) and the weighted average period for which the rate is fixed is 2.4 years (2016: 2.4 years).

Considering the net debt position as at 31 March 2017 and the investment in bank deposits, corporate bonds and debt mutual funds, any increase in interest rates would result in a net loss and any decrease in interest rates would result in a net gain. The sensitivity analysis below has been determined based on the exposure to interest rates for both derivative and non-derivative instruments at the balance sheet date.

The below table illustrates the impact of a 0.5% to 2.0% change in interest rate of floating rate borrowings on profit/(loss) and equity and represents management's assessment of the possible change in interest rates.

At 31 March 2017

(US$ million)

Change in interest rates	**Effect on profit for the year**	**Effect on total equity**
0.5%	41.3	41.3
1.0%	82.5	82.5
2.0%	165.1	165.1

At 31 March 2016

(US$ million)

Change in interest rates	**Effect on loss for the year**	**Effect on total equity**
0.5%	42.3	42.3
1.0%	84.5	84.5
2.0%	169.1	169.1

(d) Credit risk

The Group is exposed to credit risk from trade receivables, cash and cash equivalents, liquid investments and other financial instruments.

The Group has clearly defined policies to mitigate counterparty risks. Cash and liquid investments are held primarily in debt schemes of mutual funds, Bonds and bank deposits with good credit ratings. Defined limits are in place for exposure to individual counterparties in case of mutual fund houses and banks.

The large majority of receivables due from third parties are secured. Moreover, given the diverse nature of the Group's businesses trade receivables are spread over a number of customers with no significant concentration of credit risk. During the year ended 31 March 2017 and 31 March 2016, no single customer accounted for 10% or more of the Group's net sales or for any of the Group's primary businesses. The history of trade receivables shows a negligible provision for bad and doubtful debts. Therefore, the Group does not expect any material risk on account of non-performance by any of our counterparties.

The Group's maximum gross exposure to credit risk at 31 March 2017 is US $ 10,589.3 million (2016: US$$9,886.0 million).

Of the year end trade and other receivable balance the following, though overdue, are expected to be realised in the normal course of business and hence, are not considered impaired as at 31 March 2017:

(US$ million)

	2017	2016
Neither past due nor impaired	181.4	581.5
Past due but not impaired		
- Less than 1 month	130.6	49.8
- Between 1 - 3 months	34.0	74.3
- Between 3 - 12 months	199.3	92.9
- Greater than 12 months	188.6	56.2
Total	**733.9**	**854.7**

Derivative financial instruments

The fair value of all derivatives is separately recorded on the balance sheet within other financial assets (derivatives) and other financial liabilities (derivatives), current and non-current. Derivatives that are designated as hedges are classified as current or non-current depending on the maturity of the derivative.

Embedded derivatives

Derivatives embedded in other financial instruments or other contracts are treated as separate derivative contracts, when their risks and characteristics are not closely related to those of their host contracts.

Cash flow hedges

The Group also enters into forward exchange and commodity price contracts for hedging highly probable forecast transactions and accounts for them as cash flow hedges and states them at fair value. Subsequent changes in fair value are recognised in equity until the hedged transactions occur, at which time the respective gains or losses are transferred to the income statement.

The fair value of the Group's open derivative positions at 31 March 2017, recorded within financial instruments (derivative) is as follows:

(US$ million)

	As at 31 March 2017		As at 31 March 2016	
	Liability	**Asset**	**Liability**	**Asset**
Current				
Cash flow hedges				
- Commodity contracts	(13.2)	0.1	(0.9)	0.2
- Forward foreign currency contracts	(2.1)	0.1	(8.3)	5.5
Fair value hedges				
- Commodity contracts	(0.5)	-	-	0.1
- Forward foreign currency contracts	(82.1)	-	(37.4)	1.3
Non Qualifying hedges				
- Commodity contracts	(3.7)	1.4	(1.2)	2.9
- Forward foreign currency contracts	(25.1)	-	(19.7)	8.3
- Other (Foreign currency swap)	(0.2)	-	(0.2)	0.0
Total	**(126.9)**	**1.6**	**(67.7)**	**18.3**
Non-current				
Fair Value Hedges				
-Forward foreign currency contracts	(8.6)	0.6	(1.2)	0.8
Total	**(8.6)**	**0.6**	**(1.2)**	**0.8**
Grand Total	**(135.5)**	**2.2**	**(68.9)**	**19.1**

The majority of cash flow hedges taken out by the Group during the year comprises commodity contracts and foreign currency forward contracts for firm future commitments.

The cash flows related to the majority of cash flow hedges above are expected to occur during the year ended 31 March 2018 and consequently may impact the income statements for that year depending upon the change in the commodity prices and foreign exchange rate movements.

Non-qualifying hedges

The majority of these derivatives comprise foreign currency forward contracts which are economic hedges but which do not fulfil the requirements for hedge accounting of IAS 39 Financial Instruments: Recognition and Measurement.

Fair value hedges

The fair value hedges relate to foreign currency forward contracts taken to hedge currency exposure on purchase of raw materials and capital imports.

Hedging reserve reconciliation

(US$ million)

	Hedging reserves	Non-controlling interests	Total
At 1 April 2015	**(74.7)**	**(44.7)**	**(119.4)**
Amount recognised directly in equity	(17.2)	(10.1)	(27.3)
Amount transferred to income statement	(0.8)	(0.7)	(1.5)
Exchange difference	5.0	2.9	7.9
At 1 April 2016	**(87.7)**	**(52.6)**	**(140.3)**
Amount recognised directly in equity	3.3	0.5	3.8
Amount transferred to income statement	(5.0)	(3.0)	(8.0)
Exchange difference	(1.5)	(0.9)	(2.4)
At 31 March 2017	**(90.9)**	**(56.0)**	**(146.9)**

30. Provisions

(US$ million)

	Restoration, rehabilitation and environmental	KCM Copper Price Participation	Other	Total
At 1 April 2015	**224.9**	**91.9**	**27.4**	**344.2**
Charged to income statement	3.4	-	1.7	5.1
Unwinding of discount (note 7)	10.3	2.5	0.7	13.5
Cash paid	(43.9)	-	(0.7)	(44.6)
Exchange differences	(3.0)	7.6	(3.3)	1.3
At 1 April 2016	**191.7**	**102.0**	**25.8**	**319.5**
Additions	4.1	-	12.5	16.6
Amounts used	(12.8)	(6.0)	(1.2)	(20.0)
Unwinding of discount (note 7)	12.6	0.4	-	13.0
Change in estimates	112.4	-	-	112.4
Reclassifications to trade payables	-	(96.3)	(4.4)	(100.7)
Exchange differences	8.8	(0.1)	(4.7)	4.0
At 31 March 2017	**316.8**	**-**	**28.0**	**344.8**
Current 2017	9.8	-	7.7	17.5
Non-current 2017	307.0	-	20.3	327.3
	316.8	**-**	**28.0**	**344.8**
Current 2016	17.5	102.0	12.6	132.1
Non-current 2016	174.2	-	13.2	187.4
	191.7	**102.0**	**25.8**	**319.5**

Restoration, rehabilitation and environmental

The provisions for restoration, rehabilitation and environmental liabilities represent the Management's best estimate of the costs which will be incurred in the future to meet the Group's obligations under existing Indian, Australian, Zambian, Namibian, South African and Irish law and the terms of the Group's mining and other licences and contractual arrangements. These amounts, calculated by considering discount rates within the range of 2% to 13%, become payable on closure of mines and are expected to be incurred over a period of one to thirty years. Within India, the principal restoration and rehabilitation provisions are recorded within Cairn India where a legal obligation exists relating to the oil and gas fields, where costs are expected to be incurred in restoring the site of production facilities at the end of the producing life of an oil field. The Group recognises the full cost of site restoration as a liability when the obligation to rectify environmental damage arises.

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production from a producing field.

In the current period, the Group identified an adjustment to the discount rate applied to the decommissioning liability in relation to a prior year in the Group's Oil and Gas segment. The discount rate has been revised from 8% to 3.5% p.a. to reflect the risk free rate of return of the currency in which the majority of the expenses are likely to be incurred. The consequential increase in decommissioning provision and property, plant and equipment of US$125.0 million, which the Group believes is not material when comparing to the overall net assets, has been recognised in the current period.

KCM copper price participation

During the year 31 March 2013, the Group and ZCCM-IH agreed a final settlement for the copper price participation liability. Pursuant to this agreement KCM had paid US$6.0 million during the first quarter of current year and subsequently KCM and ZCCM-IH had agreed to amend the scheduled dates of payment in respect of price participation through a Consent order as recorded in the English Court. Pursuant to the terms of the order, KCM agreed to an amended schedule of payment with ZCCM-IH as US$20 million by 31 January 2017, US$22 million by 28 February 2017 and US$2.55 million at the end of every month (commencing 31 March 2017) for next 24 months until the judgment sum is paid in full. Consequent to the removal of uncertainty with respect to timing and amount, US$96.3 million has been reclassified to trade payables during the current year.

Other

Other includes provision on post- retirement medical benefits. The expected Year of utilisation is 18 years.

31. Non-current tax assets and Deferred tax (assets) / liabilities

Non-current tax assets of US $ 434.6 million (2016 : 361.7 million) mainly represents income tax receivable from Indian tax authorities by Vedanta Limited relating to refund arising consequent to the Scheme of Amalgamation & Arrangement made effective in August 2013 pursuant to approval by the jurisdiction High Court and receivables relating to matters in tax disputes in Group companies including tax holiday claim.

The Group has accrued significant amounts of deferred tax. The majority of the deferred tax liability represents accelerated tax relief for the depreciation of capital expenditure and the depreciation on fair value uplifts created on acquisitions, net of losses carried forward by Vedanta Limited (post the re-organisation) and MAT credits carried forward in Vedanta Limited, Cairn and Hindustan Zinc.

The amounts of deferred tax on temporary differences, recognized or not recognized, in the consolidated statement of financial position is as follows:

Deferred tax (assets) / liabilities

For the year ended 31 March 2017 (US$ million)

	Opening balance as at 1 April 2016	Charged/ (credited) to income statement	Charged/ (credited) to OCI	Exchange difference transferred to translation of foreign operation	Total as at 31 March 2017
Property, plant & equipment, Exploration& Evaluation and other intangible assets	2,175.0	(42.0)	-	47.3	2,180.3
Unabsorbed depreciation/business loss	(813.9)	(94.6)	-	(22.0)	(930.5)
Voluntary retirement scheme	(8.9)	1.7	-	(0.2)	(7.4)
Employee benefits	(7.9)	(1.3)	(0.6)	(0.3)	(10.1)
Fair value of derivative assets/ liabilities	2.6	19.8	1.5	0.8	24.7
Fair value of other assets/ liabilities	134.2	23.4	-	4.1	161.7
MAT credits entitlement	(1,966.7)	96.4	-	(45.3)	(1,915.6)
Other temporary differences	(149.6)	(91.1)	-	(2.3)	(243.0)
Total	**(635.2)**	**(87.7)**	**0.9**	**(17.9)**	**(739.9)**

Unrecognised deferred tax assets

As at 31 March 2017 (US$ million)

	Within one year	Greater than one year, less than five years	Greater than five years	No expiry date	Total
Unutilised business losses	302.2	869.7.	212.3	1,520.3	2,904.5
Unabsorbed depreciation	-	-	-	261.3	261.3
Capital losses	-	-	-	-	-
Unused tax credit	-	-	-	1.3	1.3
Total	**302.2**	**869.7**	**212.3**	**1,782.9**	**3167.1**

Deferred tax asset / liabilities

For the year ended 31 March 2016 (US$ million)

	Opening balance as at 1 April 2015	Charged/ (credited) to income statement	Charged/ (credited) to OCI	Exchange difference transferred to translation of foreign operation	Total as at 31 March 2016
Property, plant & equipment, Exploration& Evaluation and other intangible assets	3,478.3	(1,490.5)	-	187.2	2,175.0
Unabsorbed depreciation/business loss	(445.1)	(275.9)	-	(92.9)	(813.9)
Voluntary retirement scheme	(7.7)	(2.2)	-	1.0	(8.9)
Employee benefits	(10.8)	1.2	2.5	(0.8)	(7.9)
Fair value of derivative assets/ liabilities	2.4	1.3	1.2	(2.3)	2.6
Fair value of other assets/ liabilities	215.1	(98.3)	-	17.4	134.2
MAT credits entitlement	(1,898.0)	37.9	-	(106.6)	(1,966.7)
Other temporary differences	2.2	(192.1)	-	40.3	(149.6)
Total	**1,336.4**	**(2,018.6)**	**3.7**	**43.3**	**(635.2)**

Unrecognised deferred tax assets

For the year ended 31 March 2016 (US$ million)

	Within one year	Greater than one year, less than five years	Greater than five years	No expiry date	Total
Unutilised business losses	218.7	880.7	515.4	1,292.6	2907.4
Unabsorbed depreciation	-	-	-	587.3	587.3
Capital losses	-	40.7	143.0	-	183.7
Unused tax Credit	-	-	-	1.3	1.3
Total	**218.7**	**921.4**	**658.4**	**1,881.2**	**3,679.7**

No deferred tax asset has been recognised on these unutilized tax losses as there is no evidence that sufficient taxable profit will be available in future against which they can be utilised by the respective entities.

Unrecognised MAT Credit

(US$ million)

	As at 31 March 2017	As at 31 March 2016
2021	3.1	3.0
2022	16.0	15.6
2023	2.1	2.1
2024	8.0	7.8
2025	8.0	7.8
2026	16.0	15.6
2027	9.8	9.5
2028	1.2	1.2
2029	0.5	0.5
Total	**64.7**	**63.1**

Deferred tax assets in the Group have been recognised to the extent there are sufficient taxable temporary differences relating to the same taxation authority and the same taxable entity which are expected to reverse.

32. Share-based payments

Employee share schemes

The Group aims to provide superior rewards for outstanding performance and a high proportion of 'at risk' remuneration for Executive Directors. Three employee share schemes were approved by shareholders on Listing in 2003. In 2014, the Board introduced a Performance Share Plan ('PSP') which is the primary arrangement under which share-based incentives are provided to the Executive Directors and the wider management group. In 2015, the Board also introduced a Deferred Share Bonus Plan (DSBP). In 2016, Vedanta Limited (subsidiary of Vedanta Resources plc) introduced an Employee Stock Option Scheme 2016 ("ESOS"), which was approved by the Vedanta Limited shareholders.

The Vedanta Resources Long-Term Incentive Plan (the 'LTIP') and Employee Share Ownership Plan (the 'ESOP') and Performance Share Plan (the 'PSP')

The maximum value of shares that can be conditionally awarded to an Executive Director in a year is 150% of annual salary. In respect of Mr. Navin Agarwal and Mr Tom Albanese, salary means the aggregate of their salary payable by Vedanta and their cost to company (CTC) payable by Vedanta Limited. The maximum value of shares that can be awarded to members of the wider management group is calculated by reference to the grade average CTC and individual grade of the employee. The performance conditions attaching to outstanding awards are as follows:

PSP - Dependent on the level of employee, part of these awards will be subject to a continued service condition only with the remainder measured in terms of Total Shareholder Return ('TSR') (being the movement in a company's share price plus reinvested dividends), is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group or groups of peer companies at the end of the performance period and as moderated by the Remuneration Committee. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounding down to the nearest whole share.

Vedanta's TSR Performance against Comparator Group

	(% of award vesting)
Below median	-
At median	30
At or above upper quintile	100

The performance condition is measured by taking the Company's TSR over the three months immediately preceding the date of grant and over the three months immediately preceding the end of the performance period, and comparing its performance with that of the comparator group or groups. The information to enable this calculation to be carried out on behalf of the Remuneration Committee ('the Committee') is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has out-performed a group of industry peers, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.

Initial awards under the PSP were granted on 17 November 2014, 1 January 2015 and subsequently on 30 December 2015 and 12 May 2016. All these plans were equity settled. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed. On 2 March 2017 the Company also launched a cash based plan under the same scheme.

ESOP - measured in terms of business performance set against business plan for the financial year comprising operational deliverables, enabler parameters and sustainability performance specific to each company. The vesting schedule is graded over three years and varies from company to company with a minimum vesting of 30% triggering at either 80% or 85% business score. In another tranche, the vesting schedule is staggered over a period of three years from the date of grant, with 70% vesting based on the achievement of business performance and the remaining 30% based on continued employment with the Group until the end of the third year.

Initial awards under ESOP were granted on 24 September 2012 with further awards being made on 16 May 2013. The exercise price of the awards is 10 US cents per share and the performance period is one year.

The exercise period is six months from the date of vesting.

LTIP - measured in terms of Total Shareholder Return ('TSR') (being the movement in a company's share price plus reinvested dividends), is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group of peer companies ("Adapted Comparator Group") at the end of the performance period and as moderated by the Remuneration Committee. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounded down to the nearest whole share.

Vedanta's TSR Performance against Adapted Comparator Group

	(% of award vesting)
Below median	-
At median	40
At or above upper quartile	100

The performance condition is measured by taking the Company's TSR over the four weeks immediately preceding the date of grant and over the four weeks immediately preceding the end of the performance period, and comparing its performance with that of the comparator group described above. The information to enable this calculation to be carried out on behalf of the Remuneration Committee ('the Committee') is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has out-performed a group or groups of industries peers, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.

Initial awards under the LTIP were granted on 26 February 2004. As on 31 March 2016 the awards outstanding are the awards issued on 1 August 2011, 1 October 2011, 1 January 2012 and 1 April 2012. During the year, the Company further issued awards under the LTIP scheme on 11 November 2016. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed.

The Vedanta Resources Deferred Share Bonus Plan (the DSBP) - In 2015, Vedanta introduced the DSBP, with initial awards being made in May 2015 & August 2015. Further in 2016, fresh awards were granted in May 2016 and September 2016. Under the plan, a portion of the annual bonus is deferred into shares and the awards granted under this scheme are not subject to any performance conditions, but only to service conditions being met. The vesting schedule is staggered over a period of one to three years. In case of DSBP, the shares are purchased from open market and allotted to employees, officers and directors. As on 31 March 2017, the options outstanding under the DSBP scheme are 417,446.

In general, the awards will be settled in equity. The awards are accounted for in accordance with the requirements applying to equity settled share-based payment transactions. The fair value of each award on the day of grant is equal to the average of the middle market quotations of its share price for 5 dealing days before the grant date.

Further details on these schemes are available in the Remuneration Report of the Annual Report.

The details of share options for the year ended 31 March 2017 and 31 March 2016 is presented below:

Year of Grant	Exercise Date	Exercise price US cents per share	Options outstanding 1 April 2016	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2017
2011	1 October 2014 - 1 April 2015*	10	3,200	-	-	-	(3,200)	-
2012	1 January 2015 - 1 July 2015*	10	2,800	-	-	-	(2,800)	-
2012	1 April 2015 - 1 October 2015*	10	1,760	-	(1,080)	-	(680)	-
2012	24 September 2013 - 24 March 2016*	10	74,750	-	(16,749)	-	(58,001)	-
2013	16 May 2014 - 16 November 2016	10	781,997	-	(66,227)	-	(715,770)	-
2014	17 November 2017- 17 May 2018	10	4,658,329	-	(411,046)	-	-	4,247,283
2015	1 January 2018 – 1 July 2018	10	21,500	-	-	-	-	21,500
2015	30 December 2018 – 30 June 2019	10	5,418,842	-	(488,659)	-	-	4,930,183
2016	12 May 2019 - 12 November 2019	10	-	32,000	-	-	-	32,000
2016	11 November 2019 - 11 May 2020	10	-	475,000	-	-	-	475,000
2017	2 March 2020 – 2 September 2020 (cash based plan)	-	-	679,270	(720)	-	-	678,550
			10,963,178	**1,186,270**	**(984,481)**	**-**	**(780,451)**	**10,384,516**

Year of Grant	Exercise Date	Exercise price US cents per share	Options outstanding 1 April 2015	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2016
2011	1 July 2014 - 1 January 2015	10	600	-	-	-	(600)	-
2011	1 August 2014 - 1 February 2015	10	118,527	-	(15,120)	-	(103,407)	-
2011	1 October 2014 - 1 April 2015*	10	5,000	-	-	(1,800)	-	3,200
2012	1 January 2015 - 1 July 2015*	10	7,000	-	-	(4,200)	-	2,800
2012	1 April 2015 - 1 October 2015*	10	97,800	-	(37,850)	(58,190)	-	1,760
2012	24 September 2013 - 24 March 2016*	10	368,952	-	(19,515)	-	(274,687)	74,750
2013	16 May 2016 - 16 November 2016	10	1,302,785	-	(159,288)	-	(361,500)	781,997
2014	17 November 2017- 17 May 2018	10	5,335,500	-	(677,171)	-	-	4,658,329
2015	1 January 2018 – 1 July 2018	10	-	21,500	-	-	-	21,500
2015	30 December 2018 – 30 June 2019	10	-	5,484,575	(65,733)	-	-	5,418,842
			7,236,164	**5,506,075**	**(974,677)**	**(64,190)**	**(740,194)**	**10,963,178**

** The exercise period of the schemes expiring before 31 March 2016 was extended up to June 2016.*

In the year ended 31 March 2017, 984,481 (Year ended 31 March 2016: 1,038,867) options lapsed in total and 780,451 (Year ended 31 March 2016: 740,194) options exercised. As at 31 March 2017, 10,384,516 options remained outstanding and nil options were exercisable at the year end. The Weighted average share price for the share options exercised during the year ended 31 March 2017 was GBP 4.82 (Year ended 31 March 2016: GBP 4.1). The weighted average maturity period for the options outstanding as on 31 March 2017 is 23 months (31 March 2016: 31 months).

Most of the share-based awards of the Group are equity-settled as defined by IFRS 2 "Share-based Payment". The fair value of these awards has been determined at the date of grant of the award allowing for the effect of any market-based performance conditions. This fair value, adjusted by the Group's estimate of the number of awards that will eventually vest as a result of non-market conditions, is expensed on a straight-line basis over the vesting period. Where an award is cash-settled the fair value is recalculated at each reporting date until the liability is settled.

The fair values were calculated using the Stochastic valuation model with suitable modifications to allow for the specific performance conditions of the respective schemes. The inputs to the model include the share price at date of grant, exercise price, expected volatility, expected dividends, expected term and the risk free rate of interest. Expected volatility has been calculated using historical return indices over the period to date of grant that is commensurate with the performance period of the award. The volatilities of the industry peers have been modelled based on historical movements in the return indices over the period to date of grant which is also commensurate with the performance period for the option. The history of return indices is used to determine the volatility and correlation of share prices for the comparator companies and is needed for the Stochastic valuation model to estimate their future TSR performance relative to the Company's TSR performance. All options are assumed to be exercised immediately after vesting.

The assumptions used in the calculations of the charge in respect of the PSP/LTIP awards granted during the year ended 31 March 2017 and 31 March 2016 are set out below:

		Year ended 31 March 2017 PSP / LTIP		**Period ended 31 March 2016 PSP**
	March 2017	**November 2016**	**May 2016**	**December 2015**
Number of instruments	679,270	475,000	32,000	5,484,575
Exercise price	US$0.10	US$0.10	US$0.10	US$0.10
Share price at the date of grant	GBP8.92	GBP8.22	GBP3.45	GBP2.72
Contractual life	3years	3years	3years	3years
Expected volatility	66.3%	63.5%	61.4%	55.9%
Expected option life	3years	3years	3years	3years
Expected dividends	4.6%	4.8%	6.0%	9.9%
Risk free interest rate	0.10%	0.31%	0.38%	0.91%
Expected annual forfeitures	10%p.a.	10%p.a.	10%p.a.	10%p.a.
Fair value per option granted	GBP5.6/GBP7.8	GBP5.15	GBP1.80	GBP0.79/GBP1.95

The Group recognised total expenses of US$13.4 million (including expenses on DSBP of US$1.6 million) and US$15.6 million (including expenses on DSBP of US$1.3 million) related to equity settled share-based payment transactions in the year ended 31 March 2017 and 31 March 2016 respectively.

The total expense recognised on account of cash settled share based plan during the year ended 31 March 2017 is US$0.1 million and the carrying value of cash settled share based compensation liability as at 31 March 2017 is US$0.1 million.

The Vedanta Limited Employee Stock Option Scheme (ESOS) 2016

During the year 2016, Vedanta Limited (subsidiary of Vedanta Resources plc) introduced an Employee Stock Option Scheme 2016 ("ESOS"), which was approved by the Vedanta Limited shareholders. The maximum value of shares that can be conditionally awarded to an Executive Committee in a year is 125% of annual salary. The maximum value of options that can be awarded to members of the wider management group is calculated by reference to the grade average CTC and individual grade of the employee. The performance conditions attached to the award is measured by comparing company's performance in terms of TSR over the performance period with the performance of the companies as defined in the scheme. The extent to which an award vests will depend on the Vedanta Limited's TSR rank against a group or groups of peer companies at the end of the performance period and as moderated by the Remuneration Committee. Dependent on the level of employee, part of these awards will be subject to a continued service condition only with the remainder measured in terms of TSR. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounding down to the nearest whole share.

Vedanta's TSR performance against comparator group

	(% of award vesting)
Below median	-
At median	30
At or above upper decile	100

The performance condition is measured by taking Vedanta Limited's TSR at the start and end of the performance period (without averaging), and comparing its performance with that of the comparator group or groups. The information to enable this calculation to be carried out on behalf of the Remuneration Committee (the Committee) is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Vedanta Limited's total return has outperformed a group of industry peers, provides a reasonable alignment of the interests of participants with those of the shareholders.

Initial awards under the ESOS were granted on 15 December 2016. The exercise price of the awards is 1 INR per share and the performance period is three years, with no re-testing being allowed.

The details of share options for the year ended 31 March 2017 is presented below:

	ESOS December 2016
Options outstanding at 1 April 2016	-
Options granted during the year	8,000,000
Options lapsed during the year	184,450
Options exercised during the year	-
Options outstanding at 31 March 2017	7,815,550

In the year ended 31 March 2017, 184,450 options lapsed. As at 31 March 2017, 7,815,550 options remained outstanding.

The fair value of all awards has been determined at the date of grant of the award allowing for the effect of any market-based performance conditions. This fair value, adjusted by the Group's estimate of the number of awards that will eventually vest as a result of non-market conditions, is expensed on a straight-line basis over the vesting period.

The fair values were calculated using the Stochastic valuation model with suitable modifications to allow for the specific performance conditions of the respective schemes. The inputs to the model include the share price at date of grant, exercise price, expected volatility, expected dividends, expected term and the risk free rate of interest. Expected volatility has been calculated using historical return indices over the period to date of grant that is commensurate with the performance period of the award. The volatilities of the industry peers have been modelled based on historical movements in the return indices over the period to date of grant which is also commensurate with the performance period for the option. The history of return indices is used to determine the volatility and correlation of share prices for the comparator companies and is needed for the Stochastic valuation model to estimate their future TSR performance relative to the Vedanta Limited's TSR performance. All options are assumed to be exercised immediately after vesting.

The assumptions used in the calculations of the charge in respect of the ESOS awards granted during the period ended 31 March 2017 are set out below:

	ESOS December 2016
Number of instruments	8,000,000
Exercise price	INR 1
Share price at the date of grant	INR 235.9
Contractual life	3 years
Expected volatility	48%
Expected option life	3 years
Expected dividends	3.2%
Risk free interest rate	6.5%
Expected annual forfeitures	10%p.a.
Fair value per option granted	INR 213.6/INR 82.8

The Group recognized total expenses of US$1.0 million related to equity settled share-based plan under the above scheme in the year ended 31 March 2017.

33. Retirement benefits

The Group operates pension schemes for the majority of its employees in India, Australia, Africa and Ireland.

(a) Defined contribution schemes

Indian pension schemes

<u>*Central Recognised Provident Fund*</u>

The Central Recognised Provident Fund relates to all full-time Indian employees of the Group. The amount contributed by the Group is a designated percentage of 12% of basic salary less contributions made as part of the Pension Fund (see below), together with an additional contribution of 12% (limited to a maximum contribution of 30% in case of Iron Ore Segment) of the salary of the employee.

The benefit is paid to the employee on their retirement or resignation from the Group.

<u>*Superannuation*</u>

Superannuation, another pension scheme applicable in India, is applicable only to executives in grade M4 and above. However, in case of the Cairn India Group and Iron Ore Segment, the benefit is applicable to all executives. In Cairn India, it is applicable from the second year of employment. Certain companies hold policies with the Life Insurance Corporation of India ("LIC"), to which they contribute a fixed amount relating to superannuation, and the pension annuity is met by the LIC as required, taking into consideration the contributions made. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Pension Fund

The Pension Fund was established in 1995 and is managed by the Government of India. The employee makes no contribution to this fund but the employer makes a contribution of 8.33% of salary each month subject to a specified ceiling per employee. This must be provided for every permanent employee on the payroll.

At the age of superannuation, contributions cease and the individual receives a monthly payment based on the level of contributions through the years, and on their salary scale at the time they retire, subject to a maximum ceiling of salary level. The Government funds these payments, thus the Group has no additional liability beyond the contributions that it makes, regardless of whether the central fund is in surplus or deficit.

Australian Pension Scheme

The Group also operates defined contribution pension schemes in Australia. The contribution of a proportion of an employee's salary into a superannuation fund is a compulsory legal requirement in Australia. The employer contributes 9.5% of the employee's gross remuneration where the employee is covered by the industrial agreement and 12.5% of the basic remuneration for all other employees, into the employee's fund of choice. All employees have the option to make additional voluntary contributions.

Zambian Pension Scheme

The KCM Pension Scheme is applicable to full-time permanent employees of KCM (subject to the fulfilment of certain eligibility criteria). The management of the scheme is vested in the trustees consisting of representatives of the employer and the members. The employer makes a monthly contribution of 5% to the KCM Pension Scheme and the member makes monthly contribution of 5%.

All contributions to the KCM Pension Scheme in respect of a member cease to be payable when the member attains normal retirement age of 55 years, or upon leaving the service of the employer, or when the member is permanently medically incapable of performing duties in the service of the employer. Upon such cessation of contribution on the grounds of normal retirement, or being rendered medically incapable of performing duties, or early voluntary retirement, the member is entitled to receive his accrued pension. The member is allowed to commute his/her accrued pension subject to certain rules and regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Skorpion Zinc Provident Fund, Namibia

The Skorpion Zinc Provident Fund is a defined contribution fund and is compulsory to all full time employees under the age of 60. Company contribution to the fund is a fixed percentage of 9% per month of pensionable salary, whilst the employee contributes 7% with the option of making additional contributions, over and above the normal contribution, up to a maximum of 12%.

Normal retirement age is 60 years and benefit payable is the member's fund credit which is equal to all employer and employee contributions plus interest. The same applies when an employee resigns from Skorpion Zinc. The Fund provides disability cover which is equal to the member's fund credit and a death cover of 2 times annual salary in the event of death before retirement. Current membership total is 908.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Black Mountain (Pty) Limited, South Africa Pension & Provident Funds

Black Mountain Mining (Pty) Ltd has two retirement funds, both administered by Alexander Forbes, a registered financial service provider. Both funds form part of the Alexander Forbes umbrella fund and are defined contribution funds.

Membership of both funds is compulsory for all permanent employees under the age of 60.

Lisheen Mine, Ireland Pension Funds

Lisheen Pension Plan is for all employees. Lisheen pays 5% and employees pays 5% with the option to make Additional Voluntary Contributions ('AVC's') if desired. Executive contributions are 15% by Lisheen and a minimum of 5% by the employee with the option to make AVC's if desired. Death benefit is three times salary for employees and four times salary for executives. Pension and Life Cover ceases at 65. On wind up of the pension schemes, the benefits will be paid out to the remaining members in accordance with the scheme rules and Irish Revenue tax regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

(b) Defined benefit schemes

India

The Gratuity schemes are defined benefit schemes which are open to all Group employees in India who have a minimum of five years of service with their employing company. These schemes are funded in some subsidiaries. Based on actuarial valuation, a provision is recognised in full for the projected obligation over and above the funds held in scheme. In case where there is no funding held by the scheme, full provision is recognised in the balance sheet. Under these schemes, benefits are provided based on final pensionable pay.

The assets of the schemes are held in separate funds and a full actuarial valuation of the schemes is carried out on an annual basis.

Vedanta Limited

The Iron ore, Aluminium and Copper division of Vedanta Limited contributed to the LIC Fund based on an actuarial valuation every year. Vedanta Limited's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2017 using the projected unit credit actuarial method.

BALCO

All employees who are scheduled to retire on or before 31 March 2017 are being paid by BALCO. The Gratuity scheme is accounted for as a defined benefit scheme for all employees scheduled to retire after 31 March 2017. A provision is recognised based on the latest actuarial valuation which was performed as at 31 March 2017 using the projected unit actuarial method. At that date the fund was in deficit.

HZL

HZL contributes to the LIC fund based on an actuarial valuation every year. HZL's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2017 using the projected unit actuarial method. At that date the fund was in deficit.

MEL

The MEL contributed to the LIC fund based on an actuarial valuation every year. MEL Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2017 using the projected unit credit actuarial method.

TSPL

TSPL contributes to the LIC based on an actuarial valuation. Liabilities with regard to the Gratuity scheme are fully provided in the Balance Sheet and are determined by actuarial valuation as at the balance sheet date and as per gratuity regulations for TSPL. The latest actuarial valuation was performed as at 31 March 2017 using the projected unit actuarial method.

Cairn

Cairn contributes to the LIC fund based on an actuarial valuation every year. Cairn India Group's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2017 using the projected unit actuarial method. At that date the fund was in deficit.

Zambia

Specified permanent employees of KCM are entitled to receive medical and retirement severance benefits. This comprises two months' basic pay for every completed year of service with an earliest service start date of 1 July 2004. Under this scheme, benefits are provided based on final pensionable pay and a full actuarial valuation of the scheme is carried out on an annual basis. The accruals are not contributed to any fund and are in the form of provisions in KCM's accounts.

On the death of an employee during service, a lump sum amount is paid to his or her dependants. This amount is equal to sixty months' basic pay for employees who joined before 1 April 2000 and thirty months' basic pay for employees who joined on or after 1 April 2000. For fixed term contract employees, the benefit payable on death is thirty months' basic pay.

As at 31 March 2017, membership of pension schemes across Vedanta Limited, BALCO, HZL, TSPL, KCM and Cairn stood at 22,054 employees (31 March 2016: 22,534). The deficits, principal actuarial assumptions and other aspects of these schemes are disclosed in further detail in notes (d) and (e) below.

(c) Pension scheme costs

Contributions of US$67.1 million and US$nil in respect of defined benefit schemes were outstanding and prepaid respectively as at 31 March 2017 (2016: US$66.5 million and US$nil respectively).

Contributions to all pension schemes in the year ending 31 March 2018 are expected to be around US$3.8 million. (actual contribution during the Year ended 31 March 2017 : US$7.1 million)

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Defined contribution pension schemes	22.1	30.1
Defined benefit pension schemes	21.2	18.2
Total expense	**43.3**	**48.3**

(d) Principal actuarial assumptions.

Principal actuarial assumptions used to calculate the defined benefit schemes' liabilities are:

Particulars	Year ended 31 March 2017	Year ended 31 March 2016
Discount rate	7.6% to 22.95%	8.0% to 24.0 %
Salary increases	5.0%to 15%	5.0%to 10%

In India, the mortality tables used, assume that a person aged 60 at the end of the balance sheet date has a future life expectancy of 19 years.

Assumptions regarding mortality for Indian entities are based on mortality table of 'Indian Assured Lives Mortality (2006-2008)' published by the Institute of Actuaries of India.

Assumptions regarding mortality for KCM are based on World Health Organisation Life Tables for 1999 applicable to Zambia which has been taken as a reference point. Based on this a mortality table which is appropriate for the workers of Konkola Copper Mines plc has been derived.

(e) Balance sheet recognition

(US$ million)

Particulars	Year ended 31 March 2017	Year ended 31 March 2016
Fair value of pension scheme assets	49.1	43.5
Present value of pension scheme liabilities	(116.2)	(110.0)
Net liability arising from defined benefit obligations	(67.1)	(66.5)

(f) Amounts recognised in income statement in respect of defined benefit pension schemes:

(US$ million)

Particulars	Year ended 31 March 2017	Year ended 31 March 2016
Current service cost	8.8	7.8
Net Interest cost	12.4	10.4
Total charge to the income statement	**21.2**	**18.2**

(g) Amounts recognised in the Statement of Comprehensive Income:

(US$ million)

Particulars	Year ended 31 March 2017	Year ended 31 March 2016
Actuarial gains /(losses) on Defined benefit obligation-	(1.0)	(8.1)
Actuarial (gains) /losses on plan asset (excluding amount included in net interest cost)	(0.2)	(0.1)
Measurement of the net defined benefit liability / (asset)	**0.8**	**(8.0)**

(h) Movements in the present value of defined benefit obligations

The movement during the Year ended 31 March 2017 of the present value of the defined benefit obligation was as follows:

(US$ million)

Particulars	Year ended 31 March 2017	Year ended 31 March 2016
At 1 April	(110.0)	(119.6)
Current service cost	(8.8)	(7.8)
Gratuity benefits paid	10.2	22.4
Interest cost of scheme liabilities	(16.1)	(13.8)
Remeasurement gains/(losses)	(1.0)	(8.1)
Exchange difference	9.5	16.9
At 31 March	**(116.2)**	**(110.0)**

(i) Movements in the fair value of plan assets

(US$ million)

	As at 31 March 2017	As at 31 March 2016
At 1 April	43.5	**45.0**
Contributions received	7.1	9.7
Benefits paid	(5.8)	(12.2)
Remeasurement gains / (losses)	0.2	0.1
Interest income	3.7	3.4
Foreign exchange differences	0.4	(2.5)
At 31 March	**49.1**	**43.5**

(j) Defined benefit pension plan

(US$ million)

	As at 31 March 17	As at 31 March 16
Experience losses arising on scheme liabilities	1.0	(8.1)
Difference between expected and actual return on plan assets	(0.2)	0.1
Fair value of pension scheme assets	49.1	43.5
Present value of pension scheme liabilities	(116.2)	(110.0)
Deficits in the schemes	(67.1)	(66.5)

Sensitivity analysis

Below is the sensitivity analysis determined for significant actuarial assumptions for the determination of defined benefit obligations and based on reasonably possible changes of the respective assumptions occurring at the end of reporting Year while holding all other assumptions constant.

(US$ million)

	Increase/(Decrease) in defined benefit obligation
Discount rate	
Increase by 0.50 %	(4.1)
Decrease by 0.50%	2.3
Salary increase	
Increase by 0.50 %	1.9
Decrease by 0.50%	(3.8)

The above sensitivity analysis may not be representative of the actual benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

(l) Risk analysis

Group is exposed to a number of risks in the defined benefit plans. Most significant risks pertaining to defined benefits plans and management estimation of the impact of these risks are as follows:

Investment risk

The most of the Indian defined benefit plans are funded with Life Insurance Corporation of India. Group does not have any liberty to manage the fund provided to Life Insurance Corporation of India.

The present value of the defined benefit plan liability is calculated using a discount rate determined by reference to Government of India bonds for Group's Indian operations. If the return on plan asset is below this rate, it will create a plan deficit.

Interest risk

A decrease in the interest rate on plan assets will increase the plan liability.

Longevity risk/ Life expectancy

The present value of the defined benefit plan liability is calculated by reference to the best estimate of the mortality of plan participants both during and at the end of the employment. An increase in the life expectancy of the plan participants will increase the plan liability.

Salary growth risk

The present value of the defined benefit plan liability is calculated by reference to the future salaries of plan participants. An increase in the salary of the plan participants will increase the plan liability.

34. Capital management

The Group's objectives when managing capital are to safeguard continuity, maintain a strong credit rating and healthy capital ratios in order to support its business and provide adequate return to shareholders through continuing growth.

The Group sets the amount of capital required on the basis of annual business and long-term operating plans which include capital and other strategic investments. The funding requirement is met through a mixture of equity, internal accruals, convertible bonds and other long-term and short-term borrowings.

The Group monitors capital using a gearing ratio, being the ratio of net debt as a percentage of total capital.

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Total equity	6,014.6	6,852.4
Net debt	8,503.5	7,328.8
Total capital	14,518.1	14,181.2
Gearing	*58.6%*	*51.7%*

The increase in the gearing ratio compared to 2017 ratio is primarily due to decrease in total equity pursuant to special dividend paid by subsidiary of company & issue of preference shares on account of merger of Cairn India Limited with Vedanta Limited (refer to note 42).

35. Share capital

	Year ended 31 March 2017		Year ended 31 March 2016	
Shares in issue	**Number**	**Paid up amount (US$ million)**	**Number**	**Paid up amount (US$ million)**
Ordinary shares of 10 US cents each	301,300,825	30.1	300,522,798	30.1
Deferred shares of £1 each	50,000	-	50,000	-
	301,350,825	**30.1**	**300,572,798**	**30.1**

During the year ended 31 March 2017, the Company issued 778,027 shares at par value of 10 US cents per share to the employees pursuant to the Vedanta LTIP and ESOP schemes (2016: 561,277 shares).

The holders of deferred shares do not have the right to receive notice of any general meeting of the Company nor the right to attend, speak or vote at any such general meeting. The deferred shares have no rights to dividends and, on a winding-up or other return of capital, entitle the holder only to the payment of the amounts paid on such shares after repayment to the holders of Ordinary Shares of the nominal amount paid up on the Ordinary Shares plus the payment of £100,000 per Ordinary Share. Of the 50,000 deferred shares, one deferred share was issued at par and has been fully paid, and 49,999 deferred shares were each paid up as to one-quarter of their nominal value.

As on 31 March 2017, 6,904,995 Ordinary shares which were issued on the conversion of certain convertible bonds issued by one of the Group's subsidiaries are held through a Global Depositary Receipts and carry no voting rights.

At 31 March 2017, the total number of treasury shares held was 24,370,066 (2016: 24,309,230).

36. Non-controlling interests ('NCI')

The Group consists of a parent Company, Vedanta Resources Plc, incorporated in UK and a number of subsidiaries held directly and indirectly by the Group which operate and are incorporated around the world. Note 44 to the financial statements lists details of the interests in the subsidiaries.

Non-controlling interests that are material to the Group relate to Hindustan Zinc Limited (HZL), Cairn India Limited and Vedanta Limited.

As at 31 March 2017, NCIs hold an economic interest of 67.46% and 49.87% respectively in HZL and Vedanta Limited. The respective NCI holdings in 2016 were 59.20%and 37.15% in HZL and Vedanta Limited respectively.

Pursuant to merger of Cairn India Limited with Vedanta Limited, the NCI holding in erstwhile Cairn India Limited as at 31 March 2017 is 49.87% (2016 : 62.36%)

Principal place of business of HZL, Cairn India Limited and Vedanta Limited is in India (refer note 44).

The table below shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests:

(US$ million)

	Year ended 31 March 2017					Year ended 31 March 2016				
Particulars	**HZL**	**Cairn**	**Vedanta Limited**	**Others(1)**	**Total**	**HZL**	**Cairn**	**Vedanta Limited(2)**	**Others(1)**	**Total**
Profit/ (loss) Attributable to NCI	771.6	284.3	454.0	(607.6)	902.3	706.8	(1,982.9)	342.6	(731.2)	(1,664.7)
Equity Attributable to NCI	3,254.7	4,018.7	3,189.0	(4,039.3)	6,423.1	3,344.9	4,756.3	2,257.0	(2,793.0)	7,565.2
Dividends paid / payable to NCI	(781.7)	(40.5)	(517.9)	-	(1,340.1)	(825.7)	(55.3)	(98.5)	-	(979.5)

(1) Others consist of Investment subsidiaries of Vedanta Limited and other Individual non-material subsidiaries.
(2) For principal activities, country of incorporation and immediate holding company of the above subsidiaries refer note 44.

Summarised financial information in respect of Group's subsidiaries that have material non-controlling interests is set out below. The summarized financial information below is on a 100% basis and before inter-company eliminations:

(US$ million)

	Year ended 31 March 2017					Year ended 31 March 2016				
Particulars	**HZL**	**Cairn**	**Vedanta Limited**	**Others**	**Total**	**HZL**	**Cairn**	**Vedanta Limited**	**Others**	**Total**
Non-current assets	2,621.5	4,582.1	14,161.2	(2,345.2)	19,019.6	2,346.8	3,516.9	11,541.6	1,213.6	18,618.9
Current assets	5,337.6	4,516.9	2,988.8	(359.5)	12,483.8	5,591.8	5,128.4	3,586.3	(2,606.1)	11,700.4
Current liabilities	(3,102.8)	(634.5)	(7,375.1)	(2,959.2)	(14,071.6)	(2,266.8)	(746.2)	(5,238.0)	(2,160.6)	(10,411.6)
Non-current liabilities	(31.5)	(406.7)	(3,380.7)	(7,598.3)	(11,417.2)	(21.6)	(272.0)	(3,814.6)	(8,947.1)	(13,055.3)
Net assets	**4,824.8**	**8,057.8**	**6,394.2**	**(13,262.2)**	**6,014.6**	**5,650.2**	**7,627.1**	**6,075.3**	**(12,500.2)**	**6,852.4**

	Year ended 31 March 2017					Year ended 31 March 2016				
Particulars	**HZL**	**Cairn**	**Vedanta Limited**	**Others**	**Total**	**HZL**	**Cairn**	**Vedanta Limited**	**Others**	**Total**
Revenue	2,551.3	1,222.7	4,786.2	2,959.9	11,520.1	2,132.4	1,322.3	4,541.0	2,742.2	10,737.9
Profit/ (loss) for the year	1,305.4	456.3	1,226.3	(2,108.4)	879.6	1,193.9	(3,179.8)	922.1	(2,438.3)	(3,502.1)
Other comprehensive income / (loss)	(0.6)	1.0	1.8	(1.7)	0.5	1.9	0.1	(27.5)	8.3	(17.2)

The effect of changes in ownership interests in subsidiaries that did not result in a loss of control is as follows:

(US$ million)

As at 31 March 2017	HZL	Cairn	Vedanta Limited	Others	Total
Changes in NCI due to merger (note 42)	403.7	(1,001.7)	813.4	(1,032.5)	(817.1)
Other changes in non-controlling interests	-	0.9	(16.9)	-	(16.0)

37. Joint Arrangements

Joint Operations

The Group's principal licence interests in oil and gas business are joint operations. The principal licence interests are as follows:

Oil & Gas blocks/fields	Area	Participating Interest
Operated blocks		
Ravva block	Krishna Godavari	22.50%

CB-OS/2 – Exploration	Cambay Offshore	60.00%
CB-OS/2 - Development & production	Cambay Offshore	40.00%
RJ-ON-90/1 – Exploration	Rajasthan Onshore	100.00%
RJ-ON-90/1 – Development & production	Rajasthan Onshore	70.00%
PR-OSN-2004/1	Palar Basin Offshore	35.00%
KG-OSN-2009/3	Krishna Godavari Offshore	100.00%
South Africa Block 1	Orange Basin South Africa Offshore	60.00%

38. Commitments, guarantees and contingencies

Commitments

The Group has a number of continuing operational and financial commitments in the normal course of business including:

- Exploratory mining commitments;
- Oil and gas commitments;
- Mining commitments arising under production sharing agreements; and
- Completion of the construction of certain assets.

(US$ million)

	As at 31 March 2017	As at 31 March 2016
Capital commitments contracted but not provided	1,351.5	1,231.0

Commitments primarily related to the expansion projects:

	As at 31 March 2017	As at 31 March 2016
Oil & Gas sector		
Cairn India	**22.0**	**41.5**
Aluminium sector		
BALCO- Korba II 325 KTPA smelter and 1200 MW power plant (4 x 300 MW)	**50.2**	**47.8**
Lanjigarh Refinery (Phase II) 5.0 MTPA	**249.0**	**243.4**
Jharsuguda 1.25 MTPA smelter	**332.9**	**226.8**
Power sector		
Jharsuguda 2400 MW Power Plant	**32.8**	**32.3**
Talwandi 1,980MW IPP	**-**	**71.8**
Zinc sector		
Zinc India (mines expansion)	**239.7**	**296.7**
Gamsberg mining & milling project	**206.0**	**58.1**
Copper sector		
Tuticorin Smelter 400 KTPA	**217.6**	**207.1**
Others	**1.3**	**5.5**
Total	**1,351.5**	**1,231.0**

Guarantees

Companies within the Group provide guarantees within the normal course of business. Guarantees have also been provided in respect of certain short-term and long-term borrowings.

A summary of the most significant guarantees is set out below:

As at 31 March 2017, US$351.6 million of guarantees were advanced to banks, suppliers etc. in the normal course of business (2016: US$384.6 million). The Group has also entered into guarantees and bonds advanced to the customs authorities in India of US$326.3 million relating to the export and payment of import duties on purchases of raw material and capital goods including export obligations (2016: US$154.8 million).

Cairn PSC guarantee to Government

The Group has provided Parent company guarantee for the Cairn India Group's obligation under the Production Sharing Contract ('PSC').

Cairn India have provided various other guarantees under the Cairn India Group's bank facilities for the Cairn India Group's share of minimum work programme commitments of US$19.9 million outstanding as of 31 March 2017 (2016: US$13.1 million).

Export obligations

The Indian entities of the Group have export obligations of US$2,016.7 million (2016: US$2,200.5 million) on account of concessional rates of import duty paid on capital goods under the Export Promotion Capital Goods Scheme and under the Advance Licence Scheme for import of raw material laid down by the Government of India.

In the event of the Group's inability to meet its obligations, the Group's liability would be US$261.7 million (2016: US$349.1 million), reduced in proportion to actual exports, plus applicable interest.

Contingencies

The Group discloses the following legal and tax cases as contingent liabilities.

HZL: Department of Mines and Geology

The Department of Mines and Geology of the State of Rajasthan issued several show cause notices in August, September and October 2006 to HZL, totalling US$51.5 million. These notices alleged unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan during the period from July 1968 to March 2006.

HZL believes it is unlikely the claim will lead to a future obligation to the company and therefore no provision has been made in the financial statements. HZL has filed appeals (writ petitions) in the High Court of Rajasthan in Jodhpur and has obtained a stay in respect of these demands.

Richter and Westglobe : Income Tax

The Group through its subsidiaries Richter Holdings Limited and Westglobe Limited in 2007 acquired the entire stake in Finsider International Company Limited (FICL) based in the United Kingdom which was holding 51 percent shares of Sesa Goa Ltd, an Indian Company. In October 2013, the Indian Tax Authorities (Tax Authorities) have served an order on Richter and Westglobe for alleged failure to deduct withholding tax on capital gain on the indirect acquisition of shares in April 2007.

The Tax Authorities determined the liability for such non-deduction of tax as US$135.0 million in the case of Richter and US$90.0 million in the case of Westglobe, comprising tax and interest. Richter and Westglobe filed appeals before the first appellate authority. Appeals (writ petitions) were filed in the High Court of Karnataka challenging the constitutional validity of retrospective amendments made by the Finance Act 2012 and in particular the imposition of obligations to deduct tax on payments made against an already concluded transaction. The Karnataka High Court passed interim orders and directed that the adjudication of liability (TDS quantum and interest) shall no more remain in force since tax department passed the orders on merits travelling beyond the limited issue of jurisdiction. The high court will hear on jurisdiction issue. The next hearing date is awaited.

Cairn India: Income Tax

In March 2014, Cairn India received a show cause notice from the Indian Tax Authorities ("Tax Authorities") for not deducting withholding tax on the payments made to Cairn UK Holdings Limited ("CUHL") UK, for acquiring shares of Cairn India Holdings Limited ("CIHL"), as part of their internal reorganisation. Tax Authorities have stated in the notice that a short-term capital gain has accrued to CUHL on transfer of the shares of CIHL to Cairn India, in financial year 2006-2007, on which tax should have been withheld by the Company. Pursuant to this various replies were filed with the tax authorities.

After hearings, the Income Tax Authority, during March 2015, have issued an order by holding Cairn India as 'assessee in default' and asked to pay such demand totalling US$3,161 million (including interest of US$1,581 million). Cairn India has filed its appeal before the Appellate Authority CIT (Appeals) and filed a fresh Appeal (Writ petition) before Delhi High Court wherein it raised several points for assailing the aforementioned order. The hearing of the Appeal is due on 17 August 2017.

The Company has issued a Notice of arbitration to Government of India by invoking Bilateral Investment Promotion Treaty between the UK and India.

Vedanta Limited: Contractor claim

Shenzhen Shandong Nuclear Power Construction Co. Limited ('SSNP') subsequent to terminating the EPC contract invoked arbitration as per the contract alleging non-payment of their dues towards construction of a 210 MW co-generation power plant for 6 MTPA expansion project, and filed a claim of US$243.7 million. SSNP also filed a petition under Section 9 of the Arbitration and Conciliation Act, 1996 before the Bombay High Court praying for interim relief. The Bombay High Court initially dismissed their petition, but on a further appeal by SSNP, the Division Bench of the Bombay High Court directed Jharsuguda Aluminium to deposit a bank guarantee for an amount of US$27.6 million as a security, being a prima facie representation of the claim, until arbitration proceedings are completed. Jharsuguda Aluminium has deposited a bank guarantee of equivalent amount. Management is of the opinion that this claim is not valid under the terms of the contract with SSNP and it is unlikely that SSNP can legally sustain the claim and accordingly, no provision is considered necessary. The arbitration proceedings have concluded and the Tribunal may hold a clarificatory hearing before passing the final award.

Ravva Joint Venture arbitration proceedings: ONGC Carry

Cairn is involved in a dispute against GOI relating to the recovery of contractual costs in terms of calculation of payments that contractor party were required to make in connection with the Ravva field.

The Ravva production sharing contract obliges the contractor party to pay proportionate share of ONGC's exploration, development, production and contract costs in consideration for ONGC's payment of costs related to construction and other activities it conducted in Ravva prior to the effective date of the Ravva production sharing contract (the ''ONGC Carry''). The question as to how the ONGC Carry is to be recovered and calculated, along with other issues, was submitted to an international arbitration Tribunal in August 2002 which rendered a decision on the ONGC Carry in favor of the contractor party whereas four other issues were decided in favor of GOI in October 2004 ("Partial Award").

The GOI then proceeded to challenge the ONGC Carry decision before the Malaysian courts, as Kuala Lumpur was the seat of the arbitration. The Federal Court of Malaysia which adjudicated the matter on October 11, 2011, upheld the partial award. Per the decision of the Arbitral Tribunal in the partial award, the contractor party and GOI were required to arrive at a quantification of the sums relatable to each of the issues under the Partial Award. Also, the arbitral Tribunal retained the jurisdiction for determination of any remaining issues in the matter.

Pursuant to the decision of the Federal Court, the contractor party approached the Ministry of Petroleum and Natural Gas ("MoPNG") to implement the partial award while reconciling the statement of accounts as outlined in partial award in 2004. GOI failed to implement the partial award by way of reconciling accounts as provided in the partial award ever since the Federal Court of Malaysia adjudicated in Cairn and other joint operator partners' favor.

However, the MoPNG on July 10, 2014 proceeded to issue a show cause notice alleging that since the partial award has not been enforced profit petroleum share of GOI has been short-paid. MoPNG threatened to recover that amount from the sale proceeds payable by the oil marketing companies to the contractor party. The contractor party replied to the show cause notice taking various legal contentions. On March 9, 2015 personal hearing took place between MoPNG and contractor party whereby, the contractor party expressed their concerns against such alleged unilateral recoveries and filed further written submissions on March 12, 2015.

As partial award did not quantify the sums, therefore, contractor party approached the same arbitral Tribunal to pass a final award in the subject matter since it had retained the jurisdiction to do so. The Arbitral Tribunal was reconstituted and the final award has been passed in Cairn's favour. While the Cairn does not believe the GOI will be successful in its challenge, if the arbitral award is reversed and such reversal is binding, Cairn could be liable for approximately US$116.7 million including interest thereon. Cairn has secured a final award in its favour in October, 2016. Parallely, GOI has challenged the final award in the Malaysian courts.

Proceedings related to the Imposition of Entry Tax

Vedanta Limited and other group companies i.e. Balco, HZL and Cairn (now merged with Vedanta Limited) challenged the constitutional validity of the local statutes and related notifications in the states of Chhattisgarh, Odisha and Rajasthan pertaining to the levy of entry tax on the entry of goods brought into the states from outside. Post some contradictory orders of High Courts across India adjudicating on similar challenges, the Supreme Court referred the matters to a nine judge bench. Post a detailed hearing, although the bench rejected the compensatory nature of tax as a ground of challenge, it maintained status quo with respect to all other issues which have been left open for adjudication by regular benches hearing the matters. The total claims from Vedanta Limited and its subsidiaries is US$165.0 million (2016: US$151.3 million).

Post the order of the nine judge bench, the regular bench of the Supreme Court proceeded with hearing the maters. The regular bench remanded the entry tax matters relating to the issue of discrimination against domestic goods from other States to the respective High Courts for final determination but retained the issue of jurisdiction on levy on imported goods, for determination by Supreme Court.

The argument pertaining to imported goods are currently pending before a regular bench of the Supreme Court. The issue of discrimination has been remanded back to the High Courts for final adjudication. Vedanta has filed an Appeal (Writ petition) before the Odisha High Court and is also looking to Appeals (Writ petitions) before the Rajasthan and Chhattisgarh High Courts.

Whereas, the issue pertaining to levy of entry tax on movement of goods into a Special Economic Zone (SEZ) remains pending before the Odisha High Court. We have challenged the levy of entry tax on any movement of goods into an SEZ basis the definition of local area under the Odisha Entry Tax Act which is very clear and does not include an SEZ. In addition, the Govt of Odisha further through its SEZ Policy 2015 and the operational guidelines for administration of this policy dated 22.08.2016, exempted entry tax levy on SEZ operations.

TSPL: Proceedings related to claim for Liquidated Damages

TSPL has entered into a long term Power Purchase Agreement (PPA) with Punjab State Power Corporation Limited (PSPCL) for supply of power. Due to delay in fulfilment of certain obligations by PSPCL as per the PPA, other related reasons and force majeure events, there has been a delay in implementation/completion of the project as compared to the PPA timelines. TSPL has received notices of claims from PSPCL seeking payment of Liquidated Damages (LD) maximum of US$50.9 million each for delay in commissioning of Unit I, II and III totalling to US$147.0 million.

PSPCL invoked the Performance Bank Guarantee of US$24.1 million to recover the LD on account of delay in COD of 1st Unit. TSPL filed a petition at Punjab State Electricity Regulatory Commission (PSERC) for adjudication of above dispute. TSPL had also filed an Appeal (Civil Writ petition) before the High Court of Punjab and Haryana against the bank guarantee invocation, which was disposed with a direction to refer the matter to PSERC for adjudication while granting stay. Further, the PSERC order dated October 22, 2014 directed the matter to be settled through arbitration and allowed the stay on encashment of the bank guarantee until further orders. PSPCL has preferred an appeal in Appellate Tribunal for Electricity (APTEL) against the PSERC order and APTEL had on May 12, 2015, disposed the matter with a direction that the matter will be heard by way of arbitration. The arbitration proceedings have concluded and the order has been reserved. The Group has been legally advised by its advisors who have opined that such claims for LD from PSPCL are unsustainable. Recently, Appellate Tribunal for Electricity has, in a separate petition, before it by TSPL has adjudicated that coal is an absolute obligation of PSPCL and it needs to enter into a Fuel Supply Agreement and assign to TSPL. In light of the delay by PSPCL in entering into the Fuel Supply Agreement, the claims of PSPCL are further unsustainable.

BALCO: Challenge against imposition of Energy Development Cess

Balco challenged the imposition of Energy Development Cess levied on generators and distributors of electrical energy @ 10 paise per unit on the electrical energy sold or supplied before the High Court on the grounds that the Cess is effectively on production and not on consumption or sale since the figures of consumption are not taken into account and the Cess is discriminatory since CPPs are required to pay @ 10 paise while the State Electricity Board is required to pay @ 5 paise. The High Court of Chhattisgarh by order dated December 15, 2006 declared the provisions imposing ED Cess on CPPs as discriminatory and therefore ultra vires the Constitution. The Company has sought refund of ED Cess paid till March 2006 amounting to US$5.3 mn.

The State of Chhattisgarh moved an SLP in the Supreme Court and whilst issuing notice has stayed the refund of the Cess already deposited. The matter is to be heard by a larger bench of the Supreme Court and will be listed in due course for final hearing. In case the Supreme Court overturns the decision of the High Court, Balco would be liable to pay an amount of US$88.8 mn.

Miscellaneous disputes – Vedanta Limited, HZL, MEL, BALCO, Cairn, Lisheen, VRJL and VRJII

The Group is subject to various claims and exposures which arise in the ordinary course of conducting and financing its business from the income tax, excise, indirect tax authorities and others. These claims and exposures mostly relate to the assessable values of sales and purchases or to incomplete documentation supporting the companies' returns or other claims.

The approximate value of claims against the Group companies excluding claims shown above total US$1,738.4 million (2016: US$1,182.3 million), of which US$148.7 million (2016: US$14.9 million) is included as a provision in the Balance Sheet as at 31 March 2017 (including claims of

US$989.6 million in respect of Income tax assessments out of which US$23.3 million is included as a provision in the Balance sheet as at 31 March 2017).

The Group considers that it can take steps such that the risks can be mitigated and that there are no significant unprovided liabilities arising.

Operating Lease commitments: As lessee

Operating leases are in relation to the office premises, office equipment and other assets, some of which are cancellable and some are non-cancellable. There is an escalation clause in the lease agreements during the primary lease period. There are no restrictions imposed by lease arrangements and there are no sub leases. There are no contingent rents. The total of the future minimum lease payments under non cancellable leases are as under:

(US$ million)

Particulars	As at 31 March 2017	As at 31 March 2016
Within one year of the balance sheet date	0.4	3.9
Within two to five years from the balance sheet date	0.4	0.4
Total	**0.8**	**4.3**

Lease payments recognised as expenses during the year ended 31 March 2017, on non cancellable leases, is US$1.1 million (31 March 2016: US$8.1 million).

39. Related party transactions

The information below sets out transactions and balances between the Group and various related parties in the normal course of business for the year ended 31 March 2017.

Sterlite Technologies Limited ('STL')

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Sales to STL	127.8	140.4
Recovery of expenses	0.0	0.2
Purchases	2.6	1.1
Net Interest Income	1.3	0.2
Net amounts receivable at year end	4.0	0.2
Net amounts payable at year end	0.2	1.4
Outstanding advance received at year end	2.1	0.0
Dividend Income	0.1	0.0
Investment in Equity Share	9.2	6.5

Sterlite Technologies Limited is related by virtue of having the same controlling party as the Group, namely Volcan. Pursuant to the terms of the Shared Services Agreement dated 5 December 2003 entered into by the Company and STL, the Company provides various commercial services in relation to STL's businesses on an arm's length basis and at normal commercial terms. For the year ended 31 March 2017, the commercial services provided to STL were performed by certain senior employees of the Group on terms set out in the Shared Services Agreement. The services provided to STL in this year amounted to US$0.03 million (2016: US$0.02 million).

Sterlite Power Transmission limited ('SPTL').

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Sales to SPTL	2.6	-

Purchases	0.4	-
Investment in Equity Share	1.5	-

Sterlite Power Transmission limited ('SPTL') is related by virtue of having the same controlling party as the Group, namely Volcan.

Vedanta Foundation

During the year US$10.2 million was paid to the Vedanta Foundation including the value of land and a flat given as donation. (2016: US$0.5million).

The Vedanta Foundation is a registered not-for-profit entity with a broad focus mainly on education, nutrition and livelihood. The Vedanta Foundation is a related party as it is controlled by members of the Agarwal family who control Volcan. Volcan is also the majority shareholder of Vedanta Resources plc.

Sesa Goa Community Foundation Limited

Following the acquisition of erstwhile Sea Goa Limited, the Sesa Goa Community Foundation Limited, a charitable institution, became a related party of the Group on the basis that key management personnel of the Group have significant influence on the Sesa Goa Community Foundation Limited. During the year ended 31 March 2017, US$0.3 million (2016: US$0.4 million) was paid to the Sesa Goa Community Foundation Limited.

Sterlite Iron and Steel Limited

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Loan balance receivable	0.7	0.7
Net amount receivable at year end (including interest)	1.9	1.8
Net Interest Income	0.1	0.1

Sterlite Iron and Steel Limited is a related party by virtue of having the same controlling party as the Group, namely Volcan.

Vedanta Medical Research Foundation

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Donation	5.2	2.7

Vedanta Medical Research Foundation is a related party of the Group on the basis that key management personnel of the Group exercise significant influence.

Volcan Investments Limited

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Net amount receivable at the year end	0.4	0.2
Recovery of expenses	0.2	0.3
Dividend paid	93.7	75.0

Volcan Investments Limited is a related party of the Group by virtue of being an ultimate controlling party of the Group.

Bank guarantee has been provided by the Group on behalf of Volcan in favour of Income tax department, India as collateral in respect of certain tax disputes of Volcan. The guarantee amount is US$17.7 million (2016 : US$17.3 million).

Ashurst LLP

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Services received during the year	-	0.1

Ashurst LLP, is a related party of the Group on the basis that an independent director of the Group was a partner in the legal firm Ashurst LLP during the year ended 31 March 2016. It ceased to be a related party from May 1st 2015 onwards.

Employees Provident Fund Trust.

Details of transactions during the year with post retirement trusts. The below mentioned trusts are related parties because these are employee trusts.

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Balco Employees Provident Fund Trust	0.7	1.7
Hindustan Zinc Ltd. Employee Contributory provident fund trust	4.6	5.0
Sesa Group Employees Provident Fund	3.6	2.4
Sesa Resources Limited Employees Provident Fund	0.2	0.3
Sesa Mining Corporate Limited Employees Provident Fund	0.3	0.3

Remuneration of Key Management Personnel

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Short-term employee benefits	20.0	20.0
Post-employment benefits	1.0	0.9
Share-based payments	3.9	3.6
	24.9	**24.5**

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including any director (whether executive or otherwise).

Other related party#

(US$ million)

	Year ended 31 March 2017	Year ended 31 March 2016
Salary paid	1.2	1.1

 # close relative of the executive chairman

In addition to above sitting fees & commission of US$34,726 (previous year US$34,371) was also paid.

40. Share transactions Call options

a. HZL

Pursuant to the Government of India's policy of disinvestment, the Company in April 2002 acquired 26% equity interest in Hindustan Zinc Limited (HZL) from the Government of India. Under the terms of the Shareholder's Agreement ('SHA'), the Company had two call options to purchase all of the Government of India's shares in HZL at fair market value. The Company exercised the first call option on August 29, 2003 and acquired an additional 18.9% of HZL's issued share capital. The Company also acquired an additional 20% of the equity capital in HZL through an open offer, increasing its shareholding to 64.9%. The second call option provided the Company the right to acquire the Government of India's remaining 29.5% share in HZL. This call option was subject to the right of the Government of India to sell 3.5% of HZL shares to HZL employees. The Company exercised the second call option on July 21, 2009. The Government of India disputed the validity of the call option and refused to act upon the second call option. Consequently the Company invoked arbitration which is in the early stages. The next date of hearing is scheduled for July 15, 2017. Meanwhile, the Government of India without prejudice to the position on the Put/Call option issue has received approval from the Cabinet for disinvestment and the Government is looking to divest through the auction route.

b. BALCO

Pursuant to the Government of India's policy of divestment, the Company in March 2001 acquired 51% equity interest in BALCO from the Government of India. Under the terms of the SHA, the Company had a call option to purchase the Government of India's remaining ownership interest in BALCO at any point from March 2, 2004. The Company exercised this option on March 19, 2004. However, the Government of India contested the valuation and validity of the option and contended that the clauses of the SHA violate the erstwhile Companies Act, 1956 by restricting the rights of the Government of India to transfer its shares and that as a result such provisions of the SHA were null and void. In the arbitration filed by the Company, the arbitral tribunal by a majority award rejected the claims of the Company on the ground that the clauses relating to the call option, the right of first refusal, the "tag-along" rights and the restriction on the transfer of shares violate the erstwhile Companies Act, 1956 and are not enforceable. The Company has challenged the validity of the majority award in the High Court of Delhi and sought for setting aside the arbitration award to the extent that it holds these clauses ineffective and inoperative. The Government of India also filed an application before the High Court of Delhi to partially set aside the arbitral award in respect of certain matters involving valuation. The matter is currently scheduled for hearing by the Delhi High Court on July 10, 2017. Meanwhile, the Government of India without prejudice to its position on the Put/Call option issue has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route.

On January 9, 2012, the Company offered to acquire the Government of India's interests in HZL and BALCO for the INR equivalent of US$2,389.3 million and US$274.8 million respectively. This offer was separate from the contested exercise of the call options, and Company proposed to withdraw the ongoing litigations in relation to the contested exercise of the options should the offer be accepted. To date, the offer has not been accepted by the Government of India and therefore, there is no certainty that the acquisition will proceed.

The Group continues to include the shareholding in the two companies HZL and BALCO, in respect of which the Group has a call option as non-controlling interest.

41. Konkola Copper Mines: Value Added Tax

As of March 31, 2017, backlog Value Added Tax (falling under older VAT rule 18 regime) on inputs amounting to US$71 Million (previous year US$114 million) for ten month's period between October 2013 to December 2014 was pending to be recovered from the Zambian Government. During FY 17, KCM has received US$56 million out of the backlog VAT receivables post the favourable decision in the matter of Output VAT demand of US$600 million.

Following the amendment to VAT (General) (Amendment) No.2, Rules 2015, in February 2015, a notification was issued that exporting organizations will only be required to provide either copies of import documents for the goods, bearing a certificate of importation into the country of destination provided by the country of destination or copies of transit documents for the goods bearing a certificate of transit provided by the customs authority of the country of transit. KCM is in full compliance with the old VAT rule 18 & the amended rule and all the earlier audits were concluded to the satisfaction of ZRA.

The company believes that it will receive a refund of the entire amount and there is no objective evidence of uncertainty around collectability post set aside of assessment demand by ZRA and satisfactory VAT audits under old VAT regime. Accordingly, the company has not recognized any provision against the carrying amount of this receivable.

42. Group Restructuring

Consequent to the receipt of all substantive approvals for merger of Cairn India Limited with Vedanta Limited on 27 March 2017, the merger has been accounted for in the current financial year ending 31 March 2017. As per the terms of the scheme, upon the merger becoming effective, non-controlling i.e. public shareholders of Cairn India Limited received, one equity share in Vedanta Limited of face value Re 1 each (US$0.0) and four 7.5% Redeemable Preference Shares in Vedanta Limited with a face value of INR10 each (US$0.2) for each equity share held in Cairn India Limited. No shares were issued to Vedanta Limited or any of its subsidiaries for their shareholding in Cairn India Limited. Cairn India Limited ceased to be a separate legal entity with effect from 11 April 2017.

The above has resulted in a decrease in the shareholding of the Company in Vedanta Limited (merged entity) from 62.85% to 50.13% and an increase in the shareholdings of erstwhile Cairn India Limited's subsidiaries from 37.64% to 50.13%. Given the Company continues to control Vedanta Limited, this has been accounted for as an equity transaction with no gain or loss recognised in the income statement.

43. Subsequent events

Subsequent to the Balance Sheet date,

a) 525,000 tonnes Jharsuguda-I smelter suffered an pot outage incident wherein 228 pots out of the total 608 pots were damaged and taken out of production.

b) a fire took place in the coal handling facility at the 1,980 MW TSPL power plant in Punjab state. This has resulted in a shut-down of all three units of the power plant estimated for around 65 to 75 days.

c) the Company early redeemed all the outstanding 9.5% bonds due July, 2018 of face value US$361.1 million at a premium of US$34.0 million.

44. List of Subsidiaries

The financial statements comprise the financial statements of the following subsidiaries:

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding		Country of incorporation	Immediate holding company	Immediate percentage holding	
			31-Mar-2017	31-Mar-2016			31-Mar-2017	31-Mar-2016
Direct Subsidiaries of the Parent Company								
Vedanta Resources Holding Limited ('VRHL')	Holding company	5th Floor, 6 St Andrew Street, London EC4A 3AE	100.00%	100.00%	United Kingdom	VR plc	100.00%	100.00%
Vedanta Resources Jersey Limited('VRJL")	Investment company	47 Esplanade, St Helier JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Resources Jersey II Limited('VRJL-II')	Investment company	47 Esplanade, St Helier JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Finance (Jersey) Limited ('VFJL')	Investment company	47 Esplanade, St Helier JE1 0BD	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Vedanta Jersey Investments Limited('VJIL")	Investment company	13 Castle Street, St. Helier, jersey JE4 5UT, Channel Islands	100.00%	100.00%	Jersey(CI)	VR plc	100.00%	100.00%
Indirect Subsidiaries of the Parent Company								
Vedanta Limited(1)	Copper smelting, Iron ore mining, Aluminium mining, refining and smelting, Power generation, Oil and Gas exploration, and production	Vedanta Limited 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai–400093, Maharashtra, India	50.13%	62.85%	India	Twin Star	37.11%	46.53%
Bharat Aluminium Company Limited ('BALCO')	Aluminium mining and smelting	Aluminium Sadan, 2nd Floor, Core-6-Scope Complex, 7 Lodi Road, New Delhi-110 003	25.56%	32.05%	India	Vedanta Limited	51.00%	51.00%
Copper Mines Of Tasmania Pty Limited ('CMT')	Copper mining	C/O Henry Davis York, 44 Martin Place, Sydney, New South Wales	50.13%	62.85%	Australia	MCBV	100.00%	100.00%
Fujairah Gold FZC(2)	Gold & Silver processing	P.O. Box 3992, Fujairah, United Arab Emirates	50.13%	62.85%	UAE	MEL	100.00%	97.96%
Hindustan Zinc Limited ('HZL')	Zinc and mining and smelting	Yashad Bhawan, Udaipur (Rajasthan) – 313004	32.54%	40.80%	India	Vedanta Limited	64.92%	64.92%
Monte Cello BV ('MCBV')	Holding company	WTC Schipol Airport, Tower B, 5th Floor, Schipol Boulevard 231, 1118 BH Schipol, The Netherlands	50.13%	62.85%	Netherlands	Vedanta Limited	100.00%	100.00%
Monte Cello Corporation NV (MCNV')	Holding company	Kaya Flamboyan 3c, Curacao, Netherlands Antilles	100.00%	100.00%	Curacao	Twin Star	100.00%	100.00%
Konkola Copper Mines PLC ('KCM')	Copper mining and smelting	Private Bag KCM (C) 2000, Stand M 1408, Fern Avenue, Chingola	79.42%	79.42%	Zambia	VRHL	79.42%	79.42%
Sesa Resources Limited ('SRL')	Iron Ore	Sesa Ghor, 20 EDC Complex, Patto, Panaji (Goa)- 403001	50.13%	62.85%	India	Vedanta Limited	100.00%	100.00%
Sesa Mining Corporation Limited	Iron Ore	Sesa Ghor, 20 EDC Complex, Patto, Panaji (Goa)- 403001	50.13%	62.85%	India	SRL	100.00%	100.00%

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding		Country of incorporation	Immediate holding company	Immediate percentage holding	
			31-Mar-2017	31-Mar-2016			31-Mar-2017	31-Mar-2016
Thalanga Copper Mines Pty Limited ('TCM')	Copper mining	C/O Henry Davis York, 44 Martin Place, Sydney, New South Wales	50.13%	62.85%	Australia	MCBV	100.00%	100.00%
Twin Star Holdings Limited ('Twin Star')	Holding company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	100.00%	100.00%	Mauritius	VRHL	100.00%	100.00%
MALCO Energy Limited ('MEL')	Power generation	SIPCOT Industrial Complex, Madurai Bypass Road, Thoothukudi (Tamil Nadu) - 628 002	50.13%	62.85%	India	Vedanta Limited	100.00%	100.00%
Richter Holding Limited('Richter')	Investment company	66, Ippocratous Street. 1015 Nicosia, Cyprus	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Westglobe Limited	Investment company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	100.00%	100.00%	Mauritius	Richter	100.00%	100.00%
Finsider International Company Limited	Investment company	5th Floor, 6 St Andrew Street, London, EC4A 3AE	100.00%	100.00%	United Kingdom	Richter	60.00%	60.00%
Vedanta Resources Finance Limited ('VRFL')	Investment company	5th Floor, 6 St Andrew Street, London, EC4A 3AE	100.00%	100.00%	United Kingdom	VRHL	100.00%	100.00%
Vedanta Resources Cyprus Limited ('VRCL')	Investment company	66, Ippocratous Street. 1015 Nicosia, Cyprus	100.00%	100.00%	Cyprus	VRFL	100.00%	100.00%
Welter Trading Limited ('Welter')	Investment company	28th Oktovriou Street, 205 Louloupis Court, 1st Floor P.C. 3035, Limassol, Cyprus	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Lakomasko B.V.	Investment company	Herengracht 458, 1017 CA Amsterdam, the Netherlands	50.13%	62.85%	Netherlands	THL Zinc Holding B.V.	100.00%	100.00%
THL Zinc Ventures Limited	Investment company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.13%	62.85%	Mauritius	Vedanta Limited	100.00%	100.00%
Twin Star Energy Holdings Limited ('TEHL')	Holding company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.13%	62.85%	Mauritius	BFL	100.00%	100.00%
THL Zinc Limited	Investment company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.13%	62.85%	Mauritius	THL Zinc Ventures Ltd	100.00%	100.00%
Sterlite (USA) Inc.	Investment company	Corporation Service Company, 2711 Centerville Road, Suite 400, City of Wilmington, Country of New Castle, Delaware, 19808	50.13%	62.85%	USA	Vedanta Limited	100.00%	100.00%
Talwandi Sabo Power Limited	Power generation	Vill. Banawala, Mansa - Talwandi Sabo Road, Distt. Mansa, Punjab – 151302	50.13%	62.85%	India	Vedanta Limited	100.00%	100.00%

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding		Country of incorporation	Immediate holding company	Immediate percentage holding	
			31-Mar-2017	31-Mar-2016			31-Mar-2017	31-Mar-2016
Twin Star Mauritius Holdings Limited ('TMHL')	Holding company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.13%	62.85%	Mauritius	TEHL	100.00%	100.00%
THL Zinc Namibia Holdings (Pty) Limited ('VNHL)	Mining and Exploration	24 Orban Street, Klein Windhoek, Windhoek	50.13%	62.85%	Namibia	THL Zinc Ltd	100.00%	100.00%
Skorpion Zinc (Pty) Limited ('SZPL')	Acquisition of immovable and movable properties	24 Orban Street, Klein Windhoek, Windhoek	50.13%	62.85%	Namibia	VNHL	100.00%	100.00%
Namzinc (Pty) Limited ('SZ')	Mining	24 Orban Street, Klein Windhoek, Windhoek	50.13%	62.85%	Namibia	SZPL	100.00%	100.00%
Skorpion Mining Company (Pty) Limited ('NZ')	Mining	24 Orban Street, Klein Windhoek, Windhoek	50.13%	62.85%	Namibia	SZPL	100.00%	100.00%
Amica Guesthouse (Pty) Ltd	Accomodation and catering services	24 Orban Street, Klein Windhoek, Windhoek	50.13%	62.85%	Namibia	SZPL	100.00%	100.00%
Rosh Pinah Healthcare (Pty) Ltd	Leasing out of medical equipment and building and conducting services related thereto	24 Ondye Drive, Rosh Pinah	34.59%	43.37%	Namibia	SZPL	69.00%	69.00%
Black Mountain Mining (Pty) Ltd	Mining	24 Orban Street, Klein Windhoek, Windhoek	37.10%	46.51%	South Africa	THL Zinc Ltd	74.00%	74.00%
THL Zinc Holding BV	Investment company	Penge Road, Aggeneys	50.13%	62.85%	Netherlands	Vedanta Limited	100.00%	100.00%
Lisheen Mine Partnership	Mining Partnership Firm	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLML	50.00%	50.00%
Pecvest 17 Proprietary Ltd.	Investment Company	Penge Road, Aggeneys	50.13%	62.85%	South Africa	THL Zinc Ltd	100.00%	100.00%
Vedanta Lisheen Holdings Limited('VLHL')	Investment Company	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	THL Zinc Holding BV	100.00%	100.00%
Vedanta Exploration Ireland Limited	Exploration Company	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLHL	100.00%	100.00%
Vedanta Lisheen Mining Limited ('VLML')	Mining	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Mining Limited	Mining	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Finance Limited	Investment Company	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLHL	100.00%	100.00%
Lisheen Milling Limited	Manufacturing	Killoran, Moyne, Thurles, Co. Tipperay	50.13%	62.85%	Ireland	VLHL	100.00%	100.00%
Vizag General Cargo Berth Private Limited	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.13%	62.85%	India	Vedanta Limited	100.00%	99.99%

			The Company's economic percentage holding				Immediate percentage holding	
Subsidiaries	**Principal activities**	**Registered Address**	**31-Mar-2017**	**31-Mar-2016**	**Country of incorporation**	**Immediate holding company**	**31-Mar-2017**	**31-Mar-2016**
Paradip Multi Cargo Berth Private Limited[3]	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.13%	46.51%	India	Vedanta Limited	100.00%	74.00%
Sterlite Ports Limited ('SPL')	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.13%	62.85%	India	Vedanta Limited	100.00%	100.00%
Maritime Ventures Private Limited	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.13%	62.85%	India	SPL	100.00%	100.00%
Sterlite Infraventures Limited[4]	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	-	62.85%	India	Vedanta Limited	-	100.00%
Goa Sea Ports Private Limited[5]	Infrastructure	Sterlite Industries(I) Limited, SIPCOT Industrial Complex, Madurai Bypass Road, T.V. Puram P.O Tuticorin – 628002, Tamil Nadu, India	50.13%	-	India	SPL	100.00%	-
Bloom Fountain Limited ('BFL')	Operating (Iron ore) and Investment Company	C/O Cim Corporate Services Limited, Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	50.13%	62.85%	Mauritius	Vedanta Limited	100.00%	100.00%
Western Cluster Limited	Mining Company	Amir Building, 18th Street, Sinkor, Tubman Boulevard, Sinkor, Monrovia, Liberia, West Africa	50.13%	62.85%	Liberia	BFL	100.00%	100.00%
Sesa Sterlite Mauritius Holdings Limited	Investment company	C/o CIM Corporate Services LTD Les Cascades Building, Edith Cavell Street, Port Louis, Mauritius	100.00%	100.00%	Mauritius	BFL	100.00%	100.00%
Vedanta Finance UK Limited	Investment company	5th Floor, 6 St Andrew Street, London, EC4A 3AE	100.00%	100.00%	United Kingdom	Welter	100.00%	100.00%
Valliant (Jersey) Limited	Investment Company	47 Esplanade, St Helier JE1 0BD	100.00%	100.00%	Jersey(CI)	VRJL-II	100.00%	100.00%
Cairn India Limited[1]	Oil and gas exploration, and production	101, First Floor, C Wing, Business Square, Andheri Kurla Road, Andheri (E), Mumbai – 400 059	-	37.64%	India	TMHL	-	34.43%
Cairn India Holdings Limited	Investment company	4th Floor, 22-24 New Street, St. Paul's Gate, St. Helier, Jersey, JE1 4TR	50.13%	37.64%	Jersey	Vedanta Limited[7]	100.00%	100.00%
Cairn Energy Holdings Limited[6]	Investment company	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	-	37.64%	Scotland	Cairn India Holdings Limited	-	100.00%

Subsidiaries	Principal activities	Registered Address	The Company's economic percentage holding		Country of incorporation	Immediate holding company	Immediate percentage holding	
			31-Mar-2017	31-Mar-2016			31-Mar-2017	31-Mar-2016
Cairn Energy Hydrocarbons Ltd	Exploration & production	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.13%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Exploration (No. 7) Limited(6)	Exploration & production	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	-	37.64%	Scotland	Cairn India Holdings Limited	-	100.00%
Cairn Exploration (No. 2) Limited	Exploration & production	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.13%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Gujarat Block 1 Limited	Exploration & production	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.13%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Discovery Limited	Exploration & production	Summit House, 4-5 Mitchell Street, Edinburgh, EH6 7BD, Scotland	50.13%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Australia Pty Limited(6)	Investment company	Level 12, 680 George Street, Sydney NSW 2000, Australia	-	37.64%	Australia	Cairn India Holdings Limited	-	100.00%
Cairn Energy India Pty Limited	Exploration & production	Level 12, 680 George Street, Sydney NSW 2000, Australia	50.13%	37.64%	Australia	Cairn India Holdings Limited	100.00%	100.00%
CIG Mauritius Holdings Private Limited	Investment company	Abax Corporate Services Ltd. 6th Floor, Tower A, 1 CyberCity, Ebene, Mauritius	50.13%	37.64%	Mauritius	Vedanta Limited (7)	100.00%	100.00%
CIG Mauritius Private Limited	Investment company	Abax Corporate Services Ltd. 6th Floor, Tower A, 1 CyberCity, Ebene, Mauritius	50.13%	37.64%	Mauritius	CIG Mauritius Holding Private Limited	100.00%	100.00%
Cairn Lanka Private Limited	Exploration & production	Level 27, West Tower, World Trade Centre, Echelon Square, Colombo 1, Sri Lanka	50.13%	37.64%	Sri Lanka	CIG Mauritius Pvt Ltd	100.00%	100.00%
Cairn South Africa Pty Limited	Exploration & production	22 Bree Street, Cape Town, 8001, South Africa	50.13%	37.64%	South Africa	Cairn India Holdings Limited	100.00%	100.00%

(1) Cairn India Limited merged with Vedanta Limited w.e.f. 27th March 2017. (Refer note 42)
(2) Pursuant to transfer of holding in Fujairah Gold from TCM & CMT to MEL in July 2016
(3) Pursuant to change in holding in PMCB from 74% to 100% in May 2016
(4) Sold to Sterlite Power Transmission Limited (SPTL) in September 2016
(5) M/s Goa Sea Port Private Limited incorporated on 5th July, 2016 as a 100% subsidiary of Sterlite Ports Limited (SPL)
(6) Dissolved during the year
(7) Vedanta Limited subsequent to merger of Cairn India Limited with Vedanta Limited

The Group owns directly or indirectly through subsidiaries, more than half of the voting power of all of its subsidiaries as mentioned in the list above, and has power over the subsidiaries, is exposed or has rights, to variable returns from its involvement with the subsidiaries and has the ability to affect those returns through its power over the subsidiaries.

45. Ultimate controlling party

At 31 March 2017, the ultimate controlling party of the Group was Volcan, which is controlled by persons related to the Executive Chairman, Mr Anil Agarwal. Volcan is incorporated in the Bahamas, and does not produce Group accounts.

46. Company Balance Sheet

(US$ million)

	Note	31 March 2017	31 March 2016
Fixed assets			
Tangible assets	48	0.1	0.2
Investments in subsidiaries	49	1,226.3	1,226.3
Investment in preference shares of subsidiaries	50	4.7	4.7
Financial asset investment	51	0.3	0.1
		1,231.4	**1,231.3**
Current assets			
Debtors due within one year	52	2,151.4	505.5
Debtors due after one year	52	2,358.8	4,683.9
Investments	53	14.6	28.1
Cash at bank and in hand		0.9	0.6
		4,525.7	**5,218.1**
Creditors: amounts falling due within one year			
Trade and other creditors	54	(88.4)	(104.3)
External borrowings	54	(173.8)	(742.7)
Loan from subsidiary	54	(176.5)	(600.3)
		(438.7)	**(1,447.3)**
Net current assets		**4,087.0**	**3,770.8**
Total assets less current liabilities		**5,318.4**	**5,002.1**
Creditors: amounts falling due after one year			
Loan from subsidiary	55	-	(278.0)
External borrowings	55	(4,250.8)	(4,220.0)
		(4,250.8)	**(4,498.0)**
Net assets		**1,067.6**	**504.1**
Capital and reserves			
Called up share capital	56	30.1	30.1
Share premium account	56	201.5	201.5
Share-based payment reserve	56	28.2	29.9
Convertible bond reserve	56	-	10.8
Other reserves	56	(2.0)	(2.2)
Treasury shares	56	(490.6)	(490.6)
Profit and loss account	56	1,300.4	724.6
Equity shareholders' funds	56	**1,067.6**	**504.1**

The separate Financial Statements of Vedanta Resources plc, registration number 4740415 were approved by the Board of Directors on 23 May 2017 and signed on its behalf by

Tom Albanese – Chief Executive Officer

47. Company accounting policies

Basis of Accounting

Vedanta Resources plc ('the Company') has transitioned from UK Generally Accepted Accounting Practice (UK GAAP) to Financial Reporting Standard 101 "Reduced disclosure framework", for all periods presented. The Company meets the definition of a qualifying entity under Financial Reporting Standard (FRS 101) 'Reduced Disclosure Framework' issued by the Financial Reporting Council. Accordingly, in the year ended 31 March 2016 the Company has changed its accounting framework from pre-2015 UK GAAP to FRS 101 and has, in doing so, applied the requirements of IFRS 1.6-33 and related appendices.

These financial statements have been prepared in accordance with FRS 101 Reduced Disclosure Framework.

The Company balance sheet and related notes have been prepared under the historical cost convention and in accordance with Financial Reporting Standards 100 Application of Financial Reporting Requirements (FRS 100) and 101 Reduced Disclosure Framework (FRS 101).

As permitted by section 408 of the Companies Act 2006, the profit and loss account of the Company is not presented as part of these financial statements. The profit after tax for the year of the Company amounted to US$690.2 million (2016: Loss US$8.0 million).

These financial statements are presented in US dollars being the functional currency of the Company.

Significant accounting policies

Investments in subsidiaries

Investments in subsidiaries represent equity holdings in subsidiaries except preference shares, valued at cost less any provision for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable.

Investment in preference shares of subsidiaries

Investments in preference shares of subsidiaries are stated at fair value. The fair value is represented by the face value of the preference shares as the investments are redeemable at any time for their face value at the option of the Company.

Cash and cash equivalents

Cash in the balance sheet comprise of cash at bank and cash in hand.

Financial asset investments

Financial asset investments are classified as available for sale under IAS 39 and are initially recorded at cost and then remeasured at subsequent reporting dates to fair value. Unrealized gains and losses on financial asset investments are recognized directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Currency translation

Transactions in currencies other than the functional currency of the Company, being US dollars, are translated into US Dollars at the spot exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies at the balance sheet date are translated into US dollars at year end exchange rates, or at a contractual rate if applicable.

Tangible fixed assets

Tangible fixed assets are stated at cost less accumulated depreciation and provision for impairment.

Deferred taxation

Deferred taxation is provided in full on all timing differences that result in an obligation at the balance sheet date to pay more tax, or a right to pay less tax, at a future date, subject to the recoverability of deferred tax assets. Deferred tax assets and liabilities are not discounted.

Share-based payments

The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions are determined by an external valuer and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Company's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations. No adjustment is made to the fair value after the vesting date even if the awards are forfeited or not exercised. Amounts recharged to subsidiaries in respect of awards granted to employees of subsidiaries are recognised as intercompany debtors until repaid.

In case of cash-settled transactions, a liability is recognised for the fair value of cash-settled transactions. The fair value is measured initially and at each reporting date up to and including the settlement date, with changes in fair value recognised in employee benefits expense. The fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The fair value is determined with the assistance of an external valuer.

Borrowings

Interest bearing loans are recorded at the net proceeds received i.e. net of direct transaction costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on accruals basis and charged to the profit and loss account using the effective interest method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Convertible Bonds

The Convertible bond issued by VRJL and VRJL-II (note 54) are accounted for as a compound instrument. The gross proceeds (net of issue costs) were lent to the Company by VRJL and VRJL-II. The equity component has been recognised in a separate reserve of the company and is not subsequently re measured. The recognition of the equity component by the company acts to reduce the payable to VRJL and VRJL-II which arises once the gross proceeds are borrowed. The liability component is held at amortised cost. The interest expensed on the liability component is calculated by applying an effective interest rate. The difference between interest expensed and interest paid is added to the carrying amount of the liability component.

The bonds are first convertible into preference shares of the issuer having a principal value of $100,000 per Preference share, which are exchanged immediately for ordinary shares of the Company.

Financial instruments

The Company has elected to take the exemption provided in paragraph 8 of FRS 101 in respect of these parent company financial statements. Full disclosures are provided in note 29 to the financial statements of the Group for the year ended 31 March 2017.

Derivative financial instruments

Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are re-measured at their fair value at subsequent balance sheet dates.

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the profit and loss account. The hedged item is recorded at fair value and any gain or loss is recorded in the profit and loss account and is offset by the gain or loss from the change in the fair value of the derivative.

Derivative financial instruments that do not qualify for hedge accounting are marked to market at the balance sheet date and gains or losses are recognised in the profit and loss account immediately.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting.

Cash flow statement

The company financial statements are prepared under FRS 101, which does not require application of IAS 7. Accordingly, the Company does not present the individual company cash flow statement.

Financial guarantees

Guarantees issued by the Company on behalf of other Group companies are designated as 'Insurance Contracts'. Accordingly these are shown as contingent liabilities. (note 57)

Debtors

Debtors are stated at their nominal value as reduced by appropriate allowance for estimated irrecoverable amounts. An allowance for impairment for debtors is made where there is an indication of a reduction in the recoverability of the carrying value of the debtor.

Creditors

Creditors are stated at their nominal value.

48. Company tangible fixed assets

	(US$ million)
Cost	
At 1 April 2015	**2.3**
Additions	0.0
At 31 March 2016	2.3
Additions	0.0
At 31 March 2017	**2.3**
Accumulated depreciation	
At 1 April 2015	**2.0**
Charge for the period	0.1
At 31 March 2016	2.1
Charge for the period	0.1
At 31 March 2017	**2.2**
Net book value	
At 1 April 2015	**0.3**
At 31 March 2016	**0.2**
At 31 March 2017	**0.1**

49. Investments in subsidiaries

	(US$ million)
Cost	
At 1 April 2015	1,226.3
At 1 April 2016	**1,226.3**
At 31 March 2017	**1,226.3**

At 31 March 2017, the Company held 157,538,524 shares in Vedanta Resources Holdings Limited ('VRHL') (March 2016: 157,538,524 shares), being 100% of VRHL's issued equity share capital. The Company also held one deferred share in VRHL (March 2016: one). At 31 March 2017, the Company held two shares in Vedanta Finance Jersey Limited ('VFJL') (March 2016: two), two shares in Vedanta Resources Jersey Limited ('VRJL') (March 2016: two), two shares in Vedanta Resources Jersey II Limited ('VRJL-II') (March 2016: two), two shares in Vedanta Jersey Investment Limited ('VJIL') (March 2016: two), being 100% of its issued equity share capital.

VRHL is an intermediary holding company incorporated in the United Kingdom (note 44) and registered in England and Wales. VFJL, VRJL, VJIL and VRJL-II are companies, registered and incorporated in Jersey, established to raise funds for the Vedanta Group.

50. Investment in preference shares of subsidiaries

	(US$ million)
Fair value	
At 1 April 2016	**4.7**
Additions	-
Disposal	-
At 31 March 2017	**4.7**
At 1 April 2015	**1.7**
Additions	3.0
Disposal	-
At 31 March 2016	**4.7**

As at 31 March 2017, the Company held 47 preference shares in Vedanta Resources Jersey Limited ("VRJL") (31 March 2016: 47 preference shares).

During the previous year, VRJL received notice from the bondholders to exercise the option to convert US$3,000,000 bonds into equity shares of the Company in accordance with the provisions of the Offer circular and accordingly 30 preference shares with a nominal value of US$100,000 each were issued by VRJL to the Company.

51. Financial asset investment

	(US$ million)
Fair value	
At 1 April 2016	**0.1**
Fair value movement	0.2
At 31 March 2017	**0.3**
At 1 April 2015	**0.1**
Fair value movement	-
At 31 March 2016	**0.1**

The investment relates to an equity investment in the shares of Victoria Gold Corporation. At 31 March 2017, the investment in Victoria Gold Corporation was revalued and gain of US$0.2 million (2016: no gain/loss) was recognised in equity.

52. Company debtors

(US$ million)

	31 March 2017	31 March 2016
Amounts due from subsidiary undertakings	4,509.4	5,188.4
Prepayments and accrued income	0.5	0.5
Other taxes	0.3	0.5
Total	**4,510.2**	**5,189.4**
Debtors due within one year	2,151.4	505.5
Debtors due after one year	2,358.8	4,683.9
Total	**4,510.2**	**5,189.4**

Amounts due from subsidiary undertakings

At 31 March 2017, the Company had loans due from VRHL of US$1,790.3 million (2016: US$1,737.4 million) which represented the funds being loaned to other group companies for funding the subsidiaries. Out of the total loan, US$579.3 million bears interest at six month US$LIBOR plus 350 basis points, US$500.0 million at 5.8%, US$31.2 million at 5.9%, US$47.0 million at 9.7%, and US$632.8 million at US$LIBOR plus 367 basis points.

At 31 March 2017, the Company had loan of US$1,757.1 million (2016: US$3,069.6 million) due from Vedanta Resources Jersey II Limited. Out of the total loan US$41.4 million bears interest at US$LIBOR plus 357 basis points, US$1,200.0 million at 6.50%, US$121.4 million at LIBOR plus 300 basis points US$60.0 million at 3.15%, US$68.4 million at 6.75% and US$265.8 million at six month US$LIBOR plus 430 basis points.

The Company was owed US$344.9 million (2016: US$372.1 million) of accrued interest from VRHL and Vedanta Resources Jersey II Limited.

During the year, the company gave a loan to Vedanta Resources Jersey Limited of facility amount US$400.0 million at an interest rate of 6.75%. The outstanding amount as at 31 March 2017 was US$125.0 million and accrued interest thereon US$0.1 million.

As at 31 March 2017, the company was owed dividend receivable from Vedanta Resources Holdings limited of US$475.0 million.

In addition to the loans, the company was also owed US$17.0 million (2016: US$9.3 million) other receivables from Group companies.

53. Company current asset investments

(US$ million)

	31 March 2017	31 March 2016
Bank term deposits	14.6	28.1
Total	**14.6**	**28.1**

54. Company creditors: amounts falling due within one year

(US$ million)

	31 March 2017	31 March 2016
Accruals	(88.4)	(104.3)
External borrowings	(173.8)	(742.7)
Loan from Subsidiary	(176.5)	(600.3)
Total	**(438.7)**	**(1,447.3)**

In April 2013, the Company entered into a Standby Letter of Credit agreement arranged by Axis Bank for an amount of US$150.0 million at a commission of 1% per annum payable quarterly. The facility is funded by Bank of India to the extent of US$148.5 million and bears interest rate at three month US$LIBOR plus 290 basis points. The facility is repayable in two equal annual instalments starting April 2017. As at 31 March 2017, the outstanding amount under this facility amounting to US$74.2 million has been shown under creditors falling due within one year and balance US$74.3 million in creditors falling due after one year.

In December 2013, the Company entered into a facility agreement with Bank of India for borrowing up to US$100.0 million at an interest rate of US$LIBOR plus 357 basis points repayable to the extent of 50% in October 2017 and balance in January 2018. As at 31 March 2017, the outstanding amount under this facility is US$100.0 million.

As at 31 March 2016, loans from subsidiaries included a loan of US$1,140.3 million from VRJL relating to its issue of US$1,250.0 million convertible bonds (bond issued in July 2009). During the previous year, the Company bought from the market the bonds of face value of US$549.3 million for a consideration of US$522.4 million. Accordingly, the carrying value of the bond bought along with accrued interest i.e. US$540.0 million had been reduced from the inter-co loan outstanding amount of US$1,140.3 million from the subsidiary, VRJL.

During the year, the Company further bought from the market, the bonds of face value US$67.4 million and repaid the balance amount of US$514.8 million on its maturity in July 2016 along with accrued interest. Both these amounts were adjusted against the intercompany payable to VRJL. During the year ended 31 March 2017, interest was charged at the effective interest rate of 8.2% (March 2016: 8.2 %).

As at 31 March, 2017 loan from subsidiary includes a loan of US$176.5 million due to Vedanta Finance UK Limited at an interest rate of one year US$LIBOR plus 382 basis points.

55. Company creditors: amounts falling due after one year

(US$ million)

	31 March 2017	31 March 2016
Loan from subsidiary	-	(278.0)
External borrowings	(4,250.8)	(4,220.0)
Total	**(4,250.8)**	**(4,498.0)**

Loans from Subsidiaries as at 31 March 2016 include a loan of US$22.2 million due to Richter Holdings Limited and US$255.8 million due to Vedanta Finance UK Limited. During the year, the outstanding amount of US$22.2 million due to Richter Holdings Limited was prepaid. Further out of US$255.8 million due to Vedanta Finance UK Limited , US$79.3 million was prepaid and the balance US$176.5 million was shown under creditors falling due within one year.

In December 2013, the Company entered into a facility agreement with Bank of India for borrowing up to US$100.0 million at an interest rate of US$LIBOR plus 357 basis points repayable to the extent of 50% in October 2017 and balance in January 2018. As at 31 March 2017, the outstanding amount under this facility is US$100.0 million. The same has been shown under creditors falling due within one year.

The external borrowings represent US$1,250.0 million non-convertible bond issued during 2008, out of which US$500.0 million was repaid in January 2014 and the remaining US$750.0 million 9.5% bonds are due for repayment in July 2018. During the year, the company had bought back US$370.9 million. As at 31 March 2017, the outstanding amount under this facility is US$379.1 million. Post the balance sheet date, the Company early redeemed all the outstanding 9.5% bonds due July, 2018 of face value US$379.1 million at a premium of US$35.5 million.

In July 2011, the Company issued US$750.0 million, 6.75% bonds due June 2016, and US$900.0 million, 8.25% bonds due June 2021. During the previous year, the Company bought back US$7.0 million 6.75% bonds due June 2016 from the open market and further during the current year US$62.6 million was bought back. The balance outstanding amount of US$680.4 million was duly repaid in June 2016. As at 31 March 2017, the outstanding amount under this facility was US$900.0 million.

In April 2013, the Company entered into a Standby Letter of Credit agreement arranged by Axis Bank for an amount of US$150.0 million at a commission of 1% per annum payable quarterly. The facility is funded by Bank of India to the extent of US$148.5 million and bears interest rate at three month US$LIBOR plus 290 basis points. The facility is repayable in two equal annual instalments starting April 2017. As at 31 March 2017, the outstanding amount under this facility amounting to US$74.2 million has been shown under creditors falling due within one year and balance US$74.3 million in creditors falling due after one year.

In June 2013, the Company issued US$1,200.0 million, 6.00% bonds due January 2019, and US$500.0 million, 7.125% bonds due May 2023. During the year, the company bought back US$425.0 million out of the US$1,200.0 million bond due in January 2019. As at 31 March 2017, the outstanding amount under this facility is US$1275.0million.

In March 2015, the Company entered into a facility agreement with State Bank of India for borrowing up to US$350.0 million. US$100.0 million is repayable in March 2020 and bears interest at a rate of US$LIBOR plus 370 basis points. US$250.0 million bears interest at a rate of US$LIBOR plus 403 basis points repayable in two instalments being US$100.0 million due in June 2021 and US$150.0 million in June 2022. As at 31 March 2017, the outstanding amount under this facility is US$350.0 million.

In January 2016, the Company entered into a facility agreement with State Bank of India for borrowing up to US$300.0 million. US$120.0 million is repayable in February 2022 and bears interest at a rate of US$LIBOR plus 450 basis points. US$180.0 million is repayable in February 2023 and bears interest at a rate of US$LIBOR plus 453 basis points. As at 31 March 2017, the outstanding amount under this facility is US$300.0 million.

In January 2017, the Company issued US$1,000.0 million, 6.375% bonds due in July 2022. As at 31 March 2017, the outstanding amount under this facility is US$1,000.0 million.

56. Company reconciliation of movement in equity shareholders' funds

(US$ million)

	Share capital (note 35)	Share premium	Share-based payment reserve	Convertible bond reserve	Treasury Shares	Retained earnings	Other Reserves	Total
Equity shareholders' funds at 1 April 2016	**30.1**	**201.5**	**29.9**	**10.8**	**(490.6)**	**724.6**	**(2.2)**	**504.1**
Profit for the year	-	-	-		-	690.2	-	690.2
Dividends paid (note 14)	-	-	-	-	-	(138.4)*	-	(138.4)*
Exercise of LTIP awards (note 32)	0.0	-	(15.1)	-	-	15.1	-	0.0
Recognition of share based payments (note 32)	-	-	13.4	-	-	-	-	13.4
Gift to Employees Benefit Trust	-	-	-	-	-	(1.9)	-	(1.9)
Convertible bond transfer (note 28)	-	-	-	(10.8)	-	10.8	-	-
Movement in fair value of Financial Investment	-	-	-	-	-	-	0.2	0.2
Equity shareholders' funds at 31 March 2017	**30.1**	**201.5**	**28.2**	**-**	**(490.6)**	**1,300.4**	**(2.0)**	**1,067.6**

** Total dividends of US$138.4 million (2016:US$111.3 million) million includes dividend of US$0.9 million (2016: US$0.7 million) paid to a separate investment trust which is consolidated in the Group's financial statements with that element of dividends paid by the company being eliminated (Refer note 14).*

(US$ million)

	Share capital (note 35)	Share premium	Share-based payment reserve	Convertible bond reserve	Treasury Shares	Retained earnings	Other Reserves	Total
Equity shareholders' funds at 1 April 2015	**30.0**	**198.5**	**27.4**	**38.4**	**(490.6)**	**804.2**	**(2.2)**	**605.7**
Loss for the year	-	-	-	-	-	(8.0)	-	(8.0)
Dividends paid (note 14)	-	-	-	-	-	(111.3)*	-	(111.3)*
Exercise of LTIP awards (note 32)	0.1	-	(13.1)	-		13.1	-	0.1
Recognition of share based payments (note 32)	-	-	15.6	-	-	-	-	15.6
Gift to Employees	-	-	-	-	-	(0.9)	-	(0.9)
Benefit Trust	0.0	3.0	-	(0.1)	-	-	-	2.9
Exercise of conversion of bonds								
Convertible bond transfer (note 28)	-	-	-	(27.5)	-	27.5	-	-
Equity shareholders' funds at 31 March 2016	**30.1**	**201.5**	**29.9**	**10.8**	**(490.6)**	**724.6**	**(2.2)**	**504.1**

57. Company contingent liabilities

The Company has given a corporate guarantee to Konkola Copper Mines for an amount of US$709.0 million.

The Company has guaranteed US$170.0 million for a loan facility entered by Valliant Jersey Limited with ICICI bank and US$180.0 million (out of which, US$59.2 million has been repaid during the year) for loan facility entered by Vedanta Finance Jersey Limited with ICICI bank.

The Company has guaranteed US$500.0 million for a syndicated facility agreement entered by Welter Trading Limited with Standard Chartered Bank as facility agent.

The Company has guaranteed US$500.0 million for loan facility entered by Monte Cello NV with ICICI bank.

The Company has guaranteed US$80.0 million for revolving credit facility entered by Twin Star Holdings Limited with Emirates NBD PJSC and Standard Chartered Bank as lead arrangers and National Bank of Abu Dhabi PJSC as facility agent.

The Company has guaranteed US$500.0 million for a syndicated facility entered by Twin Star Holdings Limited with Axis Bank as lead arranger and facility agent.

The Company has guaranteed US$1,200.0 million for a syndicated facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank as facility agent. During the previous year , US$300.0 million has been repaid and during the year another US$300.0 million has been repaid. Post balance sheet date, the facility has been prepaid.

The Company has guaranteed US$500.0 million for a loan facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank and First Gulf Bank PJSC of which $250.0 million is under a commodity murabaha structure (Islamic financing) and balance $250.0 million is under a conventional loan structure. During the previous year, US$25.0 million has been repaid and during the year another US$25.0 million has been repaid. Post balance sheet date, the facility has been prepaid.

The Company has guaranteed US$1,250.0 million for a loan facility entered by its subsidiaries THL Zinc Limited with Cairn India Holdings Limited (Intercompany loan). Post balance sheet date, this guarantee has been withdrawn.

The Company has guaranteed US$900.0 million for a loan facility entered by its subsidiaries Twin Star Mauritius Holdings Limited with Fujairah Gold FZC (Intercompany loan). Post balance sheet date, this guarantee has been withdrawn.

The Company has provided a guarantee for the Cairn India Group's (now merged with Vedanta Limited) obligation under the Production Sharing Contract ('PSC').

The Company has provided guarantee for the redeemable preference shares issued by its subsidiary Twinstar Mauritius Holdings Limited to its intermediate parent Bloom Fountain Limited amounting to US$2,200.0 million. Post balance sheet date, this guarantee has been withdrawn.

During the year, the Company has provided guarantee on behalf of Vedanta Ltd. to SBI for US$192.8 million (INR 12,500 million) on account of Term Loan Facility and US$450.0 million on account of EPBG facility availed by Vedanta Limited.

58. Related party transactions

During the year the Company entered into transactions, in the ordinary course of business, with other related parties. The Company has taken advantage of the exemption under paragraph 8(k) of FRS101 not to disclose transactions with wholly owned subsidiaries. Transactions entered into and trading balances outstanding at 31 March with other related parties, are as follows:

(US$ millions)

Name of Company	Relationship	Nature of transaction	2017	2016
Vedanta Limited	Subsidiary	Management Fees charged	5.0	5.0
Konkola Copper Mines Plc	Subsidiary	Management & Guarantee Fees charged	2.9	2.8
Cairn India Limited	Subsidiary	Management Fees charged	3.8	6.5
Sterlite Technologies Limited	Related Party	Management Fees charged	0.0	0.0
Volcan Investments Limited	Holding Company	Dividend paid	93.7	75.0
Vedanta Limited	Subsidiary	Receipt of Service	(0.5)	(0.4)
Vedanta Limited	Subsidiary	Payment of Expenses	0.1	0.1
Vedanta Limited	Subsidiary	Recovery against share option expense	9.4	11.3
Konkola Copper Mines Plc	Subsidiary	Recovery against share option expense	1.7	1.5
Copper Mines of Tasmania Pty Limited	Subsidiary	Recovery against share option expense	0.0	0.1
Fujariah Gold FZC	Subsidiary	Recovery against share option expense	0.1	0.4
Vedanta Lisheen Holdings Limited	Subsidiary	Recovery against share option expense	(0.0)	0.0
Namzinc Pty Limited	Subsidiary	Recovery against share option expense	(0.2)	0.0
Black Mountain Mining (Pty) Limited	Subsidiary	Recovery against share option expense	0.1	0.7
Western Cluster Limited	Subsidiary	Recovery against share option expense	0.0	0.0
Twin Star Mauritius Holdings Limited	Subsidiary	Reimbursement of Expenses	0.1	0.0
Twin Star Energy Holdings Limited	Subsidiary	Reimbursement of Expenses	0.0	0.0
THL Zinc Limited	Subsidiary	Reimbursement of Expenses	0.0	0.0
THL Zinc Ventures Limited	Subsidiary	Reimbursement of Expenses	0.0	0.0
Konkola Copper Mines Plc	Subsidiary	Reimbursement of Expenses	0.7	0.0
Ashurst LLP (was related up to 30 April 2015)	Related Party	Receipt of service	(0.0)	(0.1)

Outstanding balances

(US$ millions)

	Relationship	Nature of transaction	2017	2016
Vedanta Limited	Subsidiary	Receivable/ (Payable)	1.9	(3.9)
Konkola Copper Mines Plc	Subsidiary	Receivable	7.7	2.3
Cairn India Limited*	Subsidiary	Receivable	1.3	1.2
Sterlite Technologies Limited	Related Party	Receivable	0.1	0.0
Copper Mines of Tasmania Pty Limited	Subsidiary	Receivable	0.0	0.7
Fujariah Gold FZC	Subsidiary	Receivable	0.1	0.6
Vedanta Lisheen Holdings Limited	Subsidiary	(Payable)	(0.0)	(0.0)
Namzinc Pty Limited	Subsidiary	(Payable)/ Receivable	(0.1)	0.0
Black Mountain Mining (Pty) Limited	Subsidiary	(Payable)/ Receivable	(0.0)	1.0
Western Cluster Limited	Subsidiary	Receivable	0.1	0.2
Twin Star Mauritius Holdings Limited	Subsidiary	Receivable	0.1	0.0
Twin Star Energy Holdings Limited	Subsidiary	Receivable	0.1	0.0
THL Zinc Limited	Subsidiary	Receivable	0.0	0.0
THL Zinc Ventures Limited	Subsidiary	Receivable	0.0	0.0
Monte Cello BV	Subsidiary	(Payable)	(1.0)	(1.0)

**Merged with Vedanta Limited w.e.f.27 March 2017 (Refer Note 42)*

59. Company Share-Based payment

The Company had certain LTIP awards outstanding as at 31 March 2017. See note 32 to the financial statements for further details on these share-based payments.

Summary consolidated income statement

(US$ million except as stated)

	Year ended 31 March 17	Year ended 31 March 16	Year ended 31 March 15	Year ended 31 March 14(1)	Year ended 31 March 13 (1)
Revenue	11,520.1	10,737.9	12,878.7	12,945.0	14,640.2
EBITDA	3191.1	2,336.4	3,741.2	4,491.2	4,908.9
Depreciation and amortisation	(1,030.5)	(1,455.2)	(2,005.7)	(2,203.1)	(2,337.2)
Special items	(17.3)	(5,210.1)	(6,744.2)	(138.0)	(41.9)
Operating profit	2,143.3	(4,328.9)	(5,008.7)	2,150.1	2,529.8
Share in consolidated profit of associate	0	-	-	0.0	0.0
Profit before interest and taxation	2,143.3	(4,328.9)	(5,008.7)	2,150.1	2,529.8
Net finance (costs)/ investment revenues	(763.4)	(655.1)	(631.5)	(1,032.0)	(806.1)
Profit before taxation	1,379.9	(4,984.0)	(5,640.2)	1,118.1	1,723.7
Net tax credit/(expense)	(500.3)	1,481.9	1,852.5	(128.7)	(46.1)
Profit after taxation	879.6	(3,502.1)	(3,787.7)	989.4	1,677.6
Non-controlling interests	(902.3)	1,664.7	1,989.1	(1,185.4)	(1,515.6)
Profit attributable to equity shareholders in parent	(22.7)	(1,837.4)	(1,798.6)	(196.0)	162.0
Dividends	(137.5)	(110.6)	(171.3)	(162.5)	(153.5)
Retained (loss)/profit	(160.2)	(1,948.0)	(1,969.9)	(358.5)	8.5
Basic earnings per share (US cents per share)					
On profit for the financial year	(8.2)	(665.8)	(654.5)	(71.7)	59.4
On Underlying Profit for the financial year	1.1	(131.9)	(14.2)	14.7	134.8
Dividend per share (US cents per share)	55.0	30.0	63.0	61.0	58.0

(1) Restated refer note 1

(US$ million except as stated)

	31 March 2017	31 March 2016	31 March 2015	31 March 2014	31 March 2013
Goodwill	16.6	16.6	16.6	16.6	16.6
Intangible assets	95.6	92.2	101.9	108.6	-
Property, plant and equipment	16,806.1	16,647.8	23,352.0	31,043.5	33,132.6
Financial asset investments	10.7	6.5	4.2	1.7	2.4
Total	16,929.0	16,763.1	23,474.7	31,170.4	33,151.6
Stocks	1,670.1	1,365.8	1,605.7	1,742.5	1,965.6
Debtors	1,084.8	1,344.3	1,839.2	1,739.9	1,706.0
Cash and Liquid Investments	9,725.2	8,936.5	8,209.8	8,937.9	7,981.7
Total	12,480.1	11,646.6	11,654.7	12,420.3	11,653.3
Short-term borrowings	(7,658.5)	(4,313.8)	(3,179.2)	(4,358.5)	(4,400.1)
Other current liabilities	(6,413.1)	(6,097.8)	(5,003.4)	(4,931.5)	(4,810.2)
Total current liabilities	(14,071.6)	(10,411.6)	(8,182.6)	(9,290.0)	(9,210.3)
Net current assets	(1,587.8)	1,288.8	3,528.8	3,541.9	2,639.8
Total assets less current Liabilities	17,431.8	19,907.7	28,806.3	36,084.3	36,751.4
Long-term borrowings	(10,570.2)	(11,949.5)	(13,488.6)	(12,512.7)	(12,192.7)
Other long term liabilities	(77.1)	(224.7)	(194.4)	(230.7)	(260.2)
Provisions and deferred tax assets	(758.0)	(869.2)	(2,854.0)	(5,354.2)	(5,417.6)

Total long term liabilities	(11,405.3)	(13,043.4)	(16,537.0)	(18,097.6)	(17,870.5)
Equity Non-controlling interests	(6,423.1)	(7,565.2)	(10,654.3)	(13,964.4)	(14,467.7)
Non equity Non-controlling interest	(11.9)	(11.9)	(11.9)	(11.9)	(11.9)
Net assets attributable to the equity holders of the parent	(408.5)	(712.8)	1,603.1	4,010.4	4,401.3

Turnover

(US$ million)

	2017	2016	2015	2014	2013
Zinc-	2,857.4	2,502.5	2,943.9	2,856.8	3,060.5
India	2,525.0	2,111.0	2,357.0	2,195.4	2,263.3
International	332.4	391.5	586.9	661.4	797.2
Oil & Gas	1,222.7	1,322.3	2,397.5	3,092.8	3,223.4
Iron ore	615.4	350.0	326.5	267.1	442.5
Copper:-	4,008.0	4,169.7	4,777.8	4,676.2	5,733.9
India/Australia	3,133.7	3,197.2	3,700.7	3,404.8	3,991.1
Zambia	874.3	972.5	1,077.1	1,271.4	1,742.8
Aluminium	2,040.0	1,694.3	2,081.9	1,785.4	1,837.8
Power	835.9	707.5	588.1	621.7	669.0
Other	(59.3)	(8.4)	(237.0)	(355.0)	(326.9)
Group	11,520.1	10,737.9	12,878.7	12,945.0	14,640.2

EBITDA

(US$ million)

	2017	2016	2015	2014	2013
Zinc	1,561.5	1,063.1	1,373.3	1,358.4	1,477.0
India	1,423.2	995.0	1,192.5	1,145.0	1,182.5
International	138.3	68.1	180.8	213.4	294.5
Oil & Gas	597.2	570.4	1,476.8	2,347.0	2,440.3
Iron ore	194.2	73.4	31.4	(24.2)	84.9
Copper	258.1	318.7	277.2	354.2	476.4
India/Australia	252.2	336.6	281.0	197.9	219.1
Zambia	5.9	(17.9)	(3.8)	156.3	257.3
Aluminium	344.2	106.7	415.5	287.3	202.6
Power	244.8	196.3	153.8	168.4	228.5
Other	(8.9)	7.8	13.2	0.1	(0.8)
Group	3,191.1	2,336.4	3,741.2	4,491.2	4,908.9

EBITDA Margin

(%)

	2017	2016	2015	2014	2013
Zinc	54.6	42.5	46.6	47.5	48.3
India	56.4	47.1	50.6	52.2	52.2
International	41.6	17.4	30.8	32.3	36.9
Oil & Gas	48.8	43.1	61.6	75.9	75.7
Iron ore	31.6	21.0	9.6	(9.1)	19.2
Copper	6.4	7.6	5.8	7.6	8.3
India/Australia	8.0	10.5	7.6	5.8	5.5
Zambia	0.7	(1.8)	(0.4)	12.3	14.8
Aluminium	16.9	6.3	20.0	16.1	11.0
Power	29.3	27.7	26.2	27.1	34.2
Group	27.7	21.8	29.1	34.7	33.5

Production

(000's MT)

	2017	2016	2015	2014	2013
Aluminium	1,213	923	877	794	774
BALCO[1]	427	332	324	252	247
Jharsuguda Aluminium[2]	786	592	553	542	527
Copper	582	566	531	471	569
Sterlite Copper	402	384	362	294	353

KCM	180	182	169	177	216
Iron Ore (WMT)	12,300	5,630	667	1,577	4,212
Zinc total	757	841	836	874	822
HZL	672	759	734	749	677
Skorpion	85	82	102	125	145
Zinc and Lead MIC	70	144	209	239	280
BMM	70	63	59	67	87
Lisheen	-	81	150	172	193

Oil & Gas- Gross Production	69.3	74.6	77.3	79.8	74.9
Oil & Gas- Working Interest	44.2	46.9	48.4	50.1	46.7

(1)BALCO- Including trial run production of 47 KT in 2017 & Nil in 2016.
(2)Jharsuguda- Including trial run production of 95 KT in 2017 & 51 in 2016.

(US cents/lb)

	2017	2016	2015	2014	2013
Aluminium – BALCO Plant- I	68.4	73.5	86.4	80.8	86.2
BALCO Plant-I (Other than Alumina)	41.5	46.7	55.1	49.1	52.8
Aluminium – BALCO Plant- II	68.1	81.4	98.4		
BALCO Plant-II (Other than Alumina)	40.6	54.3	66.9		
Aluminium-Jharsuguda Aluminium	65.3	68.9	73.9	72.6	84.8
Copper – Sterlite Copper	6.1	5.7	6.4	9.7	8.7
Copper – KCM	208.6	197.9	257.7	238.4	255.1
Zinc including Royalty- HZL	52.4	47.4	49.6	44.7	44.5
Zinc without Royalty- HZL	37.6	36.5	39.4	37.4	37.1
Zinc COP- Skorpion	75.1	73.8	70.1	56.7	54.5
Zinc COP- BMM	51.1	62.7	74.3	52.2	54.3
Zinc COP- Lisheen	0.0	56.7	52.8	50.1	42.8
Oil & Gas (Opex) (US$/ boe)	6.2	6.5	6.2	4.1	3.5

Cash costs of production in INR

(INR/ mt)

	2017	2016	2015	2014	2013
Aluminium – BALCO Plant- I	101,221	106,013	116,448	107,728	103,526
BALCO (Other than Alumina)	61,324	67,413	74,258	65,430	63,433
Aluminium – BALCO Plant- II	100,710	117,497	132,675		
BALCO (Other than Alumina)	60,039	78,378	90,147		
Aluminium-Jharsuguda Aluminium	96,622	99,408	99,676	96,893	101,779
Copper – Sterlite Copper	9,047	8,203	8,639	12,994	10,704
Zinc including Royalty	77,454	68,408	66,805	59,561	53,446
Zinc without Royalty	55,679	52,629	53,071	49,834	44,550

Capital expenditure

(US$ million)

	2017	2016	2015	2014	2013
Sustaining	145.4	184.9	221.4	321.6	390.2
Expansion	668.2	565.8	1,530.8	1,424.7	2,019.1
Total capital expenditure	813.6	750.7	1,752.2	1,746.3	2,409.3

Net cash/(debt)

(US$ million)

	2017	2016	2015	2014	2013
Zinc	3,880.8	5,414.5	5,073.3	4,513.6	4,243.7
India	3,740.9	5,317.7	4,936.6	4,344.6	4,044.8
International	139.9	96.8	136.7	169.0	198.9
Oil & Gas	4,184.6	3,239.7	2,856.9	3,911.9	3,102.4
Iron Ore	(403.9)	(459.4)	(634.3)	(512.1)	(744.2)
Copper	(495.9)	(494.4)	(705.0)	(882.3)	(1,244.0)
India/Australia	57.3	132.2	32.5	(159.0)	(492.8)
Zambia	(553.2)	(626.6)	(737.5)	(723.3)	(751.2)
Aluminium	(5,097.6)	(4,131.0)	(4,068.2)	(3,204.0)	(4,311.9)
Power	(1,574.1)	(1,801.8)	(1,576.6)	(737.0)	(696.2)
Other	(8,997.4)	(9,096.4)	(9,406.4)	(11,009.5)	(8,965.4)
Group	(8,503.5)	(7,328.8)	(8,460.3)	(7,919.5)	(8,615.6)

Gearing

(%)

	2017	2016	2015	2014	2013
Gearing	58.6	51.7	40.8	30.6	31.4

Group Free Cash Flow

(US$ million)

	2017	2016	2015	2014	2013
Group Free Cash Flow after Capital Creditors	2,211.8	2,338.7	2,578.0	2,695.0	3,534.7
Group Free Cash Flow after Project Capex	1,543.6	1,772.9	1,047.3	1,269.9	1,515.6

Capital Employed

(US$ million)

	2017	2016	2015	2014	2013
Capital Employed	14,518.0	22019.4	25271.9	25894.3	27476.7

ROCE

(%)

	2017	2016*	2015*	2014	2013
ROCE	15.6	6.2	8.7	14.9	17.5

**Before impairment*

Production and Reserves Summary

Copper

Copper Production Summary

Facility	Product	Year ended 31 March 2017 Mt	Year ended 31 March 2016 Mt
Tuticorin	Copper anode	400,620	387,016
•	Sulphuric acid	1,043,748	1,070,786
•	Phosphoric acid	200,119	198,779
•	Copper cathode	216,119	201,864
•	Copper rods	71,178	68,685
Silvassa	Copper cathode	186,611	182,183
•	Copper rods	136,352	142,115
KCM	Copper cathode	179,837	181,673

Copper Mining Summary

		Ore mined		Copper concentrate		Copper in concentrate	
Mine	Type of mine	31 March 2017 mt	31 March 2016 mt	31 March 2017 mt	31 March 2016 mt	31 March 2017 mt	31 March 2016 mt
Mt Lyell (CMT)	Underground	-	-	-	-	-	-
Konkola & NUG (KCM)	Underground	3,182,001	4,737,667	154,576	238,492	47,854	67,501

Copper Mine Resource and Reserve Summary

		Resources				Reserves	
Mine	Type of mine	Measured and indicated million mt	Copper grade %	Inferred million mt	Copper grade %	Proved and probable reserves million mt	Copper grade %
Mt Lyell (CMT)	Underground	29.6	1.09	30	1.06	-	-
Konkola (KCM)	Underground	157.9	1.95	313.0	3.20	242.3	1.22

Resources are additional to Reserves

Aluminium, Alumina and Bauxite

Aluminium Production Summary

Company	Year ended 31 March 2017 Mt	Year ended 31 March 2016 Mt
BALCO	427,079	331,618
Jharsuguda Aluminium	786,323	591,725

Alumina Production Summary

Company	Year ended 31 March 2017 Mt	Year ended 31 March 2016 Mt
Jharsuguda Aluminium	1,207,957	970,893

Bauxite Production Summary

Company	Year ended 31 March 2017 Mt	Year ended 31 March 2016 Mt
BALCO – Mainpat	73,170	455

BALCO – Bodai Daldali	1,065,300	1,033,300

Bauxite Mine Resource and Reserve Summary

	Resources				Reserves	
Mine	**Measured and indicated million mt**	**Aluminium grade %**	**Inferred million mt**	**Aluminium grade %**	**Proved and probable reserves million mt**	**Aluminium grade %**
BALCO						
Mainpat	9.0	44.8	1.1	45.1	5.1	43.3
Bodai-Daldali	4.8	45.2	1.0	45.8	2.4	43.6
Total BALCO	**13.8**	**44.9**	**2.1**	**45.4**	**7.5**	**43.4**
MALCO						
Kolli Hills and Yercaud	0.8	44.0			0.2	43.0

Resources are additional to Reserves

Zinc and Lead

Zinc and Lead Production Summary:

Company	**Year ended 31 March 2017 Mt**	**Year ended 31 March 2016 Mt**
HZL		
Zinc	671,988	758,938
Lead	139,009	144,919

Zinc and Lead Mining Summary:

a) Metal mined & metal concentrate

		Ore mined		Zinc concentrate		Lead concentrate		Bulk concentrate	
Mine	**Type of mine**	**31 March 2017 mt**	**31 March 2016 mt**	**31 March 2017 mt**	**31 March 2016 mt**	**31 March 2017 mt**	**31 March 2016 mt**	**31 March 2017 mt**	**31 March 2016 mt**
Rampura Agucha[(1)]	Open cut	4,321,192	5,241,214	1,121,463	1,179,362	92,228	109,631		
Rampura Agucha	Underground	13,79,746	223,521						
RajpuraDariba	Underground	745,534	668,777	65,012	59,054	14,851	15,784	-	8,941
SindesarKhurd	Underground	3,664,768	2,969,587	230,677	176,761	109,007	92,611		
Zawar	Underground	1,770,000	1,349,850		-		-	113,015	102,987
Total		**11,881,240**	**10,452,949**	**1,417,152**	**1,415,177**	**216,086**	**218,026**	**113,015**	**111,928**

(1) *Includes development ore MT from Kayar*

b) Metal in Concentrate (MIC)

		Zinc concentrate		Lead concentrate	
Mine	Type of mine	31 March 2017 mt	31 March 2016 mt	31 March 2017 mt	31 March 2016 mt
RampuraAgucha	Open cut & Underground	568,724	588,188	54,705	63,165
RajpuraDariba	Underground	31,799	31,793	6,082	7,327
SindesarKhurd	Underground	116,944	91,016	60,203	49,232
Zawar	Underground	38,497	33,275	30,029	24,929
Total		**755,964**	**744,272**	**151,019**	**144,653**

Zinc and Lead Mine Resource and Reserve Summary

Zinc India

	Resources						Reserves		
Mine	Measured and indicated million mt	Zinc grade %	Lead grade %	Inferred million mt	Zinc grade %	Lead grade %	Proved and probable reserves million mt	Zinc grade %	Lead grade %
Rampura Agucha	13.4	15.8	2.1	36.9	10.1	2.5	49.7	13.9	1.9
RajpuraDariba	22.5	6.8	2.4	27.7	6.6	1.8	9.0	6.3	1.5
Zawar	23.9	4.6	1.9	61.8	4.7	2.5	9.5	3.3	1.8
Kayad	1.3	13.8	1.9	0.4	7.3	1.2	5.4	7.8	1.1
SindesarKhurd	17.4	4.5	3.1	69.8	3.7	1.9	35.6	4.2	2.9
BamniaKalan	5.4	4.5	1.6	14.7	3.7	1.8	-	-	-
Total	**83.9**	**7.1**	**2.3**	**211.4**	**5.5**	**2.2**	**109.1**	**8.9**	**2.1**

Resources are additional to Reserves

Zinc International

	Resources						Reserves		
Mine	Measured and indicated million mt	Zinc grade %	Lead grade %	Inferred million mt	Zinc grade %	Lead grade %	Proved and probable reserves million mt	Zinc grade %	Lead grade %
Skorpion	2.08	9.59	-	1.44	9.14	-	4.23	9.91	-
BMM									
- Deeps	6.99	3.27	3.38	-	-	-	6.05	2.85	2.49
- Swartberg	45.35	0.53	3.21	4.74	0.82	2.79	2.07	0.62	3.73
- Gamsberg	97.91	6.20	0.54	64.36	7.81	0.52	53.18	6.63	0.51

Resources are additional to Reserves

Zinc Production Summary:

Company	Year ended 31 March 2017 Mt	Year ended 31 March 2016 Mt
Skorpion	85,427	82,029

Zinc and Lead Mining Summary:

a) Metal mined & metal concentrate

	Ore mined	Zinc concentrate	Lead concentrate

Mine	Type of mine	31 March 2017 mt	31 March 2016 mt	31 March 2017 mt	31 March 2016 mt	31 March 2017 mt	31 March 2016 mt
Skorpion	Underground	1,206,176	1,241,327	-	-	-	-
BMM	Underground	1,590,600	1,579,633	58005	59,006	59518	48,091
Lisheen	Underground	-	752,749	-	135,611	-	14,371
Total	**Underground**	**2,796,776**	**3,573,709**		**194,617**		**62,462**

b) Metal in Concentrate (MIC)

		Zinc in concentrate		Lead in concentrate	
Mine	**Type of mine**	**31 March 2017 mt**	**31 March 2016 mt**	**31 March 2017 mt**	**31 March 2016 mt**
BMM	Underground	28,708	29,272	41,770	34,114
Lisheen	Underground	-	71,825	-	8,726
Total			**101,097**		**42,840**

Iron ore

Iron Ore Production Summary

Company	Year ended 31 March 2017 Millionwmt	Year ended 31 March 2016 Millionwmt
Vedanta Limited		
Saleable Iron Ore	12.3	5.2
Goa	8.8	2.0
Karnataka	2.3	3.0
Orissa		-
Dempo	1.2	0.2

Iron Ore Resource and Reserve Summary

	Resources				Reserves	
Mine	**Measured and indicated million mt**	**Iron ore grade %**	**Inferred million mt**	**Iron ore grade %**	**Proved and probable reserves million mt**	**Iron ore grade %**
Iron ore Sesa	161.9	50.7	28.2	54.5	193.6	55.4

During the year ended 31st March 2016, the Group recognized impairment charge in respect of the exploratory asssets in West Africa (Western Cluster, Liberia) on account of low iron ore prices, geo-political factors and no plans for any substantive expenditure resulting in continued uncertainty in the project. Therefore, the company did not get certification of reserves & resources for the current period.

Oil and gas

The Oil and gas reserves data set out below are estimated on the basis set out in the section headed "Presentation of Information".

Cairn India

The Company's gross reserve estimates are updated atleast annually based on the forecast of production profiles, determined on an asset-by-asset basis, using appropriate petroleum engineering techniques. The estimates of reserves and resources have been derived in accordance with the Society for Petroleum Engineers "Petroleum Resources Management System (2007)". The changes to the reserves are generally on account of future development projects, application of technologies such as enhanced oil recovery techniques and true up of the estimates. The management's internal estimates of hydrocarbon reserves and resources at the period end, based on the current terms of the PSCs, are as follows:

Particulars	**Gross proved and probable hydrocarbons initially in place**		**Gross proved and probable reserves and resources**		**Net working interest proved and probable reserves and resources**	
	(mmboe)		**(mmboe)**		**(mmboe)**	
	31 March 2017	**31 March 2016**	**31 March 2017**	**31 March 2016**	**31 March 2017**	**31 March 2016**
Rajasthan MBA Fields	2,197	2,208	410	496	287	347
Rajasthan MBA EOR	-	-	272	225	191	158
Rajasthan Block Other	4,034	4,189	478	471	334	330
Fields						
Ravva Fields	696	706	41	39	9	9
CBOS/2 Fields	225	215	23	23	9	9
Other fields	335	481	48	74	24	36
Total	**7,486**	**7,799**	**1,273**	**1,328**	**854**	**889**

The Company's net working interest proved and probable reserves is as follows:

Particulars	**Proved and probable reserves**		**Proved and probable reserves (developed)**	
	Oil	**Gas**	**Oil**	**Gas**
	(mmstb)	**(bscf)**	**(mmstb)**	**(bscf)**
Reserves as of 1 April 2015*	**219.94**	**86.33**	**146.21**	**23.93**
Additions / revision during the year	(13.83)	(24.96)	44.42	10.85
Production during the year	45.91	6.32	45.91	6.32
Reserves as of 31 March 2016**	**160.20**	**55.05**	**144.73**	**28.47**
Additions / revision during the year	(4.81)	(2.48)	(1.60)	(8.83)
Production during the year	43.43	4.84	43.43	4.84
Reserves as of 31 March 2017***	**111.96**	**47.72**	**99.70**	**14.80**

** Includes probable oil reserves of 67.81 mmstb (of which 23.43 mmstb is developed) and probable gas reserves of 62.71 bscf (of which 7.03 bscf is developed)*
*** Includes probable oil reserves of 40.05 mmstb (of which 27.31 mmstb is developed) and probable gas reserves of 29.80 bscf (of which 5.81 bscf is developed)*
**** Includes probable oil reserves of 32.37 mmstb (of which 20.62 mmstb is developed) and probable gas reserves of 37.84 bscf (of which 4.92 bscf is developed)*

Source Of information:

In respect of all businesses, the information has been certified by geologist on behalf of Group management.

Basis of Preparation

Ore reserves and mineral resources reported herein comply with the 'Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves', other than those relating to Konkola Copper Mines plc ('KCM') which complies with the South African Code for Reporting of Mineral Reserves and Mineral Resources (the 'SAMREC Code'). The former code is prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists, and Minerals Council of Australia, and is commonly referred to as the 'JORC Code'. As at the date of this document, the editions of the JORC and SAMREC Codes in force are dated December 2004 and March 2000, respectively. The JORC and SAMREC Codes recognise a fundamental distinction between resources and reserves.

The terms and definitions in the SAMREC Code are consistent with those used in the JORC Code with minor differences in terminology – the JORC Code uses the term Ore Reserve whilst the SAMREC Code uses the term Mineral Reserve. For the purposes of ore and mineral resources reported herein, the term ore resources have been used throughout.

Oil and Gas reserves and resources have been prepared according to the Petroleum Resources Management Systems (PRMS) approved in March 2007 by the Society of Petroleum Engineers, the world Petroleum Council, the American Association of Petroleum Geologist, and the Society of Petroleum Evaluation Engineers.

Mineral resources are based on mineral occurrences quantified on the basis of geological data and an assumed cut-off grade, and are divided into Measured, Indicated and Inferred categories reflecting decreasing confidence in geological and / or grade continuity. The reporting of resource estimates carries the implication that there are reasonable prospects for eventual economic exploitation. An Ore or Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource. It includes the effect of dilution and losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, need to have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors.

These assessments demonstrate at the time of reporting that extraction could be reasonably justified. Ore Reserves are sub-divided in order of decreasing confidence into Proved Ore Reserves and Probable Ore Reserves.

The Measured and Indicated mineral resources have been reported as being inclusive of those mineral resources modified to produce the ore reserves, in addition to the ore reserves. The resource and reserve estimates provided herein comply with the resource and reserve definitions of the JORC Code, other than those relating to KCM which comply with the SAMREC Code.

GLOSSARY AND DEFINITIONS

5S

A Japanese concept laying emphasis on housekeeping and occupational safety in a sequential series of steps as Sort (Seiri); Set in Order (Seiton); Shine (Selso); Standardise (Seiketsu); and Sustain (Shitsuke)

Adapted Comparator Group

The new comparator group of companies used for the purpose of comparing TSR performance in relation to the LTIP, adopted by the Remuneration Committee on 1 February 2006 and replacing the previous comparator group comprising companies constituting the FTSE Worldwide Mining Index (excluding precious metals)

AGM or Annual General Meeting

The annual general meeting of the Company which is scheduled to be held at 3.00 pm, UK time, on 14 August 2017

AE

Anode effects

Aluminium Business

The aluminium business of the Group, comprising of its fully-integrated bauxite mining, alumina refining and aluminium smelting operations in India, and trading through the Bharat Aluminium Company Limited and Jharsuguda Aluminium (a division of Vedanta Limited), in India

Articles of Association

The articles of association of Vedanta Resources plc

Attributable Profit

Profit for the financial year before dividends attributable to the equity shareholders of Vedanta Resources plc

BALCO

Bharat Aluminium Company Limited, a company incorporated in India.

BMM

Black Mountain Mining Pty

Board or Vedanta Board

The board of directors of the Company

Board Committees

The committees reporting to the Board: Audit, Remuneration, Nominations, and Sustainability, each with its own terms of reference

Businesses

The Aluminium Business, the Copper Business, the Zinc, lead, silver, Iron ore, Power and Oil & Gas Business together

Cairn India

Erstwhile Cairn India Limited and its subsidiaries

Capital Employed

Net assets before Net (Debt)/Cash

Capex

Capital expenditure

Cash Tax Rate

Current taxation as a percentage of profit before taxation

CEO

Chief executive officer

CFO

Chief Financial Officer

CII

Confederation of Indian Industries

CLZS

Chanderiya lead and zinc smelter

CO2

Carbon dioxide

CMT

Copper Mines of Tasmania Pty Limited, a company incorporated in Australia

Company or Vedanta

Vedanta Resources plc

Company financial statements

The audited financial statements for the Company for the year ended 31 March 2017 as defined in the Independent Auditors' Report on the individual Company Financial Statements to the members of Vedanta Resources plc

Convertible Bonds

$1,250million 5.5% guaranteed convertible bonds due 2016, issued by a wholly owned subsidiary of the Company, Vedanta Resource Jersey Limited ("VRJL") and guaranteed by the Company, the proceeds of which are to be applied for to support its organic growth pipeline, to increase its ownership interest in its subsidiaries and for general corporate purposes.

$883million 4.0% guaranteed convertible bonds due 2017, issued by a wholly owned subsidiary of the Company, Vedanta Resource Jersey II Limited ("VRJL-II") and guaranteed by the Company, the proceeds of which are to be applied for to refinance debt redemptions and for general corporate purposes.

Copper Business

The copper business of the Group, comprising:

- A copper smelter, two refineries and two copper rod plants in India, trading through Vedanta Limited, a company incorporated in India;
- One copper mine in Australia, trading through Copper Mines of Tasmania Pty Limited, a company incorporated in Australia; and
- An integrated operation in Zambia consisting of three mines, a leaching plant and a smelter, trading through Konkola Copper Mines PLC, a company incorporated in Zambia

CREP

Corporate responsibility for environmental protection

Cents/lb

US cents per pound

CRRI

Central Road Research Institute

CRISIL

CRISIL Limited is a rating agency incorporated in India

CSR

Corporate social responsibility

CTC

Cost to company, the basic remuneration of executives in India, which represents an aggregate figure encompassing basic pay, pension contributions and allowances

CY

Calendar year

DDT

Dividend distribution tax

Deferred Shares

Deferred shares of £1.00 each in the Company

DFS

Detailed feasibility study

DGMS

Director General of Mine Safety in the Government of India

Directors

The Directors of the Company

DMF

District Mineral Fund

DMT

Dry metric tonne

Dollar or $

United States Dollars, the currency of the United States of America

EAC

Expert advisory committee

EBITDA

EBITDA is a non-IFRS measure and represents earnings before special items, depreciation, amortisation, other gains and losses, interest and tax.

EBITDA Margin

EBITDA as a percentage of turnover

EBITDA interest cover

EBITDA divided by gross finance costs excluding accretive interest on convertible bonds, unwinding of discount on provisions, interest on defined benefit arrangements less investment revenue

EBITDA Margin excluding custom smelting

EBITDA Margin excluding EBITDA and turnover from custom smelting of Copper India, Copper Zambia and Zinc India businesses

Economic Holdings or Economic Interest

The economic holdings/interest are derived by combining the Group's direct and indirect shareholdings in the operating companies. The Group's Economic Holdings/Interest is the basis on which the Attributable Profit and net assets are determined in the consolidated accounts

E&OHSAS

Environment and occupational health and safety assessment standards

E&OHS

Environment and occupational health and safety management system

EPS

Earnings per ordinary share

ESOP

Employee share option plan

ESP

Electrostatic precipitator

Executive Committee

The Executive Committee to whom the Board has delegated operational management. It comprises of the Executive Vice Chairman, Chief Executive Officer and the senior management of the Group

Executive Directors

The Executive Directors of the Company

Expansion Capital Expenditure

Capital expenditure that increases the Group's operating capacity

Financial Statements or Group financial statements

The consolidated financial statements for the Company and the Group for the year ended 31 March 2017 as defined in the Independent Auditor's Report to the members of Vedanta Resources plc

FY

Financial year i.e. April to March.

GAAP, including UK GAAP and Indian GAAP

Generally Accepted Accounting Principles, the common set of accounting principles, standards and procedures that companies use to compile their financial statements in their respective local territories

GDP

Gross domestic product

Gearing

Net Debt as a percentage of Capital Employed

GJ

Giga joule

Government or Indian Government

The Government of the Republic of India

Gratuity

A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

Group

The Company and its subsidiary undertakings and, where appropriate, its associate undertaking

Gross finance costs

Finance costs before capitalisation of borrowing costs

HIIP

Hydrocarbons initially-in place

HSE

Health, safety and environment

HZL

Hindustan Zinc Limited, a company incorporated in India

IAS

International Accounting Standards

ICMM

International Council on Mining and Metals

IFRIC

IFRS Interpretations Committee

IFRS

International Financial Reporting Standards

INR

Indian Rupees

Interest Cover

EBITDA divided by finance costs

IPP

Independent power plant

ISO 9001

An international quality management system standard published by the International Organisation for Standardisation

ISO 14001

An international environmental management system standard published by the International Organisation for Standardisation

Iron Ore Sesa

Iron ore Division of Vedanta Limited, comprising of a Iron ore mines in Goa and Karnataka in India.

Jharsuguda Aluminium

Aluminium Division of Vedanta Limited, comprising of an aluminium refining and smelting facilities at Jharsuguda and Lanjigarh in Odisha in India.

KCM or Konkola Copper Mines

Konkola Copper Mines PLC, a company incorporated in Zambia

KDMP

Konkola deep mining project

Key Result Areas or KRA s

For the purpose of the remuneration report, specific personal targets set as an incentive to achieve short-term goals for the purpose of awarding bonuses, thereby linking individual performance to corporate performance

KLD

Kilo litres per day

KPI s

Key performance indicators

KTPA

Thousand tonnes per annum

Kwh

Kilo-watt hour

Kwh/d

Kilo-watt hour per day

LIBOR

London inter bank offered rate

LIC

Life Insurance Corporation

Listing or IPO (Initial Public Offering)

The listing of the Company's ordinary shares on the London Stock Exchange on 10 December 2003

Listing Particulars

The listing particulars dated 5 December 2003 issued by the Company in connection with its Listing or revised listing filled in 2011.

Listing Rules

The listing rules of the Financial Services Authority, with which companies with securities that are listed in the UK must comply

LME

London Metals Exchange

London Stock Exchange

London Stock Exchange plc

Lost time injury

An accident/injury forcing the employee/contractor to remain away from his/her work beyond the day of the accident

LTIFR

Lost time injury frequency rate: the number of lost time injuries per million man hours worked

LTIP

The Vedanta Resources Long-Term Incentive Plan or Long-Term Incentive Plan

MALCO

The Madras Aluminium Company Limited, a company incorporated in India

Management Assurance Services (MAS)

The function through which the Group's internal audit activities are managed

MAT

Minimum alternative tax

MBA

Mangala, Bhagyam, Aishwarya

MIC

Metal in concentrate

MIS

Management information system

MOEF

The Ministry of Environment & Forests of the Government of the Republic of India

mt or tonnes

Metric tonnes

MU

million Units

MW

Megawatts of electrical power

NCCBM

National Council of Cement and Building Materials

Net (Debt)/Cash

Total debt after fair value adjustments under IAS 32 and 39, cash and cash equivalents, liquid investments and debt related derivative

NGO

Non-governmental organisation

NIHL

Noise induced hearing loss

Non-executive Directors

The Non-Executive Directors of the Company

NMET

National Mineral Exploration Trust

OECD

Organisation for Economic Co-operation and Development

OHSAS 18001

Occupational Health and Safety Assessment Series (standards for occupational health and safety management systems)

Oil & Gas business

Oil & Gas division of Vedanta Limited, is involved in the business of exploration, development and production of Oil & Gas.

Ordinary Shares

Ordinary shares of 10 US cents each in the Company

ONGC

Oil and Natural Gas Corporation Limited, a company incorporated in India

OPEC

Organisation of the Petroleum Exporting Countries

PBT

Profit before tax

PFC

Per fluorocarbons

PHC

Primary health centre

PPE

Personal protective equipment

Provident Fund

A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

PSC

A "production sharing contract" by which the Government of India grants a license to a company or consortium of companies (the 'Contractor") to explore for and produce any hydrocarbons found within a specified area and for a specified period, incorporating specified obligations in respect of such activities and a mechanism to ensure an appropriate sharing of the profits arising there from (if any) between the Government and the Contractor.

Recycled water

Water released during mining or processing and then used in operational activities

Relationship Agreement

The agreement between the Company, Volcan Investments Limited and members of the Agarwal family which had originally been entered into at the time of the Company's listing in 2003 and was subsequently amended in 2011 and 2014 to regulate the ongoing relationship between them, the principal purpose of which is to ensure that the Group is capable of carrying on business independently of Volcan, the Agarwal family and their associates.

Return on Capital Employed or ROCE

Operating profit after tax as a ratio of capital invested in operations as at the balance sheet date and excludes investments in project capital work-in-progress and exploration assets

RO

Reverse osmosis

SA 8000

Standard for Social Accountability based on international workplace norms in the International Labour Organisation ('ILO') conventions and the UN's Universal Declaration of Human Rights and the Convention on Rights of the Child

Senior Management Group

For the purpose of the remuneration report, the key operational and functional heads within the Group

SEWT

Sterlite Employee Welfare Trust, a long-term investment plan for Sterlite senior management

Sterlite Copper

Copper Division of Vedanta Limited comprising of a copper smelter, two refineries and two copper rod plants in India.

SHGs

Self help groups

SID

Senior Independent Director

SO2

Sulphur dioxide

SBU

Strategic Business Unit

STL

Sterlite Technologies Limited, a company incorporated in India

Special items

Items which derive from events and transactions that need to be disclosed separately by virtue of their size or nature (refer Note 2(A) (III) special items of accounting policies)

SPM

Suspended particulate matter. Fine dust particles suspended in air

Sterling, GBP or £

The currency of the United Kingdom

Superannuation Fund

A defined contribution pension arrangement providing pension benefits consistent with Indian market practices

Sustaining Capital Expenditure

Capital expenditure to maintain the Group's operating capacity

TCM

Thalanga Copper Mines Pty Limited, a company incorporated in Australia

TC/RC

Treatment charge/refining charge being the terms used to set the smelting and refining costs

TGS

Tail gas scrubber

TGT

Tail gas treatment

TLP

Tail Leaching Plan

tpa

Metric tonnes per annum

TPM

Tonne per month

TSPL

Talwandi Sabo Power Limited, a company incorporated in India

TSR

Total shareholder return, being the movement in the Company's share price plus reinvested dividends

Twin Star

Twin Star Holdings Limited, a company incorporated in Mauritius

Twin Star Holdings Group

Twin Star and its subsidiaries and associated undertaking

Underlying EPS

Underlying earnings per ordinary share

Underlying Profit

Profit for the year after adding back special items and other gains and losses and their resultant tax and Non-controlling interest effects

US cents

United States cents

UK CORPORATE GOVERNANCE CODE OR THE CODE

The UK Corporate Governance Code 2014 issued by the Financial Reporting Council

Vedanta Limited (formerly known as Sesa Sterlite Limited/ Sesa Goa Limited)

Vedanta Limited, a company incorporated in India engaged in the business of Copper smelting, Iron Ore mining, Aluminium mining, refining and smelting and Energy generation.

VFD

Variable frequency drive

VFJL

Vedanta Finance (Jersey) Limited, a company incorporated in Jersey

VGCB

Vizag General Cargo Berth Private Limited, a company incorporated in India

Volcan

Volcan Investments Limited, a company incorporated in the Bahamas

VRCL

Vedanta Resources Cyprus Limited, a company incorporated in Cyprus

VRFL

Vedanta Resources Finance Limited, a company incorporated in the United Kingdom

VRHL

Vedanta Resources Holdings Limited, a company incorporated in the United Kingdom

VSS

Vertical Stud Söderberg

Water Used for Primary Activities

Total new or make-up water entering the operation and used for the operation's primary activities; primary activities are those in which the operation engages to produce its product

WBCSD

World Business Council for Sustainable Development

ZCI

Zambia Copper Investment Limited, a company incorporated in Bermuda

ZCCM

ZCCM Investments Holdings plc, a company incorporated in Zambia

ZRA

Zambia Revenue Authority

Independent Auditor's Report
To the Members of Vedanta Resources plc

Opinion on financial statements of Vedanta Resources plc
In our opinion:
- the financial statements give a true and fair view of the state of the group's and of the parent company's affairs as at 31 March 2016 and of the group's loss for the year then ended;
- the group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including FRS 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the group financial statements, Article 4 of the IAS Regulation.

The financial statements comprise the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, the Consolidated and Parent Company Balance Sheets, the Consolidated Cash Flow Statement, the Consolidated Statement of Changes in Equity, and the related notes 1 to 59. The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and IFRSs as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) including FRS 101 "Reduced Disclosure Framework".

Going concern and the directors' assessment of the principal risks that would threaten the solvency or liquidity of the group
As required by the Listing Rules we have reviewed the directors' statement regarding the appropriateness of the going concern basis of accounting contained within note 1 to the financial statements and the directors' statement on the longer-term viability of the group contained within the strategic report on page 53.

We have nothing material to add or draw attention to in relation to:
- the directors' confirmation on pages 133 to 134 that they have carried out a robust assessment of the principal risks facing the group, including those that would threaten its business model, future performance, solvency or liquidity;
- the disclosures on pages 28 to 35 that describe those risks and explain how they are being managed or mitigated;
- the directors' statement in note 1 to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the group's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements;
- the directors' explanation on page 133 as to how they have assessed the prospects of the group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We agreed with the directors' adoption of the going concern basis of accounting and we did not identify any such material uncertainties. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the group's ability to continue as a going concern.

Independence
We are required to comply with the Financial Reporting Council's Ethical Standards for Auditors and we confirm that we are independent of the group and we have fulfilled our other ethical responsibilities in accordance with those standards. We also confirm we have not provided any of the prohibited non-audit services referred to in those standards.

Our assessment of risks of material misstatement
The assessed risks of material misstatement described below are those that had the greatest effect on our audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team.

The risks identified below are the same risks as in the prior year.

Risk	How the scope of our audit responded to the risk

Risk	How the scope of our audit responded to the risk

Impairment of property, plant and equipment (PP&E) assets
The group has recognised PP&E assets with a net book value of US$16,647.8 million at 31 March 2016 after recording impairments of US$5,187.0 million in 2016, principally in relation to Cairn of which US$4,018.3 million relates to E&E assets (discussed further below) and US$1,168.7 million to other PP&E.
 	
The assessment of the recoverable amount of PP&E requires management to exercise judgement around complex areas, as described in the group's critical accounting judgements in note 1 to the financial statements, specifically:
• the Rajasthan producing assets within the Oil & Gas business following a significant decrease in oil prices;
• the partially complete Lanjigarh expansionary programme within the Aluminium business unit received certain clearances in the year, however remained on hold during the year due to the challenges in obtaining locally-sourced bauxite;
• the operations in Goa and Karnataka within the Iron Ore business unit as a result of lower iron ore prices and statewide production caps in place; and
• the KCM operations in Zambia following lower copper prices and continuing operational challenges, including significantly higher electricity prices.
 	
For more information see notes 2b, 5 and 17 in the financial statements that provide further details and disclosures to this matter.
	We have:
	• Obtained and assessed the inputs into management's assessment as to whether indicators of impairment exist specifically, in relation to the Rajasthan producing assets, the Lanjigarh expansionary project, the Iron Ore operations in Goa and Karnataka and the KCM copper operations in Zambia;
	• obtained and assessed the valuation models used to determine the higher of value in use or fair value less cost of disposal of the relevant asset by challenging the key assumptions made by management in relation to these models, including:
	  • the expected timings of approvals and renewal of licenses, holding discussions with management, reviewing regulatory approvals and reviewing any correspondence relating to potential changes in the economic terms;
	  • source of reserve and production estimates;
	  • resources to reserves conversion ratios where applicable;
	  • exchange rates; and
	  • operating and capital expenditure estimates
	by reference to independent third party evidence and consultation with operational management;
	• benchmarking and analysis of commodity, oil & gas price assumptions against forward curves and analyst data;
	• recalculated and benchmarked discount rates applied to third party evidence and involvement of Deloitte valuation specialists;
	• testing the mechanical accuracy of the models used; and
	• assessed whether assumptions had been determined and applied on a consistent basis across the Group.

Impairment of evaluation and exploration (E&E) assets Following significant downward pressure on oil, gas and other commodity prices, which are a key assumption in the valuation of the recoverable value of E&E assets, impairment of E&E assets has been a specific area of focus for the FY16 audit. The net book value of E&E assets at 31 March 2016 is US$1,471.4 million after the group has written off E&E assets totalling US$4,018.3 million in the year, following the low commodity pricing environment and reassessment of capital allocation priorities. US$1,180.0 million of net book value relates to the Rajasthan oil field which is accounted for as one Cash Generating Unit. The assessment of the carrying value of E&E assets requires management to exercise judgement around complex areas, as described in the group's critical accounting judgements in note 1 to the financial statements. Economic value can often be difficult to determine given the relatively early stages of development. The areas of judgement include the group's intention to proceed with a future work programme for a prospect or license, the likelihood of license renewal or extension and the success of drilling and geological analysis. For more information see notes 2b, 5 and 17 in the financial statements that provide further details and disclosures to this matter.	We evaluated management's assessment of the impairment indicators on its E&E assets with reference to the criteria of IFRS 6 Exploration for and Evaluation of Mineral Resources and the group's successful efforts accounting policy (see page 158). In 2016, the group has reconsidered its exploration strategy and locations for future exploration focus in the context of a lower oil and commodity price environment and the availability of capital in these circumstances. Our procedures included understanding the Group's ongoing E&E activity, by participating in meetings with operational and finance management at all key locations and obtaining evidence including reviewing minutes of board and executive committee meetings, confirmations of budget allocation, the results of on-going appraisal activity and the licensing status to assess E&E assets. Where indicators of impairment were identified, we determined whether management provided in full for the projects that are not expected to proceed or valuations were performed where the projects are progressing but the carrying value may not be fully recoverable. Where valuations were prepared, we challenged the key assumptions using the same approach as described under the impairment of PPE assets above.
Revenue recognition IAS 18 *Revenue* and the Group's revenue recognition policy permits revenue to be recognised only when the significant risks and rewards of ownership have transferred from the seller to the buyer. The risk is related to: • the determination of the point of risk and reward transfer, particularly where this is different to the point of invoicing; • incorrect valuation of provisionally priced sales (where the pricing is only finalised based on market prices subsequent to the balance sheet date); • the value of regulated sales, and the resulting year-end	We have reviewed the application of the Group's revenue recognition policy and: • on a sample basis, reviewed the terms of sales agreements to conclude on the point at which risk and reward transfer takes place; • selected sales made pre and post year end, agreeing the date of revenue recognition to third party support, such as bills of lading, to confirm they have been recognised in the correct period; • recalculated the value of provisional pricing adjustments and validating the assumptions used to third party data where possible;

Risk	How the scope of our audit responded to the risk
receivable of US$98 million, made to the Grid Corporation of Odisha Limited (“Gridco”) where a dispute regarding the interpretation of the tariff agreement is pending appellate tribunal resolution; and • the calculation of Cairn’s oil & gas sales on an entitlement basis. For more information see notes 2a and 4 in the financial statements that provide further details and disclosures to this matter.	• challenged management in respect of whether the Gridco trade receivables are recoverable through the review of state regulatory commission and the appellate tribunal rulings, and review of the underlying power purchase agreements, receipts in the year and the external legal opinions received; and • reviewed the terms of Cairn’s profit sharing agreements and tested the underlying cost recovery and profit petroleum calculations. This included reviewing the ageing of current unapproved costs and through sample testing ensuring that costs were in accordance with pre-approved Operational Committee work orders and prepared in accordance with requisite approval requirements.
Litigation, environmental and regulatory risk As is the norm in extractive industries, there are a significant number of legal claims in the Group and a risk exists that the Group may not have adequately provided for liabilities or disclosed contingent liabilities. The Group has recognised provisions of US$97 million and disclosed contingent liabilities of US$889 million in respect of ongoing legal matters. There is also a risk of the Group’s reputation being brought into disrepute resulting in financial and reputational damage. The Group continues to be involved in a high number of legal claims. It is not unusual for claims to remain outstanding for a number of years, with the regulatory environment becoming increasingly complex and regulators focusing on the environmental and social impacts. These ongoing claims, environmental and regulatory enquiries require management to exercise judgement in determining the need for a provision or disclosure. These can give rise to a threat to the future operations as well as the Group’s current financial performance and reputation. For more information see notes 30, 38 and 42 in the financial statements that provide further details and disclosures to these matters.	We have: • reviewed management’s legal paper and challenged their assessment of the probability of success in these cases, the magnitude of any potential loss and their conclusions reached through discussions with the head of legal and operational management; • inspected external legal opinions (where considered necessary) and other evidence that supports factual information in management’s responses; • focused our procedures on the terms and conditions of mining licenses and performed procedures to gain assurance over the compliance and validity of significant mining licenses and environmental clearances; • we have assessed the appropriateness of provisions and considered the impact of the procedures performed above on the financial statements and whether the disclosures therein are in accordance with IAS 37 *Provisions, contingent liabilities and contingent assets*.
Taxation There is a risk that the Group’s aggregated taxation exposure in all jurisdictions, including the exposure to withholding taxes following past acquisitions, financing and transfer pricing arrangements, sales taxes and recognition of deferred taxation assets and liabilities, may not have been adequately valued and disclosed in the financial statements due to the complexities, timescales for resolution and the need to negotiate with various tax authorities. In the prior year, Cairn India received an order from the Indian Tax Authority for an amount of US$3,277.4 million relating to withholding taxes not paid on the acquisition of Cairn India by the previous owner, Cairn Energy plc. At 31 March 2016, US$620.2 million has been recognised as a deferred taxation liability, US$1,255.4 million has been recognised as a deferred taxation asset and US$18.5 million has been recognised as a net current tax receivable and a US$361.7 milion non-current tax receivable, with a total tax credit of US$1,481.9 million recorded in the consolidated income statement. For more information see notes 12, 31 and 38 in the financial statements that provide further details and disclosures to these matters.	We reviewed the potential taxation exposures within the Group and, through discussions with the Group’s taxation department, the tax specialists within the audit team and review of relevant documentation, including external legal advice and correspondence with tax authorities, we evaluated the appropriateness of the provisions raised and contingent liability disclosures. We have obtained the forecast utilisation of deferred tax assets, which have been recognised as part of deferred tax, on a legal entity basis and independently assessed whether the forecasts support the recognition of these assets. We considered, in the context of our tax specialists’ prior experience of similar issues, the Group‘s exposure to withholding taxes following past acquisitions, the current tax exposure following the Group’s internal restructuring, transfer pricing arrangements and deferred taxation assets and liabilities recognised to assess whether these matters were appropriately reflected and disclosed in the financial statements. We have reviewed the tax disclosures with reference to IAS 12 *Income Taxes*.

The description of risks above should be read in conjunction with the significant issues considered by the Audit Committee discussed on pages 108 to 109.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Our application of materiality
We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

We determined materiality for the group to be US$40 million (2015: US$50 million), which is approximately 5% of normalised three year profit before tax (2015: 5% of normalised profit before tax), and below 1% (2015: 1%) of equity. The use of a normalised three year profit before tax is a change to our approach last year, when materiality was based on the normalised 2015 profit before tax only. This change of approach was determined to be appropriate given the current volatility in commodity prices and their impact on the current year performance and the cyclical nature of the mining industry. Profit before tax has been normalised by adjusting for specific one-off items: the impairment charges recognised on the PP&E and E&E assets during the year following a significant decrease in commodity and oil & gas prices. Normalised profit before tax is considered a more appropriate and less volatile measure reflecting the underlying scale of the Group.

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of US$800,000 (2015: US$1.0 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit
Our group audit was scoped by obtaining an understanding of the group and its environment, including group-wide controls, and assessing the risks of material misstatement at the group level. Based on that assessment, we focused our group audit scope primarily on the audit work at 17 locations (2015: 16 locations). 13 of these were subject to a full audit, whilst the remaining 4 were subject to an audit of specified account balances where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the group's operations at those locations (2015: 12 and 4 respectively). An additional location was scoped in in the current year as a result of the lower materiality.

These 17 locations represent the principal business units and account for 98% (2015: 94%) of the Group's net assets, 96% (2015: 100%) of the Group's revenue and 98% (2015: 91%) of the Group's normalised profit before tax. They were also selected to provide an appropriate basis for undertaking audit work to address the risks of material misstatement identified above. Our audit work at the 17 locations was executed at levels of materiality between US$18 million and US$22 million (2015: US$22.5 million and US$27.5 million), as applicable to each individual entity.

At the parent entity level we also tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.

The group audit team continued to follow a programme of planned visits that has been designed so that the Senior Statutory Auditor or a senior member of the group audit team visits significant locations where the group audit scope was focused at least once every five years. At each six month reporting date we include the component audit partners and teams in our team briefing, discuss their risk assessment, and review documentation of the findings from their work.

Opinion on other matters prescribed by the Companies Act 2006
In our opinion:
- the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006; and the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which we are required to report by exception
Adequacy of explanations received and accounting records
Under the Companies Act 2006 we are required to report to you if, in our opinion:
- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Directors' remuneration
Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the Directors' Remuneration Report to be audited is not in agreement with the accounting records and returns. We have nothing to report arising from these matters.

Corporate Governance Statement
Under the Listing Rules we are also required to review the part of the Corporate Governance Statement relating to the company's compliance with certain provisions of the UK Corporate Governance Code. We have nothing to report arising from our review.

Our duty to read other information in the Annual Report
Under International Standards on Auditing (UK and Ireland), we are required to report to you if, in our opinion, information in the annual report is:
- materially inconsistent with the information in the audited financial statements; or
- apparently materially incorrect based on, or materially inconsistent with, our knowledge of the group acquired in the course of performing our audit; or
- otherwise misleading.

In particular, we are required to consider whether we have identified any inconsistencies between our knowledge acquired during the audit and the directors' statement that they consider the annual report is fair, balanced and understandable and whether the annual report appropriately discloses those matters that we communicated to the audit committee which we consider should have been disclosed. We confirm that we have not identified any such inconsistencies or misleading statements.

Respective responsibilities of directors and auditor
As explained more fully in the Directors' Responsibilities Statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). We also comply with International Standard on Quality Control 1 (UK and Ireland). Our audit methodology and tools aim to ensure that our quality control procedures are effective, understood and applied. Our quality controls and systems include our dedicated professional standards review team and independent partner reviews.

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Scope of the audit of the financial statements
An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the group's and the parent company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

Christopher Thomas (Senior statutory auditor)
for and on behalf of Deloitte LLP
Chartered Accountants and Statutory Auditor
London, United Kingdom
11 May 2016

Consolidated Income Statement

(US$ million except as stated)	Note	Year ended 31 March 2016 Before special items	Year ended 31 March 2016 Special items	Year ended 31 March 2016 Total	Year ended 31 March 2015 Before special items	Year ended 31 March 2015 Special items	Year ended 31 March 2015 Total
Revenue	4	10,737.9	–	10,737.9	12,878.7	–	12,878.7
Cost of sales		(9,241.1)	–	(9,241.1)	(10,463.9)	–	(10,463.9)
Gross profit		**1,496.8**	**–**	**1,496.8**	**2,414.8**	**–**	**2,414.8**
Other operating income		101.7	–	101.7	104.0	–	104.0
Distribution costs		(223.8)	–	(223.8)	(245.2)	–	(245.2)
Administrative expenses		(493.5)	–	(493.5)	(538.1)	–	(538.1)
Special items	5	–	(5,210.1)	(5,210.1)	–	(6,744.2)	(6,744.2)
Operating profit/(loss)		**881.2**	**(5,210.1)**	**(4,328.9)**	**1,735.5**	**(6,744.2)**	**(5,008.7)**
Investment revenue	6	697.8	–	697.8	832.6	–	832.6
Finance costs	7	(1,280.4)	–	(1,280.4)	(1,387.2)	–	(1,387.2)
Other gains and (losses) [net]	8	(72.5)	–	(72.5)	(76.9)	–	(76.9)
Profit/(loss) before taxation (a)		**226.1**	**(5,210.1)**	**(4,984.0)**	**1,104.0**	**(6,744.2)**	**(5,640.2)**
Tax credit – special items	12	–	1,737.4	1,737.4	–	2,205.1	2,205.1
Net tax expense – others	12	(255.5)	–	(255.5)	(352.6)	–	(352.6)
Net tax credit/(expense) (b)	12	**(255.5)**	**1,737.4**	**1,481.9**	**(352.6)**	**2,205.1**	**1,852.5**
(Loss)/profit for the year from continuing operations (a+b)	9	**(29.4)**	**(3,472.7)**	**(3,502.1)**	**751.4**	**(4,539.1)**	**(3,787.7)**
Attributable to:							
Equity holders of the parent		(392.9)	(1,444.5)	(1,837.4)	(74.7)	(1,723.9)	(1,798.6)
Non-controlling interests		363.5	(2,028.2)	(1,664.7)	826.1	(2,815.2)	(1,989.1)
Profit/(loss) for the year from continuing operations		**(29.4)**	**(3,472.7)**	**(3,502.1)**	**751.4**	**(4,539.1)**	**(3,787.7)**
Loss per share (US cents)							
Basic loss per ordinary share	13	(142.4)	(523.4)	(665.8)	(27.2)	(627.3)	(654.5)
Diluted loss per ordinary share	13	(142.4)	(523.4)	(665.8)	(27.2)	(627.3)	(654.5)

Consolidated Statement of Comprehensive Income

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Loss for the year from continuing operations	**(3,502.1)**	**(3,787.7)**
Income and expenses recognised directly in equity:		
Items that will not be reclassified subsequently to income statement:		
Remeasurement of net defined benefit plans	8.0	(14.0)
Tax effects on items recognised directly in equity	(2.5)	4.6
Total (a)	**5.5**	**(9.4)**
Items that may be reclassified subsequently to income statement:		
Exchange differences arising on translation of foreign operations	(810.2)	(582.0)
Gain in fair value of available-for-sale financial assets (Note 18)	2.3	2.1
Loss in fair value of cash flow hedges deferred in reserves	(24.5)	(27.4)
Tax effects arising on cash flow hedges deferred in reserves	(2.8)	0.8
Gain in fair value of cash flow hedges transferred to income statement	(3.0)	(17.8)
Tax effects arising on cash flow hedges transferred to income statement	1.6	6.0
Total (b)	**(836.6)**	**(618.3)**
Other comprehensive loss for the year (a+b)	(831.1)	(627.7)
Total comprehensive loss for the year	**(4,333.2)**	**(4,415.4)**
Attributable to:		
Equity holders of the parent	(2,223.6)	(2,089.8)
Non-controlling interests	(2,109.6)	(2,325.6)
Total comprehensive loss for the year	**(4,333.2)**	**(4,415.4)**

Consolidated Balance Sheet

(US$ million)	Note	As at year ended 31 March 2016	As at year ended 31 March 2015
Assets			
Non-current assets			
Goodwill	15	16.6	16.6
Intangible assets	16	92.2	101.9
Property, plant and equipment	17	16,647.8	23,352.0
Financial asset investments	18	6.5	4.2
Non-current tax assets		361.7	394.0
Other non-current assets	19	237.9	156.0
Financial instruments (derivatives)	29	0.8	0.2
Deferred tax assets	31	1,255.4	1,252.6
		18,618.9	**25,277.5**
Current assets			
Inventories	20	1,365.8	1,605.7
Trade and other receivables	21	1,344.3	1,839.2
Financial instruments (derivatives)	29	18.3	16.6
Current tax assets		35.5	40.1
Liquid investments	22	8,508.2	7,856.1
Cash and cash equivalents	23	428.3	353.7
		11,700.4	**11,711.4**
Total assets		**30,319.3**	**36,988.9**
Liabilities			
Current liabilities			
Short-term borrowings	24	(3,726.6)	(3,179.2)
Convertible bonds	28	(587.2)	–
Trade and other payables	27a	(5,876.1)	(4,730.0)
Financial instruments (derivatives)	29	(67.7)	(45.7)
Retirement benefits	33	(4.9)	(12.7)
Provisions	30	(132.1)	(140.8)
Current tax liabilities		(17.0)	(74.2)
		(10,411.6)	**(8,182.6)**
Net current assets		**1,288.8**	**3,528.8**
Non-current liabilities			
Medium and long-term borrowings	24	(11,949.5)	(12,385.6)
Convertible bonds	28	–	(1,103.0)
Trade and other payables	27b	(223.5)	(194.3)
Financial instruments (derivatives)	29	(1.2)	(0.1)
Deferred tax liabilities	31	(620.2)	(2,588.7)
Retirement benefits	33	(61.6)	(61.9)
Provisions	30	(187.4)	(203.4)
Non-equity non-controlling interests	25	(11.9)	(11.9)
		(13,055.3)	**(16,548.9)**
Total liabilities		**(23,466.9)**	**(24,731.5)**

(US$ million)	Note	**As at year ended 31 March 2016**	As at year ended 31 March 2015
Net assets		**6,852.4**	**12,257.4**
Equity			
Share capital	35	30.1	30.0
Share premium		201.5	198.5
Treasury shares		(557.2)	(556.9)
Share-based payment reserve	32	29.9	27.4
Convertible bond reserve		6.0	38.4
Hedging reserve		(87.7)	(74.7)
Other reserves		(1.4)	339.9
Retained earnings		(334.0)	1,600.5
Equity attributable to equity holders of the parent		(712.8)	1,603.1
Non-controlling interests	36	7,565.2	10,654.3
Total equity		**6,852.4**	**12,257.4**

Financial statements of Vedanta Resources plc, registration number 4740415, were approved by the Board of Directors on 11 May 2016 and signed on their behalf by:

Tom Albanese
Chief Executive Officer

Consolidated Cash Flow Statement

(US$ million)	Note	**Year ended 31 March 2016**	Year ended 31 March 2015
Operating activities			
Loss before taxation		(4,984.0)	(5,640.2)
Adjustments for:			
Depreciation and amortisation		1,455.2	2,005.7
Investment revenue		(697.8)	(832.6)
Finance costs		1,280.4	1,387.2
Other gains and (losses)		72.5	76.9
Loss on disposal of property, plant and equipment		1.5	4.6
Write-off of unsuccessful exploration costs		4.5	128.7
Share-based payment charge		15.6	28.6
Impairment of mining reserves and assets		5,187.0	6,694.4
Other non-cash items		2.7	40.8
Operating cash flows before movements in working capital		**2,337.6**	**3,894.1**
Decrease in inventories		163.7	40.0
(Increase)/decrease in receivables		343.3	(134.5)
Increase in payables		657.4	225.2
Cash generated from operations		**3,502.0**	**4,024.8**
Dividends received		0.3	0.3
Interest income received		633.1	587.7
Interest paid		(1,268.4)	(1,334.0)
Income taxes paid		(354.7)	(601.7)
Dividends paid		(110.6)	(171.3)
Net cash inflow from operating activities		**2,401.7**	**2,505.8**
Cash flows from investing activities			
Purchases of property, plant and equipment and intangibles		(872.4)	(2,289.1)
Proceeds on disposal of property, plant and equipment		10.0	25.7
Sale/(purchase) of liquid investments	26	(999.9)	671.7
Net cash used in investing activities		**(1,862.3)**	**(1,591.7)**
Cash flows from financing activities			
Issue of ordinary shares		0.1	0.2
Purchase of shares under DSBP scheme		(0.9)	
Dividends paid to non-controlling interests of subsidiaries		(325.5)	(340.4)
Acquisition of additional interests in subsidiaries/share buyback by subsidiary		–	(819.1)
Decrease in short-term borrowings	26	(1,022.1)	(818.8)
Proceeds from long-term borrowings	26	2,383.2	3,748.1
Repayment of long-term borrowings	26	(958.0)	(2,698.0)
Buyback of convertible bond		(523.6)	–
Net cash used in financing activities		**(446.8)**	**(928.0)**
Net increase/(decrease) in cash and cash equivalents	26	92.6	(13.9)
Effect of foreign exchange rate changes	26	(18.0)	(1.8)
Cash and cash equivalents at beginning of year		353.7	369.4
Cash and cash equivalents at end of year	23 & 26	**428.3**	**353.7**

Consolidated Statement of Changes in Equity

(US$ million)	Share capital (Note 35)	Share premium	Treasury shares	Share-based payment reserves	Convertible bond reserve	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling interests	Total equity
	Attributable to equity holders of the Company										
At 1 April 2015	**30.0**	**198.5**	**(556.9)**	**27.4**	**38.4**	**(74.7)**	**339.9**	**1,600.5**	**1,603.1**	**10,654.3**	**12,257.4**
Loss for the year	–	–	–	–	–	–	–	(1,837.4)	(1,837.4)	(1,664.7)	(3,502.1)
Other comprehensive loss for the year	–	–	–	–	–	(13.0)	(373.2)	–	(386.2)	(444.9)	(831.1)
Total comprehensive loss for the year	**–**	**–**	**–**	**–**	**–**	**(13.0)**	**(373.2)**	**(1,837.4)**	**(2,223.6)**	**(2,109.6)**	**(4,333.2)**
Acquisition of shares under DSBP scheme	–	–	(0.3)	–	–	–	–	(0.6)	(0.9)	–	(0.9)
Convertible bond transfer (Note 28)	–	–	–	–	(24.6)	–	–	24.6	–	–	–
Conversion of bond into equity	0.0	3.0	–	–	(0.1)	–	–	–	2.9	–	2.9
Convertible bond buyback	–	–	–	–	(7.7)	–	–	5.1	(2.6)	–	(2.6)
Transfers[1]	–	–	–	–	–	–	31.9	(31.9)	–	–	–
Dividends paid/payable (Note 14)	–	–	–	–	–	–	–	(110.6)	(110.6)	(979.5)	(1,090.1)
Exercise of LTIP awards	0.1	–	–	(13.1)	–	–	–	13.1	0.1	–	0.1
Recognition of share-based payment (Note 32)	–	–	–	15.6	–	–	–	–	15.6	–	15.6
Others[3]	–	–	–	–	–	–	–	3.2	3.2	–	3.2
At 31 March 2016	**30.1**	**201.5**	**(557.2)**	**29.9**	**6.0**	**(87.7)**	**(1.4)**	**(334.0)**	**(712.8)**	**7,565.2**	**6,852.4**

	Attributable to equity holders of the Company										
(US$ million)	Share capital (Note 35)	Share premium	Treasury shares	Share-based payment reserves	Convertible bond reserve	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling interests	Total equity
At 1 April 2014	**29.8**	**198.5**	**(556.9)**	**46.9**	**80.1**	**(50.4)**	**471.6**	**3,790.8**	**4,010.4**	**13,964.4**	**17,974.8**
Loss for the year	–	–	–	–	–	–	–	(1,798.6)	(1,798.6)	(1,989.1)	(3,787.7)
Other comprehensive loss for the year	–	–	–	–	–	(24.3)	(266.9)	–	(291.2)	(336.5)	(627.7)
Total comprehensive loss for the year	**–**	**–**	**–**	**–**	**–**	**(24.3)**	**(266.9)**	**(1,798.6)**	**(2,089.8)**	**(2,325.6)**	**(4,415.4)**
Convertible bond transfer (Note 28)	–	–	–	–	(41.7)	–	–	41.7	–	–	–
Transfers[1]	–	–	–	–	–	–	135.2	(135.2)	–	–	–
Dividends paid (Note 14)	–	–	–	–	–	–	–	(171.3)	(171.3)	(340.4)	(511.7)
Additional investment in subsidiary/share buyback by subsidiary	–	–	–	–	–	–	–	(175.0)	(175.0)	(644.1)	(819.1)
Exercise of LTIP awards	0.2	–	–	(48.1)	–	–	–	48.1	0.2	–	0.2
Recognition of share-based payment (Note 32)	–	–	–	28.6	–	–	–	–	28.6	–	28.6
At 31 March 2015	**30.0**	**198.5**	**(556.9)**	**27.4**	**38.4**	**(74.7)**	**339.9**	**1,600.5**	**1,603.1**	**10,654.3**	**12,257.4**

Other reserves comprise[1]

(US$ million)	Currency translation reserve	Merger reserve[2]	Investment revaluation reserve	General reserves	Total
At 1 April 2014	**(1,612.7)**	**4.4**	**1.2**	**2,078.7**	**471.6**
Exchange differences on translation of foreign operations	(263.8)	–	–	–	(263.8)
Gain in fair value of available-for-sale financial assets	–	–	1.4	–	1.4
Remeasurements	–	–	–	(4.5)	(4.5)
Transfer from retained earnings[1]	–	–	–	135.2	135.2
At 1 April 2015	**(1,876.5)**	**4.4**	**2.6**	**2,209.4**	**339.9**
Exchange differences on translation of foreign operations	(378.7)	–	–	–	(378.7)
Gain in fair value of available-for-sale financial assets	–	–	1.5	–	1.5
Remeasurements	–	–	–	4.0	4.0
Transfer from retained earnings[1]	–	–	–	31.9	31.9
At 31 March 2016	**(2,255.2)**	**4.4**	**4.1**	**2,245.3**	**(1.4)**

1 Transfer to general reserve during the year ended 31 March 2016 and 31 March 2015 includes US$31.9 million and US$30.0 million of debenture redemption reserve respectively.
2 The merger reserve arose on incorporation of the Company during the year ended 31 March 2004. The investment in Twin Star had a carrying amount value of US$20.0 million in the accounts of Volcan. As required by the Companies Act 1985, Section 132, upon issue of 156,000,000 ordinary shares to Volcan, Twin Star's issued share capital and share premium account have been eliminated and a merger reserve of US$4.4 million arose, being the difference between the carrying value of the investment in Twin Star in Volcan's accounts and the nominal value of the shares issued to Volcan.
3 Others: US$3.2 million of tax refund received on appropriatoin of reserves in BALCO.

Notes to the Financial Statements

1. Presentation of financial statements

General information

Vedanta Resources plc (the Company) is a company incorporated and domiciled in the United Kingdom and is a London listed diversified global natural resources major. The Group produces aluminium, copper, zinc, lead, silver, iron ore, oil & gas and commercial energy. Vedanta has operations in India, Zambia, Namibia, South Africa, Ireland, Liberia and Australia. These financial statements are presented in US dollars being the functional currency of the Company and all values are rounded to one decimal of the nearest million except where other otherwise indicated.

Compliance with applicable law and IFRS

The financial statements have been prepared in accordance with those parts of the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards (IFRS), Article 4 of the IAS Regulation and IFRS as adopted by the European Union and related interpretations.

Basis of preparation

The financial statements have been prepared on a historical cost basis, except for derivative financial instruments, available-for-sale financial assets, liquid investments and defined benefit pension obligations that have been measured at fair value as per the principles of Fair value measurement under IFRS 13.

The following standards have been issued but not yet effective up to the date of authorisation of these financial statements (and in some cases had not yet been adopted by EU):

IFRS 9 – Financial Instruments

In July 2014, the International Accounting Standards Board issued the final version of IFRS 9 – Financial Instruments. The standard reduces the complexity of the current rules on financial instruments as mandated in IAS 39. IFRS 9 has fewer classification and measurement categories as compared to IAS 39 and has eliminated the categories of held to maturity, available for sale and loans and receivables. Further it eliminates the rule based requirement of segregating embedded derivatives and tainting rules pertaining to held to maturity investments. For an investment in an equity instrument which is not held for trading, IFRS 9 permits an irrevocable election, on initial recognition, on an individual share-by-share basis, to present all fair value changes from the investment in other comprehensive income. No amount recognised in other comprehensive income would ever be reclassified to profit or loss. It requires the entity, which chooses to measure a liability at fair value, to present the portion of the fair value change attributable to the entity's own credit risk in the other comprehensive income. IFRS 9 replaces the 'incurred loss model' in IAS 39 with an 'expected credit loss' model. The measurement uses a dual measurement approach, under which the loss allowance is measured as either 12 month expected credit losses or lifetime expected credit losses. The standard also introduces new presentation and disclosure requirements. The effective date for adoption of IFRS 9 is annual periods beginning on or after 1 January 2018, though early adoption is permitted.

IFRS 15 – Revenue from Contracts with Customers

IFRS 15 – Revenue from Contracts with Customers outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The standard replaces most current revenue recognition guidance, including industry-specific guidance. The core principle of the new standard is for companies to recognise revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. The new standard also will result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively including service revenues and contract modifications and improve guidance for multiple-element arrangements. The new standard will come into effect for the annual reporting periods beginning on or after 1 January 2018 with early application permitted.

IFRS 16 – Leases

IFRS 16 – Leases specifies recognition, measurement and disclosure criteria for leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17. The new standard will come into effect for the annual reporting periods beginning on or after 1 January 2019. Earlier application is permitted if IFRS 15 – Revenue from Contracts with Customers has also been applied.

The following other standards, improvements and amendments to the standards have been issued up to the date of authorisation of these financial statements.

- IFRS 14 – Regulatory Deferral Accounts
- Amendments to IAS 1: Disclosure Initiative
- Annual Improvements to IFRSs: 2012-2014 Cycle
- Amendments to IAS 27: Equity method in separate financial statements
- Amendments to IAS 16 and IAS 41: Bearer plants
- Amendments to IAS 16 and IAS 38: Clarification of Acceptable Methods of Depreciation and Amortisation
- Amendments to IFRS 11: Accounting for Acquisitions of Interests in Joint Operations
- Amendments to IAS 7: Statement of cash flows on disclosure initiative
- Amendments to IAS 12: 'Income taxes' on Recognition of deferred tax assets for unrealised losses
- Amendments to IFRS 10, IFRS 12 and IAS 28: Investment entities: Applying the Consolidation Exemption

The Group is evaluating the requirements of these standards, improvements and amendments and has not yet determined the impact on the consolidated financial statements.

Adoption of new and revised standards and pronouncements
The Group has adopted, with effect from 1 April 2015, the following new amendment and pronouncements. Their adoption has not had any significant impact on the amounts reported in the financial statements.

Amendments to IAS 19: Defined benefit plans: Employee Contributions

Annual improvements to IFRSs: 2010-2012 Cycle

Annual improvements to IFRSs: 2011–2013 Cycle

The Group has not early adopted any other amendments, standards or interpretations that have been issued but are not yet effective.

Going concern
The financial statements have been prepared in accordance with the going concern basis of accounting. The use of this basis of accounting takes into consideration the Group's current and forecast financing position, additional details of which are provided in the Going Concern section of the Strategic Report.

Parent Company financial statements
The financial statements of the parent Company, Vedanta Resources plc, incorporated in United Kingdom, have been prepared in accordance with FRS 101 and UK company law. The Company Balance Sheet is presented in Note 46.

2(a) Accounting policies
(i) Basis of consolidation
Subsidiaries
The consolidated financial information incorporates the results of the Company and all its subsidiaries (the Group), being the companies that it controls. Control is evidenced where the Company has power over the investee, is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Power is demonstrated through existing rights that give the ability to direct relevant activities, which significantly affect the entity returns.

The financial statements of subsidiaries are prepared for the same reporting year as the parent Company. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used into line with accounting policies used by the Group.

For non-wholly owned subsidiaries, a share of the profit for the financial year and net assets is attributed to the non-controlling interests as shown in the consolidated income statement, consolidated statement of comprehensive income and consolidated balance sheet.

For acquisitions of additional interests in subsidiaries, where there is no change in control, the Group recognises a reduction to the non-controlling interest of the respective subsidiary with the difference between this figure and the cash paid, inclusive of transaction fees, being recognised in equity. In addition, upon dilution of controlling interests the difference between the cash received from sale or listing of the subsidiary shares and the increase to non-controlling interest is also recognised in equity. The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

All inter-company balances and transactions, including unrealised profits arising from intra-Group transactions, have been eliminated in full. Unrealised losses are eliminated unless costs cannot be recovered.

Joint arrangements
A joint arrangement is an arrangement of which two or more parties have joint control. Joint control is considered when there is contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The Group has joint operations within its Oil & Gas segment, the Group participates in several unincorporated joint operations which involve the joint control of assets used in oil & gas exploration and producing activities. The Group accounts for its share of assets, liabilities, income and expenditure of joint ventures in which the Group holds an interest, classified in the appropriate balance sheet and income statement headings. In addition, where the Group acts as operator to the joint venture, the gross liabilities and receivables (including amounts due to or from non-operating partners) of the joint operations are included in the Group balance sheet.

(ii) Revenue recognition
Revenue is measured at the fair value of consideration received or receivable and represents the net invoice value of goods and services provided to third parties after deducting discounts, volume rebates, outgoing sales taxes and duties, and are recognised when all significant risks and rewards of ownership of the asset sold are transferred to the customer or services have been provided. This is usually when the title passes to the customer as per the contract.

Certain of the Group's sales contracts provide for provisional pricing based on the price on the London Metal Exchange Limited (LME), as specified in the contract, when shipped. Final settlement of the prices is based on the applicable price for a specified future period. The Company's provisionally priced sales are marked to market using the relevant forward prices for the future period specified in the contract with a corresponding adjustment to revenue.

Revenue from oil, gas and condensate sales represents the Group's share of oil, gas and condensate production, recognised on a direct entitlement basis, and tariff income received for third party use of operating facilities and pipelines in accordance with agreements.

Revenue from holding certificate contracts is recognised when goods have been delivered to a distribution warehouse or have been identified and kept separately, have been inspected by a nominee of the buyer and cash has been received. Under these arrangements, revenue is recognised once legal title has passed and all significant risks and rewards of ownership of the asset sold are transferred to the customer.

Revenue from the sale of power is recognised when the electricity is supplied and measured based on contractually agreed tariff rates as approved by the electricity regulatory authorities.

Revenues from sale of material by-products are recognised when the significant risks and rewards of ownership of the goods sold are transferred to the customer.

Dividend income is recognised when the shareholders' right to receive payment is established.

Interest income is recognised on an accrual basis in the income statement.

(iii) Special items
Special items are those items that management considers, by virtue of their size or incidence (including but not limited to impairment charges and acquisition and restructuring related costs), should be disclosed separately to ensure that the financial information allows an understanding of the underlying performance of the business in the year, so as to facilitate comparison with prior periods. Also tax charges related to Special items and certain one-time tax effects are considered Special. Such items are material by nature or amount to the year's result and require separate disclosure in accordance with IAS 1 paragraph 97. The determination as to which items should be disclosed separately requires a degree of judgement.

(iv) Business combinations
The results of subsidiaries acquired or sold during the year are consolidated for the periods from, or to, the date on which control passed. Acquisitions are accounted for under the acquisition method. The acquirer's identifiable assets, liabilities and contingent liabilities that meet the conditions for recognition are recognised at their fair value at the acquisition date, except certain assets and liabilities required to be measured as per the applicable standards.

The identifiable assets, liabilities and contingent liabilities of a subsidiary, a joint arrangement or an associate, which can be measured reliably, are recorded at their provisional fair values at the date of acquisition. The difference between the fair value of the consideration transferred (including contingent consideration and previously held non-controlling interests) and the Group's share of the fair value of the identifiable net assets on acquisition is recognised as goodwill. Goodwill arising on acquisitions is reviewed for impairment at least annually.

Where the fair values of the identifiable assets and liabilities exceed the cost of acquisition, the surplus is credited to the income statement in the period of acquisition.

Where it is not possible to complete the determination of fair values by the date on which the first post-acquisition financial statements are approved, a provisional assessment of fair values is made and any adjustments required to those provisional fair values, and the corresponding adjustments to purchased goodwill, are finalised within 12 months of the acquisition date.

Any non-controlling interest in an acquiree is measured at fair value or as the non-controlling interest's proportionate share of the acquiree's identifiable net assets, excluding goodwill. This accounting choice is made on a transaction-by-transaction basis.

Acquisition expenses are charged to the income statement.

If the Group acquires a group of assets or equity in a company that does not constitute a business combination in accordance with IFRS 3 Business Combinations (2008 revised), the cost of the acquired group of assets or equity is allocated to the individual identifiable assets acquired based on their relative fair value.

(v) Intangible assets
Intangible assets are measured at cost less accumulated amortisation and accumulated impairment losses, if any. The Group determines the amortisation period as the period over which the future economic benefits will flow to the Group after taking into account all relevant facts and circumstances. Amortisation method, residual values and estimated useful life of intangible assets are reviewed annually or more frequently if events or changes in circumstances indicate a potential impairment. The Group does not have any indefinite life intangible assets.

Intangible assets arising out of service concession arrangements are accounted for as intangible assets where the Company has a contractual right to charge users of services when the projects are completed and is measured at the cost of such construction services completed. Such assets are amortised on a straight line basis over the balance of license period, usually between 3 to 30 years.

(vi) Property, plant and equipment
Relating to mineral assets – Mining properties and leases
The costs of mining properties and leases, which include the costs of acquiring and developing mining properties and mineral rights, are capitalised as property, plant and equipment under the heading 'Mining properties and leases' in the year in which they are incurred.

When a decision is taken that a mining property is viable for commercial production (i.e. when the Group determines that the mining property will provide sufficient and sustainable returns relative to the risk and decides to proceed with the development), all further pre-production primary development expenditure other than land, buildings, plant and equipment is capitalised as part of the cost of the mining property until the mining property is capable of commercial production. From that point, capitalised mining properties and lease costs are amortised on a unit-of-production basis over the total estimated remaining commercial reserves of each property or group of properties.

Exploration and evaluation assets acquired are recognised as assets at their cost of acquisition subject to meeting the commercial production criteria mentioned above and are subject to impairment review on an annual basis.

Exploration and evaluation expenditure incurred after obtaining the right to mine or the legal right to explore, is capitalised as property, plant and equipment and stated at cost less any impairment. Exploration and evaluation assets are transferred to the appropriate category of property, plant and equipment when the technical feasibility and commercial viability has been determined. Exploration and evaluation assets are assessed for impairment and impairment loss, if any, is recognised prior to reclassification. Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore is expensed as incurred.

Exploration expenditure includes all direct and allocated indirect expenditure associated with finding specific mineral resources which includes depreciation and applicable operating costs of related support equipment and facilities and other costs of exploration activities:
- Acquisition costs – costs associated with acquisition of licenses and rights to explore, including related professional fees.
- General exploration costs – costs of surveys and studies, rights of access to properties to conduct those studies (e.g. costs incurred for environment clearance, defence clearance, etc.), and salaries and other expenses of geologists, geophysical crews and other personnel conducting those studies.
- Costs of exploratory drilling and equipping exploratory and appraisal wells.

The stripping cost incurred during the production phase of a surface mine is deferred to the extent the current period stripping cost exceeds the average period stripping cost over the life of mine and recognised as an asset if such cost provides a benefit in terms of improved access to ore in future periods and certain criteria are met. Deferred stripping costs are included in mining properties within property, plant and equipment and disclosed as a part of mining properties. After initial recognition, the stripping activity asset is depreciated on a unit of production method over the expected useful life of the identified component of the ore body.

In circumstances where a mining property is abandoned, the cumulative capitalised costs relating to the property are written off in the period in which it occurs i.e. when the Group determines that the mining property will not provide sufficient and sustainable returns relative to the risks and the Group decides not to proceed with the mine development.

Commercial reserves are proved and probable reserves as defined by the ‘JORC’ Code and ‘SAMREC’ Code. Changes in the commercial reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Relating to oil & gas assets – Exploration and evaluation assets and developing/producing assets
For oil & gas assets a successful efforts based accounting policy is followed. Costs incurred prior to obtaining the legal rights to explore an area are expensed immediately to the income statement. Expenditure incurred on the acquisition of a license interest is initially capitalised on a license-by-license basis. Costs are held, are not amortised or depreciated, within exploration and evaluation assets until such time as the exploration phase on the license area is complete or commercial reserves have been discovered.

Exploration expenditure incurred in the process of determining oil & gas exploration targets is capitalised initially within property, plant and equipment – exploration and evaluation assets and subsequently allocated to drilling activities (under oil & gas properties and/or exploration and evaluation assets as appropriate). Exploration drilling costs are initially capitalised on a well-by-well basis until the success or otherwise of the well has been established. The success or failure of each exploration effort is judged on a well-by-well basis. Drilling costs are written off on completion of a well unless the results indicate that hydrocarbon reserves exist and there is a reasonable prospect that these reserves are commercial.

Following appraisal of successful exploration wells, if commercial reserves are established and technical feasibility for extraction demonstrated, then the related capitalised exploration costs are transferred into a single field cost centre within property, plant and equipment – development/producing assets (oil & gas properties) after testing for impairment. Where results of exploration drilling indicate the presence of hydrocarbons which are ultimately not considered commercially viable, all related costs are written off to the income statement.

All costs incurred after the technical feasibility and commercial viability of producing hydrocarbons has been demonstrated are capitalised within property, plant and equipment – development/producing assets (oil & gas properties) on a field-by-field basis. Subsequent expenditure is capitalised only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

Net proceeds from any disposal of an exploration asset are initially credited against the previously capitalised costs. Any surplus proceeds are credited to the income statement. Net proceeds from any disposal of development/producing assets are credited against the previously capitalised cost. A gain or loss on disposal of a development/producing asset is recognised in the income statement to the extent that the net proceeds exceed or are less than the appropriate portion of the net capitalised costs of the asset.

Other property, plant and equipment
The initial cost of property, plant and equipment comprises its purchase price, including import duties and non-refundable purchase taxes, and any directly attributable costs of bringing an asset to working condition and location for its intended use, including relevant borrowing costs and any expected costs of decommissioning. Expenditure incurred after the property, plant and equipment have been put into operation, such as repairs and maintenance, are charged to the income statement in the period in which the costs are incurred. Major shut-down and overhaul expenditure is capitalised as the activities undertaken improve the economic benefits expected to arise from the asset.

(vii) Assets in the course of construction
Assets in the course of construction are capitalised in the assets under construction account. At the point when an asset is operating at management’s intended use, the cost of construction is transferred to the appropriate category of property, plant and equipment and depreciation commences (see below). Costs associated with the commissioning of an asset and any obligatory decommissioning costs are capitalised where the asset is available for use but incapable of operating at normal levels until a period of commissioning has been completed. Revenue generated from production during the trial period is capitalised. Borrowing costs and certain foreign exchange gains or losses are in certain circumstances capitalised in the cost of the asset under construction. This policy is set out under ‘Borrowing Costs’.

(viii) Depreciation and amortisation
Relating to mining properties
Mining properties and other assets in the course of development or construction, freehold land and goodwill are not depreciated or

amortised. Capitalised mining properties and lease costs are amortised once commercial production commences, as described in 'Property, plant and equipment – mining properties and leases'. Leasehold land and buildings are depreciated on a straight-line basis over the period of the lease or, if shorter, their useful economic life.

Relating to oil & gas assets
All expenditure carried within each field is amortised from the commencement of production on a unit of production basis, which is the ratio of oil & gas production in the period to the estimated quantities of commercial reserves at the end of the period plus the production in the period, generally on a field-by-field basis or group of fields which are reliant on common infrastructure.

Commercial reserves are proven and probable oil & gas reserves, which are defined as the estimated quantities of crude oil, natural gas and natural gas liquids which geological, geophysical and engineering data demonstrate with a specified degree of certainty to be recoverable in future years from known reservoirs and which are considered commercially producible. There should be a 50% statistical probability that the actual quantity of recoverable reserves will be more than the amount estimated as proven and probable reserves and a 50% statistical probability that it will be less.

Costs used in the unit of production calculation comprise the net book value of capitalised costs plus the estimated future field development costs required to access commercial reserves. Changes in the estimates of commercial reserves or future field development costs are dealt with prospectively.

Others
Other buildings, plant and equipment, office equipment and fixtures, and motor vehicles are stated at cost less accumulated depreciation and any provision for impairment. Depreciation commences when the assets are ready for their intended use. Depreciation is provided at rates calculated to write off the cost, less estimated residual value, of each asset on a straight-line basis over its expected useful life, as follows:

Buildings operations and administration	30–60 years
Plant and machinery	15–40 years
Office equipment and fixtures	5–10 years
Motor vehicles	8–10 years

The Group reviews the residual value and useful life of an asset annually and, if expectations differ from previous estimates, the change is accounted for as a change in accounting estimate.

Major overhaul costs are depreciated over the estimated life of the economic benefit to be derived from the overhaul. The carrying amount of the remaining previous overhaul cost is charged to the income statement if the next overhaul is undertaken earlier than the previously estimated life of the economic benefit.

Property, plant and equipment held for sale or which is part of a disposal group held for sale is not depreciated. Property, plant and equipment held for sale is carried at the lower of its carrying value and fair value less disposal cost and is presented separately on the face of the balance sheet.

(ix) Impairment
Financial assets
A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate. An impairment loss in respect of an available-for-sale financial asset is calculated by reference to its fair value.

Significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics. All impairment losses are recognised in the consolidated statements of income. Any cumulative loss in respect of an available-for-sale financial asset recognised previously in the consolidated statements of comprehensive income is transferred to the consolidated statements of income on recognition of impairment. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. For financial assets measured at amortised cost and available-for-sale financial assets that are debt securities, the reversal is recognised in the consolidated statements of income. For available-for-sale financial assets that are equity securities, the change in fair value is recognised directly in the consolidated statements of comprehensive income.

The allowance accounts in respect of trade and other receivables are used to record impairment losses unless the Company is satisfied that no recovery of the amount owing is possible; at that point the amounts are considered irrecoverable and are written off against the financial asset directly.

Non-financial assets
Impairment charges and reversals are assessed at the level of cash-generating units. A cash-generating unit (CGU) is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or group of assets.

Formal impairment tests are carried out annually for goodwill. In addition, formal impairment tests for all assets are performed when there is an indication of impairment. The Group conducts an internal review of asset values annually, which is used as a source of information to assess for any indications of impairment or reversal of previously recognised impairment losses. External factors, such as changes in expected future prices, costs and other market factors are also monitored to assess for indications of impairment or reversal of previously recognised impairment losses.

If any such indication exists then an impairment review is undertaken, the recoverable amount is calculated, as the higher of fair value less costs of disposal and the asset's value in use.

Fair value less costs of disposal is the price that would be received to sell the asset in an orderly transaction between market participants and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general. Fair value for mineral and oil & gas assets is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal, using assumptions that an independent market participant may take into account. These cash flows are discounted at an appropriate post tax discount rate to arrive at the net present value.

Value in use is determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset in its present form and its eventual disposal. The cash flows are discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which estimates of future cash flows have not been adjusted. Value in use is determined by applying assumptions specific to the Group's continued use and cannot take into account future development. These assumptions are different to those used in calculating fair value and consequently the value in use calculation is likely to give a different result to a fair value calculation.

The carrying amount of the CGU is determined on a basis consistent with the way the recoverable amount of the CGU is determined. The carrying amount includes the deferred tax liability recognised in the fair value of the assets acquired in a business combination.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount. An impairment loss is recognised in the income statement.

Any reversal of the previously recognised impairment loss is limited to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had previously been recognised.

Exploration and evaluation assets
In assessing whether there is any indication that an exploration and evaluation asset may be impaired, the Company considers, as a minimum, the following indications

- the period for which the entity has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned;
- exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area;
- sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale; and
- reserve information prepared annually by external experts.

When a potential impairment is identified, an assessment is performed for each area of interest in conjunction with the group of operating assets (representing a cash-generating unit) to which the exploration and evaluation assets is attributed. Exploration areas in which reserves have been discovered but require major capital expenditure before production can begin, are continually evaluated to ensure that commercial quantities of reserves exist or to ensure that additional exploration work is under way or planned. To the extent that capitalised expenditure is no longer expected to be recovered, it is charged to the income statement.

(x) Non-current assets held for sale and discontinued operations
Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when a sale is highly probable from the date of classification, management are committed to the sale and the asset is available for immediate sale in its present condition. Non-current assets are classified as held for sale from the date these conditions are met and are measured at the lower of carrying amount and fair value (less costs to sell). Any resulting impairment loss is recognised in the income statement as a special item. On classification as held for sale the assets are no longer depreciated.

(xi) Government grants
Government grants relating to property, plant and equipment are treated as deferred income and released to the income statement over the expected useful lives of the assets concerned. Other grants are credited to the income statement as and when the related expenditure is incurred.

(xii) Inventories
Inventories and work-in-progress are stated at the lower of cost and net realisable value.

Cost is determined on the following basis:

- Purchased copper concentrate is recorded at cost on a first-in, first-out (FIFO) basis; all other materials including stores and spares are valued on weighted average basis; except at Cairn where stores and spares are valued on a FIFO basis.
- Finished products are valued at raw material cost plus costs of conversion, comprising labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity; and by-products and scrap are valued at net realisable value.
- Net realisable value is determined based on estimated selling price, less further costs expected to be incurred to completion and disposal.

(xiii) Taxation
Tax expense represents the sum of tax currently payable and deferred tax.

Current tax is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided, using the balance sheet method, on all temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Exceptions to this principle are:

- tax payable on the future remittance of the past earnings of subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future;
- deferred income tax is not recognised on the impairment of goodwill which is not deductible for tax purposes or on the initial recognition of an asset or liability in a transaction that is not a business combination which, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- deferred tax assets are recognised only to the extent that it is more likely than not that they will be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date. Tax relating to items recognised directly in equity is recognised in equity and not in the income statement.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and is adjusted to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the asset to be recovered.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Deferred tax is provided on temporary differences arising on acquisitions that are categorised as Business Combinations. Deferred tax is recognised at acquisition as part of the assessment of the fair value of assets and liabilities acquired. Any deferred tax is charged or credited in the income statement as the underlying temporary difference is reversed.

(xiv) Retirement benefit schemes

The Group operates or participates in a number of defined benefits and contribution schemes, the assets of which are (where funded) held in separately administered funds.

For defined benefit schemes the cost of providing benefits under the plans is determined each year separately for each plan using the projected unit credit method by independent qualified actuaries.

Actuarial gains and losses arising in the year are recognised in other comprehensive income and are not recycled to the income statement.

Net interest is calculated by applying a discount rate to the net defined benefit liability or asset. Defined benefit costs are split into current service cost, past service cost, net interest expense or income and remeasurement.

Current service cost and past service costs is recognised within cost of sales and administrative expenses. Net interest expense or income is recognised within finance costs.

For defined contribution schemes, the amount charged to the income statement in respect of pension costs and other post-retirement benefits is the contributions payable in the year.

(xv) Share-based payments

Certain employees (including Executive Directors) of the Group receive part of their remuneration in the form of share-based payment transactions, whereby employees render services in exchange for shares or rights over shares (‘equity-settled transactions’).

The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions are determined with the assistance of an external valuer and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Group’s estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations.

(xvi) Provisions for liabilities and charges

Provisions are recognised when the Group has a present obligation (legal or constructive), as a result of past events, and it is probable that an outflow of resources, that can be reliably estimated, will be required to settle such an obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows to net present value using an appropriate pre-tax discount rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Unwinding of the discount is recognised in the income statement as a finance cost. Provisions are reviewed at each balance sheet date and are adjusted to reflect the current best estimate.

(xvii) Restoration, rehabilitation and environmental costs

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production of a mine or oil fields. Costs arising from the decommissioning of plant and other site preparation work are provided for based on their discounted net present value, with a corresponding amount being capitalised at the start of each project. The amount provided for is recognised, as soon as the obligation to incur such costs arises. These costs are charged to the income statement over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision. The cost estimates are reviewed periodically and are adjusted to reflect known developments which may have an impact on the cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the lives of the assets to which they relate. The unwinding of the discount is shown as a finance cost in the income statement.

Costs for restoration of subsequent site damage which is caused on an ongoing basis during production are provided for at their net present values and charged to the income statement as extraction progresses. Where the costs of site restoration are not anticipated to be significant, they are expensed as incurred.

(xviii) Operating leases
Rentals under operating leases are charged on a straight-line basis over the lease term, even if the payments are not made on such a basis.

(xix) Finance leases
Assets held under finance leases are recognised as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the balance sheet as a finance lease obligation. Lease payments are apportioned between finance charges and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged to the income statement, unless they are directly attributable to qualifying assets, in which case they are capitalised in accordance with the Group's policy on borrowing costs.

The Group has reviewed the terms and conditions of the lease arrangements and determined that all risks and rewards of ownership lie with the Group and has therefore accounted for the leases as finance leases.

(xx) Foreign currency translation
The functional currency for each entity in the Group is determined as the currency of the primary economic environment in which it operates. For all principal operating subsidiaries, the functional currency is the local currency of the country in which it operates with the exception of KCM and Cairn which has a US dollar functional currency as that is the currency of primary economic environment in which it operates. In the financial statements of individual Group companies, transactions in currencies other than the functional currency are translated into the functional currency at the exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies are translated into the functional currency at exchange rates prevailing on the balance sheet date.

All exchange differences are included in the income statement, except, where the monetary item is designated as an effective hedging instrument of the currency risk of designated forecast sales, where exchange differences are recognised in equity and exchange differences on foreign currency borrowings relating to asset under construction, and for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings.

For the purposes of consolidation, the income statement items of those entities for which the US dollar is not the functional currency are translated into US dollars at the average rates of exchange during the period. The related balance sheets are translated at the rates ruling at the balance sheet date. Exchange differences arising on translation of the opening net assets and results of such operations, and on foreign currency borrowings to the extent that they hedge the Group's investment in such operations, are reported in other comprehensive income and accumulated in equity.

On disposal of entities with a different functional currency to the Company's functional currency, the deferred cumulative exchange differences recognised in equity relating to that particular operation are reclassified to the income statement.

(xxi) Financial asset investments
Financial asset investments are classified as available for sale under IAS 39 and are initially recorded at cost and then remeasured at subsequent reporting dates to fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Investments in unquoted equity instruments that do not have a market price and whose fair value cannot be reliably measured are measured at cost.

Investments in equity instruments are recorded in non-current assets unless they are expected to be sold within one year.

(xxii) Liquid investments
Liquid investments represent short-term investments that do not meet the definition of cash and cash equivalents for one or more of the following reasons:
- they have a maturity profile greater than 90 days;
- they may be subject to a greater risk of changes in value than cash;
- they are held for investment purposes.

The value of trading investments incorporates any dividend and interest earned on the held for trading investments.

(xxiii) Cash and cash equivalents
Cash and cash equivalents in the balance sheet comprise cash at bank and in hand, short-term deposits with banks and short-term highly liquid investments that are readily convertible into cash which are subject to insignificant risk of changes in value and are held for the purpose of meeting short-term cash commitments.

(xxiiii) Trade receivables
Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts. An allowance for impairment of trade receivables is made where there is an event, which based on previous experience, is an indication of a reduction in the recoverability of the carrying value of the trade receivables.

(xxv) Trade payables
Trade payables are stated at their nominal value.

(xxvi) Bills of exchange payable
The Group enters into arrangements whereby financial institutions make direct payments to suppliers for raw materials and project materials. The financial institutions are subsequently repaid by the Company at a later date providing working capital timing benefits. These are normally settled up to 12 months (for raw materials) and up to 36 months (for project materials). Where these arrangements are for raw materials with a maturity of up to 12 months, the economic substance of the transaction is determined to be operating in

nature and these are recognised as Bills of exchange (under trade and other payables). Where these arrangements are for project materials with a maturity up to 36 months, the economic substance of the transaction is determined to be financing in nature, and these are classified as projects buyers' credit within borrowings in the statement of financial position.

(xxvii) Equity instruments
Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

(xxviii) Borrowings
Interest bearing loans and overdrafts are recorded at the proceeds received. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis and charged to the income statement using the effective interest method. They are netted against the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

(xxix) Convertible bonds
Convertible bonds denominated in the functional currency of the issuing entity are accounted for as compound instruments. The equity components and the liability components are separated out on the date of the issue. The equity component is recognised in a separate reserve and is not subsequently remeasured. The liability component is held at amortised cost. The interest expense on the liability component is calculated by applying the effective interest rate, being the prevailing market interest rate at the date of issuance for similar non-convertible debt. The difference between this amount and interest paid is added to the carrying amount of the liability component.

Convertible bonds not denominated in the functional currency of the issuing entity or where a cash conversion option exists, are split into two components: a debt component and a component representing the embedded derivative in the convertible bond. The debt component represents a liability for future coupon payments and the redemption of the principal amount. The embedded derivative, a financial liability, represents the value of the option that bondholders have to convert into ordinary shares. At inception the embedded derivative is recorded at fair value and the remaining balance, after deducting a share of issue costs, is recorded as the debt component. Subsequently, the debt component is measured at amortised cost and the embedded derivative is measured at fair value at each balance sheet date with the change in the fair value recognised in the income statement. The embedded derivative and the debt component are disclosed together and the current/non-current classification follows the classification of the debt component which is the host contract.

(xxx) Borrowing costs
Borrowing costs directly relating to the acquisition, construction or production of a qualifying capital project under construction are capitalised and added to the project cost during construction until such time that the assets are substantially ready for their intended use in accordance with the Group policy which is when they are capable of commercial production. Where funds are borrowed specifically to finance a project, the amount capitalised represents the actual borrowing costs incurred. Where surplus funds are available out of money borrowed specifically to finance a project, the income generated from such short-term investments is also capitalised to reduce the total capitalised borrowing cost.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

Capitalisation of interest on borrowings related to construction or development projects is ceased when substantially all the activities that are necessary to make the assets ready for their intended use are complete or when delays occur outside of the normal course of business.

(xxxi) Available for sale financial assets
Listed equity shares and debt instruments held by the Group that are traded in an active market are classified as being available for sale (AFS) financial assets and are stated at fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement. Dividends received from investees accounted for as equity instruments are recognised in the income statement when the right to receive the payment is established.

(xxxii) Financial instruments fair valued through profit and loss
Held for trading financial assets
Financial assets are classified as held for trading if they have been acquired principally for the purpose of selling in the near term. The change in fair value of trading investments incorporates any dividend and interest earned on the held for trading investments and is accounted for in the income statement.

Derivative financial instruments
In order to hedge its exposure to foreign exchange, interest rate and commodity price risks, the Group enters into forward contracts, option contracts, swap contracts and other derivative financial instruments. The Group does not hold derivative financial instruments for speculative purposes.

Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are re-measured at their fair value at subsequent balance sheet dates. The resultant gains or losses are recognised in the income statement unless these are designated as effective hedging instruments.

(xxxiii) Hedge accounting
The Group designates certain hedging instruments, which include derivatives and non-derivatives in respect of foreign currency risk, as either fair value hedges or cash flow hedges. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement. The hedged item is recorded at fair value and any gain or loss is recorded in the income statement and is offset by the gain or loss from the change in the fair value of the derivative.

Changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recorded in equity. This includes certain non-derivative liabilities that are designated as hedge of the foreign currency risk on future, highly probable, forecast sales. Amounts deferred in equity are recycled to the income statement in the periods when the hedged item is recognised in the income statement.

The gain or loss on hedging instruments relating to the effective portion of a net investment hedge is recognised in equity. The ineffective portion is recognised immediately in the income statement. Gains or losses accumulated in equity are reclassified to the income statement on disposal of the foreign operations to which they relate.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. Any cumulative gain or loss on the hedging instrument recognised in equity is kept in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is transferred to the income statement.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not carried at fair value with unrealised gains or losses recognised in the income statement.

(xxxiv) Held-to-maturity financial assets

Financial instruments with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortised cost using the effective interest method.

2(b) Critical accounting judgement and estimation uncertainty

The preparation of financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions, that affect the application of accounting policies and the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities at the date of these consolidated financial statements and the reported amounts of revenues and expenses for the years presented. Actual results may differ from these estimates under different assumptions and conditions.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and future periods affected. The Group considers the following areas as the key sources of estimation uncertainty:

(i) Oil & gas reserves

Oil & gas reserves are estimated on a proved and probable entitlement interest basis. Proven and probable reserves are estimated using standard recognised evaluation techniques. The estimate is reviewed regularly. Future development costs are estimated taking into account the level of development required to produce the reserves by reference to operators, where applicable, and internal engineers.

Net entitlement reserves estimates are subsequently calculated using the Group’s current oil price and cost recovery assumptions, in line with the relevant agreements.

Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or commodity prices could impact the depreciation rates, carrying value of assets and environmental and restoration provisions.

(ii) Carrying value of exploration and evaluation fixed assets

Where a project is sufficiently advanced the recoverability of IFRS 6 Exploration assets are assessed by comparing the carrying value to higher of fair value less cost of disposal or value in use. Change to the valuation of exploration assets is an area of judgement. Further details on the Group’s accounting policies on this are set out in the accounting policy above. The amounts for exploration and evaluation assets represent active exploration projects. These amounts will be written off to the income statement as exploration costs unless commercial reserves are established or the determination process is not completed and there are no indications of impairment. The outcome of ongoing exploration, and therefore whether the carrying value of exploration and evaluation assets will ultimately be recovered, is inherently uncertain.

Details of impairment charge and the assumptions used are disclosed in Note 5.

(iii) Carrying value of developing/producing oil & gas assets
Management perform impairment tests on the Group's developing/producing oil & gas assets where indicators of impairment are identified in accordance with IAS 36.

The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumptions	Basis
Future production	proved and probable reserves, resource estimates and, in certain cases, expansion projects
Commodity prices	management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analyst forecast
Discount to price	management's best estimate based on historical prevailing discount
Extension of PSC	assumed that PSC for Rajasthan block would be extended until 2030 on the same commercial terms
Discount rates	cost of capital risk-adjusted for the risk specific to the asset/CGU

Other key assumptions in the impairment models based on management expectations are that government approval will be received for new projects and projects will be successfully implemented as planned.

Any subsequent changes to cash flows due to changes in the above mentioned factors could impact the carrying value of the assets.

Details of impairment charge and the assumptions used are disclosed in Note 5.

(iv) Mining properties and leases
The carrying value of mining property and leases is arrived at by depreciating the assets over the life of the mine using the unit of production method based on proved and probable reserves. The estimate of reserves is subject to assumptions relating to life of the mine and may change when new information becomes available. Changes in reserves as a result of factors such as production cost, recovery rates, grade of reserves or commodity prices could thus impact the carrying values of mining properties and leases and environmental and restoration provisions.

Management performs impairment tests when there is an indication of impairment. The impairment assessments are based on a range of estimates and assumptions, including:

Estimates/assumptions	Basis
Future production	proved and probable reserves, resource estimates (with an appropriate conversion factor) considering the expected permitted mining volumes and, in certain cases, expansion projects
Commodity prices	management's best estimate benchmarked with external sources of information, to ensure they are within the range of available analyst forecast
Exchange rates	management's best estimate benchmarked with external sources of information
Discount rates	cost of capital risk-adjusted for the risk specific to the asset/CGU

Details of impairment charge are disclosed in Note 5.

(v) Useful economic lives and impairment of other assets
Property, plant and equipment other than mining properties, oil & gas properties, and leases are depreciated over their useful economic lives. Management reviews the useful economic lives at least once a year and any changes could affect the depreciation rates prospectively and hence the asset carrying values. The Group also reviews its property, plant and equipment, including mining properties and leases, for possible impairment if there are events or changes in circumstances that indicate that carrying values of the assets may not be recoverable. In assessing the property, plant and equipment for impairment, factors leading to significant reduction in profits such as changes in commodity prices, the Group's business plans and changes in regulatory environment are taken into consideration. The carrying value of the assets of a cash-generating unit (CGU) is compared with the recoverable amount of those assets, that is, the higher of fair value less costs of disposal and value in use. Recoverable value is based on the management estimates of commodity prices, market demand and supply, economic and regulatory climates, long-term plan, discount rates and other factors. Any subsequent changes to cash flow due to changes in the above mentioned factors could impact the carrying value of the assets.

(vi) Assessment of impairment at Lanjigarh Refinery
During the year, the Group has received the necessary approvals for expansion of the Lanjigarh refinery to 4 million tonnes per annum (mtpa). Approval for expansion from 4mtpa to 6mtpa is dependent upon certain conditions.

Accordingly, second stream operation has commenced in Alumina refinery from April 2016 thus, taking it to the debottlenecked capacity of 1.7–2.0mtpa (contingent on bauxite quality). Further ramp up to 4mtpa will be considered after tying up the local bauxite sources. The Group has considered the delay in tying up local bauxite sources as an indication of impairment. Hence, the Group has reviewed the carrying value of its property, plant and equipment at Lanjigarh as at balance sheet date, estimated the recoverable amounts of these assets and concluded that there was no impairment because the recoverable amount (estimated based on fair value less cost of disposal) exceeded the carrying amounts.

The key assumptions and estimates used in determining the fair value less cost of disposal of these assets were:

- The State of Odisha has abundant bauxite resources and under the terms of the Memorandum of Understanding (MOU) with the Government of Odisha, management is confident that bauxite will be made available in the short to medium term. The Company has entered into agreements with various suppliers internationally and domestically to ensure the availability of bauxite to run its refinery. In the initial years, the Company has assumed that bauxite will be purchased from third party suppliers in India and other countries, until the bauxite is sourced from own mines.
- The State of Odisha has taken certain measures including reservation of areas for mining operations or undertaking prospecting and constitution of Ministerial Committee for formulation of policy for supply of ores to Odisha based industries on long-term basis. GOI has amended the existing MMDR Act. The major change is in the process of grant of concessions i.e. from first come, first served basis to more transparent process of auction and to expedite the grant process.
- Management expects that the conditions for construction of the Alumina refinery beyond 4mtpa will be fulfilled and it is assumed that the final unconditional approval for the expansion of the refinery would be received for commencement of production by fiscal 2020.
- The Government of Odisha has cancelled all the old reservations for mine allotment and has formed a more transparent process of auction of mines under the MMDR Act, which will improve the chances of local bauxite availability.

Management expects that the mining approvals for various local bauxite mines will be received. The Group carries out impairment assessment for carrying value of these assets, every half year and challenges these assumptions.

The Group has carried out a sensitivity analysis on the key variables including delay in obtaining bauxite mining approval, appreciation of rupee against US dollar, discount rate and London Metal Exchange aluminium prices. The most significant variable is the estimated timeframe for obtaining regulatory approval for the mining and/or gaining access to local bauxite. The sensitivity analysis indicates that even if regulatory approvals for mines/access to local bauxite are delayed by a year, the recoverable amount is still expected to exceed the carrying value and costs. As at 31 March 2016 the carrying amount of property, plant and equipment related to Alumina refinery operations at Lanjigarh and related mining assets is US$1,079.0 million (31 March 2015: US$1,165 million).

(vii) Assessment of impairment of Karnataka and Goa iron ore mines

Karnataka mining

The mining ban in Karnataka was lifted on 17 April 2013 and the mining operations resumed in December 2013. The mining operations were suspended since August 2014 pending environment clearances. On execution of Mining Lease Deed and final forest clearance, the operations were resumed towards the end of February 2015. Currently the permissible extraction capacity is fixed at 2.29mtpa which is based on lowest of Reserves and Resources (R&R) capacity, dumping capacity and road capacity as assessed by Indian Council of Forestry Research and Education. Subsequently, based on reassessment of R&R and other factors, the modified mining plan has been submitted to Indian Bureau of Mines in March 2016 for enhancement of production to 6mtpa. Management has estimated the recoverable amounts of these assets considering the increase in the extraction capacity in FY2017.

A delay of one year in increase in the allocated capacity would result in reduction in the recoverable amount by approximately 1% and the recoverable amount would continue to be sufficiently in excess of the carrying value.

The carrying value of assets as at 31 March 2016 is US$145.6 million (31 March 2015: US$168.1 million).

Goa mining

The Ministry of Environment and Forest revoked its earlier order which had kept the environment clearances for iron ore mines in Goa in abeyance. The State Government has issued a mining policy and has lifted the ban on iron ore mining in Goa. The Group has been allocated with an interim annual mining quantity of 6.9 million tonnes per annum (mtpa) (out of the total interim mining cap of 20mtpa for FY2016) of saleable ore.

The Expert Committee, constituted by the Supreme Court of India for conducting the Macro-Environmental Impact Assessment study on the ceiling of annual extraction of iron ore mining in Goa has recommended the enhancement of the mining cap to 30mtpa. This has been recommended to be further enhanced to 37mtpa after the review of the Macro-Environmental Impact Assessment and augmenting the carrying capacity. The report is pending for consideration of the Supreme Court. Post the Supreme Court clearance, the State Government will allocate the limits. It has been assumed that the allocation will be made based on the proportionate share of the current EC limits.

The mining operations resumed in October 2015. Management has estimated the recoverable amounts of these assets considering the mining cap of 30mtpa in FY2017 and 37mtpa from FY2018 and onwards.

A delay of one year in increase in the mining cap to 30mtpa and 37mtpa would result in a reduction in the recoverable amount by approximately 4% and the recoverable amount would continue to be sufficiently in excess of the carrying value.

The carrying value of assets as at 31 March 2016 is US$643.9 million (31 March 2015: US$736.3 million).

Management has reviewed the carrying value of Karnataka and Goa mining assets as at the balance sheet date, estimated the recoverable amounts of these assets and concluded that there was no impairment as the recoverable amount (estimated based on fair value less costs of disposal) exceeded the carrying amounts.

The Group has also carried out a sensitivity analysis on key variables including delay in increase in the mining cap, movement in iron ore prices, discount rate and appreciation of rupee against US dollar. Based on the sensitivity analysis, the recoverable amount is still expected to exceed the carrying value.

(viii) Assessment of impairment at Western Cluster Limited (WCL)

The project in Liberia is at exploratory stage and considering the low iron ore prices and volatility, geo-political factors and no immediate plans for any substantive expenditure, the Group has impaired these assets fully.

Details of impairment charge are disclosed in Note 5.

(ix) Assessment of impairment at Konkola Copper Mines (KCM)
The KCM operations in Zambia have experienced the challenging price environment, rising electricity cost and other operational challenges. Due to these factors, the Group has reviewed the carrying value of its property, plant and equipment at KCM as at balance sheet date, estimated the recoverable amounts of the assets and concluded that there was no impairment because the recoverable amount (estimated based on fair value less costs of disposal) exceeded the carrying amounts.

The Group has also carried out a sensitivity analysis on key variables like movement in copper prices, discount rate and increase in production. Based on the sensitivity analysis, the recoverable amount is still expected to exceed the carrying value.

The carrying value of assets as at 31 March 2016 is US$1,744.9 million (31 March 2015: US$2,010.3 million).

(x) Restoration, rehabilitation and environmental costs
Provision is made for costs associated with restoration and rehabilitation of mining sites as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of extractive industries and they are normally incurred at the end of the life of the mine. The costs are estimated on an annual basis on the basis of closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalised as soon as the obligation to incur such costs arises. A corresponding provision is created on the liability side. The capitalised asset is charged to the income statement over the life of the operation through the depreciation of the asset and the provision is increased each period via unwinding the discount on the provision. Management estimates are based on local legislation and/or other agreements. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology.

(xi) Provisions and liabilities
Provisions and liabilities are recognised in the period when it becomes probable that there will be a future outflow of funds resulting from past operations or events that can be reasonably estimated. The timing of recognition requires the application of judgement to existing facts and circumstances which may be subject to change especially when taken in the context of the legal environment in India. The actual cash outflows may take place over many years in the future and hence the carrying amounts of provisions and liabilities are regularly reviewed and adjusted to take into account the changing circumstances and other factors that influence the provisions and liabilities. This is set out in Note 30.

(xii) Contingencies and commitments
In the normal course of business, contingent liabilities may arise from litigation, taxation and other claims against the Group. Where it is management's assessment that the outcome cannot be reliably quantified or is uncertain, the claims are disclosed as contingent liabilities unless the likelihood of an adverse outcome is remote. Such liabilities are disclosed in the notes but are not provided for in the financial statements.

While considering the possible, probable and remote analysis of taxation, legal and other claims, there is always a certain degree of judgement involved pertaining to the application of the legislation which in certain cases is supported by views of tax experts and/or earlier precedents in similar matters. Although there can be no assurance regarding the final outcome of the legal proceedings, the Group does not expect them to have a materially adverse impact on the Group's financial position or profitability. These are set out in Note 38 and Note 42.

(xiii) The HZL and BALCO call options
The Group had exercised its call option to acquire the remaining 49% interest in BALCO and 29.5% interest in HZL. The Government of India has, however, contested the validity of the options and disputed their valuation performed in terms of the relevant agreements, the details of which are set out in Note 39. In view of the lack of resolution on the options, the non-response to the exercise and valuation request from the Government of India, the resultant uncertainty surrounding the potential transaction and the valuation of the consideration payable, the Group considers the strike price of the options to be at fair value, accordingly, the value of the option would be nil, and hence, the call options have not been recognised in the financial statements.

3. Segment information

The Group is a diversified natural resources group engaged in exploring, extracting and processing minerals and oil & gas. We produce zinc, lead, silver, copper, aluminium, iron ore, oil & gas and commercial power and have presence across India, South Africa, Namibia, Ireland, Australia and Liberia. The Group is also in the business of port operations in India.

The Group's reportable segments defined in accordance with IFRS 8 are as follows:
- Zinc-India
- Zinc-International
- Oil & Gas
- Iron Ore
- Copper-India/Australia
- Copper-Zambia
- Aluminium
- Power

The components not meeting the quantitative threshold for reporting are being reported as 'Others'.

Management monitors the operating results of reportable segments for the purpose of making decisions about resources to be allocated and for assessing performance. Segment performance is evaluated based on the EBITDA of each segment. Business segment financial data includes certain corporate costs, which have been allocated on an appropriate basis. Inter-segment sales are charged based on prevailing market prices.

The following tables present revenue and profit information and certain asset and liability information regarding the Group's reportable segments for the years ended 31 March 2016 and 31 March 2015. Items after operating profit are not allocated by segment.

(a) Reportable segments
Year ended 31 March 2016

(US$ million)	Zinc-India	Zinc-International	Oil & Gas	Iron Ore	Copper-India/ Australia	Copper-Zambia	Aluminium	Power	Total reportable segment	Elimination/ Others	Total operations
REVENUE											
Sales to external customers	2,111.0	391.5	1,322.3	341.8	3,196.8	966.7	1,692.3	691.7	10,714.1	23.8	10,737.9
Inter-segment sales[3]	–	–	–	8.2	0.4	5.8	2.0	15.8	32.2	(32.2)	–
Segment revenue	**2,111.0**	**391.5**	**1,322.3**	**350.0**	**3,197.2**	**972.5**	**1,694.3**	**707.5**	**10,746.3**	**(8.4)**	**10,737.9**
Segment result											
EBITDA[1]	995.0	68.1	570.4	73.4	336.6	(17.9)	106.7	196.3	2,328.6	7.8	2,336.4
Depreciation and amortisation[2]											(1,455.2)
Special items (Note 5)											(5,210.1)
Operating loss											**(4,328.9)**
Investment revenue											697.8
Finance costs											(1,280.4)
Other gains and (losses) (net)											(72.5)
LOSS BEFORE TAXATION											**(4,984.0)**
Segments assets	8,034.7	544.3	7,391.5	1,432.2	1,351.8	2,208.7	5,915.1	3,205.9	30,084.2	88.1	30,172.3
Unallocated assets											147.1
TOTAL ASSETS											**30,319.4**
Segment liabilities	(1,290.4)	(191.7)	(1,018.2)	(1,213.7)	(766.5)	(1,461.0)	(6,912.8)	(3,324.2)	(16,178.5)	(56.0)	(16,234.5)
Unallocated liabilities											**(7,232.4)**
TOTAL LIABILITIES											**(23,466.9)**
Other segment information											
Additions to property, plant and equipment and intangible assets	239.9	58.5	214.3	14.8	18.4	27.6	119.6	50.3	743.4	7.3	750.7
Depreciation and amortisation	(119.9)	(56.4)	(826.3)	(62.5)	(32.3)	(179.5)	(101.8)	(74.1)	(1,452.8)	(2.4)	(1,455.2)
Impairment losses (Note 5)			(4,934.2)	(245.2)	(7.6)						(5,187.0)

1 EBITDA is a non-IFRS measure and represents operating profit/(loss) before special items, depreciation, amortisation, interest and tax.
2 Depreciation and amortisation is also provided to the chief operating decision maker on a regular basis.
3 Transfer prices for inter-segment sales are on an arm's length basis in a manner similar to transactions with third parties. However, inter-segment sales at BALCO amounting to US$6.6 million for the year ended 31 March 2016 (31 March 2015: Nil), is at cost.

Year ended 31 March 2015

(US$ million)	Zinc-India	Zinc-International	Oil & Gas	Iron Ore	Copper-India/Australia	Copper-Zambia	Aluminium	Power	Total reportable segment	Elimination/Others	Total operations
REVENUE											
Sales to external customers	2,357.0	586.9	2,397.5	311.4	3,682.7	883.5	2,078.1	552.8	12,849.9	28.8	12,878.7
Inter-segment sales[3,4]	–	–	–	15.1	18.0	193.6	3.8	35.3	265.8	(265.8)	–
Segment revenue	**2,357.0**	**586.9**	**2,397.5**	**326.5**	**3,700.7**	**1,077.1**	**2,081.9**	**588.1**	**13,115.7**	**(237.0)**	**12,878.7**
Segment result											
EBITDA[1]	1,192.5	180.8	1,476.8	31.4	281.0	(3.8)	415.5	153.8	3,728.0	13.2	3,741.2
Depreciation and amortisation[2]											(2,005.7)
Special items (Note 5)											(6,744.2)
Operating loss											**(5,008.7)**
Investment revenue											832.6
Finance costs											(1,387.2)
Other gains and (losses) (net)											(76.9)
LOSS BEFORE TAXATION											**(5,640.2)**
Segments assets[5]	7,356.8	694.1	12,948.8	1,924.3	1,357.8	2,387.1	6,304.6	3,584.7	36,558.2	58.4	36,616.6
Unallocated assets											372.3
TOTAL ASSETS											**36,988.9**
Segment liabilities[5]	(277.9)	(253.0)	(3,105.7)	(1,329.8)	(1,286.6)	(1,474.2)	(5,171.6)	(2,388.5)	(15,287.3)	(113.9)	(15,401.2)
Unallocated liabilities											(9,330.3)
TOTAL LIABILITIES											**(24,731.5)**
Other segment information											
Additions to property, plant and equipment and intangible assets	217.7	34.4	1,079.6	42.1	29.7	58.2	148.9	140.3	1,750.9	1.1	1,752.0
Depreciation and amortisation	(133.2)	(111.1)	(1,270.3)	(42.3)	(51.6)	(187.2)	(140.2)	(65.8)	(2,001.7)	(4.0)	(2,005.7)
Impairment losses (Note 5)	–	–	(6,642.1)	–	–	(52.3)	–	–	(6,694.4)	–	(6,694.4)

1 EBITDA is a non-IFRS measure and represents operating profit/(loss) before special items, depreciation, amortisation, interest and tax.
2 Depreciation and amortisation is also provided to the chief operating decision maker on a regular basis.
3 Transfer prices for inter-segment sales are on an arm's length basis in a manner similar to transactions with third parties. However, inter-segment sales at BALCO amounting to US$6.6 million for the year ended 31 March 2016 (31 March 2015: Nil), is at cost.
4 Previous year amounts have been reclassified to ensure consistency.
5 During the year ended 31 March 2016, consequent to certain power facilities at a subsidiary being commissioned for the generation and sale of commercial power, assets (US$349.2 million) and liabilities (US$48.6 million) in respect of capital work-in-progress for the previous year relating to the generation and sale of commercial power has been reclassified from the 'Aluminium' segment to the 'Power' segment as this more accurately reflects the segment breakdown.

(b) Geographical segmental analysis
The Group's operations are located in India, Zambia, Namibia, South Africa, Liberia, Ireland, Australia and UAE. The following table provides an analysis of the Group's sales by region in which the customer is located, irrespective of the origin of the goods.

(US$ million)	**Year ended 31 March 2016**	**Percentage**	Year ended 31 March 2015	Percentage
India	6,773.9	63.1%	7,872.0	61.1%
China	527.9	4.9%	1,314.2	10.2%
Far East Asia	902.5	8.4%	1,168.4	9.1%
Middle East	1,075.1	10.0%	1,143.7	8.9%
Europe	345.3	3.2%	643.3	5.0%
Africa	91.1	0.8%	192.3	1.5%
Asia Others	725.3	6.8%	118.9	0.9%
UK	103.9	1.0%	2.2	0.0%
Others	192.9	1.8%	423.7	3.3%
Total	**10,737.9**	**100.0%**	**12,878.7**	**100.0%**

The following is an analysis of the carrying amount of non-current assets, and additions to property, plant and equipment, analysed by the country in which the assets are located. No material non-current assets are located in the United Kingdom and no significant additions to property, plant and equipment have been made there.

	Carrying amount of non-current assets[1]		Additions to property, plant and equipment	
(US$ million)	**As at 31 March 2016**	As at 31 March 2015	**Year ended 31 March 2016**	Year ended 31 March 2015
Australia	4.4	13.4	2.6	3.8
India	14,752.9	20,996.2	651.7	1,635.7
Zambia	1,863.3	1,905.4	27.6	58.2
Namibia	119.7	128.5	35.4	21.5
Ireland	6.7	37.7	–	12.7
South Africa	254.0	335.9	23.1	5.9
Sri Lanka	–	–	7.3	2.7
Other	–	213.6	3.0	11.5
Total	**17,001.0**	**23,630.7**	**750.7**	**1,752.0**

1 Non-current assets do not include deferred tax assets, non-current tax assets and derivative assets.

Information about major customer
Included in revenue from the Oil & Gas segment are revenues of US$663.1 million (year ended 31 March 2015: US$1,393.2 million), which arose from sales to the Group's largest customer; sales to this customer were more than 10% in the previous year. No customer contributed 10% or more to the Group's revenue during the year ended 31 March 2016.

4. Total revenue

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Revenue from sales of goods	10,737.9	12,878.7
Other operating income	101.7	104.0
Investment revenue	697.8	832.6
Total	**11,537.4**	**13,815.3**

5. Special items

(US$ million)	**Year ended 31 March 2016** **Special items**	**Tax effect of special items/ special tax items**	**Special items after tax**	Year ended 31 March 2015 Special items	Tax effect of special items/ special tax items	Special items after tax
Impairment of oil & gas assets[1a]	(4,934.2)	1,903.3	(3,030.9)	(6,642.1)	2,138.0	(4,504.1)
Impairment of mining reserves and assets					–	
Iron ore[1b]	(245.2)	–	(245.2)	–	–	–
Copper[1c,d]	(7.6)	–	(7.6)	(52.3)	–	(52.3)
Total impairment charge	**(5,187.0)**	**1,903.3**	**(3,283.7)**	**(6,694.4)**	**2,138.0**	**(4,556.4)**
Voluntary retirement schemes (redundancy costs)[2]	(23.1)	7.9	(15.2)	–	–	–
Provision for receivables[7]	–	–	–	(36.6)	12.5	(24.1)
Provision for investment in coal blocks[3]	–	–	–	(5.4)	1.8	(3.6)
Acquisition and restructuring related costs[4]	–	–	–	0.4	–	0.4
Provision for contractor dispute[5]	–	–	–	(8.2)	–	(8.2)
Special tax item[6]	–	(173.8)	(173.8)	–	52.8	52.8
Special items	**(5,210.1)**	**1,737.4**	**(3,472.7)**	**(6,744.2)**	**2,205.1**	**(4,539.1)**

1a During the year ended 31 March 2016, the Group has recognised impairment charge on its oil & gas assets of US$4,934.2 million mainly relating to Rajasthan block, triggered by the significant fall in the crude oil prices, prevailing discount of Rajasthan crude and adverse long-term impact of revised cess. Of this charge, US$1,143.5 million has been recorded against oil & gas properties and US$3,790.7 million against exploratory and evaluation assets. The valuation remains dependent on price and further deterioration in long-term prices may result in additional impairment.

For oil & gas properties, CGUs identified are on the basis of a production sharing contract (PSC) level as it is the smallest group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets.

The recoverable amount of the CGU, US$2,204.0 million (March 2015: US$5,825.5 million), was determined based on the fair value less costs of disposal approach, a level-3 valuation technique in the fair value hierarchy, as it more accurately reflects the recoverable amount based on our view of the assumptions that would be used by a market participant. This is based on the cash flows expected to be generated by the projected oil or natural gas production profiles up to the expected dates of cessation of production sharing contract (PSC)/cessation of production from each producing field based on current estimates of reserves and risked resources. Reserves assumptions for fair value less costs of disposal discounted cash flow tests consider all reserves that a market participant would consider when valuing the asset, which are usually broader in scope than the reserves used in a value-in-use test. Discounted cash flow analysis used to calculate fair value less costs of disposal uses assumption for oil price of US$41 per barrel for FY2017 (March 2015: US$70 per barrel) and the long-term nominal price of US$70 per barrel (March 2015: US$84 per barrel) derived from a consensus of various analyst recommendations. Thereafter, these have been escalated at a rate of 2.5% per annum. The cash flows are discounted using the post-tax nominal discount rate of 11.00% (March 2015: 10.32%) derived from the post-tax weighted average cost of capital.

The impairment loss relates to the Oil & Gas business reportable segments, however this has been shown as special items and does not form part of the segment result for the purpose of segment reporting.

During the year ended 31 March 2015, the Group has recognised impairment charge on oil & gas assets of US$6,642.1 million mainly relating to Rajasthan block and Sri Lanka block, triggered by the significant fall in the crude oil prices. Of this charge, US$2,162.1 million has been recorded against oil & gas properties and US$4,480.0 million against exploratory and evaluation assets. The impairment charge of US$4,480.0 million also includes US$778.1 million impairment charge relating to exploratory wells in Sri Lanka, as the development of hydrocarbons in the said block is not commercially viable at the current prices.

1b During the year ended 31 March 2016, the Group has recognised US$227.5 million impairment charge in respect of the exploratory assets in West Africa (Western Cluster, Liberia) on account of low iron ore prices, geo-political factors and no plans for any substantive expenditure resulting in continued uncertainty in the project and relates to US$17.7 million impairment charge in the carrying amount of idle assets grouped under assets under construction at Bellary, Karnataka in India.

1c During the year ended 31 March 2016, the Group has recognised US$7.6 million impairment charge relating to its operation in the Copper Mines of Tasmania Pty Ltd, Australia on account of extended care and maintenance, lower copper prices and continued uncertainty in start-up of operations.

1d During the year ended 31 March 2015, the Group has recognised US$52.3 million impairment charge relating to underground assets in Nchanga in Konkola Copper Mines Plc on account of suspension of operations and the fall in the copper prices. Of this charge, US$47.2 million has been recorded against mining property and leases and US$5.1 million against plant and equipment.

2 US$23.1 million incurred under a Group-wide voluntary retirement initiative across various Group entities.
3 Relates to provision recognised in respect of expenditure incurred on cancelled coal blocks allotted to Company's subsidiaries, pursuant to the order of the Supreme Court of India.
4 Acquisition related costs include reversal of excess provision for costs of Group simplification and restructuring and other acquisition related costs classified as special items in previous year.
5 Relates to a provision recognised following a dispute with a mining contractor at KCM Zambia.
6 As a result of amendments to the Zambian Mining Tax regime, effective from 1 January 2015, the tax rate on integrated mining operations (excluding custom smelting mineral processing activities) was reduced from 30% to 0%. The deferred tax liability in relation to mining operations was therefore reversed during the year ended 31 March 2015, resulting in a net credit to the income statement of US$52.8 million. Consequent to the subsequent amendments to the Zambian Mining Tax regime, effective from 1 July 2015 the tax rate on mining operations has been restored from 0% to 30%. Further, the set off of carried forward losses relating to mining operations has been restricted to a maximum of 50% of the income for the year. Accordingly, a total deferred tax charge of US$173.8 million resulting from the amendments has been recognised under 'Special tax items' during the year ended 31 March 2016, increase as compared to reversal in previous year is mainly on account of restriction placed on maximum loss which can be set off in a particular year.
7 In respect of iron ore mining at Goa, the Supreme Court has ruled that, out of the sale proceeds of inventory of excavated ore lying unsold, the leaseholder would be paid only the average cost of excavation. However, the carrying value includes the amortisation based on the fair value of mining reserves determined at the time of acquisition. Consequently, the excess of the carrying value of receivables over the net realisable value has been written off.

6. Investment revenue

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Interest income on loans and receivables	26.4	29.3
Interest income on cash and bank balances	124.6	139.9
Change in fair value of financial assets held for trading realised and unrealised	541.3	656.9
Dividend income on financial assets held for trading	0.3	0.3
Dividend income on available for sale investment	0.1	–
Foreign exchange gain on cash and liquid investments	5.1	6.2
	697.8	**832.6**

7. Finance costs

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Interest on loans, overdrafts and bonds (a)	1,101.3	1,116.8
Coupon interest on convertible bonds (Note 28)	62.4	86.8
Accretive interest on convertible bonds (Note 28)	28.7	76.6
Total interest charge on convertible bonds (b)	91.1	163.4
Other borrowing and finance costs (c)	160.3	194.1
Total interest cost (a+b+c)	**1,352.7**	**1,474.3**
Unwinding of discount on provisions (Note 30)	13.5	36.8
Net interest on defined benefit arrangements (Note 33)	10.4	9.2
Capitalisation of borrowing costs (Note 17)[1]	(75.6)	(133.1)
Gain on buy back of convertible bond	(20.6)	–
	1,280.4	**1,387.2**

1 All borrowing costs are capitalised using rates based on specific borrowings with the interests ranging between 1.9% to 12.2% per annum.

8. Other gains and (losses) (net)

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Gross foreign exchange losses	(103.7)	(80.8)
Qualifying exchange losses capitalised (Note 17)	10.1	14.4
Net foreign exchange gains and losses	**(93.6)**	**(66.4)**
Change in fair value of financial liabilities measured at fair value	(0.9)	(1.1)
Net (loss)/gain arising on qualifying hedges and non-qualifying hedges	22.0	(9.4)
	(72.5)	**(76.9)**

9. Loss for the year has been stated after charging/(crediting):

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Depreciation and amortisation	1,455.2	2,005.7
Costs of inventories recognised as an expense	3,708.0	3,905.0
Auditor's remuneration for audit services	2.4	2.5
Research and development	0.8	0.8
Net loss/(profit) on disposal of property, plant and equipment	1.5	4.6
Provision for receivables	–	80.4
Impairment of mining reserves and assets	252.8	52.3
Impairment of oil & gas assets	4,934.2	6,642.1
Staff costs	639.7	812.8
Foreign exchange gains and losses[1]	106.1	82.8

1 Includes foreign exchange losses on non-operational monetary items of US$93.6 million (31 March 2015: US$66.4 million), and on operational monetary items of US$17.6 million (31 March 2015: US$22.6 million). It also includes foreign exchange gain on cash and liquid investments of US$5.1 million (31 March 2015: US$6.2 million).

10. Auditor's remuneration

The table below shows the fees payable globally to the Company's auditor, Deloitte LLP, for statutory external audit and audit related services, as well as fees paid to other accountancy firms for statutory external audit and audit related services in each of the two years ended 31 March:

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Fees payable to the Company's auditor for the audit of Vedanta Resources plc annual accounts	0.6	0.6
The audit of the Company's subsidiaries pursuant to legislation	1.8	1.9
Total audit fees	**2.4**	**2.5**
Fees payable to the Company's auditor and their associates for other services to the Group		
Other services pursuant to legislation[1]	1.4	1.4
Tax services[2]	0.4	0.4
Corporate finance services[3]	0.7	0.5
Other services[4]	0.2	0.2
Total non-audit fees	**2.7**	**2.5**
Total fees paid to the Company's auditor	**5.1**	**5.0**
Audit fees payable to other auditors of the Group's subsidiaries	0.3	0.4
Non-audit fees payable to other auditors of the Group's subsidiaries	0.2	0.1
Total fees paid to other auditors	**0.5**	**0.5**

1 Other services pursuant to legislation principally comprise assurance services, being quarterly reviews of the Group's subsidiaries' results and the half year review of the Group's results.
2 Tax services principally comprise certification and assurance services as required by Indian and overseas tax regulations.
3 Corporate finance services principally comprise Group simplification and other acquisition related certifications. These assurance-related services are ordinarily provided by the auditor.
4 Includes certification related services.

11. Employee numbers and costs

Average number of persons employed by the Group in the year

Class of business	Year ended 31 March 2016	Year ended 31 March 2015
Zinc	6,780	7,428
– India	4,935	5,439
– International	1,845	1,989
Iron Ore	3,034	3,465
Copper	8,273	8,710
– India/Australia	1,058	1,185
– Zambia	7,215	7,525
Aluminium	5,266	5,932
Power	334	358
Oil & Gas	1,527	1,684
Other	321	140
	25,535	**27,717**

Costs incurred during the year in respect of employees and Executive Directors

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Salaries and wages	575.8	733.8
Defined contribution pension scheme costs (Note 33)	30.1	30.7
Defined benefit pension scheme costs (Note 33)	18.2	19.7
Share-based payments charge	15.6	28.6
	639.7	**812.8**

12. Tax

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Current tax:		
UK Corporation tax	1.5	(19.3)
Foreign tax		
– India	538.5	562.7
– Zambia	0.0	1.0
– Australia	0.0	(0.1)
– Africa and Europe	4.5	22.1
– Other	(7.8)	4.4
	536.7	**570.8**
Deferred tax: (Note 31)		
Deferred tax impact on impairment of oil & gas assets (Note 5)	(1,903.3)	(2,138.0)
Deferred tax charge/(reversal) due to change in tax regime in Zambia (Note 5)	173.8	(52.8)
Deferred tax others	(289.1)	(232.5)
	(2,018.6)	**(2,423.3)**
Net tax credit[1]	**(1,481.9)**	**(1,852.5)**
Effective tax rate[2]	29.7%	32.8%

1 Includes tax credit on special items and tax credit – special items of US$1,737.4 million during the year ended 31 March 2016 (31 March 2015: US$2,205.1 million).

2 Effective tax rate excluding special items, tax credit on special items, and dividend distribution tax of 3.1% during the year ended 31 March 2016 (31 March 2015: 25.7%).

The deferred tax expense recycled from equity to the income statement is US$1.6 million (2015: US$6.0 million).

Tax expense

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Tax effect of special items (Note 5)	(1,911.2)	(2,152.3)
Special tax item – deferred tax charge/(reversal) due to change in tax regime in Zambia (Note 5)	173.8	(52.8)
Net tax credit – special items	**(1,737.4)**	**(2,205.1)**
Tax expense – others	255.5	352.6
Net tax (credit)/expense	**(1,481.9)**	**(1,852.5)**

Deferred tax recognised in the income statement:

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Accelerated capital allowances (including fair value adjustments)	(1,281.6)	(2,634.1)
Unutilised tax losses[1]	(479.7)	440.2
Other temporary differences[2]	(257.3)	(229.4)
	(2,018.6)	**(2,423.3)**

1 US$236.8 million has been reclassified from unutilised tax losses to other temporary differences for the year ended 31 March 2015.
2 Includes MAT credit (net) US$175.7 million for the period ended 31 March 2016 (31 March 2015: US$321.2 million).

No deferred tax has been recognised in respect of temporary differences associated with investments in subsidiaries where the Group is in a position to control the timing of the reversal of the temporary differences and it is probable that such differences will not reverse in the foreseeable future. The aggregate amount of temporary differences associated with such investments in subsidiaries is represented by the contribution of those investments to the Group's retained earnings and amounted to US$7,098.1 million (2015: US$5,768.3 million).

A reconciliation of income tax expense applicable to accounting profit/(loss) before tax at the Indian statutory income tax rate to income tax expense/(credit) at the Group's effective income tax rate for the year ended 31 March 2016 is as follows:

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Accounting loss before tax	**(4,984.0)**	**(5,640.2)**
At Indian statutory income tax rate of 34.61% (2015: 33.99%)	(1,724.9)	(1,917.1)
Unrecognised tax losses	224.2	107.6
Disallowable expenses/other permanent differences	(72.0)	86.5
Dividend distribution tax	248.5	68.1
Non-taxable income	(111.4)	(73.0)
Impact of tax rate difference	67.5	118.8
Impact of change in tax regime[1]	201.9	(52.8)
Tax holiday and similar exemptions	(311.0)	(238.8)
Adjustments in respect of previous years	(4.7)	48.2
At effective income tax rate of 29.7% (2015: 32.8%)	**(1,481.9)**	**(1,852.5)**

1 Includes US$173.8 million (31 March 2015: US$(52.8) million) due to change in tax regime in Zambia (Note 5) and US$28.1 million due to change in Indian statutory rate from 33.99% to 34.61%.

Certain businesses of the Group within India are eligible for specified tax incentives in the form of tax exemptions. Most of such tax exemptions are relevant for the companies operating in India. These are briefly described as under:

The location-based exemption
In order to boost industrial and economic development in undeveloped regions, provided certain conditions are met, profits of newly established undertakings located in certain areas in India may benefit from a tax holiday. Such a tax holiday works to exempt 100% of the profits for the first five years from the commencement of the tax holiday, and 30% of profits for the subsequent five years. This deduction is available only for units established up to 31 March 2012. However, such undertaking would continue to be subject to the Minimum Alternative tax (MAT).

The Group has such types of undertakings at Haridwar and Pantnagar, which are part of Hindustan Zinc Limited (Zinc India). In the current year, Haridwar and Pantnagar units are eligible for deduction at 30% and 100% of taxable profits respectively. For the next financial year, both would be eligible for deduction at 30% of taxable profits.

Sectoral benefit – power plants
To encourage the establishment of certain power plants, provided certain conditions are met, tax incentives exist to exempt 100% of profits and gains for any 10 consecutive years within the 15-year period following commencement of the power plant's operation. The Group currently has total operational capacity of 8.4GW of thermal based power generation facilities and wind power capacity of 274MW. However, such undertakings generating power would continue to be subject to the MAT provisions.

The Group has power plants which benefit from such deductions, at various locations of Hindustan Zinc Limited (where such benefits have been drawn), Talwandi Sabo Power Limited, Vedanta Limited and Bharat Aluminium Company Limited (where no benefit has been drawn).

Sectoral benefit – oil & gas
Provided certain conditions are met, profits of newly constructed industrial undertakings engaged in the oil & gas sector may benefit from a deduction of 100% of the profits of the undertaking for a period of seven consecutive years. This deduction is only available to blocks licensed prior to 31 March 2011. However, such businesses would continue to be subject to the MAT provisions.

In the Group, Cairn India Limited benefits from such deductions. Current year is the last year for claiming such benefit.

In addition, the subsidiaries incorporated in Mauritius are eligible for tax credit to the extent of 80% of the applicable tax rate on foreign source income.

The total effect of such tax holidays and exemptions was US$311.0 million for the year ended 31 March 2016 (31 March 2015: US$238.8 million).

13. Earnings per share
Basic earnings per share (EPS) amounts are calculated by dividing net profit for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Weighted average number of treasury shares, 24,231,160 (2015: 24,206,816), outstanding during the year are excluded from the total outstanding shares for the calculation of EPS.

Diluted earnings per share amounts are calculated by dividing the net profit attributable to ordinary equity holders by the weighted average number of ordinary shares outstanding during the year (adjusted for the effects of dilutive options and the Group's convertible bonds). The following reflects the income and share data used in the basic and diluted earnings per share computations:

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Net loss attributable to equity holders of the parent	**(1,837.4)**	**(1,798.6)**

Loss per share based on loss for the year
Basic/diluted loss per share on loss for the year

(US$ million except as stated)	**Year ended 31 March 2016**	Year ended 31 March 2015
Loss for the year attributable to equity holders of the parent (US$ million)	(1,837.4)	(1,798.6)
Weighted average number of shares of the Company in issue (million)	276.0	274.8
Loss per share on loss for the year (US cents per share)	**(665.8)**	**(654.5)**

The effect of 6.8 million (2015: 4.0 million) potential ordinary shares, which relate to share option awards under the LTIP scheme, on the attributable loss for the year is anti-dilutive and thus these shares are not considered in determining diluted loss per share.

The loss for the year would be decreased if holders of the convertible bonds in Vedanta exercised their right to convert their bond holdings into Vedanta equity. The impact on loss for the year of this conversion would be the reduction in interest payable on the convertible bond.

The adjustment in respect of convertible bonds has an anti-dilutive impact on earnings and is thus not considered in determining diluted EPS.

Loss per share based on underlying loss for the year (non-GAAP)
Underlying earnings is an alternative earnings measure, which the management considers to be a useful additional measure of the Group's performance. The Group's underlying loss is the loss for the year after adding back special items, other losses/(gains) [net] (Note 8) and their resultant tax (including taxes classified as special items) and non-controlling interest effects. This is a non-GAAP measure.

(US$ million)	Note	**Year ended 31 March 2016**	Year ended 31 March 2015
Loss for the year attributable to equity holders of the parent		(1,837.4)	(1,798.6)
Special items	5	5,210.1	6,744.2
Other (gains)/losses [net]		72.5	76.9
Tax and non-controlling interest effect of special items (including taxes classified as special items) and other losses/(gains)		(3,809.3)	(5,061.4)
Underlying attributable loss for the year		**(364.1)**	**(38.9)**

Basic/diluted loss per share on underlying loss for the year (non-GAAP)

(US$ million except as stated)	**Year ended 31 March 2016**	Year ended 31 March 2015
Underlying loss for the year (US$ million)	(364.1)	(38.9)
Weighted average number of shares of the Company in issue (million)	276.0	274.8
Loss per share on underlying loss for the year (US cents per share)	**(131.9)**	**(14.2)**

The effect of 6.8 million (2015: 4.0 million) potential ordinary shares, which relate to share option awards under the LTIP scheme, on the underlying attributable loss for the year is anti-dilutive and thus these shares are not considered in determining diluted underlying loss per share.

14. Dividends

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Amounts recognised as distributions to equity holders:		
Equity dividends on ordinary shares:		
Final dividend for 2014-15: 40.0 US cents per share (2013-14: 39.0 US cents per share)	110.6	107.5
Interim dividend paid during the year: Nil (2014-15: 23.0 US cents per share)	–	63.8
	110.6	**171.3**
Proposed for approval at AGM		
Equity dividends on ordinary shares:		
Final dividend for 2015-16: 30.0 US cents per share (2014-15: 40 US cents per share)	82.8	110.8

15. Goodwill

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Cost (gross carrying amount)	16.6	16.6
Accumulated impairment losses	–	–
Net carrying amount at 31 March	**16.6**	**16.6**

Goodwill is allocated for impairment testing purposes to the following cash-generating units (CGUs). The allocation of goodwill to CGUs is as follows:
- US$12.2 million Copper India.
- US$4.4 million arising on acquisition of Goa Energy Limited.

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired.

The Company has undertaken an impairment review of goodwill of US$16.6 million as at 31 March 2016. The carrying amount of goodwill allocated to the relevant cash-generating unit is considered to be insignificant in comparison with the total carrying value of the cash-generating unit. The carrying amount of goodwill was evaluated using the higher of fair value less cost of disposal (FVLCD) or value in use based on discounted future cash flows of the entities to which the goodwill pertains and comparing this to the total carrying value of the relevant cash-generating units. It was determined that the carrying amount of goodwill is not impaired and nor was impairment indicated following a reasonably possible change in a key assumption.

16. Intangible assets

Intangible assets include Port concession rights to operate a general cargo berth for handling coal at the outer harbour of the Visakhapatnam port on the east coast of India, rights to use treated water from a sewage treatment plant at Zinc India operations and software licenses.

(US$ million)	Port concession rights[1]	Others[2]	Total
Cost			
As at 1 April 2014	**99.9**	**14.8**	**114.7**
Addition	0.8	4.7	5.5
Foreign exchange differences	(4.0)	(0.9)	(4.9)
As at 1 April 2015	**96.7**	**18.6**	**115.3**
Addition	0.0	2.8	2.8
Foreign exchange differences	(5.2)	(1.6)	(6.8)
As at 31 March 2016	**91.5**	**19.8**	**111.3**
Accumulated amortisation			
As at 1 April 2014	**3.5**	**2.6**	**6.1**
Charge for the year	3.6	3.9	7.5
Foreign exchange differences	0.2	(0.4)	(0.2)
As at 1 April 2015	**7.3**	**6.1**	**13.4**
Charge for the year	3.5	3.2	6.7
Foreign exchange differences	(0.4)	(0.6)	(1.0)
As at 31 March 2016	**10.4**	**8.7**	**19.1**
Net book value			
As at 1 April 2014	96.4	12.2	108.6
As at 1 April 2015	89.4	12.5	101.9
As at 31 March 2016	**81.1**	**11.1**	**92.2**

1 Vizag General Cargo Berth Private Limited (VGCB), a special purpose vehicle, was incorporated for the coal berth mechanisation and upgrades at Visakhapatnam port. VGCB is owned by Vedanta Limited and Leighton Welspun Contractors Private Limited (Leighton) in the ratio of 99.99:0.01 as on 31 March 2016 (99.99:0.01 as on 31 March 2015). Leighton has agreed to sell its shares in VGCB to Vedanta Limited. The project is to be carried out on a design, build, finance, operate, transfer basis and the concession agreement between Visakhapatnam port and VGCB was signed in June 2010. In October 2010, VGCB was awarded with the concession after fulfilling conditions stipulated as a precedent to the concession agreement. Visakhapatnam port has provided, in lieu of license fee an exclusive license to VGCB for designing, engineering, financing, constructing, equipping, operating, maintaining, and replacing the project/project facilities and services. The concession period is 30 years from the date of the award of the concession. The capacity of the upgraded berth would be 10.18mmtpa and that the Vishakhapatnam port would be entitled to receive 38.10% share of the gross revenue as royalty. VGCB is entitled to recover a tariff from the user(s) of the project facilities and services as per its tariff notification. The tariff rates are linked to the Wholesale Price Index (WPI) and would accordingly be adjusted as specified in the concession agreement every year. The ownership of all infrastructure assets, buildings, structures, berths, wharfs, equipment and other immovable and movable assets constructed, installed, located, created or provided by VGCB at the project site and/or in the port's assets pursuant to concession agreement would be with VGCB until expiry of this concession agreement. The cost of any repair, replacement or restoration of the project facilities and services shall be borne by VGCB during the concession period. VGCB has to transfer all its rights, titles and interest in the project facilities and services free of cost to Visakhapatnam port at the end of the concession period.

2 Others include right to use of sewage treatment plant at Zinc India which is amortised over 25 years. The carrying value was US$7.7 million as on 31 March 2016 (31 March 2015: US$7.7 million). It also includes software licenses which are amortised over a period of three years.

17. Property, plant and equipment

(US$ million)	Mining property and leases	Leasehold land and buildings	Freehold land and buildings	Plant and equipment[1]	Assets under construction	Oil & Gas properties	Exploratory and evaluation assets	Others	Total
Cost									
At 1 April 2014	**3,174.4**	**160.5**	**1,174.3**	**9,934.5**	**6,257.5**	**8,237.0**	**10,273.8**	**154.6**	**39,366.6**
Additions	25.8	11.1	44.2	212.3	372.8	865.0	204.2	16.6	1,752.0
Transfers	66.0	–	134.7	996.5	(1,291.4)	533.7	(439.7)	0.2	–
Unsuccessful exploration costs	–	–	–	–	–	–	(128.7)	–	(128.7)
Disposals	(7.2)	(0.7)	(0.3)	(37.4)	(0.6)	–	–	(0.3)	(46.5)
Foreign exchange differences	(133.3)	(2.4)	(62.5)	(390.8)	(226.3)	–	(1.9)	(24.0)	(841.2)
At 1 April 2015	**3,125.7**	**168.5**	**1,290.4**	**10,715.1**	**5,112.0**	**9,635.7**	**9,907.7**	**147.1**	**40,102.2**
Additions	121.1	0.1	20.8	129.0	249.7	134.5	79.9	15.6	750.7
Transfers	11.7	(4.2)	333.7	1,313.0	(1,673.8)	–	–	19.6	–
Unsuccessful exploration costs	–	–	–	–	–	–	(4.5)	–	(4.5)
Disposal[4]	(490.4)	(7.5)	(0.1)	(184.1)	–	–	–	–	(682.1)
Foreign exchange differences	(152.6)	(3.4)	(93.3)	(551.8)	(278.7)	–	–	(32.8)	(1,112.6)
At 31 March 2016	**2,615.5**	**153.5**	**1,551.5**	**11,421.2**	**3,409.2**	**9,770.2**	**9,983.1**	**149.5**	**39,053.7**
Accumulated depreciation, amortisation and impairment									
At 1 April 2014	**1,629.6**	**58.2**	**198.9**	**3,203.9**	**28.8**	**3,157.4**	**14.3**	**32.0**	**8,323.1**
Charge for the year	103.6	1.8	45.9	544.4	–	1,258.1	–	44.4	1,998.2
Impairment of assets (Note 5)	47.2	–	–	5.1	–	2,162.1	4,480.0	–	6,694.4
Disposal[4]	(2.0)	–	(0.2)	(23.2)	–	–	–	(0.1)	(25.5)
Foreign exchange differences	(82.9)	(0.3)	(15.5)	(123.2)	–	–	(0.7)	(17.4)	(240.0)
At 1 April 2015	**1,695.5**	**59.7**	**229.1**	**3,607.0**	**28.8**	**6,577.6**	**4,493.6**	**58.9**	**16,750.2**
Charge for the year	155.9	1.7	35.4	433.6	–	817.9	–	4.0	1,448.5
Impairment of assets (Note 5)	–	–	–	7.6	17.6	1,143.5	4,018.3	–	5,187.0
Disposal[4]	(490.4)	(6.6)	–	(173.6)	–	–	–	–	(670.6)
Foreign exchange differences	(60.1)	(0.5)	(26.2)	(198.5)	–	–	–	(23.9)	(309.2)
At 31 March 2016	**1,300.9**	**54.3**	**238.3**	**3,676.1**	**46.4**	**8,539.0**	**8,511.9**	**39.0**	**22,405.9**
Net book value									
At 1 April 2014	1,544.8	102.3	975.4	6,730.6	6,228.7	5,079.6	10,259.5	122.6	31,043.5
At 1 April 2015	1,430.2	108.8	1,061.3	7,108.1	5,083.2	3,058.1	5,414.1	88.2	23,352.0
At 31 March 2016	**1,314.6**	**99.2**	**1,313.2**	**7,745.1**	**3,362.8**	**1,231.2**	**1,471.2**	**110.5**	**16,647.8**

1 Plant and equipment include refineries, smelters, power plants and related facilities. Other tangible fixed assets include office equipment and fixtures, and light vehicles. At 31 March 2016, land with a carrying value of US$132.5 million (31 March 2015: US$125.9 million) was not depreciated.
2 During the year ended 31 March 2016, interest and foreign exchange losses capitalised was US$85.7 million (31 March 2015: US$147.5 million).
3 Certain property, plant and equipment are pledged as collateral against borrowings, the details related to which have been described in Note 24 on Borrowings.
4 Subsequent to end of life of mines in Lisheen, US$585.0 million has been removed from gross block and US$580.7 million from accumulated depreciation.

18. Financial asset investments

Financial asset investments are required to be classified and accounted for as either available-for-sale or fair value through profit or loss. The Group only has financial asset investments classified as available-for-sale.

Available-for-sale investments

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
At 1 April	4.2	1.7
Movements in fair value	2.3	2.1
Exchange difference	–	0.4
At 31 March	**6.5**	**4.2**

Financial assets investment represents quoted investments in equity shares that present the Group with an opportunity for returns through dividend income and gains in value. These securities are held at fair value based on market prices. These are classified as non-current as on 31 March 2016.

19. Other non-current assets

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Deposits, advances and other receivables due after one year	**237.9**	**156.0**

20. Inventories

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Raw materials and consumables	852.4	975.8
Work-in-progress	385.3	486.0
Finished goods	128.1	143.9
	1,365.8	**1,605.7**

Inventories with a carrying amount of US$758.1 million (2015: US$801.8 million) have been pledged as security against certain bank borrowings of the Group.

Inventory held at net realisable value amounted to US$142.8 million (2015: US$154.3 million). The write down of inventories amounted to US$53.7 million (2015: US$50.6 million).

21. Trade and other receivables

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Trade receivables	406.6	555.0
Amounts due from related parties (Note 39)	2.7	4.9
Prepayments	34.4	31.0
Deposits with Governments	277.8	281.3
Other receivables	622.8	967.0
	1,344.3	**1,839.2**

The credit period given to customers ranges from zero to 90 days. Other receivables primarily include excise balances, customs balances, advances to suppliers and claims receivables.

22. Liquid investments

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Bank deposits[1]	530.3	1,850.1
Other investments	7,977.9	6,006.0
	8,508.2	**7,856.1**

1 Includes US$28.2 million (2015: US$29.8 million) of bank deposits at Jharsuguda Aluminium that is restricted in use as it relates to security deposits as directed by courts in relation to a relief claim filed by a vendor (Note 38).

Bank deposits are made for periods of between three months and one year depending on the cash requirements of the companies within the Group and earn interest at the respective deposit rates.

Other investments include mutual fund investments which are recorded at fair value with changes in fair value reported through the income statement. Liquid investments do not qualify for recognition as cash and cash equivalents due to their maturity period and risk of change in value of the investments.

23. Cash and cash equivalents

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Cash at bank and in hand	217.2	211.6
Short-term deposits[1]	211.1	142.1
	428.3	**353.7**

1 Includes US$44.8 million (2015: US$66.5 million) of cash held in short-term deposit accounts that is restricted in use as it relates to unclaimed dividends, closure costs and future redundancy payments.

Short-term deposits are made for periods of between one day and three months, depending on the immediate cash requirements of the Group, and earn interest at the respective short-term deposit rates.

24. Borrowings

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Bank loans	11,587.9	11,474.9
Bonds	4,074.6	4,075.4
Other loans	13.6	14.5
Total	**15,676.1**	**15,564.8**
Borrowings are repayable as:		
Within one year (shown as current liabilities)	3,726.6	3,179.2
More than one year	11,949.5	12,385.6
Total	**15,676.1**	**15,564.8**

At 31 March 2016, the Group had available US$1,087.3 million (2015: US$1,208.2 million) of undrawn committed borrowing facilities in respect of which all conditions precedent had been met. The Group facilities are subject to certain financial and non-financial covenants. During the current year ended 31 March 2016, the Group has agreed with the lenders for a moratorium period for testing of certain financial covenants and relaxed level for others. Certain of these financial covenants will be reset to their original levels beginning March 2019. The primary covenants which must be complied with include fixed charge cover ratio, net borrowing to EBITDA ratio, total net assets to borrowings ratio and net interest expense to EBITDA ratio. The principal loans held by Group companies at 31 March 2016 were as follows:

Vedanta Resources plc

Long-term bonds

In July 2008, the Company issued US$500.0 million bonds bearing a coupon rate of 8.75% and US$750.0 million bonds bearing a coupon rate of 9.50%. US$500.0 million bonds due in January 2014 were duly paid. US$750.0 million bonds are due for repayment in July 2018. As at 31 March 2016, the amount outstanding is US$750.0 million (2015: US$750.0 million).

In July 2011, the Company issued US$750.0 million bonds bearing a coupon rate of 6.75% and US$900.0 million bonds bearing a coupon rate of 8.25%. The same is due for repayment in June 2016 and June 2021 respectively. Out of US$750.0 million bond due in June 2016, US$7 million has been bought back in December 2015. As at 31 March 2016, the amount outstanding is US$1,643.0 million (2015: US$1,650.0 million).

In June 2013, the Company issued US$1,200 million bonds bearing a coupon rate of 6% and US$500.0 million at a coupon rate of 7.125%. The same is due for repayment in January 2019 and May 2023. As at 31 March 2016, the amount outstanding is US$1,700.0 million (2015: US$1,700.0 million).

All the above bonds are issued in the United States of America (USA) pursuant to Rule 144A of US Securities Act of 1933 (Securities Act) and outside of the USA in compliance with Regulations pursuant to the Securities Act. The bonds are unsecured and are currently rated BB (-) by Standard & Poor's and Ba3 by Moody's.

Term loan

In December 2010, the Company availed a facility from the ICICI Bank for US$180.0 million bearing an interest rate of three month GBP LIBOR plus 385 basis points. The first instalment of US$90.0 million due in December 2014 was duly repaid and the balance US$90.0 million was duly repaid in December 2015.

In January 2011, the Company availed a facility from ICICI Bank for US$150.0 million bearing an interest rate of three month US$LIBOR plus 389 basis points. The same is repayable as US$75.0 million in January 2016 and the balance US$75.0 million in January 2017. US$75.0 million facility has been duly repaid in January 2016. As at 31 March 2016, the amount outstanding is US$75.0 million (2015: US$150.0 million).

In July 2011, the Company availed a facility from ICICI Bank for US$500.0 million bearing an interest rate of three month US$LIBOR plus 390 basis points. The same is repayable as US$250.0 million in January 2018 and the balance US$250.0 million in July 2018. As at 31 March 2016, the amount outstanding is US$500.0 million (2015: US$500.0 million).

In March 2013, the Company entered into a three-year facility agreement with Deutsche Bank as an agent for an amount of US$185.0 million bearing an interest rate of US$LIBOR plus 315 basis points. The same has been duly repaid in March 2016.

In March 2013, the Company entered into two facility agreements with ICICI Bank for an amount of US$170.0 million and US$180.0 million. The loans bear interest rates of US$LIBOR plus 430 basis points and US$LIBOR plus 427 basis points respectively. Of the said loan US$170.0 million is repayable in three annual instalments beginning April 2018 (the first instalment being 20% and the balance two instalments being 40% each) and US$180.0 million facility is repayable in three equal annual instalments beginning February 2017. As at 31 March 2016, the amount outstanding is US$350.0 million (2015: US$350.0 million).

In April 2013, the Company entered into a Standby Letter of Credit agreement arranged by Axis Bank for an amount of US$150 million bearing an interest rate at three month US$LIBOR plus 290 basis points. The facility is repayable in two equal annual instalments in April 2017 and April 2018. As at 31 March 2016, the amount outstanding is US$148.5 million (2015: US$148.5 million).

In October 2013, the Company entered into a syndicated facility agreement with Standard Chartered Bank as facility agent for borrowing up to US$500 million bearing an interest rate of US$LIBOR plus 357 basis points. The same is repayable as two equal instalments of US$250.0 million each in October 2017 and January 2018. As at 31 March 2016, the amount outstanding is US$500.0 million (2015: US$500.0 million).

In November 2013, the Company entered into a two-year Revolving Credit Facility arranged by The Royal Bank of Scotland and Standard Chartered Bank for borrowing up to US$100 million at an interest rate of US$LIBOR plus 250 basis points. The same was duly repaid in August 2015.

In December 2013, the Company entered into a facility agreement with Bank of India for borrowing up to US$100 million at an interest rate of US$LIBOR plus 357 basis points. The same is repayable in two equal instalments of US$50.0 million each in October 2017 and January 2018. As at 31 March 2016, the amount outstanding is US$100.0 million (2015: US$100.0 million).

In March 2014, the Company has entered into a US$500 million syndicated facility agreement with Axis Bank as the lead arranger. The facility bears an interest rate of US$LIBOR plus 352 basis points. The facility was fully drawn in September 2014. The same is repayable as US$100.0 million in December 2018, US$150.0 million in March 2019 and US$250.0 million in September 2019. As at 31 March 2016, the amount outstanding is US$500.0 million (2015: US$500.0 million).

In March 2015, the Company entered into a facility agreement with State Bank of India for US$350 million. Out of said facility US$100 million bears an interest rate of US$LIBOR plus 370 basis points and is repayable in March 2020. US$250.0 million bears an interest rate of US$LIBOR plus 403 basis points repayable in two instalments of US$100 million and US$150 million in June 2021 and June 2022 respectively. As at 31 March 2016, the amount outstanding is US$350.0 million (2015: US$25.0 million).

In January 2016, the Company entered into a facility agreement with State Bank of India for US$300.0 million. Out of which US$120.0 million bears an interest rate of US$LIBOR plus 450 basis points and is repayable in February 2022. Balance US$180.0 million bears an interest rate of 454 basis points. As at 31 March 2016, the amount outstanding is US$300.0 million.

Twin Star Mauritius Holdings Limited (TMHL)

Term loan

In May 2013, the Group tied up a term loan facility of US$1,200 million borrowed by TMHL through a syndicate of banks with Standard Chartered Bank (SCB) as facility agent to partly refinance US$2,664 million drawn to meet the funding requirements for the acquisition of 28.5% stake in Cairn India Limited in December 2011. The facility bears an interest rate of LIBOR plus 275 basis points and is due for repayment in four equal annual instalments starting June 2015. The facility of US$2,664 million due for repayment as US$1,350.0 million in June 2013 and US$1,314.4 million in December 2014 was fully prepaid in June 2013. The first instalment due in June 2015 has been duly repaid. As at 31 March 2016, the amount outstanding is US$900.0 million (2015: US$1,200.0 million).

In August 2014, the Group tied up a US$500 million facility with Standard Chartered Bank and First Gulf Bank PJSC of which $250 million is under a commodity murabaha structure (Islamic financing) and balance US$250 million is under a conventional loan structure. Out of the said facility US$287.5 million bears an interest rate of LIBOR plus 275 basis points with an average maturity of about five years from the date of first drawdown in August 2014 and balance amount of US$212.5 million bears an interest rate of LIBOR plus 340 basis points with an average maturity of about six years from the date of first drawdown in August 2014. US$25.0 million has been duly repaid during the current year. As at 31 March 2016, the amount outstanding is US$475.0 million (2015: US$500.0 million).

Vedanta Limited

Term loan

In March 2014, Jharsuguda Aluminium had availed a facility of US$287.5 million from Axis Bank at an average interest rate of bank base rate plus 25 basis points per annum. In May 2014, the said facility was further enhanced by US$32.0 million. The same was down sold to the following banks:

a) Axis Bank – US$39.9 million at an average interest rate of bank base rate plus 25 basis points per annum. The facility is secured by first charge by way of mortgage/pledge of movable/immovable all present and future fixed assets of the Aluminium division for the project. The same was repayable as US$32.0 million in February 2017 and US$7.9 million in February 2018. As at 31 March 2015, the amount outstanding was US$39.9 million and the same has been duly prepaid.

b) Bank of India – US$79.9 million at an average interest rate of bank base rate plus 25 basis points per annum. The facility is secured by first charge by way of mortgage/pledge of movable/immovable all present and future fixed assets of the Aluminium division for the project. The same was repayable as US$32.0 million in February 2017, US$32.0 million in February 2018 and US$15.9 million in February 2019. As at 31 March 2015, the amount outstanding was US$79.9 million and the same has been duly prepaid.

c) Corporation Bank – US$79.9 million at an average interest rate of bank base rate plus 25 basis points per annum. The facility is secured by first charge by way of mortgage/pledge of movable/immovable all present and future fixed assets of the Aluminium division for the project. The same was repayable as US$12.0 million in February 2017, US$27.9 million in February 2018 and US$40.0 million in February 2019. As at 31 March 2015, the amount outstanding was US$79.9 million and the same has been duly prepaid.
d) Syndicate Bank – US$79.9 million at an average interest rate of bank base rate plus 25 basis points per annum. The facility is secured by first charge by way of mortgage/pledge of movable/immovable all present and future fixed assets of the Aluminium division for the project. The same was repayable as US$12.0 million in February 2017, US$27.9 million in February 2018 and US$40.0 million in February 2019. As at 31 March 2015, the amount outstanding was US$79.9 million and the same has been duly prepaid.
e) Vijaya Bank – US$39.9 million at an average interest rate of bank base rate plus 25 basis points per annum. The facility is secured by first charge by way of mortgage/pledge of movable/immovable all present and future fixed assets of the Aluminium division for the project. The same was repayable as US$7.9 million in February 2017, US$16.0 million in February 2018 and US$16.0 million in February 2019. As at 31 March 2015, the amount outstanding was US$39.9 million and the same has been duly prepaid.

During the year, Jharsuguda Aluminium has acquired a facility for US$301.5 million from Axis Bank at an average rate of bank base rate plus 30 basis points per annum. The same is down sell to the following banks:

a) Axis Bank – US$150.8 million at an average interest rate of bank base rate plus 30 basis points per annum. The facility is secured by first pari passu charge by way of i) a first pari passu charge by way of hypothecation on the entire moveable fixed assets (including WIP) of the project, both present and future ii) mortgage by deposit of documents of title of the land pertaining to the fixed assets. The aforesaid mortgages/charges shall in all respects rank pari passu inter se amongst the rupee lenders and amongst all existing lenders and future lenders having first charge on the security without any preference or priority to one over the other or others. The same is repayable in quarterly instalments till December 2030. As at 31 March 2016, the amount outstanding is US$150.0 million.
b) State Bank of Hyderabad – US$30.2 million at an average interest rate of bank base rate plus 5 basis points per annum. The facility is secured by a first pari passu charge by way of hypothecation on the entire moveable fixed assets (including WIP) of the project, both present and future; and mortgage by deposit of documents of title of the land pertaining to the fixed assets. The same is repayable in quarterly instalments till December 2030. As at 31 March 2016, the amount outstanding is US$30.0 million.
c) Vijaya Bank – US$75.4 million at an average interest rate of bank base rate plus 15 basis points per annum. The facility is secured by a first pari passu charge by way of hypothecation on the entire moveable fixed assets (including WIP) of the project, both present and future; and mortgage by deposit of documents of title of the land pertaining to the fixed assets. The same is repayable in quarterly instalments till December 2030. As at 31 March 2016, the amount outstanding is US$75.0 million.
d) State Bank of Patiala – US$45.2 million at an average interest rate of bank base rate plus 15 basis points per annum. The facility is secured by a first pari passu charge by way of hypothecation on the entire moveable fixed assets (including WIP) of the project, both present and future; and mortgage by deposit of documents of title of the land pertaining to the fixed assets. The same is repayable in quarterly instalments till December 2030. As at 31 March 2016, the amount outstanding is US$45.0 million.

In July 2014, Jharsuguda Aluminium has availed a facility of US$753.8 million from State Bank of India (SBI) at a floating interest rate of SBI base rate plus 30 basis points. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2022. As at 31 March 2016, the amount outstanding is US$716.1 million (2015: US$692.2 million).

In April 2014, Jharsuguda Aluminium has availed a facility of US$301.5 million from Bank of Baroda at a floating interest rate of bank base rate plus 10 basis points. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2020. As at 31 March 2016, the amount outstanding is US$268.3 million (2015: US$316.3 million).

In April 2014, Jharsuguda Aluminium has availed a facility of US$301.5 million from Bank of India at a floating interest rate of bank base rate plus 15 basis points. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to September 2020. As at 31 March 2016, the amount outstanding is US$257.0 million (2015: US$304.4 million).

In April 2014, Jharsuguda Aluminium has availed a facility of US$75.4 million from State Bank of Bikaner & Jaipur at a floating interest rate of bank base rate plus 5 basis points. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2020. As at 31 March 2016, the amount outstanding is US$67.1 million (2015: US$79.1 million).

In April 2014, Jharsuguda Aluminium has availed a facility of US$154.6 million from Syndicate Bank at a floating interest rate of bank base rate. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2020. As at 31 March 2016, the amount outstanding is US$137.5 million (2015: US$162.1 million).

In April 2014, Jharsuguda Aluminium has availed a facility of US$150.8 million from Union Bank of India at a floating interest rate of bank base rate plus 25 basis points. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2020. As at 31 March 2016, the amount outstanding is US$133.4 million (2015: US$157.4 million).

In December 2013, Jharsuguda 2,400MW power plant has availed a facility of US$59.4 million from Canara Bank at an interest rate of 9.75% per annum. In August 2014, this facility has further been enhanced by US$90.5 million. The facility is secured by way of mortgage and charge on all the immovable properties, both present and future, of Jharsuguda 2,400MW power plant except IPP Agricultural Land and a second charge by way of pledge on all the movable fixed assets of the Power division. The loan is repayable in 16 quarterly instalments from end of quarter starting after the moratorium period up to December 2018. As at 31 March 2016, the amount outstanding is US$103.6 million (2015: US$149.8 million).

In March 2016, Jharsuguda Aluminium has availed a facility of US$188.4 million from State Bank of India at a floating interest rate of bank base rate plus 20 basis points. The facility is secured by aggregate of the net fixed assets of the Aluminium division and the Lanjigarh Expansion project reduced by the outstanding borrowings having first pari passu charge on the fixed assets of the Aluminium division and the Lanjigarh Expansion Project. The same is repayable in quarterly instalments up to March 2025. As at 31 March 2016, the amount outstanding is US$188.4 million.

In November 2015, Iron Ore Sesa has availed a facility of US$72.4 million from Corporation Bank at a floating interest rate of 9.65%. The facility is secured by creating first pari passu charge by way of hypothecation of the movable fixed assets and mortgage on immovable fixed assets of the Aluminium division, both present and future. The same is repayable in quarterly instalments up to December 2020. As at 31 March 2016, the amount outstanding is US$67.1 million (2015: US$36.0 million).

Short-term loans
In January 2015, Jharsuguda Aluminium availed a short-term borrowing facility in the form of export packing credit from Bank of America at an average rate 9.30% per annum. These loans were obtained to meet the working capital requirements. The same is repayable in June 2016. As at 31 March 2016, the amount outstanding is US$95.0 million (2015: US$32.0 million).

In October 2014, Jharsuguda Aluminium availed a short-term borrowing facility in foreign currency in the form of pre shipment/export packing credit from Bank of America at an average rate of LIBOR plus 65-70 basis points. These loans were obtained to meet the working capital requirements. This was repayable as US$32.6 million in April 2015 and US$14.6 million in May 2015. The same has been duly repaid.

Iron Ore Sesa obtained a short-term borrowing facility in foreign currency in the form of pre shipment/export packing credit from various banks at an average rate of 9.39%. These loans were obtained to meet the working capital requirements of the Iron Ore. As at 31 March 2016, the amount outstanding is US$57.4 million (2015: US$36.0 million).

Non-convertible debentures (NCDs)
In October 2008, Jharsuguda Aluminium has issued NCDs of US$66.6 million to the Life Insurance Corporation of India at a rate of 11.5% per annum. These NCDs are secured and have the first pari passu charge over the identified assets (including land and buildings) of the issuer to the extent of 1.33 times of the issued amount. These NCDs are repayable in three equal annual instalments starting October 2013. The first two instalments due for repayment of US$22.2 million each were paid in October 2013 and October 2014 respectively. The balance instalment of US$22.2 million was due for repayment in October 2015 and the same has been duly repaid.

In December 2012, April 2013, July 2013 and August 2016 Vedanta Limited had issued NCDs in three tranches for US$75.4 million, US$376.9 million, US$180.9 million and US$301.5 million with an interest rate of 9.24%, 9.10%, 9.17% and 9.70% per annum respectively. Out of the total NCDs US$180.9 million are secured by way of mortgage on the immovable property of Vedanta Limited situated at Sanaswadi in the state of Maharashtra and also by way of pledge on the movable fixed assets of Jharsuguda Aluminium division with a security cover of 1.25 times on the face value of outstanding NCDs at all time during the tenure of the NCDs. The balance NCDs of US$753.8 million are secured by way of mortgage on the immovable property of Vedanta Limited situated at Sanaswadi in the state of Maharashtra and also by way of pledge on the movable fixed assets of Jharsuguda 2,400MW power plant with a security cover of 1.25 times on the face value of outstanding NCDs at all time during the tenure of the NCDs. Of the total outstanding NCDs, US$75.4 million is repayable in December 2022, US$376.9 million in April 2023, US$180.9 million in July 2023 and US$301.5 million in August 2020. All NCDs, except for US$301.5 million issued in August 2016, have put and call option respectively at the end of five years from the respective date of allotment. As at 31 March 2016, the amount outstanding is US$934.7 million (2015: US$671.0 million).

In October, November and December 2012, Vedanta Limited had also issued NCDs in three tranches for US$75.4 million each per tranche with an interest rate of 9.24%, 9.40% and 9.40% per annum respectively. These NCDs are secured by way of mortgage on the immovable property of Vedanta Limited situated at Sanaswadi in the state of Maharashtra and also by way of pledge on the movable fixed assets of Jharsuguda 2,400MW power plant with a security cover of 1.25 times on the face value of outstanding NCDs at all time during the tenure of the NCDs. Of the total outstanding NCDs, US$75.4 million is repayable in October 2022, US$75.4 million in November 2022 and US$75.4 million in December 2022. The NCDs have put and call option respectively at the end of five years from the respective date of allotment of the NCDs. As at 31 March 2016, the amount outstanding is US$226.1 million (2015: US$239.6 million).

In October 2014, Iron Ore Sesa has also issued NCDs of US$226.1 million with an interest rate of 9.36% per annum. These NCDs are secured by way of mortgage on the immovable property of Vedanta Limited situated at Tuticorin in the state of Tamil Nadu and also by way of first ranking pari passu charge over 'movable fixed assets' in relation to Vedanta Limited's Iron Ore Sesa business (pig iron and met coke assets) and power plant assets located in Goa and the Copper plant assets located at Tuticorin with a security cover of 1.25 times on the face value of outstanding NCDs at all times during the tenure of the NCDs. These NCDs are redeemable in two instalments as US$147.0 million in October 2017 and US$79.1 million in December 2017. As at 31 March 2016, the amount outstanding is US$226.1 million (2015: US$239.7 million).

External commercial borrowing
During the year ended 31 March 2015, Jharsuguda Aluminium External Commercial Borrowing from Axis Bank of US$500.0 million was refinanced by ICICI Bank and SCB at an interest rate of US$LIBOR plus 170 basis points (prior to refinancing at an interest rate of US$LIBOR plus 400 basis points) having a subservient charge on all present and future movable assets of the Aluminium division. The repayment is to be made in three equal instalments starting from April 2015. The first instalment of US$200.0 million has been duly repaid. As at 31 March 2016, the amount outstanding is US$300.0 million (2015: US$500.0 million).

During the year ended 31 March 2013, a part of intercompany borrowing from Welter Trading Limited was refinanced through Axis Bank. This has been further refinanced from Standard Chartered Bank for US$44.5 million at an interest rate of US$LIBOR plus 129 basis points (prior to refinancing at an interest rate of US$LIBOR plus 360 basis points) having a subservient charge on all present and future movable assets of Jharsuguda Aluminium. The entire loan was repayable in July 2015 and the same has been duly repaid.

Project buyers' credit
Jharsuguda Aluminium had extended credit terms relating to purchases of property, plant and equipment bearing an average interest rate of LIBOR plus 24-55 basis points. These are secured by all of the fixed assets of Jharsuguda Aluminium, immovable or movable, present and future, on a pari passu basis with other term lenders and with priority over other creditors. Project buyers' credit have an average maturity of May 2015. As at 31 March 2015, the amount outstanding was US$2.0 million and the same has been duly repaid.

Commercial papers
During the year, Jharsuguda 2,400MW power plant has issued commercial paper to various asset management companies bearing an average coupon rate of 9.6% for funding project payables. As at 31 March 2016, the amount outstanding is US$395.7 million (2015: US$180.5 million).

During the year, Iron Ore Sesa has issued commercial papers for periods ranging up to one year bearing an average interest rate of 9.5%. These commercial papers are used to meet working capital requirements of the Iron Ore division and are repayable in the next financial year. As at 31 March 2016, the outstanding balance was US$112.3 million (2015: US$380.2 million).

During the year, Vedanta Limited has issued commercial paper to various asset management companies bearing an average coupon rate of 9.19% and are repayable in the next financial year. As at 31 March 2016, the amount outstanding is US$392.0 million.

KCM
A term loan facility of US$820 million (2015: US$820 million) has been obtained by KCM from Standard Bank. The term loan facility is made up of three tranches: US$300 million ('Facility A'), US$120 million ('Facility A1') and US$400 million ('Facility B') drawn down on various dates with the last amount drawn in June 2014. The facility was restructured in 2014. The facility was repayable in 16 quarterly instalments starting in June 2015. But during this year we restructured the loan again with Standard Bank and got a moratorium period for testing of financial covenants. First testing will be done on 30 September 2017. The loan is secured against the fixed assets of KCM and a corporate guarantee from Vedanta Resources plc for the amount equivalent to the total outstanding loan. Interest is payable quarterly at LIBOR plus 350 basis points for Facility A and A1 and US$LIBOR plus 300 basis points for Facility B. The facility is repayable in tranches with Facility A and A1 in 11 quarterly instalments commencing from 30 September 2016 and Facility B is repayable in 14 quarterly instalments commencing from 31 March 2017. As at 31 March 2016, the amount outstanding is US$569.1 million (2015: US$710.9 million).

A general short-term banking facility incorporating multiple sub-facilities amounting to US$30 million (31 March 2015: US$50 million) was provided by Stanbic Bank. The facility was revolved on 1 June 2011. Interest is payable monthly at three month US$LIBOR plus 350 basis points. The facility is repayable strictly on demand. The tenure for the facility is 12 months. The amount drawn as at 31 March 2016 under this facility is US$14 million (2015: US$27.8 million).

A general short-term banking facility incorporating multiple sub-facilities amounting to US$50 million (2015: US$50 million) was provided by Standard Chartered Bank. The facility was revolved on 26 May 2011. The facility bears an interest rate of US$LIBOR plus 300 basis points. The facilities are repayable strictly on demand. The tenure for the facility is 12 months. As at 31 March 2016, the amount outstanding is US$50.0 million (2015: US$50.0 million).

A general short-term banking facility incorporating multiple sub-facilities amounting to US$40 million (2015: US$40 million) was provided by Barclays Bank Zambia Plc. The facility bears an interest rate of three month US$LIBOR plus 250 basis points payable monthly. The facilities are repayable strictly on demand. The tenure for the facility is 12 months. As at 31 March 2016, the amount outstanding is US$32.81 million (2015: US$13.8 million).

BALCO
NCDs
In November 2008, BALCO issued NCDs of US$75.4 million to the Life Insurance Corporation of India at a rate of 12.25% per annum. These NCDs are secured and have the first pari passu charge on the fixed assets of BALCO including land and buildings. These NCDs were repayable in three equal instalments in November 2013, November 2014 and November 2015. All three instalments have been duly repaid.

In May 2013, BALCO issued NCDs of US$75.4 million to Kotak Mahindra Bank, Axis Bank Limited and Wipro Limited at an interest rate of 8.58% per annum (Series–I) and 8.60% per annum (Series–II). These NCDs are secured and have the first pari passu charge on the fixed assets of BALCO. These NCDs are repayable in two equal instalments in November 2015 and May 2016. The first instalment has been duly repaid. As at 31 March 2016, the amount outstanding is US$37.7 million (2015: US$79.9 million).

In August 2014, BALCO issued NCDs of US$75.4 million to banks and financial institutions arranged by Deutsche Bank at an interest rate of 10.25% per annum. These NCDs are secured and have the first pari passu charge on the fixed assets of BALCO. These NCDs are repayable in August 2017. As at 31 March 2016, the amount outstanding is US$75.4 million (2015: US$79.9 million).

Project buyers' credit
BALCO has extended credit terms relating to the purchase of property, plant and equipment at an average interest rate of US$LIBOR plus 107 basis points. Project buyers' credits have an average maturity of November 2016. As at 31 March 2016, the amount outstanding is US$58.1 million (2015: US$59.6 million).

External commercial borrowings
In August 2011, BALCO has obtained an External Commercial Borrowing loan from State Bank of India, London of US$200 million at an interest rate of six month US$LIBOR plus 290 basis points secured by first pari passu charges on all the fixed assets (excluding land) of BALCO projects both present and future along with secured lenders. The above loan is repayable in three equal annual instalments starting August 2016. As at 31 March 2016, the amount outstanding is US$200.0 million (2015: US$200.0 million).

In September 2015, BALCO has also obtained an External Commercial Borrowing loan from ICICI Bank Dubai of US$50.0 million at an interest rate of three month US$LIBOR plus 240 basis points secured by first pari passu charge on all movable fixed assets including plant and machinery related to 1,200MW Power project and 3.25 LTPA Smelter projects both present and future along with secured lenders. The facility is repayable as US$13.0 million in August 2019, US$14.0 million in August 2020 and US$23.0 million in August 2021. As at 31 March 2016, the amount outstanding is US$50.0 million.

Rupee term loan
During the year, BALCO has availed rupee term loan of US$75.4 million from Dena Bank at pricing of bank base rate plus 50 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$75.4 million.

During the year, BALCO has availed rupee term loan of US$45.2 million from State Bank of India at pricing of bank base rate plus 50 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$45.2 million.

During the year, BALCO has availed rupee term loan of US$22.6 million from State Bank of Mysore at pricing of bank base rate plus 50 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$22.6 million.

During the year, BALCO has availed rupee term loan of US$30.2 million from State Bank of Patiala at pricing of bank base rate plus 50 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$30.2 million.

During the year, BALCO has availed rupee term loan of US$22.6 million from South Indian Bank at pricing of bank base rate plus 25 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$22.6 million.

During the year, BALCO has availed rupee term loan of US$45.0 million from UCO Bank at pricing of bank base rate plus 50 basis points. The facility is secured against movable fixed assets (excluding coal block assets) of BALCO. The facility has a maturity of eight years and is repayable in 28 quarterly instalments post moratorium period of one year. As at 31 March 2016, the amount outstanding is US$45.0 million.

Commercial paper
In March 2016, BALCO has issued commercial paper bearing an average coupon rate of 9.89% per annum to various asset management companies for the funding of project loan repayment and other payables. As at 31 March 2016, the amount outstanding is US$79.1 million (2015: US$317.1 million).

Talwandi Sabo
NCDs
In December 2010 and January 2011, Talwandi Sabo has issued NCDs of US$226.13 million to ICICI Bank at a rate of 9.8% per annum. These NCDs are secured by first pari passu charge on the assets of Talwandi Sabo both present and future, with an unconditional and irrevocable corporate guarantee by Vedanta Limited. These NCDs have tenure of 13 years and are repayable in 12 equal instalments after 10 years after allotment. These NCDs have a call option, five years after allotment. The call option has been exercised and the NCDs have been duly repaid.

In September 2014 (four tranches), November 2014, March 2015 and April 2015, Talwandi Sabo has also issued NCDs of US$226.1 million in five tranches of US$18.1 million, US$27.1 million, US$30.2 million, US$49.0 million and US$101.8 million respectively at an interest rate of 9.60% per annum, 9.70% per annum, 9.27% per annum, 8.91% and 8.91% per annum respectively, to various asset management companies for fresh project funding and repayment of loan. These NCDs are secured by first pari passu charge on the assets of Talwandi Sabo both present and future, with an unconditional and irrevocable corporate guarantee by Vedanta Limited. These NCDs are repayable in tranches as US$18.1 million, US$27.1 million, US$30.2 million in November 2017 and balance US$150.8 million in April 2018. As at 31 March 2016, the amount outstanding is US$226.1 million (2015: US$131.8 million).

Term loan
In September 2014, Talwandi Sabo has availed a rupee term loan facility of US$75.4 million from Kotak Mahindra Bank Limited at an interest rate of 10.10% per annum. The facility is secured by first pari passu charge on the assets of Talwandi Sabo both present and future, with an unconditional and irrevocable corporate guarantee by Vedanta Limited. The facility is repayable as first 50% of the loan amount in 24 equal quarterly instalments starting from December 2015 and balance 50% of the loan amount in March 2021. As at 31 March 2016, the amount outstanding is US$68.7 million (2015: US$79.9 million).

In December 2015, Talwandi Saboo has availed a rupee term loan facility of US$301.5 million from the State Bank of India at an interest rate of SBI base rate plus 50 basis points (which is at present effective 9.80% per annum). The facility is secured by pari passu charge on the assets of Talwandi Sabo both present and future, with an unconditional and irrevocable corporate guarantee by Vedanta Limited. The facility is repayable in 48 quarterly instalments starting in June 2018. As at 31 March 2016, the amount outstanding is US$283.4 million.

Project buyers' credit
Talwandi Sabo has accessed buyers' credit in respect of purchase of capital goods at an average rate of six month US$LIBOR plus 136 basis points. The average maturity of the project buyers' credit is May 2017. As at 31 March 2016, the amount outstanding is US$165.6 million (2015: US$177.1 million).

Commercial paper
During the year, Talwandi Sabo has issued commercial paper to various asset management companies for the funding of project loan

repayment bearing an average coupon rate of 9.5% per annum. As at 31 March 2016, Talwandi Sabo had an outstanding balance of US$361.1 million (2015: US$417.0 million).

VGCB

NCDs

In May 2013, VGCB has issued NCDs of US$47.9 million to IDFC Limited at a rate of 9% per annum to refinance the existing term loan from Axis Bank. These NCDs are secured by 1.1 times on the face value of outstanding debentures, by way of charge on the fixed assets of VGCB at all time during the currency of the debentures. Debentures have tenure of three years with put and call option at the end of the second year. During this year, the call and put option has been exercised on US$33.9 million bonds and has been duly repaid. As at 31 March 2016, the amount outstanding is US$11.3 million (2015: US$47.9 million).

Project buyers' credit

VGCB has accessed buyers' credit in respect of purchase of capital goods at an average rate of six month US$LIBOR plus 145 basis points. The average maturity of the project buyers' credit is May 2017. As at 31 March 2016, the amount outstanding is US$18.3 million (2015: US$18.3 million).

25. Non-equity non-controlling interests

As at 31 March 2016, non-equity non-controlling interests amounts to US$11.9 million, being deferred shares in KCM held by ZCCM. The deferred shares have no voting rights or rights to KCM's dividends, but are entitled on a winding up to a return of up to US$0.99 per share once all of KCM's ordinary shares have received a distribution equal to their par value and any share premium created on their issue and which remains distributable to them.

The deferred shares are held at historic cost, being the fair value attributed to them at the time of initial acquisition of KCM in the year ended 31 March 2005. They are classified as non-current liabilities as they are repayable only on the winding up of KCM, for an amount different than the pro rata share of net assets upon liquidation. The shares have been valued at US$0.99 per share, which is the maximum amount payable to the deferred shareholders. These deferred shares have not been discounted as the effect would not be material.

26. Movement in net debt[1]

				Debt due within one year	Debt due after one year		
(US$ million)	Cash and cash equivalents	Liquid investments	Total cash and liquid investments	Debt carrying value	Debt carrying value	Debt–related derivatives[2]	Total net debt
At 1 April 2014	**369.4**	**8,568.5**	**8,937.9**	**(4,358.5)**	**(12,512.7)**	**13.8**	**(7,919.5)**
Cash flow	(13.9)	(671.7)	(685.6)	818.8	(1,050.1)	–	(916.9)
Other non-cash changes[3]	–	250.8	250.8	294.8	(46.7)	(16.1)	482.8
Foreign exchange differences	(1.8)	(291.5)	(293.3)	65.7	120.9	–	(106.7)
At 1 April 2015	**353.7**	**7,856.1**	**8,209.8**	**(3,179.2)**	**(13,488.6)**	**(2.3)**	**(8,460.3)**
Cash flow	92.6	999.9	1,092.5	1,022.1	(901.6)	–	1,213.0
Other non-cash changes[3]	–	59.4	59.4	(2,280.6)	2,195.6	0.3	(25.3)
Foreign exchange differences	(18.0)	(407.2)	(425.2)	123.9	245.1	–	(56.2)
At 31 March 2016	**428.3**	**8,508.2**	**8,936.5**	**(4,313.8)**	**(11,949.5)**	**(2.0)**	**(7,328.8)**

1 Net debt being total debt reduced by cash and cash equivalents and liquid investments, as carried at fair value under IAS 32 and 39.
2 Debt-related derivatives exclude derivative financial assets and liabilities relating to commodity contracts and forward foreign currency contracts.
3 Other non-cash changes comprises of mark to market of embedded derivatives, interest accretion on convertible bonds and amortisation of borrowing costs for which there is no cash movement and reclassification between debt due within one year and debt due after one year. It also includes US$59.5 million (2015: US$250.8 million) of fair value movement in investments.

27. Trade and other payables

(a) Current trade and other payables

(US$ million)	**As at 31 March 2016**	As at 31 March 2015[3]
Trade payables	2,155.8	2,258.9
Bills of exchange	1,500.0	1,512.4
Accruals and deferred income	38.3	22.8
Advance from customers[1]	396.8	–
Dividend payable to NCI	536.3	–
Dividend tax payable	311.2	–
Other trade payables[2]	937.7	935.9
	5,876.1	**4,730.0**

Non-interest bearing trade payables are normally settled on 60 to 90-day terms.

Interest bearing trade and other payables amount to US$1,500.0 million (2015: US$1,567.5 million).

Bills of exchange are interest-bearing liabilities and are normally settled within a period of 12 months. These represent arrangements whereby operational suppliers of raw materials are paid by financial institutions, with the Company recognising the liability for settlement with the institutions at a later date.

The fair values of the trade and other payables are not materially different from the carrying values presented.

(b) Non-current trade and other payables

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Advance from customers[1]	150.5	–
Other trade payables[2]	73.0	194.3
	223.5	**194.3**

1 Advances from customers include amounts received under long-term supply agreements. The advance payment plus a fixed rate of return will be settled by supplying copper over a period up to 24 months under an agreed delivery schedule as per the terms of the respective agreements. As these are contracts that the Group expects, and has the ability, to fulfil through delivery of a non-financial item, these are recognised as advances from customers and will be released to the income statement as copper is delivered under the agreements. The portion of the advance that is expected to be settled within the next 12 months has been classified as a current liability.

2 Other trade payables primarily comprise amounts withheld as retentions, payable to suppliers of capital projects after satisfactory completion of contractual commissioning period, which are payable after the completion of commissioning. The fair value of the non-current trade payables are not materially different from the carrying values presented.

3 Prior year trade and other payables of US$331.6 million have been reclassified from accruals to trade and other payables to better reflect the nature of these costs.

28. Convertible bonds

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
A. VRJL	579.9	1,096.4
B. VRJL II	7.3	6.6
	587.2	**1,103.0**

A. Vedanta Resource Jersey Limited (VRJL) issued 5.5% US$1,250 million guaranteed convertible bonds on 13 July 2009. The bonds are first convertible into exchangeable redeemable preference shares to be issued by VRJL, which will then be automatically exchanged for ordinary shares of Vedanta Resources plc. The bondholders have the option to convert at any time from 24 August 2009 to 6 July 2016. Conversion options exercised before 15 August 2012 were convertible at US$36.48 per share. Conversion options exercised on or after 15 August 2012 were convertible at US$35.58 per share.

If the notes have not been converted, they will be redeemed at the option of the Company at any time on or after 28 July 2012 subject to certain conditions, or be redeemed at the option of the bondholders on or after 13 July 2014.

If the notes have not been converted, they will be redeemed at the option of the issuer on or at any time after 28 July 2013, subject to the conditions as part of the issue. Bondholders had exercised put option on 14 July 2014, accordingly bonds with a face value US$113.8 million (9.1% of total face value) were redeemed during the year ending 31 March 2015.

During the year, in October 2015, the Company received notice from bondholders with a face value of US$3 million to exercise the option to convert the bonds into equity shares of Vedanta Resources plc in accordance with the provisions of the Offer circular dated 9

July 2009. During the year ended 31 March 2016 US$3 million of bonds were converted into 93,341 equity shares of Vedanta Resources plc. The carrying value of bond on the date of conversion was US$2.9 million.

During the year, in January 2016 and February 2016, the Company bought back the convertible bonds of a face value of US$549.3 million and carrying value of US$541.6 million from market for a consideration of US$522.4 million. The buyback consideration including buyback cost of US$1.2 million has been split between the liability and equity. Accordingly, US$2.6 million has been debited to convertible bond reserve and net gain of US$20.7 million has been recognised in the income statement.

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Opening liability	1,096.4	1,177.1
Effective interest cost	90.1	97.3
Conversion of convertible bonds	(2.9)	–
Repayment of convertible bonds	–	(113.8)
Buy back of convertible bonds	(541.6)	–
Coupon interest paid/accrued	(62.1)	(64.2)
Closing liability	**579.9**	**1,096.4**

The interest charged for the year is calculated by applying an effective interest rate of 8.2% (March 2015: 8.7%).

The fair value of the convertible bond as at 31 March 2016 is US$573.1 million (March 2015: US$1,056.9 million).

B. Vedanta Resource Jersey II Limited (VRJL-II) issued 4.0% US$883 million guaranteed convertible bonds on 30 March 2010. The bonds are first convertible into exchangeable redeemable preference shares to be issued by VRJL-II, which will then be automatically exchanged for ordinary shares of Vedanta Resources plc. The bondholders have the option to convert at any time from 10 May 2010 to 23 March 2017. Conversion options exercised before 15 August 2012 were convertible at US$51.9251 per share. Conversion options exercised on or after 15 August 2012 are convertible at US$50.646 per share, as per the terms of offering circular.

If the notes have not been converted, they will be redeemed at the option of the Company at any time on or after 14 April 2013 subject to certain conditions, or be redeemed at the option of the bondholders on or after 29 April 2013 to 30 March 2015.

Bondholders exercised the put option in March 2015, resulting in redemption of US$65.1 million bonds during the year ending 31 March 2015. The maturity of the remaining bonds is March 2017.

At the inception the net proceeds of the convertible issue was split between the liability element and a derivative component, representing the fair value of the embedded option to convert the liability into equity of the Company. The latter was not recorded within equity due to the existence of partial cash settlement terms within the bond which prevent the adoption of compound financial instrument accounting.

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Opening liability	6.6	65.7
Effective interest cost	1.0	8.9
Repayment of convertible bonds	–	(65.1)
Coupon interest paid/accrued	(0.3)	(2.9)
Closing liability	**7.3**	**6.6**

The interest charged for the year is calculated by applying an effective interest rate of 15.1% (2015: 15.0%).

The fair value of the convertible bond as at 31 March 2016 was US$7.3 million (March 2015: US$7.8 million).

C. Vedanta Limited issued 4% US$500 million convertible bonds (denominated in US dollars) on 29 October 2009 which were due on 30 October 2014. The bonds are convertible into American Depository Share (ADS) to be issued by Vedanta Limited. The bondholders have the option to convert at any time before 29 October 2014 at a conversion ratio of 42.8688 for every US$1,000 of principal which is equal to a conversion price of US$23.33 per ADS. Pursuant to the effectiveness of Group simplification scheme in August 2014 conversion rate has changed to 25.7213 ADSs for every US$1,000 principal amount of notes which is equal to a conversion price of approximately US$38.88 per ADS. Vedanta has the option (subject to the terms of the bond) to redeem the convertible bond at any time after 4 November 2012.

Vedanta Limited had also issued 5% US$500 million convertible bonds (denominated in US dollars) on 30 October 2009 and due on 31 October 2014. The bonds are convertible into ordinary shares of Vedanta Limited. The bondholders have the option to convert at any time after 10 December 2009 and before 24 October 2014 at a conversion ratio of 13837.6384 for every US$100,000 principal. Vedanta Limited has the option (subject to certain conditions) to redeem the convertible bond at any time after 30 October 2012. As the functional currency of Vedanta Limited is INR, the conversion of the convertible bonds (which are denominated in US dollars) would not result in the settlement and exchange of a fixed amount of cash in INR terms, for a fixed number of its shares respectively. Accordingly, the convertible bond must be separated into two component elements: a derivative component consisting of the conversion option (carried at fair value) and a liability component consisting of the debt element of the bonds. Further details of the accounting for such instruments are provided in the Group accounting policies (note 2a).

These convertible bonds were repaid during the year ended 31 March 2015.

The following table shows the movements in the Vedanta Limited bonds during the year on an aggregated basis:

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Opening liability	–	678.7
Effective interest cost	–	57.2
Coupon interest paid	–	(19.8)
Repayment of FCCBs	–	(716.1)
Closing liability	**–**	**–**

The interest charged for the year is calculated by applying an effective interest rate of nil (March 2015: 12.7%) for 4% US$500 million convertible notes and nil (March 2015: 19.1%) for 5% US$500 million convertible notes.

Summary of convertible bond movements:

	Year ended 31 March 2016	Year ended 31 March 2015
Opening liability	1,103.0	1,921.5
Effective interest cost	91.1	163.4
Coupon interest paid/accrued	(62.4)	(86.8)
Repayment of bonds	–	(895.1)
Conversion of convertible bonds	(2.9)	–
Buy back of convertible bonds	(541.6)	–
Closing liability	**587.2**	**1,103.0**

29. Financial instruments

The accounting classification of each category of financial instruments, and their carrying amounts, are set out below:

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Financial assets		
At fair value through profit or loss		
– Held for trading (Note 22)	7,977.9	6,006.0
At fair value through profit or loss/designated for hedging		
Financial instruments (derivatives)	19.1	16.8
Loan and receivables		
Bank deposits (Note 22)	530.3	1,850.1
Cash and cash equivalents	428.3	353.7
– Trade and other receivables	854.7	1,132.6
– Other non-current assets	69.2	129.8
Available-for-sale investments		
– Financial asset investments held at fair value	6.5	4.2
Total	**9,886.0**	**9,493.2**
Financial liabilities		
At fair value through profit or loss/designated for hedging		
– Financial instruments (derivatives)	(68.9)	(45.8)
Financial liabilities at amortised cost		
– Trade and other payables	(4,921.6)	(4,808.2)
– Borrowings[1]	(16,263.3)	(16,667.8)
Total	**(21,253.8)**	**(21,521.8)**

1 Includes amortised cost liability portion of convertible bonds US$587.2 million (2015: US$1,103.3 million).

IFRS 13 requires additional information regarding the methodologies employed to measure the fair value of financial instruments which are recognised or disclosed in the financial statements. These methodologies are categorised per the standard as:

Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 fair value measurements are those derived from inputs other than quoted prices that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The below table summarises the categories of financial assets and liabilities measured at fair value:

	As at 31 March 2016	
(US$ million)	**Level 1**	**Level 2**
Financial assets		
At fair value through profit or loss		
– Held for trading	6,840.7	1,137.2
– Financial instruments (derivatives)	3.2	15.9
Available-for-sale investments		
– Financial asset investments held at fair value	6.5	–
Total	**6,850.4**	**1,153.1**
Financial liabilities		
At fair value through profit or loss/designated for hedging		
– Financial instruments (derivatives)	(2.1)	(66.8)
Total	**(2.1)**	**(66.8)**

	As at 31 March 2015[1]	
	Level 1	Level 2
Financial assets		
At fair value through profit or loss		
– Held for trading	6,725.3	1,130.8
– Financial instruments (derivatives)	–	16.8
Available-for-sale investments		
– Financial asset investments held at fair value	4.2	–
Total	**6,729.5**	**1,147.6**
Financial liabilities		
At fair value through profit or loss/designated for hedging		
– Financial instruments (derivatives)	–	(45.8)
Total	**–**	**(45.8)**

1 Held for trading disclosure at 31 March 2015 has been restated to appropriately disclose the bonds valued using inputs other than quoted price as Level 2 rather than Level 1.

There were no transfers between Level 1 and Level 2 during the year. No financial assets or liabilities that are measured at fair value were Level 3 fair value measurements.

The fair value of borrowings is US$15,118.2 million (2015: US$16,457.7 million), classified under Level 2 of fair value hierarchy. For all other financial instruments, the carrying amount is either the fair value, or approximates to the fair value.

The fair value of financial asset investments represents the market value of the quoted investments and other traded instruments. For other financial assets the carrying value is considered to approximate to fair value.

The fair value of financial liabilities is the market value of the traded instruments, where applicable. Otherwise fair value is calculated using a discounted cash flow model with market assumptions, unless the carrying value is considered to approximate to fair value.

The fair value of the embedded derivative liability of the convertible bond has been calculated using the Black-Scholes model with market assumptions.

Derivative instruments and risk management
The Group's businesses are subject to several risks and uncertainties including financial risks.

The Group's documented risk management policies act as an effective tool in mitigating the various financial risks to which the businesses are exposed in the course of their daily operations. The risk management policies cover areas such as liquidity risk, commodity price risk, foreign exchange risk, interest rate risk, credit risk and capital management (the latter covered in Note 34).

Risks are identified through a formal risk management programme with active involvement of senior management personnel and business managers at both the corporate and individual subsidiary level. Each operating subsidiary in the Group has in place risk management processes which are in line with the Group's policy. Each significant risk has a designated 'owner' within the Group at an appropriate senior level. The potential financial impact of the risk and its likelihood of a negative outcome are regularly updated. The risk management process is coordinated by the Management Assurance function and is regularly reviewed by the Group's Audit Committee. The Audit Committee is aided by the CFO Committee and the Risk Management Committee, which meets regularly to review risks as well as the progress against the planned actions. Key business decisions are discussed at the monthly meetings of the CFO Committee and Executive Committee. The overall internal control environment and risk management programme including financial risk management is reviewed by the Audit Committee on behalf of the Board.

Treasury management
Treasury management focuses on capital protection, liquidity maintenance and yield maximisation. The treasury policies are approved by the Board and adherence to these policies is strictly monitored at the Executive Committee meetings. Day-to-day treasury operations of the subsidiary companies are managed by their respective finance teams within the framework of the overall Group treasury policies. Long-term fund raising including strategic treasury initiatives are handled by a central team while short-term funding for routine working capital requirements is delegated to subsidiary companies. A monthly reporting system exists to inform senior management of investments, debt, currency, commodity and interest rate derivatives. The Group has a strong system of internal control which enables effective monitoring of adherence to Group policies. The internal control measures are supplemented by regular internal audits.

The investment portfolio is independently reviewed by CRISIL Limited and our portfolio has been rated as 'Very Good', meaning highest safety.

The Group uses derivative instruments as part of its management of exposure to fluctuations in foreign currency exchange rates, interest rates and commodity prices. The Group does not acquire or issue derivative financial instruments for trading or speculative purposes. The Group does not enter into complex derivative transactions to manage the treasury and commodity risks. Both treasury and commodities derivative transactions are normally in the form of forward contracts and interest rate and currency swaps and these are subject to the Group guidelines and policies.

Commodity risk

The Group is exposed to the movement of base metal commodity prices on the London Metal Exchange. Any decline in the prices of the base metals that the Group produces and sells will have an immediate and direct impact on the profitability of the businesses. As a general policy, the Group aims to sell the products at prevailing market prices. The commodity price risk in the import of copper concentrate and alumina is hedged on back-to-back basis ensuring no price risk for the business. Entities with integrated operations aim to achieve the monthly average of the commodity prices for sales realisation. Hedging is used primarily as a risk management tool to secure future cash flows in cases of high volatility by entering into forward contracts or similar instruments. The hedging activities are subject to strict limits set out by the Board and to a strictly defined internal control and monitoring mechanism. Decisions relating to hedging of commodities are taken at the Executive Committee level and with clearly laid down guidelines for their implementation by the subsidiaries.

Whilst the Group aims to achieve average LME prices for a month or a year, average realised prices may not necessarily reflect the LME price movements because of a variety of reasons such as uneven sales during the year and timing of shipments.

The Group is also exposed to the movement of international crude oil price and the discount in the price of Rajasthan crude oil to Brent price.

Copper

The Group's custom smelting copper operations at Tuticorin is benefited by a natural hedge except to the extent of a possible mismatch in quotational periods between the purchase of concentrate and the sale of finished copper. The Group's policy on custom smelting is to generate margins from TC/RCs, improving operational efficiencies, minimising conversion cost, generating a premium over LME on sale of finished copper, sale of by-products and from achieving import parity on domestic sales. Hence, mismatches in quotational periods are managed to ensure that the gains or losses are minimised. The Group hedges this variability of LME prices through forward contracts and tries to make the LME price a pass-through cost between purchases of copper concentrate and sales of finished products, both of which are linked to the LME price.

TC/RCs are a major source of income for the Indian copper smelting operations. Fluctuations in TC/RCs are influenced by factors including demand and supply conditions prevailing in the market for mine output. The Group's Copper business has a strategy of securing a majority of its concentrate feed requirement under long-term contracts with mines.

KCM is largely an integrated copper producer and whenever hedging is done it is with an intention to protect the Group from price fluctuations in copper. KCM also does hedging for its custom smelting operations in line with the Group's policy on custom smelting at Tuticorin, as explained above.

Aluminium

The requirement of the primary raw material, alumina, is partly met from own sources and the rest is purchased primarily on negotiated price terms. Sales prices are linked to the LME prices. At present the Group on selective basis hedges the aluminium content in imported alumina to protect its margins.

The Group also enters into hedging arrangements for its aluminium sales to realise month of sale LME prices.

Zinc and lead

The sales prices are linked to the LME prices. The Group also enters into hedging arrangements for its zinc and lead sales to realise month of sale LME prices.

Iron ore

The Group sells its iron ore production from Goa on the prevailing market prices and from Karnataka through e-auction route as mandated by State Government of Karnataka in India.

Provisionally priced financial instruments

On 31 March 2016, the value of net financial liabilities linked to commodities (excluding derivatives) accounted for on provisional prices was a liability of US$416.3 million (2015: liability of US$689.9 million). These instruments are subject to price movements at the time of final settlement and the final price of these instruments will be determined in the financial year beginning 1 April 2016.

Set out below is the impact of a 10% increase in LME prices on profit/(loss) for the year and total equity as a result of changes in value of the Group's commodity financial instruments as at 31 March 2016:

(US$ million except as stated) Commodity price sensitivity	**Closing LME as at 31 March 2016 US$**	**Effect on profit/(loss) of a 10% increase in the LME 31 March 2016 (US$ million)**	**Effect on total equity of a 10% increase in the LME 31 March 2016 (US$ million)**
Copper	4,855.5	(44.5)	(44.5)
Zinc	1,785.0	0.2	0.2
Lead	1,704.5	0.6	0.6

(US$ million except as stated) Commodity price sensitivity	Closing LME as at 31 March 2015 US$	Effect on profit/(loss) of a 10% increase in the LME 31 March 2015 (US$ million)	Effect on total equity of a 10% increase in the LME 31 March 2015 (US$ million)
Copper	6,050	(62.2)	(62.2)
Zinc	2,075	0.2	0.2
Lead	1,808	–	–

The above sensitivities are based on volumes, costs, exchange rates and other variables and provide the estimated impact of a change in LME prices on profit and equity assuming that all other variables remain constant. A 10% decrease in LME prices would have an equal and opposite effect on the Group's financial instruments.

Further, the impact of a 10% increase in closing copper LME for provisionally priced copper concentrate purchased at Vedanta Limited Copper division custom smelting operations is US$50.0 million (2015: US$69.2 million), which is pass through in nature and as such will not have any impact on the profitability.

Financial risk and sensitivities

The Group's Board approved financial risk policies comprise liquidity, currency, interest rate and counterparty risk. The Group does not engage in speculative treasury activity but seeks to manage risk and optimise interest and commodity pricing through proven financial instruments.

(a) Liquidity

The Group requires funds both for short-term operational needs as well as for long-term investment programmes mainly in growth projects. The Group generates sufficient cash flows from the current operations which together with the available cash and cash equivalents and liquid financial asset investments provide liquidity both in the short term as well as in the long term. Anticipated future cash flows, together with undrawn fund based committed facilities of US$1,087.3 million, and cash and liquid investments of US$8,936.5 million as at 31 March 2016, are expected to be sufficient to meet the liquidity requirement of the Group in the near future.

The Group's current corporate family ratings from Standard & Poor's and Moody's are B and B2 respectively, with Stable outlook from Standard & Poor's and Negative outlook from Moody's. These ratings reflect the rating agencies' actions during the year on the companies in the resource sector taking into consideration current market conditions. The Group strives to maintain a healthy liquidity, gearing ratio and retains flexibility in the financing structure to alter the ratio when the need arises (see Note 34 for further details).

The maturity profile of the Group's financial liabilities based on the remaining period from the balance sheet date to the contractual maturity date is given in the table below. The figures reflect the contractual undiscounted cash obligation of the Group:

At 31 March 2016

(US$ million) Payment due by period	**< 1 year**	**1–2 years**	**2–5 years**	**> 5 years**	**Total**
Trade and other payables	4,885.5	–	29.9	6.2	4,921.6
Bank and other borrowings[1]	4,711.2	3,434.4	7,645.5	3,388.3	19,179.4
Convertible bonds[1]	595.5	–	–	–	595.5
Derivative liabilities	67.8	1.1	–	–	68.9
Total	**10,260.0**	**3,435.5**	**7,675.4**	**3,394.5**	**24,765.4**

1 Includes contractual interest payment based on interest rate prevailing at the end of the reporting period.

At 31 March 2015

(US$ million) Payment due by period	< 1 year	1–2 years	2–5 years	> 5 years	Total
Trade and other payables	4,509.0	229.3	63.0	6.9	4,808.2
Bank and other borrowings[1]	4,171.8	2,981.0	8,730.4	3,476.1	19,359.3
Convertible bonds[1]	65.8	1,161.5	–	–	1,227.3
Derivative liabilities	45.8	–	–	–	45.8
Total	**8,792.4**	**4,371.8**	**8,793.4**	**3,483.0**	**25,440.6**

1 Includes contractual interest payment based on interest rate prevailing at the end of the reporting period.

At 31 March 2016, the Group had access to funding facilities (both fund based and non-fund based) of US$18,140.7 million, of which US$1,087.3 million is fund based and US$716.2 million is non-fund based, was not yet drawn, as set out below.

(US$ million) Funding facilities	**Total facility**	**Drawn**	**Undrawn**
Less than 1 year	6,104.2	4,310.0	1,794.2
1–2 years	2,642.7	2,642.7	–
2–5 years and above	9,393.8	9,384.5	9.3
Total	**18,140.7**	**16,337.2**	**1,803.5**

At 31 March 2015, the Group had access to funding facilities (both fund based and non-fund based) of US$18,981.5 million of which US$1,208.2 million was fund based and US$969.7 million was non-fund based, was not yet drawn, as set out below.

(US$ million) Funding facilities	Total facility	Drawn	Undrawn
Less than 1 year	5,270.9	3,189.5	2,081.4
1–2 years	3,265.4	3,265.4	–
2–5 years and above	10,445.2	10,348.7	96.5
Total	**18,981.5**	**16,803.6**	**2,177.9**

'Fund based' facilities represent contractual agreements for financial institutions to provide cash, such as cash credit limits and term loans, whereas 'non-fund based' facilities only give rise to an obligation to provide cash in certain circumstances, such as bank guarantees and letters of credit.

(b) Foreign currency
The Group's presentation currency is the US dollar. The majority of the assets are located in India and the Indian rupee is the functional currency for the Indian operating subsidiaries. Exposures on foreign currency loans are managed through the foreign exchange hedging policy, which is reviewed periodically to ensure that the risk from fluctuating currency exchange rates is appropriately managed. Natural hedges available in the business are identified at each entity level and hedges are placed only for the net exposure. Short-term net exposures are hedged progressively based on their maturity. Longer exposures beyond one year for trade and other current account transactions are reviewed and hedges taken accordingly. However, all new exposures on account of long-term borrowing are being hedged.

The carrying amount of the Group's financial assets and liabilities in different currencies are as follows:

	At 31 March 2016		At 31 March 2015	
(US$ million)	**Financial assets**	**Financial liabilities**	Financial assets	Financial liabilities
US$	1,260.9	12,519.9	1,362.1	14,216.3
INR	8,524.6	8,502.5	8,019.4	7,151.8
Kwacha	0.8	120.9	1.3	38.9
AUD	0.4	9.3	0.7	9.7
CAD	–	0.1	–	0.3
EURO	46.6	47.4	75.6	59.0
ZAR	18.3	18.6	14.8	21.8
NAD	5.0	5.0	9.8	23.2
Others	29.4	30.1	9.5	0.8
Total	**9,886.0**	**21,253.8**	**9,493.2**	**21,521.8**

The Group's exposure to foreign currency arises where a Group company holds monetary assets and liabilities denominated in a currency different to the functional currency of that entity with USD (US dollar) being the major foreign currency exposure of the Group's main operating subsidiaries. Set out below is the impact of a 10% change in the US dollar on profit/(loss) and equity arising as a result of the revaluation of the Group's foreign currency financial instruments:

	31 March 2016		
(US$ million)	**Closing exchange rate**	**Effect of 10% strengthening of US dollar on net earnings**	**Effect of 10% strengthening of US dollar on total equity**
INR	66.3329	(191.1)	(230.2)
Kwacha	7.5811	(10.1)	(10.1)

	31 March 2015		
(US$ million)	Closing exchange rate	Effect of 10% strengthening of US dollar on net earnings	Effect of 10% strengthening of US dollar on total equity
INR	62.5908	(192.3)	(236.1)
Euro	0.9271	0.7	0.7

The sensitivities are based on financial assets and liabilities held at 31 March 2016 where balances are not denominated in the functional currency of the respective subsidiaries. The sensitivities do not take into account the Group's sales and costs and the results of the sensitivities could change due to other factors such as changes in the value of financial assets and liabilities as a result of non-foreign exchange influenced factors. A 10% depreciation of the US dollar would have an equal and opposite effect on the Group's financial instruments.

(c) Interest rate risk
At 31 March 2016, the Group's net debt of US$7,328.8 million (2015: US$8,460.3 million net debt) comprises cash, cash equivalents and liquid investments of US$8,936.5 million (2015: US$8,209.8 million) offset by debt of US$16,263.3 million (2015: US$16,667.8 million) and debt derivative liability of US$2.0 million (2015: liability of US$2.3 million).

The Group is exposed to interest rate risk on short-term and long-term floating rate instruments and on the refinancing of fixed rate debt. The Group's policy is to maintain a balance of fixed and floating interest rate borrowings and the proportion of fixed and floating rate debt is determined by current market interest rates. As at 31 March 2016, 48.0% (2015: 50.2%) of the total debt was at a fixed rate and the balance was at a floating rate. The USD floating rate debt is linked to US dollar LIBOR and INR floating rate debt to Bank's base rate. The Group also aims to opt for a higher proportion of long-term debt to fund growth projects to extend its maturity profile. The Group invests cash and liquid investments in short-term deposits and debt mutual funds, some of which generate a tax-free return, to achieve the Group's goal of maintaining liquidity, carrying manageable risk and achieving satisfactory returns.

Floating rate financial assets are largely mutual fund investments which have debt securities as underlying assets. The returns from these financial assets are linked to market interest rate movements; however the counterparty invests in the agreed securities with known maturity tenure and return and hence has manageable risk. Additionally, the investments portfolio is independently reviewed by CRISIL Limited, and our investment portfolio has been rated as 'Very Good', meaning highest safety.

The exposure of the Group's financial assets to interest rate risk is as follows:

	At 31 March 2016				At 31 March 2015			
(US$ million)	**Floating rate financial assets**	**Fixed rate financial assets**	**Equity investments**	**Non-interest bearing financial assets**	Floating rate financial assets	Fixed rate financial assets	Equity investments	Non-interest bearing financial assets
Financial assets	6,334.0	2,601.8	6.5	924.6	5,419.6	2,820.1	4.2	1,232.5
Derivative assets	–	–	–	19.1	–	–	–	16.8
Total financial assets	**6.334.0**	**2,601.8**	**6.5**	**943.7**	**5,419.6**	**2,820.1**	**4.2**	**1,249.3**

The exposure of the Group's financial liabilities to interest rate risk is as follows:

	At 31 March 2016			At 31 March 2015		
(US$ million)	**Floating rate financial liabilities**	**Fixed rate financial liabilities**	**Non-interest bearing financial liabilities**	Floating rate financial liabilities	Fixed rate financial liabilities	Non-interest bearing financial liabilities
Financial liabilities	8,454.3	9,294.2	3,436.4	8,711.9	9,506.7	3,257.4
Derivative liabilities	–	–	68.9	2.3	–	43.5
Total financial liabilities	**8,454.3**	**9,294.2**	**3,505.3**	**8,714.2**	**9,506.7**	**3,300.9**

The weighted average interest rate on the fixed rate financial liabilities is 8.15% (2015: 8.3%) and the weighted average period for which the rate is fixed is 2.4 years (2015: 3.0 years).

Considering the net debt position as at 31 March 2016 and the investment in bank deposits, corporate bonds and debt mutual funds, any increase in interest rates would result in a net loss and any decrease in interest rates would result in a net gain. The sensitivity analysis below has been determined based on the exposure to interest rates for both derivative and non-derivative instruments at the balance sheet date.

The below table illustrates the impact of a 0.5% to 2.0% change in interest rate of borrowings on profit/(loss) and equity and represents management's assessment of the possible change in interest rates.

At 31 March 2016

(US$ million) Change in interest rates	**Effect on loss for the year**	**Effect on total equity**
0.5%	42.3	42.3
1.0%	84.5	84.5
2.0%	169.1	169.1

At 31 March 2015

(US$ million) Change in interest rates	Effect on loss for the year	Effect on total equity
0.5%	41.5	41.5
1.0%	82.9	82.9
2.0%	165.9	165.9

(d) Credit risk
The Group is exposed to credit risk from trade receivables, cash and cash equivalents, liquid investments and other financial instruments.

The Group has clearly defined policies to mitigate counterparty risks. Cash and liquid investments are held primarily in debt schemes of mutual funds, bonds and bank deposits with good credit ratings. Defined limits are in place for exposure to individual counterparties in case of mutual fund houses and banks.

The large majority of receivables due from third parties are secured. Moreover, given the diverse nature of the Group's businesses, trade receivables are spread over a number of customers with no significant concentration of credit risk. During the year ended 31 March 2016 no single customer accounted for 10% or more of the Group's net sales or for any of the Group's primary businesses. During the year ended 31 March 2015, other than the exception of a single customer in our Oil & Gas business, no single customer accounted for 10% or more of the Group's net sales or for any of the Group's primary businesses. The history of trade receivables shows a negligible provision for bad and doubtful debts. Therefore, the Group does not expect any material risk on account of non-performance by any of our counterparties.

The Group's maximum gross exposure to credit risk at 31 March 2016 is US$9,886.0 million (2015: US$9,493.2 million).

Of the year end trade and other receivable balance the following, though overdue, are expected to be realised in the normal course of business and, hence, are not considered impaired as at 31 March 2016:

(US$ million)	**2016**	2015
Less than 1 month	49.8	39.1
Between 1–3 months	74.3	49.1
Between 3–12 months	98.1	40.3
Greater than 12 months	86.3	62.5
Total	**308.5**	**191.0**

Receivables amounting to Nil (31 March 2015: US$43.8 million), of the Power division of the Group have been impaired primarily as a result of an ongoing dispute in relation to a tariff agreement with a power supply company.

Derivative financial instruments
The fair value of all derivatives is separately recorded on the balance sheet within other financial assets (derivatives) and other financial liabilities (derivatives), current and non-current. In addition, the derivative component of certain convertible bonds is shown as part of the overall convertible bond liability (Note 28). Derivatives that are designated as hedges are classified as current or non-current depending on the maturity of the derivative.

Embedded derivatives
Derivatives embedded in other financial instruments or other contracts are treated as separate derivative contracts, when their risks and characteristics are not closely related to those of their host contracts.

Cash flow hedges
The Group also enters into forward exchange and commodity price contracts for hedging highly probable forecast transactions and accounts for them as cash flow hedges and states them at fair value. Subsequent changes in fair value are recognised in equity until the hedged transactions occur, at which time the respective gains or losses are transferred to the income statement.

The fair value of the Group's open derivative positions at 31 March 2016, recorded within financial instruments (derivative), is as follows:

	As at 31 March 2016		As at 31 March 2015	
(US$ million)	**Liability**	**Asset**	Liability	Asset
Current				
Cash flow hedges				
– Commodity contracts	(0.9)	0.2	–	2.5
– Forward foreign currency contracts	(8.3)	5.5	(0.6)	–
Hedge of net investment in foreign operations	–	–	–	7.9
Fair value hedges				
– Commodity contracts	–	0.1	(1.7)	3.8
– Forward foreign currency contracts	(37.4)	1.3	(20.1)	1.6
– Other (foreign currency swap)	–	–	(2.2)	–
Non-qualifying hedges				
– Commodity contracts	(1.2)	2.9	(1.5)	0.8
– Forward foreign currency contracts	(19.7)	8.3	(11.2)	0.0
– Interest rate swap	–	–	(8.2)	–
– Other (foreign currency swap)	(0.2)	0.0	(0.2)	–
Total	**(67.7)**	**18.3**	**(45.7)**	**16.6**
Non-current				
Fair value hedges				
– Forward foreign currency contracts	(1.2)	0.8	(0.1)	0.2
Total	**(1.2)**	**0.8**	**(0.1)**	**0.2**
Grand total	**(68.9)**	**19.1**	**(45.8)**	**16.8**

The majority of cash flow hedges taken out by the Group during the year comprises commodity contracts and foreign currency forward contracts for firm future commitments.

The cash flows related to the majority of cash flow hedges above are expected to occur during the year ended 31 March 2017 and consequently may impact the income statements for that year depending upon the change in the commodity prices and foreign exchange rate movements.

Non-qualifying hedges
The majority of these derivatives comprise interest rate swaps and foreign currency forward contracts which are economic hedges but which do not fulfil the requirements for hedge accounting of IAS 39 Financial Instruments: Recognition and Measurement.

Fair value hedges
The fair value hedges relate to foreign currency forward contracts taken to hedge currency exposure on purchase of raw materials and capital imports.

Hedging reserve reconciliation

(US$ million)	Hedging reserves	Non-controlling interests	Total
At 1 April 2014	**(50.4)**	**(37.2)**	**(87.6)**
Amount recognised directly in equity	(17.1)	(9.5)	(26.6)
Amount transferred to income statement	(7.4)	(4.4)	(11.8)
Changes in non-controlling interests	(3.9)	3.9	–
Exchange difference	4.1	2.5	6.6
At 1 April 2015	**(74.7)**	**(44.7)**	**(119.4)**
Amount recognised directly in equity	(17.2)	(10.1)	(27.3)
Amount transferred to income statement	(0.8)	(0.7)	(1.5)
Exchange difference	5.0	2.9	7.9
At 31 March 2016	**(87.7)**	**(52.6)**	**(140.3)**

30. Provisions

(US$ million)	Restoration, rehabilitation and environmental	KCM copper price participation	Other	Total
At 1 April 2014	**306.5**	**89.3**	**28.9**	**424.7**
(Released)/charged to income statement	(26.9)	(1.4)	0.9	(27.4)
Unwinding of discount	31.8	5.0	–	36.8
Cash paid	(7.5)	(1.0)	(1.4)	(9.9)
Change in estimates	(66.1)	–	–	(66.1)
Exchange differences	(12.9)	–	(1.0)	(13.9)
At 1 April 2015	**224.9**	**91.9**	**27.4**	**344.2**
Charged to income statement	3.4	–	1.7	5.1
Unwinding of discount (note 7)	10.3	2.5	0.7	13.5
Cash paid	(43.9)	–	(0.7)	(44.6)
Exchange differences	(3.0)	7.6	(3.3)	1.3
At 1 April 2016	**191.7**	**102.0**	**25.8**	**319.5**
Current 2016	17.5	102.0	12.6	132.1
Non-current 2016	174.2	–	13.2	187.4
	191.7	**102.0**	**25.8**	**319.5**
Current 2015	37.3	91.6	11.9	140.8
Non-current 2015	187.6	0.3	15.5	203.4
	224.9	**91.9**	**27.4**	**344.2**

Restoration, rehabilitation and environmental
The provisions for restoration, rehabilitation and environmental liabilities represent the management's best estimate of the costs which will be incurred in the future to meet the Group's obligations under existing Indian, Australian, Zambian, Namibian, South African and Irish law and the terms of the Group's mining and other licenses and contractual arrangements. These amounts, calculated by considering discount rates within the range of 2% to 9%, become payable on closure of mines and are expected to be incurred over a period of one to 15 years. Within India, the principal restoration and rehabilitation provisions are recorded within Cairn India where a legal obligation exists relating to the oil & gas fields,

where costs are expected to be incurred in restoring the site of production facilities at the end of the producing life of an oil field. The Group recognises the full cost of site restoration as a liability when the obligation to rectify environmental damage arises.

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production from a producing field.

KCM copper price participation
During the year ended 31 March 2013, the Group and ZCCM-IH agreed a final settlement for the copper price participation liability. The total amount to be paid is US$119.7 million to be settled in 16 instalments with the first instalment starting on 31 December 2012 and last instalment on 30 September 2016. The total liability that remains outstanding is US$102.0 million as at 31 March 2016. The liability recognised has been discounted at 11.00% to take into account the expected timings of the various payments and recognised as a liability of US$94.4 million (2015: US$91.9 million).

Other
Other includes provision on post retirement medical benefits. The expected period of utilisation is 18 years.

31. Deferred tax
The Group has accrued significant amounts of deferred tax. The majority of the deferred tax liability represents accelerated tax relief for the depreciation of capital expenditure and the depreciation on fair value uplifts created on acquisitions, net of losses carried forward by Vedanta Limited (post the reorganisation) and MAT credits carried forward in Cairn India and Hindustan Zinc.

The amounts of deferred taxation on temporary differences, provided and not provided, in the accounts are as follows:

Provided – deferred tax liabilities/(assets)

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Accelerated capital allowances	2,164.2	3,478.3
Unutilised tax losses	(749.8)	(445.1)
Other temporary differences	(2049.6)	(1,697.1)
	(635.2)	**1,336.1**
Disclosed as:		
Deferred tax liability	620.2	2,588.7
Deferred tax asset	(1,255.4)	(1,252.6)
	(635.2)	**1,336.1**

Unrecognised deferred tax assets

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Unutilised business losses	(585.2)	(342.2)
Unabsorbed depreciation	(203.2)	(116.6)
Capital losses	(42.4)	(12.8)
Total	**(830.8)**	**(471.6)**

The above relates to the tax effect on US$1,239.0 million (2015: US$1,088.3 million) of unutilised tax losses of the Company, VRP, VRHL and VRJ2 which have no expiry period; US$986.4 million (2015: US$827.2 million) unutilised tax losses of Twin Star Mauritius Holdings Limited; US$110.6 million unutilised tax losses of Westglobe Ltd (WL); which are subject to the Mauritius tax regime and can be carried forward for a period of five years; US$54.9 million of unutilised tax losses and non-refundable R&D tax credits of Copper Mines of Tasmania, which can be carried forward indefinitely under the Australian tax regime; US$515.4 million of unutilised tax losses of Konkola Copper Mines which can be carried forward for 10 years under the Zambian tax regime and US$297.7 million (2015: US$344.3 million) of unabsorbed depreciation for Malco Energy Limited (MEL); US$250.8 million of unutilised tax losses and unabsorbed depreciation for Talwandi Sabo Power Ltd (TSPL); US$143.0 million of unutilised capital losses of Hindustan Zinc Ltd (HZL); US$40.7 million of unutilised capital losses of Vedanta Ltd (VEDL); US$41.1 million of unutilised tax losses and unabsorbed depreciation for Vizag General Cargo Berth Pvt Ltd (VGCB) which are subject to the Indian tax regime. Pursuant to the Indian tax regime, unutilised business tax losses expire eight years from the period in which the losses arise and unabsorbed depreciation can be carried forward indefinitely. No deferred tax asset has been recognised on these unutilised tax losses and tax credits as there is no evidence that sufficient taxable profit will be available in the future against which they can be utilised by the respective entities.

Deferred tax asset

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
At 1 April	**1,252.6**	**1,223.7**
Reclassification	(10.1)	–
Credited to income statement	96.8	45.8
Credited/(charged) directly to equity	1.3	(0.3)
Foreign exchange differences	(85.2)	(16.6)
At 31 March	**1,255.4**	**1,252.6**

The Group has US$2,274.6 million of unutilised tax losses in Vedanta Limited, BALCO, KCM and MAT credits of US$1,966.8 million carried forward in Hindustan Zinc, Vedanta Limited and Cairn India which are subject to the Indian tax regime. Under the Indian tax regime, unutilised tax losses expire eight years from the period in which the losses arise and unabsorbed depreciation can be carried forward indefinitely. MAT credits expire 10 years from the period in which the credits arise.

Deferred tax assets in the Group have been recognised to the extent there are sufficient taxable temporary differences relating to the same taxation authority and the same taxable entity which are expected to reverse.

Deferred tax liability

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
At 1 April	**2,588.7**	**4,960.1**
Reclassification	(10.1)	–
Credited to income statement[1]	(1,921.8)	(2,377.5)
Charged/(credited) directly to equity	2.5	(6.5)
Foreign exchange differences	(39.1)	12.6
At 31 March	**620.2**	**2,588.7**

1 Including deferred tax credit of US$1,903.3 million (2015: US$2138.0 million) related to impairment of Oil & Gas assets at Cairn (Note 5).

32. Share-based payments

Employee share schemes

The Group aims to provide superior rewards for outstanding performance and a high proportion of 'at risk' remuneration for Executive Directors. Three employee share schemes were approved by shareholders on Listing. In 2014, the Board introduced a Performance Share Plan (PSP) which is the primary arrangement under which share-based incentives are provided to the Executive Directors and the wider management group. In 2015, the Board also introduced a Deferred Share Bonus Plan (DSBP).

The Vedanta Resources Long-Term Incentive Plan (the LTIP) and Employee Share Ownership Plan (the ESOP) and Performance Share Plan (the PSP)

The maximum value of shares that can be conditionally awarded to an Executive Director in a year is 150% of annual salary. In respect of Mr Navin Agarwal and Mr Tom Albanese, salary means the aggregate of their salary payable by Vedanta and their CTC payable by Vedanta Limited. The maximum value of shares that can be awarded to members of the wider management group is calculated by reference to the grade average CTC and individual grade of the employee. The performance conditions attaching to outstanding awards are as follows:

- PSP – measured in terms of Total Shareholder Return (TSR) (being the movement in a company's share price plus reinvested dividends) – is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group or groups of peer companies at the end of the performance period and as moderated by the Remuneration Committee.

The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounding down to the nearest whole share.

Vedanta's TSR performance against comparator group

	(% of award vesting)
Below median	–
At median	30
At or above upper quartile	100

- The performance condition is measured by taking the Company's TSR over the three months immediately preceding the date of grant and over the three months immediately preceding the end of the performance period, and comparing its performance with that of the comparator group or groups. The information to enable this calculation to be carried out on behalf of the Remuneration Committee (the Committee) is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has outperformed a group of industry peers, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.
- Initial awards under the PSP were granted on 17 November 2014, 1 January 2015 and subsequently on 30 December 2015. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed.
- ESOP – measured in terms of business performance set against business plan for the financial year comprising operational deliverables, enabler parameters and sustainability performance specific to each company. The vesting schedule is graded over three years and varies from company to company with a minimum vesting of 30% triggering at either 80% or 85% business score. In another tranche, the vesting schedule is staggered over a period of three years from the date of grant, with 70% vesting based on the achievement of business performance and the remaining 30% based on continued employment with the Group until the end of the third year.
- Initial awards under ESOP were granted on 24 September 2012 with further awards being made on 16 May 2013. The exercise price of the awards is 10 US cents per share and the performance period is one year.
- The exercise period is six months from the date of vesting.
- LTIP – measured in terms of Total Shareholder Return (TSR) (being the movement in a company's share price plus reinvested dividends) – is compared over the performance period with the performance of the companies as defined in the scheme from the grant date. The extent to which an award vests will depend on the Company's TSR rank against a group of peer companies (Adapted Comparator Group) at the end of the performance period and as moderated by the Remuneration Committee. The vesting schedule is shown in the table below, with adjusted straight-line vesting in between the points shown and rounded down to the nearest whole share.

Vedanta's TSR performance against adapted comparator group

	(% of award vesting)
Below median	–
At median	40
At or above upper quartile	100

The performance condition is measured by taking the Company's TSR over the four weeks immediately preceding the date of grant and over the four weeks immediately preceding the end of the performance period, and comparing its performance with that of the comparator group described above. The information to enable this calculation to be carried out on behalf of the Remuneration Committee (the Committee) is provided by the Company's advisers. The Committee considers that this performance condition, which requires that the Company's total return has outperformed a group of companies chosen to represent the mining sector, provides a reasonable alignment of the interests of the Executive Directors and the wider management group with those of the shareholders.

Initial awards under the LTIP were granted on 26 February 2004. As on 31 March 2015 the awards outstanding are the awards issued on 1 August 2011, 1 October 2011, 1 January 2012 and 1 April 2012. The exercise price of the awards is 10 US cents per share and the performance period is three years, with no re-testing being allowed.

- The Vedanta Resources Deferred Share Bonus Plan (the DSBP) – In 2015, Vedanta introduced the DSBP, with initial awards being made in May 2015 and August 2015. Under the plan, a portion of the annual bonus is deferred into shares and the awards granted under this scheme are not subject to any performance conditions only on service conditions being met. The vesting schedule is staggered over a period of two or three years. In case of DSBP, the shares are purchased from open market and allotted to employees, officers and Directors. As on 31 March, the options outstanding under the DSBP scheme are 231,437.

In general, the awards will be settled in equity. The awards are accounted for in accordance with the requirements applying to equity-settled share-based payment transactions. The fair value of each award on the day of grant is equal to the average of the middle market quotations of its share price for five dealing days before the grant date.

Further details on these schemes are available in the Remuneration Report of the Annual Report.

The details of share options for the year ended 31 March 2016 and 31 March 2015 are presented below:

Year of grant	Exercise date	Exercise price US cents per share 1 April 2015	Options outstanding	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2016
2011	1 July 2014–1 January 2015	10	600	–	–	–	(600)	–
2011	1 August 2014–1 February 2015	10	118,527	–	(15,120)	–	(103,407)	–
2011	1 October 2014–1 April 2015[1]	10	5,000	–	–	(1,800)	–	3,200
2012	1 January 2015–1 July 2015[1]	10	7,000	–	–	(4,200)	–	2,800
2012	1 April 2015–1 September 2015[1]	10	97,800	–	(37,850)	(58,190)	–	1,760
2012	24 September 2013–24 March 2016[1]	10	368,952	–	(19,515)	–	(274,687)	74,750
2013	16 May 2014–16 November 2016	10	1,302,785	–	(159,288)	–	(361,500)	781,997
2014	17 November 2017–17 May 2018	10	5,335,500	–	(677,171)	–	–	4,658,329
2015	1 January 2018–1 July 2018	10	–	21,500	–	–	–	21,500
2015	30 December 2018–30 June 2019	10	–	5,484,575	(65,733)	–	–	5,418,842
			7,236,164	**5,506,075**	**(974,677)**	**(64,190)**	**(740,194)**	**10,963,178**

1 The exercise period of the schemes expiring before 31 March 2016 has been extended up to June 2016.

32. Share-based payments continued

Year of grant	Exercise date	Exercise price US cents per share 1 April 2014	Options outstanding	Options granted during the year	Options lapsed during the year	Options lapsed during the year owing to performance conditions	Options exercised during the year	Options outstanding at 31 March 2015
2011	1 January 2014–1 July 2014	10	2,700	–	–	(1,620)	(1,080)	–
2011	1 April 2014–1 October 2014	10	67,500	–	–	(41,380)	(26,120)	–
2011	1 July 2014–1 January 2015	10	16,500	–	(5,000)	(6,900)	(4,000)	600
2011	1 August 2014–1 February 2015	10	2,185,550	–	(77,550)	(1,365,934)	(623,539)	118,527
2011	1 October 2014–1 April 2015	10	5,000	–	–	–	–	5,000
2012	1 January 2015–1 July 2015	10	7,000	–	–	–	–	7,000
2012	1 April 2015–1 September 2015	10	97,800	–	–	–	–	97,800
2012	24 September 2013–24 March 2016	10	2,380,748	–	(41,238)	(1,586,513)	(384,045)	368,952
2013	16 May 2014–16 October 2016	10	3,754,550	–	(188,047)	(1,899,849)	(363,869)	1,302,785
2014	17 November 2017–17 May 2018	10	–	5,485,000	(149,500)	–	–	5,335,500
			8,517,348	5,485,000	(461,335)	(4,902,196)	(1,402,653)	7,236,164

In the year ended 31 March 2016, 974,677 options lapsed in total and 740,194 options exercised. As at 31 March 2016, 10,963,178 options remained outstanding and 82,510 options were exercisable at the year end. The weighted average share price for the share options exercised during the year ended 31 March 2016 was GBP4.1 (year ended 31 March 2015: GBP8.9). The weighted average maturity period for the options outstanding as on 31 March 2016 is 31 months (31 March 2015: 33 months).

All share-based awards of the Group are equity-settled as defined by IFRS 2 ‘Share-based Payment’. The fair value of these awards has been determined at the date of grant of the award allowing for the effect of any market-based performance conditions. This fair value, adjusted by the Group’s estimate of the number of awards that will eventually vest as a result of non-market conditions, is expensed on a straight-line basis over the vesting period.

The fair values were calculated using the Stochastic valuation model with suitable modifications to allow for the specific performance conditions of the respective schemes. The inputs to the model include the share price at date of grant, exercise price, expected volatility, expected dividends, expected term and the risk free rate of interest. A progressive dividend growth policy is assumed in all fair value calculations. Expected volatility has been calculated using historical return indices over the period to date of grant that is commensurate with the performance period of the award. The volatilities of the industry peers have been modelled based on historical movements in the return indices over the period to date of grant which is also commensurate with the performance period for the option. The history of return indices is used to determine the volatility and correlation of share prices for the comparator companies and is needed for the Stochastic valuation model to estimate their future TSR performance relative to the Company’s TSR performance. All options are assumed to be exercised immediately after vesting.

The assumptions used in the calculations of the charge in respect of the PSP/ESOP awards granted during the year ended 31 March 2016 and 31 March 2015 are set out below:

	Year ended 31 March 2016 PSP December 2015	Year ended 31 March 2015 PSP November 2014
Number of instruments	5,484,575	5,485,000
Exercise price	US$0.10	US$0.10
Share price at the date of grant	GBP2.72	GBP8.09
Contractual life	3 years	3 years
Expected volatility	55.9%	35.5%
Expected option life	3 years	3 years
Expected dividends	9.93%	4.62%
Risk free interest rate	0.91%	0.90%
Expected annual forfeitures	10% p.a.	10% p.a.
Fair value per option granted	GBP1.95/GBP0.79	GBP6.98/GBP3.00

The Group recognised total expenses of US$15.6 million and US$28.6 million related to equity-settled share-based payment transactions in the year ended 31 March 2016 and 31 March 2015 respectively.

33. Retirement benefits
The Group operates pension schemes for the majority of its employees in India, Australia, Africa and Ireland.

(a) Defined contribution schemes
Indian pension schemes
Central Recognised Provident Fund
The Central Recognised Provident Fund relates to all full-time Indian employees of the Group. The amount contributed by the Group is a designated percentage of 12% of basic salary less contributions made as part of the Pension Fund (see below), together with an additional contribution of 12% (limited to a maximum contribution of 30% in case of the Iron Ore segment) of the salary of the employee.

The benefit is paid to the employee on their retirement or resignation from the Group.

Superannuation
Superannuation, another pension scheme applicable in India, is applicable only to executives in grade M4 and above. However, in case of the Cairn India Group and Iron Ore segment, the benefit is applicable to all executives. In Cairn India, it is applicable from the second year of employment. Certain companies hold policies with the Life Insurance Corporation of India (LIC), to which they contribute a fixed amount relating to superannuation, and the pension annuity is met by the LIC as required, taking into consideration the contributions made. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Pension Fund
The Pension Fund was established in 1995 and is managed by the Government of India. The employee makes no contribution to this fund but the employer makes a contribution of 8.33% of salary each month subject to a specified ceiling per employee. This must be provided for every permanent employee on the payroll.

At the age of superannuation, contributions cease and the individual receives a monthly payment based on the level of contributions through the years, and on their salary scale at the time they retire, subject to a maximum ceiling of salary level. The Government funds these payments, thus the Group has no additional liability beyond the contributions that it makes, regardless of whether the central fund is in surplus or deficit.

Australian Pension Scheme
The Group also operates defined contribution pension schemes in Australia. The contribution of a proportion of an employee’s salary into a superannuation fund is a compulsory legal requirement in Australia. The employer contributes 9.5% of the employee’s gross remuneration where the employee is covered by the industrial agreement and 12.5% of the basic remuneration for all other employees, into the employee’s fund of choice. All employees have the option to make additional voluntary contributions.

Zambian Pension Scheme
The KCM Pension Scheme is applicable to full-time permanent employees of KCM (subject to the fulfilment of certain eligibility criteria). The management of the scheme is vested in the trustees consisting of representatives of the employer and the members. The employer makes a monthly contribution of 5% to the KCM Pension Scheme and the member makes monthly contribution of 5%.

All contributions to the KCM Pension Scheme in respect of a member cease to be payable when the member attains normal retirement age of 55 years, or upon leaving the service of the employer, or when the member is permanently medically incapable of performing duties in the service of the employer. Upon such cessation of contribution on the grounds of normal retirement, or being rendered medically incapable of performing duties, or early voluntary retirement, the member is entitled to receive his accrued pension. The member is allowed to commute his/her accrued pension subject to certain rules and regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Skorpion Zinc Provident Fund, Namibia
The Skorpion Zinc Provident Fund is a defined contribution fund and is compulsory to all full-time employees under the age of 60. Company contribution to the fund is a fixed percentage of 9% per month of pensionable salary, whilst the employee contributes 7% with the option of making additional contributions, over and above the normal contribution, up to a maximum of 12%.

Normal retirement age is 60 years and benefit payable is the member's fund credit which is equal to all employer and employee contributions plus interest. The same applies when an employee resigns from Skorpion Zinc. The Fund provides disability cover which is equal to the member's fund credit and a death cover of two times annual salary in the event of death before retirement. Current membership total is 908.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

Black Mountain Mining (Pty) Limited, South Africa pension and provident funds
Black Mountain Mining (Pty) Ltd has two retirement funds, both administered by Alexander Forbes, a registered financial service provider. Both funds form part of the Alexander Forbes umbrella fund and are defined contribution funds.

Membership of both funds is compulsory for all permanent employees under the age of 60.

Lisheen Mine, Ireland Pension Funds
Lisheen Pension Plan is for all employees. Lisheen pays 5% and employees pay 5% with the option to make Additional Voluntary Contributions (AVCs) if desired. Executive contributions are 15% by Lisheen and a minimum of 5% by the employee with the option to make AVCs if desired. Death benefit is three times salary for employees and four times salary for executives. Pension and life cover ceases at 65. On wind up of the pension schemes, the benefits will be paid out to the remaining members in accordance with the scheme rules and Irish Revenue tax regulations.

The Group has no additional liability beyond the contributions that it makes. Accordingly, this scheme has been accounted for on a defined contribution basis and contributions are charged directly to the income statement.

(b) Defined benefit schemes
India
The Gratuity schemes are defined benefit schemes which are open to all Group employees in India who have a minimum of five years of service with their employing company. These schemes are funded in some subsidiaries. Based on actuarial valuation, a provision is recognised in full for the projected obligation over and above the funds held in scheme. In case where there is no funding held by the scheme, full provision is recognised in the balance sheet. Under these schemes, benefits are provided based on final pensionable pay.

The assets of the schemes are held in separate funds and a full actuarial valuation of the schemes is carried out on an annual basis.

Vedanta Limited
The Iron Ore, Aluminium and Copper divisions of Vedanta Limited contributed to the LIC Fund based on an actuarial valuation every year. Vedanta Limited's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2016 using the projected unit credit actuarial method.

BALCO
All employees who are scheduled to retire on or before 31 March 2016 are being paid by BALCO. The Gratuity scheme is accounted for as a defined benefit scheme for all employees scheduled to retire after 31 March 2016. A provision is recognised based on the latest actuarial valuation which was performed as at 31 March 2016 using the projected unit actuarial method. At that date the fund was in deficit.

HZL
HZL contributes to the LIC fund based on an actuarial valuation every year. HZL's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2016 using the projected unit actuarial method. At that date the fund was in deficit.

MEL
MEL contributed to the LIC fund based on an actuarial valuation every year. The MEL Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2016 using the projected unit credit actuarial method.

TSPL
TSPL contributes to the LIC based on an actuarial valuation. Liabilities with regard to the Gratuity scheme are fully provided in the balance sheet and are determined by actuarial valuation as at the balance sheet date and as per gratuity regulations for TSPL. The latest actuarial valuation was performed as at 31 March 2016 using the projected unit actuarial method.

Cairn
Cairn contributes to the LIC fund based on an actuarial valuation every year. Cairn India Group's Gratuity scheme is accounted for on a defined benefit basis. The latest actuarial valuation was performed as at 31 March 2016 using the projected unit actuarial method. At that date the fund was in deficit.

Zambia
Specified permanent employees of KCM are entitled to receive medical and retirement severance benefits. This comprises two months' basic pay for every completed year of service with an earliest service start date of 1 July 2004. Under this scheme, benefits are provided based on final pensionable pay and a full actuarial valuation of the scheme is carried out on an annual basis. The accruals are not contributed to any fund and are in the form of provisions in KCM's accounts.

On the death of an employee during service, a lump sum amount is paid to his or her dependants. This amount is equal to 60 months' basic pay for employees who joined before 1 April 2000 and 30 months' basic pay for employees who joined on or after 1 April 2000. For fixed term contract employees, the benefit payable on death is 30 months' basic pay.

As at 31 March 2016, membership of pension schemes across Vedanta Limited, BALCO, HZL, TSPL, KCM and Cairn stood at 22,534 employees (31 March 2015: 24,456). The deficits, principal actuarial assumptions and other aspects of these schemes are disclosed in further detail in notes (d) and (e) below.

(c) Pension scheme costs

Contributions of US$66.5 million and US$nil in respect of defined benefit schemes were outstanding and prepaid respectively as at 31 March 2016 (2015: US$74.6 million and US$nil respectively).

Contributions to all pension schemes in the year ending 31 March 2017 are expected to be around US$5.0 million (actual contribution during the year ended 31 March 2016: US$9.7 million).

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Defined contribution pension schemes	30.1	30.7
Defined benefit pension schemes	18.2	19.7
Total expense	**48.3**	**50.4**

(d) Principal actuarial assumptions

Principal actuarial assumptions used to calculate the defined benefit schemes' liabilities are:

	MALCO		BALCO		Sterlite Copper		HZL		KCM		Jharsuguda Aluminium		Iron Ore Sesa		Cairn		TSPL	
Particulars	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15	**Mar 16**	Mar 15
Discount rate	8.0%	7.8%	8.0%	9.0%	8.0%	7.8%	8.0%	7.8%	24.0%	22.5%	8.0%	7.8%	8.0%	7.8%	8.0%	7.8%	8.0%	7.8%
Salary increases	5.5%	5.0%	5.0%	5.0%	5.5%	5.3%	5.5%	5.5%	5.0%	5.0%	6.0%	6.0%	7.0%	7.0%	10.0%	10.0%	5.5%	5.5%
Actual number of employees	71	76	2,498	3,059	1,067	1,078	4,646	5,286	7,230	7,281	2,393	2,738	2,860	3,821	1,482	1,569	238	211

In India, the mortality tables used assume that a person aged 60 at the end of the balance sheet date has a future life expectancy of 19 years.

Assumptions regarding mortality for Indian entities are based on mortality table of 'Indian Assured Lives Mortality (2006-2008)' published by the Institute of Actuaries of India.

Assumptions regarding mortality for KCM are based on World Health Organisation Life Tables for 1999 applicable to Zambia which has been taken as a reference point. Based on this a mortality table which is appropriate for the workers of Konkola Copper Mines plc has been derived.

(e) Balance sheet recognition

	31 March 2016									31 March 2015								
(US$ million)	**MALCO & TSPL**	**BALCO**	**Sterlite Copper**	**HZL**	**KCM**	**Jharsuguda Aluminium**	**Iron Ore Sesa**	**Cairn**	**Total**	MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total
Fair value of pension scheme assets	0.1	–	2.9	27.6	–	1.6	5.6	5.7	43.5	0.3	–	2.5	26.8	–	1.5	9.0	4.9	45.0
Present value of pension scheme liabilities	(0.2)	(15.3)	(3.6)	(29.5)	(45.6)	(1.8)	(5.2)	(8.8)	(110.0)	(0.3)	(20.8)	(3.5)	(35.8)	(39.8)	(2.4)	(9.3)	(7.7)	(119.6)
Deficit in pension scheme recognised in balance sheet	(0.1)	(15.3)	(0.7)	(1.9)	(45.6)	(0.2)	0.4	(3.1)	(66.5)	–	(20.8)	(1.0)	(9.0)	(39.8)	(0.9)	(0.3)	(2.8)	(74.6)
Deferred tax	0.0	5.3	0.2	0.6	15.8	0.1	(0.2)	1.0	22.8	–	7.1	0.3	3.1	13.5	0.3	0.1	1.0	25.4
Net pension liability	**(0.1)**	**(10.0)**	**(0.5)**	**(1.3)**	**(29.8)**	**(0.1)**	**0.2**	**(2.1)**	**(43.7)**	**–**	**(13.7)**	**(0.7)**	**(5.9)**	**(26.3)**	**(0.6)**	**(0.2)**	**(1.8)**	**(49.2)**

(f) Amounts recognised in income statement in respect of defined benefit pension schemes:

(US$ million)	31 March 2016 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total	31 March 2015 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total
Current service cost	0.0	0.4	0.2	1.4	4.0	0.3	0.5	1.0	7.8	0.1	0.5	0.2	2.0	6.2	0.3	0.6	0.6	10.5
Net interest cost	0.0	1.3	0.1	0.3	8.4	0.1	0.1	0.1	10.4	0.0	1.6	0.2	0.5	6.4	0.0	0.2	0.3	9.2
Total charge to income statement	0.0	1.7	0.3	1.7	12.4	0.4	0.6	1.1	18.2	0.1	2.1	0.4	2.5	12.6	0.3	0.8	0.9	19.7

(g) Amounts recognised in the Statement of Comprehensive Income:

(US$ million)	31 March 2016 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total	31 March 2015 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total
Actuarial gains/(losses) on defined benefit obligation	(0.1)	0.5	0.0	(2.0)	(6.7)	0.5	(0.2)	(0.1)	(8.1)	0.1	3.7	0.5	6.2	2.8	0.6	0.4	(0.1)	14.2
Actuarial (gains)/losses on plan asset	–	–	–	0.1	–	0.0	(0.2)	–	(0.1)	(0.1)	–	–	–	–	–	(0.1)	–	(0.2)
Remeasurement of the net defined benefit liability (asset)	(0.1)	0.5	0.0	(1.9)	(6.7)	0.5	(0.4)	(0.1)	(8.0)	–	3.7	0.5	6.2	2.8	0.6	0.3	(0.1)	14.0

(h) Movements in the present value of defined benefit obligations

The movement during the year ended 31 March 2016 of the present value of the defined benefit obligation was as follows:

(US$ million)	31 March 2016 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total	31 March 2015 MALCO & TSPL	BALCO	Sterlite Copper	HZL	KCM	Jharsuguda Aluminium	Iron Ore Sesa	Cairn	Total
At 1 April	(0.2)	(20.8)	(3.4)	(35.8)	(39.8)	(2.4)	(9.5)	(7.7)	(119.6)	(0.1)	(21.2)	(3.5)	(29.4)	(35.5)	(1.7)	(9.8)	(7.5)	(108.7)
Current service cost	(0.0)	(0.4)	(0.2)	(1.4)	(4.0)	(0.3)	(0.5)	(1.0)	(7.8)	(0.1)	(0.5)	(0.2)	(2.0)	(6.2)	(0.3)	(0.6)	(0.6)	(10.5)
Gratuity benefits paid	0.0	7.1	0.2	7.2	3.2	0.5	3.8	0.4	22.4	–	5.7	0.9	4.4	4.3	0.2	1.0	0.6	17.1
Interest cost of scheme liabilities	(0.0)	(1.3)	(0.3)	(2.6)	(8.4)	(0.2)	(0.6)	(0.4)	(13.8)	(0.1)	(1.6)	(0.3)	(2.6)	(6.6)	(0.1)	(0.9)	(0.3)	(12.5)
Remeasurement gains/(losses)	(0.1)	0.5	0.0	(2.0)	(6.7)	0.5	(0.2)	(0.1)	(8.1)	0.1	(3.7)	(0.5)	(6.2)	(2.8)	(0.6)	(0.5)	(0.0)	(14.2)
Exchange difference	0.1	(0.4)	0.1	5.2	10.0	0.1	1.9	(0.1)	16.9		0.5	0.2	–	7.0	0.1	1.3	0.1	9.2
At 31 March	**(0.2)**	**(15.3)**	**(3.6)**	**(29.4)**	**(45.7)**	**(1.8)**	**(5.1)**	**(8.9)**	**(110.0)**	**(0.2)**	**(20.8)**	**(3.4)**	**(35.8)**	**(39.8)**	**(2.4)**	**(9.5)**	**(7.7)**	**(119.6)**

(i) Movements in the fair value of plan assets

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
At 1 April	**45.0**	**45.8**
Contributions received	9.7	4.0
Benefits paid	(12.2)	(6.6)
Remeasurements	0.1	0.2
Interest income	3.4	3.3
Foreign exchange differences	(2.5)	(1.7)
At 31 March	**43.5**	**45.0**

(j) Five year history
Defined benefit pension plan

(US$ million)	**As at 31 March 2016**	As at 31 March 2015	As at 31 March 2014	As at 31 March 2013	As at 31 March 2012
Experience losses arising on scheme liabilities	(8.1)	(14.2)	(5.0)	(6.9)	(7.0)
Difference between expected and actual return on plan assets	0.1	0.2	0.8	0.6	–
Fair value of pension scheme assets	43.5	45.0	45.8	46.2	47.8
Present value of pension scheme liabilities	(110.0)	(119.6)	(108.7)	(112.9)	(106.9)
Deficits in the schemes	**(66.5)**	**(74.6)**	**(62.9)**	**(66.7)**	**(59.1)**

(k) Sensitivity analysis
Below is the sensitivity analysis determined for significant actuarial assumptions for the determination of defined benefit obligations and based on reasonably possible changes of the respective assumptions occurring at the end of the reporting period while holding all other assumptions constant.

(US$ million)	Increase/(decrease) in defined benefit obligation
Discount rate	
Increase by 0.50%	(2.0)
Decrease by 0.50%	2.4
Salary increase	
Increase by 0.50%	2.0
Decrease by 0.50%	(1.9)

The above sensitivity analysis may not be representative of the actual benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

(l) Risk analysis
The Group is exposed to a number of risks in the defined benefit plans. The most significant risks pertaining to defined benefits plans and management estimation of the impact of these risks are as follows:

Investment risk
Most of the Indian defined benefit plans are funded with Life Insurance Corporation of India. The Group does not have any liberty to manage the fund provided to Life Insurance Corporation of India.

The present value of the defined benefit plan liability is calculated using a discount rate determined by reference to Government of India bonds for the Group's Indian operations. If the return on plan asset is below this rate, it will create a plan deficit.

Interest risk
A decrease in the interest rate on plan assets will increase the plan liability.

Longevity risk/life expectancy
The present value of the defined benefit plan liability is calculated by reference to the best estimate of the mortality of plan participants both during and at the end of the employment. An increase in the life expectancy of the plan participants will increase the plan liability.

Salary growth risk
The present value of the defined benefit plan liability is calculated by reference to the future salaries of plan participants. An increase in the salary of the plan participants will increase the plan liability.

34. Capital management

The Group's objectives when managing capital are to safeguard continuity, maintain a strong credit rating and healthy capital ratios in order to support its business and provide adequate return to shareholders through continuing growth.

The Group sets the amount of capital required on the basis of annual business and long-term operating plans which include capital and other strategic investments. The funding requirement is met through a mixture of equity, internal accruals, convertible bonds and other long-term and short-term borrowings.

The Group monitors capital using a gearing ratio, being the ratio of net debt as a percentage of total capital.

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Total equity	6,852.4	12,257.4
Net debt	7,328.8	8,460.3
Total capital	**14,181.2**	**20,717.7**
Gearing	51.7%	40.8%

The increase in the gearing ratio compared to the 2015 ratio is primarily due to a decrease in total equity pursuant to the impairment charge on oil & gas assets of US$3,030.9 million (net of deferred tax of US$1,903.3 million) (Note 5).

35. Share capital

	At 31 March 2016		At 31 March 2015	
Authorised	**Number**	**US$ million**	Number	US$ million
Ordinary shares of 10 US cents each	400,000,000	40.0	400,000,000	40.0
Deferred shares of £1 each	50,000	–	50,000	–
	400,050,000	**40.0**	**400,050,000**	**40.0**

	At 31 March 2016		At 31 March 2015	
Ordinary shares issued and fully paid	**Number**	**US$ million**	Number	US$ million
Ordinary shares of 10 US cents each	300,522,798	30.1	299,868,180	30.0
Deferred shares of £1 each	50,000	–	50,000	–
	300,572,798	**30.1**	**299,918,180**	**30.0**

During the year ended 31 March 2016, the Company issued 561,277 shares at face value of 10 US cents per share to the employees pursuant to the Vedanta LTIP and ESOP schemes (2015: 1,686,045 shares) and 93,341 shares were issued on the conversion of a convertible bond issued by one of the Group's subsidiaries.

The holders of deferred shares do not have the right to receive notice of any general meeting of the Company nor the right to attend, speak or vote at any such general meeting. The deferred shares have no rights to dividends and, on a winding-up or other return of capital, entitle the holder only to the payment of the amounts paid on such shares after repayment to the holders of ordinary shares of the nominal amount paid up on the ordinary shares plus the payment of £100,000 per ordinary share. Of the 50,000 deferred shares, one deferred share was issued at par and has been fully paid, and 49,999 deferred shares were each paid up as to one-quarter of their nominal value.

As on 31 March 2016, 6,904,995 ordinary shares which were issued on the conversion of certain convertible bonds issued by one of the Group's subsidiaries are held through a Global Depositary Receipts and carry no voting rights.

At 31 March 2016, the total number of treasury shares held was 24,309,230 (2015: 24,206,816).

36. Non-controlling interests (NCI)

The Group consists of a parent Company, Vedanta Resources plc, incorporated in UK and a number of subsidiaries held directly and indirectly by the Group which operate and are incorporated around the world. Note 44 to the financial statements lists details of the interests in the subsidiaries.

Non-controlling interests that are material to the Group relate to Hindustan Zinc Limited (HZL), Cairn India Limited (Cairn) and Vedanta Limited.

As at 31 March 2016, NCIs hold an economic interest of 59.20%, 62.36% and 37.15% respectively in HZL, Cairn and Vedanta Limited. The respective NCI holdings in 2015 were 59.20%, 62.36% and 37.15% respectively.

Principal place of business of HZL, Cairn and Vedanta Limited is in India (refer to Note 44).

The table below shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests:

(US$ million) Particulars	**Year ended 31 March 2016** HZL	Cairn	Vedanta Limited	Others[1]	Total	Year ended 31 March 2015 HZL	Cairn	Vedanta Limited[2]	Others[1]	Total
Profit/(loss) attributable to NCI	706.8	(1,982.9)	342.6	(731.2)	(1,664.7)	813.8	(2,608.9)	74.7	(268.7)	(1,989.1)
Equity attributable to NCI	3,344.9	4,756.3	2,257.0	(2,793.0)	7,565.2	4,310.9	6,903.6	2,199.9	(2,760.1)	10,654.3
Dividends paid/payable to NCI	(825.7)	(55.3)	(98.5)	–	(979.5)	(107.8)	(165.4)	(67.2)	–	(340.4)

1 Others consist of investment subsidiaries of Vedanta Limited and other individual non-material subsidiaries.
2 For principal activities, country of incorporation and the immediate holding company of the above subsidiaries refer to Note 44.

Summarised financial information in respect of the Group's subsidiaries that have material non-controlling interests is set out below. The summarised financial information below is on a 100% basis and before inter-company eliminations:

(US$ million) Particulars	**As at 31 March 2016** HZL	Cairn	Vedanta Limited	As at 31 March 2015 HZL	Cairn	Vedanta Limited
Non-current assets	2,346.8	3,516.9	11,541.6	2,193.2	10,407.1	11,502.0
Current assets	5,591.8	5,128.4	3,586.3	5,305.9	3,794.8	1,614.8
Current liabilities	(2,266.8)	(746.2)	(5,238.0)	(267.9)	(957.4)	(3,576.3)
Non-current liabilities	(21.6)	(272.0)	(3,814.6)	(22.1)	(2,148.3)	(3,732.2)
Net assets	**5,650.2**	**7,627.1**	**6,075.3**	**7,209.1**	**11,096.2**	**5,808.3**

Particulars	**Year ended 31 March 2016** HZL	Cairn	Vedanta Limited	Year ended 31 March 2015 HZL	Cairn	Vedanta Limited
Revenue	2,132.4	1,322.3	4,541.0	2,385.8	2,397.5	5,290.4
Profit/(loss) for the year	1,193.9	(3,179.8)	922.1	1,360.8	(4,193.4)	199.1
Other comprehensive income/(loss)	1.9	0.1	(27.5)	(5.7)	–	(37.2)

The effect of changes in ownership interests in subsidiaries that did not result in a loss of control is as follows:

(US$ million)	**Year ended 31 March 2016** HZL	Cairn	Vedanta Limited	Others	Total
Changes in NCI due to buyback and investment	–	–	–	–	–

	Year ended 31 March 2015 HZL	Cairn	Vedanta Limited	Others	Total
Changes in NCI due to buyback and investment	(197.2)	(531.5)	(83.3)	167.9	(644.1)

37. Joint arrangements

Joint operations

The Group's principal license interests in the Oil & Gas business are joint operations. The principal license interests are as follows:

Oil & Gas blocks/fields	Area	Participating interest
Operated blocks		
Ravva block	Krishna Godavari	22.50%
CB-OS/2 – Exploration	Cambay Offshore	60.00%
CB-OS/2 – Development and production	Cambay Offshore	40.00%
RJ-ON-90/1 – Exploration	Rajasthan Onshore	100.00%
RJ-ON-90/1 – Development and production	Rajasthan Onshore	70.00%
PR-OSN-2004/1	Palar Basin Offshore	35.00%
KG-OSN-2009/3	Krishna Godavari Offshore	100.00%
MB-DWN-2009/1[1]	Mumbai Deep Water	100.00%
South Africa Block[1]	Orange Basin South Africa Offshore	60.00%
Relinquished block		
SL 2007-01-001[2]	North West Sri Lanka Offshore	100.00%
Non-operated block		
KG-ONN-2003/1[3]	Krishna Godavari Onshore	49.00%

1 Intended to be relinquished in the next year.
2 Relinquished on 15 October 2015.
3 Operatorship has been transferred to Oil and Natural Gas Corporation (ONGC) with effect from 7 July 2014.

38. Commitments, guarantees and contingencies

Commitments

The Group has a number of continuing operational and financial commitments in the normal course of business including:

- exploratory mining commitments;
- oil & gas commitments;
- mining commitments arising under production sharing agreements; and
- completion of the construction of certain assets.

(US$ million)	**As at 31 March 2016**	As at 31 March 2015
Capital commitments contracted but not provided	1,289.3	1,973.7

Commitments primarily related to the expansion projects:

	As at 31 March 2016	As at 31 March 2015
HZL	296.7	274.4
Jharsuguda Aluminium	470.2	508.6
Jharsuguda 2,400MW power plant	32.3	33.7
BALCO	47.8	69.5
Talwandi Sabo	71.8	96.1
Sterlite Copper	207.1	220.8
Cairn	41.5	602.0
BMM	58.1	–
Others	5.5	–
Total	**1,231.0**	**1,805.1**

Guarantees

Companies within the Group provide guarantees within the normal course of business. Guarantees have also been provided in respect of certain short-term and long-term borrowings.

A summary of the most significant guarantees is set out below:

As at 31 March 2016, US$384.6 million of guarantees were advanced to banks, suppliers etc. in the normal course of business (2015:

US$365.4 million). The Group has also entered into guarantees and bonds advanced to the customs authorities in India of US$154.8 million relating to the export and payment of import duties on purchases of raw material and capital goods including export obligations (2015: US$228.9 million).

Cairn PSC guarantee to Government
The Group has provided a parent Company guarantee for the Cairn India Group's obligation under the Production Sharing Contract (PSC).

Cairn India have provided various other guarantees under the Cairn India Group's bank facilities for the Cairn India Group's share of minimum work programme commitments of US$13.1 million outstanding as of 31 March 2016 (2015: US$15.6 million).

Export obligations
The Indian entities of the Group have export obligations of US$2,200.5 million (2015: US$2,688.0 million) on account of concessional rates of import duty paid on capital goods under the Export Promotion Capital Goods Scheme and under the Advance License Scheme for import of raw material laid down by the Government of India.

In the event of the Group's inability to meet its obligations, the Group's liability would be US$349.1 million (2015: US$429.1 million), reduced in proportion to actual exports, plus applicable interest.

Contingencies
MEL claims with Tamil Nadu Electricity Board (TNEB)
TNEB is claiming US$16.3 million from MEL for an electricity self-generation levy for the period from May 1999 to June 2003. This claim has arisen since the commissioning of MEL's captive power plant in 1999. The Company has sought an exemption from the application of this levy from the Government of Tamil Nadu. The application is under consideration. Meanwhile, the Madras High Court has in its recent order, remitted back the case to the State of Tamil Nadu, to take a decision afresh on the representation for grant of tax exemption on consumption of electricity and directed to pass a detailed speaking order. MEL has accordingly represented before the Government of Tamil Nadu Energy Secretary, Government of Tamil Nadu vide his letter dated 20 March 2013 denied the exemption citing various reasons and asked MEL to remit US$15.7 million. MEL moved to the High Court of Madras and a stay was granted on the same.

HZL: Department of Mines and Geology
The Department of Mines and Geology of the State of Rajasthan issued several show cause notices in August, September and October 2006 to HZL, totalling US$53.3 million. These notices alleged unlawful occupation and unauthorised mining of associated minerals other than zinc and lead at HZL's Rampura Agucha, Rajpura Dariba and Zawar mines in Rajasthan during the period from July 1968 to March 2006. HZL believes that the claim becoming an obligation of the Company is unlikely and thus no provision has been made in the financial statements. HZL has filed writ petitions in the High Court of Rajasthan in Jodhpur and has obtained a stay in respect of these demands.

Richter and Westglobe: income tax
The Group through its subsidiaries Richter Holdings Limited (Richter) and Westglobe Limited (Westglobe) in 2007 acquired the entire stake in Finsider International Company Limited based in the United Kingdom. In October 2013, the Indian Tax Authorities (Tax Authorities) have served an order on Richter and Westglobe for alleged failure to deduct withholding tax on capital gain on the indirect acquisition of shares in April 2007. The Tax Authorities determined the liability for such non-deduction of tax as US$132.1 million in the case of Richter and US$88.0 million in the case of Westglobe, comprising tax and interest. Being aggrieved, Richter and Westglobe filed appeals before the first appellate authority. Writ petitions were filed in the High Court of Karnataka challenging the constitutional validity of retrospective amendments made by the Finance Act 2012 and in particular the imposition of obligations to deduct tax on payments made against an already concluded transaction. These Writs are pending for disposal before Division Bench. The hearing of the said Writ is due on 10 June 2016. Richter and Westglobe believe that they are not liable for such withholding tax and intend to defend the proceedings.

Cairn India: income tax
In March 2014, Cairn India received a show cause notice from the Indian Tax Authorities (Tax Authorities) for not deducting withholding tax on the payments made to Cairn UK Holdings Limited (CUHL) UK, for acquiring shares of Cairn India Holdings Limited (CIHL), as part of their internal reorganisation. The Tax Authorities have stated in the said notice that a short-term capital gain has accrued to CUHL on transfer of the shares of CIHL to Cairn India, in financial year 2006-2007, on which tax should have been withheld by the Company. Pursuant to this various replies were filed with the Tax Authorities.

After hearings, the Income Tax Authority, during March 2015, have issued an order by holding Cairn India as 'assessee in default' and asked to pay such demand totalling US$3,089.7 million (including interest of US$1,544.8 million). Cairn India has filed its appeal before the Appellate Authority CIT (Appeals) and filed a fresh Writ petition before Delhi High Court wherein it raised several points for assailing the aforementioned order. The hearing of the said Writ is due on 4 August 2016.

The Company has issued a Notice of arbitration to the Government of India by invoking Bilateral Investment Promotion Treaty between the UK and India.

Vedanta Limited: contractor claim
Shenzhen Shandong Nuclear Power Construction Co. Limited (SSNP) subsequent to terminating the EPC contract invoked arbitration as per the contract alleging non-payment of their dues towards construction of a 210MW co-generation power plant for 6mtpa expansion project, and filed a claim of US$248.1 million. SSNP also filed a petition under Section 9 of the Arbitration and Conciliation Act, 1996 before the Bombay High Court praying for interim relief. The Bombay High Court initially dismissed their petition, but on a further appeal by SSNP, the Division Bench of the Bombay High Court directed Jharsuguda Aluminium to deposit a bank guarantee for an amount of US$27.8 million as a security, being a prima facie representation of the claim, until arbitration proceedings are completed. Jharsuguda Aluminium has deposited a bank guarantee of equivalent amount. Management is of the opinion that this claim is not valid under the terms of the contract with SSNP and it is unlikely that SSNP can legally sustain the claim and, accordingly, no provision is considered necessary.

Ravva joint venture arbitration proceedings: Base Development Cost
In case of Cairn, Ravva joint venture had received a claim from the Ministry of Petroleum and Natural Gas, Government of India (GOI) for the period from 2000 to 2005 for US$129.0 million for an alleged underpayment of profit petroleum to the Indian Government, out of which, the Group's share will be US$29.0 million plus potential interest at applicable rate (LIBOR plus 2% as per PSC). This claim relates to the Indian Government's allegation that the Ravva JV had recovered costs in excess of the Base Development Costs (BDC) cap imposed in the PSC and that the Ravva JV had also allowed these excess costs in the calculation of the Post Tax Rate of Return (PTRR). Joint venture partners initiated the arbitration proceedings and Arbitration Tribunal published the Award on 18 January 2011 at Kuala Lumpur, allowing claimants (including the Group) to recover the development costs spent to the tune of US$278.0 million and disallowed over run of US$22.3 million spent in respect of BDC along with 50% legal costs reimbursable to the joint venture partners. The High Court of Kuala Lumpur dismissed Government of India's application of setting aside the part of the Award on 30 August 2012 with costs. However, GOI appealed before the Court of Appeal against the High Court's order and the Court of Appeal dismissed the GOI's appeal on 27 June 2014. However, GOI still preferred to challenge the same before the Federal Court, Kuala Lumpur and their Leave to Appeal is pending. GOI has also issued Show Cause Notice on this matter which Cairn has replied to and also filed an application for enforcement of Award before Delhi High Court as an abundant caution.

Ravva joint venture arbitration proceedings: ONGC Carry
Cairn is involved in a dispute against GOI relating to the recovery of contractual costs in terms of calculation of payments that contractor party was required to make in connection with the Ravva field.

The Ravva production sharing contract obliges the contractor party to pay proportionate share of ONGC's exploration, development, production and contract costs in consideration for ONGC's payment of costs related to construction and other activities it conducted in Ravva prior to the effective date of the Ravva production sharing contract (the ONGC Carry). The question as to how the ONGC Carry is to be recovered and calculated, along with other issues, was submitted to an international arbitration Tribunal in August 2002 which rendered a decision on the ONGC Carry in favour of the contractor party whereas four other issues were decided in favour of GOI in October 2004 (Partial Award).

The GOI then proceeded to challenge the ONGC Carry decision before the Malaysian courts, as Kuala Lumpur was the seat of the arbitration. The Federal Court of Malaysia, which adjudicated the matter on 11 October 2011, upheld the Partial Award. Per the decision of the Arbitral Tribunal in the Partial Award, the contractor party and GOI were required to arrive at a quantification of the sums relatable to each of the issues under the Partial Award. Also, the arbitral Tribunal retained the jurisdiction for determination of any remaining issues in the matter.

Pursuant to the decision of the Federal Court, the contractor party approached the Ministry of Petroleum and Natural Gas (MoPNG) to implement the Partial Award while reconciling the statement of accounts as outlined in the Partial Award in 2004. GOI failed to implement the Partial Award by way of reconciling accounts as provided in the Partial Award ever since the Federal Court of Malaysia adjudicated in Cairn and other joint operator partners' favour.

However, the MoPNG on 10 July 2014 proceeded to issue a show cause notice alleging that since the Partial Award has not been enforced, profit petroleum share of GOI has been short-paid. MoPNG threatened to recover that amount from the sale proceeds payable by the oil marketing companies to the contractor party. The contractor party replied to the show cause notice taking various legal contentions. On 9 March 2015 a personal hearing took place between MoPNG and the contractor party, whereby the contractor party expressed their concerns against such alleged unilateral recoveries and filed further written submissions on 12 March 2015.

As the Partial Award did not quantify the sums, therefore, the contractor party approached the same arbitral Tribunal to pass a final award in the subject matter since it had retained the jurisdiction to do so. The Arbitral Tribunal has been reconstituted and the determination of final award is sub-judice before it. While Cairn does not believe the GOI will be successful in its challenge, if the arbitral award is reversed and such reversal is binding, Cairn could be liable for approximately US$63.9 million.

Proceedings related to the imposition of entry tax
BALCO and Vedanta Limited have challenged the constitutional validity of the local statute in Chattisgarh and Orissa respectively, levying entry tax on the entry of goods brought into the States from outside and other notifications, as being in violation of certain provisions of the Indian Constitution. The challenges are pending in the Supreme Court to be heard by a Constitution Bench taking into account diverse opinion of various High Courts and the same is listed on 11 May 2016. BALCO paid the entry tax of US$30.6 million under protest to the state government of Chhattisgarh until 31 March 2015. Vedanta Limited was directed by the Supreme Court on 3 February 2010 to deposit a sum of US$0.6 million and a further amount on a monthly basis until the matter is actually disposed. These amounts have been paid under protest. In a related matter in respect of challenging the levy of entry tax on imported goods, the Supreme Court on 9 April 2013 directed 50% of the entry tax amount accrued until 30 September 2012. The amount of US$21.0 million (as on 31 March 2015) has been deposited in accordance with the order of the Supreme Court. Total claims from Vedanta Limited are of US$112.5 million (2015: US$103.3 million).

Additionally, for entry tax in SEZ, GOO has finally come out with SEZ policy 2015 exempting entry tax levy on SEZ operations which were recently notified in December 2015. We have applied for the issuance of an eligibility certificate to IPICOL for availing entry tax exemption; however, an operational guideline is pending to be issued by the industry department. The declaration of SEZ policy being a recent development after the filing of a petition before court, hence Vedanta is trying to bring out the same before the Court by filing an affidavit separately for appreciation of the court in the coming hearing.

TSPL
TSPL has entered into a long-term Power Purchase Agreement (PPA) with Punjab State Power Corporation Limited (PSPCL) for supply of power. Due to delay in fulfilment of certain obligations by PSPCL as per the PPA, other related reasons and force majeure events, there has been a delay in implementation/completion of the project as compared to the PPA timelines. TSPL has received notices of claims from PSPCL seeking payment of Liquidated Damages (LD) maximum of US$50.9 million each for delay in commissioning of Unit I, II and III, totalling US$152.9 million.

During the year, PSPCL invoked the Performance Bank Guarantee of US$24.1 million to recover the LD on account of delay in COD of Unit I. TSPL filed a petition at Punjab State Electricity Regulatory Commission (PSERC) for adjudication of above dispute. TSPL had also filed a civil writ petition before the High Court of Punjab and Haryana against the bank guarantee invocation, which was disposed with a direction to refer the matter to PSERC for adjudication while granting stay. Further, PSERC vide order dated 22 October 2014 directed the matter to be settled through arbitration and allowed the stay on encashment of the bank guarantee until further orders. PSPCL has preferred an appeal in Appellate Tribunal for Electricity (APTEL) against the PSERC order and APTEL had, on 12 May 2015, disposed the matter with a direction that the matter will be heard by way of arbitration. The arbitration proceedings are in the early stages. The Group has been legally advised by its advisers who have opined that such claims for LD from PSPCL are unsustainable. Recently, Appellate Tribunal for Electricity has, in a separate petition, before it by TSPL has adjudicated that coal is an absolute obligation of PSPCL and it needs to enter into a Fuel Supply Agreement and assign to TSPL. In light of the delay by PSPCL in entering into the Fuel Supply Agreement, the claims of PSPCL are further unsustainable.

Miscellaneous disputes – Vedanta Limited, HZL, MEL, BALCO, Cairn, Lisheen, VRJL and VRJII
The Group is subject to various claims and exposures which arise in the ordinary course of conducting and financing its business from the income tax, excise, indirect tax authorities and others. These claims and exposures mostly relate to the assessable values of sales and purchases or to incomplete documentation supporting the companies' returns or other claims.

The approximate value of claims against the Group companies excluding claims shown above total US$1,182.3 million (2015: US$1,005.0 million), of which US$14.9 million (2015: US$29.3 million) is included as a provision in the balance sheet as at 31 March 2016 (including claims of US$646.3 million in respect of income tax assessments out of which US$2.1 million is included as a provision in the balance sheet as at 31 March 2016).

The Group considers that it can take steps such that the risks can be mitigated and that there are no significant unprovided liabilities arising.

Operating lease commitments: as lessee
Operating leases are in relation to the office premises, office equipment and other assets, some of which are cancellable and some are non-cancellable. There is an escalation clause in the lease agreements during the primary lease period. There are no restrictions imposed by lease arrangements and there are no sub leases. There are no contingent rents. The total of the future minimum lease payments under non-cancellable leases are as follows:

(US$ million) Particulars	**As at 31 March 2016**	As at 31 March 2015
Within one year of the balance sheet date	3.9	4.9
Within two to five years from the balance sheet date	0.4	5.6
Total	**4.3**	**10.5**

Lease payments recognised as expenses during the year ended 31 March 2016, on non-cancellable leases, is US$8.1 million (31 March 2015: US$3.9 million).

39. Related party transactions
The information below sets out transactions and balances between the Group and various related parties in the normal course of business for the year ended 31 March 2016.

Sterlite Technologies Limited (STL)

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Sales to STL	140.4	126.0
Recovery of expenses	0.2	0.0
Purchases	1.1	2.9
Net interest received	0.2	0.6
Net amounts receivable at year end	0.2	3.7
Net amounts payable at year end	1.4	–
Dividend income	0.0	–

Sterlite Technologies Limited is related by virtue of having the same controlling party as the Group, namely Volcan. Pursuant to the terms of the Shared Services Agreement dated 5 December 2003 entered into by the Company and STL, the Company provides various commercial services in relation to STL's businesses on an arm's length basis and at normal commercial terms. For the year ended 31 March 2016, the commercial services provided to STL were performed by certain senior employees of the Group on terms set out in the Shared Services Agreement. The services provided to STL in this year amounted to US$0.02 million (2015: US$0.02 million).

Vedanta Foundation
During the year US$0.5 million was paid to the Vedanta Foundation (2015: US$0.7 million).

The Vedanta Foundation is a registered not-for-profit entity engaged in computer education and other related social and charitable activities. The major activity of the Vedanta Foundation is providing computer education for disadvantaged students. The Vedanta Foundation is a related party as it is controlled by members of the Agarwal family who control Volcan. Volcan is also the majority shareholder of Vedanta Resources plc.

Sesa Goa Community Foundation Limited

Following the acquisition of erstwhile Sesa Goa Limited, the Sesa Goa Community Foundation Limited, a charitable institution, became a related party of the Group on the basis that key management personnel of the Group have significant influence on the Sesa Goa Community Foundation Limited. During the year ended 31 March 2016, US$0.4 million (2015: US$0.4 million) was paid to the Sesa Goa Community Foundation Limited.

Sterlite Iron and Steel Limited

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Loan balance receivable	0.7	1.1
Net amount receivable at year end (including interest)	1.8	1.8
Net interest received	0.1	0.2

Sterlite Iron and Steel Limited is a related party by virtue of having the same controlling party as the Group, namely Volcan.

Vedanta Medical Research Foundation

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Donation	2.7	0.7

Vedanta Medical Research Foundation is a related party of the Group on the basis that key management personnel of the Group exercise significant influence.

Volcan Investments Limited

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Net amount receivable at the year end	0.2	0.4
Recovery of expenses	0.3	0.3
Dividend paid	75.0	115.6

Volcan Investments Limited is a related party of the Group by virtue of being an ultimate controlling party of the Group.

A bank guarantee has been provided by the Group on behalf of Volcan in favour of Income tax department, India as collateral in respect of certain tax disputes of Volcan. The guarantee amount is US$17.3 million (2015: US$18.4 million).

Ashurst LLP

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
Services received during the year	0.1	0.4

Ashurst LLP is a related party of the Group on the basis that an independent Director of the Group was a partner in the legal firm Ashurst LLP during the year ended 31 March 2016. It ceased to be a related party from 1 May 2015 onwards.

Employees Provident Fund Trust

Details of transactions during the year with post-retirement trusts:

(US$ million)	Year ended 31 March 2016	Year ended 31 March 2015
BALCO Employees Provident Fund Trust	1.7	2.2
Hindustan Zinc Ltd. Employee Contributory Provident Fund Trust	5.0	5.2
Sesa Group Employees Provident Fund	2.4	2.6
Sesa Resources Limited Employees Provident Fund	0.3	0.3
Sesa Mining Corporation Limited Employees Provident Fund	0.3	0.4

Remuneration of key management personnel

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Short-term employee benefits	20.0	15.9
Post-employment benefits	0.9	0.8
Share-based payments	2.3	2.5
	23.2	**19.2**

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including any Director (whether executive or otherwise).

Other related party[1]

(US$ million)	**Year ended 31 March 2016**	Year ended 31 March 2015
Salary paid	1.1	1.0
Interest bearing salary advance[2]	–	1.5

1 Close relative of the Executive Chairman.
2 Since repaid.

In addition to the above, sitting fees and commission of US$34,371 (2015: US$39,250) was also paid.

40. Share transactions – call options

(a) HZL

Pursuant to the Government of India's policy of divestment, in April 2002 the Company acquired 26% equity interest in HZL from the Government of India. Under the terms of the Shareholder's Agreement (SHA), the Group had two call options to purchase all of the Government of India's shares in HZL at fair market value. The Group exercised the first call option on 29 August 2003 and acquired an additional 18.9% of HZL's issued share capital. The Company also acquired an additional 20% of the equity capital in HZL through an open offer, increasing its shareholding to 64.9%. The second call option provides the Group the right to acquire the Government of India's remaining 29.5% share in HZL. This call option is subject to the right of the Government of India to sell 3.5% of HZL shares to HZL employees. The Group exercised the second call option on 21 July 2009. The Government of India disputed the validity of the call option and has refused to act upon the second call option. Consequently, the Company invoked arbitration which is in the early stages. The next date of the hearing is scheduled for 20 August 2016. Meanwhile, the Government of India, without prejudice to the position on the put/call option issue, has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route.

(b) BALCO

Pursuant to the Government of India's policy of divestment, in March 2001 the Company acquired 51% equity interest in BALCO from the Government of India. Under the terms of the SHA, the Group has a call option to purchase the Government of India's remaining ownership interest in BALCO at any point from 2 March 2004. The Group exercised this option on 19 March 2004. However, the Government of India has contested the valuation and validity of the option and contended that the clauses of the SHA violate the (Indian) Companies Act, 1956 by restricting the rights of the Government of India to transfer its shares and that as a result such provisions of the SHA were null and void. In the arbitration filed by the Group, the arbitral tribunal by a majority award rejected the claims of the Group on the grounds that the clauses relating to the call option, the right of first refusal, the 'tag-along' rights and the restriction on the transfer of shares violate the (Indian) Companies Act, 1956 and are not enforceable. The Group has challenged the validity of the majority award in the High Court of Delhi and sought for setting aside the arbitration award to the extent that it holds these clauses ineffective and inoperative. The Government of India also filed an application before the High Court of Delhi to partially set aside the arbitral award in respect of certain matters involving valuation. The matter is currently scheduled for hearing by the Delhi High Court on 28 July 2016. Meanwhile, the Government of India, without prejudice to its position on the put/call option issue, has received approval from the Cabinet for divestment and the Government is looking to divest through the auction route.

On 9 January 2012, the Group offered to acquire the Government of India's interests in HZL and BALCO for the INR equivalent of US$2,356.5 million and US$271.1 million, respectively. This offer was separate from the contested exercise of the call options, and the Group proposed to withdraw the ongoing litigations in relation to the contested exercise of the options should the offer be accepted. To date, the offer has not been accepted by the Government of India and, therefore, there is no certainty that the acquisition will proceed.

The Group continues to include the shareholding in the two companies HZL and BALCO, in respect of which the Group has a call option as non-controlling interest.

41. Konkola Copper Mines: value added tax

In earlier years, Zambia Revenue Authority (ZRA) had raised an assessment demand related to output tax amounting to K4.71 billion (US$600 million at the time). The assessment covered the years 2011, 2012 and the first quarter of 2013 and claimed non-submission of documentary evidence as required under Rule 18 of the Value Added Tax Rules to prove an export and claim it as zero rated sales. As a consequence, all sales of products that were zero rated in the returns became standard rated by this assessment. After a series of deliberations, submission of the requisite documents by KCM, followed by an independent audit by ZRA, the assessment demand has now been set aside.

Additionally, KCM has US$129 million receivable on account of value added tax on inputs that are receivable from the Zambian Government. KCM has submitted all the requisite documents and is in full compliance as per the previous Rule 18. There are precedents where other companies have received refunds of such amounts from the Government on submission of documents. Further, effective February 2015, Rule 18 has been amended by allowing exporters to submit transit documents issued by the customs authority in the country of transit of the goods instead of import certificates from the country of destination, as proof of export for purposes of VAT zero rating.

The discharge of assessment demand and amendment to Rule 18 will make it easier to collect the refunds. The Group believes that it will receive a refund of the entire amount and there is no objective evidence of uncertainty around collectability.

42. Cairn merger update
The Board of Directors of the Company and Cairn India Limited at their respective meetings held on 14 June 2015 had approved the Scheme of Arrangements (the Scheme) between the Company and Cairn India Limited and their respective shareholders and creditors, subject to regulatory and other approvals. On 10 September 2015, BSE Limited and the National Stock Exchange of India Limited has issued the 'No adverse observation' letter to the Scheme.

43. Subsequent events
In March 2016, the Company has announced a third bond buyback programme through market purchase route. Post the balance sheet date and up to the date of approval of the financial statements it has bought back bonds worth US$129.7 million.

44. List of subsidiaries
The financial statements comprise the financial statements of the following subsidiaries:

Subsidiaries	Principal activities	The Company's economic percentage holding 31 March 2016	The Company's economic percentage holding 31 March 2015	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2016	Immediate percentage holding 31 March 2015
Direct subsidiaries of the parent Company							
Vedanta Resources Holding Limited (VRHL)	Holding company	100.00%	100.00%	United Kingdom	VR plc	100.00%	100.00%
Vedanta Resources Jersey Limited (VRJL)	Investment company	100.00%	100.00%	Jersey (CI)	VR plc	100.00%	100.00%
Vedanta Resources Jersey II Limited (VRJL-II)	Investment company	100.00%	100.00%	Jersey (CI)	VR plc	100.00%	100.00%
Vedanta Finance (Jersey) Limited (VFJL)	Investment company	100.00%	100.00%	Jersey (CI)	VR plc	100.00%	100.00%
Vedanta Jersey Investments Limited (VJIL)	Investment company	100.00%	100.00%	Jersey (CI)	VR plc	100.00%	100.00%
Indirect subsidiaries of the parent Company							
Vedanta Limited	Copper smelting, iron ore mining, aluminium mining, refining and smelting, power generation	62.85%	62.85%	India	Twin Star	46.53%	46.53%
Bharat Aluminium Company Limited (BALCO)	Aluminium mining and smelting	32.05%	32.05%	India	Vedanta Limited	51.00%	51.00%
Copper Mines of Tasmania Pty Limited (CMT)	Copper mining	62.85%	62.85%	Australia	MCBV	100.00%	100.00%
Fujairah Gold FZC[1]	Gold and silver processing	62.85%	62.85%	UAE	MEL	97.96%	–
Hindustan Zinc Limited (HZL)	Zinc and mining and smelting	40.80%	40.80%	India	Vedanta Limited	64.92%	64.92%
Monte Cello BV (MCBV)	Holding company	62.85%	62.85%	Netherlands	Vedanta Limited	100.00%	100.00%
Monte Cello Corporation NV (MCNV)	Holding company	100.00%	100.00%	Curacao	Twin Star	100.00%	100.00%
Konkola Copper Mines PLC	Copper mining and	79.42%	79.42%	Zambia	VRHL	79.42%	79.42%

Subsidiaries	Principal activities	The Company's economic percentage holding 31 March 2016	31 March 2015	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2016	31 March 2015
(KCM)	smelting						
Sesa Resources Limited (SRL)	Iron ore	62.85%	62.85%	India	Vedanta Limited	100.00%	100.00%
Sesa Mining Corporation Limited	Iron ore	62.85%	62.85%	India	SRL	100.00%	100.00%
Thalanga Copper Mines Pty Limited (TCM)	Copper mining	62.85%	62.85%	Australia	MCBV	100.00%	100.00%
Twin Star Holdings Limited (Twin Star)	Holding company	100.00%	100.00%	Mauritius	VRHL	100.00%	100.00%
MALCO Energy Limited (MEL)	Power generation	62.85%	62.85%	India	Vedanta Limited	100.00%	100.00%
Richter Holding Limited (Richter)	Investment company	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Westglobe Limited	Investment company	100.00%	100.00%	Mauritius	Richter	100.00%	100.00%
Finsider International Company Limited	Investment company	100.00%	100.00%	United Kingdom	Richter	60.00%	60.00%
Vedanta Resources Finance Limited (VRFL)	Investment company	100.00%	100.00%	United Kingdom	VRHL	100.00%	100.00%
Vedanta Resources Cyprus Limited (VRCL)	Investment company	100.00%	100.00%	Cyprus	VRFL	100.00%	100.00%
Welter Trading Limited (Welter)	Investment company	100.00%	100.00%	Cyprus	VRCL	100.00%	100.00%
Lakomasko B.V.	Investment company	62.85%	62.85%	Netherlands	THL Zinc Holding B.V.	100.00%	100.00%
THL Zinc Ventures Limited	Investment company	62.85%	62.85%	Mauritius	Vedanta Limited	100.00%	100.00%
Twin Star Energy Holdings Limited (TEHL)	Holding company	62.85%	62.85%	Mauritius	BFM	100.00%	100.00%
THL Zinc Limited	Investment company	62.85%	62.85%	Mauritius	THL Zinc Ventures Ltd	100.00%	100.00%
Sterlite (USA) Inc.	Investment company	62.85%	62.85%	USA	Vedanta Limited	100.00%	100.00%
Talwandi Sabo Power Limited	Power generation	62.85%	62.85%	India	Vedanta Limited	100.00%	100.00%
Konkola Resources plc[2]	Holding company	–	100.00%	United Kingdom	VRHL	–	100.00%
Twin Star Mauritius Holdings Limited (TMHL)	Holding company	62.85%	62.85%	Mauritius	TEHL	100.00%	100.00%
THL Zinc Namibia Holdings (Pty) Limited (VNHL)	Mining and exploration	62.85%	62.85%	Namibia	THL Zinc Ltd	100.00%	100.00%
Skorpion Zinc (Pty) Limited (SZPL)	Acquisition of immovable and movable properties	62.85%	62.85%	Namibia	VNHL	100.00%	100.00%
Namzinc (Pty) Limited (SZ)	Mining	62.85%	62.85%	Namibia	SZPL	100.00%	100.00%
Skorpion Mining Company (Pty) Limited (NZ)	Mining	62.85%	62.85%	Namibia	SZPL	100.00%	100.00%
Amica Guesthouse (Pty) Ltd	Accommodation and catering services	62.85%	62.85%	Namibia	SZPL	100.00%	100.00%
Rosh Pinah Healthcare (Pty) Ltd	Leasing out of medical equipment and building	43.37%	43.37%	Namibia	SZPL	69.00%	69.00%

Subsidiaries	Principal activities	The Company's economic percentage holding 31 March 2016	31 March 2015	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2016	31 March 2015
	and conducting services related thereto						
Black Mountain Mining (Pty) Ltd	Mining	43.13%	43.13%	South Africa	THL Zinc Ltd	74.00%	74.00%
THL Zinc Holding BV	Investment company	62.85%	62.85%	Netherlands	Vedanta Limited	100.00%	100.00%
Lisheen Mine Partnership	Mining partnership firm	62.85%	62.85%	Ireland	VLML	50.00%	50.00%
Pecvest 17 Proprietary Ltd.	Investment company	62.85%	62.85%	South Africa	THL Zinc Ltd	100.00%	100.00%
Vedanta Lisheen Holdings Limited (VLHL)	Investment company	62.85%	62.85%	Ireland	THL Zinc Holding BV	100.00%	100.00%
Vedanta Exploration Ireland Limited	Exploration company	62.85%	62.85%	Ireland	VLHL	100.00%	100.00%
Vedanta Lisheen Mining Limited (VLML)	Mining	62.85%	62.85%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Mining Limited	Mining	62.85%	62.85%	Ireland	VLHL	100.00%	100.00%
Killoran Lisheen Finance Limited	Investment company	62.85%	62.85%	Ireland	VLHL	100.00%	100.00%
Lisheen Milling Limited	Manufacturing	62.85%	62.85%	Ireland	VLHL	100.00%	100.00%
Vizag General Cargo Berth Private Limited	Infrastructure	62.85%	62.85%	India	Vedanta Limited	99.99%	99.99%
Paradip Multi Cargo Berth Private Limited	Infrastructure	46.51%	46.51%	India	Vedanta Limited	74.00%	74.00%
Sterlite Ports Limited (SPL)	Investment company	62.85%	62.85%	India	Vedanta Limited	100.00%	100.00%
Maritime Ventures Private Limited	Infrastructure	62.85%	62.85%	India	SPL	100.00%	100.00%
Sterlite Infraventures Limited	Investment company	62.85%	62.85%	India	Vedanta Limited	100.00%	100.00%
Bloom Fountain Limited (BFM)	Investment company	62.85%	62.85%	Mauritius	Vedanta Limited	100.00%	100.00%
Western Cluster Limited	Mining company	62.85%	62.85%	Liberia	BFM	100.00%	100.00%
Sesa Sterlite Mauritius Holdings Limited	Investment company	100.00%	100.00%	Mauritius	VRHL	100.00%	100.00%
Vedanta Finance UK Limited	Investment company	100.00%	100.00%	United Kingdom	Welter	100.00%	100.00%
Valliant (Jersey) Limited	Investment company	100.00%	100.00%	Jersey (CI)	VRJL-II	100.00%	100.00%
Cairn India Limited	Oil & gas exploration, and production	37.64%	37.64%	India	TMHL	34.43%[3]	39.41%
Cairn India Holdings Limited	Investment company	37.64%	37.64%	Jersey	Cairn India Limited	100.00%	100.00%
Cairn Energy Holdings Limited	Investment company	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Hydrocarbons Ltd	Exploration and production	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Exploration (No.7) Limited[4]	Exploration and production	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Exploration (No.6)	Exploration and	37.64%	37.64%	Scotland	Cairn India	100.00%	100.00%

Subsidiaries	Principal activities	The Company's economic percentage holding 31 March 2016	31 March 2015	Country of incorporation	Immediate holding company	Immediate percentage holding 31 March 2016	31 March 2015
Limited[2]	production				Holdings Limited		
Cairn Exploration (No.2) Limited	Exploration and production	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Gujarat Block 1 Limited	Exploration and production	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Discovery Limited	Exploration and production	37.64%	37.64%	Scotland	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy Australia Pty Limited	Investment company	37.64%	37.64%	Australia	Cairn India Holdings Limited	100.00%	100.00%
Cairn Energy India Pty Limited	Exploration and production	37.64%	37.64%	Australia	Cairn Energy Australia Pty Limited	100.00%	100.00%
CIG Mauritius Holdings Private Limited	Investment company	37.64%	37.64%	Mauritius	Cairn India Limited	100.00%	100.00%
CIG Mauritius Private Limited	Investment company	37.64%	37.64%	Mauritius	CIG Mauritius Holding Private Limited	100.00%	100.00%
Cairn Lanka Private Limited	Exploration and production	37.64%	37.64%	Sri Lanka	CIG Mauritius Pvt Ltd	100.00%	100.00%
Cairn South Africa Pty Limited	Exploration and production	37.64%	37.64%	South Africa	Cairn Energy Hydrocarbons Limited	100.00%	100.00%

1 Pursuant to additional capital infusion in FG by MEL during the year ended 31 March 2016. Immediate percentage holding as of 31 March 2015 was 98% held by CMT.
2 Dissolved during the year ended 31 March 2016.
3 Pursuant to transfer of 4.98% of TMHL holdings in Cairn India to Vedanta Limited.
4 Dissolved subsequently on 19 April 2016.

The Group owns directly, or indirectly through subsidiaries, more than half of the voting power of all of its subsidiaries as mentioned in the list above, and has power over the subsidiaries, is exposed or has rights, to variable returns from its involvement with the subsidiaries and has the ability to affect those returns through its power over the subsidiaries.

45. Ultimate controlling party

At 31 March 2016, the ultimate controlling party of the Group was Volcan, which is controlled by persons related to the Executive Chairman, Mr Anil Agarwal. Volcan is incorporated in the Bahamas, and does not produce Group accounts.

46. Company balance sheet

(US$ million)	Note	**31 March 2016**	31 March 2015
Fixed assets			
Tangible assets	48	0.2	0.3
Investments in subsidiaries	49	1,226.3	1,226.3
Investment in preference shares of subsidiaries	50	4.7	1.7
Financial asset investment	51	0.1	0.1
		1,231.3	**1,228.4**
Current assets			
Debtors due within one year	52	505.5	422.7
Debtors due after one year	52	4,683.9	5,066.8
Investments	53	28.1	33.2
Cash at bank and in hand		0.6	0.1
		5,218.1	**5,522.8**
Creditors: amounts falling due within one year			
Trade and other creditors	54	(104.3)	(97.2)
External borrowings	54	(742.7)	(270.4)
Loan from subsidiary	54	(600.3)	–
Derivative liability	54	–	(2.0)
		(1,447.3)	**(369.6)**
Net current assets		**3,770.8**	**5,153.2**
Total assets less current liabilities		**5,002.1**	**6,381.6**
Creditors: amounts falling due after one year			
Loan from subsidiary	55	(278.0)	(1,430.2)
External borrowings	55	(4,220.0)	(4,345.7)
		(4,498.0)	**(5,775.9)**
Net assets		**504.1**	**605.7**
Capital and reserves			
Called up share capital	56	30.1	30.0
Share premium account	56	201.5	198.5
Share-based payment reserve	56	29.9	27.4
Convertible bond reserve	56	10.8	38.4
Other reserves	56	(2.2)	(2.2)
Treasury shares	56	(490.6)	(490.6)
Profit and loss account	56	724.6	804.2
Equity shareholders' funds	56	**504.1**	**605.7**

The financial statements of Vedanta Resources plc, registration number 4740415, were approved by the Board of Directors on 11 May 2016 and signed on its behalf by:

Tom Albanese
Chief Executive Officer

47. Company accounting policies
Basis of accounting
Vedanta Resources plc (the Company) has transitioned from UK Generally Accepted Accounting Practice (UK GAAP) to Financial Reporting Standard 101 'Reduced disclosure framework' (FRS 101), for all periods presented. The Company meets the definition of a qualifying entity under FRS 101 issued by the Financial Reporting Council. Accordingly, in the year ended 31 March 2016 the Company has changed its accounting framework from pre-2015 UK GAAP to FRS 101 and has, in doing so, applied the requirements of IFRS 1.6–33 and related appendices.

These financial statements have been prepared in accordance with FRS 101.

The Company balance sheet and related notes have been prepared under the historical cost convention and in accordance with Financial Reporting Standards 100 'Application of financial reporting requirements' (FRS 100) and FRS 101.

As permitted by section 408 of the Companies Act 2006, the profit and loss account of the Company is not presented as part of these financial statements. The (loss)/profit after tax for the year of the Company amounted to US$(8.0) million (2015: profit US$284.7 million).

These financial statements are presented in US dollars, being the functional currency of the Company.

The change in the basis of preparation has not materially altered the recognition and measurement requirements previously applied in accordance with UK GAAP. Consequently, the principal accounting policies are unchanged from the prior year. The change in basis of preparation has enabled the Company to take advantage of all the available disclosure exemptions permitted by FRS 101 in the financial statements because the Group presents the exempted information in the consolidated Group financial statements. There have been no other material amendments to the disclosure requirements previously applied in accordance with UK GAAP, except disclosure of the related party transactions.

Significant accounting policies
Investments in subsidiaries
Investments in subsidiaries represent equity holdings in subsidiaries except preference shares, valued at cost less any provision for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable.

Investment in preference shares of subsidiaries
Investments in preference shares of subsidiaries are stated at fair value. The fair value is represented by the face value of the preference shares as the investments are redeemable at any time for their face value at the option of the Company.

Cash and cash equivalents
Cash in the balance sheet comprises of cash at bank and cash in hand.

Financial asset investments
Financial asset investments are classified as available for sale under IAS 39 and are initially recorded at cost and then remeasured at subsequent reporting dates to fair value. Unrealised gains and losses on financial asset investments are recognised directly in equity. On disposal or impairment of the investments, the gains and losses in equity are recycled to the income statement.

Currency translation
Transactions in currencies other than the functional currency of the Company, being US dollars, are translated into US dollars at the spot exchange rates ruling at the date of transaction. Monetary assets and liabilities denominated in other currencies at the balance sheet date are translated into US dollars at year end exchange rates, or at a contractual rate if applicable.

Tangible fixed assets
Tangible fixed assets are stated at cost less accumulated depreciation and provision for impairment.

Deferred taxation
Deferred taxation is provided in full on all timing differences that result in an obligation at the balance sheet date to pay more tax, or a right to pay less tax, at a future date, subject to the recoverability of deferred tax assets. Deferred tax assets and liabilities are not discounted.

Share-based payments
The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions are determined by an external valuer and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Company's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the current expectations. No adjustment is made to the fair value after the vesting date even if the awards are forfeited or not exercised. Amounts recharged to subsidiaries in respect of awards granted to employees of subsidiaries are recognised as intercompany debtors until repaid.

Borrowings
Interest bearing loans are recorded at the net proceeds received i.e. net of direct transaction costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on accruals basis and charged to the profit and loss account using the effective interest method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Convertible bonds
The convertible bond issued by VRJL and VRJL-II (Note 54) are accounted for as a compound instrument. The gross proceeds (net of issue costs) were lent to the Company by VRJL and VRJL-II. The equity component has been recognised in a separate reserve of the Company and is not subsequently remeasured. The recognition of the equity component by the Company acts to reduce the payable to VRJL and VRJL-II which arises once the gross proceeds are borrowed. The liability component is held at amortised cost. The interest expensed on the liability component is calculated by applying an effective interest rate. The difference between interest expensed and interest paid is added to the carrying amount of the liability component.

The bonds are first convertible into preference shares of the issuer having a principal value of $100,000 per preference share, which are exchanged immediately for ordinary shares of the Company.

Financial instruments
The Company has elected to take the exemption provided in paragraph 8 of FRS 101 in respect of these parent Company financial

statements. Full disclosures are provided in Note 29 to the financial statements of the Group for the period ended 31 March 2016.

Derivative financial instruments
Derivative financial instruments are initially recorded at their fair value on the date of the derivative transaction and are re-measured at their fair value at subsequent balance sheet dates.

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the profit and loss account. The hedged item is recorded at fair value and any gain or loss is recorded in the profit and loss account and is offset by the gain or loss from the change in the fair value of the derivative.

Derivative financial instruments that do not qualify for hedge accounting are marked to market at the balance sheet date and gains or losses are recognised in the profit and loss account immediately.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting.

Cash flow statement
The Company's individual financial statements are outside the scope of FRS 1 'Cash flow statements' because the Company prepares publicly available Group financial statements, which include a consolidated cash flow statement. Accordingly, the Company does not present an individual Company cash flow statement.

Financial guarantees
Guarantees issued by the Company on behalf of other Group companies are designated as 'Insurance Contracts'. Accordingly, these are shown as contingent liabilities (Note 57).

Debtors
Debtors are stated at their nominal value as reduced by appropriate allowance for estimated irrecoverable amounts. An allowance for impairment for debtors is made where there is an indication of a reduction in the recoverability of the carrying value of the debtor.

Creditors
Creditors are stated at their nominal value.

48. Company tangible fixed assets

(US$ million)	
Cost	
At 1 April 2014	**2.3**
Additions	0.0
At 31 March 2015	2.3
Additions	0.0
At 31 March 2016	**2.3**
Accumulated depreciation	
At 1 April 2014	**1.6**
Charge for the period	0.4
At 31 March 2015	2.0
Charge for the period	0.1
At 31 March 2016	**2.1**
Net book value	
At 1 April 2014	0.7
At 31 March 2015	0.3
At 31 March 2016	**0.2**

49. Investments in subsidiaries

(US$ million)	
Cost	
At 1 April 2014	1,061.8
At 1 April 2015	**1,226.3**
At 31 March 2016	**1,226.3**

At 31 March 2016, the Company held 157,538,524 shares in Vedanta Resources Holdings Limited (VRHL) (March 2015: 157,538,524 shares), being 100% of VRHL's issued equity share capital. The Company also held one deferred share in VRHL (March 2015: one). At 31 March 2016, the Company held two shares in Vedanta Finance Jersey Limited (VFJL) (March 2015: two), two shares in Vedanta Resources Jersey Limited (VRJL) (March 2015: two), two shares in Vedanta Resources Jersey II Limited (VRJL-II) (March 2015: two), two shares in Vedanta Jersey Investment Limited (VJIL) (March 2015: two), being 100% of its issued equity share capital.

VRHL is an intermediary holding company incorporated in the United Kingdom (Note 44) and registered in England and Wales. VFJL, VRJL, VJIL and VRJL-II are companies, registered and incorporated in Jersey, established to raise funds for the Vedanta Group.

50. Investment in preference shares of subsidiaries

(US$ million)	
Fair value	
At 1 April 2015	**1.7**
Additions	3.0
Disposal	–
At 31 March 2016	**4.7**
At 1 April 2014	**1.7**
Additions	–
Disposal	–
At 31 March 2015	**1.7**

As at 31 March 2016, the Company held 47 preference shares in Vedanta Resources Jersey Limited (VRJL) (31 March 2015: 17 preference shares).

During the year, VRJL received notice from the bondholders to exercise the option to convert US$3,000,000 bonds into equity shares of the Company in accordance with the provisions of the Offer circular and accordingly 30 preference shares with a nominal value of US$100,000 each were issued by VRJL to the Company.

51. Financial asset investment

(US$ million)	
Fair value	
At 1 April 2015	**0.1**
Fair value movement	–
At 31 March 2016	**0.1**
At 1 April 2014	**0.1**
Fair value movement	–
At 31 March 2015	**0.1**

The investment relates to an equity investment in the shares of Victoria Gold Corporation. At 31 March 2016, the investment in Victoria Gold Corporation was revalued and no gain or loss (2015: no gain/loss) was recognised in equity.

52. Company debtors

(US$ million)	31 March 2016	31 March 2015
Amounts due from subsidiary undertakings	5,188.4	5,485.6
Prepayments and accrued income	0.5	3.5
Other taxes	0.5	0.4
Total	**5,189.4**	**5,489.5**
Debtors due within one year	505.5	422.7
Debtors due after one year	4,683.9	5,066.8
Total	**5,189.4**	**5,489.5**

Amounts due from subsidiary undertakings
At 31 March 2016, the Company had loans due from VRHL of US$1,737.4 million (2015: US$1,507.5 million) which represented the funds being loaned to other Group companies for funding the subsidiaries. Out of the total loan, US$579.2 million bears interest at six month US$LIBOR plus 350 basis points, US$500 million at 5.8%, US$31.2 million at 5.9%, US$47 million at 9.7%, and US$580.0 million at US$LIBOR plus 367 basis points.

At 31 March 2016, the Company had a loan of US$3,069.6 million (2015: US$3,590.5 million) from Vedanta Resources Jersey II Limited. Out of the total loan US$119.2 million bears interest at US$LIBOR plus 357 basis points, US$1,413.0 million at 7.45%, US$1,200 million at 6.50%, US$107.4 million at LIBOR plus 300 basis points, US$60 million at 3.15%, US$63.1 million at 7.25% and US$106.9 million at six month US$LIBOR plus 430 basis points.

In addition to the loans, the Company was owed US$372.1 million of accrued interest from VRHL and Vedanta Resources Jersey II Limited (2015: US$323.3 million) and US$9.3 million (2015: US$64.3 million) other receivables from Group companies.

53. Company current asset investments

(US$ million)	31 March 2016	31 March 2015
Bank term deposits	28.1	33.2
Total	**28.1**	**33.2**

54. Company creditors: amounts falling due within one year

(US$ million)	31 March 2016	31 March 2015
Accruals	(104.3)	(97.2)
External borrowings	(742.7)	(270.4)
Loan from subsidiary	(600.3)	–
Derivative liability	–	(2.0)
Total	**(1,447.3)**	**(369.6)**

54. Company creditors: amounts falling due within one year continued
The external borrowings as at 31 March 2016 represent 6.75% non-convertible bond of US$750 million repayable in June 2016. During the year, the Company bought back US$7 million worth of these bonds from open market. As at 31 March 2016, loans from subsidiaries included a loan of US$1,140.3 million from VRJL relating to its issue of US$1,250 million convertible bonds (bond issued in July 2009). In March 2015, as the final maturity was in July 2016, the above loan was classified in amounts falling due after one year and during the year the same was transferred from amounts due after one year to amounts falling due within one year (2015: US$1,110.5 million). During the year, the Company bought back from the market these bonds of face value of US$549.3 million for a consideration of US$522.4 million. The carrying value of this bond as on 31 March 2016 is US$533.5 million and accrued coupon interest is US$6.5 million. On maturity of these bought back convertible bonds, there will not be any cash exchange between the Company and its subsidiary, VRJL, but a set off of the Company’s bought back amount of the bond and inter-co liability towards this convertible bond. Accordingly, the carrying value of the bought back bond amount along with accrued interest i.e. US$540 million has been reduced from the inter-co loan outstanding amount of US$1,140.3 million from the subsidiary, VRJL.

During the year ended 31 March 2016, interest was charged at the effective interest rate of 8.2% (March 2015: 8.27%).

55. Company creditors: amounts falling due after one year

(US$ million)	31 March 2016	31 March 2015
Loan from subsidiary	(278.0)	(1,430.2)
External borrowings	(4,220.0)	(4,345.7)
Total	**(4,498.0)**	**(5,775.9)**

Loans from subsidiaries include a loan of US$22.2 million due to Richter Holdings Limited and US$255.8 million to Vedanta Finance UK Limited. As at 31 March 2015, the loan from subsidiaries included US$1,110.5 million due to VRJL (as discussed in Note 54).

Of the US$1,250 million non-convertible bond issued during 2008, US$500 million was repaid in January 2014 and the remaining US$750 million 9.5% bonds are due for repayment in July 2018.

In July 2011, the Company issued US$750 million, 6.75% bonds due June 2016, and US$900 million, 8.25% bonds due June 2021. As at 31 March 2015, the outstanding amount under this facility was US$1,650.0 million. During the year, the Company bought back US$7 million 6.75% bonds due June 2016 from the open market, and the outstanding amount of US$743 million has been shown under creditors falling due within one year and balance US$900 million in creditors falling due after one year.

In April 2013, the Company entered into a Standby Letter of Credit agreement arranged by Axis Bank for an amount of US$150 million at a commission of 1% per annum payable quarterly. The facility is funded by Bank of India to the extent of US$148.5 million and bears interest rate at three month US$LIBOR plus 290 basis points. The facility is repayable in two equal annual instalments starting April 2017. As at 31 March 2016, the outstanding amount under this facility is US$148.5 million.

In June 2013, the Company issued US$1,200 million, 6.00% bonds due January 2019, and US$500 million, 7.125% bonds due May 2023.

In December 2013, the Company entered into a facility agreement with Bank of India for borrowing up to US$100 million at an interest rate of US$LIBOR plus 357 basis points repayable to the extent of 50% in October 2017 and the balance in January 2018. As at 31 March 2016, the outstanding amount under this facility is US$100 million.

In March 2015, the Company entered into a facility agreement with State Bank of India for borrowing up to US$350 million. US$100 million is repayable in March 2020 and bears interest at a rate of US$LIBOR plus 370 basis points. US$250 million bears interest at a rate of US$LIBOR plus 403 basis points repayable in two instalments, being US$100 million and US$150 million at the end of 72 and 84 months respectively after initial utilisation. As at 31 March 2016, the outstanding amount under this facility is US$350 million.

In January 2016, the Company entered into a facility agreement with State Bank of India for borrowing up to US$300 million. US$120 million is repayable in February 2022 and bears interest at a rate of US$LIBOR plus 450 basis points. US$180 million is repayable in February 2023 and bears interest at a rate of US$LIBOR plus 460 basis points. As at 31 March 2016, the outstanding amount under this facility is US$300 million.

56. Company reconciliation of movement in equity shareholders' funds

(US$ million)	Share capital (Note 35)	Share premium	Share-based payment reserve	Convertible bond reserve	Treasury shares	Retained earnings	Other reserves	Total
Equity shareholders' funds at 1 April 2015	**30.0**	**198.5**	**27.4**	**38.4**	**(490.6)**	**804.2**	**(2.2)**	**605.7**
Loss for the year	–	–	–	–	–	(8.0)	–	(8.0)
Dividends paid (Note 14)	–	–	–	–	–	(111.3)[1]	–	(111.3)[1]
Exercise of LTIP awards (Note 32)	0.1	–	(13.1)	–	–	13.1	–	0.1
Recognition of share-based payments (Note 32)	–	–	15.6	–	–	–	–	15.6
Gift to Employee Benefit Trust	–	–	–	–	–	(0.9)	–	(0.9)
Exercise of conversion of bonds	0.0	3.0	–	(0.1)	–	–	–	2.9
Convertible bond transfer (Note 28)	–	–	–	(27.5)	–	27.5	–	–
Equity shareholders' funds at 31 March 2016	**30.1**	**201.5**	**29.9**	**10.8**	**(490.6)**	**724.6**	**(2.2)**	**504.1**

1 Total dividends of US$111.3 million includes a dividend of US$0.7 million paid to a separate investment trust which is consolidated in the Group's financial statements with that element of dividends paid by the Company being eliminated (refer Note 14).

(US$ million)	Share capital (Note 35)	Share premium	Share-based payment reserve	Convertible bond reserve	Treasury shares	Retained earnings	Other reserves	Total
Equity shareholders' funds at 1 April 2014	29.8	198.5	46.9	80.1	(490.6)	601.0	(2.2)	463.5
Profit for the year	–	–	–	–	–	284.7	–	284.7
Dividends paid (Note 14)	–	–	–	–	–	(171.3)	–	(171.3)
Exercise of LTIP awards (Note 32)	0.2	–	(48.1)	–	–	48.1	–	0.2
Recognition of share-based payments (Note 32)	–	–	28.6	–	–	–	–	28.6
Convertible bond transfer (Note 28)	–	–	–	(41.7)	–	41.7	–	–
Equity shareholders' funds at 31 March 2015	30.0	198.5	27.4	38.4	(490.6)	804.2	(2.2)	605.7

57. Company contingent liabilities

- The Company has guaranteed US$1,250 million convertible bonds issued by VRJL (2015: US$1,250 million), of the above US$113.8 million was repaid pursuant to exercise of put option during the year ended 31 March 2015. During the year, the Company bought back US$549.3 million of these bonds from open market. See Note 28 to the financial statements for further details on the convertible bonds.
- The Company has given a corporate guarantee to Konkola Copper Mines for an amount of US$897 million.
- The Company has guaranteed US$883 million convertible bonds issued by VRJL-II (2015: US$883 million). During the year ended 31 March 2015 and 31 March 2014, US$65.1 million and US$809.8 million respectively was repaid to the bondholders on exercise of put option. See Note 28 to the financial statements for further details on the convertible bonds.
- The Company has guaranteed US$170 million for a loan facility entered by Valliant Jersey Limited with ICICI Bank and US$180 million for loan facility entered by Vedanta Finance Jersey Limited with ICICI Bank.
- The Company has guaranteed US$500 million for a syndicated facility agreement entered by Welter Trading Limited with Standard Chartered Bank as facility agent.
- The Company has guaranteed US$500 million for a loan facility entered by Monte Cello NV with ICICI Bank.
- The Company has guaranteed US$150 million for a loan facility entered by Twin Star Holdings Limited with ICICI Bank. During the year ended 31 March 2016, US$90 million was repaid under this facility.
- The Company has guaranteed US$80 million for a revolving credit facility entered by Twin Star Holdings Limited with National Bank of Abu Dhabi PJSC.
- The Company has guaranteed US$500 million for a syndicated facility entered by Twin Star Holdings Limited with Axis Bank as lead arranger and facility agent.
- The Company has guaranteed US$1,200 million for a syndicated facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank as facility agent. During the year ended 31 March 2016, US$300 million was repaid under this facility.
- The Company has guaranteed US$500 million for a loan facility entered by Twin Star Mauritius Holdings Limited with Standard Chartered Bank and First Gulf Bank PJSC of which US$250 million is under a commodity murabaha structure (Islamic financing) and the balance US$250 million is under a conventional loan structure. During the year ended 31 March 2016, US$25 million was repaid under this facility.
- The Company has guaranteed US$1,250 million for a loan facility entered by its subsidiaries THL Zinc Limited with Cairn India Holdings Limited (intercompany loan).
- The Company has guaranteed US$900 million for a loan facility entered by its subsidiaries Twin Star Mauritius Holdings Limited with Fujairah Gold FZC (intercompany loan).
- The Company has provided a guarantee for the Cairn India Group's obligation under the Production Sharing Contract (PSC).
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58. Related party transactions

During the year the Company entered into transactions, in the ordinary course of business, with other related parties. The Company has taken advantage of the exemption under paragraph 8(k) of FRS 101 not to disclose transactions with wholly owned subsidiaries. Transactions entered into and trading balances outstanding at 31 March with other related parties are as follows:

(US$ million) Name of company	Relationship	Nature of transaction	**2016**	2015
Vedanta Limited	Subsidiary	Management fees charged	5.0	5.0
Konkola Copper Mines Plc	Subsidiary	Management and guarantee fees charged	2.8	2.3
Cairn India Limited	Subsidiary	Management fees charged	6.5	15.5
Sterlite Technologies Limited	Related party	Management fees charged	0.0	0.0
Volcan Investments Limited	Holding company	Dividend paid	75.0	115.6
Vedanta Limited	Subsidiary	Receipt of service	0.4	0.4
Vedanta Limited	Subsidiary	Payment of expenses	0.1	0.4
Vedanta Limited	Subsidiary	Recovery against share option expense	11.3	22.9
Konkola Copper Mines Plc	Subsidiary	Recovery against share option expense	1.5	1.4
Copper Mines of Tasmania Pty Limited	Subsidiary	Recovery against share option expense	0.1	0.0
Fujariah Gold FZC	Subsidiary	Recovery against share option expense	0.4	0.2
Vedanta Lisheen Holdings Limited	Subsidiary	Recovery against share option expense	0.0	0.6
Namzinc Pty Limited	Subsidiary	Recovery against share option expense	0.0	0.6
Black Mountain Mining (Pty) Limited	Subsidiary	Recovery against share option expense	0.7	1.1
Western Cluster Limited	Subsidiary	Recovery against share option expense	0.0	0.2
Twin Star Mauritius Holdings Limited	Subsidiary	Reimbursement of expenses	0.0	0.0
Twin Star Energy Holdings Limited	Subsidiary	Reimbursement of expenses	0.0	0.0
THL Zinc Limited	Subsidiary	Reimbursement of expenses	0.0	–
THL Zinc Ventures Limited	Subsidiary	Reimbursement of expenses	0.0	–
Ashurst LLP (was related up to 30 April 2016)	Related party	Receipt of service	0.1	0.4

Outstanding balances

(US$ million) Name of company	Relationship	Nature of transaction	**2016**	2015
Vedanta Limited	Subsidiary	(Payable)/Receivable	(3.9)	29.1
Konkola Copper Mines Plc	Subsidiary	Receivable	2.3	7.2
Cairn India Limited	Subsidiary	Receivable	1.2	2.7
Sterlite Technologies Limited	Related party	Receivable	0.0	0.0
Copper Mines of Tasmania Pty Limited	Subsidiary	Receivable	0.7	0.6
Fujariah Gold FZC	Subsidiary	Receivable	0.6	0.2
Vedanta Lisheen Holdings Limited	Subsidiary	(Payable)/Receivable	(0.0)	0.2
Namzinc Pty Limited	Subsidiary	Receivable/(Payable)	0.0	(0.0)
Black Mountain Mining (Pty) Limited	Subsidiary	Receivable	1.0	0.3
Western Cluster Limited	Subsidiary	Receivable	0.2	0.2
Twin Star Mauritius Holdings Limited	Subsidiary	Receivable	0.0	0.0
Twin Star Energy Holdings Limited	Subsidiary	Receivable	0.0	0.0
THL Zinc Limited	Subsidiary	Receivable	0.0	–
THL Zinc Ventures Limited	Subsidiary	Receivable	0.0	–
Monte Cello BV	Subsidiary	(Payable)	(1.0)	(1.0)

59. Company share-based payment

The Company had certain LTIP awards outstanding as at 31 March 2016. See Note 32 to the financial statements for further details on these share-based payments.

ANNEX A — LIFE OF MINES

Company Particulars		Reserves (Proved and Probable) Mt	Reserves and Resources Mt(1)	Fiscal year 2018 Production Mt	Mine Life — Reserves — Years as of 1 April 2018	Mine Life — Reserves and Resources — Years as of 1 April 2018
HZL	Rampura Agucha	46.0	96.5	3.8	12.0	25.1
HZL	Rajpura Dariba	9.3	60.0	0.9	10.4	67.0
HZL	Zawar Group	10.4	100.5	2.2	4.8	46.2
HZL	Kayad	5.5	8.3	1.2	4.6	6.9
HZL	Sindesar Khurd	34.6	126.0	4.5	7.7	28.0
HZL	Bamnia Kalan	—	20.1	—	—	—
CMT	Mt. Lyell	—	59.6	—	—	—
KCM	Konkola	35.0	271.3	1.4	25.0	193.8
KCM	Nchanga (Underground)	—	63.4	2.0	—	31.7
KCM	Nchanga (Open-Pit)	4.8	23.1	0.8	6.0	28.9
KCM	Other Pits	35.4	175.5	0.5	70.8	351.0
Skorpion	Skorpion	2.7	7.4	0.5	5.1	13.9
Black Mountain Mining	Deeps	5.6	16.2	1.2	4.7	13.5
Black Mountain Mining	Swartberg	2.3	64.5	0.4	5.7	159.1
Black Mountain Mining	Gamsberg	53.2	215.5	—	12.0	29.1
Vedanta Limited	Iron Ore Karnataka	45.9	100.2	2.2	21.9	45.6
BALCO	Mainpat	5.2	10.1	0.6	8.8	17.1
BALCO	Bodai-Daldali	2.8	6.2	0.6	4.8	10.5

(1) See Annex B — "Mineral Resources (exclusive reporting basis)". The reporting methodology for Mineral Resources differs from that of Ore Reserves under international reporting codes as certain factors (termed "Modifying Factors", such as mining losses and dilution) are included in the reporting of Ore Reserves, whereas Mineral Resources are reported on an in-situ basis. Accordingly, the two numbers are not added together under international reporting codes such as JORC (2012) and SAMREC (2016). Consequently, considerable caution should be exercised when considering life of mine estimates based on Mineral Resource plus Ore Reserves. Life of mine estimates which include Mineral Resources have been undertaken by the Company and have not been subject to review by the Independent Consultants named in the Offering Circular. See "Presentation of Information — Basis of Presentation of Reserves and Resources — Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Mining Operations" and "Risk Factors — Risks Relating to Business — There are uncertainties inherent in estimating Vedanta's Ore Reserves and Mineral Resources and oil, condensate and sales-gas reserves, and if the actual amounts of such reserves and resources are less than estimated, its results of operations and financial condition may be materially and adversely affected". The life of mine estimates presented in this table take into account the fiscal year 2018 production for all mines except for Gamsberg, which takes into account the production capacity. Furthermore, it should be noted that the Ore Reserves are derived from Life-of-mine plans which in certain instances assume expanded production which is significantly increased when compared to historical production capacity. Accordingly, the mine lives for such instances will be significantly shorter than the theoretical values reported above. Furthermore, there are scenarios where the contribution of Inferred Mineral Resources is significant and as these are not separately identified this may constitute non-material disclosure.

(2) Excluded from the Table are the Ore Reserves at KCM of 42.6Mt for the Tailings Dams and 105.5Mt for the Refractory Ore as well as 3.0Mt of Inferred Mineral Resource.

ANNEX B — MINERAL RESOURCES (EXCLUSIVE REPORTING BASIS)

	Measured			Indicated			Inferred		
Zinc-Lead Mines	**Quantity Mt.**	**Grade Zinc%**	**Grade Lead%**	**Quantity Mt.**	**Grade Zinc%**	**Grade Lead%**	**Quantity Mt.**	**Grade Zinc%**	**Grade Lead%**
Rampura Agucha	8.0	14.7	2.2	8.3	15.3	1.7	34.3	10.0	2.6
Rajpura Dariba	11.2	7.4	2.0	11.7	6.5	2.3	27.8	6.4	1.8
Zawar Group	1.6	3.7	2.0	20.7	4.8	1.8	67.8	4.6	2.6
Kayad	1.4	14.9	2.1	0.1	8.6	1.3	1.3	4.6	1.9
Sindesar Khurd	3.8	5.1	2.8	12.0	4.7	3.1	75.6	3.6	1.8
Bamnia Kalan	—	—	—	5.4	4.5	1.6	14.7	3.7	1.8
Skorpion	—	—	—	2.9	9.1	—	1.8	8.7	—
BMM									
— Deeps	4.0	3.1	3.4	6.6	2.8	2.7	—	—	—
— Swartberg	—	—	—	35.7	0.8	3.7	26.5	2.2	3.0
— Gamsberg	43.3	6.6	0.6	54.6	5.9	0.5	64.4	7.8	0.5

	Measured		Indicated		Inferred	
Copper Mines	**Tonnage (Mt)**	**Grade (% TCu)**	**Tonnage (Mt)**	**Grade (% TCu)**	**Tonnage (Mt)**	**Grade (% TCu)**
Mt Lyell	3.5	1.22	26.1	1.07	30.0	1.06
Konkola	1.3	3.14	6.5	3.2	225.4	3.55
Nchanga (Underground)	0.7	4.54	16.1	2.46	46.6	2.28
Nchanga (Open-Pit)	—	—	44.4	1.25	—	—
Other Open Pits	0.2	2.46	80.7	1.93	44.8	1.64
Refractory Ore	—	—	—	—	3.0	0.65

	Measured		Indicated		Inferred		Total
Iron Ore	**Quantity Mt.**	**Grade Fe%**	**Quantity Mt.**	**Grade Fe%**	**Quantity Mt.**	**Grade Fe%**	**Quantity Mt.**
Iron ore Karnataka*	10.1	58.0	33.7	39.3	10.5	42.9	53.3

* During the year ended 31 March 2018, The Supreme Court of India issued a judgment directing that all mining operations in the state of Goa were to cease with effect from 16 March 2018. Pursuant to this order, mining activities were halted. Therefore, the Company has not shown any Reserves and Resources related to Iron Ore Goa.

See "Presentation of Information — Basis of Presentation of Reserves and Resources — Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources for Mining Operations" and "Risk Factors — Risks Relating to Business — There are uncertainties inherent in estimating Vedanta's Ore Reserves and Mineral Resources and oil, condensate and sales-gas reserves, and if the actual amounts of such reserves and resources are less than estimated, its results of operations and financial condition may be materially and adversely affected".

ANNEX C — MINERAL RESOURCE AND ORE RESERVE REPORTING

The JORC Code (2012) and the SAMREC Code (2016) require that for Reporting of Mineral Resources and Ore Reserves, the publication of additional supplemental information, specifically in respect of assumed modifying factors and economic assumptions as well as a detailed narrative in respect of certain elements as noted under the JORC Codes (2012) Table 1 declarations. Certain sections of this Offering Circular present historical production sections as well as technical descriptions of the Company's Mineral Assets and as such includes some of the supporting information incorporated into such declarations.

The detailed split for Proved and Probable Ore Reserves are included under the relevant business description sections for each of the Mineral Assets.

The Competent Persons' responsible for confirming that the Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the reporting codes are:

For HZL where Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the JORC Code (2012):

The Competent Person who has reviewed the Mineral Resources as reported by the company in 31 March 2018 Statements is Mr. Mark Campodonic, FGS, AusIMM (CP) and MSc, who is an employee of SRK. He is Fellow of the geological Society and a Chartered Professional Member of the Australian Institute of Mining and Metallurgy ("AusIMM"). Mr Mark Campodonic is a resource geologist with over 20 years of experience in the mining industry. Mr Mark Campodonic is a mining geologist with over 20 years' experience in the mining industry which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

The Competent Person who has reviewed the Ore Reserves as reported by the company in the 31 March 2018 Statements is Mr John Miles, C. Eng (UK) and MSc, who is an associate of SRK. He is a Member of the Institute of Materials, Minerals and Mining ("IMMM"). Mr John Miles is a mining engineer with 35 years' experience in the mining industry which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

For KCM where Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the SAMREC Code (2016):

The Competent Person who is responsible for the Mineral Resources (Resource Estimation) for KCM is Mr Victor Simposya, Pr. Sci. Nat., SAIMM, MSc who is an associate of SRK SA. He is a Professional Natural Scientist with the South African Institute of Mining and Metallurgy ("SAIMM"). Mr Victor Simposya is a geologist with over 38 years' experience in the mining industry which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the SAMREC Code (2016).

The Competent Person who is responsible for the Ore Reserves for KCM is Mr Boniface Mwila, Pr. Eng., ECSA (South Africa), MSAIMM, MSc who is an associate of SRK SA. Mr Boniface Mwila is a Mining Engineer with over 28 years' experience in the mining industry which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the SAMREC Code (2016).

For CMT where Mineral Resources are reported in accordance with the terms and definitions of the JORC Code (2012):

The Competent Person who is responsible for the Mineral Resources of CMT is John Hooper BSc (Hons). He is a Member of the Australian Institutes of Mining and Metallurgy. Mr John Hooper has sufficient experience relevant to the style and type of mineral deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the JORC Code (2012).

For Black Mountain Mining where Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the SAMREC Code (2016):

The Competent Person who is responsible for the Mineral Resources and Ore Reserves of Black Mountain Mining's mines is S Jenniker, BMC Development Manager at Black Mountain Mining. He is a Member of the South African Council for Natural Scientific Professions and a Member of the Geological Society of South Africa. S Jenniker has sufficient experience relevant to the style and type of mineral deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the SAMREC Code (2016).

For Skorpion where Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the JORC Code (2012):

The Competent Persons who are responsible for Ore Reserves for Skorpion, as reported is John James Stoddart, Principal Consultant for AMC Consultants Pty Ltd. Mr. Stoddart is a member of Autralasian Institute of Mining and Metallurgy. Mr. Stoddart is a full time employee of AMC Consultants Pty Ltd. Mr. Stoddart has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 212 Edition of Australasian Code of Reporting of Exploration Results, Mineral Resources and ore Reserves.

For BALCO where Mineral Resources and Ore Reserves are reported in accordance with the terms and definitions of the JORC Code (2012):

The Competent Person who is responsible for the Mineral Resources and Ore Reserves of BALCO is Shalabh Saha. He is M.Sc (Geology) from Rajasthan University, Raipur, India (Batch 1990) and M.Phil (Mineral Exploration) from Ravishankar University, Raipur, India (Batch 1991). Shalabh Saha is the Director of Geo Solutions Private Limited and has over 35 years' experience in the mining and metals industry. He has sufficient experience relevant to the style and type of mineral deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the JORC Code (2012).

ANNEX D — PRODUCTION RELEASE FOR THE FISCAL YEAR ENDED 31 MARCH 2019

Zinc India

	H2			H1		Full Year		
Particulars *(in '000 tonnes, or as stated)*	**Fiscal year 2019**	**Fiscal year 2018**	*% Change*	**Fiscal year 2019**	*% Change vs H2*	**Fiscal year 2019**	**Fiscal year 2018**	*% Change*
ZINC INDIA								
Mined metal content	492	495	(1)%	444	11%	936	947	(1)%
Underground Mines	492	376	31%	444	11%	936	724	29%
Open cast Mines	—	120	—	—	—	—	223	—
Integrated metal	469	501	(6)%	425	10%	894	960	(7)%
Refined Zinc — Integrated	362	406	(11)%	334	9%	696	791	(12)%
Refined Lead — Integrated[1]	107	95	12%	91	17%	198	168	18%
Silver — Integrated (in mn ounces)[2]	11.9	9.7	22%	10.0	19%	21.8	17.9	22%

H2 Fiscal year 2019 vs. Previous Half Years

Mined metal production from underground mines increased to 492,000 tonnes, up 31% y-o-y on account of 22% higher ore production and better grades. Total mined metal production declined marginally on account of closure of open cast operations in fiscal year 2018.

Integrated metal production was 469,000 tonnes, down 6% y-o-y in line with availability of mined metal. Integrated zinc production was 362,000 tonnes, down 11% y-o-y while integrated lead production increased to 107,000 tonnes, up 12% on account of higher lead ratio in ore and retrofitting of pyro metallurgical smelter in Q2 FY2019 to produce more lead in line with higher lead mined metal availability. Integrated silver production was 11.9 mn ounces, up 22% y-o-y on account of higher lead production and better silver grades.

Mined metal production increased by 11% sequentially as underground mines ramped up during the course of the year with 10% higher ore production and better grades. Integrated metal production kept pace with mined metal production growth increasing by 10% with zinc and lead production rising by 9% and 17% respectively.

Projects Update

- Capital mine development in H2 fiscal year 2019 was 22.8 km as compared to 20.0 km in comparable period a year ago and 20.2 km in H1 fiscal year 2019.
- At Sindesar Khurd, the underground crusher and production shaft were commissioned during Q4 fiscal year 2019 and ore hoisting from shaft is expected to start in Q1 FY2020. The new 1.5 Mtpa mill was commissioned in Q3 fiscal year 2019 taking the total beneficiation capacity to 6.2 Mtpa. The second paste fill plant is under mechanical completion and expected to commission in Q1 FY2020.
- At Rampura Agucha, the second paste fill plant was commissioned ahead of schedule during Q4 FY2019. The full shaft commissioning is expected to complete by Q2 FY2020 synchronising with the completion of crusher and conveyor system.

- At Zawar, the new 2 Mtpa mill was commissioned during Q4 FY2019 while the dry tailing plant is under execution and expected to commission in Q2 FY2020.

- The fumer project at Chanderiya is under mechanical completion and is set to commission in Q1 FY2020.

Financial Year 2019 vs. Financial Year 2018

Mined metal production for FY2019 was 936,000 tonnes as compared to 947,000 tonnes a year ago. The FY2019 production was entirely from underground mines, which ramped up strongly by 29% on account of 27% increase in ore production and better grades. Therefore, despite closure of open cast operations total mined metal production declined only marginally from a year ago.

Integrated metal production was 894,000 tonnes in line with mined metal production, 7% lower from previous year's record production of 960,000 tonnes. Integrated lead and silver production were a record 198,000 tonnes and 21.8 mn ounces, higher 18% and 22% respectively driven by higher lead mined metal production, retrofitting of pyro metallurgical smelter in Q2 FY2019 and better silver grades. Integrated zinc production was lower 12% in line with the availability of zinc mined metal and higher lead ratio in ore.

Zinc — International

	H2			H1		Full Year		
Particulars *(in '000 tonnes, or as stated)*	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
ZINC INTERNATIONAL	94	82	15%	54	76%	148	157	(5)%
Zinc-refined — Skorpion	41	48	(15)%	25	64%	66	84	(22)%
Mined metal content — BMM ..	36	34	7%	29	27%	65	72	(10)%
Mined metal content — Gamsberg[3]	17	—	—	—	—	17	—	—

3 includes trial run production of 10 Kt

H2 FY2019 vs. Previous Half Years

Total production for H2 FY2019 was 94,000 tonnes, higher 15% y-o-y mainly due to commencement of production at Gamsberg and higher 76% as compared to H1 FY2019 mainly due to higher throughput and better grades at BMM and Skorpion, planned shutdown in H1 FY2019 at Skorpion and commencement of production from Gamsberg.

Production at Skorpion during H2 FY2019 was 41,000 tonnes, 15% lower y-o-y due to a strike in Q4 FY2019 and 64% higher as compared to H1 FY 2019 due to ramp up of higher grade ore production from Pit 112 (8.7% vs 6.3%) and annual shutdown in Q1 FY2019.

In case of Pit 112, over 75% of waste pre-stripping has been completed and mining will come to end by Q3 FY2020 with stockpile built up to feed plant for next 12 months.

The Skorpion Zinc mining business partner employees embarked upon an illegal strike from 22nd February to 6th March 2019. The employees cited unresolved labour matters with their employer. The strike action which lasted some fourteen (14) days had a severe negative impact on mining activities and the lead time to re-establish mining operations. This resulted in the depletion of ROM ore inventory, consequently leading to the temporary closure of the refinery, while re-establishing mining buffers, for a period of five weeks with start of operations slated for mid April. Skorpion has taken the opportunity to bring forward the annual shutdown previously scheduled in Q2 FY2020.

Production at BMM in H2 FY2019 was 36,000 tonnes, 7% higher y-o-y and 27% higher as compared to H1 FY2019 due to higher throughput, better grades and planned prioritisation of mine development in H1 FY2019 to provide for flexibility for ore mining and blending in H2 FY2019.

The Gamsberg project was launched by The President of South Africa on 28th February 2019. Gamsberg mining production is going well as per plan. During the year, 41Mt rock has been moved including pre-stripping and healthy stockpile of 1.0Mt has been built in for smooth feed to the Plant.

Post the trial production, concentrator plant has been ramping up with plant having achieved availability of 80% in March 2019.

Financial Year 2019 vs. Financial Year 2018

During FY2019, total production was at 148,000 tonnes, lower 5% y-o-y on account of lower production at Skorpion due to 2 weeks strike in Q4 FY2019, lower zinc grades at Skorpion (7.6% vs 8.2%) and lower production at BMM due to lower lead grades, hence lower recoveries. This was partially offset by commencement of production from Gamsberg.

Oil & Gas

	H2			H1		Full Year		
Particulars	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
Average Daily Gross Operated Production (boepd)	187,127	187,119	—	190,431	(2)%	188,784	185,587	2%
Rajasthan	152,193	159,698	(5)%	159,593	(5)%	155,903	157,983	(1)%
Ravva	15,930	16,577	(4)%	13,855	15%	14,890	17,195	(13)%
Cambay	19,004	10,845	75%	16,984	12%	17,991	10,408	73%
Average Daily Working Interest Production (boepd)	117,824	119,856	(2)%	121,761	(3)%	119,798	118,620	1%
Rajasthan	106,535	111,788	(5)%	111,715	(5)%	109,132	110,588	(1)%
Ravva	3,584	3,730	(4)%	3,117	15%	3,350	3,869	(13)%
Cambay	7,602	4,338	75%	6,794	12%	7,196	4,163	73%
KG-ONN	103	—	—	135	(24)%	119	—	—
Total Oil and Gas (million boe)								
Oil & Gas — Gross	34.1	34.1	—	34.8	(2)%	68.9	67.7	2%
Oil & Gas — Working Interest	21.4	21.8	(2)%	22.3	(4)%	43.7	43.3	1%

H2 FY2019 vs. Previous Half Years

Average gross operated production during H2 FY2019 across our assets was 187,127 barrels of oil equivalent per day (boepd), flat y-o-y. The natural decline has been offset by increase in volume primarily due to gains realized from Cambay infill wells campaign completed during this year and new wells brought online as part of Mangala Infill, Bhagyam & Aishwariya EOR campaign. Average gross operated production was down 2% as compared to H1 FY2019. All our assets recorded an uptime of over 99%.

Gross production from the Rajasthan block averaged 152,193 boepd for H2 FY2019, 5% lower y-o-y and sequentially. The decrease in volume was primarily due to the natural decline from the fields, partially offset by the gains realised from new wells brought online as part of Mangala Infill, Bhagyam & Aishwariya EOR campaign, production optimisation activities and augmentation of Liquid handling capacity at Mangala Processing Terminal (MPT). As part of the growth projects 99 wells have been drilled and 33 wells have been brought online during FY2019. Gross production from Development Area-1 (DA-1), Development Area-2 (DA-2) and Development Area-3 (DA-3) averaged 132,876 boepd, 18,892 boepd and 425 boepd respectively.

The Government of India, acting through the Directorate General of Hydrocarbons, Ministry of Petroleum and Natural Gas has granted its approval for a ten-year extension of the PSC for the Rajasthan Block, RJ-ON-90/1, subject to certain conditions with effect from 15th May, 2020. The applicability of the Pre-NELP Extension Policy to the RJ Block PSC is currently sub judice.

Gas production from Raageshwari Deep Gas (RDG) averaged 55.9 million standard cubic feet per day (mmscfd) (equiv. 9.3 Kboepd) in H2 FY2019, with gas sales post captive consumption at 41.5 mmscfd (equiv 6.9 kboepd).

The Ravva block produced at an average rate of 15,930 boepd for H2 FY2019, lower 4% y-o-y primarily due to natural field decline while production optimization measures helped in partially offsetting the decline.

The Cambay block produced at an average rate of 19,004 boepd for the H2 FY2019, up 75% y-o-y and 12% from H1 FY2019, supported by the gains realized from infill wells campaign completed in Q1 FY2019.

Key upcoming project milestones

- **MBA Infill, EOR Polymer and ASP Project:** 73 wells have been drilled till date. Of these 33 wells are online, ASP surface facility contract to be awarded by Q1 FY2020.

- **Tight Gas (RDG):** Early production facility under commissioning; shall add around 90 mmscfd of production. 6 wells drilled till date. The construction of terminal is progressing as per plan.

- **Tight Oil (ABH):** 20 wells have been drilled and completed. Initial deliverability from the 2 wells is in line with expectations.

- **Satellite field development:** An integrated contract for development of satellite fields is under award.

- **Liquid handling:** Facility upgradation project is progressing as per plan to handle incremental liquids, phase 1 of intra-field pipeline augmentation project has been commissioned in Q4 FY2019 and balance scope to be commissioned by Q1 FY2020.

- **Ravva Development:** An Integrated contract for drilling development wells under award.

Exploration

- **KG Offshore:** Oil discovery was notified in second exploratory well (H2). Further appraisal will be required to establish the size and commerciality of the oil discovery. The first exploration well A3-2 drilled in the block was a gas discovery. Evaluations are ongoing.

- **RJ Exploration:** 7-18 exploration and appraisal wells drilling campaign to start in Q1 FY2020 to build on the resources portfolio.

- **RJ Tight Oil Appraisal fields:** The appraisal for 4 tight oil fields to start in Q1 FY2020.

- **Ravva Exploration**: An integrated contract for drilling exploratory wells is under award.

- **OALP:** Revenue Sharing Contract have been signed for petroleum exploration of 41 Blocks in OALP Round-1. Global tender issued inviting bids for end-to-end integrated contract for the OALP blocks.

- **Discovered Small field (DSF2):** Awarded two onshore blocks (Hazarigaon in Assam and Kaza in KG basin).

Financial Year 2019 vs. Financial Year 2018

Average gross production across our assets was 2% higher y-o-y at 188,784 boepd. Production from Rajasthan block was 155,903 boepd, 1% lower y-o-y. The natural reservoir decline have been managed with the gains accruing from the new wells brought online from the Mangala Infill, Bhagyam & Aishwariya EOR campaign. Production from the offshore assets, was at a combined 32,881 boepd, higher 19% y-o-y, due to the gains from Cambay infill campaign.

Iron Ore

Particulars *(in million dry metric tonnes, or as stated)*	H2 FY 2019	H2 FY 2018	H2 *% Change*	H1 FY 2019	H1 *% Change vs H2*	Full Year FY 2019	Full Year FY 2018	Full Year *% Change*
IRON ORE								
Sales	2.1	4.5	(54)%	1.8	17%	3.8	7.6	(49)%
Goa	0.1	3.4	(97)%	1.2	(92)%	1.3	5.4	(77)%
Karnataka	2.0	1.1	74%	0.6	—	2.6	2.2	19%
Production of Saleable Ore	1.6	2.6	(40)%	2.8	(45)%	4.4	7.1	(38)%
Goa	—	2.3	—	0.2	—	0.2	4.9	(95)%
Karnataka	1.6	0.3	—	2.6	(40)%	4.1	2.2	89%
Production ('000 tonnes)								
Pig Iron	346	347	—	339	2%	686	646	6%

H2 FY2019 vs. Previous Half Years

At Goa, production and sales volume were lower compared to previous periods due to mine closure pursuant to the Supreme court judgement dated 7th February 2018 directing mining operations of all companies in Goa to cease with effect from 16th March 2018. We continue to engage with the Government for resumption of mining operations.

At Karnataka, production in H2 FY2019 was 1.6 million tonnes, higher as compared to H2 FY2018 due to increase in annual mining cap to 4.5 million tonnes. It was lower by 40% as compared to H1 FY2019 due to higher mining cap utilisation in H1 FY2019.

Pig iron production was at 346,000 tonnes, flat y-o-y and 2% higher compared to H1 FY2019.

Financial Year 2019 vs. Financial Year 2018

At Goa, production and sales volume were lower compared to previous periods due to mine closure. At Karnataka, production was 4.1 million tonnes 89% higher y-o-y due to an increase in annual mining cap in Q1 FY2019. Sales in FY2019 were at 2.6 million tonnes, 18% higher y-o-y due to increase in production partially offset by muted e-auction sales. Production of Pig Iron increased to 686,000 tonnes in FY2019, 6% higher mainly due to lower metallurgical coke availability in Q1 FY2018 and local contractors' strike in Q2 FY2018.

Steel

	H2			H1		Full Year		
Particulars *(in '000 tonnes, or as stated)*	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
STEEL[4]								
Finished Production	672	541	24%	527	27%	1,199	1,025	17%
Pig Iron	82	100	(17)%	59	39%	142	179	(21)%
Billet	32	27	19%	7	—	39	50	(21)%
TMT Bar........................	245	157	56%	196	25%	441	300	47%
Wire Rod	219	184	19%	208	5%	427	365	17%
Ductile Iron Pipes	93	73	27%	57	63%	150	130	15%

4 June 2018 was the first full month post Vedanta Limited's 90% acquisition of ESL. Previous period numbers are memorandum information for the purpose of performance evaluation of the Company.

H2 FY2019 vs. Previous Half Years

Vedanta Limited completed the acquisition of 90% share capital of Electrosteel Steels Limited (ESL) on 4th June 2018, following which we will be consolidating the financials of ESL for a 10 month period in FY2019. ESL has designed capacity of 2.5 Mtpa in Bokaro, Jharkhand with blast furnace/basic-oxygen-furnace technology. ESL's current operating capacity is 1.5Mtpa with a diversified product mix of wire rod, rebar, DI pipe and pig iron.

Total production for H2 FY2019 was 672,000 tonnes, 24% higher y-o-y and 27% higher sequentially as a result of operational & commercial excellence and restarting of 350 m^3 Blast Furnace-3 from August 2018.

In line with our stated priorities to stabilise production and ramp up to 1.5 Mtpa, we achieved hot metal production run rate of 1.5 Mtpa in FY2019.

Financial Year 2019 vs. Financial Year 2018

Total production for FY2019 was 1,199,000 tonnes, 17% higher y-o-y as a result of operational & commercial excellence and restarting of 350 m^3 Blast Furnance -3 from August 2018.

Copper — India

Particulars (in '000 tonnes, or as stated)	H2 fiscal year 2019	H2 fiscal year 2018	H2 % Change	H1 fiscal year 2019	H1 % Change vs H2	Full Year fiscal year 2019	Full Year fiscal year 2018	Full Year % Change
COPPER-INDIA								
Copper — Cathodes	50	207	(76)%	40	26%	90	403	(78)%
Tuticorin Power Sales (MU)	—	5	—	—	—	—	39	—

Smelting operations at Tuticorin have been halted since April 2018. The Tamil Nadu Pollution Control Board (TNPCB) through an order dated 9th April 2018 rejected the Consent to Operate (CTO) of the Tuticorin Plant and issued a direction for closure and disconnection of power supply at the plant. In May 2018, The Government of Tamil Nadu has issued orders with a direction to permanently seal the existing copper smelter plant at Tuticorin. In response to Vedanta Limited's appeal to the National Green Tribunal (NGT) against the aforementioned orders, in December 2018, NGT set aside Tamil Nadu Government's order and directed TNPCB to renew the CTO subject to complying of certain directions as specified in the order.

However, in February 2019, The Honourable Supreme Court set aside NGT's order on the grounds of maintainability and has given liberty to approach Madras High Court for filing a writ petition before the Madras High Court challenging the impugned orders and seek interim relief considering that Vedanta Limited's plant has been shut since end March 2018. The Company has filed a writ petition before Madras High Court challenging the various orders passed against the company in 2018 and 2013. The Madras High Court has directed the State of Tamil Nadu and TNPCB to file their counter to our petition for interim relief and has posted the matter for hearing on 23 April 2019.

Our Silvassa refinery and wire rod plant continue to operate. This enables us to cater to the domestic market. Production from the Silvassa refinery was 26% higher in H2 fiscal year 2019 as compared to H1 fiscal year 2019 due to improved availability of customised anode and secondary material.

Copper — Zambia

Particulars (in '000 tonnes, or as stated)	H2 fiscal year 2019	H2 fiscal year 2018	H2 % Change	H1 fiscal year 2019	H1 % Change vs H2	Full Year fiscal year 2019	Full Year fiscal year 2018	Full Year % Change
COPPER-ZAMBIA								
Mined metal	42	46	(8)%	49	(13)%	91	91	—
Copper — Total	83	94	(12)%	94	(12)%	177	195	(9)%
Integrated	42	41	3%	48	(12)%	90	84	7%
Custom	40	53	(23)%	47	(13)%	87	111	(22)%

H2 Fiscal Year 2019 vs. Previous Half Years

Mined metal production in H2 fiscal year 2019 was at 42,000 tonnes, down 8% y-o-y and 13% sequentially.

The production at Konkola was at 14,000 tonnes in H2 fiscal year 2019, 30% lower y-o-y and 12% lower sequentially due to poor performance from one of the business partner at Shaft 3 area, shaft's structural maintenance for improving the hoisting capacities & reliability and lower equipment availability than planned resulting in lagging developments. A new business partner with better mining expertise has already been identified and productive engagement is on with the partner with a targeted resource mobilisation by Q1 fiscal year 2020.

Production from Nchanga in H2 FY2019 was 5,100 tonnes, lower 14% y-o-y and 32% sequentially due to heavy monsoon impacting feeds from open-pits and temporary suspension of Nchanga underground operations from Q4 FY2019 due to low availability of acid as a result of rationalised operations at our Nchanga smelter following the introduction of a 5% custom duty on copper concentrates in the Fiscal Budget 2019 effective from 1st January 2019.

Tailings leach plant recorded a production of 23,200 tonnes in H2 FY2019, an improvement of 16% y-o-y due to improved feed-grades and higher copper recoveries as a result of consistent pumps & plant availability and stable process controls. It was, however, 9% lower sequentially due to temporary suspension of Nchanga underground operations from Q4 FY 2019.

Custom volumes in H2 FY2019 were at 40,000 tonnes, lower 23% y-o-y and 13% sequentially due to lower concentrate availability in the region and the levy of custom duty in the recent Fiscal Budget 2019.

Financial Year 2019 vs. Financial Year 2018

Mined metal production in FY2019 was 91,000 tonnes, flat y-o-y. Custom volumes decreased to 87,000 tonnes, 22% lower compared to FY2018 mainly due to lower concentrate availability in the market and the levy of custom duty in the recent Fiscal Budget 2019.

Aluminium

	H2			**H1**		**Full Year**		
Particulars *(in '000 tonnes, or as stated)*	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
ALUMINIUM								
Alumina-Lanjigarh	827	638	30%	673	23%	1,501	1,209	24%
Total Aluminium Production	983	922	7%	976	1%	1,959	1,675	17%
Jharsuguda-I	272	249	9%	273	—	545	440	24%
Jharsuguda-II[5]	423	389	9%	420	1%	843	666	27%
BALCO-I	132	131	1%	128	3%	260	259	—
BALCO-II[6]	156	153	2%	155	1%	311	310	—

H2 FY2019 vs. Previous Half Years

The Lanjigarh refinery produced 827,000 tonnes of alumina in H2 FY2019, 30% higher y-o-y and 23% higher as compared to H1 FY2019 due to plant debottlenecking. Improved captive alumina production and locally sourced bauxite are key to drive our aluminium costs lower. The peak run rate at Lanjigarh Refinery during the year was 1.8 Mtpa.

Bauxite supplies for the Lanjigarh refinery from Odisha Mining Corporation commenced in Q1 FY2019. The Odisha Mining Corporation production has ramped up during the year with production run rate of 3.0 Mtpa, with supplies as per state policy.

Aluminium production in H2 FY2019 was at 983,000 tonnes, up 7% y-o-y. The production was flat as compared to H1 FY2019. Line 4 of Jharsuguda Smelter II continues to be under evaluation. Stabilised aluminium production (i.e. production excluding trial run) was 956,000 tonnes in H2 FY2019.

Coal continues to be a key focus area for management. The linkage coal materialisation for the captive power plants has improved in Q4 FY2019 as compared to previous quarters resulting in no power import for the last 4 months. The Company secured 3.2 million tonnes of coal in Tranche IV auction and materialisation has started from March 2019. This will improve coal availability and therefore help to drive our costs down.

Financial Year 2019 vs. Financial Year 2018

Aluminium production increased to 1,959,000 tonnes in FY2019, 17% higher y-o-y, as the production increase stabilised (from ramp up of Jharsuguda smelters). Alumina production was 1,501,000 tonnes, 24% higher y-o-y due to plant debottlenecking.

Power

	H2			H1		Full Year		
Particulars *(in million units)*	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
Power								
Total Power Sales	6,687	6,254	7%	6,830	(2)%	13,517	11,041	22%
Jharsuguda 600 MW	751	515	46%	289	—	1,039	1,172	(11)%
TSPL	4,778	4,770	—	5,081	(6)%	9,859	7,915	25%
BALCO 600 MW[7]	1,031	854	21%	1,137	(9)%	2,168	1,536	41%
MALCO[#]	—	—	—	—	—	—	4	—
HZL Wind Power	127	115	10%	324	(61)%	451	414	9%
TSPL — Availability	83%	95%		93%		88%	74%	

\# continues to be under care and maintenance since 26th May 2017 due to low demand in Southern India.

7 we have received an order dated January 1, 2019 from CSERC for Conversion of 300 MW IPP to CPP. During the Q4 FY2019, 184 units were sold externally from this plant.

H2 FY2019 vs. Previous Half Years

During H2 FY2019, power sales were 6,687 million units higher 7% y-o-y. Power sales at TSPL were 4,778 million units with 83% availability in H2 FY2019. At TSPL, the Power Purchase Agreement with the Punjab State Electricity Board compensates us based on the availability of the plant.

The 600MW Jharsuguda power plant operated at plant load factor (PLF) of 26% in H2 FY2019 (PLF of 13% in H2 FY2018 and 3.5% in H1 FY2019).

The 600 MW BALCO IPP operated at a PLF of 54% in H2 FY2019 (PLF of 40% in H2 FY2018 and 51% in H1 FY2019). The PLF has increased primarily due to improved coal availability.

Financial Year 2019 vs. Financial Year 2018

During FY2019, power sales was at 13,517 million units, 22% higher y-o-y mainly on account of higher sales in TSPL plant, as the plant has delivered higher availability consistently after Q1 FY2018 wherein there was a fire incident in the coal conveyor.

Production Summary (Unaudited)

(In '000 tonnes, except as stated)

	H2			H1		Full Year		
Particulars	**FY 2019**	**FY 2018**	*% change*	**FY 2019**	*% change vs H2*	**FY 2019**	**FY 2018**	*% change*
ZINC INDIA								
Mined metal content	492	495	(1)%	444	11%	936	947	(1)%
Underground Mines	492	376	31%	444	11%	936	724	29%
Open cast Mines	—	120	—	—	—	—	223	—
Integrated Metal	469	501	(6)%	425	10%	894	960	(7)%
Refined Zinc — Integrated	362	406	(11)%	334	9%	696	791	(12)%
Refined Lead — Integrated[1]	107	95	12%	91	17%	198	168	18%
Silver — Integrated (in mn ounces)[2]	11.9	9.7	22%	10.0	19%	21.8	17.9	22%
ZINC INTERNATIONAL	94	82	15%	54	76%	148	157	(5)%
Zinc-Refined — Skorpion	41	48	(15)%	25	64%	66	84	(22)%
Mined metal content — BMM	36	34	7%	29	27%	65	72	(10)%
Mined metal content — Gamsberg[3]	17	—	—	—	—	17	—	—
OIL AND GAS								
Average Daily Gross Operated Production (boepd)	**187,127**	187,119	—	190,431	(2)%	188,784	185,587	2%
Rajasthan	152,193	159,698	(5)%	159,593	(5)%	155,903	157,983	(1)%
Ravva	15,930	16,577	(4)%	13,855	15%	14,890	17,195	(13)%
Cambay	19,004	10,845	75%	16,984	12%	17,991	10,408	73%
Average Daily Working Interest Production (boepd)	**117,824**	119,856	(2)%	121,761	(3)%	119,798	118,620	1%
Rajasthan	106,535	111,788	(5)%	111,715	(5)%	109,132	110,588	(1)%
Ravva	3,584	3,730	(4)%	3,117	15%	3,350	3,869	(13)%
Cambay	7,602	4,338	75%	6,794	12%	7,196	4,163	73%
KG-ONN	103	—	—	135	(24)%	119	—	—
Total Oil and Gas (million boe)								
Oil & Gas — Gross	34.1	34.1	—	34.8	(2)%	68.9	67.7	2%
Oil & Gas — Working Interest	21.4	21.8	(2)%	22.3	(4)%	43.7	43.3	1%
IRON ORE (in million dry metric tonnes, or as stated)								
Sales	2.1	4.5	(54)%	1.8	17%	3.8	7.6	(49)%
Goa	0.1	3.4	(97)%	1.2	(92)%	1.3	5.4	(77)%
Karnataka	2.0	1.1	74%	0.6	—	2.6	2.2	19%
Production of Saleable Ore	1.6	2.6	(40)%	2.8	(45)%	4.4	7.1	(38)%
Goa	—	2.3	—	0.2	—	0.2	4.9	(95)%
Karnataka	1.6	0.3	—	2.6	(40)%	4.1	2.2	89%
Pig Iron ('000 tonnes)	346	347	—	339	2%	686	646	6%

(In '000 tonnes, except as stated)

	H2			H1		Full Year		
Particulars	**FY 2019**	**FY 2018**	*% Change*	**FY 2019**	*% Change vs H2*	**FY 2019**	**FY 2018**	*% Change*
Steel[4]								
Finished Production	672	541	24%	527	27%	1,199	1,025	17%
Pig Iron	82	100	(17)%	59	39%	142	179	(21)%
Billet	32	27	19%	7	—	39	50	(21)%
TMT Bar	245	157	56%	196	25%	441	300	47%
Wire Rod	219	184	19%	208	5%	427	365	17%
Ductile Iron Pipes	93	73	27%	57	63%	150	130	15%
COPPER — INDIA								
Copper — Cathodes	50	207	(76)%	40	26%	90	403	(78)%
Tuticorin Power Plant Sales (MU)	—	5	—	—	—	—	39	—
COPPER — ZAMBIA								
Mined metal	42	46	(8)%	49	(13)%	91	91	—
Copper — Total	83	94	(12)%	94	(12)%	177	195	(9)%
Integrated	42	41	3%	48	(12)%	90	84	7%
Custom	40	53	(23)%	47	(13)%	87	111	(22)%
ALUMINUM								
Alumina-Lanjigarh	827	638	30%	673	23%	1,501	1,209	24%
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MALCO	—	—	—	—	—	—	4	—
HZL Wind Power	127	115	10%	324	(61)%	451	414	9%
TSPL — Availability	83%	95%	93%	88%	74%			
Ports — VGCB (in million tonnes)[8]								
Cargo Discharge	2.4	3.3	(27)%	2.7	(12)%	5.1	5.6	(8)%
Cargo Dispatches	2.4	3.1	(24)%	2.7	(13)%	5.1	5.4	(5)%

1. Excluding captive consumption of 2,957 tonnes in H2 FY2019 vs. 3,356 tonnes in H2 FY2018 and 3,577 tonnes in H1 FY2019. It was 6,534 tonnes in FY2019 vs. 6,946 tonnes in FY2018

2. Excluding captive consumption of 501,000 ounces in H2 FY2019 vs. 562,000 ounces in H2 FY2018 and 598,000 ounces in H1 FY2019. It was 1,099,000 ounces in FY2019 vs. 1,171,000 ounces in FY2018

3. Includes trial run production of 10 Kt

4. June 2018 was the first full month post Vedanta Limited's 90% acquisition of ESL. Previous period numbers are memorandum information for the purpose of performance evaluation of the Company

5. Including trial run production of 27.5 kt in H2 FY2019, 27.8 kt in H2 FY2018 and 33.1 kt in H1 FY2019. It was 60.5 kt in FY2019 vs. 61.8 kt in FY2018

6. Including trial run production of Nil in H2 FY2019, 0.1 kt in H2 FY2018 and Nil in H1 FY2019. It was Nil in FY2019 vs. 16.1 kt in FY2018

7. We have received an order dated January 1, 2019 from CSERC for Conversion of 300 MW IPP to CPP. During the Q4 FY2019, 184 units were sold externally from this plant

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