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18th June 2021

Vedanta Resources Limited
Results for the year ended 31 March 2021

Financial Highlights

- Revenue for FY2021, decreased by 1% to $11.7 billion (FY2020: $ 11.8 billion). This was primarily driven by rupee depreciation, lower power sales at TSPL, lower volume at Oil & Gas, Skorpion mine put under maintenance and care, and lower cost recovery at Oil & Gas business, partially offset by higher commodity prices, higher volumes at Zinc India, Copper, Iron Ore and Aluminium business, inclusion of FACOR in FY2021.
- EBITDA at $3.8 billion, 27% higher y-o-y (FY2020: $3.0 billion)
- Robust adjusted EBITDA margin1 of 37% (FY2020: 29%)
- ROCE at c.19.4% in FY2021 (FY2020: 10.3%)
- Profit Attributable to equity holders (before exceptional items) at $303 million (FY2020: $(202) million)
- Free cash flow (FCF) post-capex of $1.3 billion (FY2020: $0.8 billion), driven by strong cash flow from operations and lower sustaining and project capital expenditure.
- Gross debt at $16.4 billion (FY2020: $15.1 billion), higher by $1.3 billion mainly due to the increase in borrowings at Vedanta Resources Limited standalone level.
- Net debt at $10.7 billion (FY2020: $ 10.0 billion), primarily driven by dividend payment during the year, increase in working capital, stake increase in VEDL, capital expenditure partially offset by strong cash flow from operations.
- Strong financial position with cash and cash equivalents of $5.6 billion (FY2020: $5.1 billion)
- Moody's downgraded corporate Family ratings of Vedanta Resources from B1 to B2 (and the ratings of senior unsecured notes from B3 to Caa1) and placed the ratings "under review for downgrade' in December 2020 upon failure of take private transaction and expectation of high refinancing needs and weak liquidity at VRL. On 17th February 2021, Moody's confirmed Vedanta Resources Limited's B2 Corporate Family Rating and Caa1 rating on the senior unsecured notes of the company and changed the outlook on the rating to "Negative" from ratings "under review for downgrade". The rating confirmation reflects the reduced immediate refinancing risk at VRL. Further to downgrade of VRL in March 2020 by S&P to B- with a stable outlook, S&P placed the ratings on 'Negative' outlook in October 2020 upon failure of Take private transaction. On 25th January 2021, S&P revised the outlook to 'Stable' from 'Negative' on account of reduced refinancing risk and improving liquidity position at the holding company level while affirming the ratings at 'B-'.
- Contribution to the exchequer of c. $4.7 billion in FY2021 (FY2020: $4.6 billion)

1. Excludes custom smelting at Copper India and Zinc India Operations.

Business highlights

Zinc India

- Highest ever ore production of 15.5 million tonnes despite disruptions on account of the pandemic
- Highest ever mined metal production of 972 kt, up 6% y-o-y
- Refined zinc-lead production of 930 kt, up 7% y-o-y

Zinc International

- Cost of production at US$1,307 per tonne, down 22% y-o-y.
- Increase in Gamsberg production volume from 108kt in FY2020 to 145kt in FY2021.
- BMM started a new product line of recovering magnetite through its tailings with potential capacity of 0.7 million tonnes of production per annum

Oil & Gas

- Average gross operated production of 162 kboepd, down 6% y-o-y due to impact of the pandemic on growth projects completion and natural field decline
- Key growth projects update:
  - New gas processing terminal construction completed; commissioning underway expected to add ~ 100mmscfd by Q1 FY2022
  - Liquid handing capacity upgraded by 30%, major facility systems commissioned
  - Enhanced Oil Recovery project implemented in Bhagyam and Aishwariya Fields
  - Aishwariya Barmer Hill surface facility commissioned; wells being hooked up progressively
- Drilling activities across the portfolio in Rajasthan, North East & Cambay regions. First well KW-2-Udip drilled in Rajasthan.
- Capex growth projects update:
  - 74 wells hooked up during FY2021
  - Ravva drilling program completed; ~11 kboepd of incremental volumes

Aluminium

- Highest ever aluminium production at 1,969 kt, retaining our position as the largest aluminium producer in the country
- Highest ever alumina production from Lanjigarh refinery at 1,841 kt, up 2% y-o-y
- Lowest ever hot metal cost of production at US$ 1,347 per tonne, 20% lower y-o-y

Power

- Lowest ever APC of 7.19% at the 1,980MW TSPL plant in FY2021
- Sustained operations with zero import coal in FY21 through coal substitution scheme of GoI (Government of India)

Iron Ore

- Goa operations remains suspended during the year due to state-wide directive from the Hon'ble Supreme Court, continuous engagement with the stakeholders for a resumption of mining operations
- Production of saleable ore at Karnataka at 5 million tons, up 15% y-o-y
- Iron Ore Sales at Goa at 2.1 million tons
- Value Added Business achieved highest ever EBITDA Margin of $104/T supported by strengthening steel prices

Steel

- Annual steel production at 1.19 million tonnes for FY2021
- Robust margin of US$ 131 per tonne during the last quarter (~22% EBITDA Margin)

Copper India

- Due legal process being followed to achieve a sustainable restart of the operations

ESG Highlights

- We are deeply saddened by the loss of eight lives in FY 2021. We have completed in-depth incident investigations for the fatalities and the action pointers from lessons learned are being tracked and monitored at ExCo.We reiterate our commitment and vision to ensure all employees go home safely.
- Vedanta Cares initiative to add 1,000 beds across 10 locations in India as part of second wave relief of COVID
- Vedanta arranged 500 thousand vaccines for its employees, families & communities
- 42 million community beneficiaries through our social investments (FY2020: 3.26 million)
- Carbon footprint of 60 million mt (FY2020: 59 million mt)
- Water recycling rate of 30.7% (FY2020: 29%)
- 1.89 million GJ energy conserved (FY2020: 1.75 million GJ)
- Community investment of c.$45 million. (FY2020: $42 million)

Consolidated Group results

(US$ million, unless stated)

Particulars	Year ended 31 March 2021	Year ended 31 March 2020	% change
Revenue[1]	11,722	11,790	(1)%
EBITDA[1]	3,800	3,003	27%
EBITDA margin[1]	32%	25%	-
Adjusted EBITDA margin [2]	37%	29%	-
Operating profit before special items[1]	2,701	1,591	70%
Profit/(loss) attributable to equity holders of the parent	323	(1,568)	-
Underlying attributable profit/(loss)[3]	334	(171)	-
ROCE %	19.4%	10.3%	-

1. Excludes Copper Zambia as its operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019
2. Excludes custom smelting at Copper India, and Zinc India Operations.
3. Previous period figures have been regrouped or re-arranged wherever necessary to conform to current period's presentation except ROCE

Message from the Chairman

Strength meets responsibility

The year 2020 was a very unusual year for all of us. A year that was challenging on multiple fronts, but what stood out was the extraordinary resilience and adaptability of individuals and enterprises. There was a tectonic shift in the way we live or conduct our businesses, and Vedanta was no different. As a large natural resources company, we have had our fair share of challenges. However, we were quick to adapt to the emerging realties, backed by the relentless support of our dynamic workforce.

In India, where our key subsidiary Vedanta Limited has maximum footprint, we extended our support to the nation's fight against Covid-19 during its first wave through contributions to the PM CARES fund and undertaking initiatives that positively impacted the lives of over 15 lakh people. We have now pledged Rs c.$20 million to help the country in its fight against the second wave of Covid-19 along with setting up of 1000 specialty beds in 10 locations across India. Sterlite Copper, which has a capacity to produce 1,000 tonnes of oxygen at Tuticorin, is catering to the needs of Covid patients in the region.

A year of continued excellence and learning

Vedanta Resources Limited is one of the world's largest suppliers of natural resources, with primary operations in zinc-lead-silver, iron ore, steel, copper, aluminium, power, oil & gas. Our portfolio of world-class, low-cost, scalable assets consistently generate strong profitability and deliver robust cash flows. We are actively deleveraging our balance sheet and are raising the bar in operational excellence, across our wide canvas of operations.

During FY 2021, Vedanta continued to live up to its promises to its stakeholders and operated a resilient and responsible business that contributed to a self-reliant India. Even as temporary disruptions materialized, we were able to bounce back strongly with industry-leading EBITDA margins and exceptional quarters for key businesses. We continued to deliver on all strategic levers, building on our strengths and commitment to operational excellence. We remained cash flow positive; liquidity was maintained at comfortable levels.

It also gives me great pleasure in informing you that we performed exceedingly well on key environmental, social and governance (ESG) aspects during the year. This is validated by our improved ranking in the Dow Jones Sustainability Index. It's a true reflection of our belief that business and sustainability are synergistic in nature.

While we have reasons to celebrate, we mourn the passing of eight of our colleagues. We are aggrieved by their irreplaceable loss and are supporting the bereaved families. At Vedanta, we accord paramount importance to occupational safety and employee wellbeing and continue to nurture a safety culture that results in zero harm. However, there is always room for improvement, and collective action and behavioral change alone can help bring transformational outcomes. Aligned to this, we are conducting a Group-wide review of permit to work and isolation procedure and are instating a safety alert dashboard to improve implementation of fatality learnings. Cross business safety audits and piloting of critical risk management are other supplementary initiatives supporting this.

Another key development of the year, is the appointment of Mr. A R Narayanaswamy as a Non-Executive Director on our Board, who brings a host of experience with his background in management consulting, operational audit, and information technology in manufacturing and service businesses. A Chartered Accountant by profession, he has been an advisor to the Vedanta Foundation in recent years and is a lead member of the Vedanta CSR Management Committee. We hope to be guided by his extensive financial, strategic and boardroom experience, in setting new benchmarks for Vedanta. We are thankful to Mr. Deepak Parekh, Mr. Ravi Rajagopal and

Mr. Edward T Story for their contributions during their tenure with the Vedanta Board as Non-Executive Director.

Operating in a thriving economy

After an outlier year, India is now back on the growth trajectory, and is poised to grow by 11.5% in FY 2022, according to the International Monetary Fund. The rebound is clearly evidenced by the uptick in consumption, manufacturing activity and bank credit. India is experiencing a V-shaped recovery. Global agencies such as the World Bank have acknowledged the fact that this recovery is phenomenal, given how the country has now opened up, and is organising large-scale vaccination drives on priority.

The government is also playing a key role in facilitating the economy's return to the growth path. This is clearly reflected in the Union Budget 2021, which lays extended focus on economic enablers such as infrastructure and socially important sectors such as health. Among others, the proposals to create a Development Financial Institution (DFI), monetise assets, set up new economic corridors and increase the ambit of the National Infrastructure Pipeline (NIP) are promising. These measures, in conjunction with a conducive policy environment, are expected to increase the demand for basic materials in which we specialise. The relevance of metals and mining are more pronounced today than ever, and at Vedanta, we are rightly positioned to cater to the growing needs. The clarion call for 'Aatmanirbharta'(self-reliance) is very well founded, and we are perfectly aligned to the government's vision of a self-reliant nation. In line with this, we have augmented our positioning to 'Desh Ki Zarooraton Ke Liye, Aatmanirbhar Bharat Ke Liye (For the needs of the nation, For India's self-reliance).'

Growing in a vital industry

There is a definite focus on India's natural resources sector as a key enabler in supporting the nation's development. Apart from being a contributor to GDP, it underpins the supply of raw materials to the nation's burgeoning manufacturing sector. Development of this sector thus holds key to the nation's ambition of becoming fully self-reliant.

In recognition of this, India is turning a new leaf with the introduction of the Mines and Minerals (Development and Regulation) Amendment (MMRDA) Bill, 2021. A welcome move, its passage will significantly boost India's metals and mining industry, by inviting private participation in the exploration of key resources such as coal and gold. It is set to redefine the norms of exploration of mineral blocks and adequately utilise India's unused mineral reserves. Currently, natural resources contribute 1.75% to India's GDP, whereas in countries with similar reserves, the contribution is 7-7.5%. The MMRDA Bill is a gamechanger in this context and is expected to significantly improve the share of the sector in the national economy. It will contribute to the creation of over five million jobs and will considerably reduce India's import dependence for basic materials.

Being the developer of choice

Over the years, Vedanta has built one of the most recognised and impactful CSR programmes in India. As a natural resources player, we are inextricably linked to the communities near our operations, and have become an inalienable part of their livelihood.

From here stems our deep sense of responsibility and extended obligation beyond what is mandatory.

During FY 2021, we spent over $45 million on social development activities, spread across our core impact areas of education, health, sustainable livelihoods, women empowerment, sports and culture, environment and community development. Each Group company played its part by executing the respective CSR agenda, in line with the Group guidelines.

This year, supporting communities during the COVID-19 crisis also assumed precedence, with the distribution of nearly 25 lakh meal and ration kits, and over 7 lakh health and hygiene kits.

As we stand today, our flagship CSR initiative for women and children has touched a new milestone, with the setting up of 2,300+ Nand Ghars (women-child welfare centres) in 11 states. It continues to pave way for the model Anganwadi (rural childcare centre) movement across India and to date, we have positively touched the lives of c.52,000 women and c.65,000 children through the initiative.

Being naturally responsible

Vedanta is one of the world's largest natural resources companies and we are well aware of the responsibility that rests on our shoulders. It's in this context that we have a target-oriented environmental programme. We believe that good ecology is good business and strive our best to give back more than we take. Consequently, over the past four years, we have achieved water savings of ~9.23 million m^3 and have implemented an active plastic protocol in three of our business units. We have also seen 100%+ fly ash utilisation.

With regards to GHG emissions, we have a vision to substantially de-carbonise our operations by 2050, and towards this extent, we have built a Group-wide carbon forum with CEO-level engagement. I'm also proud of the fact that we are among the 24 Indian companies who have signed the declaration towards carbon neutrality, in late 2020. Today, we have achieved ~13.6 million TCO2e in avoided emissions compared to our 2012 baseline.

Being the employer of choice

Vedanta is home to thousands of skilled professionals, who seek to develop their careers aligned to our culture and facilitated by an employee-friendly, diverse, and meritocratic environment. Their efforts have been instrumental in taking Vedanta to its current stature, and their contribution to ensuring business continuity has been phenomenal during the height of the pandemic.

The safety, wellbeing and happiness of our employees is of utmost importance to us, and we are taking every measure to ensure the same. Towards this, we rolled out health programmes for our employees and business partners during the year. We also focused on telemedicine, promotion of mental health and health monitoring so that our people remained safe and secure during these trying times.

We constantly engage with best-in-class service and technology providers to ensure the highest level of safety for our employees and have managed to achieve a zero-fatality year at our largest business - Hindustan Zinc.

Ahead with India

As I look forward, I see an opportunity of a lifetime ahead of us. Th Indian economy has regained its growth momentum and we are operating in an industry that complements this growth curve. With India's young energy, consistent governance, strong consumption, and a thriving private sector, I'm positive that the best for the nation is yet to come. At Vedanta, we are cognisant of the immense growth potential and will invest in opportunities that create value for all stakeholders. As we power ahead, we stand in solidarity with India, its ambition of being Aatmanirbhar (self-reliance) and creating a 5 trillion-dollar economy.

Best regards,

Anil Agarwal

Chairman

STRATEGIC OVERVIEW

As part of our long-term roadmap, we have five strategic focus areas along which we determine our progress and deliver consistent stakeholder value. They are intricately linked to our material issues, opportunity landscape and risk management protocol, hence forming a key part of our integrated decision-making process.

We continually strive to improve our operations to achieve benchmark performance, optimise costs and improve realisations. We are committed to achieving our objective of zero harm, zero wastage and discharge, thus creating sustainable value for all our stakeholders. The success of our existing operations and future projects are in part dependent on broad support and a healthy relationship with our respective local communities. Our BU teams proactively engage with communities and stakeholders through a proper and structured engagement plan, with the objective of working with them as partners.

Summary of strategic priorities:

Continue Focus on World Class ESG Performance

We operate as a responsible business, focusing on achieving 'zero harm, zero wastage and zero discharge', and thus minimising our environmental impact. We promote social inclusion across our operations to promote inclusive growth. We establish management systems and processes in place to ensure our operations create sustainable value for all our stakeholders.

Augment our reserves & resources (R&R) base:

We look at ways to expand our R&R base through targeted and disciplined exploration programmes. Our exploration teams aim to discover mineral and oil deposits in a safe and responsible manner, to replenish the resources that support our future growth ambitions.

Operational Excellence and Cost Leadership

We strive for all-round operational excellence to achieve benchmark performance across our business, by debottlenecking our assets to enhance production, supported by improved digital and technology solutions. Our efforts are focused on enhancing profitability by optimising our cost and improving realisations through prudent marketing strategies.

Optimise capital allocation and maintain a strong balance sheet:

Our focus is on generating strong business cashflows and maintaining stringent capital discipline in investing in profitable high IRR projects. Our aim is to maintain a strong balance sheet through proactive liability management. We also review all investments (organic and acquisitions) based on our stringent capital allocation framework to maximising shareholder returns.

Delivering on growth opportunities:

We are focused on growing our operations organically by developing brownfield opportunities in our existing portfolio. Our large, well -diversified, low-cost and long-life asset portfolio offers us attractive expansion opportunities, which are evaluated based on our return criteria for long-term value creation for all stakeholders.

FINANCE REVIEW

Executive summary:

We had a strong operational and financial performance in FY2021 amidst the challenges faced due to the pandemic. The company continues to focus on controllable factors such as resetting cost base through diverse cost optimisation initiatives, disciplined capital investments, working capital initiatives, marketing initiatives & volume with strong control measures to ensure safe operations across businesses within framed government and corporate guidelines amidst the pandemic.

In FY2021, we recorded an EBITDA of $3,800 million, 27% higher y-o-y and robust adjusted EBITDA margin[1] of 37%. (FY2020: $3,003 million, margin 29%).

Higher sales volumes resulted in increase in EBITDA by $128 million, driven by higher volumes at Zinc India, Iron ore, Aluminium and steel business. However, this was partially offset by lower sales volume at Oil & Gas business and lower power sales at TSPL.

Market and regulatory factors resulted in increase in EBITDA by $524million compared to FY2020. This was primarily driven by increase in the commodity prices, softening of input commodity prices, rupee depreciation, partially offset by lower brent realization at Oil & Gas business and lower capex recovery at Oil & Gas business.

Gross debt as on 31 March 2021 was $16.4 billion, an increase of $1.3 billion since March 31, 2020. This was mainly due to the increase in borrowings at Vedanta Resources Limited standalone level.

Net debt as on 31 March 2021 was $10.7 billion, increased by $0.7 billion since 31 March 2020 (FY2020: $10.0 billion), primarily driven by dividend payment during the year, increase in working capital, stake increase in VEDL, capital expenditure, partially offset by strong cash flow from operations.

The balance sheet of Vedanta Resources Limited continues to remain strong with cash & cash equivalents, of $5.6 billion and Net Debt to EBITDA ratio at 2.8x (FY2020: 3.3x)

1. *Excludes custom smelting at Copper India and Zinc India Operations.*

Consolidated operating profit before special items

Operating profit before special items increased by 70% in FY 2021 to $2,701 million. This was mainly driven by lower depreciation, higher commodity prices, higher sales realisation from Iron ore and Steel business, increased volumes at Zinc India and Aluminium business, lower cost of production at Zinc, Aluminium and Oil & Gas business, partially offset by lower brent realisation and lower cost recovery at Oil & Gas business.

Consolidated operating profit summary before special items

(US$ million , unless stated)

Consolidated operating profit before special items[1]	FY2021	FY2020	% change
Zinc	1,313	875	50%
-India	1,236	911	36%
-International	77	(36)	-
Oil & Gas	151	466	(68)%
Aluminium	816	48	-
Power	111	151	(26)%
Iron Ore	215	83	-
Steel	80	49	65%
Copper India/Australia	(42)	(61)	(31)%
Others	57	(20)	-
Total Group operating profit before special items	**2,701**	**1,591**	**70%**

1. Excludes Copper Zambia as its operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019.

Consolidated operating profit bridge before special items:

(US$ million)

Operating profit before special items for FY2020[1]	**1,591**
Market and regulatory: US$ 524 million	
a) Prices, premium / discount	151
b) Direct raw material inflation	232
c) Foreign exchange movement	126
d) Profit petroleum to GOI at Oil & Gas	(90)
e) Regulatory changes	105
Operational: US$ 273 million	
f) Volume	128
g) Cost and marketing	188
h) Others	(43)
Depreciation and amortization	313
Operating profit before special items for FY2021	**2,701**

1.Excludes Copper Zambia as its operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019.

a) Prices, premium/discount

Commodity price fluctuations have a significant impact on the Group's business. During FY2021, we saw a net positive impact of $151 million on operating profit due to commodity price fluctuations.

Zinc, lead and silver: Average zinc LME prices during FY2021 marginally increased to US$2,422 per tonne, up 1% y-o-y; lead LME prices decreased to US$1,868 per tonne, down 4% y-o-y; and silver prices increased to US$22.9 per ounce, up 38% y-o-y. The cumulative impact of these price fluctuations increased operating profit by $170 million.

Aluminium: Average aluminium LME prices increased to US$1,805 per tonne in FY2021, up 3% y-o-y, this had a positive impact of $95 million on operating profit.

Oil & Gas: The average Brent price for the year was US$44.3 per barrel, lower by 27% compared with US$60.9 per barrel during FY2020. This had negative impact on operating profit by $230 million.

b) Direct raw material inflation

Prices of key raw materials such as imported alumina, thermal coal, carbon and caustic have reduced significantly in FY2021, improving operating profit by $232 million, mainly at Aluminium and Zinc business.

c) Foreign exchange fluctuation

INR and SA Rand depreciated against the US dollar during FY2021. Stronger dollar is favourable to the Group's operating profit, given the local cost base and predominantly US dollar-linked pricing. The favourable currency movements positively impacted operating profit by $126 million.

Key exchange rates against the US dollar:

	Average year ended 31 March 2021	Average year ended 31 March 2020	% change	As at 31 March 2021	As at 31 March 2020
Indian rupee	74.11	70.86	4.6%	73.30	74.81
South African rand	16.37	14.78	10.7%	14.83	17.89

d) Profit petroleum to GOI at Oil & Gas

The profit petroleum outflow to the Government of India (GOI), as per the production sharing contract (PSC), decreased by $90 million. The increase in outflow was primarily due to the lower recovery of capital expenditure in FY2021.

e) Regulatory

During FY2021, changes in regulatory levies such as Renewable Power Obligation etc. had a cumulative positive impact on the Group operating profit of $105 million.

f) Volumes

Higher volume led to increase in operating profit by $128 million, majorly by following businesses:

Zinc India (positive $165 million)

Higher zinc & lead sales (higher by 6% and 20% respectively) & higher sliver sales (~25%), had a cumulative positive impact on operating profit of $165 million.

Oil & Gas (negative $70 million)

Oil & Gas business achieved WI sales of 40.27 mmboe, down by 8% y-o-y. This had negative impact on operating profit of $70 million.

Iron Ore (positive $35 million)

Sales volumes at iron ore business increased significantly having a positive impact on operating profit of $35 million.

Aluminium (positive $15 million)

In FY2021, the Aluminium business achieved metal sales of 1.96 million tonnes, up 2% y-o-y. This volume increase had a positive impact on operating profit of $15 million.

g) Cost and marketing

Improved costs resulted in an increase in operating profit by $188 million over FY2021, primarily due to improved cost at Aluminium business driven by better coal rate and mix and lower alumina imports. This was partially offset by lower premia realizations at Aluminium and Zinc business.

h) Others

This primarily includes the impact of past exploration cost recovery at Oil & Gas business during the FY2020 and change in Profit Petroleum (PP) tranche partially offset by higher power EBITDA, inventory and foreign exchange adjustments, impacting operating profit negatively by $43 million.

Depreciation and amortisation

Depreciation and amortisation decreased by $313 million against the previous year. This was primarily primarily on account of lower charge at Oil & Gas business due to impairment of asset in Q4 FY2020, and Skorpion mine put under maintenance and care at the start of the financial year 2021.

Income statement

(US$ million, unless stated)

Particulars	FY2021	FY2020[1]	% change
Revenue	11,722	11,790	(1)%
EBITDA	3,800	3,003	27%
EBITDA margin (%)	32%	25%	-
EBITDA margin without custom smelting (%)	37%	29%	-
Special items	(49)	(2,065)	-
Depreciation and amortisation	(1,099)	(1,412)	(22)%
Operating profit	**2,652**	**(474)**	**-**
Operating profit without special items	2,701	1,591	70%
Net interest expense	(917)	(797)	15%
Interest cost-related special items	(58)	12	-
Other gains /(losses)	6	(87)	-
Profit before taxation	**1,683**	**(1,346)**	**-**
Profit before taxation without special items	1,795	707	-
Income tax expense	(316)	(411)	(23)%
Income tax (expense)/credit (special items)	18	781	(98)%
Effective tax rate without special items (%)	17.7%	27.5%	-
Profit for the year from continuing operations	**1,385**	**(976)**	**-**
Profit for the period/year from continuing operations before special items	1,479	296	-
Profit for the year from discontinuing operations (special items)	91	(771)	-
Profit for the period /year	**1,476**	**(1,747)**	**-**
Profit for the period /year without special items	1,479	296	-
Non-controlling interest	1,153	(179)	-
Non-controlling interest without special items	1,176	498	-
Attributable profit / (loss)	323	(1,568)	-
Attributable profit/loss without special items	303	(202)	-
Underlying attributable profit/(loss)	334	(171)	-

1. Previous period figures have been regrouped or re-arranged wherever necessary to conform to current period's presentation.

Consolidated revenue

Revenue, for FY2021, decreased by 1% to US$ 11,722 million (FY2020: US$ 11,790 million). This was primarily driven by rupee depreciation, lower power sales at TSPL, lower volume at Oil & Gas, Skorpion mine put under maintenance and care, and lower cost recovery at Oil & Gas business, partially offset by higher commodity prices, higher volumes at Zinc India, Copper, Iron Ore and Aluminium business, inclusion of FACOR in FY2021.

(US$ million, unless stated)

Consolidated revenue[1]	FY2021	FY2020	Net revenue % change
Zinc	3,328	3,004	11%
India	2,960	2,563	15%
International	368	441	(17)%
Oil & Gas	1,016	1,787	(43)%
Aluminium	3,865	3,751	3%
Power	725	827	(12)%
Iron Ore	611	489	25%
Steel	630	604	4%
Copper India/Australia	1,469	1,278	15%
Others [2]	76	51	50%
Total	11,722	11,790	(1)%

1. *Excludes Copper Zambia as its operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019*
2. *Includes port business and eliminations of inter-segment sales.*

Consolidated EBITDA[1]

The consolidated EBITDA by segment is set out below:

(US$ million, unless stated)

	FY2021	FY2020	% change	Key drivers	EBITDA margin% FY2021	EBITDA margin % FY2020
Zinc	1,688	1,283	32%		51%	43%
-India	1,568	1,230	28%	Higher volumes and Higher LME	53%	48%
-International	120	54	-	Higher LME offset by lower volumes	33%	12%
Oil & Gas	438	1,032	(58)%	Lower Oil Price & Volume	43%	58%
Aluminium	1,046	281	-	Higher volume & Improved Cost of Production	27%	8%
Power	190	233	(18)%	Lower volume & lower realisation	26%	28%
Iron Ore	245	117	-	Higher Iron Ore Karnataka volumes	40%	24%
Steel	117	83	42%	Higher sales & lower cost of sales	19%	14%
Copper India/Australia	(21)	(40)	-		(1)%	(3)%
Others [2]	97	14	-		-	28%
Total	3,800	3,003	27%	EBITDA margin[1]	32%	25%
				Adjusted EBITDA margin[1]	37%	29%

1. *Excludes Copper Zambia as its operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019*
2. *Includes port business, FACOR and elimination of inter-segment transactions.*

EBITDA[1] AND EBITDA MARGIN[1]

EBITDA[1] for the year was at US$ 3,800 million, 27% higher y-o-y. . This was mainly driven by higher commodity prices, higher sales realisation from Iron ore and Steel business, increased volumes at Zinc India and Aluminium business, lower cost of production at Zinc, Aluminium and Oil & Gas business, , partially offset by lower brent realisation, lower cost recovery at Oil & Gas business. (See 'Operating profit variance' for more details).

We maintained a robust adjusted EBITDA margin[1] of 37% for the year (FY2020: 29%)

Special items - Continued operations (included interest income related and others)

In FY2021 special items stood at negative $ 94 million. For more information, refer note [6] on special items is set out in financial statement.

Net Interest

The blended cost of borrowings was 7.52% for FY2021 compared to with 7.43% in FY2020.

Finance cost excluding special items for FY2021 was at US$1,209 million, 3% higher y-o-y compared to US$ 1,179 million in FY2020 mainly on account of increase in average borrowing primarily at VRL standalone level, increase in average borrowing cost, lower capitalisation of interest cost, partially offset by lower bill discounting charges & bank charges, decrease in export advance and BC/SC cost.

Investment income excluding special items for FY2021 stood at US$292 million, 26% lower y-o-y compared to US$382 million in FY2020. This was mainly due to lower average investments, primarily due to lower investment at Oil & Gas business, and lower pre-tax return on investments.

The average post-tax return on the Group's investments during FY2021 was 4.76% (FY2020: 5.62%), and the average pre-tax return was 5.86% (FY2020: 7.17%).

The increased finance cost and decreased investment revenue led to a net increase of US$ 120 million in net interest expense (excluding special items) during the period.

Other gains/(losses) excluding special items

Other gains/(losses) excluding special items for FY2021 amounted to US$11 million, compared to US$(87) million in FY2020.

Taxation

Tax expense for FY2020 stood at US$ 298 million. The normalized ETR is 38% (excluding tax on dividend from HZL US$ 117mn and tax on exceptional items of US$ 18 mn, new tax regime impact of (US$ 34)mn and Deferred Tax Asset of US$ 420mn recognized on losses in ESL) compared to 52% (excluding tax on distributable reserve/dividend from HZL US$ 276mn, new regime impact (US$233) mn and tax on exceptional items of US$ 781 mn) which is primarily on account of increase in profit from the entities which are taxable at lower rate and adoption of new tax regime in one of the major subsidiary.

Attributable profit/(Loss)

Attributable profit before special items was US$ 303 million in FY2021 compared to an attributable loss of US$ 202 million in FY2020, primarily driven by higher EBITDA, lower depreciation charge partially offset by higher net interest.

Fund flow post-capex

The Group generated free cash flow (FCF) post-capex of $1,253 million (FY2020: $823 million), driven by strong cash flow from operations and lower sustaining and project capital expenditure.

Fund flow movement in net debt[1]

Fund flow and movement in net debt[1] in FY2021 are set out below.

(US$ million, unless stated)

Particulars	FY2021	FY2020
EBITDA [2]	3,800	3,003
Working capital movements	(576)	(74)
Changes in non-cash items	(2)	18
Sustaining capital expenditure	(467)	(558)
Movements in capital creditors	(164)	84
Sale of property, plant and equipment	23	21
Net interest (including interest cost-related special items)	(938)	(687)
Tax paid	(242)	(165)
Expansion capital expenditure	(325)	(819)
Free cash flow (FCF) post capex[1]	1,109	723
Dividend paid to equity shareholders	(162)	(536)
Dividend paid to non-controlling interests	(992)	(101)
Dividend Received	-	2
Tax on dividend from Group companies	-	-
Acquisition of subsidiary	(8)	(5)
Discontinued operations of Copper Zambia[2]	-	(118)
Payment for acquiring non-controlling interest	(403)	-
Others	(253)	222
Movement in net debt	(709)	287

1. Includes foreign exchange movements
2. Copper Zambia operations have been discontinued & deconsolidated in books w.e.f. 21 May 2019.

Debt, maturity profile and refinancing

The Gross debt increased from US$15.1 billion in FY2020 to US$16.4 billion, mainly on account of increase in borrowings at Vedanta Resources Limited standalone level.

During FY2021, Net Debt increased from US$10.0 billion to US$ 10.7 billion, primarily driven by dividend payment during the year, increase in working capital, stake increase in VEDL, partially offset by strong cash flow from operations.

Our total gross debt of US$16.4 billion comprises:

US$15.9 billion as term debt (March 2020: US$12.9 billion);
US$0.3 billion of short-term borrowings (March 2020: US$1.2 billion); and
US$0.2 billion of working capital loans (March 2020: US$1.0 billion).

The maturity profile of term debt of the Group (totalling US$ 15.9 billion) is summarised below:

Particulars	As at 31 March 2020	As at 31 March 2021	FY2022	FY2023	FY2024	FY2025 & beyond
Debt at Vedanta Resources	6.7	8.6	1.1	2.0	2.4	3.1
Debt at subsidiaries	6.2	7.3	2.0	1.3	1.0	2.9
Total term debt[1]	12.9	15.9	3.1	3.3	3.4	6.0

1.Term debt excluding preference shares.

Term debt at our subsidiaries was US$ 7.3 billion, with the balance at Vedanta Resources Limited. The total undrawn fund-based credit limit was c.US$ 1.1 billion as at 31 March 2021.

Cash and liquid investments stood at US$ 5.6 billion at 31 March 2021 (31 March 2020: US$5.1 billion). The portfolio continues to be invested in debt mutual funds, and in cash and fixed deposits with banks.

Going Concern

The Group has prepared the consolidated financial statements on a going concern basis. The Directors have considered a number of factors in concluding on their going concern assessment.

The Group monitors and manages its funding position and liquidity requirements throughout the year and routinely forecasts its future cash flows and financial position. The key assumptions for these forecasts include production profiles, commodity prices and financing activities.

The last Going concern assessment carried out for the period ended September 30, 2020 was approved by the Board of Directors in December, 2020. The Directors were confident that the Group will be able to ensure production is not materially impacted by the COVID-19 virus, that the Group will be able to roll-over or obtain external financing as required and that prices will remain within their expected range.

Since then, while the other mitigating actions as highlighted in the period ended September 30, 2020 financial statements remain available to the Group, several recent significant developments have had a positive bearing on the liquidity and company's ability to continue as going concern. [For more information, please refer to, Note 1(d) of the Consolidated Financial Statements]

Notwithstanding the uncertainties, the Directors have confidence in Group's ability to execute sufficient mitigating actions. Based on these considerations, the Directors have a reasonable expectation that the Group and the Company will meet its commitments as they fall due over the going concern period. Accordingly, the Directors continue to adopt the going concern basis in preparing the Group's consolidated financial statements and Company's standalone financial statements.

Covenant Compliance

The Group's financing facilities, including bank loans and bonds, contain covenants requiring the Group to maintain specified financial ratios. The Group has complied with all the covenant requirements till 31st March 2021.

Management notes that the Group has previously obtained covenant waivers, including in response to the appointment of a provisional liquidator at KCM. Additionally, the Group has recently successfully amended the covenants for its listed bonds. The Directors of the Group are confident that they will be able to execute mitigating actions (see below) to ensure that the Group avoids, or secures waivers or relaxations for future period breaches, if any, of its covenants during the going concern period. [For more information, please refer to, Note 1(d) of the Consolidated Financial Statements]

Credit rating

During FY2021, Moodys downgraded corporate Family ratings of Vedanta Resources from B1 to B2 (and the ratings of senior unsecured notes from B3 to Caa1) and placed the ratings "under review for downgrade' in December 2020 upon failure of take private transaction and expectation of high refinancing needs and weak liquidity at VRL. On 17th February 2021, Moody's confirmed Vedanta Resources Limited's B2 Corporate Family Rating and Caa1 rating on the senior unsecured notes of the company and changed the outlook on the rating to "Negative" from ratings "under review for downgrade".

The rating confirmation reflects the reduced immediate refinancing risk at VRL. Further to downgrade of VRL in March 2020 by S&P to B- with a stable outlook, S&P placed the ratings on 'Negative' outlook in October 2020 upon failure of Take private transaction. On 25th January 2021, S&P revised the outlook to 'Stable' from 'Negative' on account of reduced refinancing risk and improving liquidity position at the holding company level while affirming the ratings at 'B-'.

Balance sheet

(US$ million, unless stated)

Particulars	31 March 2021	31 March 2020
Goodwill	12	12
Intangible assets	99	100
Property, plant and equipment	12,968	13,005
Exploration and Evaluation Assets	334	240
Other non-current assets	3,115	3,028
Cash, liquid investments and Financial asset investment net of related liabilities	5,957	5,090
Other current assets	2,834	2,711
Total assets	**25,319**	**24,186**
Gross debt	(16,377)	(15,095)
Other current and non-current liabilities	(6,611)	(6,818)
Net assets	**2,331**	**2,273**
Shareholders' equity	(3,147)	(3,263)
Non-controlling interests	5,478	5,536
Total equity	**2,331**	**2,273**

Shareholders' (deficit)/equity was US$(3,147) million at 31 March 2021 compared with US$(3,263) million at 31 March 2020. Non-controlling interests decreased to US$ 5,478 million at 31 March 2021 (from US$5,536 million at 31 March 2020).

Property, plant and equipment (including exploration and Evaluation Assets)

As at March 31, 2021, PPE was at US$13,302 million (FY2020: US$ 13,245 million). The increase of US$ 57 million was primarily driven by additions $920 million (Zinc India $315mn, Aluminium division $270mn, Oil & Gas 200mn Zinc International $50mn, FACOR $50mn and BALCO $35mn), FCTR ~US $330million partly offset by depreciation charge US $1099million CWIP impairment charge recognition of US$ 33 million and net disposals US $60 million.

Contribution to the exchequer

The Group contributed c.US$ 4.7 billion to the exchequer in FY2021 compared to US$4.6 billion in FY2020 through direct and indirect taxes, levies, royalties and dividend, which was made by Vedanta Resources Limited.

Project capex

(US$ million)

Capex in progress	Status	Total capex approved[3]	Cumulative spend up to March 2020[4]	Spent in FY2021[4]	Unspent as at 31 March 2021[5]
Cairn India[1]					
Mangala Infill, Liquid handling, Bhagyam & Aishwariya EOR, Tight Oil & Gas,OALP, etc	On - going	2,522	1,144	181	1,197
Aluminium Sector					
Jharsuguda 1.25mtpa smelter	Line 3: Fully capitalised Line 4: Fully Capitalised Line 5: Six Section capitalised Line 6: Phase-wise capitalisation	2,990	2,925	36	29
Zinc India					
Mine expansion	Ongoing	2,076	1,726	44	306
Others		261	159	7	95
Zinc International					
Gamsberg mining Project[2]	Completed Capitalisation	400	387	3	10
Copper India					
Tuticorin smelter 400ktpa	Project is under force majeure	717	198	-	519
Avanstrate Inc					
Furnace Expansion and Cold repair		74	48	7	20
Capex flexibility					
Metals and Mining					
Lanjigarh Refinery (Phase II) – 5mtpa		2,088	909	18	1,161
Skorpion refinery conversion	Currently deferred till pit 112 extension	156	14	-	142

1. *Capex approved for Cairn represents Net capex, however Gross capex is $3.4 bn*
2. *Capital approved US$400 million excludes interest during construction (IDC).*
3. *Based on exchange rate prevailing at time of approval.*
4. *Based on exchange rate prevailing at the time of incurrence.*
5. *Unspent capex represents the difference between total projected capex and cumulative spend as at March 31, 2021*

OPERATIONAL REVIEW

ZINC INDIA

The year in brief

Our mine production gradually improved during the year with ore production for the full year, up by 7% y-o-y, to deliver a record production of 15.5 million MT. This was supported by robust production growth at Zawar mines and Rampura Agucha mine, up by 21% and 9%, respectively. Our operations were halted on account of the pandemic-induced lockdown from March 22, 2020 onwards, impacting 3-4 weeks of equivalent production. Mined metal production was up by 6% y-o-y to 972 kt, primarily on account of higher ore production, with overall grades remaining at the same levels.

Occupational health & safety

Lost time injury frequency rate (LTIFR) for the last quarter was 0.92 vis-à-vis 1.23 in Q4 FY2020, driven by several safety awareness, investigation and prevention initiatives. Compared to a year ago, the number of LTIs declined from 18 to 13 in the fourth quarter. LTIFR for the year was 0.98 (total 51 LTIs). There has been greater management focus to bring a cultural shift via felt leadership programmes, safety town halls, enabling tools such as safety whistle-blower as well as reward and recognition for near-miss reporting.

In view of the COVID-19 health emergency, an advisory was issued for the precautionary measures, along with awareness campaigns and drive for disinfecting facilities across the Company. The Company's operations were halted during the lockdown and employees were asked to work from home barring some employees, who attended call for duty to keep production assets safe. To ensure business continuity, a committee of COVID-19 Response 'War Room' was organised to identify and implement urgent business decisions. We also engaged the Self-Help Group (SHG) women in our communities to stitch and distribute cloth masks among the villagers, police and administration officials. Our teams also worked with the civil administration to ensure food reached the vulnerable population.

During the year we commissioned an underground Occupational Health Centre at Rampura Agucha Mine which significantly improves the response time in emergency cases. Senior management visits to shop floors and Gemba walks at contractor operated sites reiterated the focus on felt leadership in the organisation. 'Sameeksha' was conducted with six business partners to discuss the details of their serious LTI with CEO, HZL chairing the session.

Environment

Zinc India was certified as 2.41x water positive company, defined as a ratio of Water Credit and Water Debit. The assessment was carried by DNV GL, a globally renowned risk management and quality assurance company. Initiatives like rainwater harvesting, recharge to ground water and use of treated sewage water have enabled us to achieve this distinction.

Zinc India management has finalised Sustainability Goals 2025 by undertaking the following targets:

- Zero work-related fatalities and 50% reduction in TRIFR
- Achieve 0.5 million tonnes of CO2e GHG emission savings in our operations from the base year 2017
- Become a 5 times water positive company and achieve 25% reduction in fresh-water consumption

- Achieve 3 times increase in gainful utilization of smelting process waste
- Protecting and enhancing biodiversity throughout the Life Cycle
- Positively impacting 1 million lives through social, economic, and environmental outcomes
- Inclusive & diverse workplace with 30% diversity
- 100% responsible sourcing in supply chain

Zinc India's 22 MW solar power project at RAM was registered under the Gold Standard during the year. DSC Zinc successfully commissioned a 4500 MTPA FPT (Freeze Precipitation Technology) plant to recover sodium sulphate from the final multi-stage RO rejects which will cater to 1/3rd of DSC Hydro smelter's input salt requirements to support our circular economy goal. The CPP Team conducted an innovative in-house recycling of the bottom ash to convert it into fly ash (saleable product) improving value realisation and lowering the environment footprint. Zinc India's Udaipur Sewage Treatment Plants expanded to 55 MLD translating into over 90% treatment of city's sewage

Zinc India led an endorsement for 'UNGC (United Nations Global Compact) CEO Water Mandate' giving our commitment towards water stewardship and initiating our journey to follow the six principles laid out by UNGC. As part of our commitment towards biodiversity conservation, the Company is now a member of IUCN 'Leader for Nature India' initiative. HZL actively participated in the 3rd meeting of 'Business Leaders Group COP26' and actively engaged for shaping the agenda for COP26, to be held at Glasgow (UK) in Nov'21.

Our sustainability initiatives received several endorsements during the year including the selection in 'Sustainability Yearbook 2021' as Member for fourth consecutive year, Supplier Engagement Rating 'A' received from CDP, first position in the Asia Pacific region in metal and mining sector in Dow Jones Sustainability Indices and 7th Globally and CII-ITC Corporate Excellence Sustainability Award 2020. Zinc India (HZL) was featured among the first Indian companies to be featured in CDP India Annual Report and was rated 'A' in Climate change CDP 2020. Hindustan Zinc is the first company in India to respond to CDP's Forests questionnaire.

Production performance

Production (kt)	FY2021	FY2020	% change
Total mined metal	972	917	6%
Refinery metal production	930	870	7%
Refined zinc – integrated	715	688	4%
Refined lead – integrated[1]	214	182	18%
Production – silver (in tonnes)[2]	706	610	16%

1. Excluding captive consumption of 6,424 tonnes in FY2021 vs. 7,088 tonnes in FY2020.

2.Excluding captive consumption of 34.6 tonnes in FY 2021 vs. 36.7 tonnes in FY 2020.

Operations

For the full-year, ore production was up 7% y-o-y to 15.5 million tonnes on account of strong production growth at Rampura Agucha and Zawar mines, which were up by 9% and 21% respectively. Zinc India's mined metal production for FY2021 was 971,976 tonnes compared to 917,101 tonnes in the previous year in line with higher ore production.

For the full year, metal production was up 7% to 930 kt in line with higher MIC availability, while silver production strengthened by 16% to a record 706 MT in line with higher lead production and better grades at SK. These record numbers were delivered despite losing 3-4 weeks equivalent of production days in the year due to COVID induced disruptions.

Prices

Particulars	FY2021	FY2020	% change
Average zinc LME cash settlement prices US$ per tonne	2,422	2,402	1%
Average lead LME cash settlement prices US$ per tonne	1,868	1,952	(4)%
Average silver prices US$/ounce	22.9	16.5	38%

LME Zinc prices averaged $2,750 per MT in Q4 FY2021, up 29% y-o-y and 5% q-o-q. Investor interests in base metals is set to be sustained with the roll out of vaccination programmes globally. The recovery in international trade has not been uniform. In comparison to December 2020 the bulk of the growth can be attributed to the growth of imports and exports in China and developed Asian nations. There was marginal growth from the European Union and the rest of Asia, and a modest decline for the US and UK. Wood Mackenzie estimates zinc LME prices to average $2800 per MT in 2021.

The ongoing vaccination programmes and relatively better manufacturing activity are providing positive cues to investors. As for the premiums in South East Asia, a combination of improving demand and smelters directing shipments to China have tightened the market, helping premiums to shift to the upper end of a $90-110/tonne range. Global exchange stocks ended at 389 kt March, marginally higher than in February, but remain at 10 days in terms of days of global consumption.

Zinc Demand – Supply

Zinc Global Balance In KT	CY 2019	CY 2020	CY 2021 E
Mine Production	13363	12491	13171
Smelter Production	13601	13731	13938
Consumption	13924	13228	13755

Source: Wood Mackenzie, March STO

Last year, the largest supply changes were attributed to Chinese mines, primarily from Inner Mongolia, Hunan and Sichuan. This reflects the poor performance of the small mine sector, where several mines in these provinces failed to restart. Hunan was most affected. The 2021 global mine production estimate of Wood Mackenzie is 13.2Mt, a 5.47% increase vis-à-vis 2020. The Chinese spot TCs declined from $85 in December to $70 in March in favour of miners.

After hitting a low of 27.4 in April 2020, the manufacturing Purchasing Managers Index (PMI) hit 54.6 in September and has averaged 57 in the four months through to February 2021. This is pointing to a robust pace of expansion for the country's manufacturing sector. The strength of the rebound in activity has driven a rapid recovery in the Indian steel production with crude steel production hitting 9.7 Mt in December, its highest since the record high of just over 10 Mt in March 2019. With India's economic growth entering positive territory, the strong performance of India's steel sector seen in the latter part of 2020 should be sustained into 2021.

Unit costs

Particulars	FY2021	FY2020	% change
Unit costs (US$ per tonne)			
Zinc (including royalty)	1,286	1,371	(6)%
Zinc (excluding royalty)	954	1,047	(9)%

For the full year, zinc COP excluding royalty was $954, lower by 9% y-o-y. The COP decrease reflects lower spend on consumables, lower coal and coke consumption, digitisation led operational efficiency which was partly offset by higher R&M expense, other mining and manufacturing expenses.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% change
Revenue	2,960	2,563	15%
EBITDA	1,568	1,230	28%
EBITDA margin (%)	53%	48%	-
Depreciation and amortisation	332	319	4%
Operating Profit before special items	1,236	911	36%
Share in Group EBITDA (%)	41%	41%	-
Capital Expenditure	281	532	(47)%
Sustaining	225	341	(34)%
Growth	56	191	(71)%

Revenue from operations for the year was $2,960 million, up 15% y-o-y, primarily on account of higher metal production partly offset by lower sulphuric acid and due to lower domestic sales of zinc.

EBITDA in FY2021 increased to $1,568 million, up 28% y-o-y. The increase was primarily driven by higher revenue and lower cost of production.

Projects

We commissioned a 10 MLD STP plant in Udaipur and another 5 MLD STP (Sewage Treatment Plant) is in its last leg of commissioning, which will take the total STP capacity set up by us to 60 MLD. This will treat almost the entire sewage of Udaipur city and the recycled water will be used by our plants, significantly reducing our freshwater intake.

During the year, our graphite floatation system was commissioned at Mill 3 of Sindesar Khurd Mines, which will enhance the smelter throughput and bolster recovery.

During the quarter, backfill plants were commissioned at Zawarmala and Mochia mines. These plants will derisk operations and provide an opportunity to mine left-out high-grade ore in pillars. On similar lines, we have also commenced activities for a combined paste-fill and dry tailing plant at Rajpura Dariba. This will help increase ore production from 1.2 MTPA to 2 MTPA; also facilitating additional utilisation of tails by ~20% for back-filling and will reduce stope turnaround time.

The development of North Decline (ND1) was completed at Rampura Agucha (RA) mine. This improves the accessibility of shaft section, alternate emergency evacuation, ease in mine equipment deployment at lower mine levels, face charging with emulsion explosives, face drilling with long feed jumbo, and so on.

We have commenced operations in RKD circuit (component of overall Fumer project) to treat Raw Zinc Oxide (RZO). Covid-19 restrictions including stringent visa guidelines for Chinese nationals continued during the year, which resulted in delay in commissioning of Fumer plant at Chanderiya. We are following up with government authorities to find a solution. Two back-fill plants in Zawar were also commissioned during the year.

Exploration

The Company has put in place an aggressive exploration programme focusing on delineating and upgrading Reserves and Resources (R&R) within its license areas. Technology adoption and innovation play a key role in enhancing exploration success.

The Company's deposits remain 'open' and exploration identified a number of new targets on mining leases having potential to increase R&R over the next 12 months. Across all the sites, the Company increased its surface drilling to assist in upgrading resources to reserves.

In line with previous years, the mineral resource is reported on an exclusive basis to the Ore Reserve and all statements have been independently audited by SRK (UK).

Total Ore Reserves increased significantly from 114.7 million tonnes at the end of FY 2020 to 150.3 million tonnes at the end of FY 2021 due to heightened focus on resource to reserve conversion during the year. Exclusive Mineral Resource totalled 297.6 million tonnes. Total R&R increased to 448 million tonnes as we added more resource than that was consumed during the year.

Total contained metal in Ore Reserves is 9.16 million tonnes of zinc, 2.55 million tonnes of lead and 295.5 million ounces of silver and the Mineral Resource contains 14.9 million tonnes of zinc, 6.3 million tonnes of lead and 618.7 million ounces of silver. At current mining rates, the R&R underpins metal production for more than 25 years.

Strategic priorities & outlook

Our primary objective remains to concentrate on enhancing overall output, cost efficiency of our operations and disciplined capital expenditure. While the current economic environment remains uncertain our goals over the medium term are unchanged.

Our key strategic priorities include:

- Further ramp-up of underground mines towards their design capacity, deliver increased silver output in line with communicated strategy.
- Sustain cost of production to below US$1000 per tonnes through efficient ore hauling, higher volume and grades and incremental productivity through ongoing efforts in automation and digitisation
- Disciplined capital investments in minor metal recovery to enhance profitability
  Increase R&R through higher exploration activity and new mining tenements, as well as upgradation of resource to reserve

ZINC INTERNATIONAL

The year in brief

During FY2021, Zinc International continued to ramp up production from its flagship project Gamsberg mine and achieved production of 145kt. Several best demonstrated performances on throughput, milled tonnes and improved recoveries were achieved in Q4 FY2021.

Black Mountain continued to have a stable production of 58kt, slightly lower than FY2020 due to lower head grades and mining challenges due to unplanned equipment breakdowns. A new product line of recovering magnetite from tailings was established in FY21.
In spite of COVID-19, robust mitigation measures were put in place to ensure minimal impact on production.

Skorpion Zinc has been under Care and Maintenance since the start of May 2020, following cessation of mining activities due to geotechnical instabilities in the open pit. Activities to restart the mine are progressing well.

Significant reduction in cost was achieved in FY21 through increased volumes, cost containment measures, consumption efficiencies and exchange rate depreciation.

Safety

Gamsberg mine recorded a slope failure in the South Pit on 17 November 2020. One fatality was recorded and efforts to locate the one missing employee of our business partner, remains a priority. A dedicated team has been constituted to undertake the recovery efforts. Gamsberg LTIFR improved from 1.10 in FY20 to 1.08 in FY21

Black Mountain Mine had a fatality free year and saw a reduction in high potential risk incidents. Employee engagement is an integral to our safety strategy and both Visible Felt Leadership Interactions and Planned Task Observations are conducted regularly by leaders and front-line supervisors to coach and address behavioural issues.

Both Black Mountain and Gamsberg Mines are embarking on a Critical Control Management programme to ensure that all the fatal risks protocols are in place and understood by all the employees.

Leadership remains key to the success of our safety improvement programme. Our leaders have recently undergone legal compliance training and plans are in place to provide risk-management training and improve risk management interventions and decision-making.

Occupational Health

At Vedanta Zinc International, we take the health and safety of our employees and stakeholders very seriously and we remain committed to communicating timely and transparently to all stakeholders. Since Covid 19 pandemic, we have recorded 227 positive cases, 222 recoveries, 3 active cases and 2 deceased. We have put stringent protocols to mitigate the spread and we have rolled out awareness initiatives to assist communities in which we operate.

Airborne particulate management remains a key focus in reducing lead and silica dust exposures of employees. Black Mountain Mine has reduced blood lead withdrawals from 12 in FY2020 to 6 in FY2021. As a part of our Employee Wellness Programme, we are focussing on increased participation of employees and communities in VCT for Aids / HIV, blood donation and wellness; 2172 employees were screened for tuberculosis during the year.

Environmental

Gamsberg successfully reduced water consumption in the plant to 0.65m3/t and reduced the levels of the Tailings Storage Facility return water dam to prevent future overflows from the dam. During a recent ISO 14001; 2015 recertification audit Black Mountain Mining successfully retained the certification with no major non-conformances.

The draft Gamsberg Nature Reserve Strategic Management Plan has been prepared and submitted for public comments. The final Management Plan will be submitted to MEC for approval. BMM is in negotiations to secure additional farms to be include in the Gamsberg Nature Reserve to ensure compliance to the Biodiversity Offset Agreement.

Production performance

Particulars	FY2021	FY2020	% change
Total production (kt)	203	240	(16)%
Production – mined metal (kt)			
BMM	58	66	(12)%
Gamsberg	145	108	34%
Refined metal Skorpion	-*	67	-

* *Skorpion produced 0.6kt in April 20 before moving into Care and Maintenance for rest of the year*

Operations

During FY2021, our total production stood at 203,000 tonnes, 16% lower y-o-y. This was primarily due to Skorpion Zinc going into care and maintenance, BMM mining challenges which was partly offset by higher production at Gamsberg.
At BMM, production was 58,000 tonnes, 12% lower y-o-y. This was mainly due to lower grade of lead (2.3% vs 2.9%) and hence lead lower recoveries (84.1% vs 85.6%) and 6% lower throughput resulting from lower mining performance.
Gamsberg's production was at 145,000 tonnes as the operation continues to ramp up with improved performance every quarter – Q1 FY2021 at 25,000 tonnes, Q2 at 35,000 tonnes, Q3 at 43,000 tonnes and Q4 at 41,000 tonnes (Q4 FY2021 performance slightly impacted by lower mine grades). Our plant operations were partially impacted in November due to the slope failure incident. While mining only started in phases in December and January 2021, plant continued to run on healthy ROM stockpile.

At Skorpion Zinc, engagement with technical experts to explore opportunities of safely extracting the remaining ore is ongoing. The pit optimisation work is complete. The business is currently evaluating options to restart mining. Further there is significant progress made to make the Skorpion Refinery Conversion Project economically feasible. Previously completed feasibility study is being updated. We target to start the on-ground execution by H1 FY22.

At both BMM and Gamsberg, production was also slightly impacted by the COVD-19 lockdown during Q1 FY2021.

Unit costs

Particulars	FY2021	FY2020	% Change
Zinc (US$ per tonne) unit cost	1,307	1,665	(22%)

The unit cost of production decreased by 22% to US$1,307 per tonne, from US$1,665 per tonne in the previous year. This was mainly driven by the Company's strong focus to reduce the cost, along with reduction through higher production at Gamsberg, local currency depreciation, optimising consumables usage, higher copper credits offset by higher TCRCs and annual inflation.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% change
Revenue	368	441	(17)%
EBITDA	120	54	-
EBITDA margin (%)	33%	12%	-
Depreciation and amortisation	43	89	(51)%
Operating Profit before special items	77	(36)	-
Share in Group EBITDA (%)	3%	2%	-
Capital Expenditure	44	101	(57)%
Sustaining	44	80	(45)%
Growth	-	21	-

During the year, revenue decreased by 17% to $368 million, driven by lower volumes compared to FY2020 due to Skorpion Zinc going under Care and Maintenance, partially offset by higher price realisations. EBITDA increased significantly to $120 million, from $54 million in FY2020 mainly on account of higher price realization and improved cost.

Projects

Refinery Conversion – A substantial progress has been made on Skorpion Zinc Refinery conversion Project with the FEED completion, feasibility study, tendering activities and techno-commercial adjudication. All regulatory approval is in place to start project execution. Previously completed feasibility study is being updated. With power tariffs being very critical for the viability of the project, discussions are ongoing with the state power utility and the option of renewable power is also being explored. We can start the on-ground execution by H1 2022 subject to the confirmation of power tariff and approval from the Board.

Swartberg Phase 2 – Based on the completed feasibility study, the finalised mine design and environmental authorisation has been received in Q3 FY2021. Based on the proposed integration schedule with BMM the underground operations project is planned to be executed in FY2023.

Gamsberg Phase 2 - 54MT reserves have been added post completion of Feasibility study for expansion which can result in additional 200ktpa MIC production over and above current production.. The mine design and the new reserve statement was completed with the Resource to Reserve conversion as scheduled. The project is currently split into two distinctive sections, one focused on increasing the mining to 9 MTPA and second focused on construction of a duplicate concentrator plant, effectively doubling the capacity.

Gamsberg Smelter – We have received the environmental approval for bulk water pipeline construction and outcome of ESIA for Gamsberg Smelter is also expected in April'21. The SEZ application process has progressed well. We are engaging with the Governmnet of South Africa on critical success factors like SEZ, power price, sulphuric acid offtake, logistics infrastructure and other regulatory approvals.

Black Mountain Magnetite project – This is a project to recover iron ore/magnetite from the BMM tailings. The feasibility was completed and pilot plant of 60ktpa capacity was started in Q4 FY21. To fast track the project and take advantage of the current favourable market conditions a quick start modular 0.7MTPA plant was decided, based on treating current fresh tailings. This project will be put up for approval to start the execution in H1 FY2022 with target of completion by end of FY22.

Exploration

Certified Mineral Reserves and Resources at Zinc International increased by 8% to 566.4 Mt containing 30.3 Mt of metal. Gross additions to reserves and resources, after depletion, amounted to 41.3 Mt of ore and 1.8 Mt of metal. Despite depletion, reserve levels were successfully maintained at the same level as 2020, and amount to 139.7 Mt containing 8.3 Mt of metal. The most significant contributor to the addition of metal in resources was the declaration of a maiden resource at Gamsberg South (23.2 Mt @ 7.1% Zn and 0.6% Pb).

Strategic priorities & outlook

Zinc International continues to remain focused to improve its production by sweating its current assets beyond its design capacity, debottlenecking the existing capacity, and adding capacity through growth projects.
Our priority is to ramp up the performance of our Gamsberg Plant at designed capacity and simultaneously develop the debottlenecking plan to increase plant capacity by 10% to 4.4Mt Ore throughput. Likewise, BMM continues to deliver stable production performance and the focus is to debottleneck its ore volumes from 1.6 Mt to 1.8 Mt.

Skorpion is expected to remain in 'Care and Maintenance' for H1 FY2022, while management is assessing feasible and safe mining methods to extract ore from pit 112. Zinc International continues to drive the cost reduction programme to place Gamsberg operations on the 1st quartile of global cost curve with the production cost less than US$1000 per tonne.

Additionally, core growth strategic priorities include:

- Complete approval process and commence project activities of Skorpion Refinery Conversion Project and Magnetite Project in FY2022
- Continue to improvise business case of Gamsberg Phase II and Gamsberg Smelter Project through government intervention, capex and opex reduction.

OIL & GAS

The year in brief

During FY2021, Oil & Gas business delivered gross operated production of 162 kboepd, lower by 6% y-o-y. This was mainly due to delay in execution of growth projects owing to the implementation of nationwide lockdown imposed by the Government of India to curb the spread of COVID-19 and natural reservoir decline at the MBA fields. The decline was partially offset by the addition of wells brought online as a part of Mangala Infill, MPT Upgrade, Aishwarya and Bhagyam Polymer and ABH. Business continues to drive all efforts towards volume growth through capacity additions, new wells and surface facilities. During FY2021, 74 wells were hooked up across all assets.

In OALP blocks, the initial phase of seismic acquisition programme has been completed in Assam, Cambay, Rajasthan and Offshore GS-GK region. Second phase is ongoing in Rajasthan and Cambay.

Early drilling opportunities have been identified based on reprocessing and interpretation of vintage data in Rajasthan, Assam and Cambay regions. First well KW-2-Udip has been drilled in Rajasthan. Drilling and related preparation activities are ongoing in Cambay and North East.

Occupational health & safety

There are six lost time injuries (LTIs) in FY2021. The frequency rate stood at 0.16 per million-man hours (FY2020: 0.3 per million-man hours) amidst increased development activities. Unfortunately, there was also a fatality in one of the projects during the FY2021.

Our focus remains on strengthening our safety philosophy and management systems. We were recognised with awards conferred by external bodies:

- Leaders Award in Sustainability 4.0 award 2020 jointly instituted by Frost & Sullivan and TERI under Mega Large Business, Process Sector
- 'Sword of Honour' and '5Star' by British Safety Council for excellence in HSE Management for Pipeline Operation
- CII National Award for Excellence in Water Management 2020' 'within fence' category and noteworthy contribution under 'CII National Award for excellence in Water Management 2020' 'beyond fence category

Cairn Oil & Gas has taken various initiatives to prevent exposure of COVID-19:

- Awareness on COVID-19 based on MOHFW (Ministry of Health and Family Welfare), ICMR (Indian Council of Medical Research) and National Disaster Management Guidelines.
- Tied up with Apollo and Mahatma Gandhi Hospital, Jaipur for handling of COVID patients
- Established Apollo Telemedicine Centre in Barmer and 'Isolation / Quarantine Accommodation' at Camp sites
- Weekly Health Awareness Sessions by Specialists from various prestigious Hospitals.
- SOPs for travel, office duty, construction & operations and COVID test requirement.
- Daily Health Monitoring of Personnel on Parameters - Temperature, Cold & Cough.
- Launched 'Your Dost', an Online Emotional Wellness Platform providing 24x7 guidance from 900+ experts.

Environment

Our Oil & Gas business is committed to protect the environment, minimise resource consumption and drive towards our goal of 'zero discharge'. We have secured first runner-up position in Jury Special Mention Award on 'Recycling of Produced Water for Injection Purpose' under sustainability 4.0 award 2020 jointly instituted by Frost & Sullivan and TERI. Highlights for FY2021 are:

- Recycling and reusing of produced water resulting in reduced water abstraction: 99.55% at Mangala, Bhagyam and Aishwariya.
- Natural gas was adopted at Raageshwari Gas Terminal for power generation, eliminating the flaring of gas and reduction in GHG emissions.
- Waste oil disposal to registered recyclers: 6,390bbls in FY2021
- Energy conservation by the replacement of conventional lights with energy-efficient lightings (LED): ~150,000 units in FY2021.
- Commissioning of GEG's at Rajasthan North field for power generation, reduction in GHG emissions of ~9200 tons of CO_2e/annum
- Biodiversity Conservation:
    a. Conservation and proliferation of indigenous species: ~1,500 seed balls and 10,000 saplings of indigenous species developed at Mangala Processing Terminal

b. Carbon sequestration - plantation in Ravva field: ~17,959 tons of CO_2e

c. Conservation of Fishing Cat at Coringa Wildlife Sanctuary at Godavari delta. MoU signed with Andhra Pradesh Forest Department and Wildlife Institute of India.

d. Published "Know your Flora-A Glimpse of Thar Ecosystem", capturing information about 57 local floral species (26 trees, 17 shrubs and 14 herbs) growing in the vicinity of Rajasthan.

Production performance

	Unit	FY2021	FY2020	% change
Gross operated production	Boepd	162,104	172,971	(6%)
Rajasthan	Boepd	132,599	144,260	(8%)
Ravva	Boepd	19,177	14,232	35%
Cambay	Boepd	10,329	14,479	(29%)
Oil	Bopd	140,353	154,677	(9%)
Gas	Mmscfd	130.5	109.8	19%
Net production – working interest	Boepd	101,706	110,459	(8%)
Oil*	Bopd	88,923	99,709	(11%)
Gas	Mmscfd	76.7	64.5	19%
Gross operated production	Mmboe	59.2	63.3	(7%)
Net production – working interest	Mmboe	37.1	40.4	(8%)

** Includes net production of 441 boepd in FY2021 and 483 boepd in FY2020 from KG-ONN block, which is operated by ONGC. Cairn holds a 49% stake.*

Operations

Average gross operated production across our assets was 6% lower y-o-y at 162,104 boepd. The company's production from the Rajasthan block was 132,599 boepd, 8% lower y-o-y. The decrease was primarily due to the delay in execution of growth projects due to COVID-19 restrictions and natural reservoir decline at the MBA fields. The decline was partially offset by the addition of wells brought online as a part of Mangala Infill, MPT Upgrade, Aishwarya and Bhagyam Polymer and ABH. Production from the offshore assets, was at 29,505 boepd, 3% higher y-o-y, supported by production from new wells drilled through Ravva drilling campaign and production optimization activities.

The production details by block are summarised below.

Rajasthan block

Gross production from the Rajasthan block averaged 132,599 boepd, 8% lower y-o-y. This decrease was primarily due to the delay in execution of growth projects due to implementation of the nationwide lockdown imposed by the Government of India to curb the spread of COVID-19 and natural reservoir decline at the MBA fields. The decline was partially offset by the addition of wells brought online as a part of Mangala Infill, MPT Upgrade, Aishwarya and Bhagyam Polymer and ABH and production optimisation activities.

As part of the growth projects in Rajasthan 248 wells have been drilled. Of these 143 wells have been hooked up till date.

Gas production from Raageshwari Deep Gas (RDG) averaged 124 million standard cubic feet per day (mmscfd) in FY2021, with gas sales, post captive consumption, at 96 mmscfd.

On 26th October 2018, the Government of India, acting through the Directorate General of Hydrocarbons (DGH), Ministry of Petroleum and Natural Gas, has granted its approval for a 10-year extension of the PSC for the Rajasthan block, RJ-ON-90/1, subject to certain conditions, with effect from 15 May 2020. In May 2018 the single judge had passed the order in our favour allowing extension of Rajasthan PSC on same terms. The GoI had appealed against the said order before the division bench of the Delhi High Court. Vide order dated 26 March 2021, the High Court has allowed the appeal of GoI against the single judge order.

We have served notice of arbitration on the Government of India (GoI) in respect of the audit demand raised by DGH based on PSC provisions. The Government has accepted it and the arbitration tribunal stands constituted. It is our position that there is no liability arising under the PSC owing to these purported audited exceptions. The audit exceptions do not constitute demand and hence shall be resolved as per the PSC provisions.

The tribunal had a first procedural hearing on 24th October on which Vedanta also filed its application for interim relief. The interim relief application was heard by the tribunal on 15th December 2020 wherein it was directed that the GoI should not take any coercive action to recover the disputed amount of audit exceptions which is in arbitration and that during the arbitration period, the GoI should continue to extend the tenure of the PSC on terms of current extension. The GoI has challenged the said order before the Delhi High court which is now listed on 20th May 2021.

Further, on 23rd September 2020, the GoI filed an application for interim relief before Delhi High Court seeking payment of all disputed dues. The bench has not been inclined to pass any ex-parte orders and the matter is now listed for hearing on 20th May 2021.

Further to above stated letter from GoI on 26th October 2018, in view of pending non-finalization of the Addendum to PSC, the GoI granted, permission to the Oil & Gas business to continue petroleum operations in Rajasthan block, till the execution of the Addendum to PSC or 30th April 2021, whichever is earlier.

Ravva block
The Ravva block produced at an average rate of 19,177 boepd, higher by 35% y-o-y. This was primarily due to new wells bought online through Ravva drilling campaign which was successfully completed during the year.

Cambay block
The Cambay block produced at an average rate of 10,329 boepd, lower by 29% y-o-y. This was primarily due to natural field decline partially offset by production optimization measures.

Prices

Particulars	FY2021	FY2020	% change
Average Brent prices –US$/barrel	44.3	60.9	(27%)

Crude oil price averaged US$44.3 per barrel, compared to US$60.9 per barrel in the previous year driven by multiple reasons shifting the world from the era of supply disruption to plenty. Global economic indicators continued to be adversely impacted due to the COVID-19 pandemic.

Early in the year, oil prices declined drastically as the markets struggled with a rapidly filling storage capacity and massive crude oil glut amid a demand collapse caused by the virus outbreak.

Prices continued extending gains from the second quarter, climbing to a six-month high as physical market fundamentals continued to recover, rollout of COVID-19 vaccines and the surplus in the market eased, which was reflected from the decline in crude oil stocks, and recovery in refinery operations and utilization rates in the major economies.

Continued efforts by OPEC to accelerated production cuts including voluntary adjustments and weather-related energy crisis in the US later in the year caused a sharp decline in oil production. This temporarily disrupted at least a fifth of the U.S. refining output, and a million barrels of crude production led to a steady rally in crude prices.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% change
Revenue	1,016	1,787	(43%)
EBITDA	438	1,032	(58%)
EBITDA margin (%)	43%	58%	-
Depreciation and amortisation	287	566	(50%)
Operating Profit before special items	151	466	(67%)
Share in Group EBITDA (%)	12%	34%	-
Capital Expenditure	233	495	(53)%
Sustaining	9	19	(51)%
Growth	224	476	(53)%

Revenue for FY2021 was 43% lower y-o-y at $1,016 million (after profit petroleum and royalty sharing with the Government of India), owing to fall in oil price realization and lower volumes. EBITDA of FY2021 was at $437 million, lower by 58% y-o-y in line with the lower revenue.

The Rajasthan operating cost was US$7.7 per barrel in FY2021 compared to US$8.7 per barrel in the previous year, primarily driven by cost optimisation initiatives and lower maintenance activities due to COVID-19 early in the year.

A. Growth projects development

The Oil & Gas business has a robust portfolio of infill development & enhanced oil recovery projects to add volumes in the near term and manage natural field decline. Some of key projects are:

Mangala infill, Bhagyam & Aishwariya Enhanced oil recovery (EOR) and FM3/5 Infill
Mangala is currently under full field polymer injection. In addition, to increase the ultimate oil recovery and support production volumes, we are executing a 45-well infill drilling campaign in Mangala field. Drilling and hook up of the 45 well campaign have been completed during FY2021.

The polymer's success enhanced oil recovery at Mangala and is being replicated at Bhagyam and Aishwariya fields to increase recovery rates. Drilling and hook-up of 42 well campaign have been completed during fiscal year 2021. Surface facility development for polymer implementation has been completed and polymer injection has been ramped up to its design capacity.

Based on the success of the FM3 infill drilling campaign, Cairn has identified opportunities to further accelerate production by drilling four horizontal wells in FM3 and FM5 sands. The project also entails drilling of few deviated wells for FM2/3 sands and conversion of three wells to polymer injector. The approved field development plan is being executed and the drilling is expected to commence during the first half of the fiscal year 2022.

Tight oil and gas projects

Tight oil: Aishwariya Barmer Hill (ABH)
Aishwariya Barmer Hill (ABH) is the first tight oil project to monetise the Barmer hill potential. All 39 wells have been drilled, of which 27 wells are hooked up. They are being progressively hooked up to ramp up volumes. Surface facility construction is completed and commissioned.

Aishwariya Barmer hill stage II drilling program enabled to establish the confidence in reservoir understanding of ABH. Based on the success of it, drilling of 5 additional wells were conceptualized and drilling is expected to commence during third quarter of fiscal year 2022.

Tight gas: Raageshwari deep gas (RDG) development
Gas development in the Raageshwari Deep Gas field continues to be a strategic priority. Early production facility has been commissioned and ramped up to its designed capacity of 90 mmscfd.

Further construction of gas terminal through integrated contract is completed and under commissioning. This shall lead to incremental sales of ~100 mmscfd.

In order to realize the full potential of the gas reservoir, drilling of 42 wells is nearing completion. 41 wells have been drilled, of which 23 wells are online as of March 31, 2021. They are being progressively hooked up to ramp up volumes.

Other projects

Surface facility upgradation
The Mangala processing terminal facility upgradation is nearing completion and all the major sub-systems of liquid handling are under operation. Intra-field pipeline augmentation project has been completed. The project will lead to increasing liquid handling capacity by 30% at the Mangala processing terminal.

Ravva development
An integrated development campaign which was commenced in Q3 FY2020 got completed in FY2021. Seven well drilling programmes resulted in ~11 kboepd of incremental volumes from Ravva Block.

B. Exploration and appraisal

Rajasthan - (BLOCK RJ-ON-90/1)

Rajasthan exploration
The Rajasthan portfolio provide access to multiple play types with oil in high permeability reservoirs, tight oil and tight gas. We are evaluation opportunities to drill low to medium risk and medium to high reward exploration wells to build on the resource portfolio.

Tight oil appraisal
The appraisal programme of four fields (Vijaya and Vandana, Mangala Barmer Hill, DP and Shakti) entails the drilling and extended testing of 10 new wells with multi-stage hydraulic fracturing. Till March 31, 2021, 8 wells have been drilled.

Open Acreage Licensing Policy (OALP)
Under the Open Acreage Licensing Policy (OALP), revenue-sharing contracts have been signed for 51 blocks located primarily in established basins, including some optimally close to existing infrastructure.

Full Tensor Gravity Gradiometry™ (FTG) airborne survey implemented to prioritise area of hydrocarbon prospectivity has been completed in Assam, Cambay, Rajasthan and Kutch region. The exploration prospect maturation process is digitalised to fastrack the decision to drill.

The initial phase of seismic acquisition programme has been completed in Assam, Cambay and Offshore GS-GK region. The second phase is ongoing in Rajasthan and Cambay.

Early drilling opportunities have been identified, based on reprocessing and interpretation of vintage data in Rajasthan, Assam and Cambay region. It is planned to utilise modular production facilities Extended Well Test (EWT), Quick Production Facility (QPF) to fastrack production.

The first well KW-2 Udip has been drilled in Rajasthan. Drilling and related preparation activities are ongoing in Cambay and North East.

Strategic priorities and outlook
Vedanta's Oil & Gas business has a robust portfolio mix comprising exploration prospects spread across basins in India, development projects in the prolific producing blocks and stable operations which generate robust cash flows.

The key priority for us is to deliver on our commitments from our world-class resources with 'zero harm, zero waste and zero discharge':

- Increase in near-term volumes by commissioning the gas processing terminal and surface facilities for Aishwariya Barmer Hill
- Infill projects across producing fields to add volume in near term
- Unlock the potential of the exploration portfolio comprising OALP and PSC blocks.

  Continue to operate at a low cost-base and generate free cash flow post-capex;

ALUMINIUM

The year in brief

In FY2021, the aluminium smelters achieved India's highest production of 1.97 million tonnes (including trial run). It has been a remarkable year in our cost reduction journey on all operational fronts. Structural reforms and continued focus on operational excellence, coupled with lower input commodity prices, provided us a long-term cost advantage. Our efforts towards optimising our bauxite and coal mix and improved asset capacity utilisation across refinery, smelters and power plants supported the cost reduction journey. We started and continued a structural cost reduction program called Vijaypath with focus on optimising our controllable costs and improving our price realisation to improve profitability in a sustainable manners. The hot metal cost of production for FY2021 stood at US$ 1,347 per tonne. We also achieved record production of 1.84 million tonnes at the alumina refinery through continued debottlenecking.

Occupational health & safety

We report with deep regret, two fatalities during the year, one at our operations in Lanjigarh during unloading of bauxite and another at power Plant in BALCO. We investigated both incidents thoroughly and shared the lessons learned across all our businesses.

This year, we experienced total 19 Lost Time Injuries (LTIs) at our operations with a LTIFR of 0.27.

To enhance competencies of our executives, engineers, and supervisors of business partners, we have launched the Safety Booster programme at our sites. We conducted safety stand-downs across the sites to communicate the learnings from safety incidents and prevent repeated future incidents. Also, our safety leadership regularly engages with the business partner site in-charges and their safety officers for their capability development and strengthening the culture of safety at our sites. Our operations commenced a monthly theme initiative where cross-functional audits and awareness programmes were carried out based on one high hazard work area each month such as confined space, vehicle driving and working at height.

Moreover, to sensitize our employees towards our core values of 'Care', we regularly carry out programmes such as 'Suraksha ki Goth' and 'Suraksha Charcha'.

The worldwide outbreak of COVID-19 has not impacted our operations in FY 2021. As part of our Corporate Social Responsibility, our business units worked with the government and stakeholders, including local community to provide relief measures. Our mobile health units were used for creating awareness with a clear emphasis on the importance of social-distancing and maintaining personal hygiene. Our business units provided support to the district and state health services in terms of medical equipment, including hand sanitisers, medicines, reagents and PPEs such as surgical masks, gloves, gowns and personnel (housekeeping staff, security personnel, medical personnel and so on, in addition to the contribution to the Government's relief fund for COVID-19).

The SHGs associated with our facilities were involved in preparing masks, thereby creating livelihood while helping reduce the COVID-19 impact. Fire brigades at the facilities have been deployed to sanitise the premise and in the core villages near our facilities. The facilities provide food to migrant workers, identified community groups, police personnel and so on, as part of our social responsibility initiatives.

Environment

Jharsuguda has recycled 14.67% of the water used in FY 2021, while BALCO has recycled 12.49%. One of our smelters at Jharsuguda has achieved Specific Water Consumption of 0.28 m^3/MT of aluminium, a benchmark in India. There has been a significant improvement in our water consumption of 0.59 m^3/MT (FY 2020: 0.69 m^3/MT) at BALCO. We are consistently focusing on improving the recycled water percentage in future.

The management of hazardous waste such as spent Pot line, aluminium dross, fly ash, and so on are material waste management issues for the aluminium business. Our BALCO and Jharsuguda units disposed of 25,949 MT spent pot lining and 14,736 MT of aluminium dross this year, to recyclers authorised by respective state pollution control boards. Our operations were able to dispose 100% of fly ash generated at the units. At our Lanjigarh operations, 92% of lime grit has been utilised in FY 2021 vis-à-vis 98.4% in FY2020.

Production performance

Particulars	FY2021	FY2020	% change
Production (kt)			
Alumina – Lanjigarh	1,841	1,811	2%
Total aluminium production	**1,969**	**1,904**	**3%**
Jharsuguda I	533	543	(2%)
Jharsuguda II[1]	867	800	8%
BALCO I	265	256	4%
BALCO II	304	305	-

(1) Including trial run production of 27kt in FY2021 vs. nil in FY2020

Alumina refinery: Lanjigarh

At Lanjigarh, production was 2% higher y-o-y at 1.84 million tonnes, primarily through continued plant debottlenecking and improved capacity utilisation.

Aluminium smelters

We ended the year with production of 1.97 million tonnes (including trial run). Our smelter at BALCO continued to show consistent performance. Jharsuguda smelter ramped-up its production from 1.3 mtpa in FY2020 to 1.4 mtpa in FY2021, 4% up y-o-y.

Coal Security

We continue to focus on the long-term security of our coal supply at competitive prices. We added Jamkhani and Radhikapur (West) coal mines through competitive bidding process by GOI. The Radhikapur Coal Block has a capacity of 6 MTPA, as per current approved mine plan and Jamkhani coal block is currently rated at 2.6 MTPA. These acquisitions will substantially improve our coal security. We also look forward to continuing our participation in linkage coal auctions and secure coal at competitive rates.

Prices

Particulars	FY2021	FY2020	% change
Average LME cash settlement prices (US$ per tonne)	1,805	1,749	3%

Average LME prices for aluminium in FY2021 stood at US$ 1,805 per tonne, 3% higher y-o-y. LME prices were bearish for the first two quarters due to pandemic-induced disruption in the global economic activity and seemed bullish in the last two quarters, driven by increase in demand in the second half of FY2021. The prices showed a sharp increase in the concluding months of FY2021.

Unit costs

(US$ per tonne)

Particulars	FY2021	FY2020	% change
Alumina cost (ex-Lanjigarh)	235	275	(15) %
Aluminium hot metal production cost	1,347	1,690	(20) %
Jharsuguda CoP	1,304	1,686	(23) %
BALCO CoP	1,450	1,700	(15) %

During FY2021, the cost of production (CoP) of alumina improved to US$ 235 per tonne, due to benefits from increase in locally sourced bauxite, continued debottlenecking, improved capacity utilization and plant operating parameters. This was further backed by reduced input commodity prices (mainly caustic soda and HFO).

In FY2021, the total bauxite requirement of about 5.3 million tonnes was met by Odisha (56%) and imports (44%). In the previous year, the bauxite supply mix was captive mines (9%), Odisha (49%) and imports (42%).

In FY2021, the CoP of hot metal at Jharsuguda was US$ 1,304 per tonne, down by 23% from US$ 1,686 in FY2020. The hot metal CoP at BALCO fell to US$ 1,450 per tonne, down by 15% from US$ 1,700 per tonne in FY2020. This was primarily driven by improved materialisation of domestic coal from Coal India Limited (CIL) with lower auction premiums and structural reduction in Renewable Purchase Obligation rates. Improved production and lower cost of Lanjigarh Alumina along with subdued input commodity prices in first nine months supported our cost reduction journey.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% Change
Revenue	3,865	3,751	3%
EBITDA	1,046	281	-
EBITDA margin (%)	27%	8%	-
Depreciation and amortisation	230	233	(1%)
Operating Profit before special items	816	48	-
Share in Group EBITDA (%)	28%	9%	-
Capital Expenditure	221	153	45%
Sustaining	162	96	69%
Growth	59	57	3%

During the year, revenue increased by 3% to $3,865 million, driven primarily by rising LME Aluminium prices and higher production volumes. EBITDA was significantly up at $1,046 million (FY2020: $281 million), mainly due to improved hot metal cost of production & increased sales realisation.

Strategic priorities & outlook

With the increasing primary aluminium demand, the outlook for FY2022 is strong. Regional ingot and value-added product premiums are rapidly increasing, reflecting a combination of low ordering for 2021 and stronger than expected demand.

The input commodity prices across carbon are moving on a higher side driven by continued demand increases. We are looking at ways to continuously optimise our costs, while also increasing the price realisation to improve profitability sustainably.

India's market is expected to have robust growth, supported primarily by growing industrial activity and government focus on infrastructure sector and domestic manufacturing in the country. Several government initiatives (Make in India, Production-linked Incentive for domestic manufacturing, National Infrastructure Pipeline and National Rail Plan) will enhance aluminium demand, going forward.

Vedanta continues to expand its value-added product portfolio in line with evolving market demand, making it poised to grow in the Indian aluminium market.

At our power plants, we are also working towards reducing gross calorific value (GCV) losses in coal as well as improving plant operating parameters which should deliver higher plant load factors (PLFs) and a reduction in non-coal costs. Vedanta is working out a plan to expedite operationalization of Radhikapur and Jamkhani coal mines.

Whilst the current market outlook remains bullish, our core strategic priorities include:

- Focus on the health & safety of our employees, business partners, customers and community
- Deliver alumina and aluminium production through structured asset optimisation framework
- Enhance our raw material security of bauxite and alumina
- Improve coal linkage security, better materialisation
- Expedite operationalisation of Radhikapur and Jamkhani coal block
- Zero slippage in raw material and finished goods quality
- Improve our plant operating parameters across locations; and
- Improve realisations by enhancing our value-added product portfolio

POWER

The year in brief
In FY2021, TSPL's (Talwandi Sabo Power Limited) plant availability was 81% and Plant Load Factor (PLF) was 40%, primarily on account of Covid related demand disruption in H1 FY2021.

Occupational health & safety
We reported 1 fatality at TSPL in FY21. The accident was thoroughly investigated and learnings have been propagated across our employees, Business Partners and across the group.

We continue to strengthen the 'Visible Felt Leadership' through the on-ground presence of senior management, improvement in reporting across all risk and verification of on-ground critical controls. We also continue to build safety assisting infrastructure development through the construction of pedestrian pathways, dedicated route for bulkers, creation of secondary containment for hazardous chemicals and other infra development across sites.

Environment
One of the main environmental challenges for power plants is the management and recycling of fly ash. At all our operations, we have a managed to utilize more than 100% of generated fly ash and 60% in TSPL. The reduction in ash utilisation is due to COVID-19 related demand disruption and national/local lockdowns affecting traffic movement, particularly in H1.

TSPL has implemented all the recommendations given by M/s Golder associates for ash dyke. Additional review done by dyke designer and assurance was also taken from third party (M/s TSE) regarding ash dyke stability.

TSPL has recycled 18.5% of the water used. We are further working to sustain the recycled water percentage through measures planned during FY2022.

Production performance

Particulars	FY2021	FY2020	% change
Total power sales (MU)	11,261	11,162	1%
Jharsuguda 600 MW	2,835	776	-
BALCO 300 MW*	1,596	1,726	(7%)
MALCO#	-	-	-
HZL wind power	351	437	(20%)
TSPL	6,479	8,223	(21%)
TSPL – availability	81%	91%	-

#continues to be under care and maintenance since 26 May 2017 due to low demand in Southern India.
*we have received an order dated 01 Jan 2019 from CSERC for Conversion of 300MW IPP to CPP w.e.f. 01 April 2017. During the Q4 FY2019, 184 units were sold externally from this plant.

Operations

During FY2020, power sales were 11,261 million units, 1% higher y-o-y. Power sales at TSPL were 6,479 million units with 81% availability in FY2021. 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 a lower plant load factor (PLF) of 58% in FY2021. The 300 MW BALCO IPP operated at a PLF of 66% in FY2021.

The MALCO plant continues to be under care and maintenance, effective from 26 May 2017, due to low demand in Southern India.

Unit sales and costs

Particulars	FY2021	FY2020	% change
Sales realisation (US cents/kWh)1	4.2	5.1	(18)%
Cost of production (US Cents/kWh)1	3.2	3.5	(10)%
TSPL sales realisation (US Cents/kWh)2	4.0	5.3	(24)%
TSPL cost of production (US Cents/kWh)2	2.8	3.8	(25)%

(1) Power generation excluding TSPL
(2) TSPL sales realisation and cost of production is considered above, based on availability declared during the respective period

Average power sale prices, excluding TSPL, decreased by 18% to US cents 4.2 per kWh and the average generation cost was lower at US cents 3.2 per kWh (FY2020: US cents 3.5 per kWh), driven mainly by decrease in coal prices and improved linkage materialisation.

In FY2021, TSPL's average sales price was lower at US cents 4.0 per kWh (FY2020: US cents 5.3 per kWh), and power generation cost was lower at US cents 2.8 per kWh (FY2020: US cents 3.8 per kWh).

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% change
Revenue	725	827	(12)%
EBITDA	190	233	(18)%
EBITDA margin (%)	26%	28%	-
Depreciation and amortisation	79	81	(4)%
Operating Profit before special items	111	151	(26)%
Share in Group EBITDA (%)	5%	8%	-
Capital Expenditure	3	3	(1)%
Sustaining	3	3	(1)%
Growth	-	-	-

**Excluding one-offs*

EBITDA for the year was 18% lower y-o-y at $190 million, mainly due to low capacity charges as PPA at TSPL, BALCO and Zinc India and lower realisation at TSPL, partially offset by increase in power sales at Aluminium business.

Strategic priorities & outlook

During FY2022, we will remain focused on maintaining the plant availability of TSPL and achieving higher plant load factors at the BALCO and Jharsuguda IPPs.

Our focus and priorities will be to:

- Resolve pending legal issues and recover aged power debtors;
- Achieve higher PLFs for the Jharsuguda and BALCO IPP; and
- Improve power plant operating parameters to deliver higher PLFs/availability and reduce the non-coal cost.
- Ensuring safe operations, energy & carbon management

IRON ORE

The year in brief

Production of Crude ore at Karnataka stood at 5.60 wet million tons. With the order of Central Empowered Committee (Supreme Court appointed body) on 21st March'20, our annual mining capacity has been increased up to 5.89 MTPA. In line with this the Govt. of Karnataka on Feb'2021 has allocated the production quantity of 5.60 wet million tons for FY2021 to maintain the SC allocated district cap.

Meanwhile, operations in Goa remained in suspension in FY2021 due to a state-wide directive from the Supreme Court. However, we continue to engage with the Government to secure a resumption of mining operations.

Occupational health & safety

In-spite of our best efforts towards the vision of Zero Harm we are very sorry to inform that we lost one of our business partner colleague at our Karnataka operations in a fatal accident at the mobile screening plant. This has appalled the entire management and we thus undertook to review all our activities for the risk perception and on ground implementation of controls. Our Lost Time Injury Frequency Rate (LTIFR) has increased to 0.56 (FY 2020:0.45).

We engaged a third-party consultant to identify the hidden risk in our operations and further strengthened our Grid owner systems with focus on implementation of Vedanta Safety performance standard on ground.

We have a robust top-down approach with more than 95% month on month compliance for Visible Felt Leadership rounds including the EXCO. Collective efforts of our enthusiastic Business Partners, grid owners and Line managers has been effective in ensuring critical controls in place for all identified Critical Activities.

IOB has implemented more focused initiatives to improve vehicle and driving safety. At Iron ore Karnataka all our drivers working in mining are trained by OEM's, and at VAB, we have developed internal trainers for vehicle and driving safety with greater focus given on one way-traffic, pedestrian walkways, discipline parking of trucks and HEMM, Pre-start inspection etc.

Our one of its kind Grid Owners Scheme has proved to be the essence for inculcating and percolating the true values of Safety leadership at site level. With each grid owner working as a responsible steward, our BUs have seen commendable positivity and enthusiasm towards compliance with not just safety standards but also green belt development, waste segregation, UA/UC reporting, critical task management, etc.

With the wholehearted involvement of our line managers, we had run a theme-based safety campaign on "Line of Fire at Workplace" which included site rounds, on-site trainings, awareness sessions, online sessions, online quiz, poster and slogan competitions, daily mailers and screensavers. The campaign helped us to identify and control situations and conditions of line of fire across all BUs. Post this successful and well-accepted campaign, we will be organising similar theme-based campaigns every quarter to strengthen the safety culture of our business.

With the persistent pandemic of COVID-19 across the nation, top management team of IOB has been driving continual efforts to restrict spread of the Novel Corona Virus among our employees and business partners. After a small duration of shutdown due to 'Janata curfew' and nation-wide lockdown in the month of April'20, we were able to restart majority of our operations by the last week of April. Till date we have tested up to 1400 staff, workmen and business partner employees under travel and contact tracing guidelines. We have had 318 persons who were found positive.

Our IOB Covid-19 taskforce, under the guidance of our CEO and unit wise cross functional teams, for implementation of all the preventive and precautionary measures, are engaged in prevention and control of the virus. Controls like cold fumigation for common areas, mandatory screening, social distancing, usage of masks, contact tracing, work from home, etc. proved effective and steered us to maintain our business continuity. Also, our State-of-the-art Video analytics system called COVID Marshall which was rolled out by our Security and IT team, gave us an edge to ensure compliance of social distancing, mask compliance, etc. The solution was extended to other group companies as a best practice. One of the major milestones achieved during this phase was that we were able complete the BF#3 re-lining project at VAB with zero outbreaks of the Novel Corona virus among project workers and employees which was an outcome of testing at source and destination for the project workmen and strict controls on site.

Our focus for the upcoming year would be on strengthening the controls of critical activities, business partner safety management, centralization, and standardization of HSE trainings, up-grade of incident investigation methods and digital transformation in HSE functions for effective management.

Environment

At our Value-Added Business we recycle and reuse almost all the wastewater. Only the non-contact type condenser cooling water of the power plant is cooled and treated for pH adjustment and discharged back into the Mandovi river, which is a consented activity by the authorities.

We have further strengthened our dust control system by installing new bag houses systems with advanced design at our Blast furnace 2 and Coke screening plant 1 & 2.

At Iron ore Karnataka, continuing with its best practises, company has constructed 38 check dams, 7 settling pond and 2 Harvesting pits having a rainwater harvesting potential of 275805 m3/annum. Additionally, company has de-silted 10 nearby village ponds increasing their rainwater harvesting potential by 75629 m3/annum.

In FY2021, around 5 Ha of mining dump slope was covered with biodegradable geotextiles to prevent soil erosion & 41,000 native species sapling were planted. Various latest technologies like use of fog guns; environment friendly dust suppressants mixed with water were adopted on the mines to reduce water consumption for dust suppression without affecting the effectiveness of the measures.

Awards and accolades

- Value Added Business achieved 2 Green Triangle Society Safety Awards. PID 2 has won the 1st prize, Gomant Sarvocha Suraksha Puraskar and PP 1 won the 2nd prize, Gomant Suraksha Puraskar in the event organised by Green Triangle Society under the aegis of Goa Inspectorate of Factories and Boilers.
- Value Added Business received the Indian Chamber of Commerce - National OHS Gold award for excellence in Occupation Safety and Health Practices.
- VAB Won CII National Energy Efficiency Circle Competition 2020'
- IOK Won FIMI's Subh Karan Sarwangi Award.
- IOK won Grow Care India Environment Gold Award.

- VGCB won 3-star award in "EHS Excellence Award" at 13th edition of CII-South Region EHS Excellence Awards 2020. The recognition made on the outstanding performance in various EHS categories.
- VGCB Won Greentech Safety and Environment Award under Safety & Environment Excellence category
- VGCB Won Apex India Safety Gold Award 2020 under Safe Workplace Category

Production performance

Particulars	FY2021	FY2020	% change
Production (dmt)			
Saleable ore	5.0	4.4	15%
Goa	-	-	-
Karnataka	5.0	4.4	15%
Pig iron (kt)	596	681	(12)%
Sales (dmt)			
Iron ore	6.5	6.6	(2)%
Goa	2.1	0.9	-
Karnataka	4.4	5.8	(24)%
Pig iron (kt)	609	666	(8)%

Operations

At Karnataka, production was 5 million tonnes, 15% higher y-o-y. Sales in FY2021 were 4.4 million tonnes, 24% lower y-o-y due to Covid-19 Impact in the current financial year. Production of pig iron was 596,197 tonnes in FY2021, down by 12% y-o-y due to Covid-19 Impact and shut down of Plant for two months due to planned relining activity.

At Goa, mining was brought to a halt pursuant to the Supreme Court judgement dated 7 February 2018 directing all companies in Goa to stop mining operations with effect from 16 March 2018. We continue to engage with the Government for a resumption of mining operations.

We bought low grade iron ore in auctions held by Goa Government in Auction No -23 & 24. This ore along with opening stock of ore purchased in 22nd auction and fresh royalty paid ore moved out of mines post the supreme court order, was exported which further helped us to cover our fixed cost and some ore were used to cater to requirement of our pig iron plant at Amona.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% Change
Revenue	611	489	25%
EBITDA	245	117	-
EBITDA margin (%)	40%	24%	-
Depreciation and amortisation	30	34	(13)%
Operating Profit before special items	215	83	-
Share in Group EBITDA (%)	6%	4%	-
Capital Expenditure	14	10	47%
Sustaining	6	9	(26)%
Growth	7	1	-

In FY2021, revenue increased to $611 million, 25% higher y-o-y mainly due twofold increase in sales volume at Goa & improved margin at Goa, Karnataka & VAB during the year. EBITDA increased to $245 million compared with $117 million in FY2020 was mainly due to improved margin and higher volume at Goa.

Strategic priorities & outlook

Our near-term priorities comprise:

- Resume mining operations in Goa through continuous engagement with the government and the judiciary
- Realign and revamp resources, assets, HEMM's for starting the mine's operation
- Grow our footprint in iron ore by continuing to participate in auctions across the country, including Jharkhand.
- Securing EC for the expansion of production capacity of Pig Iron plant by 1.7 LTPA
- Advocacy for removal of E-auction/trade barrier in Karnataka.

STEEL

The year in brief

ESL is an integrated steel plant (ISP) in Bokaro, Jharkhand, with a design capacity of 2.5mtpa. Its current operating capacity is 1.5mtpa with a diversified product mix of Wire Rod, Rebar, DI Pipe and Pig Iron.

In FY2021, ESL Steel Limited (ESL) has achieved lowest ever cost during the year since acquisition resulting in higher EBITDA margin vis-à-vis previous period (US$ 95 per tonne v/s US$ 78 per tonne).

Occupational health & safety

We had one unfortunate incident on the road inside the plant on July 29, 2020, wherein the driver while standing on road in front of the truck was struck by a payloader. The vehicle was coming from the opposite direction and resulted in fatality. Actions were undertaken as per the detailed investigation to avoid such incidents in future. Currently our LTIFR is 0.38.

Capability development of our employees and business partners continue to be our priority. We have engaged various external agencies in providing specialised trainings such as rescue training, training for signalman and riggers, defensive driving training, Vedanta safety standard requirements, MBRD sessions, and so on.

As a part of our 24x7 safety culture, we have commenced monthly shutdowns, continuous engagement with all team members, in which the senior leadership visits the shopfloors and communicates with workers on lessons learnt from recent incidents. Our safety alerts are also available in local languages and displayed at all strategic locations.

External studies have been conducted on ergonomics, hygiene study (qualitative) illumination, noise and arc flash assessment. We have also strengthened our firefighting capability both in terms of manpower and infrastructure. On people engagement we have organised the National Safety Month Celebrations & Road Safety Month Celebrations with various competitions for employees and business partners.

We have also organised our first-ever safety summit to discuss ways and means to enhance our safety performance as a business unit.

We have won two external recognitions- CII HSE Excellence Award (Certificate of Appreciation) & Greentech Safety Award.

We have also implemented the COVID protocol/SOP formulated to ensure business continuity by ensuring minimum footfall and mitigating COVID risk. This includes staggered shift schedules, zero touch auto sanitising facilities, daily sanitization of workplace, vaccination for frontline warriors, SOP and handbook on COVID, Vigilance of PPE compliances through automation, Cardinal COVID rules, etc.

Environment

In Waste Management system, 100% utilisation of Blast furnace granulated Slag, Fly Ash to cement industries through long-term contracts and brick manufacturers, disposal of LD Slag, disposal of Biomedical waste to CBWTF, selling of Used Oil and Zinc Dust to Pollution Control Board authorised recyclers and re-processors is being ensured. E-Waste and battery waste is also sent to authorised recyclers and re-processors and membership with Treatment, Storage and Disposal Facility (TSDF) has also been done and hazardous waste is disposed-off to that facility.
In Water Management, treatment of 4500 Kl of effluent daily in the Effluent Treatment Plant is done and it is being reutilised in several processes such as Coke Quenching, BF Slag granulation, in Greenbelt Development, Fire Fighting, Dust Suppression and in operations of Lime and Dolo, DIP and others. Recycling percentage has increased from 12% to 26 %.

In Energy Management, the usage of waste heat from coke oven flue gas for generation of steam which ultimately helps in power generation, reduction in auxiliary power consumption from 12 % to 8 % through improvement in station heat rate is carried out.

Usage of LP steam in blast furnace to minimise the fuel requirement, LD gas and BF gas in several operations such as reheating furnace of rolling mills, Blast Furnace, DIP and lime and Dolo to reduce the fuel consumption, Running of TG through steam generated from Waste Heat recovery.

In Air Emission Management, Revamping of Oxygen Convertor Gas Recovery (OG) system in Steel Melting Shop (SMS) to reduce fugitive emission, Upgradation of Air pollution control equipment's to meet the norms stipulated by the regulatory authorities, ESP revamping of Sinter Plant, Installation of fixed sprinklers all along the roads and dry fog system in all the closed conveyors and deployment of mechanical sweepers for road sweeping is carried out.

Production performance

Particulars	FY2021	FY2020	% change
Production (kt)	1,187	1,231	(4) %
Pig iron	189	167	13%
Billet	165	27	-
TMT bar	338	468	(28) %
Wire rod	361	413	(13) %
Ductile iron pipes	135	155	(13) %

Operations

There have been significant gains in operational efficiencies, such as optimization of the coal mix in coke ovens and iron ore blending. Improved yields of the converters and finishing mills also added to the efficiency.

During FY2021, we produced 11,87,310 tonnes of saleable product, down 4% y-o-y on account of reduced availability of hot metal due to lower production amidst the disruption caused by the pandemic.

The priority remains to enhance production of value-added products (VAPs), i.e., TMT Bar, Wire Rod and DI Pipe. ESL maintained 72% of VAP sales, in line with priority.

Our Consent to Operate (CTO) for the steel plant at Bokaro, which was valid until December 2017, was not renewed by the Jharkhand State Pollution Control Board (JSPCB). This was followed by the Ministry of Environment, Forests and Climate Change (MoEF&CC) revoking the Environmental Clearance (EC) dated February 21, 2018. MoEF&CC, on August 25, 2020, has granted a Terms of Reference to ESL for 3 MTPA plant with conditions like fresh EIA/EMP reports and public hearing. The Honorable High Court of Jharkhand had extended the interim protection granted in the pending writ petitions till September 16, 2020. Hon'ble High Court on September 16, 2020 pronounced and revoked the interim stay for plant continuity w.e.f September 23, 2020. ESL filed a SLP before Hon'ble Supreme Court against September 16, 2020 order for grant of interim status quo order and plant continuity. Vide order dated September 22, 2020 Hon'ble Supreme Court issued notice and allowed plant operations to continue till further orders. Public hearing has been concluded on December 16, 2020, and ESL has applied for grant of Environment Clearance to MoEF & CC on January 11, 2021 on Parivesh Portal of MoEF & CC and presented before EAC on 11th February 2021. The revised proposal has been submitted on March 14, 2021 post inputs from February 11, 2021 meeting.

Prices

(US$ per tonne)

Particulars	FY2021	FY2020	% change
Pig Iron	382	354	8%
Billet	336	418	(20)%
TMT	539	494	9%
Wire rod	537	519	3%
DI pipe	544	602	(10)%
Average steel price (US$ per tonne)	**488**	**495**	**(1)%**

Average sales realisation decreased 1% y-o-y from US$495 per tonne in FY2020 to US$488 per tonne in FY2021. Prices of iron and steel are influenced by several macro-economic factors. These include global economic slowdown, US-China trade war, supply chain destocking, government expenditure on infrastructure, the emphasis on developmental projects, demand-supply dynamics, the Purchasing Managers' Index (PMI) in India and production and inventory levels across the globe especially China. Even though the NSR dipped by US$ 7 per tonne, we were able to increase our EBITDA margin to US$ 95 per tonne for the year (against US$ 78 per tonne in FY2020) through better control over costs.

Unit costs

Particulars	FY2021	FY2020	% change
Steel (US$ per tonne)	393	418	(6)%

Cost has decreased by 6 % y-o-y from US$ 418 per tonne to US$ 393 per tonne in FY2021, primarily on account of softening of coking coal price during the year and operational efficiencies which was managed through improvement in key operational metrics

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	%Change
Revenue	630	604	4%
EBITDA	117	83	42%
EBITDA margin (%)	19%	14%	-
Depreciation and amortisation	37	34	9%
Operating Profit before special items	80	49	65%
Share in Group EBITDA (%)	3%	3%	-
Capital Expenditure	(21)	11	-
Sustaining	14	11	(27)%
Growth	(36)	-	-

Revenue increased by 4% to $630 million (FY2020: $604 million), primarily due to higher volume. EBITDA increased by 42% to $117 million in line with higher sales and improved cost of production.

Strategic priorities and outlook

Steel demand is expected to surge owing to the gradual recovery in economic activities across the world, and the emphasis of governments to ramp up infrastructure spend. The focus is to operate with the highest Environment, Health and Safety standards, while improving efficiencies and unit costs.

The focus areas comprise:

- Ensuring business continuity
- Greater focus on Reliability Centred Maintenance
- Obtain clean 'Consent to Operate' and environmental clearances
- Raw material securitisation through –long-term contracts; approaching FTA countries for coking coal
- Ensure zero harm and zero discharge, fostering a culture of 24x7 safety culture

COPPER – INDIA / AUSTRALIA

The year in brief

Tuticorin's copper smelter plant was shut down for FY2021. We continue to engage with the Government of India and relevant authorities to enable the restart of operations at Copper India. We continued to operate our refinery and rod plant at Silvassa, catering to the domestic market.

Occupational health & safety

The lost time injury frequency rate (LTIFR) was zero till Mar'21 (FY2020: 0).

Environment

Copper Mines of Tasmania continued in care and maintenance awaiting a decision on restart. Meanwhile, a small, dedicated team is maintaining the site and there were no significant safety or environmental incidents during the year. The site retained its ISO accreditation in safety, environment and quality management systems and the opportunity of a production lull was used to review and further improve these systems.

Production performance

Particulars	FY2021	FY2020	% change
Production (kt)			
India – cathode	101	77	31%

Operations

The Tamil Nadu Pollution Control Board (TNPCB) vide order, dated 9 April 2018, rejected the consent renewal application of Vedanta Resources Limited for its copper smelter plant at Tuticorin. It directed Vedanta not to resume production operations without formal approval/consent (vide order dated 12 April 2018), and directed the closure of the plant and the disconnection of electricity (vide order dated 23 May 2018).

The Government of Tamil Nadu also issued an order dated 28 May 2018 directing the TNPCB to permanently close and seal the existing copper smelter at Tuticorin; this was followed by the TNPCB on 28 May 2018. Vedanta Resources Limited filed a composite appeal before the National Green Tribunal (NGT) against all the above orders passed by the TNPCB and the Government of Tamil Nadu. In December 2018, NGT set aside the impugned orders and directed the TNPCB to renew the CTO. The order passed by the NGT was challenged by the Tamil Nadu State Government in the Hon'ble Supreme Court.

The Company had filed a writ petition before the Madras High Court challenging various orders passed against the Company in 2018 and 2013. On August 18, 2020, the Madras High Court delivered the judgement wherein it dismissed all the Writ Petitions filed by the Company.

The Company has approached the Supreme Court and challenged the said High Court order by way of a Special Leave Petition (SLP) to Appeal and also filed an interim relief for care and maintenance of the plant. The matter was then listed on December 02, 2020 before the Supreme Court Bench. The Bench after having heard both the sides concluded that at this stage the interim relief in terms of trial run could not be allowed. Further, considering the voluminous nature of documents and pleadings, the matter shall be finally heard on merits. Besides, Hon'ble Supreme Court held that the case will be listed once physical hearing resumes in the Supreme Court. The matter was again mentioned before the bench on 17th March 2021, wherein the matter was posted for hearing on 17th August 2021.

Meanwhile, the Company's Silvassa refinery and rod plant continues to operate as usual, enabling us to cater to the domestic market.

Our copper mine in Australia has remained under extended care and maintenance since 2013. However, we continue to evaluate various options for its profitable restart, given the Government's current favorable support and prices.

Prices

Particulars	FY2021	FY2020	% change
Average LME cash settlement prices (US$ per tonne)	6,897	5,855	18%

Average LME copper prices increased by 18% compared with FY2020.

Financial performance

(US$ million, unless stated)

Particulars	FY2021	FY2020	% change
Revenue	1,469	1,278	15%
EBITDA	(21)	(40)	-
EBITDA margin (%)	(1)%	(3)%	-
Depreciation and amortisation	21	21	-
Operating Profit before special items	(42)	(61)	-
Share in Group EBITDA (%)	(1)%	(1)%	-
Capital Expenditure	7	15	(52)%
Sustaining	2	8	(74)%-
Growth	5	7	(26)%-

During the year, EBITDA was negative $21 million and revenue was $1,469 million, an increase of 25% on the previous year's revenue of $1,278 million. The increase in revenue was mainly due to higher Copper LME prices and higher volume. EBITDA loss decreased to $21 million on account of increase in sales realizations by 20%.

Strategic priorities & outlook

Over the following year our focus and priorities will be to:

- Engage with the Government and relevant authorities to enable the restart of operations at Copper India.
- Sustain operating efficiencies, reducing our cost profile; and
- Upgrade technology to ensure high-quality products and services that sustain market leadership and exceeds customer expectations.

Port Business

Vizag General Cargo Berth (VGCB)

During FY2021, VGCB operations showed a decline of 29% in discharge and 25% in dispatch compared to FY2020. This drop was mainly due to worldwide lockdown during the pandemic and Government of India's initiatives towards curtailing import coal volumes and encouraging domestic coal production or consumption. This has resulted in ~26% reduction of import coal volumes in the Vizag region and ~12% across India on a year-on-year basis.

Risk management

MANAGING AND MITIGATING RISKS IN A VOLATILE BUSINESS SCENARIO

ENTERPRISE RISK MANAGEMENT

As a global natural resources Company operating in multiple geographies, our businesses are exposed to a wide range of risks. Therefore, it is essential to have the necessary systems and a robust governance framework in place to manage risk, while balancing the risk-reward equation expected by stakeholders.

The Group has a multi-layered risk-management framework, which aims to effectively manage risks, which our businesses are exposed to in the course of their operations, as well as in their strategic actions. We identify risks at the individual business level for existing operations as well as for ongoing projects through a well-crafted methodology. Formal discussion on risk management takes place at business level review meetings at least once in a quarter. The Group's every business division has evolved its own risk matrix, which gets reviewed by the Business Management Committee. In addition, business divisions have developed their own risk registers.

Respective businesses review the risks, changes in the nature and extent of major risks since the last assessment, control measures and further action plans. The control measures stated in the risk matrix are also periodically reviewed by the business management teams to verify their effectiveness. These meetings are chaired by business CEOs and attended by CXOs, senior management and concerned functional heads. The role of risk officers at each business and at group level is to create awareness on risks at senior management level, and to develop and nurture a risk-management culture within the businesses. The Company's risk-mitigation plans are integral to the KRAs / KPIs of process owners. The governance of risk management framework in the businesses is anchored with the leadership teams.

The Audit & Risk Management Committee aids the Board in the risk management process by identification and assessment of any changes in risk exposure, review of risk-control measures and by approval of remedial actions, wherever appropriate. The Committee is, in turn, supported by the Group Risk Management Committee, which helps the Audit & Risk Management Committee in evaluating the design and operating effectiveness of the risk-mitigation programme and the control systems. The Risk Management Committee meets at least four times annually to discuss risks and mitigation measures. The committee reviews the robustness of our framework at individual businesses and progress against actions planned for key risks.

Our risk-management framework is simple and consistent and provide clarity on managing and reporting risks to our Board. Together, our management systems, organisational structures, processes, standards and code of conduct and ethics represent the system of internal control that governs how the Group conducts its business and manages the associated risks.

The Board shoulders the ultimate responsibility for the management of risks and for ensuring the effectiveness of internal control systems. It includes the Audit Committee's report on the risk matrix, significant risks, and mitigating actions that we have put in place. Any systemic weaknesses identified by the review are addressed by enhanced procedures to strengthen the relevant controls, and these are reviewed regularly.

The Audit Committee is in turn assisted by the Group-level Risk Management Committee in evaluating the design and effectiveness of the risk-mitigation programme and control systems. The Group Risk Management Committee (GRMC) meets every quarter and comprises the Group

Chief Executive Officer, Group Chief Financial Officer and Director-Management Assurance. The Group Head-Health, Safety, Environment & Sustainability is invited to attend these meetings. GRMC discusses key events impacting the risk profile, relevant risks and uncertainties, emerging risks and progress against planned actions.

Since it is critical to the delivery of the Group's strategic objectives, risk management is embedded in business-critical activities, functions and processes. The risk-management framework helps the Company by aligning operating controls with the Group's objectives. It is designed to manage rather than eliminate the risk of failure to achieve business objectives and provides reasonable and not absolute assurance against material misstatement or loss. Materiality and risk tolerance are key considerations in our decision-making. The responsibility for identifying and managing risks lies with every manager and business leader.

Additionally, other key risk governance and oversight committees in the Group comprise the following:

- Committee of Directors (COD) comprising Vice Chairman & Group CFO supports the Board by considering, reviewing and approving all borrowing and investment related proposals within the overall limits approved by the Board. The invitees to these committee meetings are the CEO, business CFOs, Group Head Treasury and BU Treasury Heads depending upon the agenda matters.
- Sustainability Committee reviews sustainability related risks.

Additionally, there are various Group level ManComs such as Procurement ManCom, Sustainability - HSE ManCom, CSR ManCom, and so on who work on identifying risks in those specific areas and mitigating them.

Each business has developed its own risk matrix, which is reviewed by its respective management committee/executive committee, chaired by its CEO. In addition, each business has developed its own risk register depending on the size of its operations and number of SBUs/ locations. Risks across these risk registers are aggregated and evaluated and the Group's principal risks are identified, and a response mechanism is formulated.

This element is an important component of the overall internal control process from which the Board obtains assurance. The scope of work, authority and resources of the Management Assurance Services (MAS) are regularly reviewed by the Audit Committee. The responsibilities of MAS include recommending improvements in the control environment and reviewing compliance with our philosophy, policies and procedures. The planning of internal audits is approached from a risk perspective. In preparing the internal audit plan, reference is made to the risk matrix, and inputs are sought from senior management, business teams and members of the Audit Committee. In addition, we refer to past audit experience, financial analysis and the prevailing economic and business environment.

Despite Covid-induced disruptions Vedanta's BUs dealt with its impact extremely well, resulting in an effective response. This happens owing to the following:

- Our safety-first culture that prioritised people's health and wellbeing
- Our collaboration with communities, governments, and health experts ensure that leading practices are followed

- Focusing on what is critical to operations and communities, while continuing to build longer-term resilience
- Consistent response to the pandemic across the Group
- Establishment of Covid 19 taskforces under seasoned leaders
- Investments in new processes, procedures, protocols, health-testing equipment and support for workforce.

As a result, our facilities remained largely operational during the pandemic, despite challenges. Rather, the disruption created an opportunity for us to identify and work on certain transformational aspects for the future. We continue to remain committed to achieve our objectives of zero harm, zero wastage and discharge, thus creating sustainable stakeholder value.

The order in which the risks appear in the section below does not necessarily reflect the likelihood of their occurrence or the relative magnitude of their impact on Vedanta's businesses. The risk direction of each risk has been reviewed based on events, economic conditions, changes in business environment and regulatory changes during the year.

While Vedanta's risk-management framework is designed to help the organisation meet its objectives, there is no guarantee that the Group's risk-management activities will mitigate or prevent these or other risks from occurring.

The Board, with the assistance of the management conducts periodic and robust assessments of principal risks and uncertainties of the Group and tests the financial plans for each risk and uncertainty mentioned below.

Impact	Mitigation
Sustainability risks	
Health, safety and environment (HSE)	**Risk direction: ◄►**
The resources sector is subject to extensive health, safety and environmental laws, regulations and standards. Evolving requirements and stakeholder expectations could result in increased cost or litigation or threaten the viability of operations in extreme cases. **Emissions and climate change:** Our global presence exposes us to a number of jurisdictions in which regulations or laws have been, or are being, considered to limit or reduce emissions. The likely effect of these changes could be to increase the cost for fossil fuels, impose levies for emissions in excess of certain permitted levels, and increase administrative costs for monitoring and reporting. Increasing regulation of greenhouse gas (GHG) emissions, including the progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets, is likely to raise costs and reduce demand growth.	■ HSE is a high priority area for Vedanta. Compliance with international and local regulations and standards, protecting our people, communities and the environment from harm and our operations from business interruptions are key focus areas. ■ Policies and standards are in place to mitigate and minimise any HSE-related occurrences. Safety standards issued / continue to be issued to reduce risk level in high-risk areas. Structured monitoring and a review mechanism and system of positive compliance reporting are in place. ■ BU Leadership continues to emphasise on three focus areas: visible felt leadership, safety critical tasks and managing business partners. ■ The process to improve learning from incidents is currently being improved with the aim of reducing re-occurrence of similar incidents. ■ A Vedanta Critical Risk Management programme will be launched to identify critical risk controls and to measure, monitor and report the control effectiveness. ■ The Company has implemented a set of standards to align its sustainability framework with international practice. A structured sustainability assurance programme continues to operate in the business divisions covering environment, health, safety, community relations and human rights aspects, and is designed to embed our commitment at operational level. ■ All businesses have appropriate policies in place for occupational health-related matters, supported by structured processes, controls and technology. ■ To provide incentives for safe behaviour and effective risk management, safety KPIs have been built into performance management of all employees. ■ Carbon forum has been re-constituted with updated Terms of Reference and representation from all businesses. It has a mandate to develop and recommend to the ExCo and Board the carbon agenda for the Group. ■ Enhanced focus on renewable power obligations. ■ The Group Companies are actively working on reducing the GHG Emissions Intensity of our operations.

	■ A task force team is formulated to assess end to end operational requirement for FGD plant. We continue to engage with various stakeholders on the matter.

Managing relationship with stakeholders	**Risk direction: ◄►**
The continued success of our existing operations and future projects are in part dependent on broad support and a healthy relationship with our respective local communities. Failure to identify and manage local concerns and expectations can have a negative impact on relations and therefore affect the organisation's reputation and social licence to operate and grow.	■ CSR approach to community programmes is governed by the following key considerations: the needs of the local people and the development plan in line with the new Companies Act in India; CSR guidelines; CSR National Voluntary Guidelines of the Ministry of Corporate Affairs, Government of India; and the UN's sustainable development goals. ■ Our BU teams are proactively engaging with communities and stakeholders through a proper and structured engagement plan, with the objective of working with them as partners. ■ Business Excos factor in these inputs, and then decide upon focus areas of CSR and budgets while also aligning with strategic business priorities. ■ All BUs follow well-laid processes for recording and resolving all community grievances. ■ Every business has a dedicated Community Development Manager, who is a part of the BU Exco. They are supported with dedicated teams of community professionals. ■ Our business leadership teams have periodic engagements with the local communities to build relations based on trust and mutual benefit. Our businesses seek to identify and minimise any potentially negative operational impacts and risks through responsible behaviour - acting transparently and ethically, promoting dialogue and complying with commitments to stakeholders. ■ Stakeholder engagement is driven basis stakeholder engagement plan at each BUs by CSR and cross functional teams. Regular social and environment risk assessment discussions are happening at BU level. ■ Strategic CSR communication is being worked upon for visibility. Efforts continue to meet with key stakeholders, showcase our state-of the art technology, increase the organic followers and enhance engagement through social media. ■ CSR communication and engagement with all stakeholders – within and outside communities.

Tailings dam stability	Risk direction: ◄►
A release of waste material leading to loss of life, injuries, environmental damage, reputational damage, financial costs and production impacts. A tailings dam failure is considered to be a catastrophic risk – i.e., a very high severity but very low frequency event that must be given the highest priority.	■ The Risk Management Committee included tailings dams on the Group Risk Register with a requirement for annual internal review and three-yearly external review. ■ Operation of tailings dams is executed by suitably experienced personnel within the businesses. ■ Third party has been engaged to review tailings dam operations, including improvement opportunities/remedial works required and the application of Operational Maintenance and Surveillance (OMS) manuals in all operations. This is an oversight role in addition to technical design and guidance arranged by respective business units. Technical guidelines are also being developed. ■ Vedanta Tailings Management Standard has been reviewed, augmented and reissued including an annual, independent review of every dam and half-yearly CEO sign-off that dams continue to be managed within design parameters and in accordance with the last surveillance audit. Move towards dry tailings facilities has commenced. ■ Those responsible for dam management received training from third party and will receive on-going support & coaching from international consultants. ■ Management standard implemented with business involvement. ■ BUs are expected to ensure ongoing management of all tailings facilities with ExCo oversight with independent third-party assessment on Golder recommendations implementation status YoY. ■ Digitalization of tailings monitoring facilities is being carried out at the BU's. ■ Tailing management standard is updated to include latest best practices in tailing management. UNEP/ICMM Global Tailings Standard incorporated into Vedanta Standard during FY21.

Operational risks

Challenges in Aluminium and Power business	Risk direction: ▼
Our projects have been completed and may be subject to a number of challenges during operationalisation phase. These may also include challenges around sourcing raw materials and	■ Improved LME and improved aluminium demand has led to recovery from the fall which happened last year ■ Alumina refinery expansion from 2mtpa to 5 mtpa being pursued ■ Continue to pursue new coal linkages to ensure coal security.

infrastructure-related aspects and concerns around Ash utilization / evacuation.	■ Inbound & outbound supply chain across rail, road & ocean including manpower are functioning well, with no major risks foreseen. ■ Local sourcing of Bauxite & Alumina from Odisha. ■ Jharsuguda facilities have ramped up satisfactorily. ■ Project teams in place for Ash pond, Red mud, railway infrastructure and FGD. ■ Dedicated teams working towards addressing the issue of new emission norms for power plants. ■ Global technical experts have been inducted to strengthen operational excellence. ■ Continuous focus on plant operating efficiency improvement programme to achieve design parameters, manpower rationalisation, logistics and cost reduction initiatives. ■ Continuous augmentation of power security and infrastructure. ■ Strong management team continues to work towards sustainable low-cost of production, operational excellence and securing key raw material linkages. ■ Talwandi Saboo (TSPL) power plant matters are being addressed structurally by a competent team.
Discovery risk	**Risk direction: ◄►**
Increased production rates from our growth-oriented operations place demand on exploration and prospecting initiatives to replace reserves and resources at a pace faster than depletion. A failure in our ability to discover new reserves, enhance existing reserves or develop new operations in sufficient quantities to maintain or grow the current level of our reserves could negatively affect our prospects. There are numerous uncertainties inherent in estimating ore and oil and gas reserves, and geological, technical, and economic assumptions that are valid at the time of estimation. These may change significantly when new information becomes available.	■ Dedicated exploration cell with continuous focus on enhancing exploration capabilities. ■ Appropriate organisation and adequate financial allocation in place for exploration. ■ Strategic priority is to add to our reserves and resources by extending resources at a faster rate than we deplete them, through continuous focus on drilling and exploration programme. Exploration Executive Committee (Exco) has been established to develop and implement strategy and review projects group wide. ■ Continue to make applications for new exploration tenements in countries in which we operate under their respective legislative regimes. ■ Exploration-related systems being strengthened, and standardised Group wide and new technologies being utilised wherever appropriate. ■ International technical experts and agencies are working closely with our exploration teams to enhance our capabilities.

Breaches in IT / cybersecurity	Risk direction: ◄►
Like many global organisations, our 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. Security breaches could also result in misappropriation of funds or disruptions to our business operations. A cybersecurity breach could have an impact on business operations.	■ Group-level focus on formulating necessary frameworks, policies, and procedures in line with best practices and international standards. ■ Implementation and adoption of various best-in-class tools and technologies for information security to create a robust security posture. ■ Special focus to strengthen the security landscape of plant technical systems (PTS) through various initiatives. ■ Adoption of various international standards relating to Information Security, Disaster Recovery & Business Continuity Management, IT Risk Management and setting up internal IT processes and practices in line with these standards. ■ Work towards ensuring strict adherence to the IT related SOPs so as to improve operating effectiveness and continuous focus for employees to go through mandatory cybersecurity awareness training. ■ Periodic assessment of entire IT systems landscapes and governance framework from vulnerability and penetration perspective through reputed expert agencies and addressing the identified observations in a time-bound manner.

Loss of assets or profit due to natural calamities	Risk direction: ◄►
Our operations may be subject to a number of circumstances not wholly within the Group's control. These include damage to or breakdown of equipment or infrastructure, unexpected geological variations or technical issues, extreme weather conditions and natural disasters – any of which could adversely affect production and/or costs.	■ Vedanta has taken appropriate Group insurance cover to mitigate this risk and Insurance Council is in place that monitors adequacy of coverage and status of claims. ■ An external agency reviews the risk portfolio and adequacy of this cover and assists us in our insurance portfolio. ■ Our underwriters are reputed institutions and have capacity to underwrite our risk. ■ Established mechanism of periodic insurance review in place at all entities. However, any occurrence not fully covered by insurance could have an adverse effect on the Group's business. ■ Continuous monitoring and periodic review of security function. ■ Continue to focus on capability building within the Group.

Cairn related challenges	**Risk direction: ◄►**
Cairn India has 70% participating interest in Rajasthan Block. The production sharing contract (PSC) of Rajasthan Block runs till 2020. The Government of India has granted its approval for ten-year extension at less favourable terms, pursuant to its policy for extension of Pre-NELP Exploration Blocks, subject to certain conditions. Ramp up of production vs envisaged may have impact on profitability.	■ RJ PSC 2020 extension was issued by DGH subject to certain conditions. Ongoing dialogue and communication with the Government and relevant stakeholders to address the conditions. ■ The applicability of the Pre-NELP Extension Policy to the RJ Block is currently sub judice. ■ Discussions within teams as well as with partners have been initiated with an objective to optimize cost across all spheres of operations. ■ Constant engagement with vendors / partners to ensure minimal project delay based on the current situation and plan to ramp-up. ■ The growth projects are being implemented through an integrated contracting approach. Contracts have built in mechanism for risk and reward. Rigorous project reviews with execution partners / contractors to deliver volumes and returns. ■ Project management committee & project operating committee have been set to provide support to the outsourcing partner and address issues on time to enable better quality control as well as timely execution for growth projects.

Compliance risks	
Regulatory and legal risk	**Risk direction: ◄►**
We have operations in many countries around the globe. These may be impacted because of legal and regulatory changes in the countries in which we operate resulting in higher operating costs, and restrictions such as the imposition or increase in royalties or taxation rates, export duty, impacts on mining rights/bans, and change in legislation.	■ The Group and its business divisions monitor regulatory developments on an ongoing basis. ■ Business-level teams identify and meet regulatory obligations and respond to emerging requirements. ■ Focus has been to communicate our responsible mining credentials through representations to government and industry associations. ■ Continue to demonstrate the Group's commitment to sustainability by proactive environmental, safety and CSR practices. Ongoing engagement with local community/media/NGOs. ■ SOX-compliant subsidiaries. ■ Common compliance monitoring system being implemented in Group companies. Legal requirements and a responsible person for compliance have been mapped in the system. ■ Legal counsels within the Group continues to work on strengthening the compliance and governance framework and the resolution of legal disputes. ■ Competent in-house legal organisation is in place at all the businesses and the legal teams have been strengthened with induction of senior legal professionals across all Group companies. ■ Standard operating procedures (SOPs) have been implemented across our businesses for compliance monitoring. ■ Greater focus for timely closure of key non-compliances. ■ Contract management framework has been strengthened with the issue of boiler plate clauses across the Group which will form part of all contracts. All key contract types have also been standardised. ■ Framework for monitoring performance against anti-bribery and corruption guidelines is also in place.
Tax related matters	**Risk direction: ◄►**
Our businesses are in a tax regime and changes in any tax structure or any tax-related litigation may impact our profitability.	■ Tax Council reviews all key tax litigations and provides advice to the Group. ■ Continue to engage with concerned authorities on tax matters. ■ Robust organisation in place at business and Group-level to handle tax-related matters. ■ Continue to consult and obtain opinion from reputable tax consulting firms on major tax matters to mitigate the tax risks on the Group and its subsidiaries

Financial risks

Fluctuation in commodity prices (including oil) and currency exchange rates	Risk direction: ◄►
Prices and demand for the Group's products may remain volatile/uncertain and could be influenced by global economic conditions, natural disasters, weather, pandemics, such as the COVID-19 outbreak, political instability, and so on. Volatility in commodity prices and demand may adversely affect our earnings, cash flow and reserves. Our assets, earnings and cash flows are influenced by a variety of currencies due to our multi-geographic operations. Fluctuations in exchange rates of those currencies may have an impact on our financials.	■ The Group's well-diversified portfolio acts as a hedge against fluctuations in commodities and delivers cashflows through the cycle. ■ Pursue low-cost production, allowing profitable supply throughout the commodity price cycle. ■ Vedanta considers exposure to commodity price fluctuations to be integral to the Group's business and its usual policy is to sell its products at prevailing market prices; and not to enter into price hedging arrangements other than for businesses of custom smelting and purchased alumina, where back-to-back hedging is used to mitigate pricing risks. Strategic hedge, if any, is taken after appropriate deliberations and due approval from ExCo. ■ Our Forex policy prohibits forex speculation. ■ Robust controls in forex management to hedge currency risk liabilities on a back-to-back basis. ■ Finance Standing Committee reviews all forex and commodity-related risks and suggests necessary courses of action as needed by business divisions. ■ Seek to mitigate the impact of short-term currency movements on the businesses by hedging short-term exposures progressively, based on their maturity. However, large, or prolonged movements in exchange rates may have a material adverse effect on the Group's businesses, operating results, financial condition and/or prospects. ■ Notes to the financial statements in the Annual Report provide details of the accounting policy followed in calculating the impact of currency translation.

CONSOLIDATED INCOME STATEMENT

(US$ Million)

		Year ended 31 March 2021			Year ended 31 March 2020		
	Note	**Before Special items**	**Special items (Note 6)**	**Total**	**Before Special items**	**Special items (Note 6)**	**Total**
Revenue	5	11,722	-	11,722	11,790	-	11,790
Cost of sales		(8,494)	(16)	(8,510)	(9,611)	24	(9,587)
Gross profit		**3,228**	**(16)**	**3,212**	**2,179**	**24**	**2,203**
Other operating income		178	-	178	142	-	142
Distribution costs		(272)	-	(272)	(257)	-	(257)
Administrative expenses		(433)	-	(433)	(473)	(17)	(490)
Impairment (charge)/reversal [net]	6	-	(33)	(33)	-	(2,072)	(2,072)
Operating profit/ (loss)		**2,701**	**(49)**	**2,652**	**1,591**	**(2,065)**	**(474)**
Investment revenue	7	292	-	292	382	12	394
Finance costs	8	(1,209)	(58)	(1,267)	(1,179)	-	(1,179)
Other gains and (losses) [net]	9	11	(5)	6	(87)	-	(87)
Profit/ (loss) before taxation from continuing operations (a)		**1,795**	**(112)**	**1,683**	**707**	**(2,053)**	**(1,346)**
Net (expense)/tax credit (b)	10	(316)	18	(298)	(411)	781	370
Profit/ (loss) for the year from continuing operations (a+b)		**1,479**	**(94)**	**1,385**	**296**	**(1,272)**	**(976)**
Profit/ (Loss) after tax for the year from discontinued operations	3(b)	-	91	91	-	(771)	(771)
Profit/ (loss) for the year		**1,479**	**(3)**	**1,476**	**296**	**(2,043)**	**(1,747)**
Attributable to:							
Equity holders of the parent		303	20	323	(202)	(1,366)	(1,568)
Non-controlling interests		1,176	(23)	1,153	498	(677)	(179)
Profit/ (loss) for the year		**1,479**	**(3)**	**1,476**	**296**	**(2,043)**	**(1,747)**

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Profit/ (Loss) for the year	**1,476**	**(1,747)**
Items that will not be reclassified subsequently to income statement:		
Remeasurement of net defined benefit plans	(1)	(30)
Tax effects on net defined benefit plans	(1)	10
Profit/ (Loss) on fair value of financial asset investment	9	(10)
Total (a)	**7**	**(30)**
Items that may be reclassified subsequently to income statement:		
Exchange differences arising on translation of foreign operations	232	(652)
(Loss)/ Gains of cash flow hedges recognized during the year	(34)	18
Tax effects arising on cash flow hedges	12	(6)
Gains/ (loss) on cash flow hedges recycled to income statement	24	(4)
Tax effects arising on cash flow hedges recycled to income statement	(8)	2
Total (b)	**226**	**(642)**
Other comprehensive profit/ (loss) for the year (a+b)	**233**	**(672)**
Total comprehensive profit/ (loss) for the year	**1,709**	**(2,419)**
Attributable to:		
Equity holders of the parent	419	(1,802)
Non-controlling interests	1,290	(617)
Total comprehensive profit/ (loss) for the year	**1,709**	**(2,419)**

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(US$ million)

	Note	As at 31 March 2021	As at 31 March 2020*
Assets			
Non-current assets			
Goodwill		12	12
Intangible assets		99	100
Property, plant and equipment		12,968	13,005
Exploration and evaluation assets		334	240
Financial asset investments	12	21	12
Non-current tax assets		375	354
Other non-current assets		1,701	1,548
Financial Instruments (derivatives)		-	0
Deferred tax assets		1018	1,114
		16,528	**16,385**
Current assets			
Inventories		1,358	1,515
Trade and other receivables		1,465	1,102
Financial instruments (derivatives)		10	93
Current tax assets		1	1
Short-term investments	13	5,002	4,385
Cash and cash equivalents	14	955	705
		8,791	**7,801**
Total assets		**25,319**	**24,186**
Liabilities			
Current liabilities			
Borrowings	15(a)	3,673	10,186
Operational buyer's credit/supplier's credit		1,104	1,361
Trade and other payables		4,442	4,358
Financial instruments (derivatives)		38	13
Retirement benefits		16	15
Provisions		32	32
Current tax liabilities		38	26
		9,343	**15,991**
Net current liabilities		**(552)**	**(8,190)**
Non-current liabilities			
Borrowings	15(a)	12,704	4,909
Trade and other payables		205	232
Financial instruments (derivatives)		10	6
Deferred tax liabilities		299	397
Retirement benefits		20	22
Provisions		407	356
Non equity non-controlling interests		-	-
		13,645	**5,922**
Total liabilities		**22,988**	**21,913**
Net assets		**2,331**	**2,273**
Equity			
Share capital		29	29
Share premium		-	202
Hedging reserve		(97)	(95)
Other reserves		(296)	(331)
Retained earnings		(2,783)	(3,068)
Equity attributable to equity holders of the parent		**(3,147)**	**(3,263)**
Non-controlling interests		5,478	5,536
Total equity		**2,331**	**2,273**

*Restated. Refer note 1(b)(i)

Financial Statements of Vedanta Resources Limited (formerly Vedanta Resources plc) with registration number 4740415 were approved by the Board of Directors on 18 June 2021 and signed on their behalf by

Navin Agarwal

Director

CONSOLIDATED CASH FLOW STATEMENT

(US$ million)

	Note	Year ended 31 March	Year ended 31 March 2020*
Operating activities			
Profit/(Loss) before taxation from continuing operations		1,683	(1,346)
Adjustments for:			
Depreciation and amortisation		1,099	1,412
Investment revenues		(292)	(394)
Finance costs		1,267	1,179
Other (gains) and losses (net)		(8)	87
(Profit)/ Loss on disposal of PP&E		(10)	8
Write-off of unsuccessful exploration costs		1	-
Share-based payment charge		8	10
Impairment charge (net)		33	2,072
Other special items		16	(7)
Other non-cash items		-	-
Operating cash flows before movements in working capital		**3,797**	**3,021**
Decrease in inventories		187	292
Increase in receivables		(409)	(713)
(Decrease)/ Increase in payables		(241)	411
Cash generated from operations		**3,334**	**3,011**
Dividend received		-	2
Interest received		320	130
Interest paid		(1,336)	(1,136)
Income taxes paid (net of refunds)		(315)	(165)
Dividends paid		(162)	(536)
Cash Flows from operating activities (Continuing activities)		**1,841**	**1,306**
Net cash from Operating Activities (Discontinued operations)		-	3
Net cash inflow from operating activities		**1,841**	**1,309**
Cash flows from investing activities			
Consideration paid for business acquisition (net of cash and cash equivalents acquired)	3(a)	(6)	(5)
Purchases of property, plant and equipment, intangibles, exploration and evaluation assets		(913)	(1,104)
Proceeds on disposal of property, plant and equipment, intangibles, exploration and evaluation assets		23	21
Proceeds from redemption of short-term investments	15(b)	13,988	15,178
Purchases of short-term investments	15(b)	(14,723)	(15,460)
Proceeds from sale of financial asset investments	15(b)	-	428
Payments toward financial asset investments	15(b)	-	(63)
Amount paid against guarantees issued on behalf of KCM		-	(251)
Reduction in cash and cash equivalents from discontinued		-	(1)
Cash Flows from investing activities (Continuing activities)		**(1,631)**	**(1,257)**
Net cash used in investing activities (Discontinued operations)		-	(4)
Net cash used in investing activities		**(1,631)**	**(1,261)**
Cash flows from financing activities			
Payment for acquiring non-controlling interest		(403)	(15)
Dividends paid to non-controlling interests of subsidiaries		(992)	(101)
Exercise of stock options in subsidiary		-	0
Repayment of working capital loan (net)	15(b)	(1,294)	(1,604)
Proceeds from other short-term borrowings	15(b)	3,569	317
Repayment of other short-term borrowings	15(b)	(3,394)	(551)
Proceeds from long-term borrowings	15(b)	5,182	4,294
Repayment of long-term borrowings	15(b)	(2,845)	(2,650)
Payment of lease liabilities		(46)	(45)
Cash Flows from financing activities (Continuing activities)		(223)	(355)
Net cash from Financing Activities (Discontinued operations)		-	-
Net cash used in financing activities		**(223)**	**(355)**
Net decrease in cash and cash equivalents		**(13)**	**(307)**
Effect of foreign exchange rate changes		22	(62)
Cash and cash equivalents at beginning of the year		**692**	**1,061**
Cash and cash equivalents at end of the year	**14 & 15(b)**	**701**	**692**

**Refer Note 1(b)(ii)*

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 March 2021

(US$ million)

	Attributable to equity holders of the parent							
	Share capital	**Share premium**	**Hedging reserve**	**Other reserves[1]**	**Retained earnings**	**Total**	**Non-controlling Interests**	**Total equity**
At 1 April 2020	29	202	(95)	(331)	(3,068)	(3,263)	5,536	2,273
Profit for the year	-	-	-	-	323	323	1,153	1,476
Other comprehensive income/ (loss) for the year	-	-	(2)	98	-	96	137	233
Total comprehensive income/ (loss) for the year	**-**	**-**	**(2)**	**98**	**323**	**419**	**1,290**	**1,709**
Transfers	-	-	-	(63)	63	-	-	-
Dividends paid/ payable	-	-	-	-	(251)	(251)	(992)	(1,243)
Exercise of stock options of subsidiary	-	-	-	-	5	5	3	8
On account of Capital reduction[3]	-	(202)	-	-	202	-	-	-
Acquisition of FACOR	-	-	-	-	-	-	(4)	(4)
Share buy back	-	-	-	-	(38)	(38)	(365)	(403)
Change in fair value of put option liability/conversion option asset/derecognition of non controlling interest	-	-	-	-	(19)	(19)	15	(4)
Other changes in non-controlling interests[2]	-	-	-	-	-	-	(5)	(5)
At 31 March 2021	**29**	**-**	**(97)**	**(296)**	**(2,783)**	**(3,147)**	**5,478**	**2,331**

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.

2. Includes share-based payment charge by subsidiaries and exercise of stock options of subsidiary.

3. Pursuant to Section 641 (1) (a) of Companies Act 2006, US$ 202 million of share premium was converted into distributable reserves. Accordingly, the share premium account was reduced to nil.

For the year ended 31 March 2020

(US$ million)

	Attributable to equity holders of the parent							
	Share capital	Share premium	Hedging reserve	Other reserves[1]	Retained earnings	Total	Non-controlling Interests	Total equity
At 1 April 2019	**29**	**202**	**(98)**	**(97)**	**(964)**	**(928)**	**6,181**	**5,253**
Loss for the year	-	-	-	-	(1,568)	(1,568)	(179)	(1,747)
Other comprehensive income/ (loss) for the year	-	-	3	(237)	-	(234)	(438)	(672)
Total comprehensive income/(loss) for the year	**-**	**-**	**3**	**(237)**	**(1,568)**	**(1,802)**	**(617)**	**(2,419)**
Transfers	-	-	-	(14)	14	-	-	-
Dividends paid/ payable	-	-	-	-	(537)	(537)	(101)	(638)
Derecognition of Non-controlling interest pertaining to KCM (refer note 3(b))	-	-	-	-	-	-	86	86
Acquisition of Non-controlling interest of ESL	-	-	-	17	-	17	(33)	(16)
Change in fair value of put option liability/conversion option asset/derecognition of non-controlling interest	-	-	-	-	(16)	(16)	12	(4)
Other changes in non-controlling interests[2]	-	-	-	-	3	3	8	11
At 31 March 2020	**29**	**202**	**(95)**	**(331)**	**(3,068)**	**(3,263)**	**5,536**	**2,273**

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.
2. Includes share-based payment charge by subsidiaries and exercise of stock options of subsidiary.

OTHER RESERVES COMPRISE

(US$ million)

	Currency translation reserve	Merger reserve(2)	Financial asset investment revaluation reserve	Capital Reserve	Other reserves(3)	Total
At 1 April 2019	**(2,380)**	**4**	**11**	**12**	**2,256**	**(97)**
Exchange differences on translation of foreign operations	(225)	-	-	-	-	(225)
Loss on fair value of financial asset investments	-	-	(5)	-	-	(5)
Remeasurements	-	-	-	-	(7)	(7)
Acquisition of Non-controlling interest of ESL	-	-	-	17	-	17
Transfer to retained earnings (1)	-	-	-	-	(14)	(14)
At 1 April 2020	**(2,605)**	**4**	**6**	**29**	**2,235**	**(331)**
Exchange differences on translation of foreign operations	93	-	-	-	-	93
Loss on fair value of financial asset investments	-	-	5	-	-	5
Remeasurements	-	-	-	-	0	0
Transfer to retained earnings (1)	-	-	-	-	(63)	(63)
At 31 March 2021	**(2,512)**	**4**	**11**	**29**	**2,172**	**(296)**

(1) *Transfer to retained earnings during the year ended 31 March 21 includes withdrawal of US$ 39 million from debenture redemption reserve (31 March 2020: US$ 14 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 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 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$ 4 million (31 March 2020: US$ 4 million), debenture redemption reserve of US$ 91 million (31 March 2020 US$ 130 million) and balance mainly includes general reserve and capital redemption 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.*

Group Overview

Vedanta Resources Limited ("Vedanta" or "VRL" or "Company") is a company incorporated and domiciled in the United Kingdom. Registered address of the Company is 8th Floor, 20 Farringdon Street, London, EC4A 4AB. Vedanta and its consolidated subsidiaries (collectively, the "Group") is a diversified natural resource group engaged in exploring, extracting and processing minerals and oil and gas. The Group engages in the exploration, production and sale of zinc, lead, silver, copper, aluminium, iron ore and oil & gas and have a presence across India, South Africa, Namibia, Ireland, Australia, Liberia and UAE. The Group is also in the business of commercial power generation, steel manufacturing and port operations in India and manufacturing of glass substrate in South Korea and Taiwan.

Details of the Group's various businesses are as follows.

- Zinc India business is owned and operated by Hindustan Zinc Limited ("HZL").
- Zinc international business is comprising of Skorpion mine and refinery in Namibia operated through THL Zinc Namibia Holdings (Proprietary) Limited ("Skorpion"), Lisheen mine in Ireland operated through Vedanta Lisheen Holdings Limited ("Lisheen") (Lisheen mine ceased operations in December 2015) and Black Mountain Mining (Proprietary) Limited ("BMM"), whose assets include the operational Black Mountain mine and the Gamsberg mine located in South Africa.
- The Group's oil and gas business is owned and operated by Vedanta Limited and its subsidiary, Cairn Energy Hydrocarbons Limited and consists of exploration, development and production of oil and gas.
- The Group's iron ore business is owned by Vedanta Limited, and by two wholly owned subsidiaries of Vedanta Limited, i.e., Sesa Resources Limited and Sesa Mining Corporation Limited and consists of exploration, mining and processing of iron ore, pig iron and metallurgical coke and generation of power for captive use. Pursuant to the order of Honourable Supreme Court of India, mining operations in the state of Goa are currently suspended. The Group's iron ore business includes Western Cluster Limited ("WCL") in Liberia which has iron ore assets and is wholly owned by the Group. WCL's assets include development rights to Western Cluster and a network of iron ore deposits in West Africa. WCL's assets have been fully impaired.
- The Group's copper business comprises three operations divided into two segments, namely (i) Copper India/Australia, comprising Vedanta Limited's custom smelting operations in India (including captive power plants at Tuticorin in Southern India) and (ii) Copper Zambia comprising Konkola Copper Mines plc's ("KCM") mining and smelting operations in Zambia. In view of ongoing litigations in relation to the Zambian operations, the Group believes that it has lost control over KCM and has accordingly deconsolidated the same (refer note 3(b)(iii) for further details).

  The Group's copper business in India has received an order from Tamil Nadu Pollution Control Board ("TNPCB") on 09 April 2018, rejecting the Group's application for renewal of consent to operate under the Air and Water Acts for the 400,000 tpa copper smelter plant in Tuticorin for want of further clarification and consequently the operations were suspended. The Group has filed an appeal with TNPCB Appellate authority against the said order. During the pendency of the appeal, TNPCB through its order dated 23 May 2018 ordered for disconnection of electricity supply and closure of the copper smelter plant. Post such order, the state government on 28 May 2018 ordered the permanent closure of the plant. (Refer Note 2(c)(I)(vii)).

Further, the Group's copper business includes refinery and rod plant Silvassa consisting of a 133,000 MT of blister/ secondary material processing plant, a 216,000 tpa copper refinery plant and a copper rod mill with an installed capacity of 258,000 tpa. The plant continues to operate as usual, catering to the domestic market.

In addition, the Group owns and operates the Mt. Lyell copper mine in Tasmania, Australia through its subsidiary, CMT and a precious metal refinery and copper rod plant in Fujairah, UAE through its subsidiary Fujairah Gold FZC. The operations of Mt Lyell copper mine were suspended in January 2014 following a mud slide incident and were put into care and maintenance since 09 July 2014 following a rock fall incident in June 2014.

- The Group's Aluminium business is owned and operated by Vedanta Limited and by Bharat Aluminium Company Limited ("BALCO"). The aluminium operations include a refinery and captive power plant at Lanjigarh and a smelter and captive power plants at Jharsuguda both situated in the State of Odisha in India. BALCO's partially integrated aluminium operations comprise two bauxite mines, captive power plants, smelting and fabrication facilities in the State of Chhattisgarh in central India.
- The Group's power business is owned and operated by Vedanta Limited, BALCO, and Talwandi Sabo Power Limited ("TSPL"), a wholly owned subsidiary of Vedanta Limited, which are engaged in the power generation business in India. Vedanta Limited power operations include a thermal coal- based commercial power facility of 600 MW at Jharsuguda in the State of Odisha in Eastern India. BALCO power operations include 300 MW thermal coal-based power plant at Korba. TSPL power operations include 1,980 MW (three units of 660 MW each) thermal coal- based commercial power facilities. Power business also includes the wind power plants commissioned by HZL and a power plant at MALCO Energy Limited ("MEL") (under care and maintenance) situated at Mettur Dam in State of Tamil Nadu in southern India.
- The Group's other activities include ESL Steel Limited ("ESL") acquired on 04 June 2018. ESL is engaged in the manufacturing and supply of billets, TMT bars, wire rods and ductile iron pipes in India.

The Group's other activities also include Vizag General Cargo Berth Private Limited ("VGCB") and Maritime Ventures Private Limited ("MVPL"). Vizag port project includes mechanization of coal handling facilities and upgradation of general cargo berth for handling coal at the outer harbour of Visakhapatnam Port on the east coast of India. VGCB commenced operations in the fourth quarter of fiscal year 2013. MVPL is engaged in the business of rendering logistics and other allied services inter alia rendering stevedoring, and other allied services in ports and other allied sectors. The Group's other activities also include AvanStrate Inc. ("ASI") and Ferro Alloys Corporation Limited ("FACOR"). ASI is involved in manufacturing of glass substrate in South Korea and Taiwan. FACOR was acquired on 21 September 2020 and is involved in business of producing Ferro Alloys and owns a Ferro Chrome plant with capacity of 72,000 TPA, two operational Chrome mines and 100 MW of Captive Power Plant through its subsidiary, FACOR Power Limited ("FPL").

Delisting of Vedanta Limited

On 12 May 2020, the Company announced its intention to acquire outstanding shares of Vedanta Limited from the market and take Vedanta Limited private by delisting it from all stock exchanges in India and SEC.

The Company also informed Vedanta Limited Board vide letter dated 12 May 2020 and in turn Vedanta Limited had informed the Indian stock exchanges that it has received a letter from VRL, wherein VRL has expressed its intention to, either individually or along with one or more subsidiaries, acquire all fully paid-up equity shares of Vedanta Limited ("Equity Shares") that are held by the public shareholders (as defined under the Delisting Regulations, to be referred to as "Public Shareholders") and consequently voluntarily delist the Equity Shares from BSE Limited and National Stock Exchange of India Limited, the recognized stock exchanges where the Equity Shares are presently listed ("Stock Exchanges"), in accordance with the Delisting Regulations ("Delisting Proposal") and if such delisting is successful, then to also delist the company's American Depositary Shares from the New York Stock Exchange ("NYSE") and deregister the company from the Securities and Exchange Commission ("SEC"), subject to the requirements of the NYSE and the SEC.

Further, the board of directors of Vedanta Limited in their meeting held on 18 May 2020 have considered and granted their approval for the said Delisting Proposal and to seek shareholders' approval for the said proposal via postal ballot. The Shareholder notices for postal ballot was posted on 24 May 2020 and shareholder approved the delisting of Vedanta Limited on 25 June 2020.

The Stock Exchanges granted in-principal approval for delisting vide their letters each dated 28 September 2020. VRL and its wholly owned subsidiaries, namely, Vedanta Holdings Mauritius Limited and Vedanta Holdings Mauritius II Limited had issued a public announcement with regard to the delisting offer on 29 September 2020 in accordance with Regulation 10(1) of the Delisting Regulations.

The Public Shareholders holding Equity Shares were invited to submit bids through reverse book building process conducted through the Stock Exchange Mechanism of BSE during the bid period (5 October 2020 to 9 October 2020), in accordance with the Delisting Regulations.

The total number of Offer Shares validly tendered by the Public Shareholders in the Delisting Offer were 1,25,47,16,610, which were less than the minimum number of Offer Shares required to be accepted by the Acquirers in order for Delisting Offer to be successful in terms of Regulation 17(1)(a) of the Delisting Regulations.

Thus, the Delisting Offer was considered to be unsuccessful in terms of Regulation 19(1) of the Delisting Regulations. Accordingly, the Acquirers did not acquire any Equity Shares tendered by the Public Shareholders in the Delisting Offer and the Equity Shares of Vedanta Limited continue to remain listed on the Stock Exchanges.

NOTES TO PRELIMINARY ANNOUNCEMENT

1(a). General information and accounting policies

This preliminary results announcement is for the year ended 31 March 2021. While the financial information contained in this preliminary results announcement has been prepared in accordance with the recognition and measurement criteria of International Financial Reporting Standards ("IFRS"), this announcement does not itself contain sufficient information to comply with IFRS. For these purposes, IFRS comprise the Standards issued by the International Accounting Standards Board ("IASB") and Interpretations issued by the IFRS Interpretations Committee ("IFRIC"). The financial information contained in the preliminary announcement has been prepared on the same basis of accounting policies as set out in the previous financial statements unless otherwise stated. The standards/amendments applicable with effect from 01 April 2020 did not have any significant impact on the amounts reported in the financial statements. The Company expects to publish full financial statements that comply with IFRSs in due course.

1(b) Restatement/Reclassification

On an ongoing basis, the management reviews the changes in the nature of the Company's operations, selection and application of accounting policies and recent accounting pronouncements to assess appropriateness of presentation or classifications of items in the financial statements. For the year ended 31 March 2021, the Company has revised the presentation of:

i) operational buyer's/suppliers' credit and vendor financing on the face of the balance sheet, which were previously included under trade payables to enhance the understanding of the financial statements. The value of such liabilities as at 01 April 2020 was US$ 1,361 Million (As at 31 March 2021: US$ 1,104 Million) and this reclassification has not had any material impact on the financial statements.

ii) the constituents of cash and cash equivalents for the purpose of cash flow statement and movement in net debt (Refer Note 15(b)) do not consider the restricted cash and cash equivalents amount hitherto included in other bank balance. Consequently, such accounts amounting to US$ 72 Million and US$ 13 Million as at 31 March 2019 and 31 March 2020 respectively have been excluded from opening and closing cash and cash equivalents for the year ended March 31, 2020 for the purpose of above notes.

iii) the constituents of 'Short term investments' for the purpose of movement in net debt to include only those amounts of restricted funds that are corresponding to liabilities (e.g. margin money deposits) and non-current bank deposit included for purpose of Movement in net debt disclosure. Consequently, restricted funds amounting to US$ 27 Million and US$ 8 Million as at 31 March 2019 and 31 March 2020 have been excluded from opening and closing 'Short-term investments' and non-current bank deposit amounting to US$ 3 Million and US$ 5 Million as at 31 March 2019 and 31 March 2020 included in movement in net debt disclosure.

1(c) Going concern

The Group has prepared the consolidated financial statements on a going concern basis. The Directors have considered a number of factors in concluding on their going concern assessment.

The Group monitors and manages its funding position and liquidity requirements throughout the year and routinely forecasts its future cash flows and financial position. The key assumptions for these forecasts include production profiles, commodity prices and financing activities.

The last going concern assessment carried out for the period ended 30 September 2020 was approved by the Board of Directors in December 2020. The Directors were confident that the Group will be able to ensure production is not materially impacted by the COVID-19 pandemic, that the Group will be able to roll-over or obtain external financing as required and that prices will remain within their expected range.

Since then, while the other mitigating actions as highlighted in the period ended 30 September 2020 financial statements remain available to the Group, following recent significant developments have had a positive bearing on the liquidity and Company's ability to continue as going concern;

a. The Group has raised $ 1Bn Bonds in December 2020 to repay upcoming maturity of bonds in June 2021 while providing certain liquidity for other repayments in Q4 FY21.

b. On 24 December 2020, VRL purchased on the market 185,000,000 equity shares of Vedanta Limited ("VEDL") at a price of INR 159.94 per share, increasing its overall stake from 50.13% to 55.11% of the total paid-up share capital of VEDL.

c. In January 2021, VRL announced a voluntary open offer ("VOO") to acquire an additional 10% stake in VEDL which was subsequently increased to an offer for acquiring 17.51% of paid up share capital of VEDL at a price of INR 235 per share in March 2021.

   In April 2021, 374,231,161 equity shares representing 10.1% of paid up share capital of Vedanta Limited were validly tendered in the VOO. The acquisition of such equity shares was completed, and consideration for such acquisition was paid in April 2021. Post this acquisition, the Company's shareholding in Vedanta Limited increased from current 55.1% to 65.2%

   For this stake increase in VEDL by VRL through creeping acquisition and VOO:
   - the Group raised $1bn through private financing in December 2020, $0.4bn drawn in December for creeping acquisition of 4.98% VEDL Stake, $0.1bn drawn in April'21 for VOO;
   - $1.2bn Bond raised in February 2021 at the rate of 8.95% for stake purchase in VEDL under VOO/refinancing, c. $0.8bn used for VOO in April 2021; and
   - c. $0.4bn term loan facilities executed with certain banks.

The Directors consider that the expected operating cash flows of the Group combined with the current finance facilities which are in place give them confidence that the Group has adequate resources to continue as a going concern.

The Directors have considered the Group's ability to continue as a going concern in the period to 30 September 2022 ("the going concern period") under both a base case and a downside case.

The downside case assumes, amongst other sensitivities, delayed ramp-up and re-opening of projects, deferment of additional capital expenditure and a conservative assumption of uncommitted refinancing.

- **Covenant Compliance**

The Group's financing facilities, including bank loans and bonds, contain covenants requiring the Group to maintain specified financial ratios. The Group has complied with all the covenant requirements till 31 March 2021.

Management notes that the Group has previously obtained covenant waivers, including in response to the appointment of a provisional liquidator at KCM. Additionally, the Group has recently successfully amended the covenants for its listed bonds. The Directors of the Group are confident that they will be able to execute mitigating actions (see below) to ensure that the Group avoids, or secures waivers or relaxations for future period breaches, if any, of its covenants during the going concern period.

Mitigating actions

The mitigating options available to the Group and Company to address the uncertainties in relation to going concern include:

- Out of the $1.2 bn bonds raised in February 2021, c. $0.4bn available for refinancing/ interest servicing at VRL. Out of $1.0bn private financing obtained in December 2020, $0.5bn is undrawn. Further, $0.2bn one year term loans tied up with two foreign banks.
- Vedanta Limited executed a ~$1.4bn long term syndicated long term facility agreement with overall maturity of seven years with State Bank of India, Bank of Baroda, Indian Bank and Yes Bank Limited as arrangers. Out of ~$1.4bn, ~$1.2bn has been drawn till March 2021 and further ~$0.2bn will be drawn in Q1 FY21-22.
- Execution of an off-take agreement covering certain future production and amounting potentially to c. $1bn. The Group is currently negotiating with a number of interested bidders an off-take agreement, under which the Group would receive an advance payment in return for supply of certain future production. However, no agreement has been concluded and there is a therefore uncertainty as to the Group's ability to access these funds.
- Extension of working capital facilities and rollover of commercial papers: As at 31 March 2021, the Group had unutilised working capital facilities amounting to c. $1.8bn and commercial papers in issue amounting to c. $0.3bn. These facilities are not committed for the full duration of the going concern period to September 2022, but rather must be extended or rolled over. There is therefore a risk that, in adverse market conditions, the Group would not be able to extend or roll over these facilities. However, the Directors assess that the Group has a strong record of extending and rolling over these short-term facilities and has historically had significantly higher levels of commercial papers in issue.
- Access to supplier credit and customer advances: As at 31 March 2021, the Group had c. $1.1bn of supplier's credit and c. $0.7bn of advances from customers. These financing arrangements are integral to the business of certain Group divisions, but are not committed for the full duration of the going concern period. There is therefore a risk that the Group will not be able to access these financing arrangements in the future. Nevertheless, the Directors note that the Group has in the past consistently obtained supplier credit and customer advances at current levels.

Conclusion

Notwithstanding the uncertainties described above, the Directors have confidence in Group's ability to execute sufficient mitigating actions. Based on these considerations, the Directors have a reasonable expectation that the Group and the Company will meet its commitments as they fall due over the going concern period. Accordingly, the Directors continue to adopt the going concern basis in preparing the Group's consolidated financial statements and Company's standalone financial statements.

2(a) Compliance with applicable law and IFRS

The financial information contained in this preliminary results announcement has been prepared on the going concern basis. This preliminary results announcement does not constitute the Group's statutory accounts as defined in section 434 of the Companies Act 2006(the "Act") but is derived from those accounts. The statutory accounts for the year ended 31 March 2021 have been approved by the Board and will be delivered to the Registrar of Companies following approval by the Company's shareholders. The auditors have reported on those accounts and their report was unqualified, with no matters by way of emphasis, and did not contain statements under section 498(2) of the Act (regarding adequacy of accounting records and returns) or under section 498(3) (regarding provision of necessary information and explanations).

The information contained in this announcement for the year ended 31 March 2020 also does not constitute statutory accounts. A copy of the statutory accounts for that year has been delivered to the Registrar of Companies. The auditors have reported on those accounts and their report was qualified for not able to perform their planned procedures surrounding the observation of physical counts of inventory due to restrictions imposed by the Government of India in response to COVID19. Material uncertainty around going concern was also reported. Except for the reason arising solely from the limitation on the scope of Auditors' work relating to inventory, their report did not contain statements under section 498(2) of the Act (regarding adequacy of accounting records and returns) or under section 498(3) (regarding provision of necessary information and explanations).

2(b) Application of new and revised standards

The Group has adopted, with effect from 01 April 2020, the following new and revised standards and interpretations. Their adoption has not had any significant impact on the amounts reported in the consolidated financial statements.

1. Amendments to IFRS 3 regarding definition of a Business
2. Amendments to IFRS 7 and 9 regarding Interest Rate Benchmark Reform
3. Amendments to IAS 1 and IAS 8 regarding definition of Material
4. Amendments to IFRS 16 regarding COVID-19 related rent concessions

Other Amendments

A number of other minor amendments to existing standards also became effective on 01 April 2020 and have been adopted by the Group. The adoption of these new accounting pronouncements did not have a material impact on the accounting policies, methods of computation or presentation applied by the Group.

2(c) Significant accounting estimates and judgements

The preparation of consolidated 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 judgments 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:

I. Significant Estimates:

(i) Impact of COVID-19

The outbreak of novel Coronavirus (COVID-19) pandemic globally and in India and the consequent lockdown restrictions imposed by national governments is causing significant disturbance and slowdown of economic activity across the globe. The commodity prices including oil have seen significant volatility with downward price pressures due to major demand centers affected by lockdown.

The Group is in the business of metals and mining, Oil & gas and generation of power which are considered as either essential goods and services or were generally allowed to continue to carry out the operations with adequate safety measures. The Group has taken proactive measures to comply with various regulations/guidelines issued by the Government and local bodies to ensure safety of its workforce and the society in general.

The Group has considered possible effects of Covid-19 on the recoverability of its investments, property, plant and equipment (PPE), inventories, loans and receivables, etc in accordance with IFRS. The Group has considered forecast consensus, industry reports, economic indicators and general business conditions to make an assessment of the implications of the Pandemic. The Group has also performed sensitivity analysis on the key assumptions identified based on the internal and external information, which are indicative of future economic condition. Based on the assessment, the Group has recorded necessary adjustments, including impairment to the extent the carrying amount exceeds the recoverable amount and has disclosed the same as special item during the previous year ended 31 March 2020. No such impairments were identified during the current year.

The actual effects of COVID-19 could be different from what is presently assessed and would be known only in due course of time, however no further adjustments are considered necessary at this stage.

(ii) Oil and Gas reserves

Significant technical and commercial judgements are required to determine the Group's estimated oil and natural gas reserves. Oil and 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 and gas prices could impact the depletion rates, carrying value of assets and environmental and restoration provisions.

(iii) 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 impairment indicators exist. 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 consolidated 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.

(iv) Carrying value of developing/producing oil and gas assets

Management performs impairment tests on the Group's developing/producing oil and gas assets where indicators of impairment or impairment reversal of previously recorded impairment are identified in accordance with IAS 36.

In the current year, the management has reviewed the key assumptions, i.e., future production, oil prices, discount to price, Production sharing contract (PSC) life, discount rates, etc. for all of its oil and gas assets. Based on analysis of events that have occurred since then, there did not exist any indication that the assets may be impaired or previously recorded impairment charge may reverse. Hence, detailed impairment analysis has not been conducted in the current financial year. However, during the year ended 31 March 2020, management had performed impairment tests on the Group's developing/producing oil and gas assets and the impairment assessments were based on a range of estimates and assumptions, including:

Estimates/ assumptions	**Basis**
Future production	proved and probable reserves, production facilities, resource estimates and 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 and updated sales contracts
Extension of PSC	granted till 2030 on the expected commercial terms (Refer note 2(c)(I)(viii)
Discount rates	cost of capital risk-adjusted for the risk specific to the asset/CGU

(v) 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

There is no impairment recognised during the year. For the year ended 31 March 2021, details of impairment charge/reversal and the assumptions used are disclosed in note 6.

(vi) 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 utilized. 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 consolidated income statement.

The total deferred tax assets recognised in this financial statement (refer note 10) includes MAT credit entitlements of US$ 1,125 million (31 March 2020: US$ 1,221 million), of which US$ 46 million is expected to be utilised in the fourteenth year (31 March 2020: US$ 481 Million was expected to be utilised in fourteenth and fifteenth year), fifteen years being the maximum permissible time period to utilise the MAT credits.

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 involves 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 decision.

vii). Copper- India

Existing Plant:

In an appeal filed by the Group against the closure order of the Tuticorin Copper smelter by Tamil Nadu Pollution Control Board ("TNPCB"), the appellate authority National Green Tribunal ("NGT") passed an interim order on 31 May 2013 allowing the copper smelter to recommence operations and appointed an Expert Committee to submit a report on the plant operations. Post the interim order, the plant recommenced operations on 23 June 2013. Based on Expert Committee's report on the operations of the plant stating that the plant's emission were within prescribed standards and based on this report, NGT ruled on 08 August 2013 that the Copper smelter could continue its operations and recommendations made by the Expert Committee be implemented in a time bound manner. The Group has implemented all of the recommendations. TNPCB has filed an appeal against the order of the NGT before the Supreme Court of India.

In the meanwhile, the application for renewal of Consent to Operate (CTO) for existing copper smelter, required as per procedure established by law was rejected by TNPCB in April 2018. Vedanta Limited has filed an appeal before the TNPCB Appellate Authority challenging the Rejection Order. During the pendency of the appeal, there were protests by a section of local community raising environmental concerns and TNPCB vide its order dated 23 May 2018 ordered closure of existing copper smelter plant with immediate effect. Further, the Government of Tamil Nadu, issued orders dated 28 May 2018 with a direction to seal the existing copper smelter plant permanently. The Company believes these actions were not taken in accordance with the procedure prescribed under applicable laws. Subsequently, the Directorate of Industrial Safety and Health passed orders dated 30 May 2018, directing the immediate suspension and revocation of the Factory License and the Registration Certificate for the existing smelter plant.

The Company has appealed this before the National Green Tribunal (NGT), who 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 the Supreme Court in Civil Appeals on 02 January 2019 challenging the above judgement of NGT and the previously passed judgement of NGT dated 08 August 2013. The Supreme Court vide its judgement dated 18 February 2019 set aside the judgements of NGT dated 15 December 2018 and 08 August 2013 on the sole basis of maintainability and directed the Company to file an appeal in the High court.

The Company has filed a writ petition before Madras High Court challenging the various orders passed against the Company in 2018 and 2013. On 18 August 2020, the Madras High Court delivered the judgement wherein it dismissed all the Writ Petitions filed by the Company. The Company has approached the Supreme Court and challenged the said High Court order by way of a Special Leave Petition (SLP) to Appeal and also filed an interim relief for care & maintenance of the plant. The matter was then listed on 02 December 2020 before the Supreme Court Bench. The Bench after having heard both the sides concluded that at this stage the interim relief in terms of trial run could not be allowed. Further, considering the voluminous nature of documents and pleadings, the matter shall be finally heard on merits. The matter was again mentioned before bench on 17 March 2021, wherein matter was posted for hearing on 17 August 2021.

However, subsequent to the year end, the Company approached the Supreme Court offering to supply medical oxygen from the said facility in view of prevailing COVID-19 situation, which was allowed by the Supreme Court, under supervision of a committee constituted by the Government of Tamil Nadu.

As per the Company's assessment, it is in compliance with the applicable regulations and expects to get the necessary approvals in relation to the existing operations and hence the Company does not expect any material adjustments to these financial statements as a consequence of above actions.

The Company has carried out an impairment analysis for existing plant assets during the period ended 31 March 2021 considering the key variables and concluded that there exists no impairment. Further, no fresh indicators are identified for impairment as at 31 March 2021. The Company has done an additional sensitivity analysis with commencement of operations of the existing plant w.e.f 01 April 2024 and noted that the recoverable amount of the assets would still be in excess of their carrying values.

The carrying value of the assets as at 31 March 2021 is US$ 250 million (US $260 million as at 31 March 2020).

Expansion Project:

Separately, the Company has filed a fresh application for renewal of the Environmental Clearance for the proposed Copper Smelter Plant 2 ("Expansion Project") dated 12 March 2018 before the Expert Appraisal Committee of the Ministry of Environment, Forest and Climate Change ("MoEFCC") 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 held vide 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 in the interim, ordered the company to cease construction and all other activities on site for the proposed Expansion Project with immediate effect. The MoEFCC has delisted the Expansion Project since the matter is sub-judice. Separately, the State Industries Promotion Corporation of Tamil Nadu Limited ("SIPCOT") vide its letter dated 29 May 2018, cancelled 342.22 acres of the land allotted for the proposed Expansion Project. Further, the TNPCB issued orders on 07 June 2018 directing the withdrawal of the Consent to Establish (CTE) which was valid till 31 March 2023.

The Company 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. Considering the delay in existing plant matter and accordingly delay in getting the required approval for expansion project, management considered to make provision for impairment for expansion project basis fair value less cost of disposal and accordingly made impairment provision of US$ 94 million in March 2020. During the year, there are no updates in the expansion matter and impairment provision of US$ 94 million is adequate and the net carrying value of US$ 13 million as at 31 March 2021 approximates its recoverable value.

Impairment recognised during the year ended 31 March 2020

For the Expansion Project, the project activities are on halt since May 2018. Further, the environment clearance for the Expansion Project expired on 31 December 2018 and fresh application was filed before the competent authority. However, the process will start only after reopening of the existing plant and after obtaining all statutory approvals, the timing of which is uncertain.

Keeping in view the above factors and the fact that value in use cannot be reasonably ascertained, the Company has carried out recoverability assessment of the items of property, plant and equipment, capital work in progress (CWIP) and capital advances. Based on the realisable value estimate of US$ 38 Million, the Company had recognised an impairment of US$ 94 Million (comprising CWIP balances of US$ 61 million, capital advances of US$ 28 million and other assets of US$ 5 million) during the previous year.

Property, plant and equipment of US$ 197 million and inventories of US$ 69 million, pertaining to existing and expansion project, could not be physically verified, anytime during the year, as the access to the plant is presently restricted. However, since operations are suspended and access to the plant restricted, any difference between book and physical quantities is unlikely to be material.

viii) PSC Extension

Rajasthan Block

The Company operates an oil and gas production facility in Rajasthan under a Production Sharing Contract ("PSC"). The management is of the opinion that the Company is eligible for automatic extension of the PSC for Rajasthan ("RJ") block on same terms w.e.f. 15 May 2020, while Government of India ("GoI") in October 2018, accorded its approval for extension of the PSC, under the Pre-NELP Extension policy as per notification dated 07 April 2017 ("Pre-NELP Policy"), for RJ block by a period of 10 years, w.e.f. 15 May 2020. As per the said policy and extension, the Company is required to comply with certain conditions and pay an additional 10% profit oil to GoI. The Company had challenged the applicability of Pre-NELP Policy to the RJ block. The Division Bench of the Delhi High Court in March 2021 set aside the single judge order of May 2018 which allowed automatic extension of PSC. The Company is studying the order and all available legal remedies are being evaluated for further action as appropriate.

One of the conditions for extension of PSC relates to notification of certain audit exceptions raised for FY 16-17 as per PSC provisions and provides for payment of amounts, if such audit exceptions result into any creation of liability.

The Directorate General of Hydrocarbons ("DGH") in May 2018 raised a demand on the Company and its subsidiary for the period up to 31 March 2017 for Government's additional share of Profit oil based on its computation of disallowance of costs incurred in excess of the initially approved Field Development Plan ("FDP") of the pipeline project for US$ 202 million and retrospective re-allocation of certain common costs between Development Areas ("DAs") of RJ block aggregating to US$ 364 million. The DGH vide its letter dated 12 May 2020, reiterated its demand only with respect to the retrospective re-allocation of certain common costs between DAs of the RJ block of US$ 364 million towards contractor share for the period upto 31 March 2017. This amount was subsequently revised to US$ 458 million till March 2018 vide DGH letter dated 24 December 2020.

The Company in January 2020 received notifications from the DGH on audit exceptions arising out of its audit for the FY 2017-18, which comprises the consequential effects on profit oil due to the aforesaid matters and certain new matters on cost allowability plus interest aggregating to US$ 645 million, representing share of the Company and its subsidiary, CEHL ("the Claimants"), which have been suitably responded to by the Company.

The Company believes that it has sufficient as well as reasonable basis pursuant to the PSC provisions and related approvals, supported by legal advice, for having claimed such costs and for allocating common costs between different DAs. In the Company's opinion, these computations of the aforesaid demand / audit exceptions are not appropriate, and the accounting adjustments sought for issues pertaining to Year 2007 and onwards are based on assumptions that are not in consonance with the approvals already in place. The Company's view is also supported by independent legal opinion and the Company has been following the process set out in PSC to resolve these aforesaid matters. The Company has also invoked the PSC process for resolution of disputed exceptions and has issued notice for arbitration and the tribunal stands constituted. Further, on 23 September 2020, the GoI had filed an application for interim relief before Delhi High Court seeking payment of all disputed dues. This matter is now scheduled for hearing on 05 July 2021.

Also, on Vedanta's application under section 17 of the Arbitration and Conciliation Act, 1996, the tribunal in December 2020 ordered that GoI should not take any action to enforce any of the amounts at issue in this arbitration against the Claimants during the arbitral period. The GoI has challenged the said order before the Delhi High Court under the said Act. This matter is also scheduled for hearing on 05 July 2021.

In management's view, the above mentioned condition on demand raised by the DGH for additional petroleum linked to PSC extension is untenable and has not resulted in creation of any liability and cannot be a ground for non-extension. In addition, all necessary procedures prescribed in the PSC including invocation of arbitration, in respect of the stated audit observation have also been fulfilled. Accordingly, the PSC extension approval granted vide DGH letter dated 26 October 2018 upholds with all conditions addressed and no material liability would devolve upon the Group.

Simultaneously, the Company is also pursuing with the GoI for executing the RJ PSC addendum at the earliest. In view of extenuating circumstances surrounding COVID-19 and pending signing of the PSC addendum for extension after complying with all stipulated conditions, the GoI has been granting interim permission to the Company to continue Petroleum operations in the RJ block. The latest permission is valid upto 31 July 2021 or signing of the PSC addendum, whichever is earlier.

Ravva Block

The Government of India (GoI) has granted its approval for a ten-year extension of PSC for Ravva Block with effect from 28 October 2019, in terms of the provision of the "Policy on the Grant of the extension to Production Sharing Contract Signed by Government awarding small, medium-sized and discovered field to private joint ventures" dated 28 March 2016. The PSC addendum recording this extension has been executed by all parties.

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 and payment of royalty and cess as per prevailing rate in accordance with the PNG Rules, 1959 and OIDB Act. Under the Ravva PSC, the Company's oil and gas business is entitled to recover 100% of cost of production and development from crude oil and natural gas sales before any profit is allocated among the parties.

Cost recovery for exploration cost during extension period shall be governed as per the provision of Office Memorandum 2013, 2019 issued by the Ministry of Petroleum and Natural Gas ("MoPNG") on exploration in mining lease area post expiry of the exploration period.

(ix) Impact of Taxation Laws (Amendment) Act, 2019

Pursuant to the introduction of Section 115BAA of the Indian Income-tax Act, 1961, which is effective 1 April 2019, companies in India have the option to pay corporate income tax at the rate of 22% plus applicable surcharge and cess as against the earlier rate of 30% plus applicable surcharge and cess, subject to certain conditions like, the company has to forego all benefits like tax holidays, brought forward losses generated through tax incentives/additional depreciation and outstanding MAT credit. Considering all the provisions under Section 115BAA and based on the expected timing of exercising of the option under Section 115BAA, the Group has re-measured its deferred tax balances as at 31 March 2021. This computation required assessment of assumptions regarding future profitability, which is inherently uncertain. To the extent assumptions regarding future profitability change, there can be increase or decrease in the amounts recognised.

(x) ESL Steel Limited (formerly known as Electrosteel Steels Limited) (ESL), 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, as JSPBC awaited response from the MoEFCC over a 2012 show-cause notice. After a personal hearing towards the show cause notice, the MoEFCC revoked the Environmental Clearance ("EC") on 20 September 2018. The Hon'ble High Court of Jharkhand granted stay against both revocation orders and allowed the continuous running of the plant operations under regulatory supervision of the JSPCB. The Jharkhand High Court on 16 September 2020 passed an order vacating the interim stay in place beyond 23 September 2020, while listing the matter for final hearing. ESL filed an Special Leave Petition (SLP) in the Supreme Court of India which on 22 September 2020, granted permission to ESL to run the plant till further orders. Next date of High Court hearing is 25 June 2021 and the Supreme Court hearing is yet to be listed.

The Forest Advisory Committee (FAC) of MoEFCC granted the Stage 1 clearance and the MoEFCC approved the related Terms of Reference (TOR) on 25 August 2020. As per Stage 1 clearance, the Company is required to provide non-forest land in addition to the afforestation cost. The Company, based on the report of an EIA consultant, has recognised a provision of US$ 29 Million as an Special item in these financial statement with respect to the costs to be incurred by the Company for obtaining the EC.

(xi) Assessment of impairment of assets at Aluminium division

During year ended 31 March 2020, considering lower sales realisation, an impairment trigger was identified in the aluminium division of Vedanta Limited. The impairment assessments were based on a range of estimates and assumptions, including:

Estimates/assumption	**Basis**
Future production	Proved and probable reserves, production facilities, resource estimates and 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 rates	cost of capital risk-adjusted for the risk specific to the asset/CGU

The Group carried out impairment analysis, based on value in use approach, considering the key variables and concluded that no impairment exists. The Group had carried out sensitivity analysis on key assumptions including commodity price, discount rate and delay in expansion of refinery. Based on sensitivity analysis, the recoverable amount is still expected to exceed the carrying value of US$ 3,263 million as at 31 March 2020. No negative developments have occurred since the previous year and accordingly, it is not expected that the carrying amount would exceed the recoverable amount. Hence, the recoverable value for the year ended 31 March 2021 was not re-determined.

(xii) Discontinued operations - Copper Zambia (KCM)

The investment in KCM and loans, receivables and obligations of KCM towards the Group are fair valued during the year. The Group employed third-party experts to undertake the valuations using the income approach method. In this approach, the discounted cash flow method was used to capture the present value of the expected future economic benefits to be derived from the ownership of these assets. The resulting valuation is adjusted to reflect a number of factors, including the uncertainty and risks inherent in litigation and recovery. Details of significant estimates are disclosed in note 3(b).

II. Significant Judgements:

(i) Determining whether an arrangement contains a lease

The Group has ascertained that the Power Purchase Agreement (PPA) executed between one of the Subsidiary and a State Grid qualifies to be an operating lease under IFRS 16 "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 4 and 5.

(ii) Contingencies

In the normal course of business, contingent liabilities may arise from litigation, taxation and other claims against the Group. A provision is recognised when the Group has a present obligation as a result of past events, 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 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 applicable law, in particular India, and the likelihood of settlement. Management uses in-house and external legal professionals to make informed 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.

(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 IFRS 15 and to assess the recoverability of withheld revenue currently accounted for as receivables.

In assessing this critical judgment 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.

(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 are set out in note 6.

3. Business Combination and others

a) Ferro Alloys Corporation Limited

On 21 September 2020, the Group acquired control over Ferro Alloys Corporation Limited ("FACOR"). FACOR was admitted under Corporate insolvency resolution process in terms of the Insolvency and Bankruptcy Code, 2016 of India. The National Company Law Tribunal (NCLT) vide its order dated 30 January 2020 approved the resolution plan for acquiring controlling stake in FACOR. Pursuant to the approved resolution plan, FACOR will be wholly owned subsidiary of Vedanta Limited. FACOR holds 90% in its subsidiary, Facor Power Limited (FPL).

FACOR is in the business of producing Ferro Alloys and owns a Ferro Chrome plant with capacity of 72,000 TPA, two operational Chrome mines and 100 MW of Captive Power Plant through its subsidiary, FPL. The acquisition will complement the Group's existing steel business as the vertical integration of ferro manufacturing capabilities has the potential to generate significant efficiencies.

The fair value of the identifiable assets and liabilities of FACOR as at the date of the acquisition were as below:

(US$ million)

Particulars	**Fair Value at Acquisition**
Property, Plant and Equipment including Capital work in progress	48
Bank deposits	1
Non-current assets	**49**
Inventories	6
Trade and other receivables	1
Cash and cash equivalents	2
Other bank balances	9
Other financial assets	0
Other current assets	4
Current assets	**22**
Total Assets (A)	**71**
Borrowings	1
Deferred tax liabilities	8
Trade payables	1
Other financial liabilities	3
Provisions	1
Other current liabilities	5
Total Liabilities (B)	**19**
Net Assets (C = A-B)	**52**
Satisfied by:	
Cash consideration paid for equity acquired	5
Cash consideration paid for debt acquired	3
Zero coupon, Non-Convertible Debentures (“NCDs”) issued by FACOR repayable equally over 4 years commencing March 2021 (Nominal value US$ 39 million) *	32
Total Purchase consideration (D)	**40**
Non-Controlling interest on acquisition (10% of net liabilities of FPL) (E)	(4)
Bargain Gain/Goodwill (C-D-E)	16

*Includes NCDs of nominal value US$ 0.4 million yet to be issued as part of purchase consideration.

Since the date of acquisition, FACOR has contributed US$ 37 million and US$ 5 million to the Group revenue and profit before taxation respectively for the year ended 31 March 2021. If FACOR had been acquired at the beginning of the year, the Group revenue would have been US$ 11,752 million and the profit before tax of the Group would have been US$ 1,674 million.

The carrying amount of all assets and liabilities within the working capital equals their fair value. None of the Trade receivables was impaired and the full contractual amount were expected to be realised. Mining Rights have been valued considering the With or Without method, i.e., based on the cost savings resulting from the usage of the mines vis a vis procurement of raw material (chrome ore) from external vendors. Land has been valued based on the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act. Buildings, Plant & Machinery, Other Tangible Assets, Capital Work in Progress and Capital Advances pertaining to the Tangible Assets together have been estimated based on the Value in Use of FACOR under the Income Approach.

Non-controlling interest has been measured at the non-controlling interest's proportionate share of FPL's identifiable net assets.

(b) Discontinued operations - Copper Zambia (KCM):

In 2019, ZCCM Investments Holdings Plc (ZCCM), a company majority owned by the Government of the Republic of Zambia (GRZ), which owns 20.6% of the shares in Konkola Copper Mines Plc (KCM), filed a petition in the High Court of Zambia to wind up KCM (Petition) on "just and equitable" grounds. Subsequently, ZCCM amended the Petition to include an additional ground based on allegations that KCM is unable to pay its debts. ZCCM also obtained an ex parte order from the High Court of Zambia appointing a Provisional Liquidator (PL) of KCM pending the hearing of the Petition. As a result of the appointment of the PL following ZCCM's ex parte application, the PL is currently exercising almost all the functions of the Board of Directors, to the exclusion of the Board.

The Group not only disputes the allegations and opposes the Petition, but also maintains that the complaints brought by ZCCM are in effect "disputes" between the shareholders. Per the KCM Shareholders' Agreement, the parties (including ZCCM and the Government of the Republic of Zambia) have agreed that any disputes must be resolved through international arbitration seated in Johannesburg, South Africa, applying the UNCITRAL Arbitration Rules; not the Zambian courts.

Arbitration Application

Following the filing of the Petition, Vedanta Resources Holdings Limited (VRHL) and Vedanta Resources Limited (VRL or Company) commenced the dispute resolution procedures prescribed by the KCM Shareholders' Agreement, and have initiated arbitration consistent with their position that ZCCM is in breach of the KCM Shareholders' Agreement by reason of its actions in seeking to wind up KCM before the Zambian High Court and applying for the appointment of the PL, as opposed to pursuing its alleged grievances through arbitration under the KCM Shareholders' Agreement. As part of the dispute resolution process under the KCM Shareholders' Agreement, VRHL obtained injunctive relief from the High Court of South Africa requiring ZCCM to withdraw the Petition such that the PL is discharged from office and declaring ZCCM to be in breach of the arbitration clause in the KCM Shareholders' Agreement. ZCCM was further prohibited by the High Court of South Africa from taking any further steps to wind up KCM until the conclusion of the arbitration. ZCCM had sought leave to appeal to the Supreme Court of South Africa. Leave to appeal was denied on 29 April 2021. ZCCM has renewed its application for leave to appeal before a single judge of the Supreme Court. On 4 June 2021, both Company and PL was given time to submit the documents and held that basis same ruling will be rendered.

The arbitration proceedings against ZCCM continue and a sole arbitrator has been appointed. The procedural timetable for the arbitration was varied in October 2020. An initial hearing of prioritised issues took place, with the substantive dispute being heard in November 2021 and February 2022. ZCCM filed and served its Defence and Counterclaim on VRL and VRHL on 14 July 2020. VRHL and VRL filed their reply and defence to ZCCM's defence and counterclaims on 31 January 2021, and ZCCM filed its reply to VRHL and VRL's defence to ZCCM's counterclaims on 15 April 2021. Arbitration awards are enforceable in Zambia under the New York Convention.

Proceedings in the Zambian Courts

VRHL has also made a number of applications before the Zambian High Court in connection with the Petition, including an application for a stay of the Petition, pending the determination of the arbitration. Although, this application was dismissed at first instance by the High Court, VRHL was granted leave to appeal to the Zambian Court of Appeal.

An Order given by the Zambian High Court staying certain of the PL's powers (i.e., those relating to the PL's ability to sell assets and make compromises with creditors) was set aside until the Petition returns to the High Court, subject to the outcome of the appeals to the Zambian Court of Appeal. The PL has given evidence in the Zambian High Court that he would not be able to sell assets (beyond that which is necessary to carry on KCM's ordinary business) without seeking the Court's approval. Notwithstanding this, on 10 September 2019, the PL caused KCM to enter into a consent order disposing of certain surface rights owned by KCM. On 28 November 2019, VRHL and KCM (acting through the lawyers appointed by the directors of KCM) obtained an ex-parte injunction restraining the PL from taking action to implement the consent order, halting the sale of surface rights and preventing any sale of the land itself. A challenge to the ex-parte injunction has been heard and the ruling has been reserved.

In connection with the response to the Petition, VRL has provided to the Board of KCM a commitment to provide certain financial support to KCM. This commitment is subject to certain conditions, including the dismissal of the Petition and discharge of the PL. Additionally since the conditions to the funding support were not satisfied by 30 September 2019, VRL has reserved the right to withdraw the offer set out in the letter.

The appeal hearing took place on 25 August 2020, and the ruling of the Appeal Court was delivered on 20 November 2020. The Appeal Court ruled in favour of the Group and concluded that a dispute as defined in the SHA exists between the parties, and that the disputes are arbitrable and referable to arbitration. The Appeal Court ordered a stay of the winding up proceedings pursuant to section 10 of the Zambian Arbitration Act, 2000 and that the matter be referred to arbitration. Costs were awarded in the Group's favour in both Courts in Zambia.

Although the Petition is currently stayed, the PL has insisted that he remains in his post with his full powers. The PL has argued that the Court of Appeal has not ordered him to vacate his seat. The Group's application for an Embodiment Order of the Appeal Court ruling was argued before the Judge President of the Court of Appeal on 8 December 2020 and the Judge reserved her ruling. The Group and the Respondents (ZCCM and KCM) have a different opinion as to whether the Appeal Court ruling of 20 November 2020 has the result of the PL having to vacate his seat. The form in which the Embodiment Order is issued by the Judge President will determine the impact of the Court of Appeal ruling on the PL's position. The Judge ultimately adopted the Embodiment Order in the form preferred by ZCCM, with the result that the PL has not had to vacate his seat. Vedanta's Zambian counsel have applied for a hearing of the full court of appeal to reconsider the embodiment order. (The order was made by a single judge of the court of appeal rather than the full court.) On 5 May 2021 the Court of Appeal heard preliminary objections against Vedanta's application and have adjourned the motion to a date after it rules on the objections raised. The Court of Appeal Marshall has indicated that the ruling on the objections is likely to be ready in June 2021.

The Company also applied seeking directions on the PL's powers after the Court of Appeal ruling of 20 November 2020, arguing that the Court of Appeal judgment did not in any way stay the supervisory jurisdiction of the High Court over the PL as an officer of the Court, and that the Preliminary Issues Applications should be dismissed. The Judge gave a ruling on 7 May 2021, finding that in light of the stay of the winding up proceedings ordered by the Court of Appeal and the referral of the matter to arbitration, she does not have the jurisdiction to consider an application requesting her to give directions on the powers of the PL. Leave to appeal was denied.

At the date of approval of these financial statements, the PL remains in office and the Petition remains stayed.

Notice of Deemed Transfer of Shares

On 14 July 2020, ZCCM served a notice entitled "Notice of Deemed Transfer of Shares" on VRL and VRHL (Notice). The Notice is stated to be given under clause 10.1.2 of the KCM Shareholders' Agreement, notifying VRL and VRHL of various alleged breaches of the KCM Shareholders' Agreement having a Material Adverse Effect (as defined in the KCM Shareholders' Agreement) or other material breaches of the SHA, and requiring VRL and VRHL to remedy the notified breaches within 30 days, and reserving its rights in the event VRHL does not or cannot remedy the breaches within that time period to treat the event as deemed service by VRHL of an irrevocable offer under clause 10.2 to sell its shares in KCM to ZCCM at 'Fair Value'. Fair Value is to be determined in accordance with a mechanism set out in the KCM Shareholders' Agreement. If ZCCM thereafter notifies VRHL that it wishes to exercise these rights, VRHL will be deemed to have served an exit notice under clause 9.6 of the Shareholders' Agreement, giving rise to the application of a number of the exit provisions under the Shareholders' Agreement, including the requirement to make payment of budgeted capex for the succeeding 12 month period and any capital expenditure underspend in previous financial years on a cumulative basis, as determined by KCM's auditors.

VRL and VRHL intend to challenge the Notice in accordance with the provisions of the Shareholders' Agreement and note that the effectiveness and validity of the Notice is to be determined by the arbitrator as part of the arbitration proceedings referred to above before any further steps can be taken by ZCCM to acquire VRHL's shares in KCM pursuant to the mechanism in clause 10 of the KCM Shareholders' Agreement.

Accounting Considerations

As all the significant decision-making powers, including carrying on the business of KCM and taking control over all the assets of KCM, rests with the PL, the Group believes that the appointment of PL has caused loss of its control over KCM. Accordingly, the Group deconsolidated KCM with effect from 21 May 2019 and presented the same in the consolidated income statement as a discontinued operation. This also resulted in derecognition of non-controlling interests in KCM of US$ 86 million in the previous year.

The Group continues to account for its investment in KCM and loans, receivables and obligations of KCM towards the Group at cost.

The loss with respect to KCM operations along with the loss on fair valuation of the Group's interest in KCM has been presented as a special item in the consolidated income statement.

The Group has total exposure of US$ 1,887 million (31 March 2020: US$ 1,952 million) (including equity investment in KCM of US$ 266 million) to KCM in the form of loans, receivables, investments and amounts relating to the guarantees issued by VRL, which have been accounted for at fair value on initial recognition and disclosed under non-current assets in the Consolidated Statement of Financial Position.

a) The profit/ (loss) from discontinued operations, i.e., KCM:

	For the year ended 31 March 2020*
Revenue	94
Cost of sales	(160)
Gross loss	**(66)**
Other operating income	1
Distribution costs	(3)
Administrative expenses	(12)
Operating loss	**(80)**
Investment revenue	(11)
Finance costs	(9)
Loss before taxation (a)	**(100)**
Net tax credit/ (expense) (b)	23
Loss after tax from discontinued operations (a+b)	**(77)**

** Till the date of appointment of PL, i.e., 21 May 2019*

b) *Loss on deconsolidation:*

On loss of control of KCM, all assets and liabilities of KCM have been derecognised at their carrying value on the date of loss of control, 21 May 2019. On deconsolidation, the investment in KCM and the loans, receivables and obligations of KCM towards the Group have been measured at their fair value, at the date of loss of control. The resulting loss on deconsolidation, recognised in special items in the consolidated income statement, has been calculated as shown in the table below.

(US$ million)

	As at 21 May 2019
Fair value of assets recognised on deconsolidation:	
Investment in KCM (Original cost of investment: US$ 266 million)	-
Loans, receivables and obligations of KCM towards the Group*	693
Total (a)	**693**
Assets derecognised on deconsolidation:	
External Net assets of KCM (refer note iii below)	**1,268**
Non-controlling Interest	86
External Net assets of KCM attributable to the Group (b)	**1,354**
Loss on deconsolidation (a) – (b)	**(661)**

**consists of unsecured loans advanced by the Group of US$ 265 million, which is past due, secured borrowings of KCM where the Group has provided guarantee to the lenders/ creditors of US$ 355 million, monies advanced for goods and other receivables of US$ 73 million.*

c) *The carrying amount of assets and liabilities as at 21 May 2019:*

(US$ million)

	External	**VRL Group[1]**	**Total**
Property, plant and equipment	1,470	-	1,470
Other non-current assets	68	-	68
Trade and other receivables	240	-	240
Total assets	**1,778**	**-**	**1,778**
Borrowings	-	1,187	1,187
Trade and other payables[2]	510	499	1,009
Total liabilities	**510**	**1,686**	**2,196**
Net assets/ (liabilities) of KCM	**1,268**	**(1,686)**	**(418)**

1Loans, receivables and obligations of KCM towards the Group

2 *During the year ended 31 March 2021, guarantee given by the Group to the lenders/creditors amounting to US$ 69 Million has been expired.*

d) The profit/ (loss) from discontinued operations, i.e., KCM including loss on its deconsolidation has been presented below:

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Loss after tax from discontinued operations (refer note i above)	-	(77)
Loss on deconsolidation (refer note ii above)	-	(661)
Gain on expiry of guarantee given by the Group to the lenders/creditors. (refer note iii (2) above)	69	-
Fair value change during the year (refer note v below)	22	(33)
Total	**91**	**(771)**

Key sources of estimation uncertainty

The investment in KCM and loans, receivables and obligations of KCM towards the Group recognised following deconsolidation of the subsidiary are initially recognized at fair value on the date of loss of control. Subsequently, the equity investment in KCM is measured at fair value through profit or loss and the loans, receivables and obligations of KCM towards the Group are measured at amortised cost, subject to impairment.

The Group employed third-party experts ("Expert") to undertake valuations of the investment in KCM and loans, receivables and obligations of KCM towards the Group at the date of loss of control, 21 May 2019, at 31 March 2020 and at 31 March 2021. The income approach method was applied for the purposes of the valuation. In this approach, the discounted cash flow method was used to capture the present value of the expected future economic benefits to be derived from the ownership of these assets. The resulting valuation is adjusted to reflect a number of factors, including the uncertainty and risks inherent in litigation and recovery. The third-party valuation provides a range of reasonable fair values, based on which management calculated the fair value to be recognised in the financial statements as the mid-point of the range.

Cash flow projections are based on financial budgets and life of mine plans on a going concern basis and are sensitive to changes in input assumptions. Input assumptions into the valuation that involve management judgement include:

- The expectation that the large-scale mining licence expiring in 2025 will be extended to the end of the life of mine under the Mines & Mineral Development Act on payment of requisite fees and submission of the proposed programme of mining operation for the period of renewal. We believe this licence renewal process is in line with globally accepted procedural requirement to be followed by a mining company backed by a robust life of mine plan and as such, would get extended for the next permissible period post fulfilment of procedural requirement in ordinary course of business.
- Expected delay between success of the litigation proceedings and receipt of any amounts due.
- Liquidity of the market in the event of a sale of KCM, which has been considered through benchmarking the resulting valuation against other recent transactions for similar mines.

- The discount rate used to discount the cash flow projection, which has been calculated on a post-tax basis at 12.750% (31 March 2020: 12.125%), using the input of third-party expert.
- To factor in the uncertainties, valuation under few scenarios in addition to the base case valuation, assuming equal likelihood, has been computed a) If Provisional Liquidator continues to control the assets for longer than expected, b) additional capex required to achieve the planned ramp up of production and c) future implied Zambian country risk premium.

The key sources of estimation uncertainty, to which the valuation is most sensitive, are:

- The long-term copper prices which are based on the median of analyst forecasts.
- Throughput at the Konkola concentrator: The timing of ramp up of through put at the Konkola concentrator is based on internal management forecasts. The forecasts incorporate management experience and expectations as well as the risks associated therewith (for example availability of required fleets, skill sets for level developments at critical areas).
- The probability of achieving an award or positive settlement outcome in respect of the litigation proceedings. As discussed above, the Group believes, based on the legal advice it has obtained, that it is probable that it will succeed with its appeal to the Zambian Court of Appeal, which would result in the Petition being stayed until the outcome of the arbitration and the Group believes at some stage the Petition will be dismissed and the appointment of the PL discharged. The probability used in the valuation is based on the Expert's assumption based on external legal advice that it is probable that the Group will succeed with its appeal to the Zambian Court of Appeal and benchmarked using external data on historical outcomes for similar claims.
- The potential proportion of the claim value that may be expected to be recovered in the event of achieving an award or positive settlement outcome. This includes the ability of ZCCM to make payments in the event of a successful award or settlement outcome.

Where discounted cash flow models based on management's assumptions are used, the resulting fair value measurements are considered to be at level 3 in the fair value hierarchy, as defined in IFRS 13 Fair Value Measurement, as they depend to a significant extent on unobservable valuation inputs.

e) Fair value measurements

The valuation of the investment in KCM and the loans, receivables and obligations of KCM towards the group is determined using discounted future cash flows and adjusted to reflect Expert's current views on litigation risk and other unobservable inputs as described below. These assets are considered to be level 3 in the fair value hierarchy. Quantitative information about the significant unobservable inputs used in level 3 fair value measurements are set out in the table below:

(US$ million, unless stated otherwise)

Financial asset	**Fair value at**			**Significant unobservable Inputs**	**Relationship of unobservable inputs to fair value**
	31 March 2021	**31 March 2020**	**21 May 2019**		
Investments and Loans, receivables and obligations of KCM towards the Group	682	660	693	Probability of achieving an award or positive settlement outcome in respect of litigation proceedings	A decrease in probability of success would decrease the fair value. A 10% decrease in the probability of success, with no change to any other inputs, would decrease the fair value by US$ 54 million. We have used a 10% assumption to calculate our exposure as it represents a change in the probability of success that we deem to be reasonably probable.
				Potential proportion of the claim value that may expected to be recovered in the event of achieving an award or positive settlement outcome	A decrease in the recovery percentage would decrease the fair value. A 10% decrease in the recovery percentage, with no change to any other inputs, would decrease the fair value by US$ 136 million. We have used a 10% assumption to calculate our exposure as it represents a change in the recovery probability that we deem to be reasonably probable.
				Copper price Long term price of US$ 6,850 / tonne (31 March 2021), US$ 6,559 / tonne (31 March 2020) and US$ 6,503 / tonne (21 May 2019)	A decrease in the copper price would decrease the fair value. A 10% reduction in the long-term copper price, with no change to any other inputs, would decrease the fair value by US$ 140 million. We have used a 10% assumption to calculate our exposure as it represents the annual copper price movement that we deem to be reasonably probable (on an annual basis over the long run).

c) Acquisition of Global coke plant

On 28 July 2019, the Group acquired Sindhudurg plant of Global Coke Limited which was under liquidation as per the Insolvency and Bankruptcy Code, 2016 (including all amendments for the time being in force) for a cash consideration of US$ 5 Million. The assets acquired mainly included Land, Building and Plant and Equipment of similar value as the cash consideration. The acquisition complements backward integration opportunity for the Group's existing pig iron division and also increase Group's footprint in met coke market in south western part of India. Detailed disclosure of fair value of the identifiable assets and liabilities of Sindhudurg plant has not been provided as the same is not material. Acquisition costs related to this acquisition were not material.

4. Segment information

The Group is a diversified natural resources Group engaged in exploring, extracting and processing minerals and oil and gas. The Group produces 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, ferro alloys & steel.

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
- Aluminium
- Power

'Others' segment mainly comprises of port/berth, steel, ferro alloys and glass substrate business and those segments which do not meet the quantitative threshold for separate reporting.

Each of the reportable segments derives its revenues from these main products and hence these have been identified as reportable segments by the Group's chief operating decision maker ("CODM").

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 Earnings Before Interest, Taxes, Depreciation, and Amortization ("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 2021 and 31 March 2020. Items after operating profit are not allocated by segment.

(a) Reportable segments

Year ended 31 March 2021

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Aluminium	Power	Others	Elimination	Total operations
REVENUE										
Sales to external customers	2,960	368	1,016	606	1,469	3,856	725	722	-	11,722
Inter-segment sales	-	-	-	5	0	9	-	5	(19)	-
Segment revenue	**2,960**	**368**	**1,016**	**611**	**1,469**	**3,865**	**725**	**727**	**(19)**	**11,722**
Segment Result										
EBITDA [(1)]	1,568	120	438	245	(21)	1,046	190	214	-	3,800
Depreciation and amortisation [(2)]	332	43	287	30	21	230	79	77	-	1,099
Operating profit / (loss) before special items	**1,236**	**77**	**151**	**215**	**(42)**	**816**	**111**	**137**	**-**	**2,701**
Investment revenue										292
Finance costs										(1,209)
Other gains and (losses) [net]										11
Special items										(112)
Loss before taxation from continuing operations										**1,683**
Segment assets	2,730	828	2,419	451	825	6,564	2,235	1,062	-	17,114
Financial asset investments										21
Deferred tax assets										1,018
Short-term investments										5,002
Cash and cash equivalents										955
Tax assets										375
Others										834
TOTAL ASSETS										**25,319**
Segment liabilities	644	146	1,508	173	590	2,142	245	287	-	5,735
Borrowings										16,377
Current tax liabilities										38
Deferred tax liabilities										299
Others										539
TOTAL LIABILITIES										**22,988**
Other segment information										
Additions to property, plant and equipment, exploration and evaluation assets and intangible assets [(4)]	340	51	188	13	8	232	4	82	-	919
Impairment charge [(3)]	-	-	-	-	-	24	-	9	-	33

Year ended 31 March 2020

(US$ million)

	Zinc-India	Zinc-International	Oil and gas	Iron Ore	Copper-India/ Australia	Aluminium	Power	Others	Elimination	Total operations
REVENUE										
Sales to external customers	2,563	441	1,787	487	1,277	3,746	827	662	-	11,790
Inter-segment sales	-	-	-	2	0	5	-	13	(20)	-
Segment revenue	**2,563**	**441**	**1,787**	**489**	**1,277**	**3,751**	**827**	**675**	**(20)**	**11,790**
Segment Result										
EBITDA (1)	1,230	54	1,032	117	(40)	281	232	97	-	3,003
Depreciation and amortisation (2)	319	90	566	34	21	233	81	68	-	1,412
Operating profit / (loss) before special items	**911**	**(36)**	**466**	**83**	**(61)**	**48**	**151**	**29**	**-**	**1,591**
Investment revenue										382
Finance costs										(1,179)
Other gains and (losses) [net]										(87)
Special items										(2,053)
Loss before taxation from continuing operations										**(1,346)**
Segment assets	2,762	692	2,079	461	879	6,560	2,333	1,072	-	16,838
Financial asset investments										12
Deferred tax assets										1,114
Short-term investments										4,385
Cash and cash equivalents										705
Tax assets										355
Others										777
TOTAL ASSETS										**24,186**
Segment liabilities	637	164	1,344	164	606	2,396	214	207	-	5,732
Borrowings										15,095
Current tax liabilities										26
Deferred tax liabilities										397
Others										663
TOTAL LIABILITIES										**21,913**
Other segment information										
Additions to property, plant and equipment, exploration and evaluation assets and intangible assets	651	107	642	15	31	200	10	44	-	1,700
Impairment charge (3)	-	-	1,906	-	94	-	-	72	-	2,072

(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 are also provided to the chief operating decision maker on a regular basis.

(3) Included under special items (Note 6).

(4) Additions to property, plant and equipment, exploration and evaluation assets and intangible assets includes US$ 1 Million not allocated to any segment. It also includes US$ 48 Million acquired through business combination.

4. Segment information (continued)

(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 revenue by region in which the customer is located, irrespective of the origin of the goods.

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
India	7,236	7,652
China	705	380
UAE	94	116
Malaysia	959	1,079
Others	2,728	2,563
Total	**11,722**	**11,790**

The following is an analysis of the carrying amount of non-current assets, excluding deferred tax assets, derivative financial assets, financial asset investments and other non-current financial assets analysed by the geographical area in which the assets are located:

(US$ million)

	Carrying amount of non-current assets	
	As at 31 March 2021	As at 31 March 2020
India	13,083	13,091
Namibia	121	100
South Africa	607	498
Taiwan	137	155
Others	101	145
Total	**14,049**	**13,989**

Information about major customer

Revenue from one customer amounted to US$ 1,414 Million for the year ended 31 March 2021 (31 March 2020: No customer), arising from sales made in the Aluminium, Zinc and Copper segment. No other customer contributed to 10% or more of revenues.

Disaggregation of revenue

Below table summarises the disaggregated revenue from contracts with customers:

(US$ million)

Particulars	Year ended 31 March 2021	Year ended 31 March 2020
Zinc Metal	2,245	2,223
Lead Metal	524	490
Silver Bars	593	349
Oil	874	1,539
Gas	92	112
Iron ore	293	209
Pig Iron	327	316
Metallurgical coke	35	8
Copper Products	1,377	1,037
Aluminium Products	3,832	3,589
Power	493	622
Steel Products	535	534
Ferro Alloys	37	-
Others	287	529
Revenue from contracts with customers*	**11,544**	**11,557**
Revenue from contingent rents	204	236
Losses on provisionally priced contracts under IFRS 9 (refer note 5)	(26)	(183)
JV partner's share of the exploration costs approved under the OM (refer note 5)	-	180
Total Revenue	**11,722**	**11,790**

** Includes revenues from sale of services aggregating to US$ 30 million (31 March 2020: US$ 30 million) which is recorded over a period of time and the balance revenue is recognised at a point in time.*

5. Total Revenue

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Sale of products [a,b]	11,488	11,524
Sale of services [a]	30	30
Revenue from contingent rents	204	236
Total Revenue	**11,722**	**11,790**

a) Revenue from sale of products and from sale of services for the year ended 31 March 2021 includes revenue from contracts with customers of US$ 11,554 million (31 March 2020: US$ 11,557 million) and a net loss on mark-to-market of US$ 26 million (31 March 2020: US$ 183 million) on account of gains/ losses relating to sales that were provisionally priced at the beginning of the respective year with the final price settled in the subsequent year, gains/ losses relating to sales fully priced during the respective year, and marked to market gains/ losses relating to sales that were provisionally priced as at the beginning of the respective year.

b) Government of India (GoI) vide Office Memorandum ("OM") No. O-19025/10/2005-ONG-DV dated 01 February 2013 allowed for Exploration in the Mining Lease Area after expiry of Exploration period and prescribed the mechanism for recovery of such Exploration Cost incurred. Vide another Memorandum dated 24 October 2019, GoI clarified that all approved Exploration costs incurred on Exploration activities, both successful and unsuccessful, are recoverable in the manner as prescribed in the OM and as per the provisions of PSC. Accordingly, during the previous year, the Group has recognized revenue of US $ 180 million, for past exploration costs, through increased share in the joint operations revenue as the Group believes that cost recovery mechanism prescribed under OM for profit petroleum payable to GOI is not applicable to its Joint operation partner, view which is also supported by an independent legal opinion. However, the Joint operation partner carries a different understanding and the matter is pending resolution.

c) Majority of the Group's sales are against advance or are against letters of credit/ cash against documents/ guarantees of banks of national standing. Where sales are made on credit, the amount of consideration does not contain any significant financing component as payment terms are within three months.

As per the terms of the contract with its customers, either all performance obligations are to be completed within one year from the date of such contracts or the Group has a right to receive consideration from its customers for all completed performance obligations. Accordingly, the Group has availed the practical expedient available under paragraph 121 of IFRS 15 and dispensed with the additional disclosures with respect to performance obligations that remained unsatisfied (or partially unsatisfied) at the balance sheet date. Further, since the terms of the contracts directly identify the transaction price for each of the completed performance obligations, in all material respects, there are no elements of transaction price which have not been included in the revenue recognised in the financial statements.

Further, there is no material difference between the contract price and the revenue from contract with customers.

6. Special items

(US$ million)

	Year ended 31 March 2021			Year ended 31 March 2020		
	Special items	Tax effect of Special items	Special items after tax	Special items	Tax effect of Special items	Special items after tax
Revision of Renewable Purchase Obligation (RPO) [5]	13	(3)	10	24	(8)	16
Provision for settlement of dispute regarding environmental clearance [11]	(29)	10	(19)	-	-	-
Gross profit special items (a)	**(16)**	**7**	**(9)**	**24**	**(8)**	**16**
Impairment (charge)/reversal of oil and gas assets [1]	-	-	-	(1,906)	742	(1,164)
Impairment (charges) of CWIP & capital advances [2, 9, 10]	(33)	11	(22)	(94)	33	(61)
Impairment (charge) of ASI assets [3]	-	-	-	(72)	11	(61)
Total impairment reversal/ (charge) (net) (b)	**(33)**	**11**	**(22)**	**(2,072)**	**786**	**(1,286)**
Provision on Iron ore assets [4] (c)	-	-	-	(17)	6	(11)
Operating special items (a+b+c)	**(49)**	**18**	**(31)**	**(2,065)**	**784**	**(1,281)**
Investment Revenue Special item [7]	-	-	-	12	(3)	9
Transaction costs paid to the ultimate parent company on structured investment sold in previous year	(14)	-	(14)	-	-	-
Bargain gain on acquisition of FACOR [12]	16	-	16	-	-	-
Delisting expenses [8]	(65)	-	(65)	-	-	-
Profit/ (Loss) on Discontinued Operations [6]	91	-	91	(771)	-	(771)
Total of Special items	**(21)**	**18**	**(3)**	**(2,824)**	781	(2,043)

1 During the year ended 31 March 2020, the Group has recognized impairment charge of US$ 1,906 on its assets in the oil and gas segment comprising of:

I. During the year ended 31 March 2020, impairment charge of US$ 1,795 million relating to Rajasthan oil and gas block ("RJ CGU") triggered by the significant fall in the crude oil prices. Of this charge, US$ 1,648 million impairment charge has been recorded against oil and gas producing facilities and US$ 147 million impairment charge had been recorded against exploration intangible assets under development.

For oil & gas assets, 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 RJ CGU, US$ 1,405 million, was determined based on the fair value less costs of disposal approach, a level-3 valuation technique in the fair value hierarchy. Also, 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 the current estimates of reserves and risked resources. Reserves assumptions for fair value less costs of disposal 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 short-term oil price of US$ 38 per barrel for the next one year and scales upto long-term nominal price of US$ 57 per barrel three years thereafter derived from a consensus of various analyst recommendations. Thereafter, these have been escalated at a rate of 2% per annum. The cash flows are discounted using the post-tax nominal discount rate of 10.35% derived from the post-tax weighted average cost of capital after factoring the risks ascribed to the successful implementation of key growth projects. Additionally, in computing the recoverable value, the effects of market participant's response on production sharing contract matters have also been appropriately considered (refer note 2(c)(I)(viii) for PSC extension matters). Based on the sensitivities carried out by the Group, change in crude price assumptions by US$ 1/bbl and changes to discount rate by 1% would lead to a change in recoverable value by US$ 45 million and US$ 66 million respectively.

II. During the year ended 31 March 2020, impairment charge of US$ 36 million relating to KG-ONN-2003/1 CGU mainly due to the reduction in crude oil price forecast.

The recoverable amount of the CGU, US$ 20 million was determined based on fair value less cost of disposal approach, a level-3 valuation technique in the fair value hierarchy as described in above paragraph. Discounted cash flow analysis used to calculate fair value less costs of disposal uses assumption for oil price as described in above paragraph. The cash flows were discounted using the post-tax nominal discount rate of 11.1% derived from the post-tax weighted average cost of capital. The sensitivities around change in crude price and discount rate are not material to the financial statements.

III. During the year ended 31 March 2020, impairment charge of US$ 75 Million, in exploration block KG-OSN-2009/3, was provided for as the Government of India approval on extension and grant of excusable delay was awaited.

2. Refer note 2(c)(I)(vii).

3. During the year ended 31 March 2020, the Group has recognized impairment charge of US$ 72 million on the assets of AvanStrate Inc (ASI) mainly due to the significant changes in the market and economic environment in which ASI operates leading to decrease in demand and profitability in the glass substrate business. The charge relates to ASI business in Japan, Taiwan and Korea classified in the 'others' segment. Given the significant interdependence of these entities on each other, these are considered as a single cash-generating unit.

   The net recoverable value of assets and liabilities has been assessed at US$ 205 million based on the value in use approach.Based on the sensitivities carried out by the Group, decrease in volume assumptions by 1% would lead to decrease in recoverable value by US$ 2 million and increase in discount rate by 1% would lead to a decrease in recoverable value by US$ 6 million.

4. During the year ended 31 March 2020, a parcel of land relating to the Iron Ore business having carrying value of US$ 17 million was reclassified from freehold land to other financial asset due to an ongoing legal dispute relating to title of the land. Subsequently, during the year, the financial asset was fully provided for impairment and recognized under special items.

5. During the year ended 31 March 2020, Vedanta Limited restated its Renewable Power Obligation (RPO) liability pursuant to Odisha Electricity Regulatory Commission (OERC) notification dated 31 December 2019 which clarified that for CPPs commissioned before 01 April 2016, RPO should be pegged at the RPO obligation applicable for 2015-16. Based on the notification, liability of Vedanta Limited's Jharsuguda and Lanjigarh plants have been revised and US$ 24 million reversal relating to previous years has been recognised under special items.

During the year ended 31 March 2021, Vedanta Limited has recomputed its Renewable Power Obligation (RPO) pursuant to Chhattisgarh State Electricity Regulatory Commission (CSERC) notification dated 13 July 2020 (published on 22 July 2020) which clarified that for Captive Power Plants commissioned before 01 April 2016, RPO should be pegged at the RPO obligation percentage rates (both for solar and non-solar) applicable for FY 2015-16. Consequent to the aforesaid notification, Vedanta Limited's obligation towards RPO relating to the period upto 31 March 2020 has been reversed to the extent of US$ 13 million during this year.

6. Refer note 3(b).

7. On the contempt petition filed by TSPL, the Hon'ble Supreme Court of India vide its order dated 07 August 2019 allowed gross calorific value (GCV) on as received basis (ARB) and actual cost of coal in the Energy Charge Formula and directed Punjab State Power Corporation Limited (PSPCL) to make the payments within 8 weeks. Pursuant to the order, PSPCL has paid US$ 142 million in September 2019 and October 2019. TSPL has booked an interest of US$ 20 million due to the delay in receipt of payment as per the Supreme Court order dated 07 March 2018 allowing the interest on delay in payment. Of this interest of US$ 12 million pertaining to period prior to 31 March 2019 is booked as special item and amount of US$ 8 million for previous year is booked in investment income.

8. Refer delisting note in Group overview section.

9. During the year ended 31 March 2021, the Group has recognised a loss of US$ 24 Million relating to certain items of capital work-in-progress at the aluminium operations, which are no longer expected to be used.

10. During the year ended March 31, 2021, ESL Steel Limited conducted a detailed physical verification and evaluation of project equipment and material being carried forward as capital work in progress at a carrying value of US$ 113 Million. Pending completion of entire exercise, an interim provision of US$ 9 Million has been recognized relating to certain items of capital work-in-progress, which are no longer expected to be used.

11. Refer Note 2(c)(I)(x).

12. Refer Note 3(a).

7. Investment revenue

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Net gain on financial assets held at fair value through profit or loss (FVTPL)*	109	97
Interest Income:		
Interest income- financial assets held at FVTPL	63	140
Interest income- bank deposits at amortised cost	77	33
Interest income- loans and receivables at amortised cost	37	67
Interest income- others	11	4
Investment Revenue – Special item	-	12
Dividend Income:		
Dividend income- available for sale Investments	-	-
Dividend income- financial assets held at FVTPL	0	7
Foreign exchange (loss)/ gain (net)	(5)	7
Net Gain arising on qualifying hedges and non-qualifying hedges	-	27
Total	**292**	**394**

* *Includes mark to market loss of Nil (31 March 2020: gain of US$ 51 million) relating to structured investment.*

8. Finance costs

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Interest expense – financial liabilities at amortised cost	1170	1,245
Other finance costs (including bank charges)	70	61
Total interest cost	**1240**	**1,306**
Unwinding of discount on provisions	10	14
Net interest on defined benefit arrangements	3	3
Special items (note 6)	58	-
Capitalisation of finance costs/borrowing costs	(44)	(144)
Total	**1,267**	**1,179**

All borrowing costs are capitalised using rates based on specific borrowings and general borrowings with the interest rate of 6.91% (7.49% for 31 March 2020) per annum for the year ended 31 March 2021.

9. Other gains and (losses) (net)

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Foreign exchange gain/ (loss) (net)	55	(79)
Change in fair value of financial liabilities measured at fair value	(1)	(1)
Net loss arising on qualifying hedges and non-qualifying hedges	(43)	(7)
Bargain gain on acquisition of FACOR – Special Item (Refer Note 3(a))	16	-
Other gains and losses – Special Item	(21)	-
Total	**6**	**(87)**

10. Tax

(a) Tax charge/ (credit) recognised in Consolidated Income Statement (including on special items)

(US$ million)

	Year ended 31 March 2021	Year ended 31 March 2020
Current tax:		
Current tax	308	258
Total current tax (a)	**308**	**258**
Deferred tax:		
Origination of temporary differences	8	153
Credit in respect of Special items (Refer Note 6)	(18)	(781)
Total deferred tax (b)	**(10)**	**(628)**
Total Income tax expense/ (benefit) for the year((a)+(b))	**298**	**(370)**
(Loss)/ Profit before tax from continuing operations	**1,683**	**(1,346)**
Effective Income tax rate (%)	**17.7%**	**27.5%**

Tax (benefit)/ expense

(US$ million)

Particulars	Year ended 31 March 2021	Year ended 31 March 2020
Tax effect on special items	(18)	(781)
Tax expense – others	316	411
Net tax expense/ (benefit)	**298**	**(370)**

(b) A reconciliation of income tax expense/ (credit) applicable to 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 indicated are 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 2021	Year ended 31 March 2020
Profit/ (Loss) before tax from continuing operations	**1,683**	**(1,346)**
Indian statutory income tax rate	34.944%	34.944%
Tax at statutory income tax rate	**588**	**(470)**
Disallowable expenses	30	30
Non-taxable income	(17)	(20)
Tax holidays and similar exemptions	(104)	(70)
Effect of tax rate differences of subsidiaries operating at other tax rates	64	55
Tax on distributable reserve of/ dividend from subsidiary	117	276
Unrecognized tax assets (Net)**	(420)	66
Change in deferred tax balances due to change in tax law*	(42)	(251)
Capital Gains/ Other Income subject to lower tax rate	(23)	(39)
Credit in respect of earlier years	-	-
Other permanent differences	105	53
Total	**298**	**(370)**

** Deferred tax charge for the year ended 31 March 2020 includes deferred tax credit of US$ 233 million on remeasurement of deferred tax balances as at 31 March 2019. Also refer note 2(c)(I)(ix).*

*** In June 2018, the Company acquired majority stake in ESL, which has since been focusing on operational turnaround. Based on management's estimate of future outlook, financial projections and requirements of Ind AS 12 – Income taxes, ESL has recognized deferred tax assets of US$ 434 million during the year ended 31 March 2021.*

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 tax holiday under section 80IC of the Income-tax Act, 1961. Such 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').

In the current year, an undertaking at Pantnagar, which is part of Hindustan Zinc Limited, is the only unit eligible for deduction at 30% of taxable profit.

The location based exemption: SEZ Operations

In order to boost industrial development and exports, provided certain conditions are met, profits of undertaking located in Special Economic Zone ('SEZ') may benefit from tax holiday. Such tax holiday works to exempt 100% of the profits for the first five years from the commencement of the tax holiday, 50% of profits for five years thereafter and 50% of the profits for further five years provided the amount allowable in respect of deduction is credited to Special Economic Zone Re-Investment Reserve account. However, such undertaking would continue to be subject to the Minimum Alternative tax ('MAT').

The Group has setup SEZ Operations in its aluminium division of Vedanta Limited (where no benefit has been drawn).

Sectoral Benefit - Power Plants and Port Operations

To encourage the establishment of infrastructure certain power plants and ports have been offered income tax exemptions of upto 100% of profits and gains for any ten consecutive years within the 15 year period following commencement of operations subject to certain conditions under section 80IA of the Income-tax Act, 1961. 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) and port facilities. However, such undertakings would continue to be subject to 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).

The Group operates a zinc refinery in 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$ 104 million for the year ended 31 March 2021 (31 March 2020: US$ 70 million).

11. Underlying Attributable Profit/(Loss) for the year

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 profit/ loss for the year after adding back special items, other losses/(gains) [net] (note 9) and their resultant tax (including taxes classified as special items) & non-controlling interest effects and (Gain)/ loss on discontinued operations. This is a Non-IFRS measure.

(US$ million)

	Note	Year ended 31 March 2021	Year ended 31 March 2020
Profit/(Loss) for the year attributable to equity holders of the parent		323	(1,568)
Special items	*6*	112	2,053
Other (gains)/losses [net]	*9*	(11)	87
Tax effect of special items (including taxes classified as special items) and other gains/ (losses) [net]		(16)	(799)
Non-controlling interest on special items and other gains/ (losses)		5	(684)
(Gain)/loss on discontinued operations	*3(b)*	(91)	771
Non-controlling interest on loss after tax from discontinued operations		12	(30)
Underlying attributable profit/ (loss) for the year		**334**	**(170)**

12. Financial asset investments

Financial asset investments represent investments classified and accounted for at fair value through profit or loss or through other comprehensive income.

Financial Asset Investments

(US$ million)

	As at 31 March 2021	As at 31 March 2020
At 1 April 2020	12	707
(Sale)/purchase of structured investment	-	(639)
Movements in fair value (including on investments purchased during the year)	9	(61)
Investment in Bonds*	-	7
Exchange difference	0	(2)
At 31 March 2021	**21**	**12**

*Reclassified during the year from short-term investments

Financial asset investment represents quoted investments in equity shares and other investments that present the Group with an opportunity for returns through dividend income and gains in value. These securities are held at fair value. These are classified as non-current as at 31 March 2021 and 31 March 2020.

13. Short-term investments

(US$ million)

	As at 31 March 2021	As at 31 March 2020
Bank deposits [1,2]	1,625	1,101
Other investments	3,377	3,284
Total	**5,002**	**4,385**

(1) The above bank deposits include US$ 90 million (31 March 2020: US$ 34 million) on lien with banks, US$ 37 million (31 March 2020: US$ 19 million) of margin money, US$ 33 million (31 March 2020: US$ 23 million) maintained as debt service reserve account.

(2) Restricted funds of US$ 3 million (31 March 2020: Nil) on lien with Others and US$ 63 million (31 March 2020: Nil) held as interest reserve created against interest payment on loans from banks and US$ 6 million (31 March 2020: US$ 8 million) of restricted funds held as collateral in respect of closure costs.

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 recorded at fair value with changes in fair value reported through the consolidated 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.

14. Cash and cash equivalents

(US$ million)

	As at 31 March 2021	As at 31 March 2020
Cash and cash equivalents consist of the following		
Cash at bank and in hand	376	321
Short-term deposits[2]	325	371
Restricted cash and cash equivalents [1]	254	13
Total	**955**	**705**

(1) Restricted cash and cash equivalents includes US$ 240 million (31 March 2020: Nil) and US$ 14 million (31 March 2020: US$ 13 million) that are kept in a specified bank account to be utilised solely for the purposes of voluntary open offer and for the payment of dividends to non-controlling shareholders, which are being carried as a current liability respectively.

(2) 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.

(3) Cash and cash equivalents for the purpose of Statement of Cash Flows comprise the following:

	As at 31 March 2021	As at 31 March 2020
Cash and cash equivalents as above	955	705
Less: Restricted cash and cash equivalents	(254)	(13)
Total	**701**	**692**

15(a) Borrowings

(US$ million)

	As at 31 March 2021	As at 31 March 2020
Current borrowings consist of:		
Banks and financial institutions	547	1,644
Total short-term borrowings	**547**	**1,644**
Add: Current maturities of long-term borrowings	3,126	8,542
Current borrowings (A)	**3,673**	**10,186**
Non-current borrowings consist of:		
Banks and financial institutions	7,612	7,099
Non- convertible bonds	5,866	4,141
Non-convertible debentures	2,264	2,191
Redeemable Preference shares	0	0
Others	88	20
Total long-term borrowings	**15,830**	**13,451**
Less: Current maturities of long-term borrowings	(3,216)	(8,542)
Non-current borrowings (B)	**12,704**	**4,909**
Total (A+B)	**16,377**	**15,095**

The Group has discounted trade receivables on recourse basis US$ 4 million (31 March 2020: US$ 4 million). Accordingly, the monies received on this account are shown as borrowings as the trade receivables do not meet de-recognition criteria. 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, attributable leverage ratio and EBITDA to net interest expense ratio.

15(b). Movement in net debt[1]

(US$ million)

	Cash and cash equivalents **	Short term investments and Non-current Bank Deposits ***	Financial asset investment net of related liabilities and derivatives [1]	Total cash and short-term investments	Short-term borrowing	Long-term borrowing*	Total Net Debt
					Debt carrying value	Debt carrying value	
At 1 April 2019	**1,061**	**4,140**	**391**	**5,592**	**(4,132)**	**(11,848)**	**(10,388)**
Cash flow from continuing operations [3]	(305)	282	(365)	(388)	1,838	(1,644)	(194)
Cash flow from discontinued operations	(1)	-	-	(1)	-	-	(1)
Net debt on acquisition through business combination	(1)	-	-	(1)	128	22	149
Other non-cash changes [2]	-	205	(26)	179	372	(439)	112
Foreign exchange currency translation differences	(62)	(246)	-	(308)	150	458	300
At 1 April 2020	**692**	**4,381**	**-**	**5,073**	**(1,644)**	**(13,451)**	**(10,022)**
Cash flow from continuing operations [3]	(15)	431	-	416	1,119	(2,337)	(802)
Net debt on acquisition through business combination (note 3(a))	2	10	-	12	(1)	-	11
Other non-cash changes [2]	-	56	-	56	(1)	88	143
Foreign exchange currency translation differences	22	67	-	89	(19)	(131)	(61)
At 31 March 2021	**701**	**4,945**	**-**	**5,646**	**(546)**	**(15,831)**	**(10,731)**

* Includes current maturities of long-term borrowings of US$ 3,673 million as at 31 March 2021 (31 March 2020: US$ 8,542 million)
** Restated. Refer note 1(b)(ii)

*** The constituents of 'Short term investments' for the purpose of this note to include only those amounts of restricted funds that are corresponding to liabilities (e.g. margin money deposits). Consequently, restricted funds amounting to US$ 72 Million (31 March 2020: US$ 8 Million) have been excluded from 'Short-term investments' (Refer note 13(2)) and non-current bank deposit included for purpose of in this note.

(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, short-term 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 amortisation of borrowing costs, foreign exchange difference on net debt. It also includes US$ 195 million (31 March 2020: US$ 159 million) of fair value movement in investments and accrued interest on investments.*

(3) Consists of net repayment of working capital loan, proceeds and repayments of short-term and long-term borrowings.

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 & Amortization
EBITDA margin (%)	No direct equivalent	EBITDA divided by Revenue
Adjusted revenue	Revenue	Revenue Less: revenue of custom smelting operations at our Copper India & Zinc India business
Adjusted EBITDA	Operating profit/(loss) before special items	EBITDA Less: EBITDA of custom smelting operations at our Copper India & Zinc India business

Adjusted EBITDA margin	No direct equivalent	Adjusted EBITDA divided by Adjusted Revenue
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)
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 (FCF) post capex	Net cash flow from operating activities	Net Cash flow from operating activities Less: addition 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*	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.	No Adjustments
ROCE	No direct Equivalent	Not Applicable

*In December 2018, the Group has made a structured investment which is classified as Financial Assets investments. We believe liquidity of the investment makes its comparable to the other assets included previously in the debt calculation; therefore, inclusion gives more reliable and relevant information.

ROCE for FY2021 is calculated based on the working summarized below. The same method is used to calculate the ROCE for all previous years (stated at other places in the report).

Particulars	**Period ended 31 March 2021**
Operating Profit Before Special Items	2,701
Less: Cash Tax Outflow	242
Operating Profit before special Items less Tax outflow (a)	2,459
Opening Capital Employed (b)	12,295
Closing Capital Employed (c)	13,062
Average Capital Employed (d)= (b+c)/2	12,679
ROCE (a)/(d)	**19.4%**

Adjusted Revenue, EBITDA & EBITDA Margin for FY 2021 is calculated based on the working summarised below. The same method is used to calculate the adjusted revenue and EBITDA for all previous years (stated at other places in the report).

Particulars	**Period ended 31 March 2021**
Revenue	11,722
Less: Revenue of Custom smelting operations	(1,469)
Adjusted Revenue(a)	**10,253**
EBITDA	3,800
Less: EBITDA of Custom smelting operations	(21)
Adjusted EBITDA(b)	**3,821**
Adjusted EBITDA Margin (b)/(a)	**37%**

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 01 February 2006 and replacing the previous comparator group comprising companies constituting the FTSE Worldwide Mining Index (excluding precious metals)

Adjusted EBITDA

Group EBITDA net of EBITDA from custom smelting operations at Copper India & Zinc India operations.

Adjusted EBITDA margin

EBITDA margin computed on the basis of Adjusted EBITDA and Adjusted Revenue as defined elsewhere

Adjusted Revenue

Group Revenue net of revenue from custom smelting operations at Copper India & Zinc India operations.

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 Limited

Attributable Profit

Profit for the financial year before dividends attributable to the equity shareholders of Vedanta Resources Limited

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

Boepd

Barrels of oil equivalent per day

Bopd

Barrels of oil per day

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

CO2

Carbon dioxide

COP

Cost of production

CMT

Copper Mines of Tasmania Pty Limited, a company incorporated in Australia

Company or Vedanta

Vedanta Resources Limited

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 Limited, a company incorporated in Zambia which is treated as discontinued operations and deconsolidated the same w.e.f 1st June'2019, affiliation with Zambian government is in progress.

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

% Change

It is calculated and presented on absolute numbers. Hence, it would not match with % calculated on face value numbers. **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

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

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

FACOR

Ferro Alloys Corporation Ltd.

Financial Statements or Group financial statements

The consolidated financial statements for the Company and the Group for the year ended 31 March 2019 as defined in the Independent Auditor's Report to the members of Vedanta Resources Limited

Free Cash Flow

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

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 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 Limited, 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

KBOEPD

Kilo barrel of oil equivalent per day

LIBOR

London inter bank offered rate

LIC

Life Insurance Corporation

LME

London Metals Exchange

London Stock Exchange

London Stock Exchange Limited

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 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

MMSCFD

Million standard cubic feet per day

MT or Tonnes

Metric tonnes

MU

Million Units

MW

Megawatts of electrical power

NCCBM

National Council of Cement and Building Materials

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.

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.

OALP

Open Acreage licensing Policy

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

Return on Capital Employed or ROCE

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

Revenue Sharing Contract

Contract between Vedanta & Joint venture which define share of revenue for each joint venture partner.

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

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

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

% Share in EBITDA

It is % share of respective segment's EBITDA to Vedanta Resources Limited's EBITDA.**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

Underlying profit/ (loss)
Attributable profit/(loss) before special items Less: NCI share in other gains/(losses) (net of tax)

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 Limited, a company incorporated in Zambia and a minority shareholder of Konkola Copper Mines Limited

ZRA
Zambia Revenue Authority

The results will be available in the Investor Relations section of our website www.vedantaresources.com

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About Vedanta Resources

Vedanta Resources Limited ("Vedanta") is a diversified global natural resources company. The group produces aluminium, copper, zinc, lead, silver, iron ore, oil & gas, and commercial energy. Vedanta has operations in India, Zambia, Namibia, South Africa, and Australia. With an empowered talent pool globally, Vedanta places strong emphasis on partnering with all its stakeholders based on the core values of trust, sustainability, growth, entrepreneurship, integrity, respect, and care. Good governance and sustainable development are at the core of Vedanta's strategy, with a strong focus on health, safety, and environment, and on enhancing the lives of local communities. The group has a strong focus on achieving best in class ESG practices. The group's CSR philosophy is to eradicate poverty and malnutrition with a focus on development of women & children. For more information on Vedanta Resources, please visit **www.vedantaresources.com** .

Disclaimer