

VEDANTA LIMITED

**INVESTOR  
PRESENTATION  
Q2 FY2020**

November 2019

*We Are...*  
**GROWING  
RESPONSIBLY**

OIL & GAS | ZINC-LEAD-SILVER | ALUMINIUM & POWER | COPPER | IRON ORE & STEEL

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# Q2 FY2020 Review

**Venkat**

Chief Executive Officer



<p><b>Operational</b></p> 	<ul style="list-style-type: none"> <li>▪ <b>Zinc India</b> ore production up by 3% y-o-y at 3.6 million ton with strong growth at Rampura Agucha and Zawar Mines</li> <li>▪ <b>Zinc International</b> overall production at 63kt (24kt Gamsberg), up significantly y-o-y</li> <li>▪ <b>O&amp;G</b> 166 wells drilled, 63 wells hooked up</li> <li>▪ Early gas production facility currently ramped up to over 50 mmscfd</li> <li>▪ <b>Aluminum</b> continuous structural reduction in cost, down 10% y-o-y</li> <li>▪ Vedanta emerged as highest bidder for Jamkhani coal block in Odisha</li> <li>▪ Lanjigarh production 410kt, up 18% y-o-y with COP \$293/t down 18% y-o-y</li> <li>▪ <b>Iron Ore</b> achieved highest ever sales of 1.4 million tonnes at Karnataka</li> <li>▪ <b>Electrosteel</b> sales 283 kt, up 6% y-o-y</li> </ul>
<p><b>Financial</b></p> 	<ul style="list-style-type: none"> <li>▪ Robust EBITDA generation of ₹ 4,497 cr with Industry leading margin in subdued commodity price scenario and PAT higher by 61% y-o-y</li> <li>▪ Gross debt reduced by ₹ 3,279 crore pursuant to repayment at TSPL and Vedanta Standalone</li> <li>▪ Net debt at ₹ 20,081 crore, lower by ₹ 8,322 crore q-o-q with strong Net debt/EBITDA at 0.9x</li> <li>▪ Strong financial position with total cash &amp; liquid investments of ₹ 35,817 cr</li> </ul>
<p><b>Awards &amp; Recognition</b></p> 	<ul style="list-style-type: none"> <li>▪ Vedanta bestowed with the coveted <b>“Golden Peacock Global Award for Excellence in Corporate Governance 2019”</b></li> <li>▪ The world’s largest PR awards program, <b>“The Sabre Awards”</b>, presented Oil &amp; Gas and Vedanta Ltd., a <b>Gold SABRE APAC 2019 award</b> in the B2B category</li> <li>▪ Zinc India won best Environmental Sustainability Award in the category of National Awards for <b>‘Excellence in CSR and Sustainability’</b> on World CSR Day by Zee Business</li> </ul>

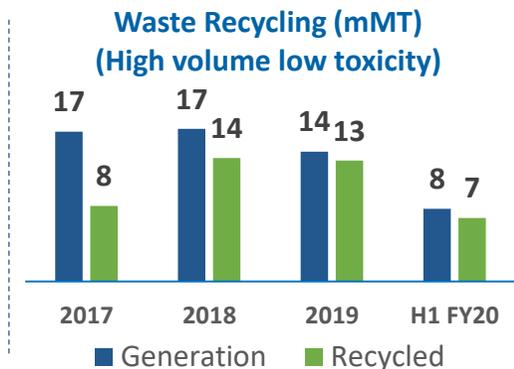
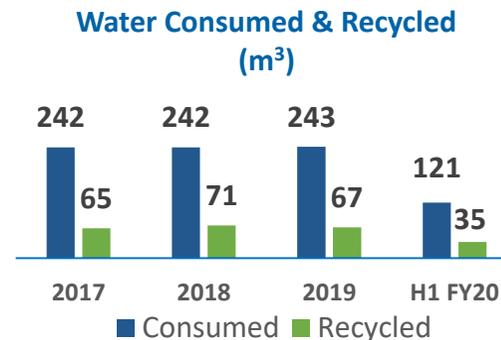
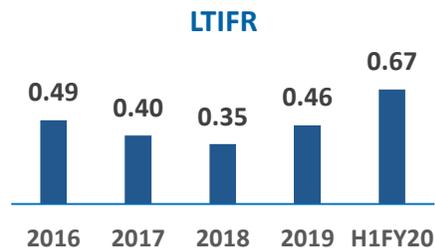
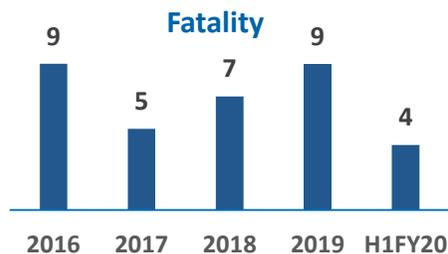
## Dow Jones Sustainability Index Ranking Improves to 20<sup>th</sup> (24<sup>th</sup> in 2018) Ranked 7<sup>th</sup> in Asia Pacific Region (metals and mining sector)

### Safety Program Update

- |   |   |
|---|---|
| 1 rail-related fatality in Q2               | ▪ Rail safety committee to prevent repeats  |
| Visible felt leadership                     | ▪ Group Safety Head conducting in-situ reviews to facilitate implementation   |
| Controls-in-place for safety critical tasks | <ul style="list-style-type: none"> <li>▪ Enhanced bow-tie risk assessments</li> <li>▪ Update of the Permit to Work System</li> </ul>  |
| Business partner engagement                 | <ul style="list-style-type: none"> <li>▪ Review of BP pre-qualification and on-boarding process</li> <li>▪ Committee established to aid BP enhance their safety deliverables</li> </ul> |

### Environment Update

- |                                |   |
|--------------------------------|---|
| Tailings Management            | ▪ Tailings dam information published as per Church of England request       |
| Measuring water use efficiency | ▪ BALCO estimate based on ICMM showed 99.8% efficiency against ~11% average |



**Benefitting the lives of 3.0 million people across 1,042 villages**

## Healthcare

1.6 Million people benefited  
> 35 Initiatives

## Drinking Water and Sanitation

350,000 people benefited  
> 25 Initiatives

## Community Infrastructure

200,000 people and 3000+ families benefited  
> 25 Initiatives

## Children's Well-being and Education

135,000 Children Benefited  
>50 Initiatives

## Sports & Culture

> 65,000 Million sports person benefitted  
> 20 Initiatives

## Women's Empowerment

>35,000 Women benefited  
> 10 Initiatives  
>2,400 Self Help Groups  
120+ Micro - Enterprises

## Environmental Protection & Restoration

> 100,000 saplings planted

## Agriculture and Animal Husbandry

>30,000 people benefited  
> 30 Initiatives

## Flagship Programs

1000<sup>th</sup> Nand Ghar established in 4 states



## Football Academy



## Vedanta Medical Research Foundation

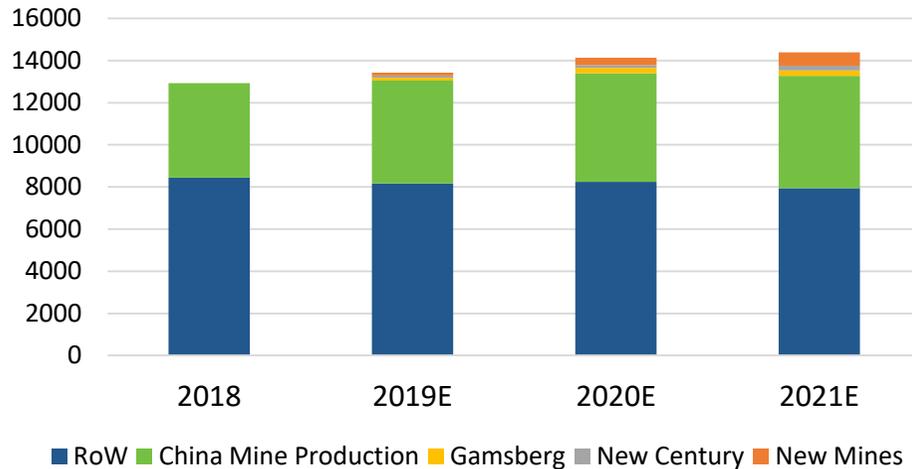


# Zinc India: Zinc supply shortfall and low stocks expected to support price

## Slower than expected production growth continues

- Reduction in production forecast in China
- Slow start at new projects
- Lower production in Russia and Peru

Global Zinc Mine Production ('000 MT)

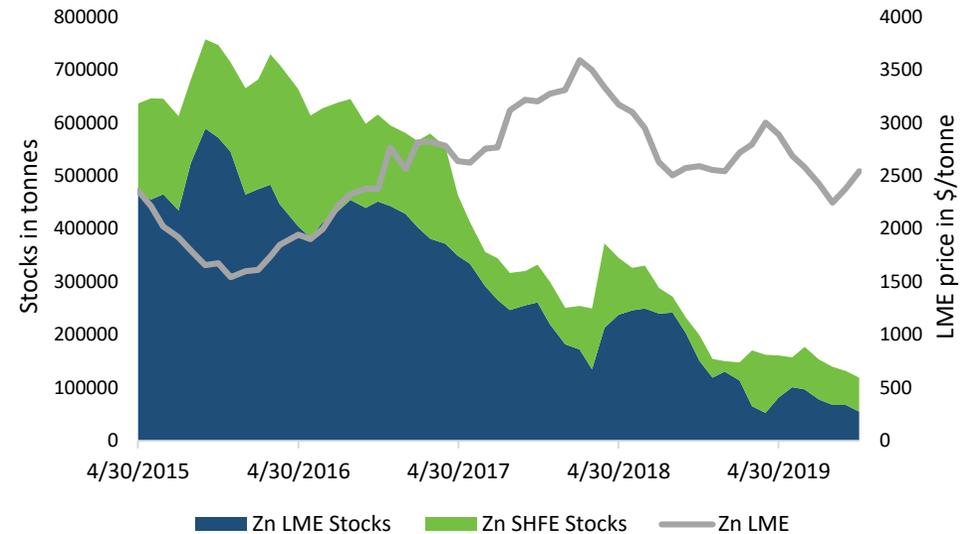


Forecast includes ~280kt increase each year in China which is at risk due to ongoing environmental issues  
mine production declining from 2023 onwards

## Refined market remains in deficit despite weak demand as production growth remains modest

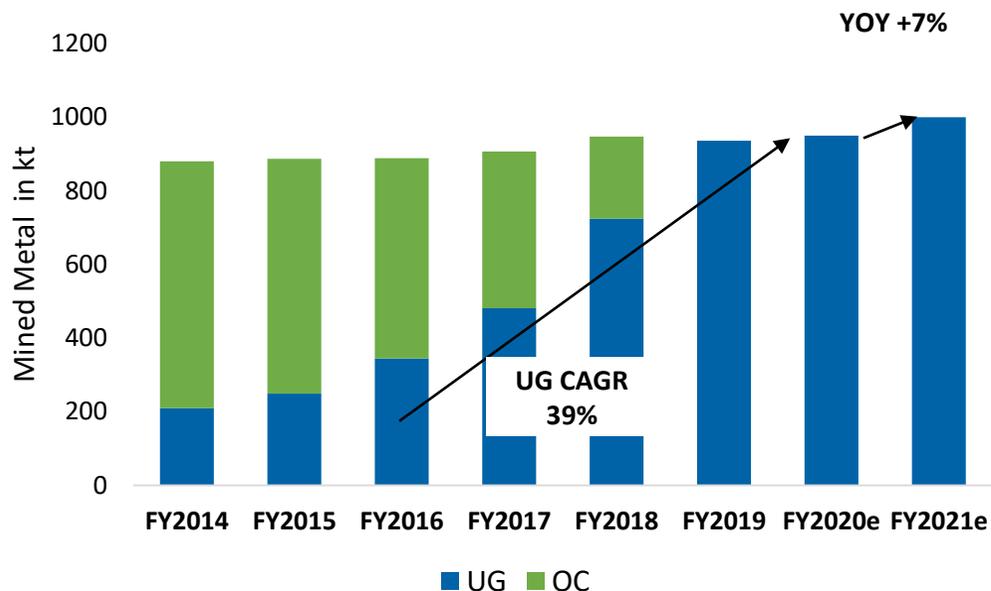
- Plant closures in China continue despite high TCs due to environmental regulations
- Exchange Metal stocks are at 4 days of consumption
- Metal stocks are forecast to remain at historically low levels over the balance of 2019 and into 2020

Zinc exchange stocks and LME price trend



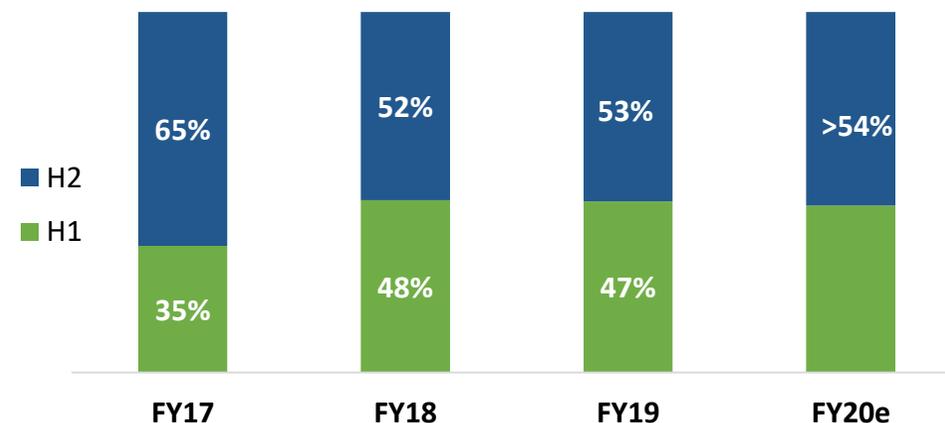
Source: Wood Mackenzie Q2 2019 Long Term Outlook

## Production ramp up to 1.0 million tons mined metal



## H2 – Completing 1.2 Mtpa project activities

- Traditional post-summer ramp-up in production
- Completion of key projects in H2



### Rampura Agucha

- ✓ Rapid Development crew to open new levels from Q2
- Shaft Commissioning in Q3

### Sindesar Khurd

- ✓ Shaft full ramp-up
- Resolution of Geotech issues in lower blocks
- Faster Paste filling in H2

### Zawar

- ✓ Commissioning of dry tail stacking plant
- Commissioning of two paste fill in Q3
- Ballaria ramp-up in Q4
- Pillar mining

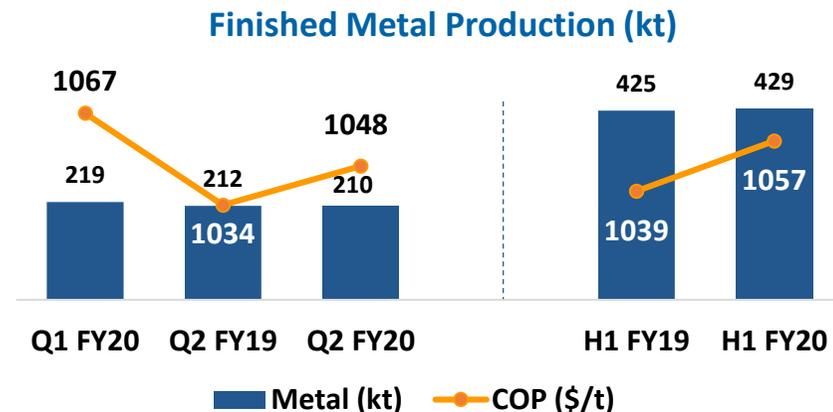
## Performance Update

### Quarter Performance:

- Metal Production 210kt, flat y-o-y
- MIC Production 219kt, down 6% y-o-y
- Silver Production 134 tons, down 22% y-o-y
- COP at \$1,048/t, marginally up 2% y-o-y

### Half Year Performance:

- Metal Production 429kt, up 1%
- MIC Production 432kt, marginally down 3%
- Silver Production 293 tons, down 5%
- COP at \$1,057, marginally up 2%



## Dow Jones Sustainability Index Ranking

**5<sup>th</sup> Globally**

In metals and mining sector for the 2<sup>nd</sup> consecutive year

**1<sup>st</sup> Asia Pacific Region**

Overall Ranking in metals and mining sector

**1<sup>st</sup> Globally**

In Materiality, Environment Reporting and Human Capital Development aspects

**FTSE4Good Index series for the 3<sup>rd</sup> consecutive year**

## Performance Update

### Quarter Performance:

- Overall production at 63kt, up 126% y-o-y
- COP of \$1,584/t, down 35% y-oy

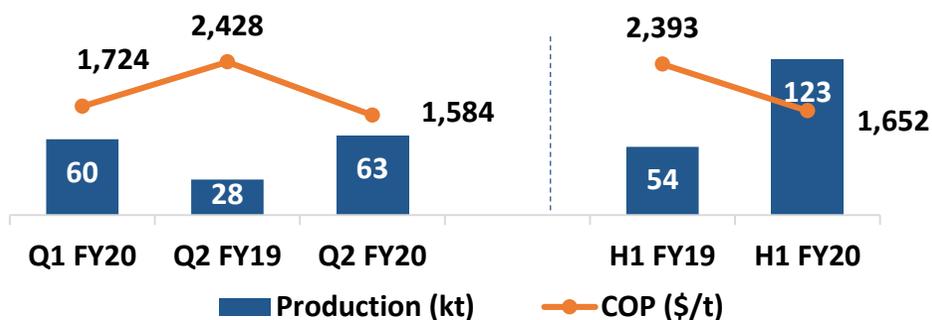
### Half Year Performance:

- Overall production at 123kt, up 130%
- COP of \$1,652/t, down 31%

### Skorpion

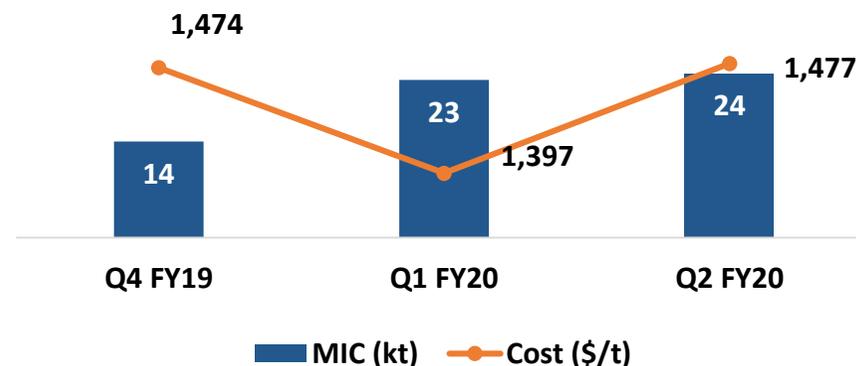
- Skorpion had a slope failure in May 2019 in Pit 112, remedial activities have been substantially completed. This has resulted in 4 month ore gap leading to refinery shutdown and shifting of 60kt production to FY21

### Consolidated Production and COP



## Gamsberg

- Production at 24kt, up 7% q-o-q
- COP at \$1,477, up 6% q-o-q due to increase in mining cost
- Ore production achieved >0.5 Mt in Sep
- >1.6 Mt of healthy ore stockpile ahead of plant
- Crusher current throughput is ~700 tph better than design throughput of 685 tph
- Achieved Exit Mill production run rate of 408 tph, will reach design run rate in Q3
- Won **“Visionary Client of the Year Award for Excellence in Tailing Facility Engineering”** from CESA



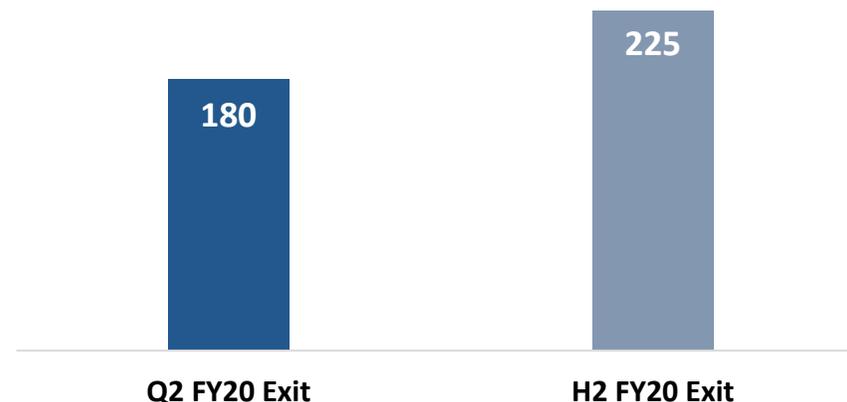
## Capex Investment

- **Gross Capex of \$ 3.2 billion in PSC blocks**
  - Monetization of 400 mmeob of resources
  - Development cost of \$ 7/boe
  
- **Capex of \$ 0.8 million in OALP blocks across 51 blocks**
  - Integrated Project Management by Lloyd’s Register
  - Full Tensor Gravity – Gradiometry survey commenced across 8 OALP Blocks in Assam

## Project Progress

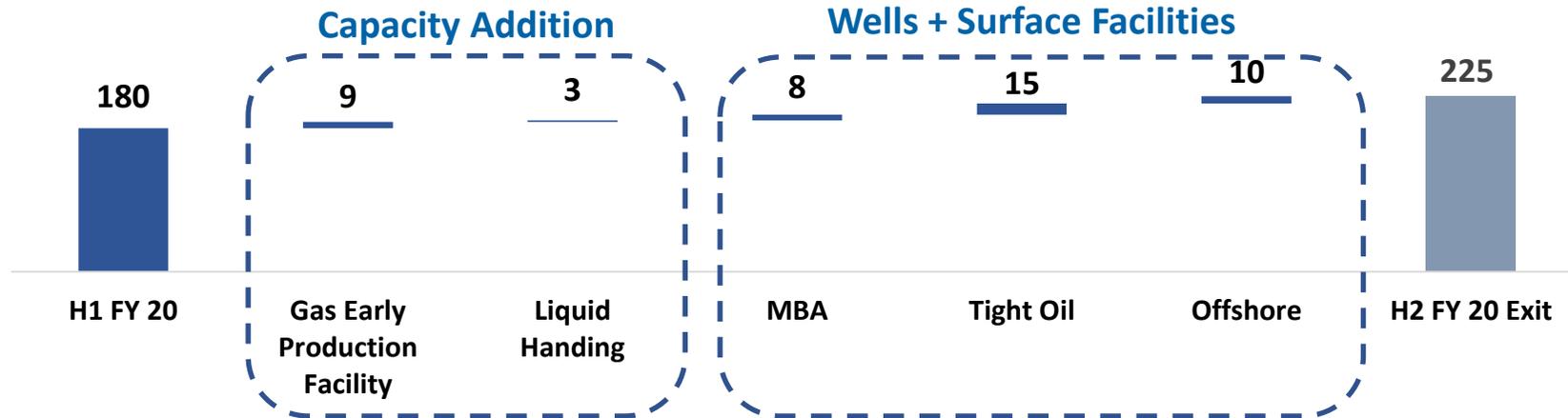
- 166 wells drilled, 63 wells hooked up
  
- Early gas production facility being progressively ramped up to design capacity of 90 mmscfd; currently at over 50 mmscfd
  
- Liquid handling capacity upgradation in progress

## Production Ramp Up (kboepd)



## Key Drivers for Production Ramp Up

	H1 FY20 Exit	H2 FY20 Exit
<b>Wells Drilled</b>	166	250
<b>Wells Hooked Up</b>	63	150
<b>Liquid Handling Capacity</b>	1.10 mmbld	1.25 mmbld
<b>Gas Processing Capacity</b>	80 mmscfd	150 mmscfd



### Mangala, Bhagyam & Aishwariya

- Commence full field polymer injection in Bhagyam and Aishwariya fields
- Additional Horizontal wells in Mangala Field
- Hook up balance 33 wells

### Tight Gas (RDG)

- Early production facility ramp up to design capacity of 90 mmscfd

### Liquid Handling

- Complete facility upgradation to enhance capacity by ~15% through Water Injection debottlenecking

### Tight Oil (ABH)

- Ramp up production through hook up of balance 34 wells
- Surface Facility online by January 2019

### Ravva

- Drilling to commence in Q3 FY20; 4 producer wells online by Q4 FY20

## OALP Blocks

51

### Well Diversified

40 Onshore  
11 Offshore

~60,000  
sq km

Acreage

500

### Peak Production (kboepd)

Upside Scenario

5.5

Resources (bnboe)

Upside Scenario

\$800  
mn

### Capex commitment

For exploration  
phase

192

Exploratory Wells

To be drilled

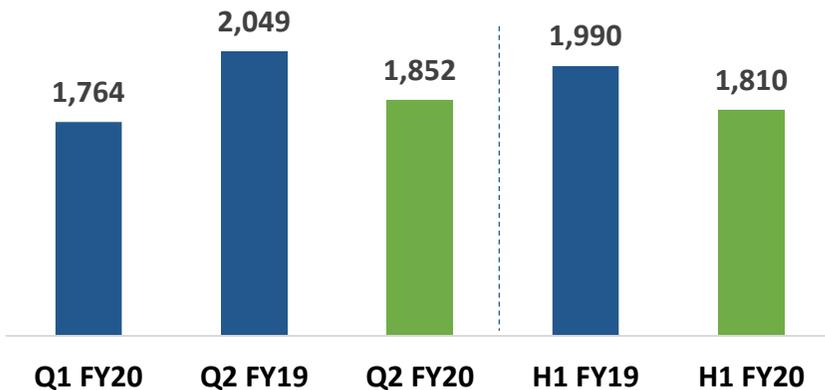
- **Integrated Project Management** by Lloyd's Register
- **Full Tensor Gravity** – Gradiometry survey, a state-of-the-art Airborne Technology for early screening of opportunities commenced across 8 OALP Blocks in Assam

## PSC Blocks

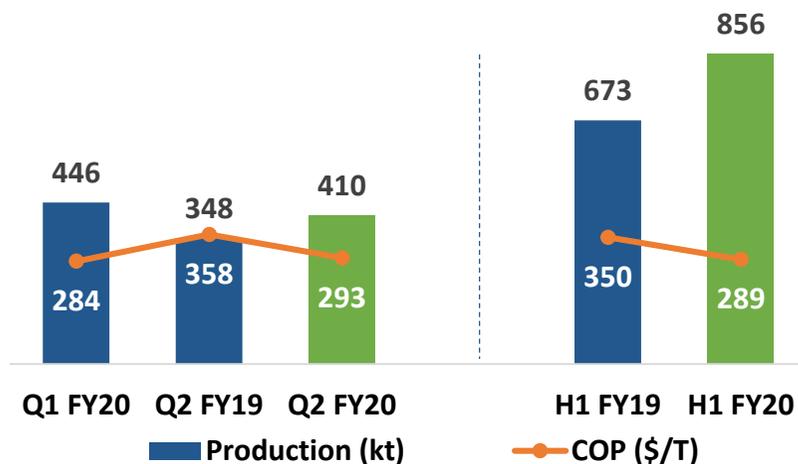
	Investment (\$mn)	Resources (mmboe)	Work Program (Wells)	Drilling Status
<b>Rajasthan Exploration</b>	60	300-600	7-18	Drilling from Q4 FY 20
<b>Rajasthan Tight Oil Appraisal</b>	75	200	14	Commenced in Q2 FY 20
<b>KG - Offshore</b>	60	300	2	Evaluation Ongoing
<b>Ravva</b>	85	50	4-9	Drilling from Q3 FY 20

**Strong exploration fundamentals supports reserves & resources growth**

## Structural Reduction in Cost



## Alumina Production & COP



## Performance Update

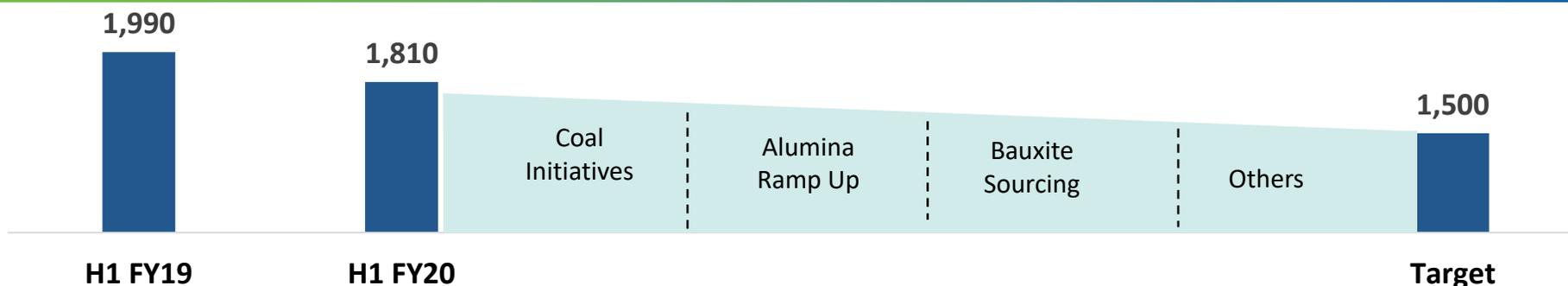
### Quarter Performance:

- Aluminium COP at \$1,852/t, down 10% y-o-y
- Lanjigarh production 410 kt, up 18% y-o-y
- Lanjigarh COP at \$293/t, down 18% y-o-y
- EGA Bauxite supplies started from Guinea

### Half Year Performance:

- Aluminium COP at \$1,810/t, down 9% y-o-y
- Lanjigarh production 856 kt, up 27% y-o-y
- Lanjigarh COP at \$289/t, down 17% y-o-y
- Local bauxite meeting half of the total requirement
- Chotia coal Mine on track to achieve full capacity of c. 1 Mtpa

# Aluminium: Significant progress on Strategic levers Continues



Initiatives	Action Plan
Coal Initiatives	<ul style="list-style-type: none"> <li>▪ Increase Linkages through participation in Tranche V &amp; VI, Coal Block Auctions</li> <li>▪ Target coal security 90% of requirement, up from current 72%</li> <li>▪ Balance Requirements: E-Auctions, Actively evaluate options available for best deals</li> </ul>
Alumina Ramp Up	<ul style="list-style-type: none"> <li>▪ Phase-I expansion to 2.7 Mtpa</li> <li>▪ Medium term expansion to 4 Mtpa</li> <li>▪ Easing of Alumina prices to sub \$300/t levels</li> </ul>
Bauxite Sourcing	<ul style="list-style-type: none"> <li>▪ Efforts to significantly increase mine output</li> <li>▪ Exploration of new resources under the New Mineral Policy</li> </ul>
Carbon & Others	<ul style="list-style-type: none"> <li>▪ Logistics: Shifting from road to rail</li> <li>▪ Procurement efficiencies: Strategic partnerships with key suppliers, long-term contracts</li> <li>▪ Ongoing improvement in power plant operating parameters, Fixed cost reduction</li> </ul>

## Iron Ore

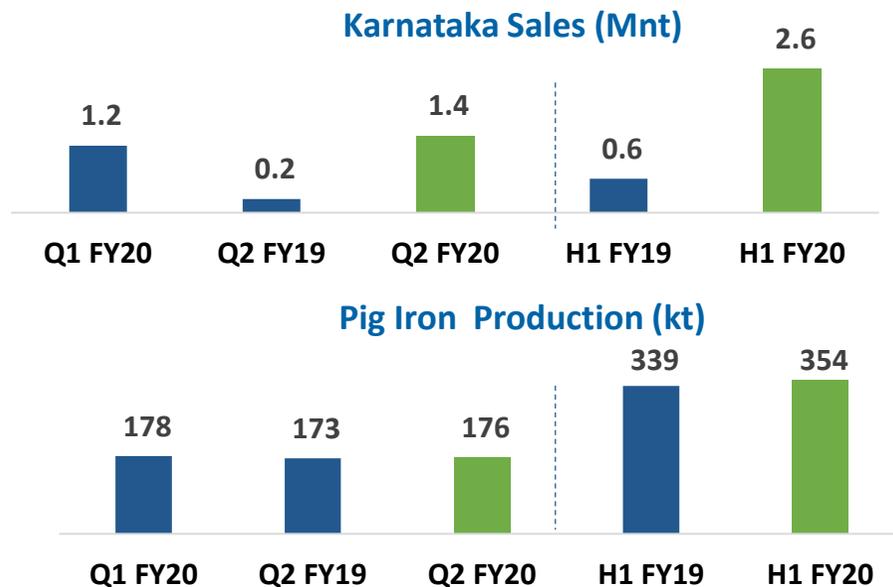
### Performance Update

#### Quarter Performance:

- Karnataka sales 1.4 Mnt, highest ever
- Pig Iron production 176kt, up 2% y-o-y

#### Half Year Performance:

- Karnataka sales 2.6 Mnt, significantly up
- Pig Iron production 354kt, up 4%



## Electrosteel Steels

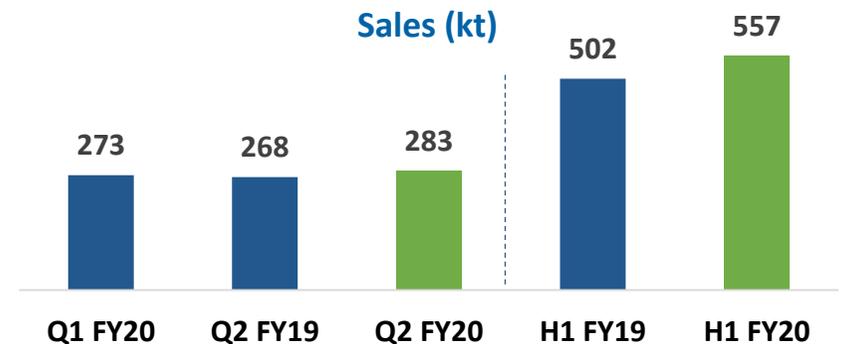
### Performance Update

#### Quarter Performance:

- Production 270kt, down 5% y-o-y
- Sales 283kt, up 6% y-o-y
- Margin at \$23/t, down 75% y-o-y on account of soften steel pricing scenario in domestic market

#### Half Year Performance:

- Production 645kt, up 15%
- Sales 557kt, up 11%
- Margin at \$63/t, down 32% on account of soften steel pricing scenario in domestic market





# Financial Update

**Arun Kumar**

Chief Financial Officer



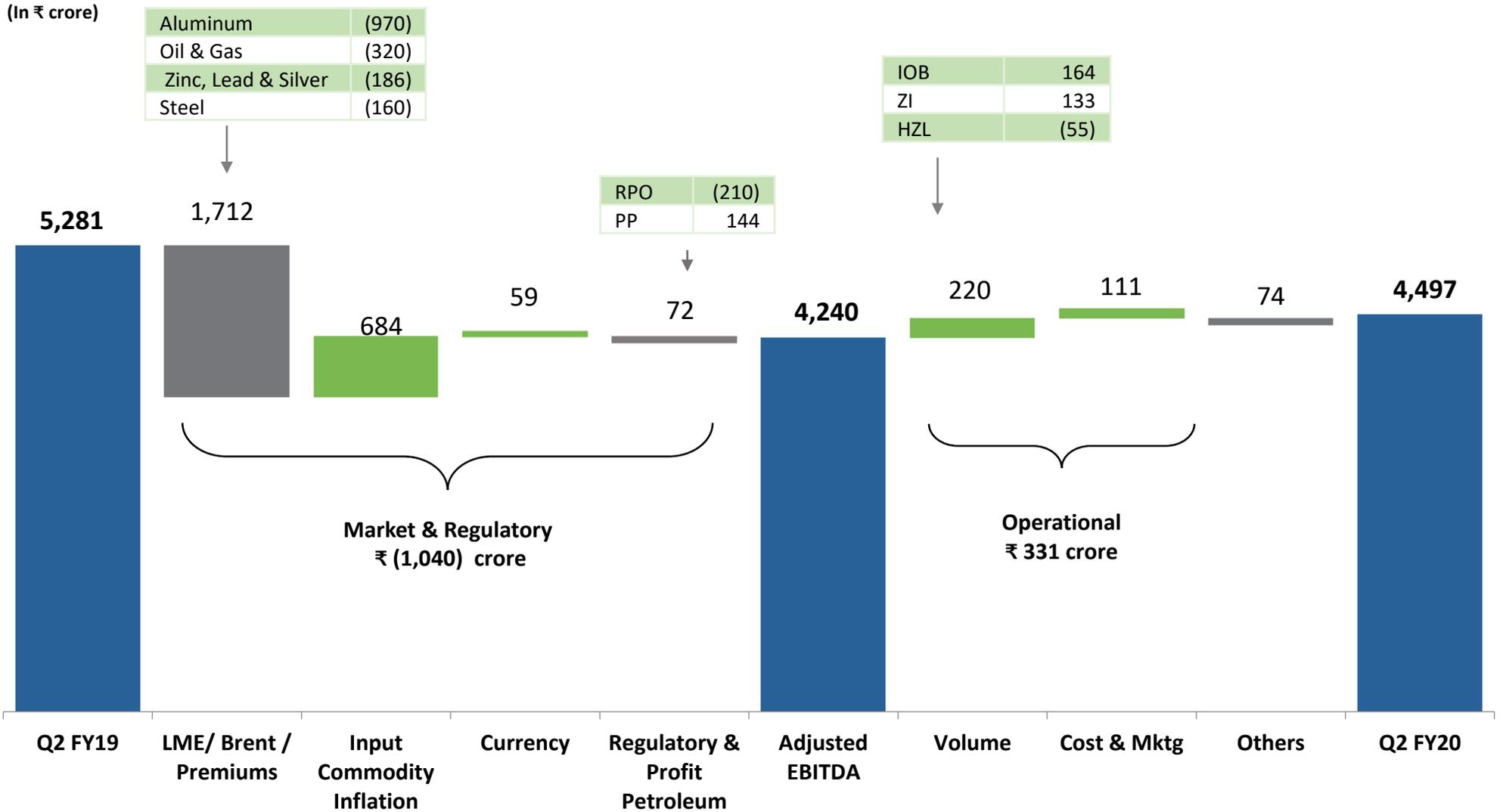
EBITDA	Attributable PAT	EBITDA Margin*
₹ 4,497 cr	₹ 2,158 cr	25%
Down 13% q-o-q	Up 60% q-o-q	Industry leading margin

Gross Debt	Net Debt	ND/EBITDA
₹ 55,898 cr	₹ 20,081 cr	0.9x
Down 6% q-o-q	Down 29% q-o-q	Lowest among Indian peers

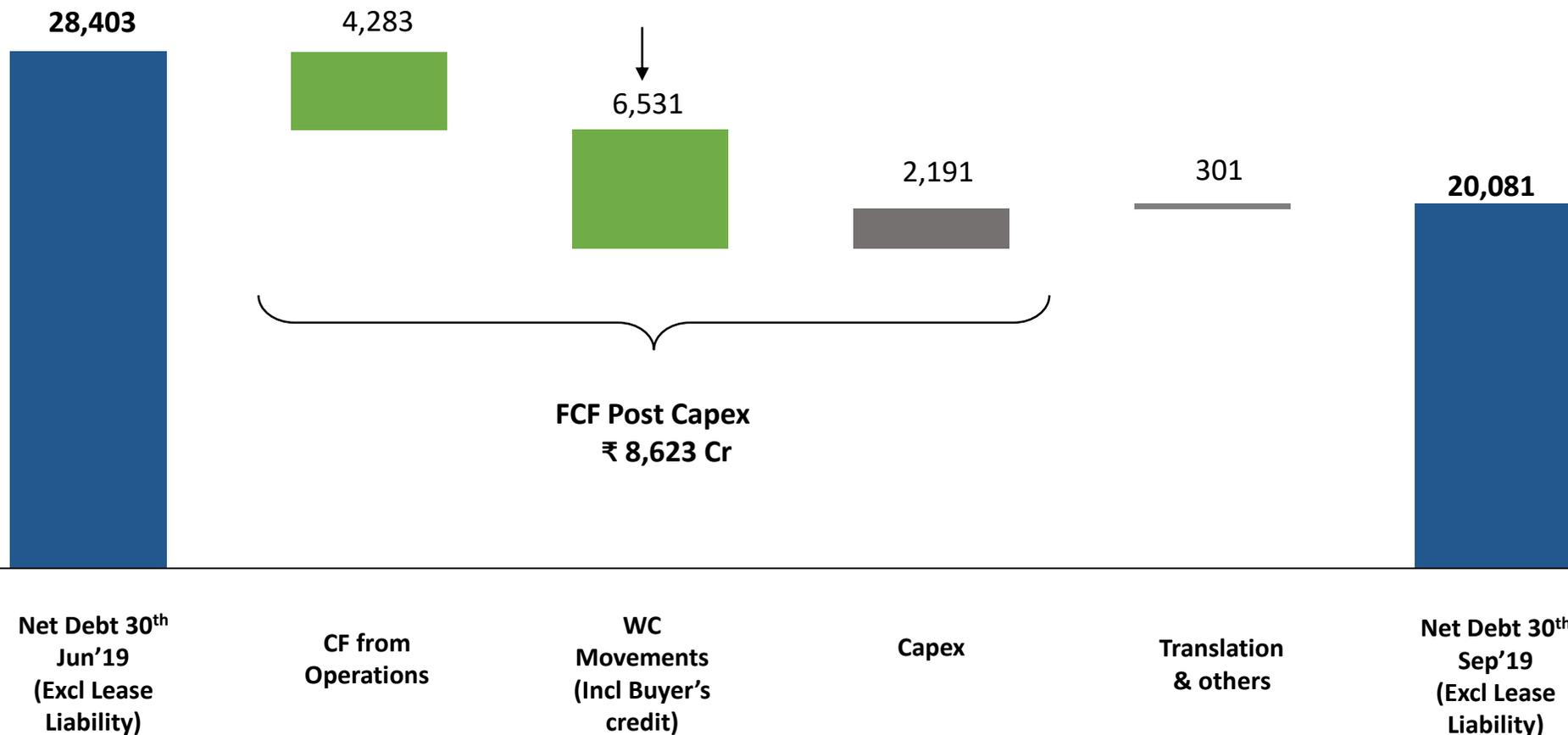
\* Excludes custom smelting at Copper India and Zinc-India operations

# EBITDA Bridge (Q2 FY2019 vs. Q2 FY2020)

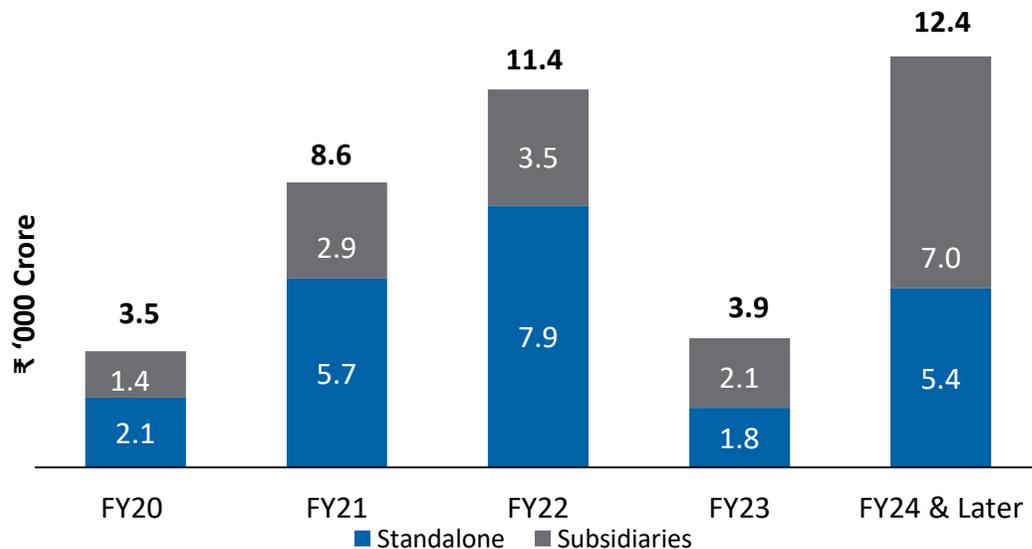


(In ₹ crore)

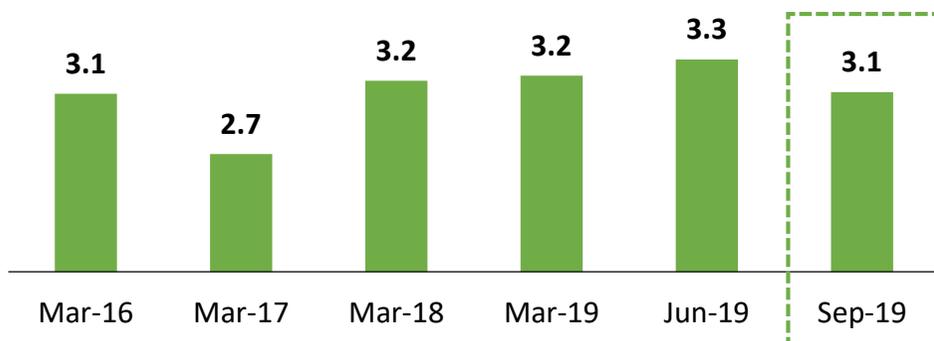
Power Debtor Realization	1,400
Metal Debtor Realization	520
Inventory Liquidation	1,055
Creditors/Customer Advance	3,540



## Term Debt Maturities - ₹ 39,861 Crore (\$5.7 bn) (as of Sep 30, 2019)



## Average Term Debt Maturity (years)



## Liquidity

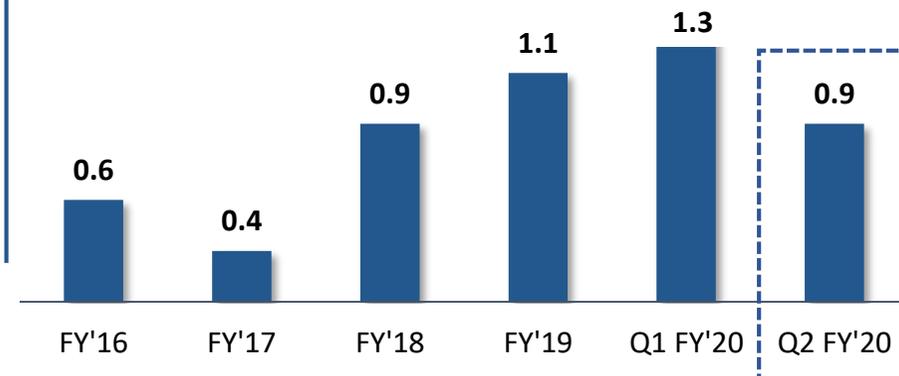
- Cash and investments @ ₹ 35,817 cr rated Tier I by CRISIL;
- Undrawn line of credit ₹ c. 7,200 crore

## Net Interest – Reducing q-o-q

- **Interest Income** – Returns ~7.6%.
- **Interest Expense** – Maintained ~8%

- Average term debt maturity maintained above 3 years

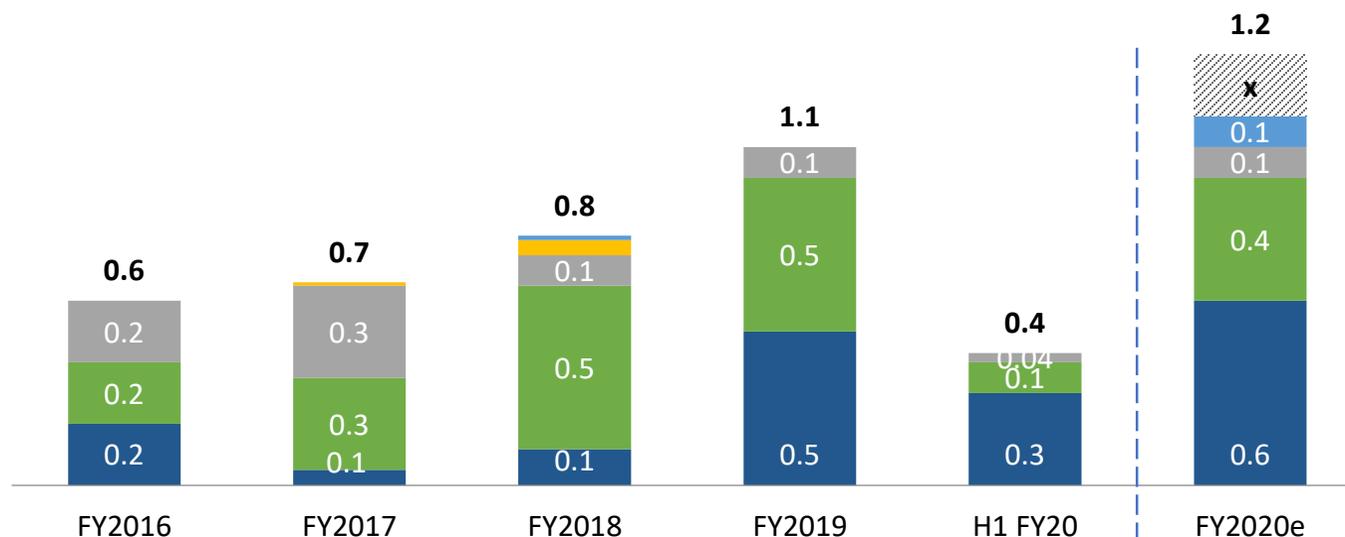
## Net Debt / EBITDA – lowest among peers



# Self funded Capex Delivering Superior Returns

## Growth CAPEX Profile, \$bn

Oil & Gas   Zinc   Al & Power   Copper   Other   Optionality



FCF pre capex, \$bn

2.4	2.8	2.0	2.8	1.4
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ROCE<sup>1</sup>

~5%	~15%	~17%	~13%	~11%
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1. ROCE is calculated as EBIT net of tax outflow divided by average capital employed on LTM basis.

1  Large Diversified Asset Base with an Attractive Commodity Mix

3  Well-Invested Assets Driving Cash Flow Growth

5  Strong Financial Profile

2  Ideally Positioned to Capitalise on Favourable Geographic Presence

4  Operational Excellence and Technology Driving Efficiency and Sustainability

6  Proven Track Record

# Appendix



Segment	FY20 Production and COP	Revised FY20 Guidance
<b>Zinc India</b>	Mined Metal and Finished Metal: c 1.0 Mtpa Silver: 750 - 800 tonnes < \$1,000/t excluding royalty	Mined Metal and Finished Metal: c 950kt Silver: c. 650 tonnes H2 COP < \$1,030/t excluding royalty
<b>Zinc International</b>	Skorpion and BMM: >170kt Gamsberg: 180 - 200kt ZI COP (excl Gamsberg) : \$1,400/t Gamsberg: c \$1,000/t	Skorpion and BMM: ~130kt Gamsberg: 140 - 150kt ZI COP (excl Gamsberg) : \$1,850/t Gamsberg: \$1,200 - \$1,250/t
<b>Oil &amp; Gas</b>	Gross Volume: 200-220 kboepd Opex: ~ \$7.5/boe	Gross Volume: 190-200 kboepd H2 Exit: c 225 kboepd
<b>Aluminium</b>	Alumina: 1.7-1.8 Mtpa Aluminium: 1.9 - 1.95 Mtpa COP*: \$ 1,725 – 1,775/t	
<b>Power</b>	TSPL plant availability: >80%	
<b>Iron Ore</b>	Karnataka (WMT): 4.5 Mtpa Goa: To be updated on re-start of operations	
<b>ESL</b>	Hot Metal – c 1.5 Mtpa	
<b>Copper - India</b>	To be updated on re-start of operations	

\*Hot Metal COP

## Depreciation & Amortization

- Higher q-o-q and y-o-q on account of higher ore production at Zinc businesses, commencement of Gamsberg operations and higher charge in O&G business due to capitalisation.

## Finance Cost

- Lower y-o-y primarily due to reduction in gross borrowings while on q-o-q basis it remained flat.

## Investment Income

- Higher y-o-y primarily on account of mark to market gain on investments due to softening of yields partially offset by one time re-classification from other comprehensive income in Zinc India in previous year.
- Higher q-o-q on account of mark to market gain on investments.

## Taxes

- Tax charge includes, one time deferred tax credit of ₹2,501 crore on account of re-measurement of deferred tax balances due to introduction of section 115BAA of the Income Tax At, 1961. Normalized tax rate for the quarter is 32% as against 27% last quarter.

In ₹ Crore	Q2 FY'20	Q2 FY'19	Q1 FY'20
Revenue from operations	21,739	22,432	21,167
Other operating income	219	273	207
EBITDA	4,497	5,281	5,188
Depreciation & amortization	(2,395)	(1,931)	(2,155)
Finance Cost	(1,340)	(1,478)	(1,341)
Investment Income	832	587	373
Exchange gain/(loss)	(50)	(161)	17
Exceptional item	(422)	320	-
<b>Profit Before Taxes</b>	<b>1,122</b>	<b>2,618</b>	<b>2,082</b>
Taxes	1,609	(718)	(138)
<b>Profit After Taxes</b>	<b>2,730</b>	<b>1,900</b>	<b>1,944</b>
<b>Attributable profit</b>	<b>2,158</b>	<b>1,343</b>	<b>1,351</b>
Basic Earnings Per Share (EPS) (₹/share)	5.83	3.62	3.65
Minorities % (after exceptional item)	21%	29%	31%

*Note: Previous period figures have been regrouped or re-arranged wherever necessary to conform to the current period's presentation*

Capex in Progress	Status	Capex <sup>3</sup> (\$mn)	Spent up to 31 Mar'19 <sup>4</sup>	Spent in H1 FY2020 <sup>4</sup>	Unspent as at 30 Sep'2019 <sup>5</sup>
<b>Cairn India</b> <sup>1</sup> – Mangala Infill, Liquid handling, Bhagyam & Aishwariya EOR, Tight Oil & Gas etc		2,452	651	282	1,519
<b>Aluminium Sector</b>					
Jharsuguda 1.25mtpa smelter	Line 3: Fully capitalised Line 4: Fully Capitalised Line 5: Six Section capitalised	2,920	2,915	10	-
<b>Zinc India</b>					
1.2mtpa mine expansion	Phase-wise by FY2020	2,076	1,569	99	408
Others		261	124	16	121
<b>Zinc International</b>					
Gamsberg Mining Project <sup>2</sup>	Completed Capitalisation	400	364	10	26
<b>Copper India</b>					
Tuticorin Smelter 400ktpa	Project is under Force Majeure	717	198	-	519
<b>Avanstrate</b>					
Furnace Expansion and Cold Repair	Completed	48	41	5	3
<b>Capex Flexibility</b>					
<b>Metals and Mining</b>					
Lanjigarh Refinery (Phase II) – 5mtpa	Under evaluation	1,570	857	27	686
Zinc India (1.2 Mtpa to 1.35mtpa mine expansion)	Subject to Board approval	698	1	-	697
Skorpion Refinery Conversion	Currently deferred till Pit 112 extension	156	14	-	142

1. Capex approved for Cairn represents Net capex, however Gross capex is \$3.2 bn.

2. Capex approved for Gamsberg \$400 mn excludes interest during construction.

3. Is based on exchange rate at the time of approval.

4. Is based on exchange rate at the time of incurrence

5. Unspent capex represents the difference between total capex approved and cumulative spend as on 30<sup>th</sup> September 2019.

# Entity Wise Cash and Debt

(In ₹ crore)

Company	Sep 30, 2019			Jun 30, 2019			Sep 30, 2018		
	Debt	Cash & LI	Net Debt	Debt	Cash & LI	Net Debt	Debt	Cash & LI	Net Debt
Vedanta Limited Standalone	37,956	7,162	30,794	39,922	4,147	35,775	44,754	8,050	36,704
Cairn India Holdings Limited <sup>1</sup>	1,213	5,180	(3,968)	-	6,167	(6,167)	2,912	7,101	(4,189)
Zinc India	-	19,655	(19,655)	-	18,280	(18,280)	-	23,318	(23,318)
Zinc International	423	833	(410)	413	682	(269)	-	460	(460)
BALCO	4,412	169	4,243	4,536	36	4,500	5,322	24	5,298
Talwandi Sabo	6,477	1,265	5,212	8,889	125	8,764	8,487	11	8,476
Vedanta Star Limited <sup>2</sup>	3,386	27	3,359	3,376	37	3,339	3,365	26	3,339
Others <sup>3</sup>	2,031	1,526	506	2,041	1,300	741	1,532	1,025	507
<b>Vedanta Limited Consolidated</b>	<b>55,898</b>	<b>35,817</b>	<b>20,081</b>	<b>59,177</b>	<b>30,774</b>	<b>28,403</b>	<b>66,372</b>	<b>40,015</b>	<b>26,357</b>

Notes: Debt numbers are at Book Value and excludes inter-company eliminations.

1. Cairn India Holdings Limited is a wholly owned subsidiary of Vedanta Limited which holds 50% of the share in the RJ Block

2. Vedanta Star limited, 100% subsidiary of VEDL which owns 90% stake in ESL

3. Others includes MALCO Energy, CMT, VGCB, Electrosteel, Fujairah Gold, Vedanta Limited's investment companies and ASI.

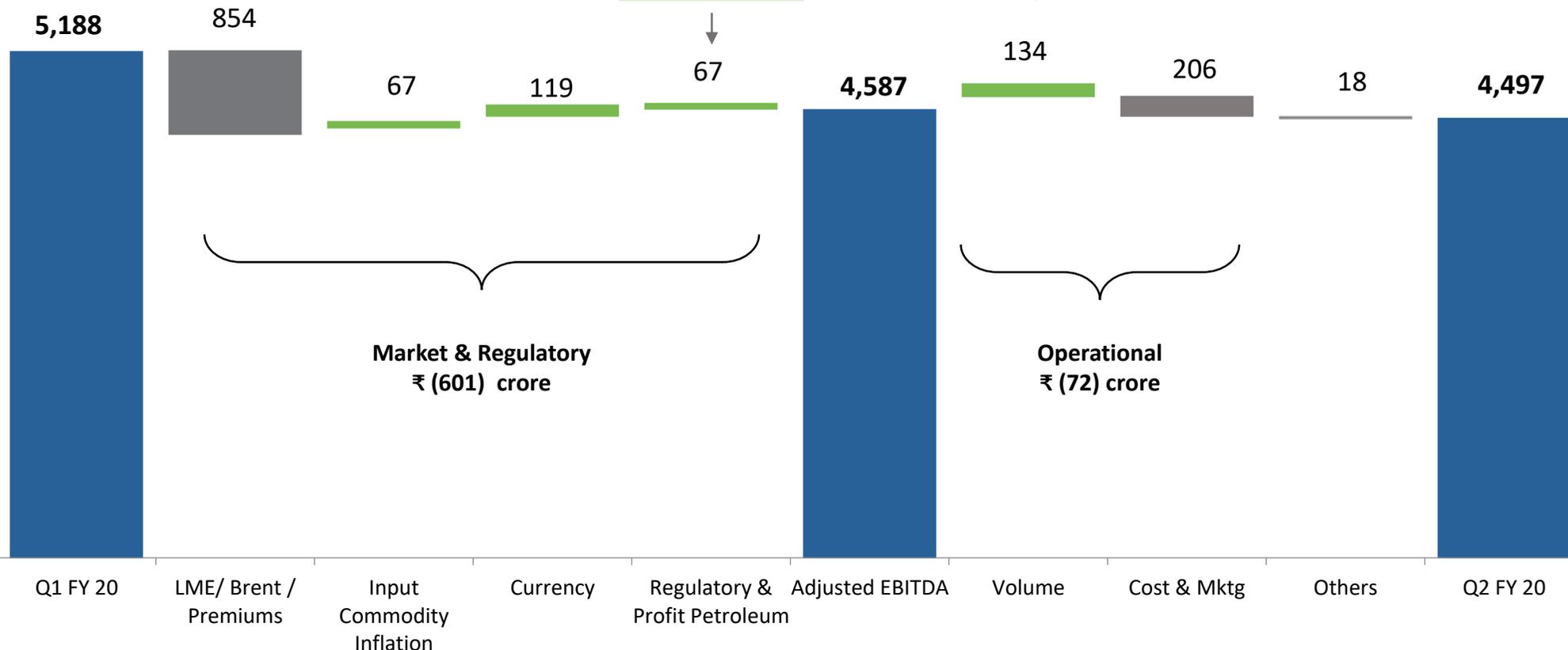
# EBITDA Bridge (Q1 FY 2020 vs. Q2 FY 2020)

(In ₹ crore)

Zinc, lead & Silver	(344)
Oil & Gas	(190)
Electrosteel	(160)

RPO	(112)
PP	188

HZL	(82)
ZI	85
Oil & Gas	78
Aluminum	30



Production (in '000 tonnes, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Mined metal content</b>	<b>219</b>	<b>232</b>	<b>(6)%</b>	<b>213</b>	<b>432</b>
<b>Integrated metal</b>	<b>210</b>	<b>212</b>	<b>(1)%</b>	<b>219</b>	<b>429</b>
Refined Zinc – Integrated	166	162	2%	172	338
Refined Lead – Integrated <sup>1</sup>	44	49	(11)%	48	91
Refined Saleable Silver - Integrated (in tonnes) <sup>2</sup>	134	172	(22)%	159	293
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	4,395	4,647	(5)%	4,871	9,266
EBITDA	2,066	2,240	4%	2,429	4,495
Zinc CoP without Royalty (₹ /MT)	73,800	72,400	2%	74,200	74,000
Zinc CoP without Royalty (\$/MT)	1,048	1,034	1%	1,067	1,057
Zinc CoP with Royalty (\$/MT)	1,361	1,369	(1)%	1,441	1,400
Zinc LME Price (\$/MT)	2,348	2,537	(7)%	2,763	2,549
Lead LME Price (\$/MT)	2,028	2,104	(4)%	1,885	1,958
Silver LBMA Price (\$/oz)	17.0	15.0	13%	14.9	16.0

# Segment Summary – Zinc International

Production (in'000 tonnes, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
Refined Zinc – Skorpion	23	15	54%	18	41
Mined metal content- BMM	16	13	22%	19	35
Mined metal content- Gamsberg	24	-	-	23	47
<b>Total</b>	<b>63</b>	<b>28</b>	<b>-</b>	<b>60</b>	<b>123</b>
<b>Financials (In ₹ Crore, except as stated)</b>					
Revenue	890	541	65%	824	1,714
EBITDA	207	16	-	128	335
Consolidated CoP – (\$/MT)	1,584	2,428	(35)%	1,724	1,652
Zinc LME Price (\$/MT)	2,348	2,537	(7)%	2,763	2,549
Lead LME Price (\$/MT)	2,028	2,104	(4)%	1,885	1,958

Production (in boepd, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Average Daily Production</b>					
Gross operated	178,744	185,926	(4)%	180,059	179,398
Oil	160,991	177,026	(9)%	165,983	163,473
Gas (Mmscfd)	107	53	99%	84	96
Non operated- Working interest	565	181	-	162	365
<b>Rajasthan (Block RJ-ON-90/1)</b>					
Gross operated	150,421	155,194	(3)%	149,153	149,790
Oil	137,235	150,258	(9)%	140,360	138,789
Gas (Mmscfd)	79	30	-	53	66
<b>Ravva (Block PKGM-1)</b>					
Gross operated	12,544	13,496	(7)%	13,491	13,015
Oil	9,966	11,570	(14)%	10,939	10,449
Gas (Mmscfd)	15	12	34%	15	15
<b>Cambay (Block CB/OS-2)</b>					
Gross operated	15,780	17,236	(8)%	17,415	16,593
Oil	13,791	15,198	(9)%	14,684	14,235
Gas (Mmscfd)	12	12	(2)%	16	14

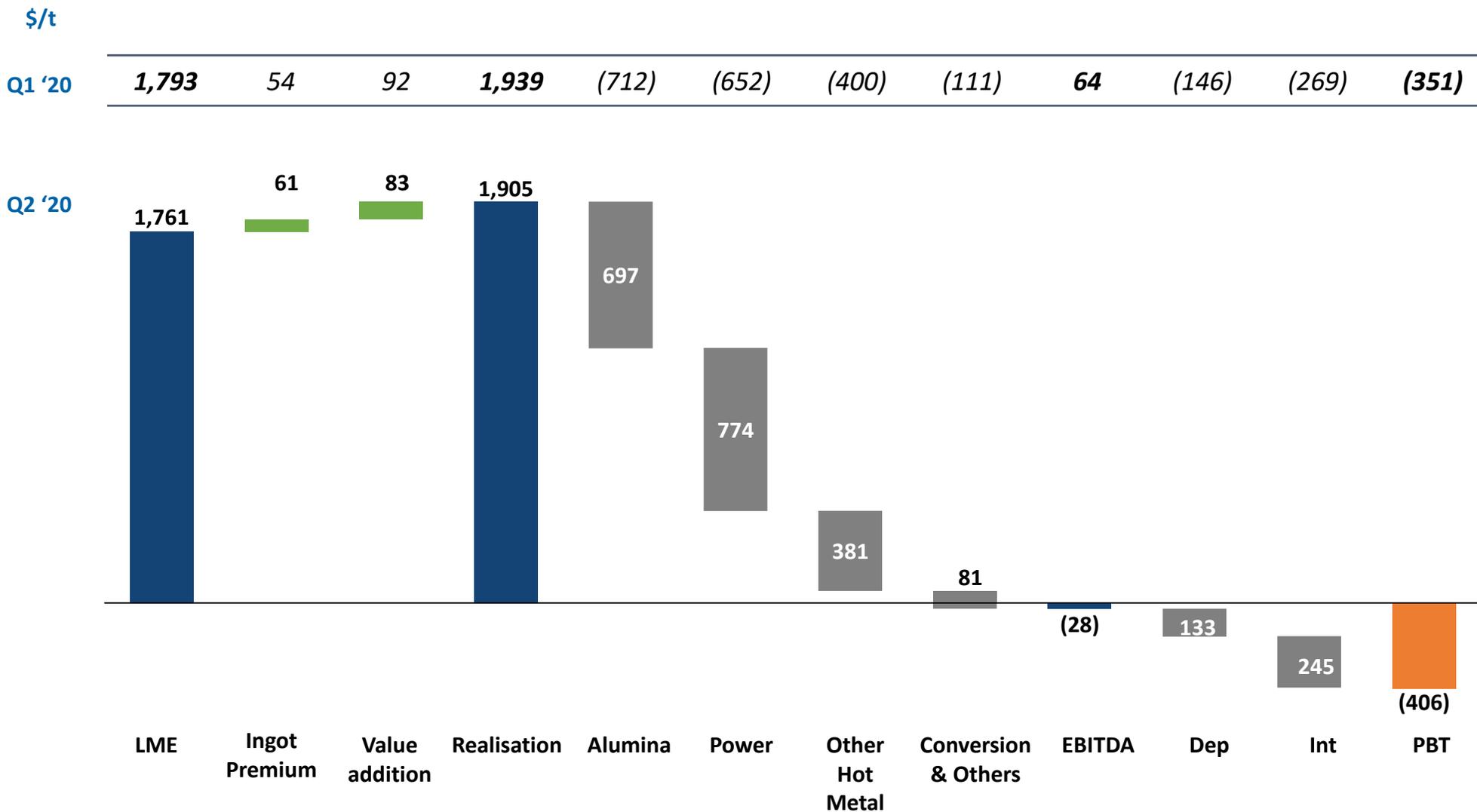
Production (in boepd, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Average Daily Working Interest Production</b>	<b>114,994</b>	<b>118,748</b>	<b>(3)%</b>	<b>114,570</b>	<b>114,783</b>
Rajasthan	105,294	108,636	(3)%	104,407	104,853
Ravva	2,822	3,037	(7)%	3,036	2,928
Cambay	6,312	6,894	(8)%	6,966	6,637
KG-ONN 2003/1	565	181	-	162	365
<b>Average Price Realization</b>					
Brent Price (\$/bbl)	61.9	75.2	(18)%	68.9	65.4
Cairn Total (US\$/boe)	58.7	68.9	(15)%	64.8	61.7
Oil (US\$/bbl)	61.1	69.5	(12)%	66.7	63.9
Gas (US\$/mscf)	5.7	9.1	(37)%	6.7	6.1
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	3,196	3,479	(8)%	3,131	6,327
EBITDA	1,817	2,026	(10)%	1,825	3,641

# Segment Summary – Aluminium

Particulars (in'000 tonnes, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Alumina – Lanjigarh</b>	410	348	18%	446	856
<b>Total Aluminum Production</b>	<b>476</b>	<b>494</b>	<b>(4)%</b>	<b>471</b>	<b>947</b>
Jharsuguda-I	137	137	0%	134	271
Jharsuguda-II <sup>1</sup>	201	216	(7)%	199	401
245kt Korba-I	63	64	(2)%	63	126
325kt Korba-II	75	78	(3)%	74	150
BALCO 900 MW (MU)	392	105	-	362	755
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	6,576	7,888	(17)%	6,834	13,410
EBITDA – BALCO	62	122	-	83	145
EBITDA – Vedanta Aluminium	(176)	215	-	96	-80
<b>EBITDA Aluminum Segment</b>	<b>(114)</b>	<b>337</b>	<b>-</b>	<b>179</b>	<b>65</b>
Alumina CoP – Lanjigarh (\$/MT)	293	358	(18)%	284	289
Alumina CoP – Lanjigarh (₹ /MT)	20600	25,100	(17)%	19,800	20,200
Aluminium CoP – (\$/MT)	1,852	2,049	(10)%	1,764	1,810
Aluminium CoP – (₹ /MT)	130,300	143,500	(8)%	122,800	126,600
Aluminum CoP – Jharsuguda (\$/MT)	1,883	2,053	(8)%	1,755	1,822
Aluminium CoP – Jharsuguda(₹ /MT)	132,500	143,800	(8)%	122,100	127,500
Aluminum CoP – BALCO (\$/MT)	1,775	2,038	(13)%	1,787	1,781
Aluminium CoP – BALCO (₹ /MT)	124,900	142,700	(12)%	124,400	124,600
Aluminum LME Price (\$/MT)	1,762	2,057	(14)%	1,793	1,777

1. Including trial run production of nil in Q2 FY2020 and 18 kt in Q2 FY2019.

# Aluminium profitability



Particulars (in million units)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Total Power Sales</b>	<b>3,253</b>	<b>3,514</b>	<b>(7)%</b>	<b>3,523</b>	<b>6,776</b>
Jharsuguda	20	124	(84)%	267	287
BALCO <sup>1</sup>	454	480	(6)%	425	878
HZL Wind Power	165	185	(11)%	134	298
TSPL	2,615	2,725	(4)%	2,697	5312
<b>Financials (in ₹ crore except as stated)</b>					
Revenue	1,646	1,718	(4)%	1,703	3,349
EBITDA	419	378	2%	392	812
Average Cost of Generation(₹ /unit) ex. TSPL	2.35	2.90	(19)%	2.28	2.44
Average Realization (₹ /unit) ex. TSPL	3.88	3.63	8%	3.61	3.57
TSPL PAF (%)	92%	94%	-	95%	93%
TSPL Average Realization (₹ /unit)	4.29	4.37	(2)%	4.46	4.38
TSPL Cost of Generation (₹ /unit)	3.29	3.37	(2)%	3.41	3.35

1. BALCO IPP: received an order dated January 1, 2019 from CSERC for Conversion of 300 MW IPP to CPP.

## Segment Summary – Iron Ore

Particulars (in million dry metric tonnes, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Sales</b>	<b>1.4</b>	<b>0.4</b>	-	<b>1.2</b>	<b>2.6</b>
Goa	0.0	0.1	-	0.0	-
Karnataka	1.4	0.2	-	1.2	2.6
<b>Production of Saleable Ore</b>	<b>1.3</b>	<b>1.4</b>	<b>(6)%</b>	<b>1.1</b>	<b>2.4</b>
Goa	-	-	-	-	-
Karnataka	1.3	1.4	(6)%	1.1	2.4
<b>Production ('000 tonnes)</b>					
Pig Iron	176	173	2%	178	354
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	757	615	23%	797	1,554
EBITDA	201	91	93%	114	315

## Segment Summary – Steel

Particulars ('000 tonnes, or as stated)	Q2			Q1	H1
	FY 2020	FY 2019	% change YoY	FY2020	FY 2020
<b>Total Production</b>	<b>270</b>	<b>285</b>	<b>(5)%</b>	<b>323</b>	<b>593</b>
Pig Iron	45	45	-	28	73
Billet	27	4	-	14	41
TMT Bar	89	106	(16)%	128	217
Wire Rod	78	110	(29)%	109	187
Ductile Iron Pipes	31	20	55%	44	76
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	986	1,099	(10)%	1,104	2,090
EBITDA	18	168	(90)%	197	214
Margin (\$/t)	25	104	(76)%	104	63

<b>Production (in '000 tonnes, or as stated)</b>	<b>Q2</b>			<b>Q1</b>	<b>H1</b>
	<b>FY 2020</b>	<b>FY 2019</b>	<b>% change YoY</b>	<b>FY 2020</b>	<b>FY 2020</b>
Copper - Cathodes	16	15	2%	16	31
<b>Financials (In ₹ crore, except as stated)</b>					
Revenue	3,185	2,376	34%	1,777	4,962
EBITDA	(105)	12	-	(66)	(171)
Copper LME Price (\$/MT)	5,802	6,105	(5)%	6,113	5,952

Sales volume	Q2 FY 2020	Q2 FY 2019	Q1 FY 2020	H1 FY 2020
<b>Zinc-India Sales</b>				
Refined Zinc (kt)	168	160	167	335
Refined Lead (kt)	44	49	47	91
<b>Total Zinc-Lead (kt)</b>	<b>212</b>	<b>209</b>	<b>215</b>	<b>427</b>
Silver (tonnes)	135	161	155	289
<b>Zinc-International Sales</b>				
Zinc Refined (kt)	23	15	17	40
Metal in Zinc Concentrate (kt)	34	6	29	63
<b>Total Zinc (Refined+Conc)</b>	<b>57</b>	<b>21</b>	<b>46</b>	<b>103</b>
Metal in Lead Concentrate (kt)	11	8	11	21
<b>Total Zinc-Lead (kt)</b>	<b>67</b>	<b>29</b>	<b>57</b>	<b>124</b>
<b>Aluminium Sales</b>				
Sales - Wire rods (kt)	78	94	84	162
Sales - Rolled products (kt)	7	7	5	13
Sales - Busbar and Billets (kt)	89	104	128	217
<b>Total Value added products (kt)</b>	<b>174</b>	<b>205</b>	<b>217</b>	<b>391</b>
Sales - Ingots (kt)	307	284	263	570
<b>Total Aluminium sales (kt)</b>	<b>481</b>	<b>489</b>	<b>481</b>	<b>962</b>

Sales volume	Q2 FY 2020	Q2 FY 2019	Q1 FY 2020	H1 FY2020
<b>Iron-Ore Sales</b>				
Goa (Mn DMT)	-	0.1	-	-
Karnataka (Mn DMT)	1.4	0.2	1.2	2.6
Total (Mn DMT)	1.4	0.4	1.2	2.6
Pig Iron (kt)	159	173	172	330
<b>Copper-India Sales</b>				
Copper Cathodes (kt)	0.7	-	0	0.7
Copper Rods (kt)	22	28	22	43
<b>Total Steel Sales (kt)</b>	<b>283</b>	<b>268</b>	<b>273</b>	<b>557</b>
Pig Iron	47	41	24	71
Billet	16	4	2	17
TMT Bar	100	98	109	209
Wire Rod	93	106	101	193
Ductile Iron Pipes	29	19	37	65

Sales volume	Q2 FY 2020	Q2 FY 2019	Q1 FY 2020	H1 FY 2020
<b>Power Sales (mu)</b>				
Jharsuguda	20	124	267	287
TSPL	2,615	2,725	2,694	5,309
BALCO <sup>2</sup>	454	480	425	878
HZL Wind power	165	185	134	298
<b>Total sales</b>	<b>3,253</b>	<b>3,514</b>	<b>3,520</b>	<b>6,773</b>
<b>Power Realisations (INR/kWh)</b>				
Jharsuguda	1.68	2.12	3.13	2.23
TSPL <sup>1</sup>	4.29	4.37	4.46	4.38
Balco <sup>2</sup>	3.90	3.74	3.75	3.83
HZL Wind power	4.06	4.35	4.15	4.10
Average Realisations <sup>3</sup>	<b>3.95</b>	<b>3.63</b>	<b>3.61</b>	<b>3.63</b>
<b>Power Costs (INR/kWh)</b>				
Jharsuguda 600 MW	17.28	6.46	4.00	4.91
TSPL <sup>1</sup>	3.29	3.37	3.41	3.35
Balco <sup>2</sup>	2.33	2.91	2.14	2.24
HZL Wind power	0.62	0.46	0.71	0.66
<b>Average costs<sup>3</sup></b>	<b>2.35</b>	<b>2.90</b>	<b>2.51</b>	<b>2.44</b>

1. Based on Availability

2. BALCO IPP: received an order dated January 1, 2019 from CSERC for Conversion of 300 MW IPP to CPP.

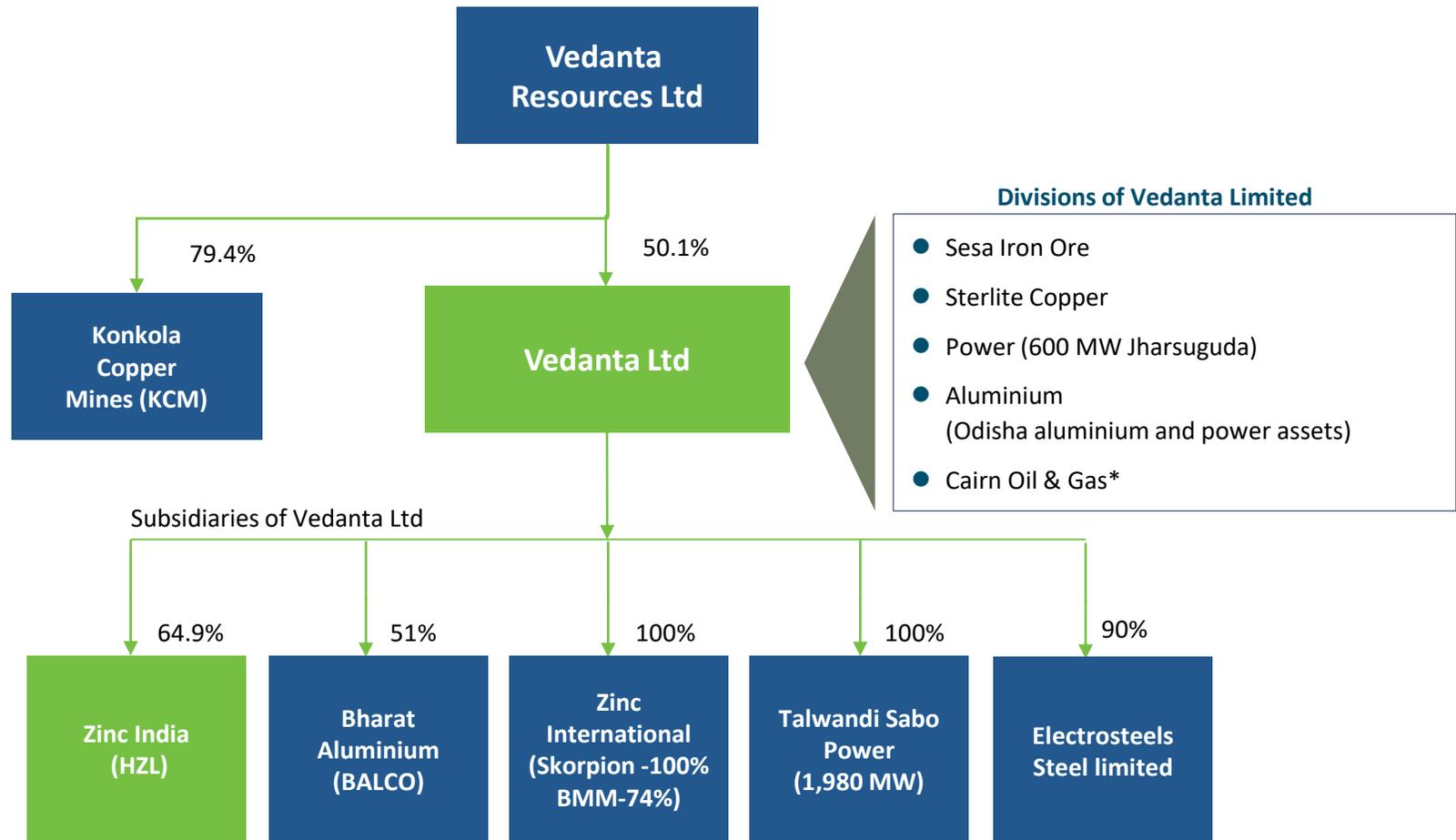
3. Average excludes TSPL

## Foreign Currency - Impact of ₹ 1 depreciation in FX Rate

Currency	Increase in EBITDA
INR/USD	~ INR 600 crs / year

## Commodity prices – Impact of a 10% increase in Commodity Prices

Commodity	H1 FY 2020 Average price	Full Year Impact on EBITDA (\$mn)
Oil (\$/bbl)	66	108
Zinc (\$/t)	2,595	205
Aluminium (\$/t)	1,782	272
Lead (\$/t)	1,936	37
Silver (\$/oz)	15.5	31



Note: Shareholding as on Sep 30, 2019

\*50% of the share in the RJ Block is held by a subsidiary of Vedanta Ltd

■ Listed entities

■ Unlisted entities

Results conference call is scheduled at 6:00 PM (IST) on November 14, 2019. The dial-in numbers for the call are given below:

Event		Telephone Number
Earnings conference call on November 14, 2019	<b>India – 6:00 PM (IST)</b>	<b>India:</b> +91 7045671221 Toll free: 1800 120 1221 <b>Universal access:</b> +91 22 7115 8015 +91 22 6280 1114
	<b>Singapore – 8:30 PM (Singapore Time)</b>	Toll free number 800 101 2045
	<b>Hong Kong – 8:30 PM (Hong Kong Time)</b>	Toll free number 800 964 448
	<b>UK – 12:30 PM (UK Time)</b>	Toll free number 0 808 101 1573
	<b>US – 7:30 AM (Eastern Time)</b>	Toll free number 1 866 746 2133
For online registration	<a href="https://services.choruscall.in/DiamondPassRegistration/register?confirmationNumber=100540&amp;linkSecurityString=2f483238">https://services.choruscall.in/DiamondPassRegistration/register?confirmationNumber=100540&amp;linkSecurityString=2f483238</a>	
Replay of Conference Call (November 14, 2019 to November 20, 2019)		Mumbai +91 22 7194 5757 Passcode: 63835#