Certain statements in this report concerning our future growth prospects are forward looking statements, which involve a number of risks, and uncertainties that could cause actual results to differ materially from those in such forward looking statements. The risk and uncertainties relating to these statements include, but are not limited to risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, intense competition within Steel industry including those factors which may affect our cost advantage, wage increases in India, our ability to attract and retain highly skilled professionals, time and cost overruns on fixed-price, fixed-time frame contracts, our ability to commission mines within contemplated time and costs, our ability to raise the finance within time and cost client concentration, restrictions on immigration, our ability to manage our internal operations, reduced demand for steel, our ability to successfully complete and integrate potential acquisitions, liability for damages on our service contracts, the success of the companies in which the Company has made strategic investments, withdrawal of fiscal/governmental incentives, impact of regulatory measures, political instability, legal restrictions on raising capital or acquiring companies outside India, unauthorized use of our intellectual property and general economic conditions affecting our industry. The company does not undertake to update any forward looking statements that may be made from time to time by or on behalf of the company.
JSW Group – overview

<table>
<thead>
<tr>
<th>JSW Steel*</th>
<th>JSW Energy*</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Among India’s leading integrated steel producers (Steel making capacity: 18 MTPA)</td>
<td>– Engaged across the value chain of power business</td>
</tr>
<tr>
<td>– Market capitalisation of US$11.7bn(^{(a)})</td>
<td>– Operational capacity: 4,531 MW</td>
</tr>
<tr>
<td></td>
<td>– Market capitalisation of US$1.4bn (^{(a)})</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JSW Infrastructure</th>
<th>JSW Cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Engaged in development and operations of ports</td>
<td>– Manufacturer of Portland Slag Cement (PSC), Ordinary Portland Cement (OPC) and Ground Granulated Blast Furnace Slag (GGBS)</td>
</tr>
<tr>
<td>– Operational capacity 70MTPA</td>
<td>– Operational capacity 11.6MTPA</td>
</tr>
</tbody>
</table>

* Listed company
\(^{(a)}\) As of 25-Oct-2018
Note: Translated at 1 USD = 73.15 INR, the rate as of 25th Oct 18
Source: Bloomberg, Company data
JSW Steel – among India’s leading steel manufacturers

- Integrated steel manufacturing facilities – from raw material processing plants to value-added product capacities
- Pan India marketing and distribution network, export presence in c.100 countries across 5 continents
- Installed capacity of 18 MTPA, at strategic locations in South and West India
- Combination of state-of-the-art steel making technologies: Corex, DRI, Blast Furnace
- Extensive portfolio of products – HR, CR, galvanneal, galvanized/ galvalume, pre-painted, tinplates, electrical steel (CRNO), TMT bars, wire rods, special steel bars, rounds and blooms
- One of the leading steel players in India
- Integrated manufacturing process
- Technological competence
- Diversified product portfolio
- Strong distribution network and export presence
- Global presence
- International presence in steel making (Ohio, US), value-added facilities (Plate and Pipe mill in US, Italy), and mining assets (Chile, US and Mozambique)
### Transformational journey to market leadership

#### Capacity (MTPA)

<table>
<thead>
<tr>
<th></th>
<th>FY02</th>
<th>FY10</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR</td>
<td>2%</td>
<td>8%</td>
<td>18%</td>
<td>18%</td>
</tr>
</tbody>
</table>

- CAGR FY02-18: 16.3%

#### Total revenue (US$m)\(^{(a)}\)\(^{(b)}\)

<table>
<thead>
<tr>
<th></th>
<th>FY02</th>
<th>FY10</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>239</td>
<td>2,685</td>
<td>10,107</td>
<td>5,811</td>
</tr>
<tr>
<td>2010</td>
<td>38</td>
<td>573</td>
<td>2,038</td>
<td>1,379</td>
</tr>
</tbody>
</table>

- CAGR FY02-18: 26.3%

#### EBITDA (US$m)\(^{(a)}\)

<table>
<thead>
<tr>
<th></th>
<th>FY02</th>
<th>FY10</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>38</td>
<td>573</td>
<td>2,038</td>
<td>1,379</td>
</tr>
<tr>
<td>2010</td>
<td>38</td>
<td>573</td>
<td>2,038</td>
<td>1,379</td>
</tr>
</tbody>
</table>

- CAGR FY02-18: 26.3%

#### Market cap (US$m)\(^{(c)}\)

- 36
- 3,160
- 11,677
- 28x increase in market value
- 31-Mar-02
- 31-Mar-10
- Current

#### Technology

- FY02: Corex
- FY10: Corex, BF
- FY18: Corex, BF, DRI

- Adopting industry leading technologies

#### Product mix

- FY02: Flats, long, special steel, value added
- FY10: Flats, long, special steel, value added, AHSS for automotive, electrical steel, colour coated steel
- FY18: Flats, long, special steel, value added, AHSS for automotive, electrical steel, colour coated steel

- Continuously expanding product canvas with focus on high-end value-added products

---

**Note:**

- Translated at 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18
- \(^{(a)}\) Includes other income
- \(^{(b)}\) Restated Revenue
- \(^{(c)}\) INR market cap numbers at all three points translated at 1 USD = 73.15 INR, the rate as of 25th Oct 18

Source: Company data, BSE
Key highlights

1. Market leader and well placed to benefit from upcycle
2. Strong business profile diversified by region, markets and products
3. Strong focus on operational efficiency with best-in-class conversion costs
4. Robust financial profile and stable cash flows
5. Prudent leverage management
6. Proven track record of growth through organic and inorganic expansions
7. Experienced management with strong parentage
JSW Steel is a leading player in India

**Steel prices have trended upward since Q4 CY15**

India apparent steel consumption expected to grow significantly

(a) CY17 data as per World Steel Association (WSA)
(b) Steel consumption as per WSA for calendar years 2018 and 2019
(c) Change from 1st Jan 2016 to 28th September 2018

**JSW Steel is a leading player in India**

<table>
<thead>
<tr>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6MT</td>
<td>7.8MT</td>
</tr>
<tr>
<td>23%</td>
<td>14%</td>
</tr>
<tr>
<td>58%</td>
<td>65%</td>
</tr>
</tbody>
</table>

Standalone saleable steel

Exports share by revenue

Group VASP and special products sales

**Buoyant steel market conditions**

**Indian market**
- Government focus on infrastructure development
- INR 5.97tn planned to be spent on infrastructure in FY19
- National steel policy to achieve 300MT by 2030-31
- Current low per capita steel consumption (<65 kg per annum(a))
- Steel consumption is expected to grow at 5.5-6.0% over 2018 and 2019(b)

**Global market**
- China
  - Accounts for c.50% of global steel production
  - Decreasing exports from China due to:
    - continuing closure of inefficient production facilities
    - pollution-induced production curtailments
    - strong domestic demand
  - Utilization to remain high resulting in higher steel spreads

- Europe
  - Supportive business conditions to result in robust steel demand growth
  - Continued elevated steel spreads and stable profitability expectations

- US
  - US spreads have widened, driven by robust demand and trade measures

**Well placed to benefit from weaker global raw material prices**

**Lower cost from commencement of captive iron ore mines and improved availability**

**Stable margins through the cycle**

**Change since 1-Jan-16(c)**

<table>
<thead>
<tr>
<th></th>
<th>India HRC Mumbai</th>
<th>China HRC</th>
<th>North Europe HRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2018</td>
<td>41.6%</td>
<td>109.3%</td>
<td>93.9%</td>
</tr>
</tbody>
</table>

Note: Translated at 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18
Source: WSA, Investing.com, IBEF, Joint Plant Committee, Platts
Strong business profile diversified by region, markets and products

Geographically diversified with manufacturing facilities in South and West India along with strategic overseas presence

- **Dolvi: 5 MTPA**
  - 3.5 MTPA blast furnace
  - 1.6 MTPA gas based DRI
  - 67 MW power plant

- **Salav: 0.9 MTPA DRI\(^*\)**

- **Vijayanagar: 12 MTPA**
  - 1.7 MTPA corex
  - 10.4 MTPA blast furnaces
  - 854 MW power plant

- **Vasind & Tapiport (JSCPL)**
  - 1.18 MTPA GP/GC
  - 0.5 MTPA colour coating line
  - 30 MW power plant

- **Karneshwar (JSCPL)**
  - 0.58 MTPA GP/GC
  - 0.19 MTPA colour coating line

- **Salem: 1 MTPA**
  - 1 MTPA blast furnaces
  - 0.5 MTPA blooming mill
  - 60 MW captive power plant

- **Vasind: 5 TPA GP/GC**
  - 0.5 MTPA colour coating line

Extensive geographical presence in India with nimble sales setup to shift sales judiciously between domestic market and exports

- As per India Brand Equity Foundation, Joint Plant Committee
- Revenue from operations as per Ind-AS from FY16 onwards
- FY18 based on restated financials
- As per WSA for calendar year 2015 as compared to 2014

Flexibility to judiciously shift between domestic and international markets based on market conditions

- One of the largest exporter of steel products from India with export presence in over 100 countries
- Ability to re-align sales effort as per market conditions
  - Strategically reduced share of exports to 12% of total sales in FY16, as global steel consumption declined 3% YoY\(^*\) in CY15
  - Increased exports in FY17 and FY18 to leverage upon robust demand and pricing environment in international markets

India Finished Steel Consumption Growth\(^*\)

- JSW Domestic Turnover as % of total (b)
- JSW Export Turnover as % of total (b)

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Turnover</th>
<th>Export Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY08</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>FY10</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>FY12</td>
<td>16%</td>
<td>84%</td>
</tr>
<tr>
<td>FY15</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>FY16</td>
<td>12%</td>
<td>88%</td>
</tr>
<tr>
<td>FY17</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>FY18</td>
<td>23%</td>
<td>77%</td>
</tr>
</tbody>
</table>

(a) As per India Brand Equity Foundation, Joint Plant Committee
(b) Revenue from operations as per Ind-AS from FY16 onwards
(c) FY18 based on restated financials
(d) As per WSA for calendar year 2015 as compared to 2014
Strong business profile diversified by region, markets and products (continued)

<table>
<thead>
<tr>
<th>Wide offering of flat and long products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slabs</td>
</tr>
<tr>
<td>Billets</td>
</tr>
</tbody>
</table>

- **Continuously increasing value added products (a)**
  - Diversified portfolio to address growing demand for value-added steel
  - Commissioned new facilities to further enrich product mix
  - Leveraging JFE Steel’s well-established manufacturing technology for advanced high strength steel (AHSS) for automotive

<table>
<thead>
<tr>
<th>Total saleable steel (MTPA)(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY16</td>
</tr>
<tr>
<td>Value Added and Special Products</td>
</tr>
<tr>
<td>12.3</td>
</tr>
<tr>
<td>65%</td>
</tr>
<tr>
<td>35%</td>
</tr>
</tbody>
</table>

- **Developing new products, capturing niche markets**
  - AHSS for automotive
    - Enhanced focus on cold rolled, galvanised and galvanneal products for body panels of automobiles
    - Manufactured at a new CRM2 complex
  - Color coated products
    - Largest color coated facility to address construction, warehousing and roofing requirements
    - State-of-the-art color coating line for appliance grade products used in consumer durables
  - Electrical steel
    - Commissioned Cold Rolled Non-grain Oriented (CRNO) steel plant to address domestic demand by substituting imports of high grade electrical steel

**Focus on continuously enhancing product mix**

(a) Special Products data available from FY17

(b) Total sales (JSW Standalone + JSW Steel Coated Products after netting-off inter-company sales). Value added and Special products (VASP) include HRPO, CRFH, CRCA, ES, Galvanised, Colour Coated and Special Bars and Rounds. Special products include HR special, TMT Special and WR Special

![Steel](https://via.placeholder.com/150)
### Ongoing cost benefit initiatives

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vijayanagar Works</strong></td>
<td></td>
</tr>
</tbody>
</table>
Blast Furnace upgradation  
- Revamp and upgrade of Blast Furnace-3 at Vijayanagar from 3 MTPA to 4.5 MTPA, along with associated auxiliary units  
Pipe Conveyor system  
- To transport Iron ore from the mines to the Vijayanagar plant with a capacity of 20 MTPA  
- Environmental friendly solution and reduction of transportation costs  
Coke drying unit  
- Establish coke drying unit for Blast Furnace-1 to utilize the waste heat of Sinter Plant-1 to reduce moisture in coke |
| **Salem Works** |  
Pre- and Post-pickling treatment  
- Addition of pre- and post-pickling treatment with a capacity of 84000 TPA for BRM products  
Stove upgradation  
- Upgradation of stove in BF 1 to improve hot blast temperature |
| **Dolvi Works** |  
Capacity expansion  
- 5.75 mtpa sinter plant, 4 mpta pellet plant and 4 kilns of 600 TPD LCPs |
| **Vasind Works, Tarapur Works and Kalmeshwar Works** |  
Capacity modernization  
- Modernization and enhancement of capacity by 1.5 MTPA by setting up PLTCM  
- PLTCM planned as an alternative to earlier planned 0.96 MTPA BCTM |

### Parameter rankings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>JSW Steel</th>
<th>Tata Steel</th>
<th>POSCO</th>
<th>ArcelorMittal</th>
<th>Severstal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanding Capacity</td>
<td>10 / 10</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Location in high growth markets</td>
<td>10 / 10</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Conversion costs; yields</td>
<td>10 / 10</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Labor costs</td>
<td>10 / 10</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Cost cutting efforts</td>
<td>9 / 10</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Aggregate rank</td>
<td>8</td>
<td>15</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18

(a) Calculated as a sum total of employee benefit expenses and other expenses less exchange difference, commission on sales, donations, CSR expenses, allowance for doubtful advances, loss on sale of PPE and carriage and freight costs, divided by standalone annual crude steel volume

(b) All quoted numbers are scores assigned out of 10 on World Steel Dynamics’ World-Class Steelmaker Rankings as of June 2018

(c) On the basis of weighted average score out of 10 across 23 different parameters from World Steel Dynamics’ World-Class Steelmaker Rankings as of June 2018

Source: World Steel Dynamics, Company data
Robust financial profile and stable cash flows

**Strong track record of volume growth**

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>H1-FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA (US$m)</td>
<td>12.3</td>
<td>14.7</td>
<td>15.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Consolidated saleable steel (MTPA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EBITDA margin improvement of 990 bps from FY15 to Q1 FY19**

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY18</th>
<th>FY18</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA margin (%)</td>
<td>72</td>
<td>114</td>
<td>131</td>
<td>106</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>y-o-y growth</td>
<td>13.9%</td>
<td>20.1%</td>
<td>20.2%</td>
<td>16.8%</td>
<td>23.8%</td>
<td></td>
</tr>
</tbody>
</table>

**Continued positive momentum in operating revenues**

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>H1 FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenue (US$m)</td>
<td>6,334</td>
<td>8,339</td>
<td>10,085</td>
<td>4,630</td>
<td>5,795</td>
</tr>
</tbody>
</table>

**Cashflow from operations (US$m)** (d)

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashflow from operations (US$m)</td>
<td>1,036</td>
<td>1,185</td>
<td>2,015</td>
</tr>
</tbody>
</table>

---

Note: 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18, consolidated financials
(a) FY18 numbers based on restated financials
(b) EBITDA calculated as total profit/(loss) for the year/period +(-) share of profit/loss from associate + (-) share of profit/loss from joint ventures (net) +(-) taxes/(benefit) + exceptional items + depreciation and amortization expense + finance costs - other income
(c) Based on consolidated saleable steel volume
(d) Excluding income taxes paid

Source: Company data
Prudent leverage management

Publicly stated financial policies

- Focused leverage management
- Diversify funding sources
- Improve debt maturity profile

Strong y-o-y profitability improvement -> reduction in net leverage

<table>
<thead>
<tr>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,813</td>
<td>5,989</td>
<td>5,426</td>
<td>6,187</td>
</tr>
<tr>
<td>1.41</td>
<td>2.46</td>
<td>1.89</td>
<td>1.99</td>
</tr>
</tbody>
</table>

Net debt^{[a]} / EBITDA^{[c]}:

<table>
<thead>
<tr>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.44x</td>
<td>3.41x</td>
<td>2.57x</td>
<td>2.35x</td>
</tr>
</tbody>
</table>

Diverse sources of funding^{(d)}

- Financial flexibility to raise capital
- Strong relationships with over 50 banks / financial institutions with access to low cost credit
- Healthy mix with 44% of debt being foreign currency

Maturity profile of long term borrowings^{(f)} (US$)

- Bonds and debentures 28%
- Loans and others 72%
- INR debt 56%
- Foreign currency debt 44%

5. Strong y-o-y profitability improvement -> reduction in net leverage

Net debt^{[a](b)} / EBITDA^{[c]}:

<table>
<thead>
<tr>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>H1 FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.19x</td>
<td>1.85x</td>
<td>1.38x</td>
<td>1.46x</td>
</tr>
</tbody>
</table>

Maturity profile of long term borrowings^{(f)} (US$)

- 786 <1 year
- 4781 >1 year

Note: 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18.

(a) Debt excludes acceptances
(b) Net debt calculated as Non-current Borrowings + current borrowings + current maturities of long-term borrowings - cash and cash equivalents - bank balances other than cash and cash equivalents - current investments
(c) EBITDA calculated as total profit/loss for the year/period +(-) share of profit/loss from associate + (-) share of profit/loss from joint ventures (net) +(-) taxes/benefit + exceptional items + depreciation and amortization expense + finance costs - other income
(d) As of 30-Sep-2018
(e) Excluding preference share capital and unamortized upfront fees
(f) Comprises only term loans, as of 30-Sep-2018
Proven track record of growth through organic and inorganic expansions

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4.8 MTPA&lt;br&gt;• 1.0 MTPA – CRM&lt;br&gt;• Plate and pipe mill in US&lt;br&gt;• Coal mining concessions in Mozambique</td>
</tr>
<tr>
<td>2009</td>
<td>Capacity at 7.8 MTPA</td>
</tr>
<tr>
<td>2011</td>
<td>49.3% stake in Ispat industries</td>
</tr>
<tr>
<td>2013</td>
<td>14.3 MTPA post Ispat merger</td>
</tr>
<tr>
<td>2015</td>
<td>CRM2 – Phase 2&lt;br&gt;• 0.2 MTPA electrical steel mill&lt;br&gt;• Won 6 iron ore mines in Karnataka (~120mn tonnes estimated reserves)</td>
</tr>
<tr>
<td>2017</td>
<td>74% stake in Praxair’s industrial gases JV&lt;br&gt;• Won 6 iron ore mines in Karnataka (~120mn tonnes estimated reserves)</td>
</tr>
</tbody>
</table>

Note: Highlighted portions indicate acquisitions

- Southern Iron and Steel Company
- Amba River Coke Limited
- Praxair India Private Limited
- JSW Praxair Oxygen Private Limited

Key new projects

**India**
- Dolvi: Ongoing capacity expansion from 5 MTPA to 10.66 MTPA
- Vijayanagar: Augmentation to 13 MTPA, BF-3 revamp and upgradation, CRM-1 complex capacity expansion
- Salem: Capacity expansion to 1.2 MTPA
- Vasind and Tarapur: Modernization-cum-capacity enhancement

**International**
- Investment of USD 500mn, in phases, to develop steel manufacturing infrastructure in Baytown, Texas
  - USD 150mn brownfield investment to augment existing unit capabilities
  - Up to USD 350mn to setup a new hot end facility
- Integration of acquired Aferpi to build a strong foothold in the Italian and European markets
- Investment of up to US$500m, in phases, to acquire and upgrade Acero Junction Inc, steel manufacturing unit at Ohio

CAGR FY2002 – FY2018

- Capacity CAGR: 16.3%
- Total revenue CAGR: 26.3%

Continuously evaluating opportunities to deliver value enhancing growth
Case study: Turnaround strategy at JSW Ispat’s Dolvi plant

JSW Steel has a proven track record of identifying, acquiring and integrating assets creating synergies and optimizing costs.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Plant under maintenance</td>
<td>• Infusion of equity</td>
<td>• Capacity expanded to 5MTPA</td>
<td>• Capacity expected to be increased to 10MTPA from current 5MTPA</td>
</tr>
<tr>
<td>• Loss making at EBITDA level</td>
<td>• Alignment of marketing strategies resulting in freight synergies and VAT benefits</td>
<td>• Diversified product offering from Flat steel only to mix of Flat and Long steel</td>
<td>• Major facilities being setup include:</td>
</tr>
<tr>
<td>• High interest cost</td>
<td>• Reduction of high cost working capital funding</td>
<td></td>
<td>• 4.5 MTPA Blast furnace with 5 MTPA Steel Melt Shop</td>
</tr>
<tr>
<td>• Financially distressed</td>
<td>• Refinancing of existing debt</td>
<td></td>
<td>• 5MTPA Hot Strip Mill</td>
</tr>
<tr>
<td></td>
<td>• Electricity sourcing from JSW Energy at competitive prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Commissioning of 4MTPA pellet plant(^{(a)}), 1MTPA coke oven(^{(a)}), waste gas based 55MW power plant, railway siding, and lime calcination plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inability to service existing debt</td>
<td>Exit from CDR</td>
<td>Stabilized/ ramped-up the expanded capacity</td>
<td>Further expansion and operational improvements underway</td>
</tr>
<tr>
<td>Inadequate cashflows</td>
<td>Generating positive profit after tax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate debt restructuring (CDR) case</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Able to leverage an acquisition to maximum value accretion through application of knowledge and experience

(a) Implemented in a wholly owned subsidiary Amba River Coke Limited
Proven track record of growth through organic and inorganic expansions (continued)

### Detailed capex plan

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Capex (INR mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announced Capex (FY18-FY21)</td>
<td>3,693</td>
</tr>
<tr>
<td>New Projects</td>
<td>2,419</td>
</tr>
<tr>
<td>Upstream Projects</td>
<td>2,989</td>
</tr>
<tr>
<td>Downstream Projects</td>
<td>729</td>
</tr>
<tr>
<td>Cost saving Projects</td>
<td>1,662</td>
</tr>
<tr>
<td>Pellet plant, Coke ovens, captive power plant, pipe conveyer etc</td>
<td>97</td>
</tr>
<tr>
<td>Augmentation of CRM1, new Tinplate, Colour Coating, Galvalume and PLTCM Lines- overall value added capacity increase of 3.2 MTPA</td>
<td>6,113</td>
</tr>
<tr>
<td>Mining Capex</td>
<td>636</td>
</tr>
<tr>
<td>Sustenance &amp; Other Capex</td>
<td>1,662</td>
</tr>
</tbody>
</table>

### …based on a well thought-out guidelines / strategic rationale

- Focus on return metrics instead of pure capacity addition
- Well planned spread-out of capex into phases with run-rate value addition at the end of each phase
- Funding for capex well thought-out with a significant percentage being funded through internal accruals
- Track record of successful project execution on-time and within budget

Note: 1 USD = 72.5975 INR (RBI Reference Rate as of 28th Sep 18)
Experienced management with strong parentage

**JSW-JFE partnership**

**Partnership overview**
- 14.99% minority stake bought by JFE in July 2010
- Access to cutting edge technologies
- Operational excellence for cost reduction
- Balance Sheet deleveraging to support growth

**Technology agreements benefits:**
- Access to fast growing auto steel market
- Technical know-how for electrical steel manufacturing
- Short learning curve
- Application engineering
- New product development
- Benchmarking and personnel training

**Other benefits:**
- Improvement in quality, productivity, yield, energy efficiency
- Sharing best maintenance, environment and safety practices
- Benchmarking, training and talent sharing
- Standardization of processes
### Conclusion

<table>
<thead>
<tr>
<th>Market leadership</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the largest steel manufacturers in India(^{(a)})</td>
<td></td>
</tr>
<tr>
<td>One of the largest steel exporters in India(^{(a)})</td>
<td></td>
</tr>
<tr>
<td>58% share of VASP and special products(^{(b)})</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strong asset portfolio</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographically diversified with manufacturing facilities in South and West India</td>
<td></td>
</tr>
<tr>
<td>Focus on flat steel products (approximately 70% of capacity) with higher entry barriers, differentiated end-product and sticky customer base</td>
<td></td>
</tr>
<tr>
<td>Wide product range and new product development targeted at capturing niche markets eg. AHSS for auto, electrical steel for electrical motors, generators, power plants</td>
<td></td>
</tr>
<tr>
<td>Flexibility to shift sales between domestic and international markets based on market conditions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Well placed to capitalize on improving macro environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Well placed to benefit from flexible raw material blends</td>
<td></td>
</tr>
<tr>
<td>Lower cost from recently commenced captive iron ore mines with cumulative capacity of 5 MTPA</td>
<td></td>
</tr>
<tr>
<td>Two of the five iron ore mines already operational</td>
<td></td>
</tr>
<tr>
<td>Planned capex and brownfield expansions to further catalyze growth</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strong growth with improving leverage and robust financial profile</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12.7% saleable steel CAGR and 26.2% revenue CAGR FY16-18</td>
<td></td>
</tr>
<tr>
<td>990 bps EBITDA margin expansion from FY16 through H1 FY19</td>
<td></td>
</tr>
<tr>
<td>Strong balance sheet position with net leverage reduced from 6.44x in FY16 to 2.35x(^{(c)}) in H1 FY19</td>
<td></td>
</tr>
</tbody>
</table>

---

**Note 1:** Net debt calculated as Non-current Borrowings + current borrowings + current maturities of long-term borrowings - cash and cash equivalents - bank balances other than cash and cash equivalents - current investments

**Note 2:** EBITDA calculated as total profit/(loss) for the year/period +(-) share of profit/ loss from associate + (-) share of profit / loss from joint ventures (net) +(-) taxes/(benefit) + exceptional items + depreciation and amortization expense + finance costs - other income

\(^{(a)}\) Based on FY18 statistics

\(^{(b)}\) Split by FY18 consolidated saleable steel volume

\(^{(c)}\) Net debt as of September 2018 upon LTM EBITDA as of September 2018
Strong momentum in steel prices, with increase faster than raw material cost rise leading to positive spread

Steel prices have trended upward since Q4 CY15

Raw material price trends (US$/tonne)

Steel spreads (US$/tonne)

(a) SBB premium hard coking coal - FOB east coast port
(b) Iron Ore delivered to Qindao China - 62% ferrous content
(c) Raw material costs calculated as 1.7 times the iron ore prices plus 0.9 times coking coal prices
Reducing Chinese steel exports supplemented with strong fundamentals for domestic consumption growth

China steel exports (MTPA)

- China has closed most of its outdated and inefficient induction furnaces
- The government has introduced pollution-induced production curtailments
- Strong domestic demand in China

Positive India steel consumption environment

- Total consumption of steel was 90.7 MT in FY18 as compared to 84.0 MT in FY17
- Real steel consumption has grown at a CAGR FY08-FY18 of 5.7%
- Strong growth in steel end-user sector to drive demand

Significant room for improvement in per-capita consumption in India

- Lower per capita consumption compared to international average
- Infrastructure, oil and gas and automotives expected to drive the growth of the industry
- Improving policy support from the central government

Source: WSA, IBEF, Joint Plant Committee, World Steel Association, National Steel Policy 2017
## Consolidated Financials

<table>
<thead>
<tr>
<th>Particulars (US$m)</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18&lt;sup&gt;(a)&lt;/sup&gt;</th>
<th>H1-FY18&lt;sup&gt;(a)&lt;/sup&gt;</th>
<th>H1-FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenue</td>
<td>6,333</td>
<td>8,339</td>
<td>10,085</td>
<td>4,630</td>
<td>5,795</td>
</tr>
<tr>
<td>Operating EBITDA&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td>822</td>
<td>1,677</td>
<td>2,038</td>
<td>779</td>
<td>1,379</td>
</tr>
<tr>
<td>% margin</td>
<td>13.9%</td>
<td>20.1%</td>
<td>20.2%</td>
<td>16.8%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>(340)</td>
<td>706</td>
<td>1,048</td>
<td>299</td>
<td>881</td>
</tr>
<tr>
<td>Profit after tax</td>
<td>(66)</td>
<td>478</td>
<td>842</td>
<td>201</td>
<td>610</td>
</tr>
<tr>
<td>Shareholder’s equity&lt;sup&gt;(c)&lt;/sup&gt;</td>
<td>2,586</td>
<td>3,086</td>
<td>3,793</td>
<td>3207</td>
<td>4,238</td>
</tr>
<tr>
<td>Net Debt</td>
<td>5,673</td>
<td>5,723</td>
<td>5,237</td>
<td>5890</td>
<td>6,187</td>
</tr>
<tr>
<td>Net Debt / Equity</td>
<td>2.19x</td>
<td>1.85x</td>
<td>1.38x</td>
<td>1.87</td>
<td>1.46x</td>
</tr>
<tr>
<td>Net Debt / EBITDA</td>
<td>6.44x</td>
<td>3.41x</td>
<td>2.57x</td>
<td>3.67</td>
<td>2.35x</td>
</tr>
</tbody>
</table>

Note 1: Financials as per Ind-AS, translated at 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18
Note 2: Net debt calculated as Non-current Borrowings + current borrowings + current maturities of long term borrowings - cash and cash equivalents - bank balances other than cash and cash equivalents - current investments
Note 3: EBITDA calculated as total profit/(loss) for the year/period +(-) share of profit/loss from associate +(-) share of profit/loss from joint ventures (net) +(-) taxes/(benefit) + exceptional items + depreciation and amortization expense + finance costs - other income

<sup>(a)</sup> FY18 and H1-FY18 financials restated
<sup>(b)</sup> EBITDA based on group definition
<sup>(c)</sup> Includes minority interest
Volume guidance for FY19

Crude Steel Production

- FY18: 16.27 million tonnes
- FY19 E: 16.75 million tonnes
  - YoY %: +3.0%

Saleable Steel Sales

- FY18: 15.62 million tonnes
- FY19 E: 16.00 million tonnes
  - YoY %: +2.5%

All figures are in million tonnes
# Key Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Total Project Cost</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **Dolvi: increasing steel making capacity to 10 MTPA**   | ₹15,000 crore (USD $2,066M) | Total capacity will be increased from 5 MTPA to 10 MTPA. The major facilities to be set-up under the expansion project are:  
  - 4.5 MTPA Blast furnace with 5 MTPA Steel Melt Shop  
  - 5 MTPA Hot Strip Mill  
  - Commissioning: by March 2020 |
| **Dolvi Augmentation to 10.66 MTPA**                      | ₹1,375 crore (USD $189M) | Total project cost – ₹1,375 crore (USD $189M)  
  - Increase DRI Capacity in Salav from 0.9 MTPA to 1.6 MTPA  
  - Modify and augment SMS at Dolvi for Hot Charging of DRI  
  - Commissioning: by March 2020 |
| **Vijayanagar Augmentation to 13 MTPA**                   | ₹2,300 crore (USD $317M) | Total project cost – ₹2,300 crore (USD $317M)  
  - Enhance SMS capacity, augment existing HSM and Wire Rod Mills to support enhanced BF-3 capacity  
  - Commissioning: by March 2020 |

Note: 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18
## Key Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Capacity Expansion Details</th>
<th>Project Cost</th>
<th>Commissioning Date</th>
</tr>
</thead>
</table>
| Vijayanagar: CRM-1 complex capacity expansion |  Total project cost – ₹2,000 crore (USD $275M)  
- CRM1 complex capacity will be increased from 0.85 MTPA to 1.80 MTPA alongwith two Continuous Galvanizing Line of 0.45 MTPA each, a new 1.2 MTPA Continuous Pickling Line for HRPO products  
- Commissioning: by September 2019 | ₹2,000 crore (USD $275M) | by September 2019 |
| Vasind and Tarapur: modernisation-cum-capacity enhancement |  Total project cost – ₹1,730 crore (USD $238M)  
- The modernisation cum capacity enhancement project includes:  
  - increase in GI/GL capacity by 1.08 MTPA  
  - increase in colour coating capacity by 0.28 MTPA  
- Commissioning: by September 2019 | ₹1,730 crore (USD $238M) | by September 2019 |
| Downstream: modernisation-cum-capacity enhancement |  Total project cost – ₹940 crore (USD $129M)  
- The modernisation cum capacity enhancement project includes:  
  - Setting up Color Coating Line at Vijayanagar of 0.3 MTPA  
  - Additional Tinplate Line at Tarapur 0.2 MTPA  
  - Capacity enhancement of PPGL at Kalmeshwar by 0.22 MTPA  
- Commissioning: between September 2019 and March 2020 | ₹940 crore (USD $129M) | between September 2019 and March 2020 |

Note: 1 USD = 72.5973 INR, RBI Reference Rate as of 28th Sep 18
<table>
<thead>
<tr>
<th>Key Projects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vijayanagar: Manufacturing Integration</strong></td>
<td></td>
</tr>
</tbody>
</table>
- Total project cost – ₹5,200 crore (USD $716M)  
- Pellet plant 8 MTPA  
- Coke oven battery 1.5 MTPA  
- Commissioning: by March 2020 |
| **Dolvi – Captive Power** | 
- Total project cost – ₹975 crore (USD $134M)  
- Instal 175 MW WHRB and 60 MW CPP to harness flue gases and steam from CDQ  
- Commissioning: by March 2020 |
| **Dolvi Coke Projects Phase 2** | 
- Total project cost – ₹2,050 crore (USD $282M)  
- Phase 2: Second line of 1.5 MTPA coke oven battery along with CDQ  
- Commissioning: by June 2020 |

Note: 1 USD = 72.5975 INR, RBI Reference Rate as of 28th Sep 18
Performance on sustainability metrics

- **Material recycled**
  - 3.29 MT
  - 96% waste heat utilization rate for FY17

- **Recycled and reused water**
  - 17,741,405 KL
  - 63,170 Thousand GJ

- **LTIFR**(a) in FY 18
  - 0.42
  - 6.69% YoY Decrease in Total Particulate Matter in FY 18

- **Indirect energy consumption in FY17**
  - 27.57 GJ/Ton

- **Specific energy consumption in FY18**

- **Performance on sustainability metrics**

- **Deming Award for Vijayanagar Works**
  - 2018
  - JSW Steel included in the NIFTY 50 Index

- **Golden Peacock Innovative Product Award**
  - 2017

- **“National Award for Supply Chain and Logistics Excellence” under the steel industry category by the Confederation of Indian Industry**
  - 2016

- **“Industry Leadership Award” in steel, metals and mining at Platts Global Metals Awards**
  - 2015

- **Best Integrated Steel Plant in India and the Steel Minister's Trophy Gold Category**
  - 2014

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(a): Lost time injury frequency rate
Thank you