STEEL
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## EXECUTIVE SUMMARY

### 3rd largest producer of crude steel
- Total crude steel production in India has increased at a CAGR of 5.43 per cent during FY12–18, with country’s output reaching 102.34 million tonnes per annum (MTPA) in FY18.
- The country became the 3rd largest crude steel producer in 2017, as large public and private sector players strengthen steel production capacity in view of rising demand.
- Moreover, capacity has increased to 134.6 million tonnes (MT) in 2017-18 while in the coming ten years the figure is anticipated to rise to 300 MT of steel.

### Strong growth opportunities
- India’s comparatively low per capita steel consumption and expected growth in consumption due to growing infrastructure construction, automobile and railways sectors has offered scope for growth.
- National Mineral Development Corporation is expected to increase the iron ore production 75 million tonnes per annum (MTPA) until 2021 indicating new opportunities in the sector.

### Rising domestic and international investments
- Domestic players’ investments in expanding and upgrading manufacturing facilities are expected to reduce reliance on imports. In addition, the entry of international players would provide benefits in terms of capital resources, technical know how and more competitive industry dynamics.

*Note:* MTPA – Million Tonnes Per Annum  
*Source:* World Steel Association, Ministry of Steel, Aranca Research
ADVANTAGE INDIA
**ADVANTAGE INDIA**

- Demand would be supported by growth in the domestic market
- Infrastructure, oil and gas and automotives would drive the growth of the industry
- Lower per capita consumption compared to international average
- Steel production in India is forecasted to double by 2031

- To achieve steel capacity build-up of 300 million tonnes per annum (MTPA) by 2030, India would need to invest US$ 156.08 billion by 2030-31.
- The industry is witnessing consolidation of players which has led to investments by entities from other sectors. The ongoing consolidation also presents an opportunity to global players to enter the Indian market.

- As of 2017, India is the world’s 3rd largest producer of crude steel (up from 8th in 2003). India’s steel production in 2017 stood at 101.4 MT.
- Easy availability of low-cost manpower and presence of abundant iron ore reserves make India competitive in the global set up

- 100 per cent FDI through the automatic route is allowed. Large infrastructure projects in the PPP mode are being formed
- National Steel Policy (NSP) implemented to encourage the industry to reach global benchmarks
- Policy clarity and stability expected in respect of mining leases and forest clearances
- 20 per cent safeguard duty on steel imports

Notes: MT - Million Tonnes, FDI – Foreign Direct Investment
Source: Metallurgical and Materials Engineering Division Board, Aranca Research
MARKET OVERVIEW
EVOLUTION OF THE INDIAN STEEL SECTOR

- Production of steel started in India (TISCO was setup in 1907)
- IISC was set up in 1918 to compete with TISCO

- Hindustan Steel Ltd and Bokaro Steel Ltd were setup in 1954 and 1964, respectively
- In the early 1990s, the public sector dominated steel production
- Private players were in downstream production mainly producing finished steel using crude steel products

- Foreign players began entering the Indian steel market
- No license requirement for capacity creation
- Imposition of export duty on iron ore, to focus more on catering growing domestic demand
- Decontrol of domestic steel prices
- Launch of Scheme for promotion of Research and Development in Iron and Steel sector

1907-18
- Mysore Iron and Steel Company was set up in 1923
- According to the new Industrial Policy Statement (1948), new ventures were only undertaken by the central government

1923-48
- SAIL was created in 1973 as a holding company to oversee most of India’s iron and steel production
- In 1989, SAIL acquired Vivesvata Iron and Steel Ltd
- In 1993, the government set plans in motion to partially privatise SAIL

1954-64

1973-92

1993-2014

2015-18
- In 2017, India ranked as the 3rd largest crude steel producer in the world, leaving behind United States.
- During 2017-18, 9.62 MT of steel was exported from India.

Notes: (1) TISCO - Tata Iron and Steel Company; IISC - Indian Iron and Steel Company; SAIL - Steel Authority of India Ltd;
STRUCTURE OF THE STEEL SECTOR

Source: Report on Indian steel industry by Competition Commission of India, Aranca Research
STEEL PRODUCTION IN INDIA HAS BEEN GROWING AT A FAST PACE

- In FY18, crude steel production in India was 102.34 MT, with the total crude steel production growing at a CAGR of 6.63 per cent during FY08-FY18.
- The steel sector contributes over 2 per cent to the GDP of the nation and provides 2 million in the country.
- During 2017-18, finished steel production for sale in India stood at 104.98 MT respectively.
- Steel manufacturing output of India is expected to increase to 128.6 MT by 2021, accelerating the country’s share of global steel production from 5.4 per cent in 2017 to 7.7 per cent by 2021.

Notes: FY - Indian Financial Year (April – March), MT - Million Tonnes, CAGR - Compound Annual Growth Rate; P – Provisional, *without deducting own consumption by producers
Source: Joint Plant Committee, News Articles, Ministry of Steel
DEMAND HAS OUTPACED SUPPLY OVER THE LAST FIVE YEARS

- India’s finished steel consumption grew at a CAGR of 5.69 per cent during FY08-FY18 to reach 90.68 MT.
- Steel consumption is expected to grow 5.7 per cent year-on-year to 92.1 MT in 2018.
- It is expected that consumption per capita would increase supported by rapid growth in the industrial sector and rising infra expenditure projects in railways, roads and highways, etc.
- India’s per capita consumption of steel grew at a CAGR of 3.96 per cent from 46 kgs in FY08 to 68.00 kgs in FY17. The figure stood at 68 kgs (P) during Apr 2017-Feb 2018.

**Note:** MT - Million Tonnes, FY18 - Up to February 2018, ²CAGR- up to FY17, P – Provisional, kg - kilograms

**Source:** JPC India Steel, Ministry of Steel, Aranca Research
TRENDS IN IMPORTS AND EXPORTS OF STEEL

- Indian Government imposed Anti-Dumping Duty on 47 steel products for five years beginning from August 2016.
- In 2017-18, the country’s finished steel exports increased 17 per cent year-on-year to 9.62 million tonnes (MT), as compared to 8.24 MT in 2016-17.
- During the same period, the country’s finished steel imports rose 3.5 per cent year-on-year to 7.48 MT, as compared to 7.23 MT in 2016-17.
- Exports and imports of finished steel stood at 0.99 MT and 1.22 MT, during Apr-May 2018.

Note: FY - Indian Financial Year (April - March), FY19* - up to May 2018
Source: Joint Plant Committee, Aranca Research

Finished steel exports and imports (in million tonnes)
## KEY PLAYERS OF THE INDUSTRY

<table>
<thead>
<tr>
<th>Company</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tata Steel Ltd</td>
<td>Finished steel (non-alloy steel)</td>
</tr>
<tr>
<td>SAIL</td>
<td>Finished steel (non-alloy steel)</td>
</tr>
<tr>
<td>JSW Steel Ltd</td>
<td>Hot-rolled coils, strips and sheets</td>
</tr>
<tr>
<td>Jindal Steel and Power Ltd</td>
<td>Iron and steel</td>
</tr>
<tr>
<td>Ispat Industries Ltd</td>
<td>Hot-rolled coils, strips and sheets</td>
</tr>
<tr>
<td>Welspun-Gujarat Stahl Rohren Ltd</td>
<td>Tubes and pipes</td>
</tr>
<tr>
<td>Bhushan Steel Ltd</td>
<td>Cold-rolled coils, strips and sheets</td>
</tr>
<tr>
<td>Visa Steel Ltd</td>
<td>Ferro Chrome, coke and special steel</td>
</tr>
</tbody>
</table>

*Source: Aranca Research*
KEY STEEL PLANTS IN INDIA

Steel integrated plants under SAIL (Bhilai, Rourkela, Bokaro, Durgapur and Burnpur)

Tata Steel’s largest steel plant, based in Jamshedpur

RINL steel plant in Vishakhapatnam

Alloy and special steel plants under SAIL (Bhadrawati and Salem); iron and steel plant at Visvesvaraya

Source: Company websites, Aranca Research
## STEEL SEZs IN INDIA

<table>
<thead>
<tr>
<th>Developer</th>
<th>Location</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viraj Profiles Ltd</td>
<td>Thane, Maharashtra</td>
<td>Stainless steel engineering products</td>
</tr>
<tr>
<td>SAIL Salem SEZ Pvt Ltd</td>
<td>Salem, Tamil Nadu</td>
<td>Steel</td>
</tr>
<tr>
<td>Orissa Industrial Infrastructure Development Corporation</td>
<td>Jaipur, Orissa</td>
<td>Metallurgical-based engineering and ancillary/downstream industry</td>
</tr>
<tr>
<td>Tata Steel Special Economic Zone (TSSEZ)</td>
<td>Gopalpur, Odisha</td>
<td>Steel and allied downstream industries</td>
</tr>
</tbody>
</table>

*Source: Formal approvals granted in the Board of Approvals after the SEZ rules coming into force, Special Economic Zones in India website, www.sezindia.nic.in*
RECENT TRENDS AND STRATEGIES
### NOTABLE TRENDS IN THE INDIAN STEEL INDUSTRY … (1/2)

**Growing investments**
- Most of the companies in the industry are undertaking modernisation and expansion of plants to be more cost efficient. E.g. SAIL has undertaken modernisation and expansion for its 6 plants.
- An Inter-Ministerial Group (IMG) functioning under the Ministry of Steel, is monitoring and coordinating major steel investments across the country.
- The production capacity of SAIL is expected to increase from 13 MTPA to 50 MTPA in 2025 with the total investment of US$ 24.88 Billion.

**Strategic alliances**
- SAIL and Arcelor Mittal are going to form a joint venture to set up a 1.5 million tonne per annum steel plant.
- The consortium of SAIL and National Fertiliser Ltd. (NFL) has been nominated for revival of Sindri Unit of the Fertiliser Corporation of India Ltd.
- RINL, Vishakhapatnam Steel Plant and the Power Grid Corporation of India Ltd (POWERGRID) signed an MoU to set up a JV company to manufacture transmission line towers and tower parts including R&D of new high-end products.

**Entry of international companies**
- Attracted by the growth potential of the Indian steel industry, several global steel players have been planning to enter the market.
- Liberty House Group, a UK based business, is aiming to acquire Bhushan Power and Steel which will help the conglomerate to enter the Indian market.

**Notes:** MTPA - Million Tonnes Per Annum  
**Source:** Ministry of Steel, Ministry of Railways, Aranca Research
Increased emphasis on technological innovations

- Indian steel companies have now started benchmarking their facilities and processes against global standards, to enhance productivity.
- These steps are expected to help Indian companies improve raw material and energy consumption as well as improve compliance with environmental and pollution yardsticks.
- Companies are attempting coal gasification and gas-based Direct-Reduced Iron (DRI) production. Other alternative technologies such as Hismelt, Finex and ITmk3 being adopted to produce hot metal.
- Ministry of Steel has issued necessary direction to the steel companies to frame a strategy for taking up more R&D projects by spending at least 1 per cent of their sales turnover on R&D to facilitate technological innovations in the steel sector.
- Ministry has established a task force to identify the need for technology development and R&D.
- Ministry has adopted energy efficiency improvement projects for mills operating with obsolete technologies.

Source: Ministry of Steel, Aranca Research
STRATEGIES ADOPTED

Capacity expansion

- Companies in the steel industry are investing heavily in expanding their capacity. Major public and private companies, including Tata Steel, SAIL and JSW Steel, are expanding their production capacity. The government is targeting a steel production capacity of 150 million tonnes by 2020.
- India is the 3rd-largest crude steel producer in the world with production reaching 101.4 million tonnes in 2017.
- Tata Steel is expanding the capacity of its Kalinganagar plant from 3MTPA to 8MTPA with an estimated investment of Rs 23,500 crore (US$ 36.46 billion). The capacity expansion is expected to improve margins and lead to cost effectiveness.
- The Ministry of Steel is encouraging R&D activities by providing financial assistance from Steel Development Fund (SDF) and Plan Scheme of the Central Government. Furthermore, the government has allowed 100 per cent FDI through the automatic route in the Indian steel sector.
- A long term perspective is to achieve capacity of 300 mtpa by 2030, as per National Steel Policy 2017
- SAIL is increasing its production capacity by 60-70 per cent in the last leg of its US$10.79 billion programme.
- JSW Steel is looking at starting activity in the next fiscal on its 12 million tonnes mega steel plant proposed in Odisha.

Greenfield projects – focus on downstream value-added products

- In the last few years, rapid and stable growth in demand has also prompted domestic entrepreneurs to set up fresh greenfield projects in different states of the country. Mittal Steel announced two 12 mtpa greenfield steel projects, one each in Jharkhand and Orissa.
- As India surges ahead in building infrastructure, investments in steel pave the way ahead.

Note: GDP – Gross Domestic Product, MTPA – Million tonnes per annum
Source: CCI, Ministry of External Affairs
STRATEGIES ADOPTED

Mergers and Acquisition

- Steel companies are strengthening their position through cross border mergers and acquisitions. The focus is on improving existing technology to upgrade production process and developing new value added-products.

- In 2014, Arcelor Mittal along with Nippon Steel and Sumitomo Metal Corporation acquired ThyssenKrupp Steel USA. Notable deals include Essar Global’s acquisition of Canada-based Algoma Steel.

- On 1st August 2016, Kirloskar Ferrous Industries Ltd has announced to acquire pig iron plant of VSL Steels Ltd. for US$ 23.68 million. Also on 18 August 2016, JSW Steel Ltd. has acquired 74 per cent stake of Praxair Oxygen Pvt. Ltd. in their joint venture for US$ 36 million

- As on December 01, 2016, JSW Steel, the flagship steel company of JSW Group, entered into a consortium to acquire 35 per cent stakes of Ilva steel plant, in Italy.

- Tata Steel has executed an agreement with Creative Port Development (CPDPL) for the acquisition of the majority stakes, i.e., 51 per cent in CPDPL in January 2017

- Italy’s Marcegaglia ArcelorMittal have offered to buy Italy’s troubled Ilva steel plant, for an amount of US$ 2.4 billion and will boost production

- In March 2017, Central Government permitted sale of SAIL’s 3 units including Alloy Steels Plants, Visvesvaraya Iron and Steel Plant, Salem Steel Plant with the transfer of management in these plants for the strategic disinvestment.

- ArcelorMittal SA is looking to set up a joint venture (JV) factory in India with state-owned Steel Authority of India Ltd (SAIL), to manufacture high-end steel products which could be used in defence and satellite industries.

- In March 2018, Tata Steel won the bid for acquisition of Bhushan Steel and is awaiting approval from National Company Law Tribunal (NCLT) and Competition Commission of India (CCI). Acquisition of Bhushan Steel will help Tata Steel increase its capacity to over 18 MTPA.

Note: MTPA – Million Tonnes Per Annum
Source: CCI, Ministry of External Affairs
GROWTH DRIVERS
STRONG DEMAND AND POLICY SUPPORT DRIVING INVESTMENTS

Growing demand

Growing demand in the construction industry
Growing demand in the automobiles sector
Rising demand for consumer durables and capital goods

Policy support

100 per cent FDI in the steel sector
Encouragement of sector-based R&D activities by the government
Reduced custom duty and other favourable measures

Increasing investments

Rising investments from domestic and foreign players
Increasing number of MoUs signed to boost investment in steel
Foreign investment of nearly US$ 40 billion committed in the steel sector

Notes: FDI - Foreign Direct Investment, MOU – Memorandum of Understanding
Over 2017-22F, the appliances and consumer electronics (ACE) sector will expand at a CAGR of 9 per cent as growth in disposable income is expected to result in increase in demand for such products.

The appliances and consumer electronics market is estimated at US$ 31.49 billion in 2017 and is forecasted to reach US$ 48.37 billion by 2022.

Automobile production in India expanded at a CAGR of 7.08 per cent during FY13-FY18.

Gross Value Added (GVA) of the construction industry grew 8.8 per cent* during 2017-18 and is expected to post strong growth in the current fiscal year, backed by higher expenditure of the government.

As the construction industry is a major consumer of steel, expansion in the construction industry will translate into growth of steel sector.

**Notes:** F- Forecast, FY - Indian Financial Year (April - March), *Provisional Estimates of National Income

**Source:** SIAM, PWC, CEAMA, Aranca Research

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### Appliances and Consumer Electronics Industry (US$ billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2022F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.49</td>
<td>48.37</td>
</tr>
</tbody>
</table>

- CAGR 8.96%

### Total automobile production in India (million units)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
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<tr>
<td></td>
<td>0.57</td>
<td>0.76</td>
<td>0.93</td>
<td>0.83</td>
<td>0.7</td>
<td>0.78</td>
<td>0.81</td>
<td>0.89</td>
<td>0.89</td>
</tr>
</tbody>
</table>

- Passenger Vehicles
- Commercial Vehicles
- Two & Three Wheelers
### National Steel Policy 2017

- New National Steel Policy has been formulated by the Ministry of Steel in 2016, which will retain the objectives included in National Steel Policy (NSP) 2005. It aims at covering broader aspects of steel sector across the country including environment and facilitation of new steel projects, growth of steel demand in India and raw materials.

- Under the policy, the central government stated that all the government tenders will give preference to domestically manufactured steel and iron products. Moreover, Indian steel makers importing intermediate products or raw materials can claim benefits of domestic procurement provision by adding minimum of 15 per cent value to the product.

- The New steel policy, 2017 aspires to achieve 300MT of steel making capacity by 2030. This would translate into additional investment of Rs 10 lakh Crore (US$ 156.08 billion) by 2030-31.

- New Steel Policy seeks to increase per capita steel consumption to the level of 160 kgs by 2030 from existing level of around 60 kg.

### R&D and innovation

- ‘The scheme for the promotion of R&D in the iron and steel sector’ has been continued under the 14th Finance Commission (2019-20). Under the scheme, 26 projects have been approved with financial assistance of Rs 161 crore (US$ 24.98 million) from Ministry of Steel.

- The Ministry of Steel is also actively participating in the Impacting Research Innovation & Technology (IMPRINT) & Uchchatar Avishkar Yojana (UAY) Schemes launched by Ministry of Human Resource Development. IMPRINT scheme aims to solve major engineering and technology challenges and UAY is promoting industry sponsored, outcome-oriented research projects.

- Ministry of Steel is setting up an industry driven institutional mechanism - Steel Research & Technology Mission of India (SRTMI) – with an initial corpus of US$ 30.89 million. The institute will facilitate joint collaborative research projects in the sector.

**Note:** MT - Million tonnes  
**Source:** Ministry of Steel, Aranca Research
### POLICY SUPPORT AIDING GROWTH IN THE STEEL SECTOR … (2/2)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rise in export duty</strong></td>
<td>- The government hiked the export duty on iron ore to 30 per cent ad valorem on all varieties of iron ore (except pellets)</td>
</tr>
</tbody>
</table>
| **Reduction in custom duty on plants and equipment** | - The government has reduced the basic custom duty on the plants and equipments required for initial set up or expansion of iron ore pellets plants and iron ore beneficiation plants from 7.5/5 per cent to 2.5 per cent  
  - Customs duty on imported flat-rolled stainless steel products has been increased to 10 per cent from 7.5 per cent  
  - Basic customs duty on steel grade dolomite and steel grade limestone is being reduced from 5 per cent to 2.5 per cent. Basic customs duty is being reduced from 10 per cent to 5 per cent on forged steel rings used in the manufacture of bearings of wind-operated electricity generators |
| **Push due to Make in India initiative** | - Going forward, the Make in India initiative and policy decisions taken under it are expected to augment the country’s steel production capacity and resolve issues related to the mining industry |
| **Foreign Direct Investment**    | - 100 per cent FDI through the automatic route is allowed in the Indian steel sector                                                                                                                                 |

*Source: The Economic Times, Ministry of Steel, Business Standard, Make In India, Aranca Research*
THE SECTOR WITNESSED RISING INVESTMENTS IN THE LAST DECADE

<table>
<thead>
<tr>
<th>Date announced</th>
<th>Acquirer name</th>
<th>Target name</th>
<th>Value of deal (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-18</td>
<td>Vedanta Star Ltd</td>
<td>Electrosteel Steels</td>
<td>825.45</td>
</tr>
<tr>
<td>May-18</td>
<td>Tata Steel Ltd</td>
<td>Bhushan Steel</td>
<td>5,461.60</td>
</tr>
<tr>
<td>Dec-17</td>
<td>Tata Steel Ltd</td>
<td>Bhubaneshwar Power</td>
<td>39.5</td>
</tr>
<tr>
<td>Jan-17</td>
<td>Tata Steel Ltd</td>
<td>Creative Port Development Pvt Ltd</td>
<td>-</td>
</tr>
<tr>
<td>Aug-16</td>
<td>JSW Steel Ltd</td>
<td>Praxair Oxygen Pvt. Ltd.</td>
<td>36</td>
</tr>
<tr>
<td>Aug-16</td>
<td>Kirloskar Ferrous Industries Ltd</td>
<td>VSL Steels Ltd.</td>
<td>23.68</td>
</tr>
<tr>
<td>Aug-14</td>
<td>JSW Steel Ltd</td>
<td>Welspun Maxsteel Ltd</td>
<td>165.85</td>
</tr>
<tr>
<td>Apr-14</td>
<td>JSW Steel Ltd</td>
<td>Vallabh Tinplate Pvt Ltd</td>
<td>7.63</td>
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<tr>
<td>Mar-14</td>
<td>Lalitanjali Group Pvt Ltd</td>
<td>Centom Industries Ltd</td>
<td>-</td>
</tr>
<tr>
<td>Dec-13</td>
<td>Venus Insec Pvt Ltd</td>
<td>Goodluck Steel Tubes Ltd</td>
<td>23.73</td>
</tr>
<tr>
<td>Oct-13</td>
<td>JSW Projects Ltd</td>
<td>IST Steel and Power Ltd</td>
<td>-</td>
</tr>
<tr>
<td>Aug-13</td>
<td>Readymade Steel India Ltd</td>
<td>Kridhan Infra Solutions Pvt</td>
<td>-</td>
</tr>
<tr>
<td>Jul-13</td>
<td>Swelect Energy Systems Ltd</td>
<td>Amex Alloys Pvt Ltd</td>
<td>-</td>
</tr>
</tbody>
</table>

**Cumulative FDI inflows**

Period: April 2000 to December 2017

- **Sector**
  - Metallurgical industries
    - US$ 10.56 billion

*Source: Thomson ONE Banker, Department of Industrial Policy and Promotion*
OPPORTUNITIES
### OPPORTUNITIES … (1/2)

#### Automotive
- The automotive industry is forecasted to grow in size by US$ 74 billion in 2015 to US$ 260-300 billion by 2026.
- With increasing capacity addition in the automotive industry, demand for steel from the sector is expected to be robust.
- In 2017, India overtook Germany to become the fourth largest automobiles market globally.

#### Capital goods
- The capital goods sector accounts for 11 per cent of steel consumption and expected to increase 14/15 per cent by 2025-26 and has the potential to increase in tonnage and market share.
- Corporate India’s capex is expected to grow and generate greater demand for steel.

#### Infrastructure
- The infrastructure sector accounts for 9 per cent of steel consumption and expected to increase 11 per cent by 2025-26.
- Due to such a huge investment in infrastructure the demand for long steel products would increase in the years ahead.

#### Airports
- More and more modern and private airports are expected to be set up.
- In FY18, passenger traffic at Indian airports stood at 308.75 million and number of operational airports stood at 94 in July 2017.
- Development of Tier-II city airports would sustain consumption growth.
- Estimated steel consumption in airport building is likely to grow more than 20 per cent over next few years.

*Source: Make In India, SIAM, Ministry of Steel, Airport Authority of India*
### Railways
- The Dedicated Rail Freight Corridor (DRFC) network expansion would be enhanced in future.
- Gauge conversion, setting up of new lines and electrification would drive steel demand.
- PPP Investments in railways are expected to grow from Rs 24,000 crore (US$ 3.72 billion) in 2017-18 (RE) to Rs 27,000 crore (US$ 4.19 billion) in 2018-19.

### Oil and gas
- Oil and gas amongst major end-user segment accounted for ~34.4 per cent of primary energy consumption in FY16.
- This would lead to an increase in demand of steel tubes and pipes, providing a lucrative opportunity to the steel industry.

### Power
- The government targets capacity addition of 100 GW under the 13th Five-Year Plan (2017–22).
- Both generation and transmission capacities would be enhanced, thereby raising steel demand from the sector.
- Power capacity addition of 17,200 MW achieved in 2017-18.

### Rural India
- Rural India is expected to reach per capita consumption of 12.11 kg to 14 kg for finished steel by 2020.
- Policies like Food for Work Programme (FWP) and Indira Awaas Yojana, Pradhan Mantri Gram Sadak Yojana are driving growing demand for construction steel in rural India.
- In FY16, per capita consumption of steel in rural India is estimated at 9.74 kg.

*Note: RE – Revised Estimates*
*Source: Make In India, Ministry of Power, Aranca Research*
KEY INDUSTRY ASSOCIATIONS
Indian Stainless Steel Development Association

L-22/4, DLF Phase-II
Gurgaon, Haryana –122 002
Phone: 91-124-4375501
Fax: 91-124-4375509
E-mail: nissda@gmail.com
USEFUL INFORMATION
GLOSSARY

- CAGR: Compound Annual Growth Rate
- FDI: Foreign Direct Investment
- FY: Indian Financial Year (April to March)
  - So FY10 implies April 2009 to March 2010
- JV: Joint Venture
- MoU: Memorandum of Understanding
- MT: Million Tonnes
- MTPA: Million Tonnes Per Annum
- NPAT: Net Profit After Tax
- SEZ: Special Economic Zone
- TMT: Thermo Mechanically Treated
- US$ : US Dollar
- Wherever applicable, numbers have been rounded off to the nearest whole number
<table>
<thead>
<tr>
<th>Year</th>
<th>INR Equivalent of one US$</th>
</tr>
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<td>67.09</td>
</tr>
<tr>
<td>2017–18</td>
<td>64.45</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of India, Average for the year

<table>
<thead>
<tr>
<th>Year</th>
<th>INR Equivalent of one US$</th>
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