



# Securing a robust and sustainable future for the Indian Steel industry

September 2020



Confederation of Indian Industry  
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# Table of contents

Foreword  
Page no: 4

Introduction **A**  
Page no: 6

Key challenges and opportunities **B**  
Page no: 12

Solution themes **C**  
Page no: 20







# Foreword

Global Steel industry is undergoing a subtle shift across dimensions of technology of steel manufacturing, raw material sourcing, finished steel quality, green field capital investments and environmental sustainability. The CAGR of demand of Steel has been about 4% for the last 5 years<sup>1</sup> and is expected to be at the same level in the near future.

In comparison, Indian Steel sector has been relatively been more vibrant and has been growing at a CAGR of about 5%-6% yoy<sup>2</sup>. Several infrastructure projects announced by government across sectors, including rail, road, aviation, gas pipeline, and housing, are expected to boost the steel demand.

With an expected V Shaped demand recovery post Covid the government shall provide support to the industry to catalyse the recovery. The industry players have to play their part in ensuring that the recovery is financially and environmentally relevant. The global forces of trade and sustainability, notwithstanding, the govt and the industry need to work in sync to co create a strategic plan which is unique and relevant to India. This collaboration will be best to nurture the future of a robust and a sustainable steel industry.

CII and EY have created this joint report after having spoken to several leaders and captains of the industry. Fast track execution of the declared infrastructure projects, by Government of India will give the much-needed boost to the domestic steel demand with a cascading effect on the larger economy. Rationalizing duties and taxes to make domestic steel globally competitive and have a level playing field for players is another.

Steel players will have to show discipline of capital spends and foresight on investment in the right technologies for expansion. They must also deploy the latest management techniques to make their capital deployed more efficient with shorter time returns to investments.

We hope you enjoy reading the report.



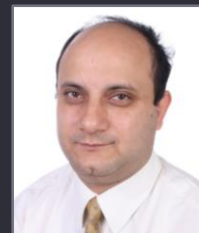
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<sup>1</sup> "2020 World Steel in Figures", World Steel Association

<sup>2</sup> Annual Report 2019-20", Ministry of Steel



# Introduction

A

## a. Global Steel trends

The last 5 years have seen a steady CAGR growth in global steel production at the rate of around 4%. A continuing trend of regional shift in Steel power was observed along with India continuing to build capacity at rates much than that of the rest of world. This was fundamentally driven the by the disparities of Gross Domestic Product (GDP) growth of such countries in comparison to the rest of world, availability and cost of quality raw materials and trade positions taken by several other countries on trading in Steel. India emerged as the second largest crude Steel producer displacing Japan in 2019<sup>3</sup>.

The world witnessed continued increase in Electric Arc Furnace (EAF) capacities as a replacement for Blast Furnace-Basic Oxygen Furnace (BF-BOF) and as new green field investments with a near visible saturation of a fraction proportion 50% BOF /50% EAF in the next ten years. Recycled steel value chains became more globalized and structurally organized with global trading of the same gained significant volumes in keeping with the trend of the BOF/EAF capacity proportions.



In order to keep the performance guarantees of high grade steel intact we will continue the BOF route to steel manufacturing. As scrap availability increases its usage will go up but unlikely to replace all of virgin steel



**Mr Enrico Di Cesare**  
President & CEO  
NSGI Steel Inc

<sup>3</sup> "2020 World Steel in Figures", World Steel Association

Investment in technological advancements in the industry to reduce the carbon loading attributable to steel continued to be a key focus area. Several economically viable options were being tested as a replacement of the carbon route and some of them are being considered for scale up. Investments in research for lighter, higher tensile strength blended Steel products are continuing in the industry's quest to make Steel a more eco-friendly, sustainable substitute for wood, plastic and aluminum across several industries.

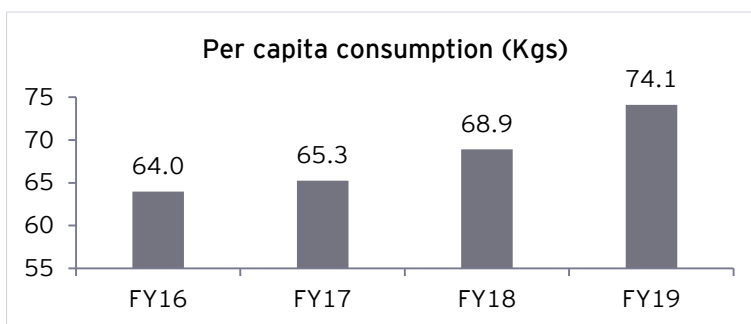
Overall, while steelmakers around the globe were focused on value creation strategies such as product customization, securing long term cost effective RM supply, enhancing the penetration of the digital solutions as a key enabler for efficiency and improving capital structure, the governments of steel-making countries have been busy trying to metamorphose their policies for the metals and mining sectors in deference to pressures of global trade while protecting their own domestic steel economies.

It is more true than ever that a vibrant, robust and growing domestic Steel industry is pivotal to meeting the GDP growth ambitions of a nation. There is an increasing realization that given the developments of the last 10 years, every country should draw up their own roadmap of embracing the goodness of Steel addressing the all dimensions of industry structure, technology of manufacturing, quantum and type of market demand, GDP predictions and Global Trade positions.

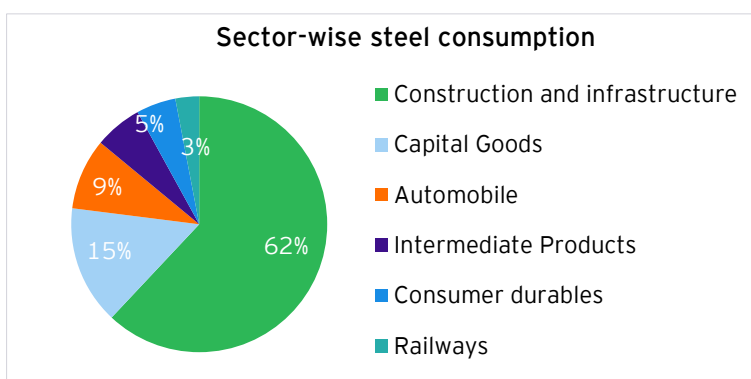
## b. Brief overview of Indian Steel industry

Since the first Steel production started in India at TISCO in 1907, India has travelled a long way to become the world's second largest crude Steel producer with a production of 111 million tonnes accounting for 5.9% of global production and 3.1% of global exports<sup>4</sup>. The sector has largely been dominated by private players contributing 81% of the crude Steel production and rest by government owned enterprises. The sector currently accounts for more than 2% of the country's GDP and employs half a million people directly and about 2 million indirectly.

India's per capita consumption of Steel grew at a CAGR of 4.12 % from almost 64kgs in FY16 to nearly 74 kgs in FY19.



Source: "Annual Report 2019-20", Ministry of Steel



Source: Market Economics via Factiva Research

Key drivers for the continuous rise in the production and consumption of Steel has been a strong domestic demand till FY19, from major consuming sectors, combined with a rise in export of Steel grades, like structural Steel, HR and CR Coils/ Sheets etc. National Steel Policy 2017, lays significant emphasis on increasing steel consumption across major segments of infrastructure, automobiles, and housing, resulting in a potential rise in per capita Steel consumption to 160 kg by 2030<sup>4</sup>.

“ Indian steel industry plays a pivotal role in the economic development and GDP growth of the nation. The captains of the industry, along with the government, must come together and put forth a road map for a financially and environmentally sustainable future ”



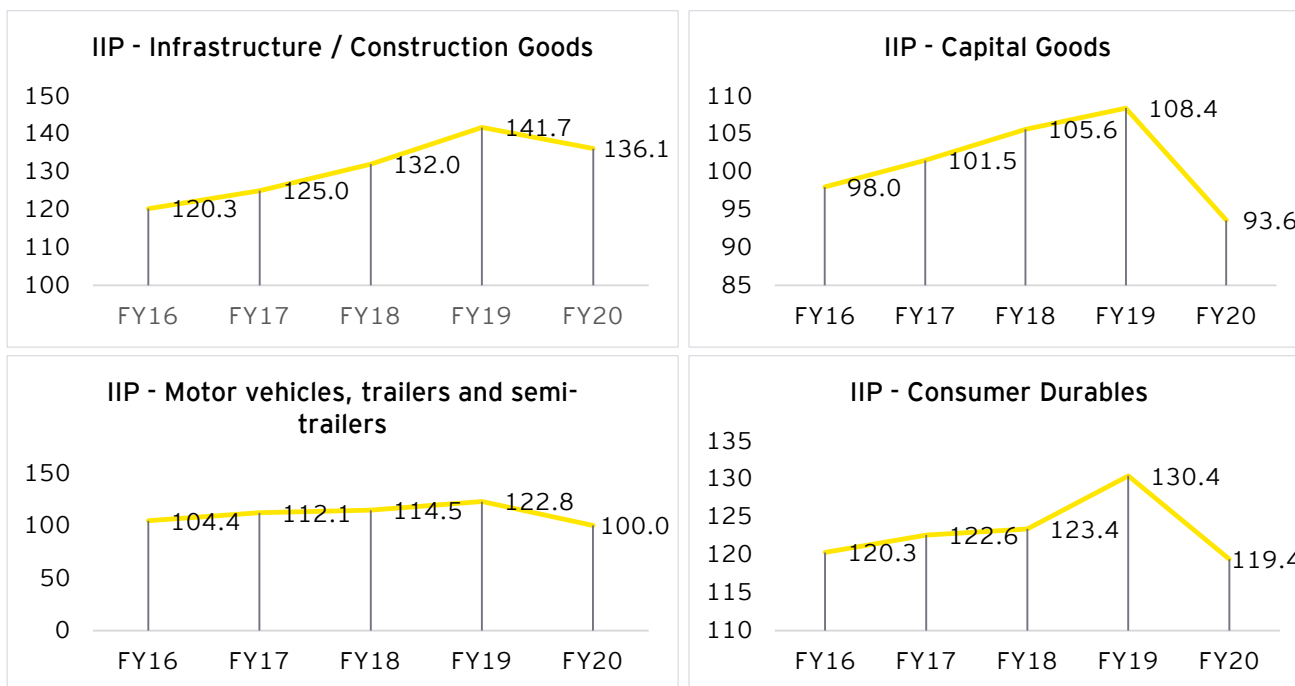
**Mr V R Sharma**  
Chairman, CII Steel Mart 2020 & Managing Director Jindal Steel & Power Ltd.

<sup>4</sup> "National Steel Policy (NSP), 2017", Ministry of Steel



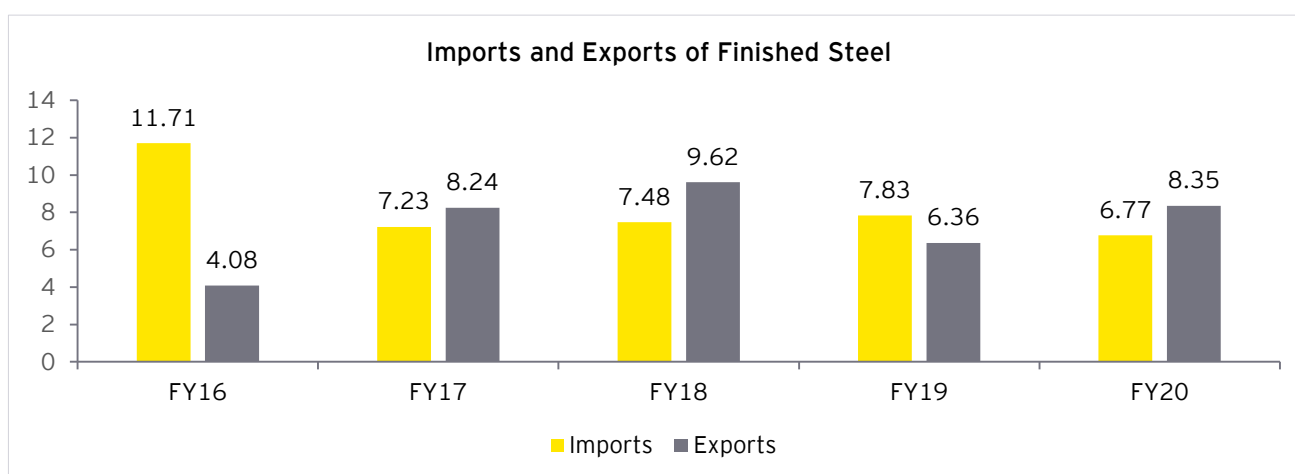
A major internal driving force for domestic market expansion has been the country's vast population, low per capita consumption of iron and Steel and its GDP growth. This implies that there is potential for rapid growth of the domestic market of Steel due to low-base effects. India's relatively young population and the trend of urbanization both tend to boost demand for housing, transportation and public infrastructure, which translates into higher demand for steel.

The lockdown measures adopted by various nations to fight COVID-19 during Q4, 2019-20, steel production, trade and consumption at global level was affected negatively in this period.



Source: "All India Index of Industrial Production", Ministry of Statistics and Programme Implementation

Along with this, the depreciation of the Indian rupee against the US dollar over the last five years has given a boost to Indian Steel exports. Along with this, 30% duty imposed on iron ore lumps and fines of +58% Fe content, made quality iron ore available to domestic manufacturers at lower prices<sup>5</sup>, aiding steel production.



Source: "Annual Report 2019-20", Ministry of Steel

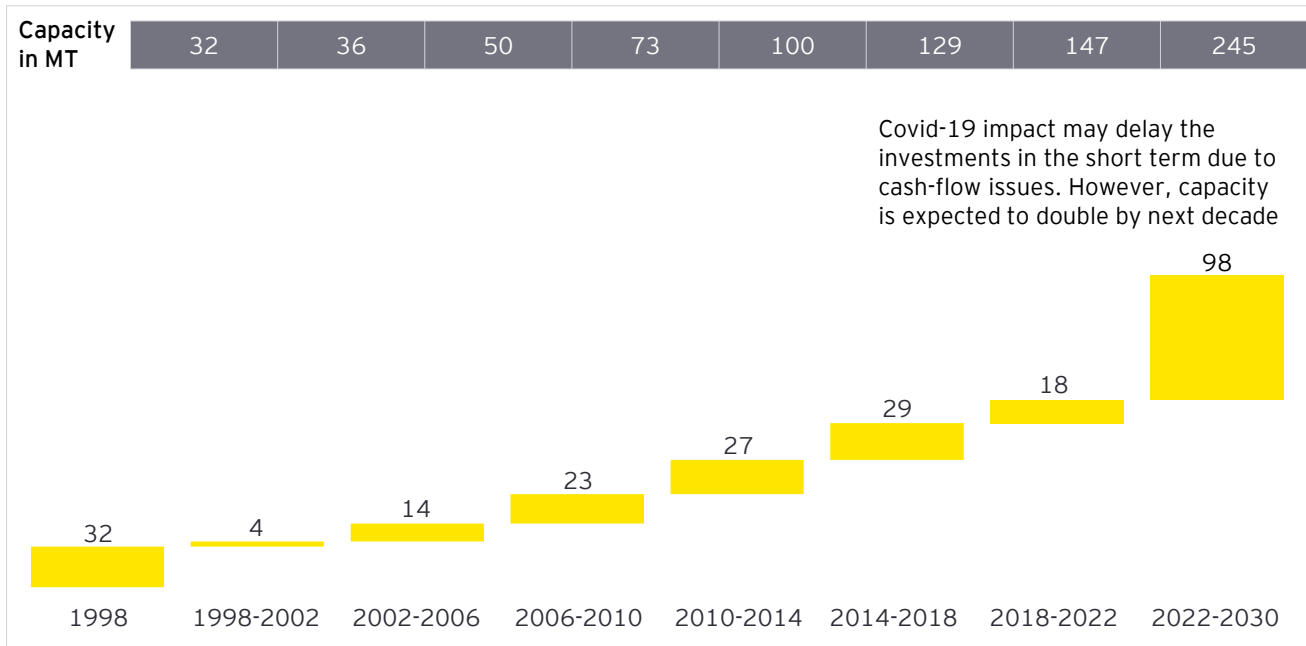
India has rapidly expanded its Steel production capacity at a CAGR of 5.26 percent from 122 MT in FY16 to 142 MT in FY19<sup>6</sup>. To cater to rising demand, Indian Steel capacity is expected to grow to ~ 245mt by 2030<sup>7</sup>.

<sup>5</sup> <https://steel.gov.in/ease-doing-business>

<sup>6</sup> "Annual Report, 2019-20", Ministry of Steel

<sup>7</sup> "National Steel Policy (NSP), 2017", Ministry of Steel





Source: "Global Steel: Focus on India", Morgan Stanley

Currently the BF-BOF route contributed to nearly 44% of the crude Steel production capacity, this is expected grow to 68% by 2030 of the capacity and the rest getting fulfilled by EAF and IF routes<sup>8</sup>.

### c. Impact of COVID disruption and path to recovery

#### Immediate impact

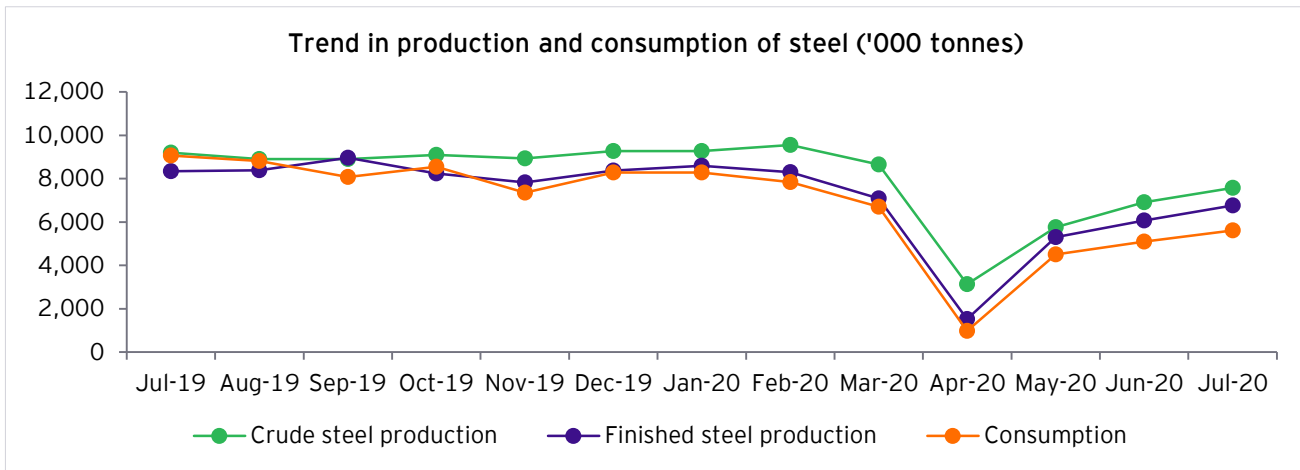
The COVID-19 pandemic has severely affected economies and industries globally and the steel industry is no exception. A comparative chart on the Purchasing Manager's Index (PMI) indicating the prevailing directions of 7 major economies on a month on month for the last one year, clearly indicates the extent on impact of COVID-19.

|          | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-20 | Jun-20 | Jul-20 |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| China    | 48.3   | 49.9   | 50.8   | 50.2   | 50.2   | 49.4   | 49.8   | 50.4   | 51.4   | 51.7   | 51.8   | 51.5   | 51.5   | 40.3   | 50.1   | 49.4   | 50.7   | 50.9   | 51.1   |
| Brazil   | 52.8   | 53.4   | 52.8   | 51.5   | 50.2   | 51     | 49.9   | 52.5   | 53.4   | 52.2   | 52.9   | 50.2   | 51     | 52.3   | 48.4   | 36     | 38.3   | 51.6   | 58.2   |
| India    | 53.9   | 54.3   | 52.6   | 51.8   | 52.7   | 52.1   | 52.5   | 51.4   | 51.4   | 50.6   | 51.2   | 52.7   | 55.3   | 54.5   | 51.8   | 27.4   | 30.8   | 47.2   | 46     |
| Russia   | 50.9   | 50.1   | 52.8   | 51.8   | 49.8   | 48.6   | 49.3   | 49.1   | 46.3   | 47.2   | 45.6   | 47.5   | 47.9   | 48.2   | 47.5   | 31.3   | 36.2   | 49.4   | 48.4   |
| US       | 54.9   | 53     | 52.4   | 52.6   | 50.5   | 50.6   | 50.4   | 50.3   | 51.1   | 51.3   | 52.6   | 52.4   | 52.4   | 50.7   | 48.5   | 36.1   | 39.8   | 49.8   | 50.9   |
| Eurozone | 50.5   | 49.3   | 47.5   | 47.9   | 47.7   | 47.6   | 46.5   | 47     | 45.7   | 45.9   | 46.9   | 46.3   | 47.9   | 49.2   | 44.5   | 33.4   | 39.4   | 47.4   | 51.8   |
| Japan    | 50.3   | 48.9   | 50.5   | 50.2   | 49.8   | 49.3   | 49.4   | 49.3   | 48.9   | 48.4   | 48.9   | 48.4   | 48.8   | 47.8   | 44.8   | 41.9   | 38.4   | 40.1   | 47.2   |

India was in an expansion mode till March 2020 with a PMI over 50, when the impact of COVID-19, put India to a grinding lockdown. The supply side constraints due to inter-state border closures, along with labor shortage and office shutdowns put the economic cycle to a grinding halt in the month of April, resulting in record low levels. The weak domestic demand along with large inventory build-up and supply chain bottlenecks caused prices to stay low and prevented rapid production ramp ups.

<sup>8</sup> "National Steel Policy (NSP), 2017", Ministry of Steel



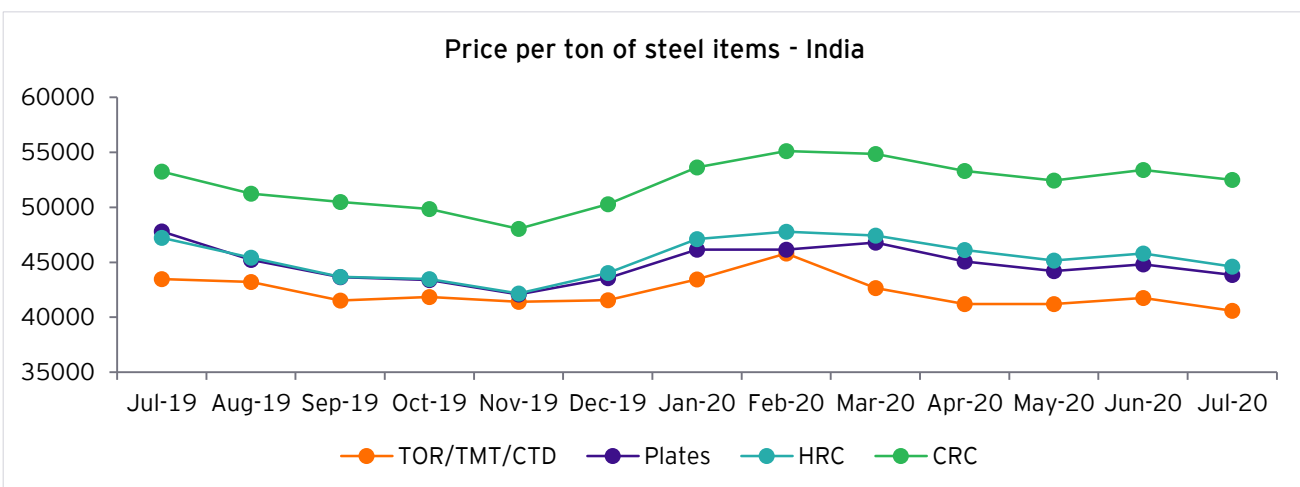


Source: "Steel Sector Update - August 2020", Care Ratings

### Impact on Steel prices and profitability

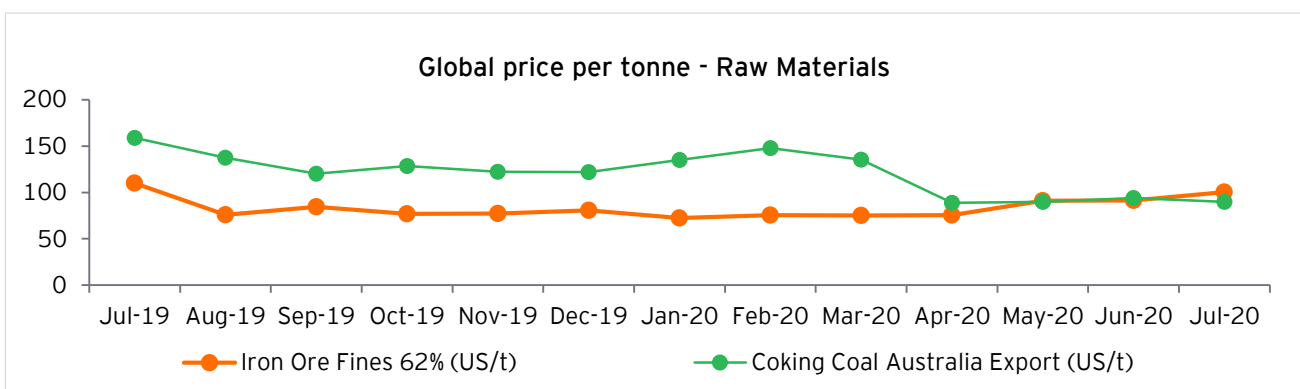
The COVID pandemic started affecting the demand and hence Steel prices from January 2020. US HRC prices had declined by over 20% between Jan-April 2020 and were down by 49% from their September 2018 highs. Although price have recovered over the last 4 months, they are still below the average prices of 2019.

After declining sharply in March and April, Indian retail steel prices rose by a marginal 1.5% m-o-m in June 2020, and have inched up gradually in following months. Prices are likely to stabilise with an upside bias at least in short term.



Source: Dashboard, Ministry of Steel

Supply disruption in Brazil has pushed global iron prices well above US\$100/t.. However, going forward, higher iron ore production from Australia and growing scrap consumption in China will keep pressure on prices in medium to long-term. In the US, lower steel demand will also impact domestic iron ore prices.



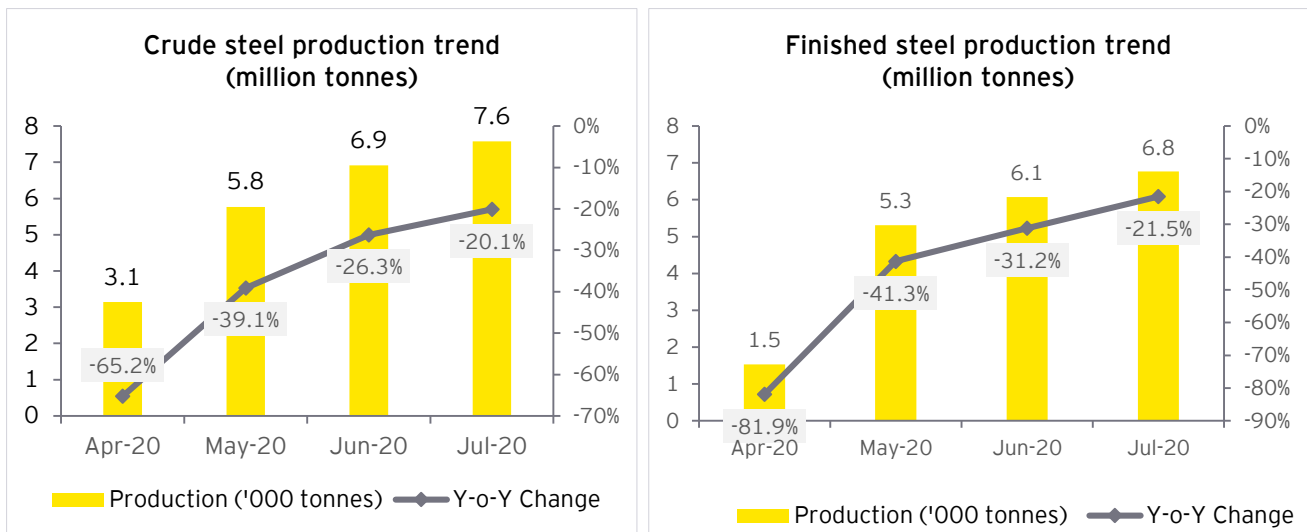
Source: "Commodity Prices", S&P Market Intelligence



## Recovery trends

Export of finished Steel has seen a huge jump during the last three months due to significant increase in exports to China, Spain and Italy. India exported 7.2% of total finished Steel produced in July 2019 which increased to 20.3% in July 2020<sup>9</sup>. China alone accounted for nearly 60% of the increase in Steel exports mostly in form of semis and hot rolled coils both from primary and secondary Steel producers.

The consumption went down to a historical low of ~1 Million tonnes in April 20 but registered a recovery to 5.6 Million tonnes by July 2020. The domestic demand will remain subdued till the sectors such as auto, infrastructure, real estate construction, electronics and consumer durables posts a sustainable recovery. Consumption of long Steel products primarily used in buildings, construction and capital goods sectors are expected to have a faster recovery as compared to flat Steel, where the demand is consumer-driven through end user segments like automotive and domestic appliances. This has resulted in a steady increase in crude Steel and finished Steel production, from the month of April 2020 onwards.



Source: "Steel Sector Update - August 2020", Care Ratings

Resumption of construction activities through Unlock 4.0 is expected to strengthen domestic demand, while Steel exports are likely to lose its momentum as China ramps up its domestic productions.



As a product that is made almost entirely from recycled scrap, stainless steel is the 'greenest' a metal can get. It meets the triple goals of People, Profit, and Planet by its inherent nature. People, because it's the safest and most hygienic alternative. Profit, because it's lowest on lifecycle costing. And Planet, because this metal lasts longest, and lives forever.



**Mr Abhyuday Jindal**  
Managing Director  
Jindal Stainless Ltd.

<sup>9</sup> "Steel Sector Update - August 2020", CARE Ratings





## Key challenges and opportunities

B

### Emerging global and domestic landscape

As the world limps back into resumption of economic activity, through the waning phase of COVID-19, the impact of the pandemic shall be visible across many sectors, including Steel, through FY21. As the number suggests, the steel industry, at large, has taken preventive measures on people and processes to minimize the impact on production. Where possible the industry has been able to sustain economies of continuous production during the peak COVID periods.

Major reasons for large shrink in developed economies is due to manufacturing recession coupled with distress in auto and machinery industries and falling oil prices discouraging energy sector investments. Developing countries including India are the hardest hit in terms of Steel demand owing to stricter lockdown measures and longer lockdown phase impacting all major consumer industries of Steel.

#### a. Domestic challenges in the near to long term

##### Demand constraints

Fall in domestic demand amidst slowing global economic growth has forced cross imposition of duties by major Steel-producing nations. India has also imposed duties to safeguard its domestic Steel industry, especially against dumping of flat products in the country. In June 2020, India imposed an anti-dumping duty in the range of US\$13.07 - US\$173.1/tonne on imports of flat rolled product of Steel, plated or coated with alloy of aluminum and zinc, from China, South Korea and Vietnam<sup>10</sup>. While China, was the major destination for exports during April 20 to June 20, the export volume is likely to go down as discussed earlier, due to opening up of their domestic manufacturing companies.

<sup>10</sup> <https://economictimes.indiatimes.com/news/economy/foreign-trade/india-imposes-anti-dumping-duty-on-certain-steel-products-from-china-vietnam-korea/articleshow/76536912.cms>

With all hopes pinned on the domestic market revival for the Steel sector, the worries are far from over. Despite a number of domestic user industries including infrastructure are showing strong demand trends, demand from infrastructure, construction and real estate sectors can remain subdued in 1HFY21 (first half of FY21) with the lockdown in 1QFY21 (April-June FY21) and the monsoon season over 2QFY21 (July-September FY21), as compared to growth expectations. Furthermore, major government infrastructure projects are likely to get delayed as a direct fallout of COVID- 19 impact.

Data from the Centre for Monitoring Indian Economy showed that till June end the number of stalled projects had gone up to 1,377 from 1046 in December. Data from "Projects Today" showed that the number of new project announcements in electricity, infrastructure, irrigation, manufacturing and mining fell to 1,241 valued at ₹98,000 crore in the June quarter from 2,500 new projects valued at ₹3.86 Lakh crore in the same period last year. Following are a few examples:

- ▶ Bharatmala Pariyojana phase-1 is estimated to be delayed by four years and is envisaged to be completed by 2025-26<sup>11</sup>
- ▶ Indian Railways decision to cancel Rs.470 crore (\$US 63.3m) signaling contract with the Beijing National Railway Research and Design Institute in the COVID-19 crisis has had an adverse impact on the Eastern and Western Dedicated Freight Corridors (DFC), with the completion deadlines for the two lines now extended by six months<sup>12</sup>

The real estate sector is witnessing a demand slump due to excess inventory and severe price pressures. The sector has severe liquidity crunch, particularly with small developers. The sector is undergoing a transformation where consolidation is becoming the key to survival and success. More and more realtors are entering into joint venture partnerships with smaller players, to pull in resources.

Auto sector has also witnessed stagnant growth, resulting in lower demand for Steel. The auto sector is caught in cyclic downturn, uncertain demand sentiments and uncertainty regarding electric vehicle launches and higher environmental standards.

## Input prices

In India, apart from a rise in demand in post-COVID scenario, there is a big shortage of iron ore due to iron ore exports. The per tonne price of iron ore has increased by Rs 700, while that of steel pellets has gone up by Rs 300-350. In addition, iron ore fines and lumps have gone up by Rs 200-250<sup>13</sup>. Iron ore prices have jumped 85 per cent in July and August, and to absorb the cost, there was an increase Steel prices.

Indian Steel sector is disadvantaged due to limited availability of some of the essential raw material such as high-grade lumpy Manganese ore and Chromite, coking coal, Steel-grade limestone, refractory raw material, nickel, ferrous scrap etc. Due to shortage of domestic coking coal, both in terms of quantity and quality, pig iron producers/ BF operators in India must significantly depend on import of coking coal. India largely fulfils its coking coal requirements through imports from Australia. But due to vagaries of weather, there has been huge fluctuations in coking coal supply as well as coking coal prices.

## Logistics and infrastructure

Logistics has always been a challenge for Steel manufacturers of India. Unlike many countries where Steel plants are located near to ports, the Steel plants in India are in the inlands, often in remote areas with severe logistics challenge. Furthermore, as a thumb rule, nearly 3 tonnes of raw material is needed in form of iron ore and coke to produce 1 tonne of Steel. Hence, the inbound logistics requirement for Steel-making is also significantly high. Thus, raw material and Steel travels through a network of ports, railways and roads to reach the destination.

Steel transportation till now has been heavily reliant on railways as it meets more than 70% of the Steel industry's transportation needs. NITI Aayog estimates a relative cost disadvantage for Indian steelmakers at USD 20-25 per tonne of finished Steel. This high cost is resulting from the compulsion of Indian railways to subsidize passenger carrying cost with freight earnings. The capacity of Indian railways is constrained with a lot of delays and issues in rake availability and rake placements, creating bottleneck points in the entire supply chain.

Similarly, ports suffer from low productivity, slow unloading, delayed stevedoring and other myriad issues. Lack of appropriate digitalization of the supply chain nodes, like document processing and clearances at ports, tracking and tracing of goods etc., result in inefficiency and bottlenecks. The COVID impact, has triggered a sharper digitalization adoption curve, which needs to be sustained and taken forward.

<sup>11</sup> <https://economictimes.indiatimes.com/news/economy/infrastructure/bharatmala-pariyojana-to-get-delayed-by-4-years-icra/articleshow/76303089.cms>

<sup>12</sup> [https://www.railjournal.com/infrastructure/cancelled-contract-delays-completion-of-indias-dedicated-freight-corridors/#:~:text=INDIAN%20Railways'%20\(IR\)%20decision,lines%20now%20extended%20by%20six](https://www.railjournal.com/infrastructure/cancelled-contract-delays-completion-of-indias-dedicated-freight-corridors/#:~:text=INDIAN%20Railways'%20(IR)%20decision,lines%20now%20extended%20by%20six)

<sup>13</sup> <https://economictimes.indiatimes.com/markets/commodities/news/surging-demand-for-steel-lifts-prices/articleshow/77666938.cms>

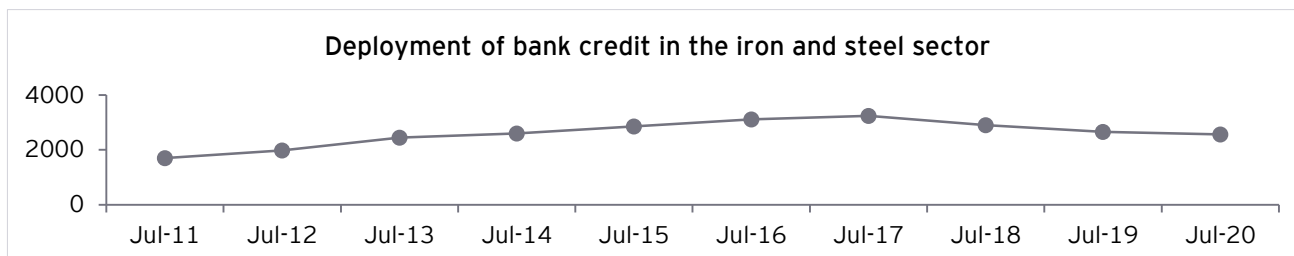


## Power cost

As in the words of Edwin Basson, Director General of World Steel Association, energy represents one of the key challenges for today's Steel industry and the efficient use of energy has always been one of the Steel industry's key priorities. Over the last 40 years, the Steel industry has reduced its energy consumption per tonne of Steel by 50%. Still, the cost of energy accounts for 15 to 20% of the total cost of Steel production and energy consumption is directly related to the environmental impact of the industry.

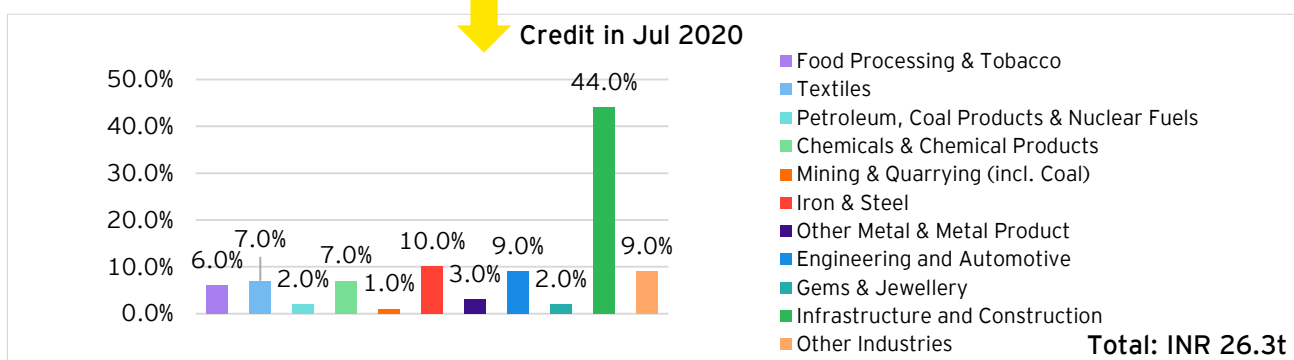
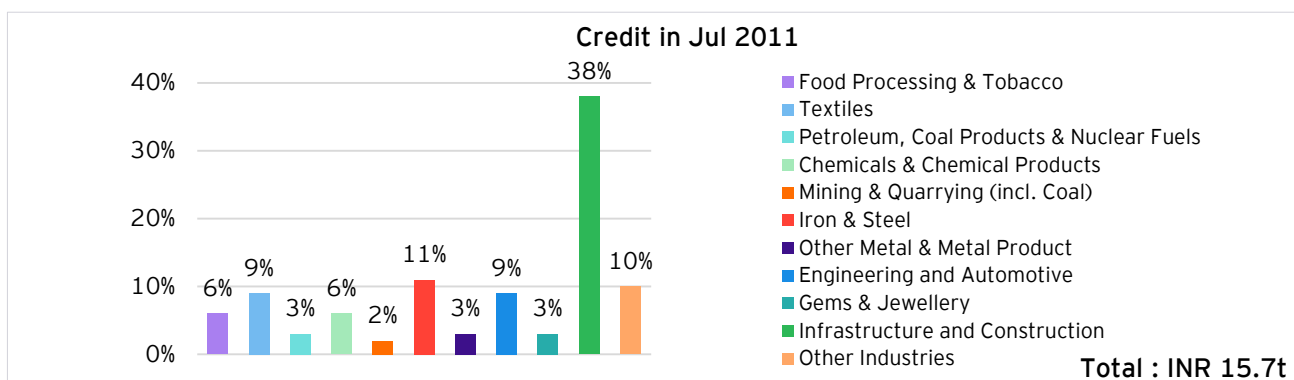
India's specific consumption of energy per tonne of Steel produced is approx. 7.2 giga calories per tonne of crude Steel is way high than the global best figures of 5.38 giga calories per tonne of crude Steel. This indicates that Indian Steel plants need to invest more in energy efficient systems to remain competitive.

## Finance Cost



Source: "Data on Sectoral Deployment of Bank Credit", Reserve Bank of India

Steel industry is a capital-intensive sector requiring an investment of INR 6000 - INR 8000 crore to set up 1 tonne of Steel production capacity through greenfield initiatives. The cost of financing for expansion or new capacity addition is majorly through borrowed capital. However, the bank credit in the Iron and Steel sector have shown a declining trend with the future remaining uncertain. Overall, share of bank credit to Iron and Steel sector has declined between 2011 to 2020. Further, in India the cost of finance is higher as compared to the cost of finance in countries like China, Japan and Korea.



Source: "Data on Sectoral Deployment of Bank Credit", Reserve Bank of India

In conclusion, a large share of the challenges that the Steel industry has faced since 2014 can be traced to the extremely high finance costs or cost of borrowed capital. Although India's Reserve Bank has lowered the repo rate from 6.5% in the beginning of 2019 to 4.0% as of August 2020<sup>14</sup>, the cost of capital in India remains significantly high and Indian Steel makers continue to face a relative disadvantage vis-à-vis their competitors from the developed world.

<sup>14</sup> <https://www.financialexpress.com/economy/rbi-governor-shaktikanta-das-press-conference-live-updates-reverse-repo-rate-crr-t-ltro-liquidity-monetary-easing/1967031/>

## Duties and taxes

Although India has ranked second in conversion cost efficiency, Indian Steel is often considered to be uncompetitive globally. The reason for this is the non-creditable taxes, duties and cesses paid by Steel makers which amounts to nearly Rs.2750/ Tonne as per ISA analysis. This includes the royalty, clean energy cess, etc. for iron ore, electricity duty, fuel tax on freight, and custom duties. This number out of gate taxes as applicable on Steel are about 12%-14%

High entry barriers in US, Europe and GCC countries in form of duties already act as a major deterrent in scaling up exports to these countries.

## Environmental concerns

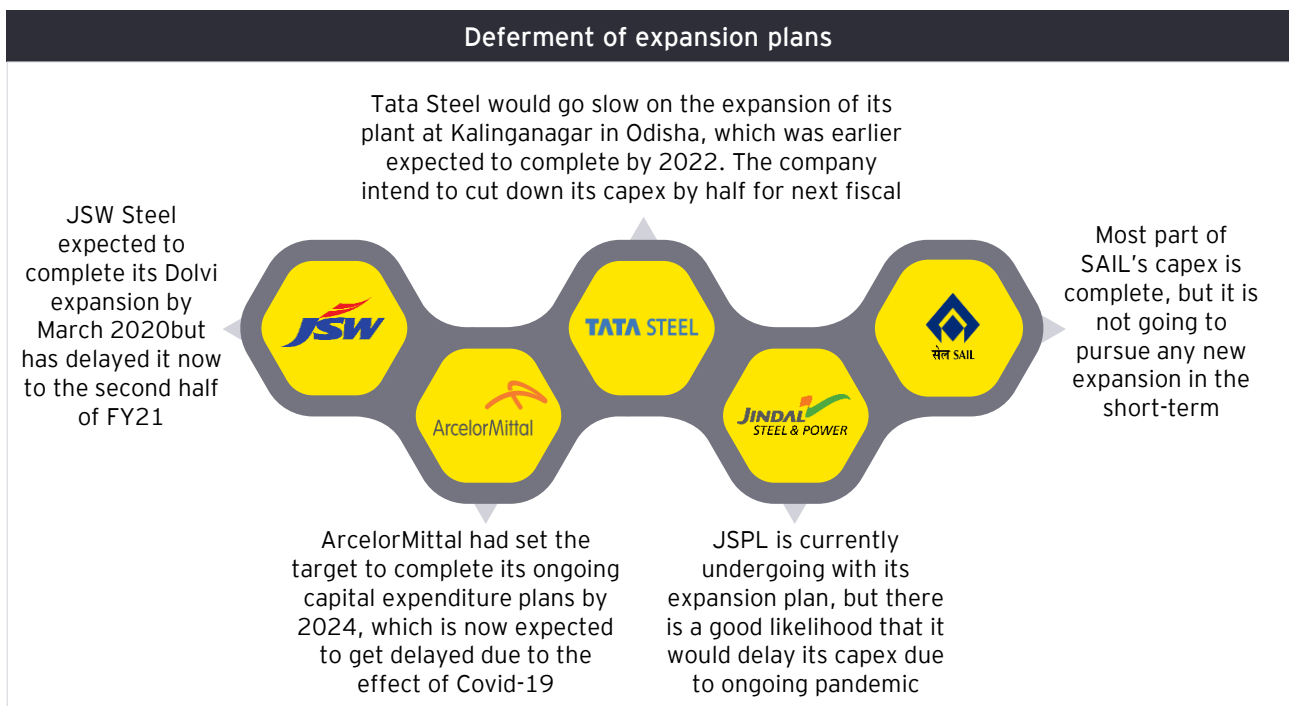
Environmental concerns are gaining more importance in the current scenario. Steel industry being energy-intensive and is the second biggest consumer of energy globally contributes to a significantly higher carbon footprint which in turn affects the immediate environment. Developing economies which depend primarily on the BF-BOF route due to the scarce availability of scrap has higher total energy consumption and material consumption per ton of Steel as the BF-BOF route are 2.8 and 11 times larger than those of the EAF route, respectively. In addition, the emission intensities of dust, CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>2</sub> and CO of the BF-BOF route are 7.7, 2.6, 92.6, 33.5, and 12.0 times greater than those of the EAF route, respectively<sup>15</sup>.

In India, EAF and IF route accounts for about 55% of the total crude Steel production in FY19 with a majority of the producers having a capacity in the range of 0.25 - 0.5 Million tonnes, serving customers in the range of 50-200 Km. Many smaller steel producers have little to no focus on environment friendly interventions. Various steel producing sections are not fully automated. Automation driven by quality analytics plays a vital role in integrating and bringing about better process efficiency, which in turn reduces operating costs like power, water and raw material along with being environment friendly.

Government of India had released draft environment guidelines which are quite stringent and may further become rigorous in future. This shall affect many inefficient and small steel producers as they may find it unviable to produce steel while complying with increasingly strict environment norms. This may jeopardize the goals laid out in the National Steel Policy, 2017.

## Deferment in expansion

The key challenge that lies ahead of the Indian Steel industry which was already battling with suppressed Steel prices and escalated input prices in the last FY, is to restore back its profitability and cash flows, before the capacities can be augmented. The top 5 Indian Steel majors, had plans to add nearly 40 Million tonnes of Steel producing capacity by 2026. However, this is most likely to get delayed, as a direct impact of the COVID-19 pandemic. The figure below illustrates the likely deferment in plan for some key players.



<sup>15</sup> "Material Metabolism and Environmental Emissions of BF-BOF and EAF steel production route", researchgate.net



## b. Domestic opportunities

In spite of the setback due to COVID-19 and resulting lockdowns there is a silver lining of hope across the major sectors, that commands significant portion of the Steel demand. The largest driver of this demand is the Construction and Infrastructure sector, which is currently witnessing a slump. However, the sector is hopeful of rapid growth in near future, owing to myriad Government infrastructure projects like Bharatmala, Sagarmala, Atal Mission for Rejuvenation and Urban Transformation, setting up of National Investment and Manufacturing Zone, Smart cities etc.

A big push in the Infrastructure sector can, in turn, catalyze the growth in the Capital Goods sector of which a large part constitutes of Heavy Electrical Equipment, Plant process machinery, and Heavy Earth Moving Machinery (HEMM) as sub-sectors. The opening of the Mining sector and rapid investment in the Infrastructure sector is expected to result in a growth in Capital Goods which consumes nearly 15% of the domestic Steel productions. Automobile sector is expected to sustain the Steel demand in mid to long term, if not in the immediate near future, owing to ambitious Automotive Mission Plan 2026. Consumer Durables, dependent largely on the per capita GDP, disposable income and favorable population composition is expected to return back to its growth trajectory soon, with a young population at the heart of the Indian demography.

The Realty sector which has witnessed stagnant demands over the last few years, is also likely to show upward movement within the next 1.5- 2 years, primarily from the Home segment and boost in affordable housing constructions. Work from home is becoming the new normal amidst the pandemic, and demand for office space is likely to witness major space requirement and design changes in form paints used, structures, and digitization.

The pandemic also had unexpected effects on the stagnant Auto sector. Customer sentiments have changed from using public transports to private vehicles (two and four wheelers) as unlocking of the economy is happening. Wholesale volumes reported by leading carmakers such as Maruti Suzuki India Ltd, Hyundai Motor India Ltd, Mahindra & Mahindra (M&M), Kia Motors India Pvt Ltd, Toyota Kirloskar Motor Pvt Ltd, MG Motor India Pvt Ltd point at a ~17% YoY growth in August 20. The demand from rural has demonstrated a strong comeback in the last 2-3 months.

As per Mr. Sanjeev Saxena, Automotive President of Schaeffler India, "the Auto sector demand is likely to return to 2018 levels by 2022". There is also going to be a progressive need of specialized steel grades, which are lighter in weight and yet robust in performance, as the Auto sector moves towards producing higher performance cars and Electric Vehicles (EV s).

The figure below represents a summary perspective of the sector-wise important drivers, expected to contribute to the steel demand.



**Mr Vineet Singh**  
Chief of Sales & Exports  
Tata Steel BSL

## Sector-wise Steel Demand Drivers

| 1<br>Construction & Infrastructure   | 2<br>Capital Goods  | 3<br>Automobile  | 4<br>Consumer Durables   |
|--|---|--|--|
| <ul style="list-style-type: none"> <li>▶ Demand expectation largely from Government infrastructure projects like Sagarmala (8.5 L Cr) and Bharatmala (34,800 km of road &amp; 5.3 L Cr of investment)</li> <li>▶ Multiple other Govt missions/ projects, like 100 smart cities, Uрга ganga gas pipeline, AMRUT, NIMZs, Jal Jeevan Mission etc. expected to boost demand</li> <li>▶ Real estate sector under stress from excess inventory is likely to see growth especially in affordable housing segment in coming years</li> </ul> | <ul style="list-style-type: none"> <li>▶ Demand dropped significantly during Mar-Apr 20, however showing a V shaped recovery</li> <li>▶ Heavy equipment manufacturing forms significant portion of this sector followed by other process plant equipment</li> <li>▶ This sector is dependent on construction, mining, and heavy and light industries for fuelling its growth. The government investments in boosting up the countries infrastructure is likely to catalyse further growth in this sector</li> </ul> | <ul style="list-style-type: none"> <li>▶ In spite of COVID-19, wholesale volumes in July 2020 continued to improve across segments (except CVs) on pickup in retails and OEMs' efforts to normalize dealer inventory levels</li> <li>▶ Wholesale volumes reported by the leading carmakers shows a at a ~17% YoY growth in Aug'20.</li> <li>▶ GOI announced the Automotive Mission Plan 2016-26 (AMP 2026) aimed at sustained automotive growth will in turn sustain steel demand</li> </ul> | <ul style="list-style-type: none"> <li>▶ This sector showed a sharp decline in April 20 due to lockdowns, post which it is showing a V shaped recovery</li> <li>▶ Sector is consumer dependent and is expected to grow with raising per Capita GDP, increasing disposable income and favourable population composition</li> <li>▶ The S&amp;P BSE Consumer Durables Index was up 6.8 per cent in Jan 2020 and gained 32.1 per cent in last one year</li> </ul> |

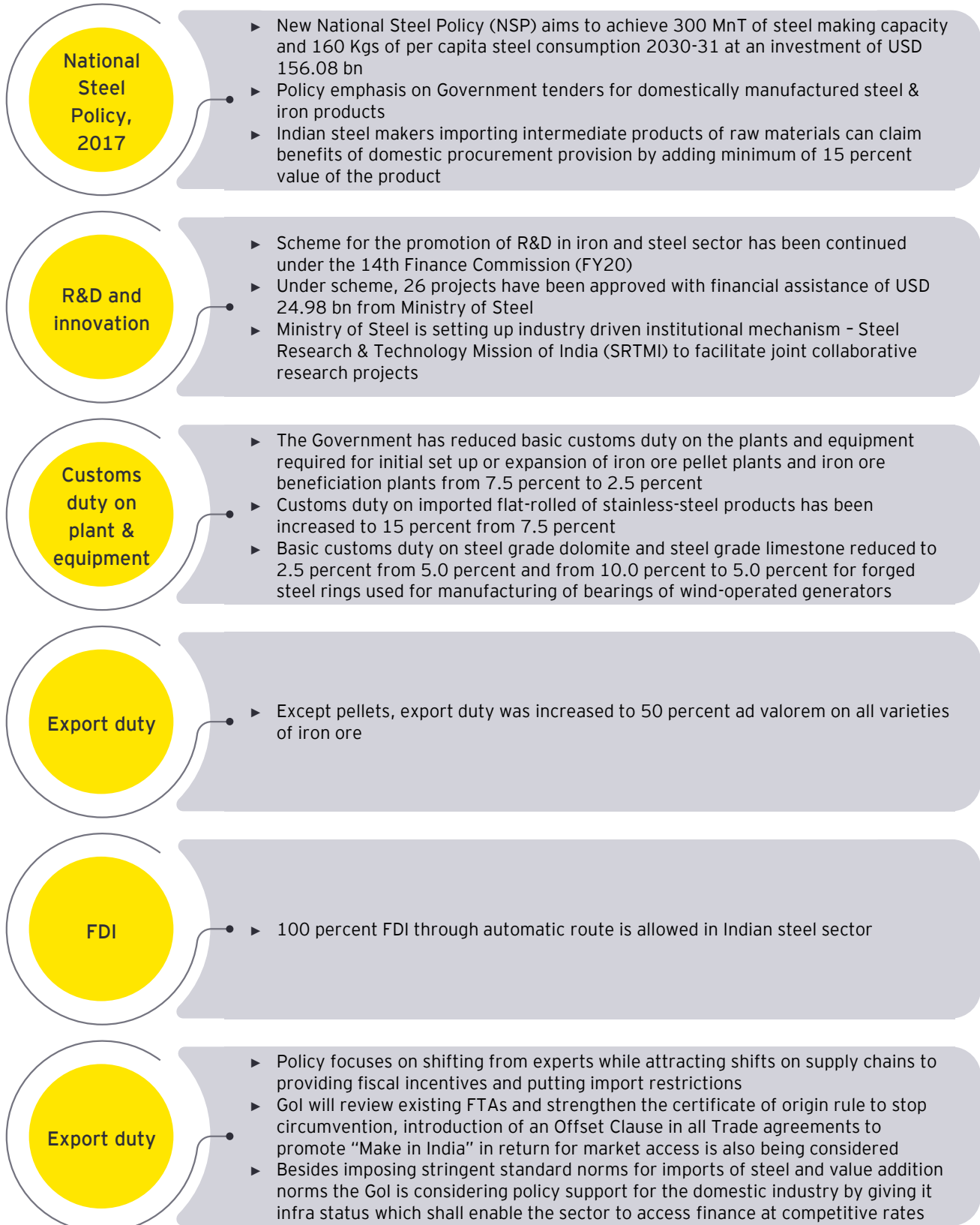




### c. Policy support from Government on Steel

Government of India has been supporting the Steel industry with various policies and schemes and initiatives. The diagram displays such initiatives, and outlines key features available:

#### Key Snapshot of steel related policies by Govt. of India









**C**

# Solution themes

## a. Role of Government

As the economy battles with significant demand and price volatility challenges, and as the new normal in the post COVID world is bringing new opportunities, the industry is looking forward to various kinds of support from the Government, to bolster Steel demand not only in the short term, but also propel India's Steel industry to fulfil its ambitious targets.

All infrastructure projects like Sagarmala, Bharatmala, Urja Ganga Pipeline, dedicated freight corridors (DFCs), national infrastructure pipelines, construction of national investment and manufacturing zones, smart cities and many other such projects currently under implementation, or in planned status, must be expedited with full focus on efficient and rapid execution. This is necessary for generating demand impetus not only to the Steel industry but also to the nation's economy.

Apart from this, the government can further support the Steel sector through targeted policy initiatives, given as below:

### i) Import/ Export duty/ Taxes

Currently, multiple local levies such as electricity duties, duties of fuel, clean energy cess, royalties paid on mineral use etc. get accumulated in the cost of production of domestic Steel. The following initiatives shall assist in boosting Steel production and make it competitive:

- ▶ **Reduction of taxes and cess** on Steel manufacturing inputs like iron ore and coke for domestic consumption.

**“**

The government policy around taxation and trade promotion can help steel players in India in accessing the global markets more sustainably

**”**

**Dr Bhaskar Chatterjee**  
Secretary General and  
Executive Head  
Indian Steel Association

- ▶ Introduction of Border Adjustment Tax on import can be introduced less than or equal to the indirect levies to provide a level playing field for domestic Steel manufacturers. A BAT of 12% can offset comparative cost advantage of imported Steel originating from countries with Free Trade Agreements with India.
- ▶ Expedite the imposition of Remission of Duties or Taxes on Export Product (RoDTEP) scheme. A huge amount of indirect taxes and cesses like compensation cess, DMF, etc plague the Steel sector. Remission of these duties is a step forward in making the Indian Steel sector globally competitive.
- ▶ Currently, export to EU markets is hindered by the India-specific quota. Similarly, target destinations like US and GCC countries have a lot of entry barriers in place, which hinders export volume expansion to these geographies. Government may use diplomatic channels, to work out favorable quota and duty regimes with these countries that can facilitate higher trade volumes.

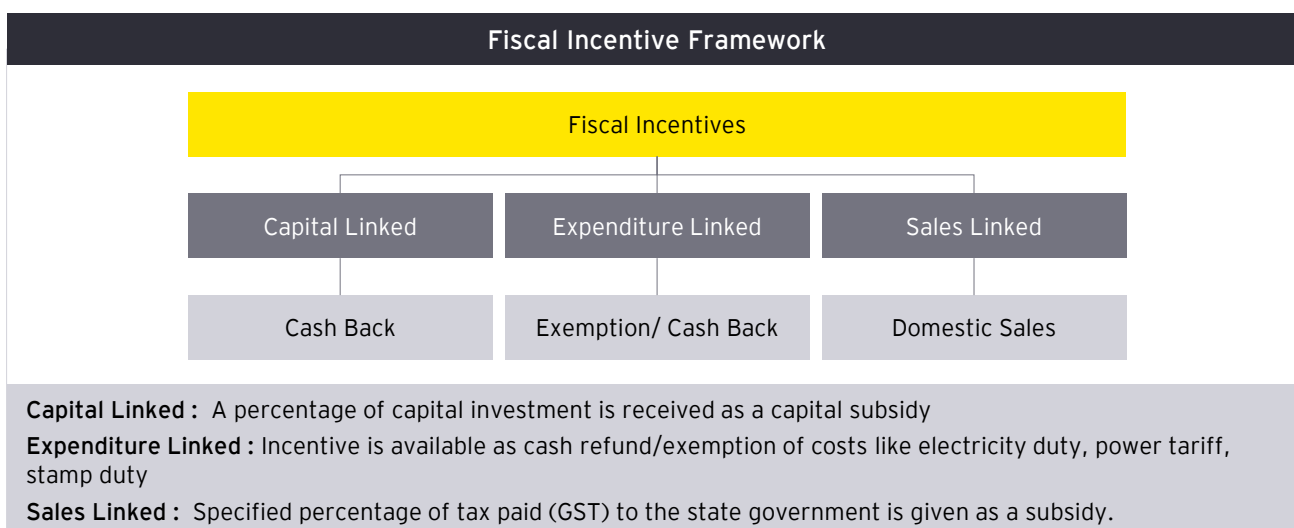
## ii) Attracting Capital investments

In line with the National Steel Policy envisaging at a capacity augmentation to 300 million tonnes, major steel players will add capacity, as per their announced plans. Globally, access to capital has improved but steelmakers remain cautious about the growth agenda. While sentiment remains cautious, some Steel players are now in a strong position to raise capital for organic or acquisitive growth. RoCE has improved but it is still far from comfort and aggressive investments seem to be unlikely.

Given the huge need for capital; some fiscal incentives which can act as an enabler for players to set up Steel mills are as below:

- ▶ **Capital Linked:** a percentage of capital investment is received as a capital subsidy
- ▶ **Expenditure Linked:** incentive is available as cash refund/exemption of costs like electricity duty, power tariff, stamp duty
- ▶ **Sales Linked:** specified percentage of tax paid (GST) to the state government is given as a subsidy.

The proposed fiscal incentive framework is depicted as follows:



## iii) MSME/ SME cluster development

Currently there are approximately 313 sponge iron producers, 42EAFs, 1126IFs, and around 1157 small and medium sized steel rerolling mills (SRRMs) scattered over the country. They are usually found in clusters, with each cluster having about 50-400 units. Collectively, the MSME Steel sector produces around 30 million MT of finished Steel, which is close to 34% of India's Steel production. Flexibility in size, location, land requirement and production make EAF and IF routes lucrative for the Indian market. The IF/EAF base can be used to expand capacity aggressively in India due to higher global scrap availability, especially from China.

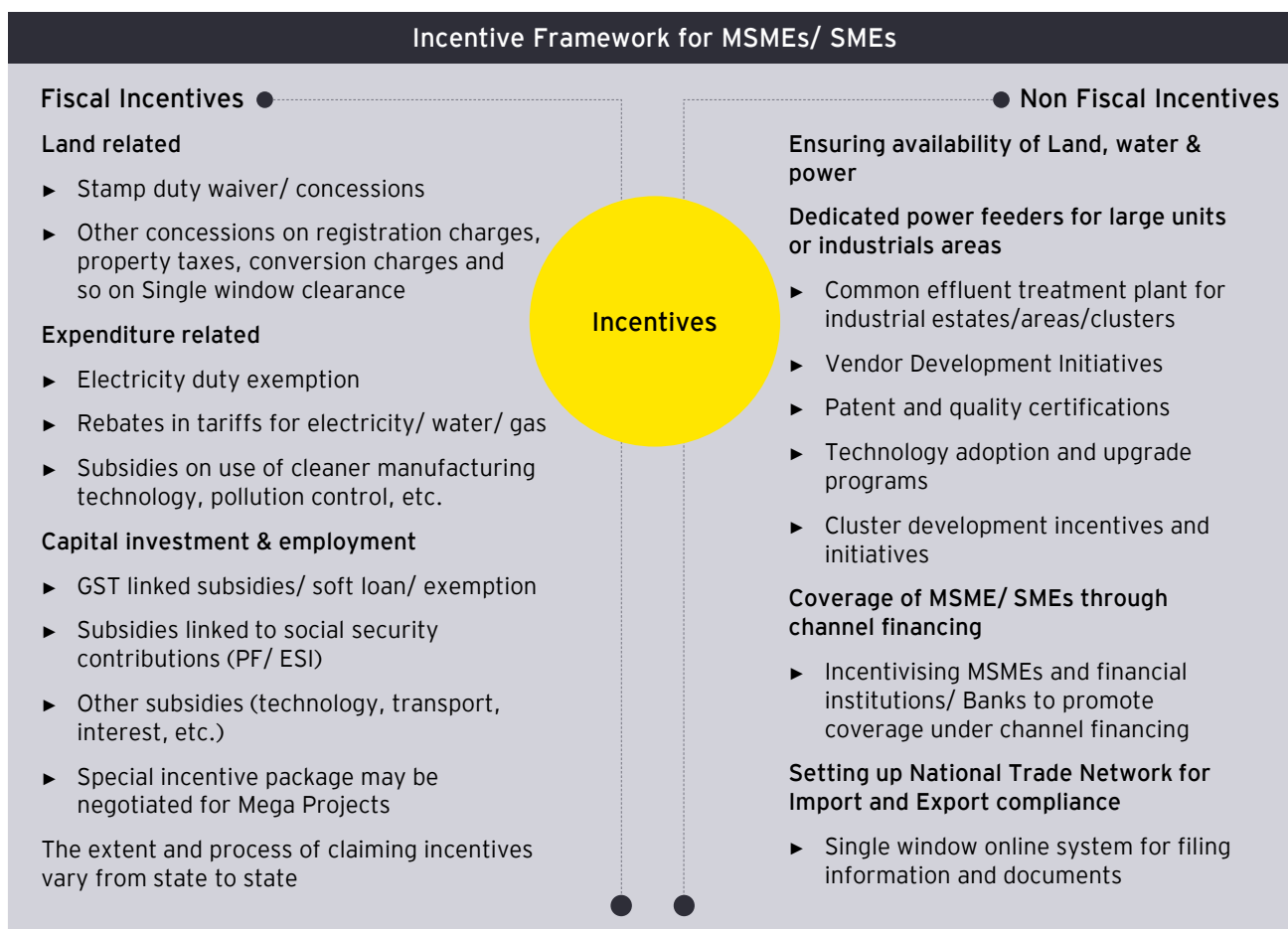
The downstream manufacturing units of steel are largely MSME/ SMEs, and they form an integral part of the value chain. These units also need to grow in order to match the expanding Steel production and capacity. Such small-scale units have a perennial shortage of capital and cash flows.

For development of such clusters, various fiscal and non-fiscal incentives may be given. While the fiscal incentives can constitute of various land related support, like stamp duty waivers, concessions on registration charges, and single window clearances, it may also include expenditure related incentives like electricity duty exemptions, rebates, subsidies and capital investment related incentives.

Additionally, there may be non-fiscal incentives as well, like building dedicated common infrastructure for the clusters, and setting up online single window platform for document filing for exports. To improve the cash flow and reduce risk, government may incentivize both banks/ FIs and MSMEs to get covered under channel financing.



The various possible support to MSME/ SME sector is explained in the diagram below



**iv) Incentives towards green technology, digitalization initiatives etc.**

While large Steel plants investing progressively on green and clean technologies, the MSME/ SMEs sector are lagging way behind. Steel plants being one of the major polluters, significant incentives need to be provided to both large and small plants, to cut down carbon emissions, and improve dust, and water management. Experts believe that the next big wave of cleaner technology will see use of Hydrogen as a fuel substitute to carbon, coupled with use of renewable energy. However, on a shorter horizon, the following can be done to promote use of green technology particularly for MSME/ SME Steel clusters.

- ▶ Environmental audit will be mandatory
- ▶ Water audit will be mandatory
- ▶ Exemption from water cess
- ▶ Ten per cent one-time capital subsidy for units practicing zero water discharge
- ▶ Rainwater harvesting will be compulsory
- ▶ Under renewable energy appropriate incentives under existing schemes will be available
- ▶ Incentive to obtain green rating for buildings

“The rural markets in India are a huge opportunity for steel. We can significantly enhance our per capita consumption of steel in India through active government interventions and our capability of configuring solutions of steel which meet the specific needs of rural India”



**Mr R V Sridhar**  
CEO & Executive Director  
Arcelor Mittal Nippon Steel

## b. Role of private sector

In an effort to capture the projected Steel demand in India, the players in India will have to calibrate their choice of capital spend with the right technologies and right quantities. The debt burden of the industry as a whole is a concern. Any future economic shocks to the industry will make the industry more liable for being sick and dependent on external support for keeping it alive. Choices of capital spend may need to be calibrated to the current state of over supply to ensure the prices of Steel remain stable and see less volatility in the future.

The sector should actively seek to modernize and adapt to the global developments in management thought on mastering the future for robustness and sustainability. One such lever is automation/digitalization. Digitalization of steel industries in an integrated holistic fashion will further improve the operating efficiency and quality and reduce the operating cost. While larger Steel players are already progressing on this curve and a great speed, the smaller units are lagging way behind, in maturity e.g digital twin of blast furnace are being deployed for optimizing operations in real time by large steel players, Artificial intelligence and advanced analytics based digital tools are being deployed in core operational areas like procurement and supply chain to improve working capital, enhance service levels and save costs. Adequate incentivization needs to be provided by Government of India (GoI), to ensure quick adoption of digitalization by smaller players, to enable higher productivity and transparency.

The diversity of Indian market presents a challenge and an opportunity for the Indian steel manufacturers. On one hand, rural markets are still under-penetrated for steel as a category, the unavailability of high quality steel from Indian manufacturers, necessitates the import of such steel grades for speciality steel buyers, on the other. The visibility of sales and inventory data of last mile steel distribution networks makes the services to the retail market cost and service inefficient. Focus on adoption of relevant information technologies with appropriate linkages to physical distribution chains to service the complex market dynamics can yield significant business returns for players who demonstrate insight and take action for actualizing such initiatives.

Another lever is people. In the post COVID world, any development to make the day to day operations contactless and less people dependent would help. Building a future of world class Steel technologists as the first generation of Steel technologist superannuate will be another. The generation that is running the Steel plants of today and have seen the formative years of the rapid growth in India would soon be retiring from an active career. The retention of that knowledge skill, systematic programs e.g pass the same to the next generation would definitely add to the competitiveness of the industry.

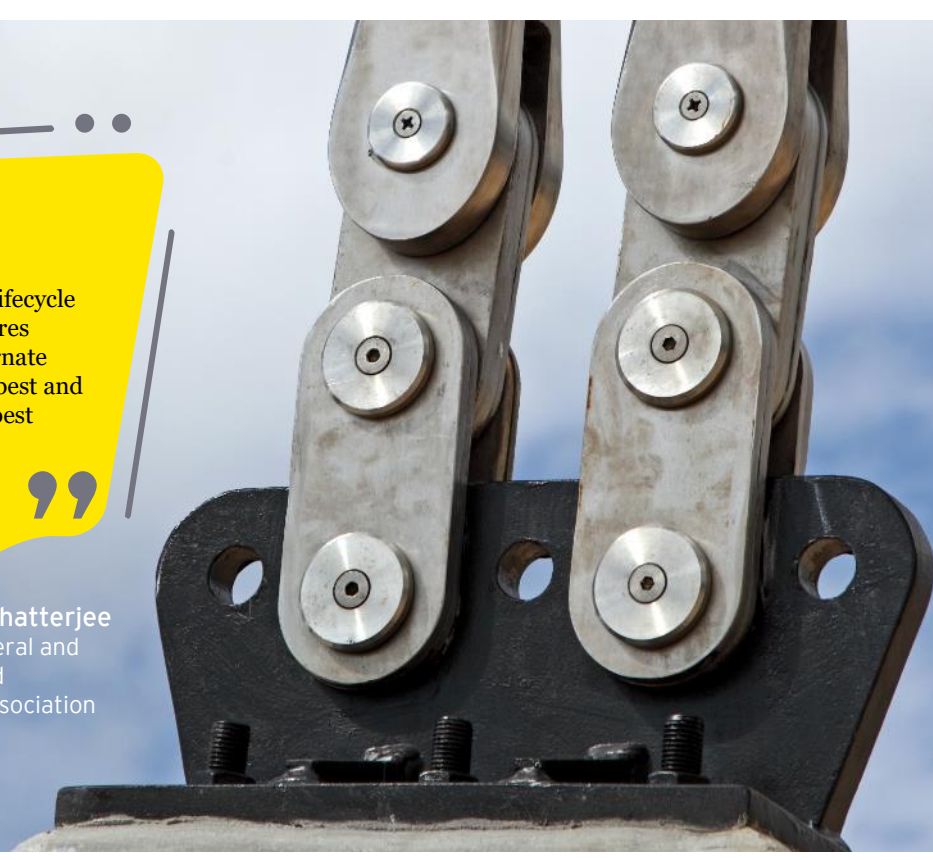
Needless to say, the continued and rapid investment required to funding research on Steel as a key sustainable substitute of wood, plastic, concrete and aluminum would be an added incentive for Steel to remain a most sought after material for the future of the industry.



When we compare the lifecycle costs of built up structures made of steel with alternate substitutes, steel is the best and will continue to be the best



**Dr Bhaskar Chatterjee**  
Secretary General and  
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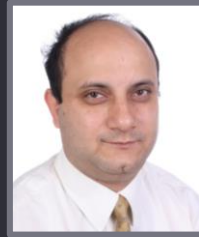


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EYIN2009-011  
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