

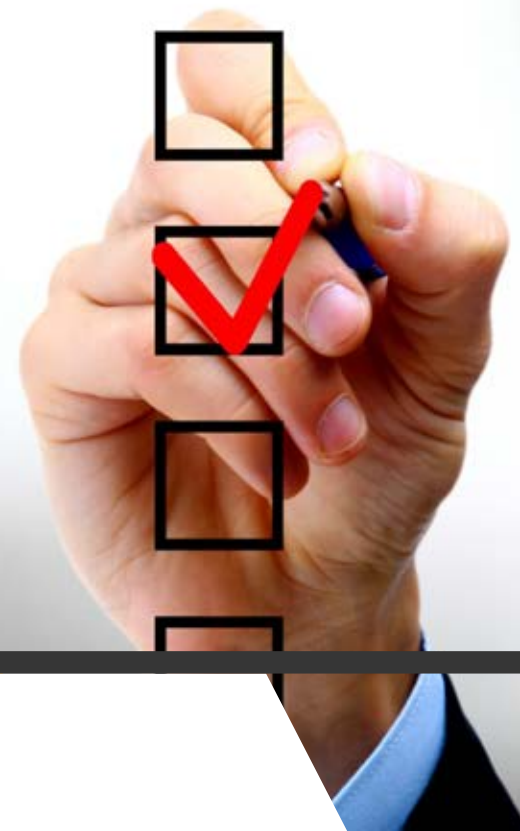
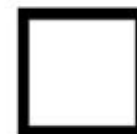
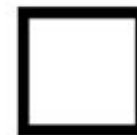
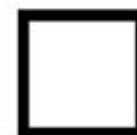


STEEL



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Second largest producer of crude steel

- Total crude steel production in India has increased at a CAGR of 6.40 per cent during FY08–19P, with country's output reaching 106.40 million tonnes per annum (MTPA) in FY19P.
- India surpassed Japan to become the world's second largest steel producer in 2018, with crude steel production of 106.50 million tonnes,
- Moreover, capacity has increased to 137.98 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

- Government is working on various fronts to make steel sector globally efficient and competitive.
- National Mineral Development Corporation is expected to invest US\$ 1 billion on infrastructure in next three years to boost iron production and increase the iron ore production 75 million tonnes per annum (MTPA) until 2021 indicating new opportunities in the sector
- In India, as per Indian Steel Association (ISA), steel demand to grow by over 7.2 per cent in both 2019-20 and 2020-21.

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, TechSci Research

ADVANTAGE INDIA



- Infrastructure, oil and gas and automotive would drive the growth of the industry
- As per Economic Survey 2018-19, steel production in India will touch 128.6 million tonnes by 2021.
- India's finished steel consumption is anticipated to increase to 230 MT by 2030-31[^] from 90.68 MT in 2017-18.
- Steel demand in India is expected to grow 7 per cent year-on-year in both 2019 and 2020, according to the World Steel Association

Robust demand

- 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.

Increasing investments

ADVANTAGE INDIA

Competitive advantage

- As of 2018, India is the world's second largest producer of crude steel (up from eighth spot in 2003). India's steel production in 2018 stood at 106.5 MT.
- Easy availability of low-cost manpower and presence of abundant iron ore reserves make India competitive in the global set up.
- India is home to the fifth-highest reserves of iron ore in the world.[#]

Policy support

- National Steel Policy (NSP) 2017 implemented to encourage the industry to reach global benchmarks
- Government introduced Steel Scrap Recycling Policy aimed to reduce import.
- An export duty of 30 per cent has been levied on iron ore* (lumps and fines) to ensure supply to domestic steel industry.
- The Government of India raised import duty on most steel items twice, each time by 2.5 per cent and imposed measures including anti-dumping and safeguard duties on iron and steel items

Notes: MT - Million Tonnes, FDI – Foreign Direct Investment, [^]National Steel Policy 2017, [#]USGS Mineral Commodity Summaries 2018, *except low grade (below 58 per cent)
Source: Metallurgical and Materials Engineering Division Board, TechSci Research

MARKET OVERVIEW

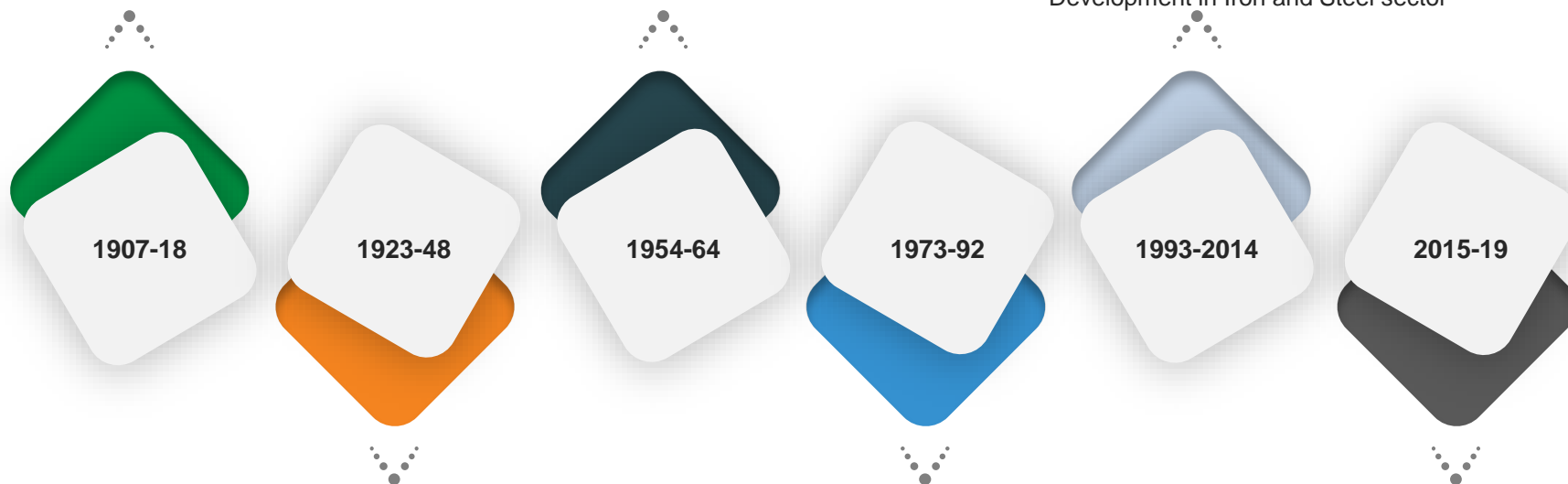


EVOLUTION OF THE INDIAN STEEL SECTOR

- 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

1923-48

1954-64

1973-92

1993-2014

2015-19

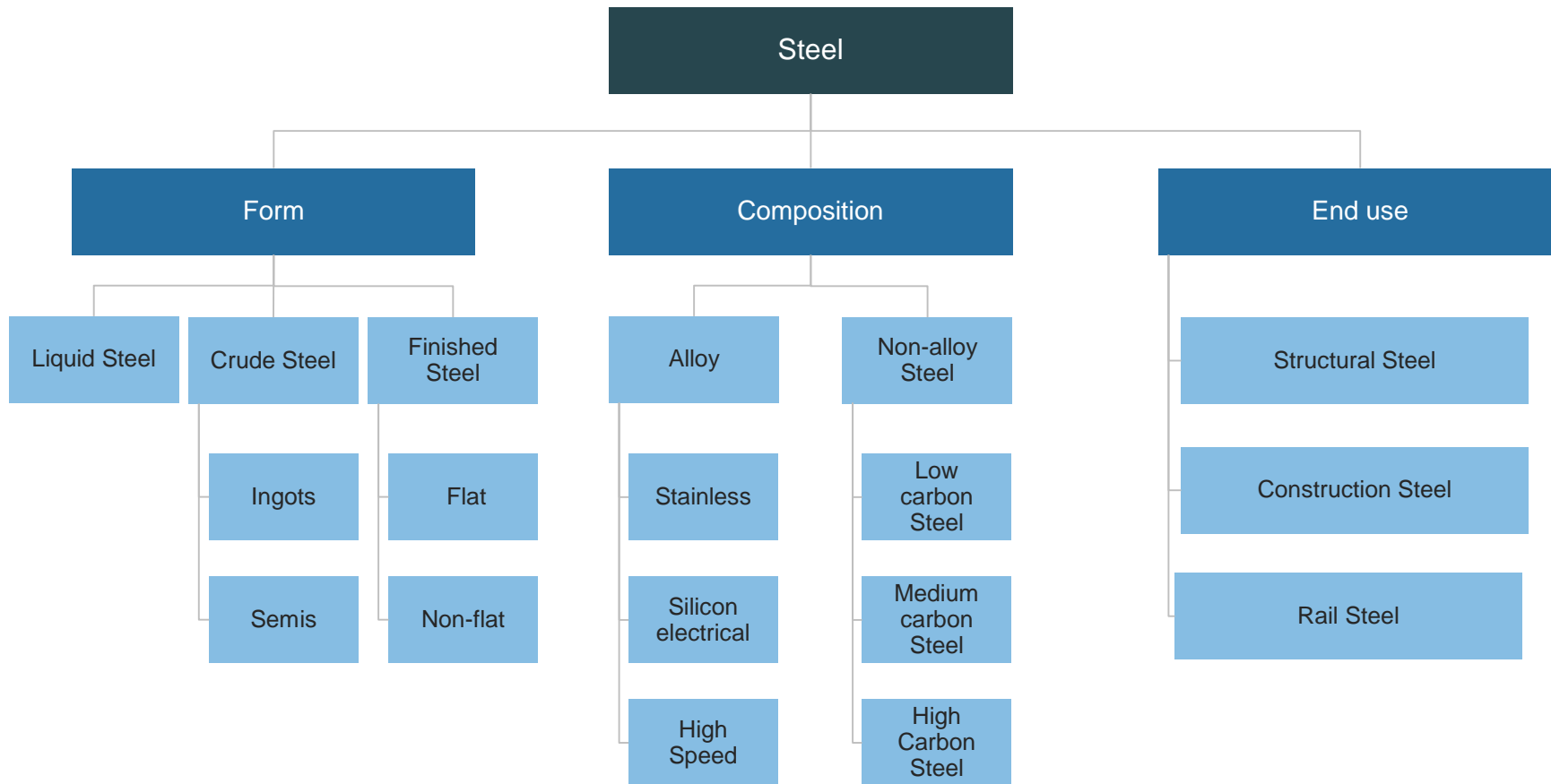
- Mysore Iron and Steel Company was set up in 1923
- According to the new Industrial Policy Statement (1948), new ventures were only undertaken by the central government

- 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

- In 2018, India ranked as the second largest crude steel producer in the world.
- During 2018-19, 6.36 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;

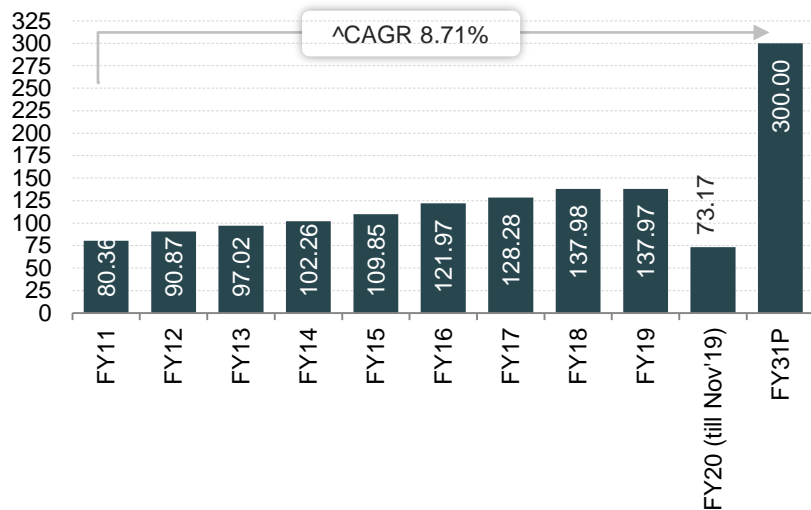
STRUCTURE OF THE STEEL SECTOR



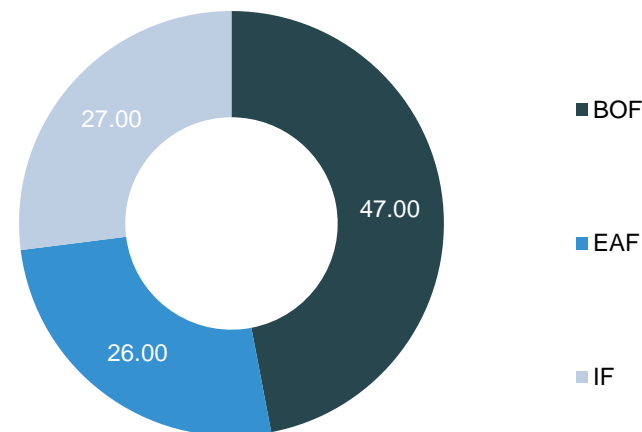
Source: Report on Indian steel industry by Competition Commission of India, TechSci Research

STEEL PRODUCTION CAPACITY HAS EXPANDED RAPIDLY

Crude Steel Production Capacity (in million tonnes)



Route-wise Crude Steel Production Capacity in FY19 (in million tonnes)



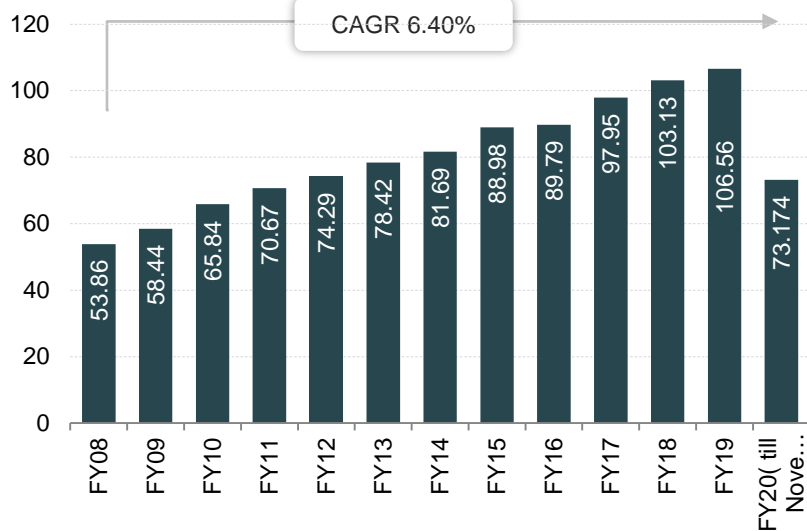
- India's steel production capacity has expanded rapidly over the past few years, growing at a CAGR of 8.71 per cent from 59.84 million tonnes in FY08 to 73.17 million tones in FY20 (April-Nov'19).
- The National Steel Policy 2017 has envisaged achieving up to 300 million tonnes of production capacity by 2030-31.
- Out of the total, BF-BOF route is expected to contribute 65 per cent of capacity, while the remaining 35 per cent is expected to come from EAF & IF routes.
- Expansion of production capacity to 300 million tonnes will translate into additional investments worth Rs 10 lakh crore (US\$ 156.08 billion) by 2030-31.

Note: FY - Indian Financial Year (April - March), P - Projection, ^CAGR is up to FY18, BF-BOF - Blast Furnace-Blast Oxygen Furnace, EAF - Electric Arc Furnace, IF - Induction Furnace

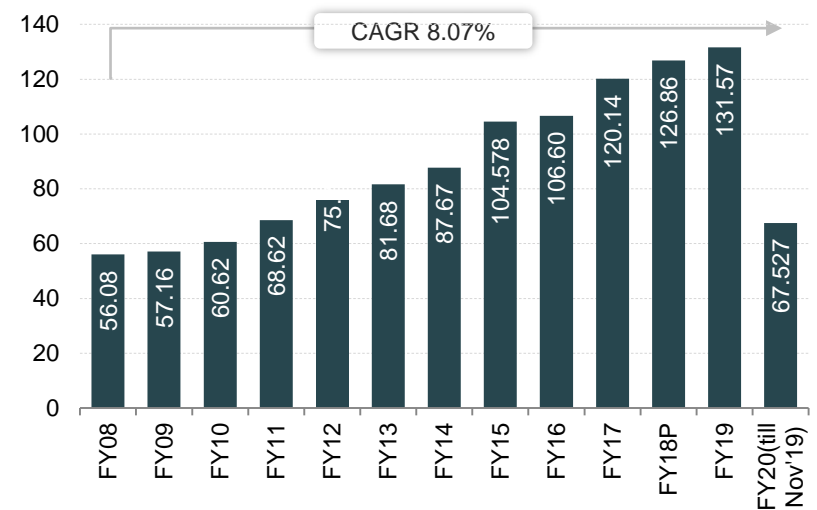
Source: Joint Plant Committee, Ministry of Steel

STEEL PRODUCTION IN INDIA HAS BEEN GROWING AT A FAST PACE

Total crude steel production (million tonnes)



Total finished steel production (million tonnes)#



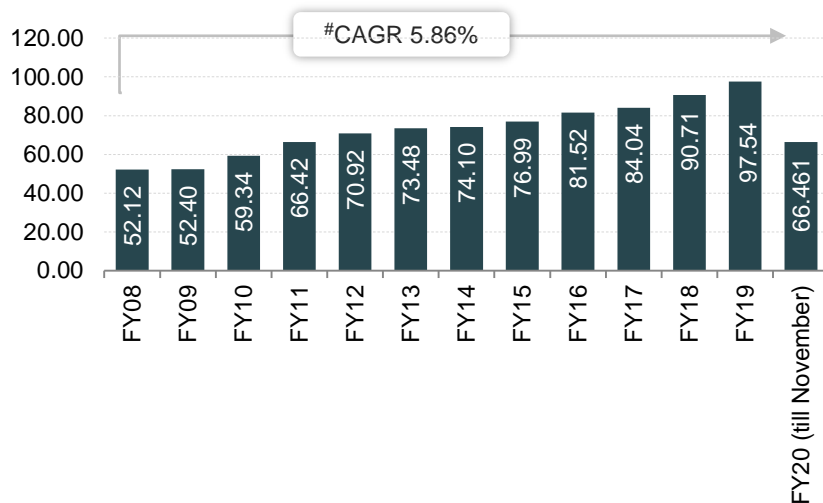
- The steel sector contributes over 2 per cent to the GDP of the nation. Also, it employs 500,000 people directly and 2.50 million indirectly.
- Crude steel production in India was 106.56 in FY19, with the growth of 3.3 per cent and 73.174 in FY20 (till November'19)
- During 2018-19 (P), gross finished steel production in India stood at 131.72 MT.
- 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 5.9 per cent in 2018 to 7.7 per cent by 2021.

Notes: FY - Indian Financial Year (April – March), MT - Million Tonnes, CAGR - Compound Annual Growth Rate; P – Provisional, #Figures reflect 'Gross Production' and not 'Production for Sale'

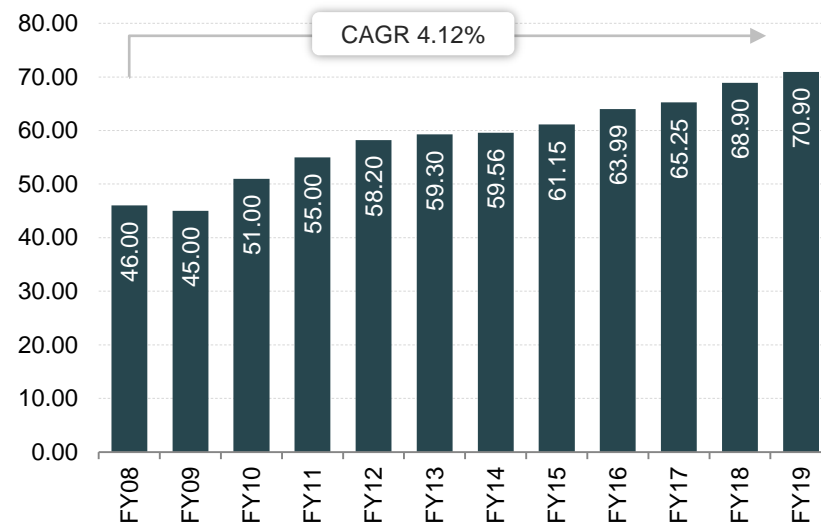
Source: Joint Plant Committee, News Articles, Ministry of Steel, World Steel Association

DEMAND HAS OUTPACED SUPPLY OVER THE LAST FIVE YEARS

Consumption of finished steel (in million tonnes)



Per-capita consumption of steel (in kgs)



- India's finished steel consumption grew at a CAGR of 7.5 per cent during FY08-FY19 to reach 97.54 MT.
- Finished steel consumption in India is expected to grow 7.1 per cent year-on-year to 102.8 MT in 2019F, surpassing consumption of US and making India the world's second largest finished steel consumer**.
- 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 4.12 per cent from 46 kgs in FY08 to 68.90 kgs in FY18. The National Steel Policy aims to increase per capita steel consumption to 160 kgs by 2030-31.

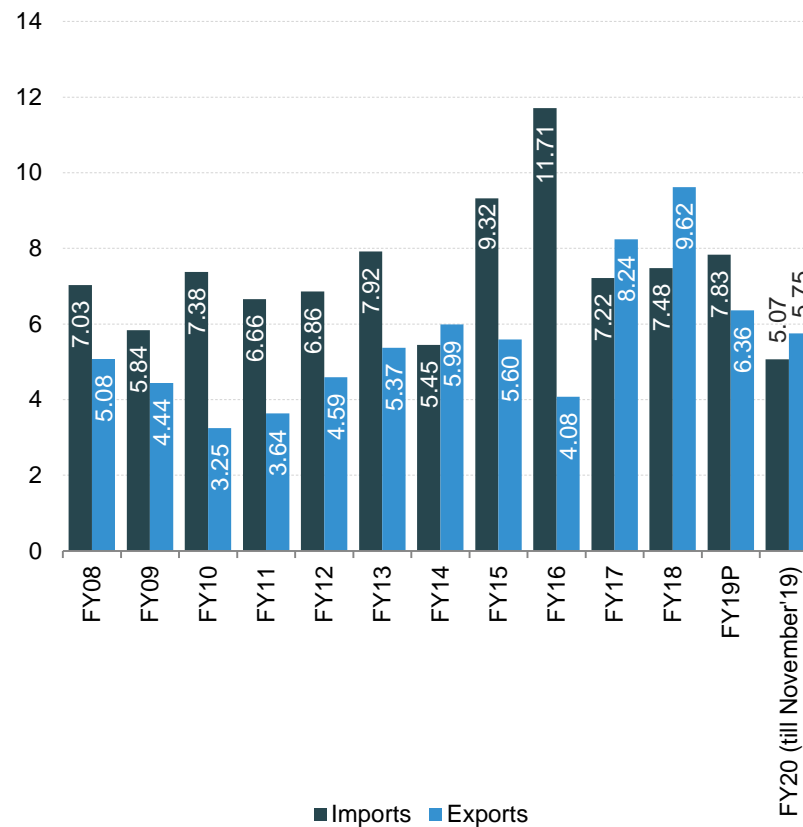
Note: MT - Million Tonnes, #CAGR is up to FY19, **As per the World Steel Association, kg – kilograms, P -Provisional

Source: JPC India Steel, Ministry of Steel, World Steel Association

TRENDS IN IMPORTS AND EXPORTS OF STEEL

- In 2018-19, India exported 6.36 million tonnes (MT) of finished steel.
- During the same period, the country's finished steel imports reached 7.84 million tonnes.
- Exports and imports of finished steel stood at 5.75 MT and 5.07 MT, respectively, in FY20P (up to November 2019).









Finished steel exports and imports (in million tonnes)



Note: FY - Indian Financial Year (April - March), P - Provisional

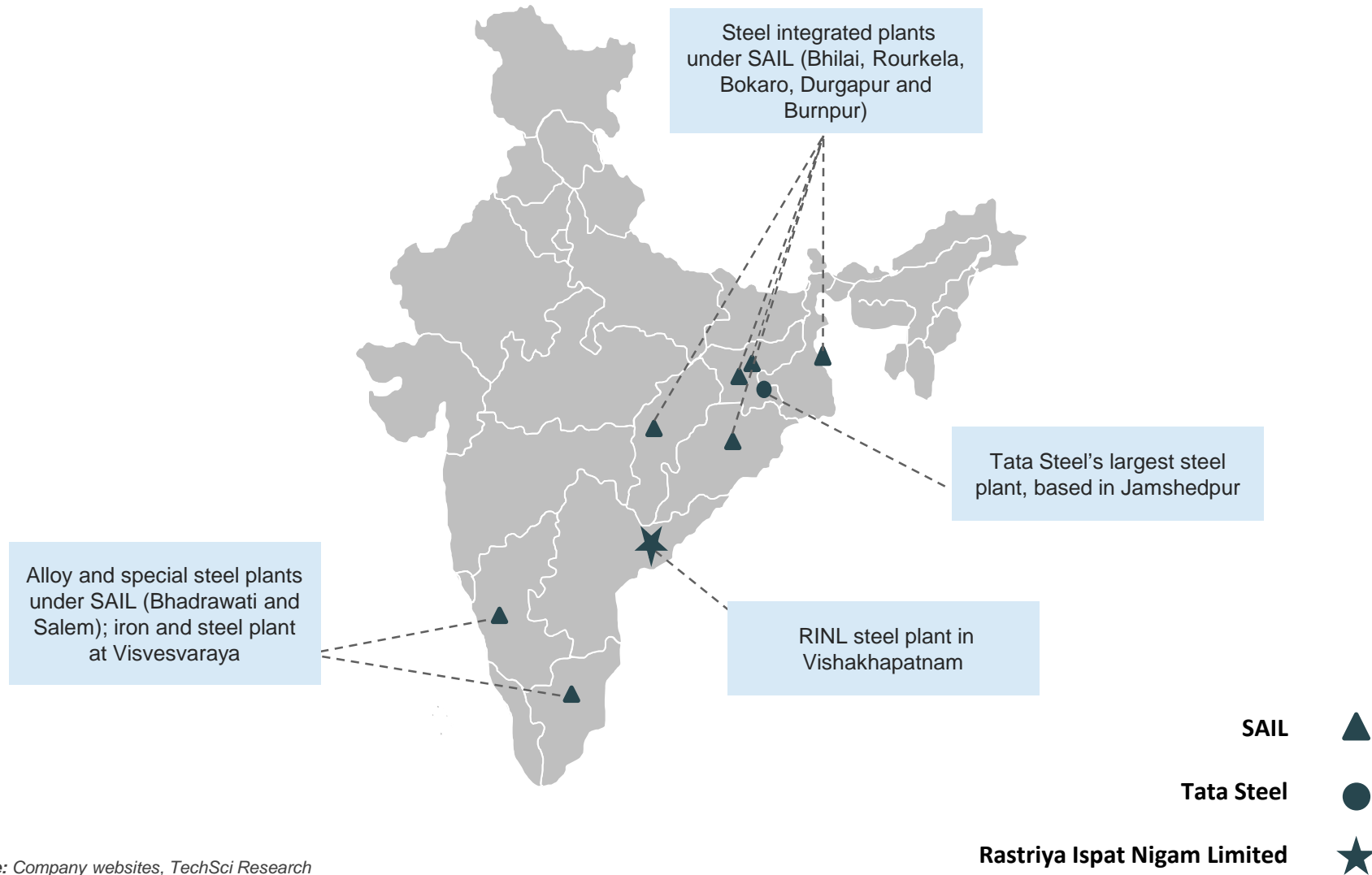
Source: Joint Plant Committee

KEY PLAYERS OF THE INDUSTRY

	Company	Products
	Tata Steel Ltd	Finished steel (non-alloy steel)
	SAIL	Finished steel (non-alloy steel)
	JSW Steel Ltd	Hot-rolled coils, strips and sheets
	Jindal Steel and Power Ltd	Iron and steel
	Welspun-Gujarat Stahl Rohren Ltd	Tubes and pipes
	Visa Steel Ltd	Ferro Chrome, coke and special steel
	Essar Steel	Hot Rolled, Cold Rolled, Galvanized, Colour-Coated products, extra wide plates and pipes
	RINL Powergrid TLT Pvt Ltd.	Forged Rounds, Rebars, Rounds, Wire Rod coil, rounds, billets

Source: TechSci Research

KEY STEEL PLANTS IN INDIA



Source: Company websites, TechSci Research

Rastriya Ispat Nigam Limited

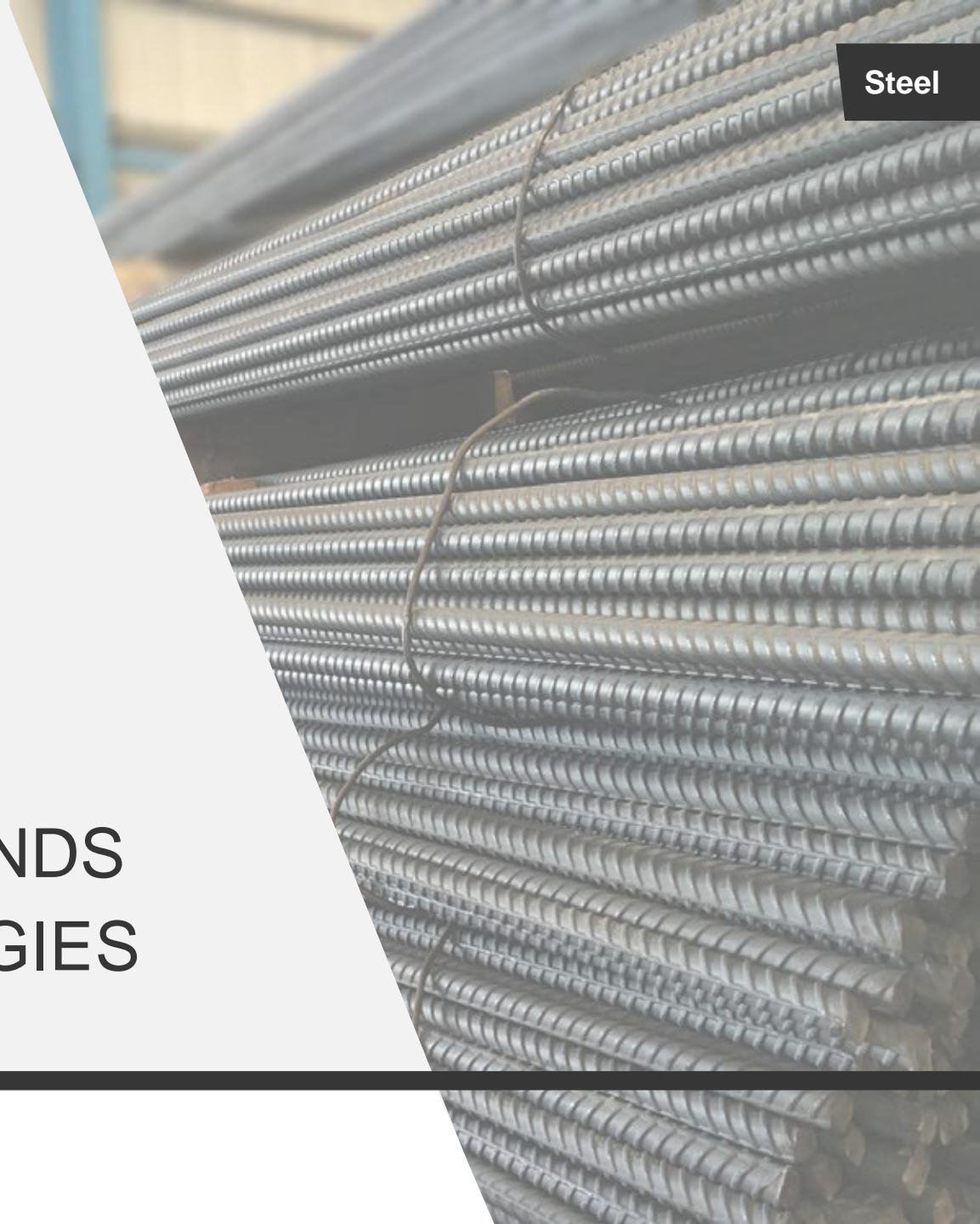


STEEL SEZs IN INDIA

Developer	Location	Product
Tata Steel Special Economic Zone (TSSEZ)	Gopalpur, Odisha	Steel and allied downstream industries

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 total investment of US\$ 24.88 billion.
- JSW group is entering the steel furniture business under the brand JSW Living which is expected to be launched by first quarter of 2019-20.
- Tata Sponge Iron, subsidiary of Tata Steel announced the completion of acquisition of Usha Martin Ltd for a cash consideration between Rs 4,300-4,700 crore (US\$ 615.25-US\$ 672.29 million).

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.
- Tata Steel may venture into commercial mining.
- 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. The firm has already started the acquisition of Adhunik Metaliks, another Indian company.
- CarVal Investors, the investment arm of US-based agri group Cargill, has offered around Rs 2,000 crore (US\$ 277.20 million) along with Asset Reconstruction Company (India) Ltd for the purchase of Uttam Value Steels and Uttam Galva Metalics.

Notes: MTPA - Million Tonnes Per Annum

Source: Ministry of Steel, Ministry of Railways, TechSci Research , News Sources

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 one 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, TechSci Research

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.
- A long-term perspective is to achieve capacity of 300 mtpa by 2030, as per National Steel Policy 2017.
- As of December 2018, Vedanta Group is going to set up new steel plant in Jharkhand with a capacity of 4.5 million tonne per annum with an investment of around US\$ 3-4 billion.
- JSW Steel will be looking to further enhance the capacity of its Vijayanagar plant from 13 MTPA to 18 MTPA. In April 2019, the company had announced plans to expand the plant's production capacity to 13 MTPA by 2020 with an investment of Rs 7,500 crore (US\$ 1.12 billion).
- 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 expansion is likely to be completed by 2021 or early 2022. It is expected to improve margins and lead to cost effectiveness. The company is planning to increase its overall installed capacity to 30 MTPA by 2025 from the current 18.5 MTPA.
- JSW Steel has undertaken capacity expansion at its Dolvi unit in Maharashtra. It is investing around Rs 15,000 crore (US\$ 2.24 billion) to double the capacity of its plant to 10 million tonnes by the end of 2019. The company has set a target of increasing its capacity from the current 18 MTPA to 24 MTPA by March 2020.

Expansion through brownfield investments

- The steel sector is going through a phase of consolidation and companies operating in the sector are expected to undertake brownfield investments for expansion.
- As of December 2018, Japan-based companies Nippon Steel and Sumitomo Metal Corporation's acquisition of 51 per cent shareholding in Sanyo Steel was approved by Competition Commission of India (CCI).
- In March 2019, ArcelorMittal was declared as the winning bidder to acquire Essar Steel for a consideration of Rs 42,000 crore (US\$ 5.82 billion).

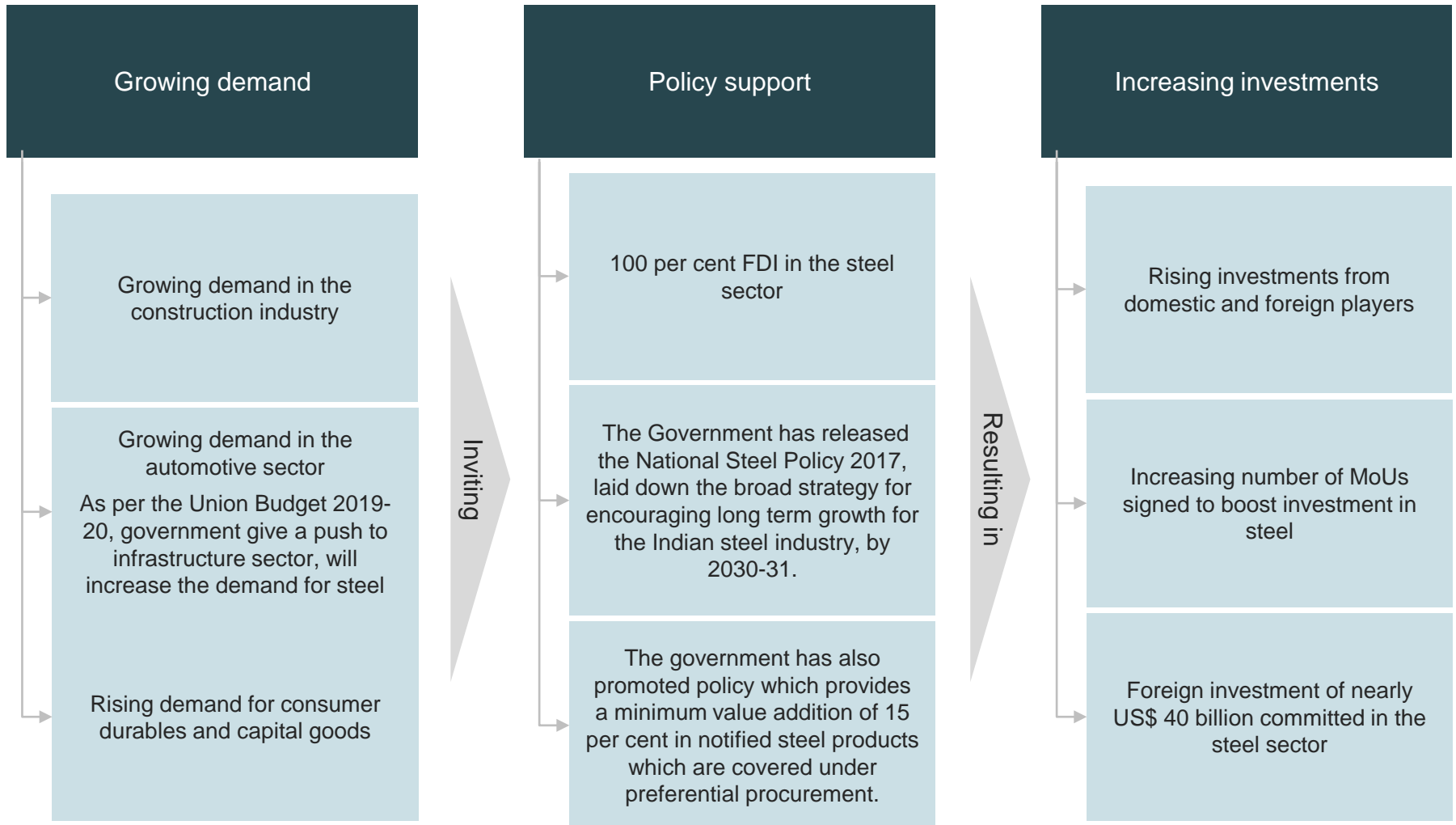
Note: GDP – Gross Domestic Product, MTPA – Million tonnes per annum

Source: CCI, Ministry of External Affairs

GROWTH DRIVERS



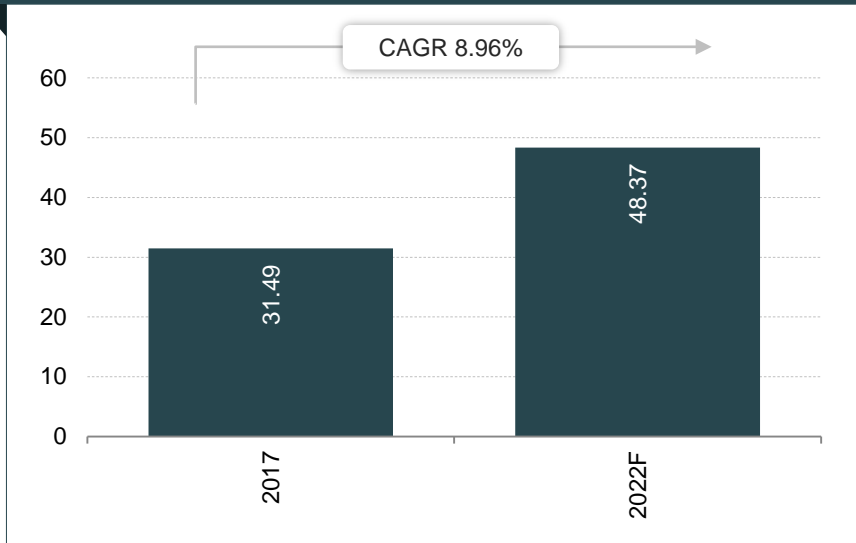
STRONG DEMAND AND POLICY SUPPORT DRIVING INVESTMENTS



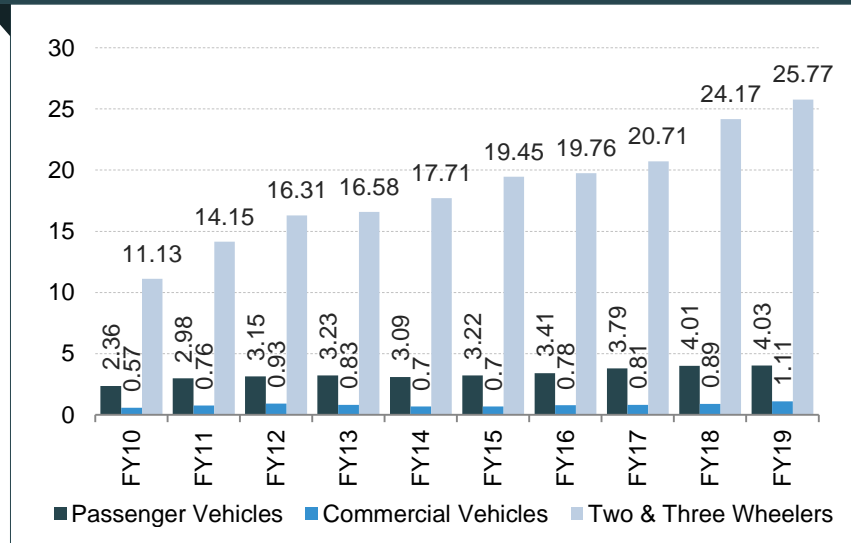
Notes: FDI - Foreign Direct Investment, MOU – Memorandum of Understanding

CAPITAL GOODS, CONSUMER DURABLES AND AUTOMOTIVES FURTHER DRIVING STEEL GROWTH

Appliances and Consumer Electronics Industry (US\$ billion)



Total automobile production in India (million units)



- Over 2017-22F, the appliances and consumer electronics (ACE) sector will expand at a CAGR of 8.96 per cent, contributing to the growth of the steel industry.
- Growth in automobile production is also expected to augment growth in steel production. During FY13-FY18, automobile production in India expanded at a CAGR of 7.08 per cent.
- Gross Value Added (GVA) of the construction industry grew 13.9 per cent* during 2018-19* 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, Data for automobile production is expected in or after April 2019, * - As per 2nd advanced estimate

Source: SIAM, PWC, CEAMA, TechSci Research

POLICY SUPPORT AIDING GROWTH IN THE STEEL SECTOR ... (1/2)

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 National steel policy, 2017 aspires to achieve 300MT of steel making capacity by 2030-31. This would translate into additional investments of Rs 10 lakh crore (US\$ 156.08 billion).
- Further, it aims to increase in per capita steel consumption to 160 kgs by 2030-31.

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, TechSci Research

POLICY SUPPORT AIDING GROWTH IN THE STEEL SECTOR ... (2/2)

Rise in export duty

- The government hiked the export duty on iron ore to 50 per cent ad valorem on all varieties of iron ore (except pellets)

Reduction in custom duty on plants and equipment

- The government has reduced the basic custom duty on the plants and equipment 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 15 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, TechSci Research

THE SECTOR WITNESSED RISING INVESTMENTS IN THE LAST DECADE

Date announced	Acquirer name	Target name	Value of deal (US\$ million)
Mar-19	ArcelorMittal	Essar steel	5,821.21
Sep-18	Tata Steel	Usha Martin Ltd (Specialty Steel Business)	641.41-701.07
Aug-18	Nippon Steel and Sumitomo Metal Corp	Sanyo Special Steel Co Ltd	-
Jul-18	Aion Investments-JSW Steel	Monnet Ispat and Energy	428.85
Jul-18	Liberty House	Adhunik Metals	58.42
Jun-18	Vedanta Star Ltd	Electrosteel Steels	825.45
May-18	Tata Steel Ltd	Bhushan Steel	5,461.60
Dec-17	Tata Steel Ltd	Bhubaneswar Power	39.5
Jan-17	Tata Steel Ltd	Creative Port Development Pvt Ltd	-
Aug-16	JSW Steel Ltd	Praxair Oxygen Pvt. Ltd.	36
Aug-16	Kirloskar Ferrous Industries Ltd	VSL Steels Ltd.	23.68
Aug-14	JSW Steel Ltd	Welspun Maxsteel Ltd	165.85
Apr-14	JSW Steel Ltd	Vallabh Tinplate Pvt Ltd	7.63
Mar-14	Lalitanjali Group Pvt Ltd	Centom Industries Ltd	-
Dec-13	Venus Insec Pvt Ltd	Goodluck Steel Tubes Ltd	23.73
Oct-13	JSW Projects Ltd	IST Steel and Power Ltd	-
Aug-13	Readymade Steel India Ltd	Kridhan Infra Solutions Pvt	-

Cumulative FDI inflows

Period: April 2000 to September 2019

▪ Sector

- Metallurgical industries

US\$ 11.401 billion

Source: Thomson ONE Banker, Department for Promotion of Industry and Internal Trade (DPIIT). News Articles

OPPORTUNITIES



Automotive

- The automotive industry is forecasted to grow in size to US\$ 260-300 billion by 2026
- The industry accounts for around 10 per cent of demand of steel in India.
- With increasing capacity addition in the automotive industry, demand for steel from the sector is expected to be robust

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 rising investments in infrastructure the demand for long steel products would increase in the years ahead
- Seventy per cent of the country's infrastructure estimated at Rs 6 lakh crore (US\$ 89.50 billion) is yet to come up. Thus, a significant growth potential for steel sector is present.*
- For various infrastructure sectors, including real estate and power, Ministry of Finance planning to set up a stress fund.

Airports

- More and more modern and private airports are expected to be set up
- In FY19, passenger traffic at Indian airports stood at 344.69 million
- The number of operational airports stood at 110 as on 31 March 2018.
- 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

*Note: Capex – Capital Expenditure, P – Provisional, *According to Mr Chaudhary Birender Singh, Minister of Steel*

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.
- Introduction of high-speed bullet trains and metro trains will increase the steel usage.
- As per Union Budget 2019-20, 657 km Metro rail network is already operational..

Oil and gas

- India's primary energy consumption of oil and gas is expected to increase to 10 mbpd and 14 bcf, respectively, by 2040.
- This would lead to an increase in demand of steel tubes and pipes, providing a lucrative opportunity to the steel industry

Power

- The government has envisaged capacity addition of 58,384 MW from conventional sources between 2017-22*. Also, the government is targeting to achieve 175 GW of renewable power generation capacity by 2022.
- This will lead to enhancement in both transmission and distribution capabilities, thereby raising steel demand from the sector

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 Pradhan Mantri Awa Yojana and 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, mbpd – million barrels per day, bcf – billion cubic feet per day, *National Electricity Plan 2018*

Source: Make In India, Ministry of Power, TechSci Research

KEY INDUSTRY ASSOCIATIONS



Indian Steel Association

207-208, 2nd Floor, Kailash Building,
26 K. G. Marg, New Delhi - 110 001,
Phone: 011 – 42668800
Fax: 011 – 42668805

Ministry of Steel

Udyog Bhavan
New Delhi - 110011
Fax : 91-11-23063236
Phone : 91-11-23063417

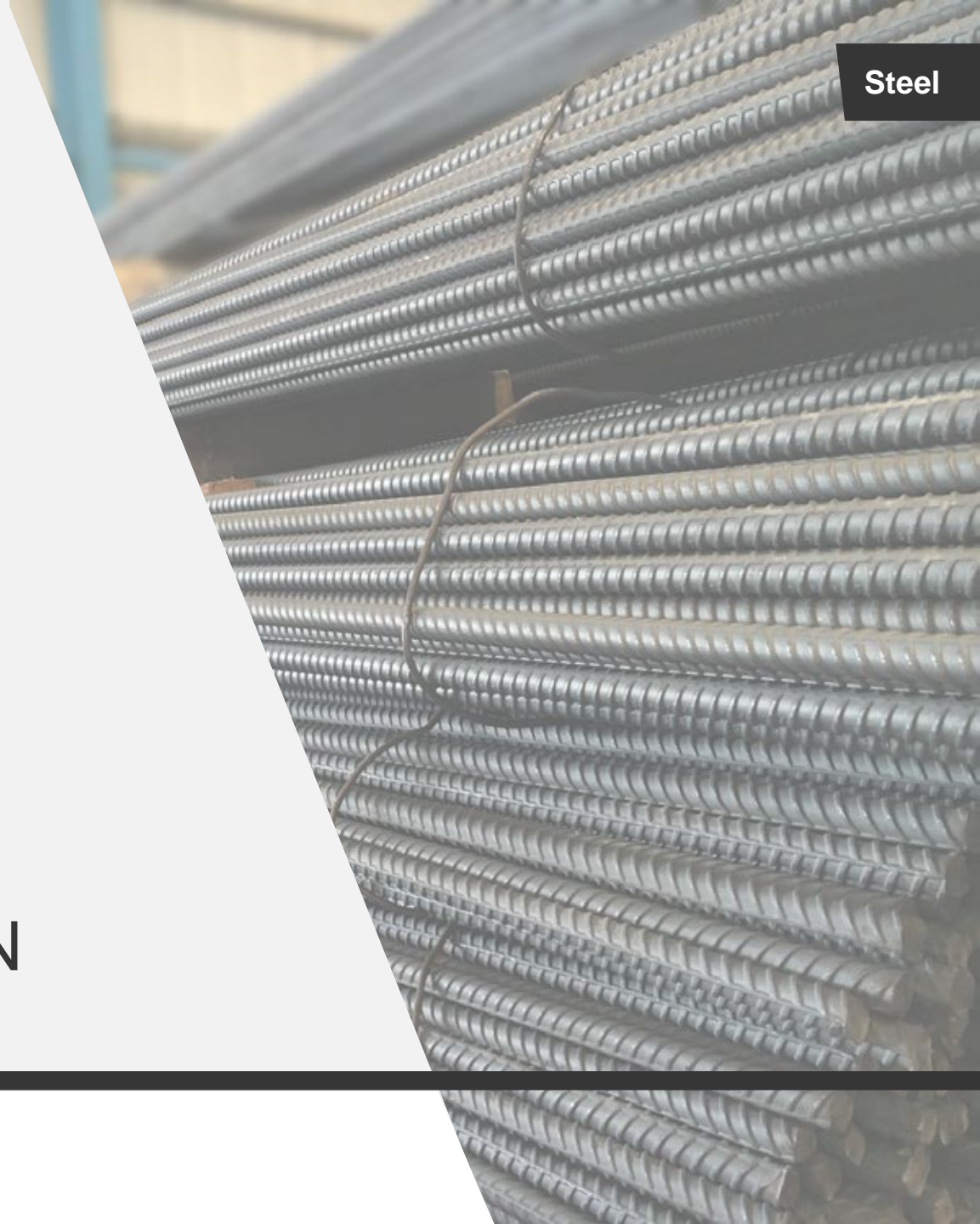
National Mineral Development Corporation

Khanij Bhavan, Masab Tank,
Hyderabad – 500028
Fax: 91-235338711
Phone: 040-23538713-21

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



- 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

EXCHANGE RATES

Exchange Rates (Fiscal Year)

Year INR	INR Equivalent of one US\$
2004-05	44.95
2005-06	44.28
2006-07	45.29
2007-08	40.24
2008-09	45.91
2009-10	47.42
2010-11	45.58
2011-12	47.95
2012-13	54.45
2013-14	60.50
2014-15	61.15
2015-16	65.46
2016-17	67.09
2017-18	64.45
2018-19	69.89

Exchange Rates (Calendar Year)

Year	INR Equivalent of one US\$
2005	44.11
2006	45.33
2007	41.29
2008	43.42
2009	48.35
2010	45.74
2011	46.67
2012	53.49
2013	58.63
2014	61.03
2015	64.15
2016	67.21
2017	65.12
2018	68.36

Source: Reserve Bank of India, Average for the year

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