

METALS AND MINING



Table of Contents

Executive Summary	3
Advantage India	4
Market Overview	6
Recent Trends and Strategies	18
Growth Drivers	22
Opportunities	29
Key Industry Contacts	32
Appendix	34

Executive summary

1. Coal production

- Coal production in the country stood at 716.01 million tonnes (MT) in FY21.

2. Fourth-largest iron ore producer

India ranks fourth globally in terms of iron ore production. Production of iron ore in FY21 stood at 189 million tonnes.



3. Steel production

In FY20, India had a total number of 914 steel plants producing crude steel. In FY21, India's crude steel production stood at 102.49 million tonnes.

5. Long duration mining lease

India has a vast mineral potential with mining leases granted for a longer duration of 50 years.

4. Aluminium production

Combined Aluminium production (primary and secondary) in India stood at 3.6 MT in FY20.



2. DEMAND GROWTH

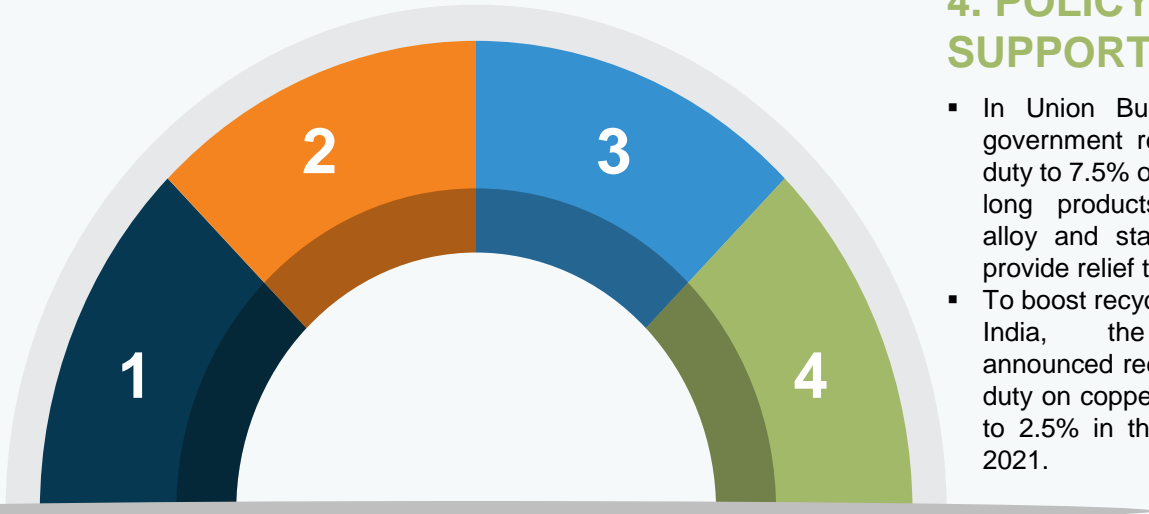
- Rise in infrastructure development is driving growth.
- Power and cement industries also aiding growth in the metals and mining sector.
- Demand for iron and steel is set to continue, given the strong growth expectations for the residential and commercial building industry.
- According to official data, in the first quarter of FY22, iron ore exports reached US\$ 1.7 billion, registering an increase of 168% YoY.

3. ATTRACTIVE OPPORTUNITIES

- The steel production in India is registering strong growth on the back of firms (such as Tata Steel) commissioning new projects.
- In February 2021, under the Production-Linked Incentive (PLI) scheme, the government approved an outlay of funds worth Rs. 6,322 crore (US\$ 864.67 million) over five years to boost the domestic production of specialty steel.
- In July 2021, the Odisha government approved five key industrial projects worth Rs. 1.46 lakh crore (US\$ 19.60 billion) that are expected to boost capacity of steel production by 27.5 million tonnes.

1. COMPETITIVE ADVANTAGE

- India holds a fair advantage in cost of production and conversion costs in steel and alumina.
- As of FY21, the number of reporting mines in India were estimated at 1,229, of which reporting mines for metallic minerals were estimated at 545 and non-metallic minerals at 684.

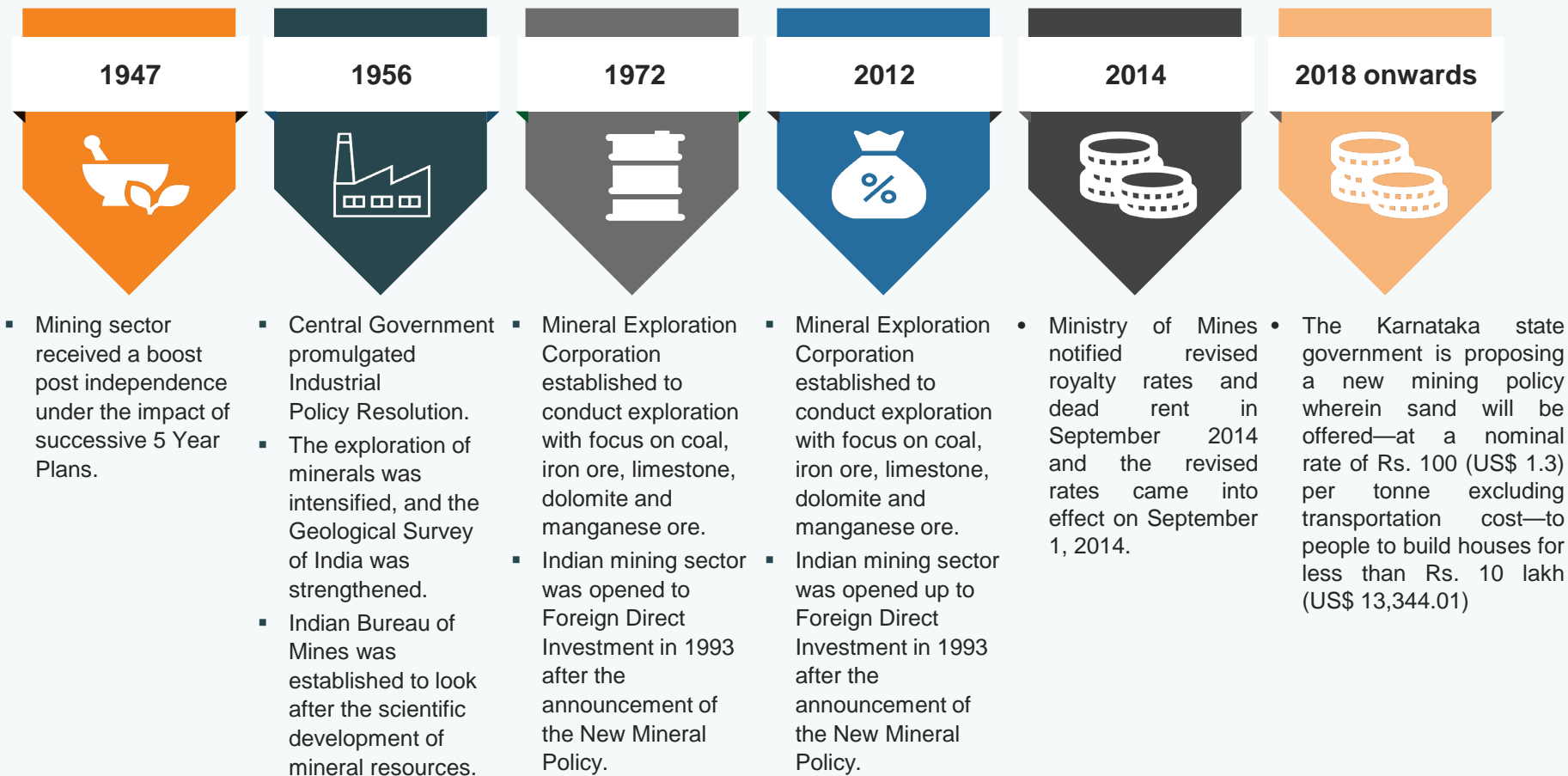


4. POLICY SUPPORT

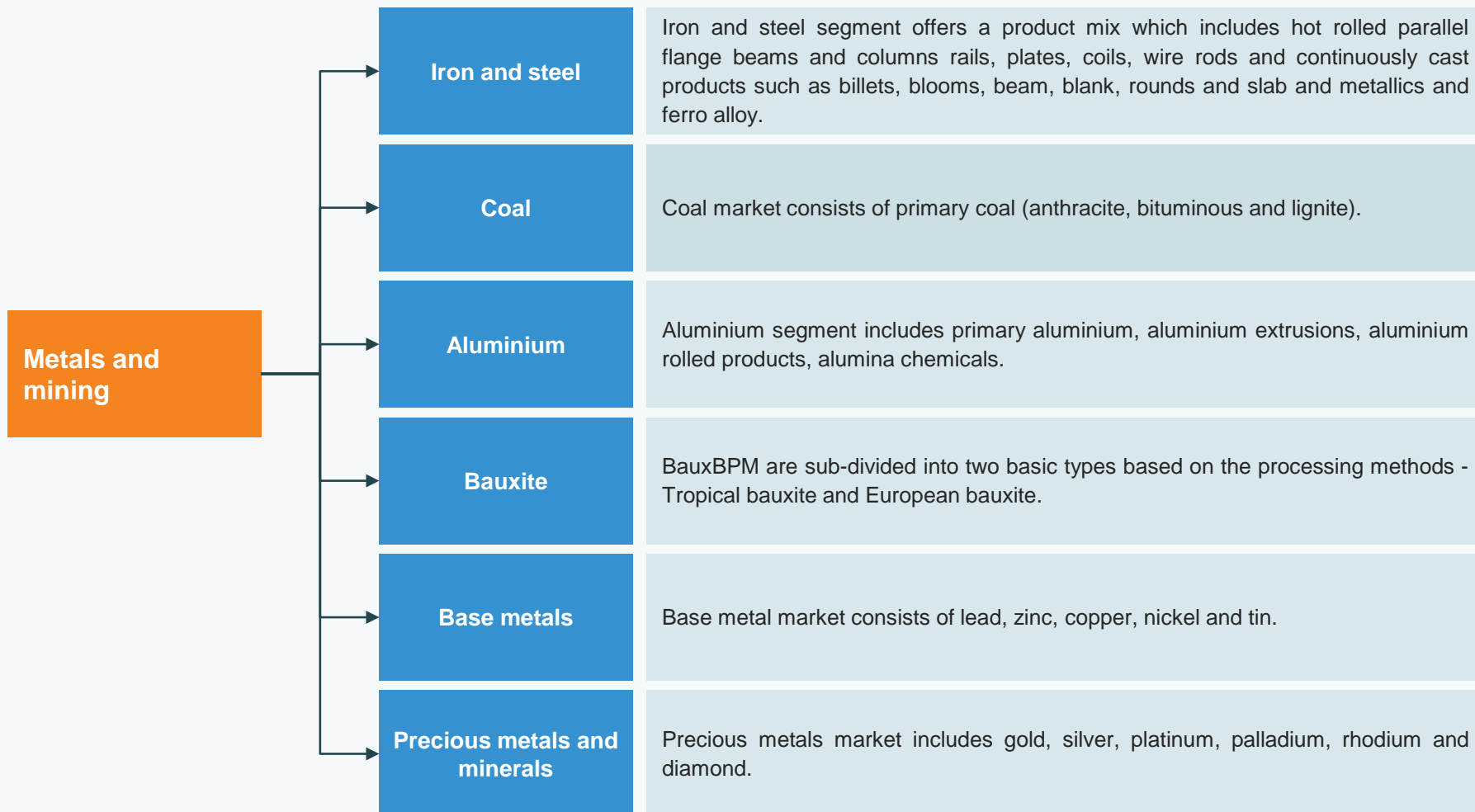
- In Union Budget 2021, the government reduced customs duty to 7.5% on semis, flat and long products of non-alloy, alloy and stainless steels to provide relief to MSMEs.
- To boost recycling of copper in India, the government announced reduction of import duty on copper scrap from 5% to 2.5% in the Union Budget 2021.



Evolution of the Indian mining sector

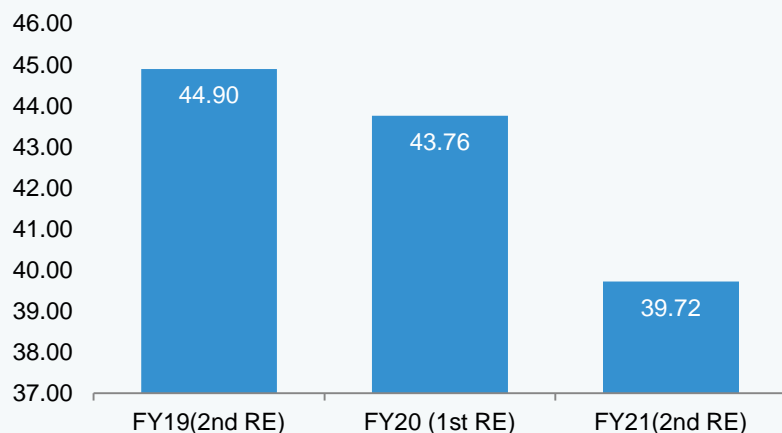


Segments of metals and mining industry

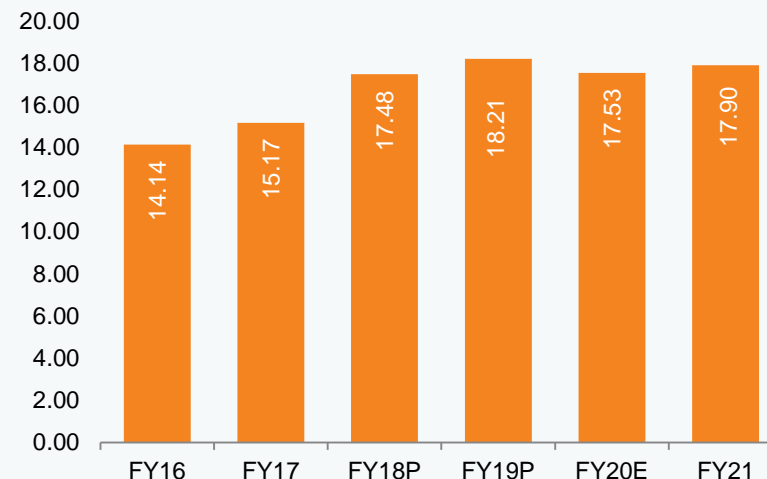


Strong growth in India's metals & mining sector over the years

GVA from mining and quarrying (US\$ billion)



Mineral production in India (US\$ billion)



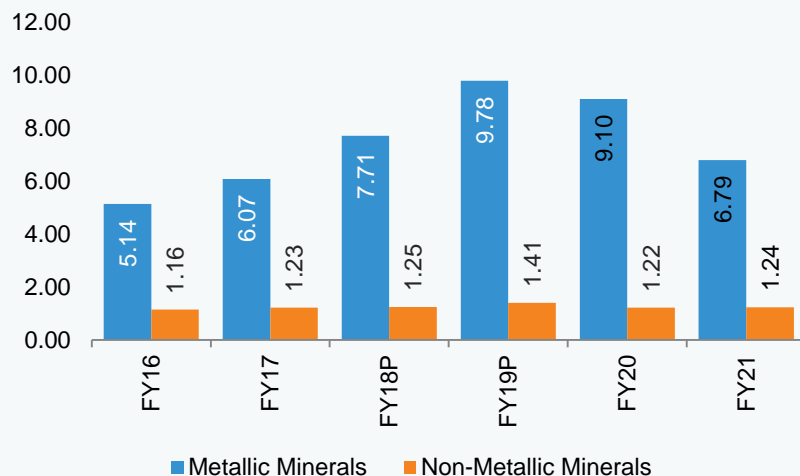
- GVA from mining and quarrying stood at US\$ 39.72 billion in FY21, as per the second revised estimates.
- In FY21, mineral production was estimated at Rs.1,29,950 crore (US\$ 17.90 billion).
- Mineral production also surged, registering a CAGR of 5.52% between FY16 and FY20E and reached US\$ 17.53 billion in FY20E.
- In FY21, production of key minerals increased YoY—Zinc Conc. (18%; 1,648.00 thousand tonnes), Lead Conc. (15%; 405.47 thousand tonnes), Sillimanite (32%; 17.52 thousand tonnes) and Garnet (abrasive) (107%; 1.14 thousand tonnes).
- In May 2021, exports of mica, coal & other ores and minerals, including processed minerals, stood at US\$ 389.97 million, compared with US\$ 220.24 million in May 2020.

Notes: CAGR - Compound Annual Growth Rate, ^Excluding atomic and fuel minerals, GVA - Gross Value Added, P- Provisional, E- Estimate

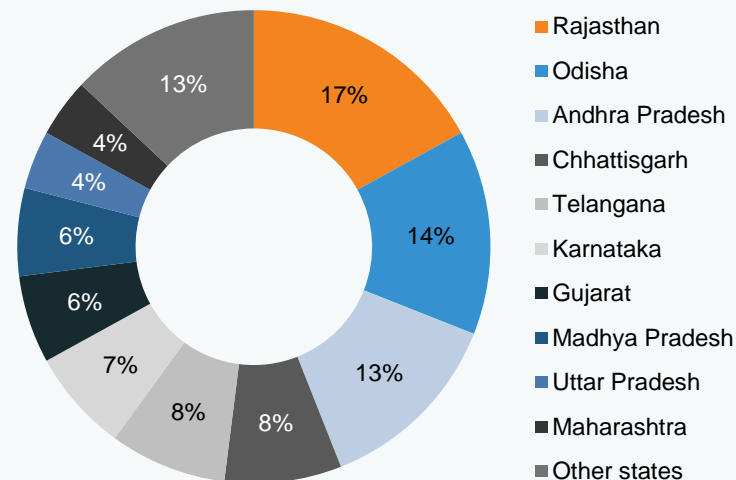
Source: Ministry of Statistics and Programme Implementation, Ministry of Mines

Composition of India's metals and mining sector

Production of metallic and non-metallic minerals (US\$ billion)



Share of states in mineral[^] production FY21E



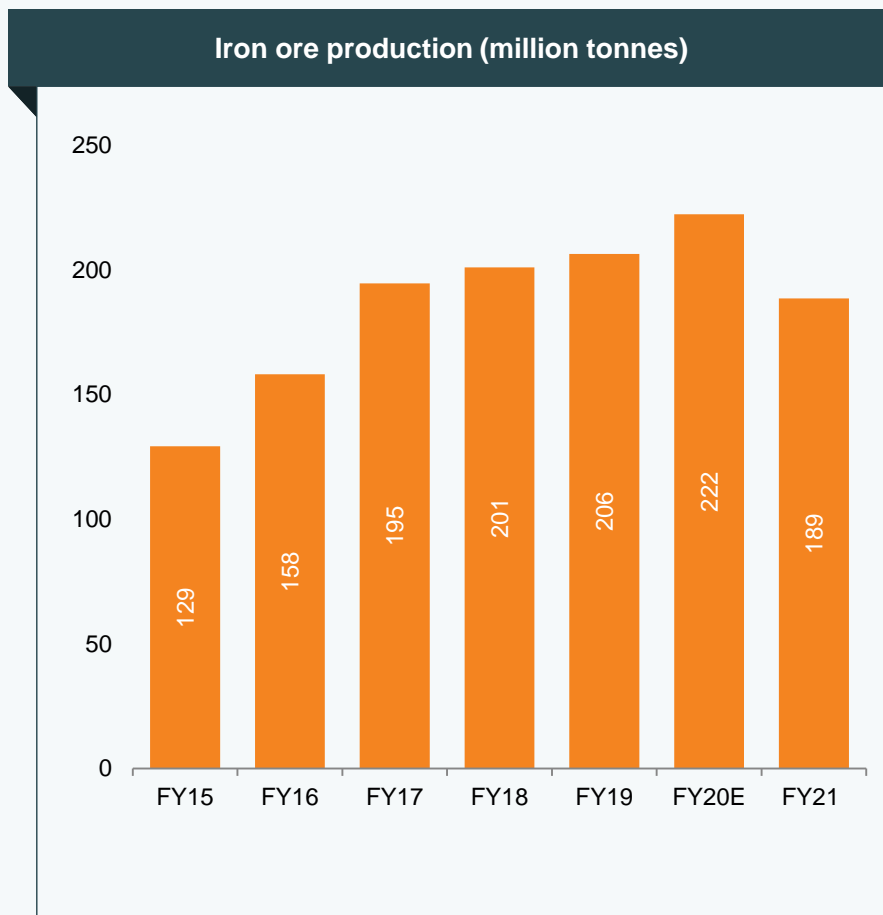
- India is home to 1,531 operating mines. Production of as many as 95 minerals is undertaken in India, including 4 fuel minerals, 10 metallic minerals, 23 non-metallic minerals, 3 atomic minerals and 55 minor minerals (including building and other materials).
- The country has large reserves of iron ore, bauxite, chromium, manganese ore, baryte, rare earth and mineral salts.
- Rajasthan was the leading producer of minerals with 17% market share, followed by Odisha at 14% and Andhra Pradesh at 13%.
- Production of metallic minerals in the country increased from US\$ 5.14 billion in FY16 to US\$ 6.79 billion in FY21E. In the same period, production of non-metallic minerals increased from US\$ 1.16 billion in FY16 to US\$ 1.24 billion in FY21.

Notes: MMT- Million Metric Tonnes, E-Estimate, ^ - excluding fuel and atomic minerals, P- Provisional, E- Estimate

Source: Ministry of Mines

Iron ore production

- Iron ore is a key input for production of steel and primary iron.
- Majority (over 85%) of iron ore reserves are of medium- to high-grade and are directly used in blast furnace and direct reduced iron (DRI) plants in the form of sized lumps or sinters or pellets.
- India was estimated to be the fourth-largest producer of iron ore in 2019.
- Iron ore production in the country stood at 189 million tonnes in FY21.
 - In 2021, state-owned NMDC aims to utilise 97% production capacity to manufacture 35 MT of iron ore. In FY21 (until January 2021), NMDC's iron ore production stood at 25.66 MT.
- To increase availability of iron ore in India, the government took several initiatives, such as 'Mining and Mineral Policy' reforms, to ramp up production and maximum capacity utilisation by government mining companies. For example, SAIL, with the approval to sell 25% fresh fines and 70 MT dumps and tailings, accelerated sale of iron ore.

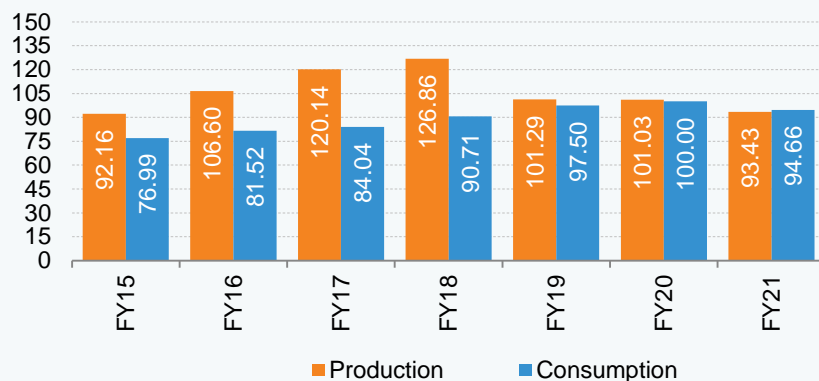


Notes: CAGR- Compounded Annual Growth Rate, P - Provisional, E - Estimate

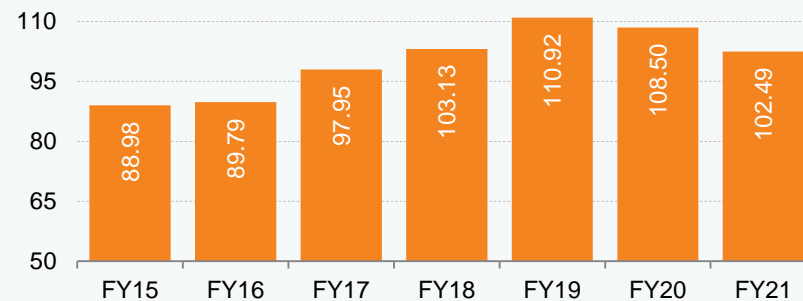
Source: Business Standard, Ministry of Mines (Annual Report)

Rising steel demand driving growth

Finished steel production and consumption (million tonnes)



Crude steel production (million tonnes)



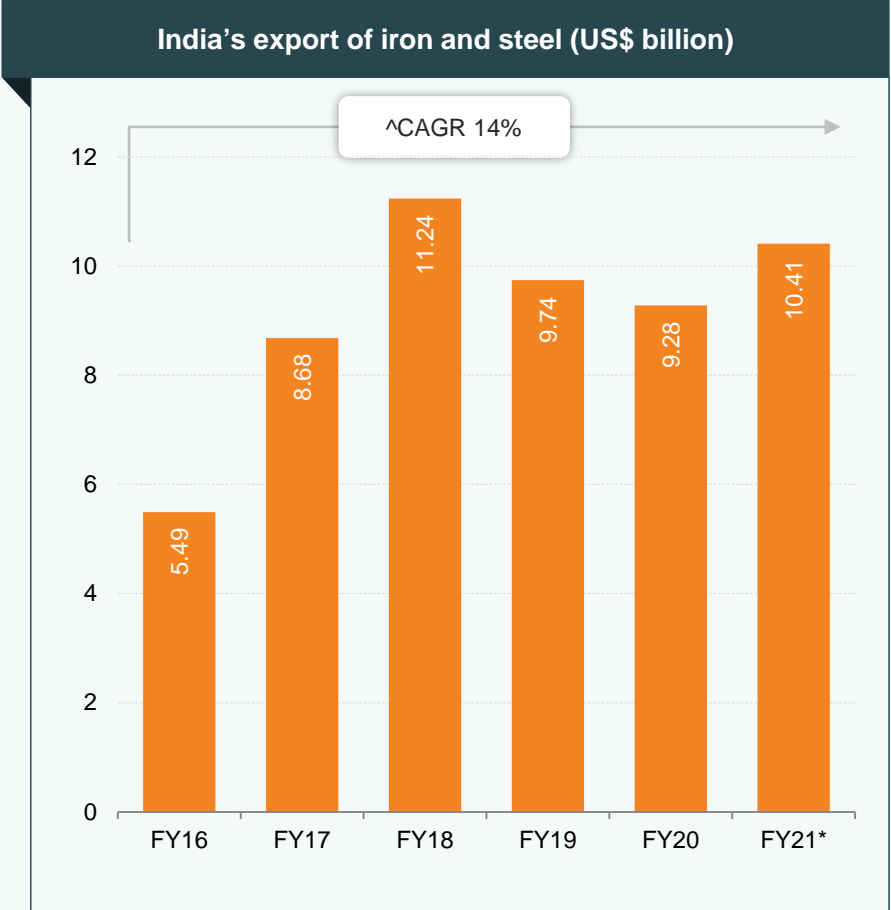
- India's crude steel production stood at 102.49 million tonnes in FY21.
- According to worldsteel, crude steel output in India registered a 46.9% YoY growth to reach 9.2 million tonnes in May 2021, as compared with 5.8 million tonnes of crude steel output registered in May 2020.
- Crude steel demand/production is forecast to reach 255 million tonnes by FY31.
- The National Steel Policy aims to boost per capita steel consumption to 160 kgs by 2030-31. The government has a fixed objective of increasing rural consumption of steel from the current 19.6 kgs per capita to 38 kgs per capita by 2030-31.
- On October 1, 2020, Directorate General of Foreign Trade (DGFT) announced that steel manufacturers in the country can avail duty drawback benefits on steel supplied through their service centres, distributors, dealers and stock yards.
- In February 2021, ArcelorMittal-Nippon Steel India, in agreement with the Odisha government, has planned to set up an integrated steel plant (with 12 MT capacity) in the state's Kendrapada district for Rs. 50,000 crore (US\$ 6.89 billion).
- In April 2021, production of hot metal, crude steel and saleable steel by SAIL stood at 1.371 MT, 1.230 MT and 1.256 MT, respectively.
- In July 2021, JSW Steel announced that the company registered a 62% YoY surge in crude steel production at 4.93 million tonnes in the first quarter of FY22.

Notes: CAGR - Compound Annual Growth Rate, MT - Million Tonnes, *- Until January 2021

Source: World Steel Association, News Articles

Rising domestic demand puts pressure on supply of iron and steel... (1/2)

- In FY20, India's iron and steel export was valued at US\$ 9.28 billion. During FY16-FY20, India's export of iron and steel grew at a CAGR of 14%.
- Government of India has imposed 30% export duty on all iron ore forms (except the low-grade iron ore) and 5% export duty is levied on iron ore pellets.
- In June 2020, iron and steel recorded more than 100% growth in exports shipments of US\$ 1.32 billion against US\$ 653.52 million in June 2019.
- Iron and steel exports stood at US\$ 10.41 billion in FY21* (between April 2020 and February 2021).
- In May 2021, iron ore exports stood at US\$ 574.56 million, compared with US\$ 457.05 million in May 2020.

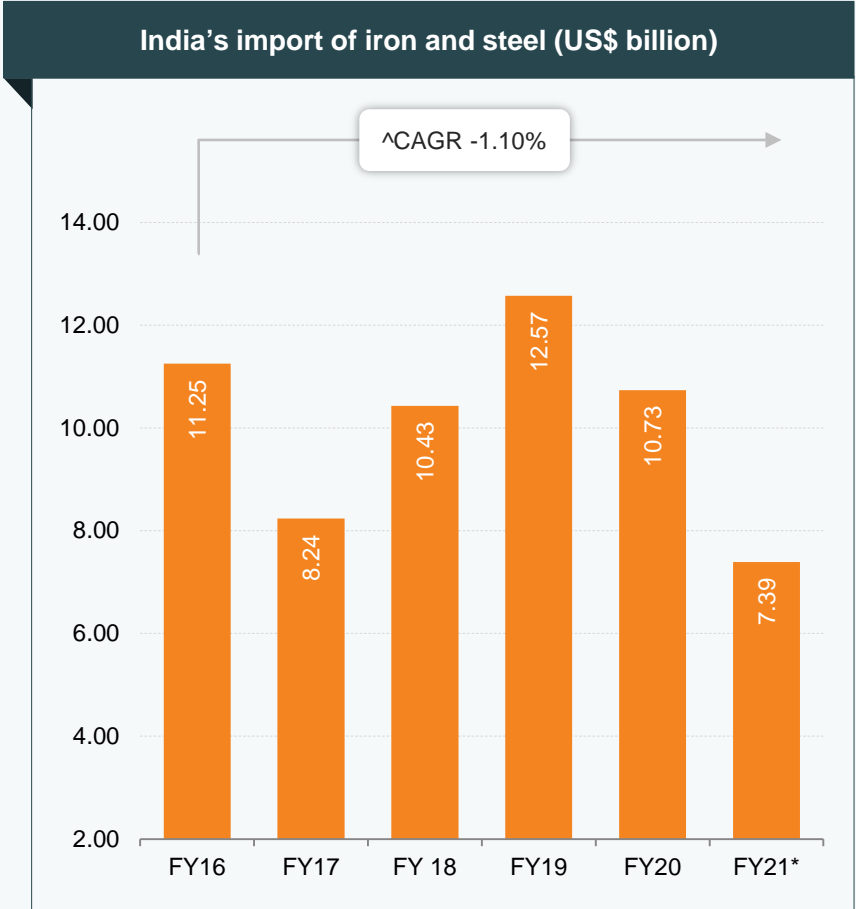


Notes: CAGR - Compound Annual Growth Rate, ^CAGR is up to FY20 ; *Until February 2021

Source: Ministry of Commerce, DGCIS - Directorate General of Commercial Intelligence and Statistics, Engineering Exports Promotion Council

Rising domestic demand puts pressure on supply of iron and steel... (2/2)

- India has turned into a net importer of iron and steel due to strong growth in the manufacturing sector and rising infrastructure projects.
- India's transition into a net importer of steel despite the strong growth in domestic steel production shows the demand potential of the sector.
- The impact of strong growth in domestic steel production has been most felt in the iron ore sector. With steel firms' ever rising demand for the raw material, India's import of iron ore has been growing steadily.
- Iron and steel imports stood at US\$ 7.388 billion in FY21 (from April 2020 to February 2021).
- In April 2021, iron and steel imports stood at US\$ 1.18 billion compared with US\$ 682 million in April 2020.
- In June 2021, Mr. T.V. Narendran, the CII President and Managing Director of Tata Steel, stated that steel firms have firmed up plans to invest ~Rs. 60,000 crore (US\$ 8 billion) over the next three years in this sector.
- In November 2020, MS Agarwal Foundries (MSAF) announced plan to set up a steel plant in Andhra Pradesh. The company signed an MoU with the Government of Andhra Pradesh for commissioning a new ultramodern steel plant at Mantralayam in Kurnool district. The plant will require an investment of Rs. 1,200 crore (US\$ 162.40 million) and be completed by the second half of 2021.

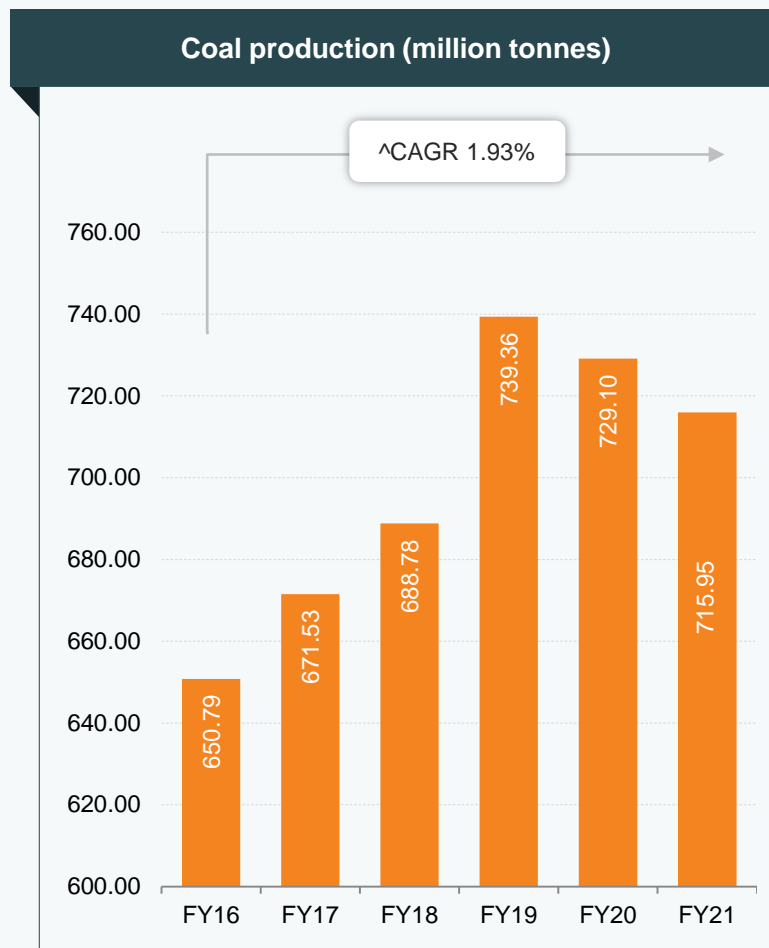


Notes: CAGR - Compound Annual Growth Rate, ^CAGR is up to FY20; *Until February 2021

Source: Ministry of Commerce, DGCIS - Directorate General of Commercial Intelligence and Statistics

Coal production growing at a steady pace

- In the coming years, coal production in the country is likely to receive a boost as the Government plans to replace country's captive mining policy in coal and iron ore with an open bidding one.
- India's coal production stood at 715.95 MT in FY21. In April 2021, coal production stood at 516 lakh tonnes.
- In March 2021, Coal India Ltd. (CIL) approved 32 new coal mining projects, of which 24 are expansion of the existing projects and the remaining are greenfield. Estimated cost of the project is Rs. 47,000 crore (US\$ 6.47 billion).
- In November 2020, the Union Coal Minister, Pralhad Joshi, stated that 19 mines have been successfully auctioned; this is the highest number of successfully auctioned mines in any tranche of coal auctions. The country's first-ever commercial mining auction will garner a total revenue of Rs. 6,656 crore (US\$ 900.59 million) annually from mines spread over the following five states—Madhya Pradesh, Chhattisgarh, Odisha, Jharkhand and Maharashtra.
- In July 2021, Power Mech Projects Ltd. secured a contract worth Rs. 9,294 crore (US\$ 1.25 billion) from Central Coalfields Ltd. (CCL) to build and operate a mine.
- In April 2021, National Aluminium Company Ltd. was granted the mining lease of Utkal-E coal block in Odisha.
- In April 2021, Coal India Ltd. (CIL) announced the incorporation of two wholly owned subsidiaries—CIL Solar PV Ltd. and CIL Navikarniya Urja Ltd.
- In July 2021, India shipped its first coal export to Rampal Power Plant in Bangladesh, giving a boost to the country's coal exports.



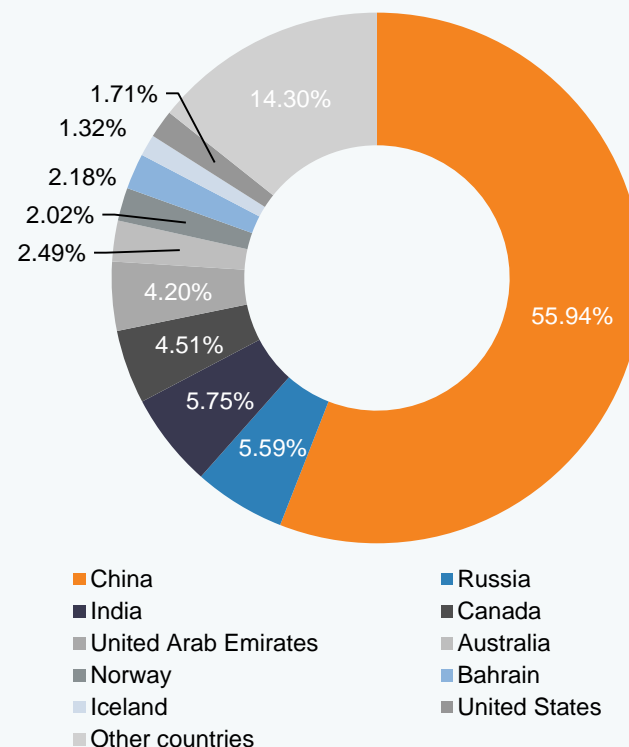
Notes: CAGR - Compound Annual Growth Rate, ^CAGR is up to FY21

Source: Ministry of Coal

India's role in global Aluminium production

- India was the fourth-largest producer of aluminium in the world with a share of around 5.33% of the global aluminium output.
- The principal user segment in India for aluminium continues to be electrical and electronics sector followed by automotive and transportation, building, construction, packaging, consumer durables, industrial and defence.
- According to the Ministry of Mines, India had the seventh-largest bauxite reserves of ~2,908.85 million tonnes in FY18.
- Aluminum production increased to 3.65 million kgs in FY19.
- Over the course of the last four years, India's aluminium production capacity has increased to 4.1 MMTPA, driven by investment worth Rs. 1.2 lakh crore (US\$ 18.54 billion).

India's share in global aluminium production (2019E)



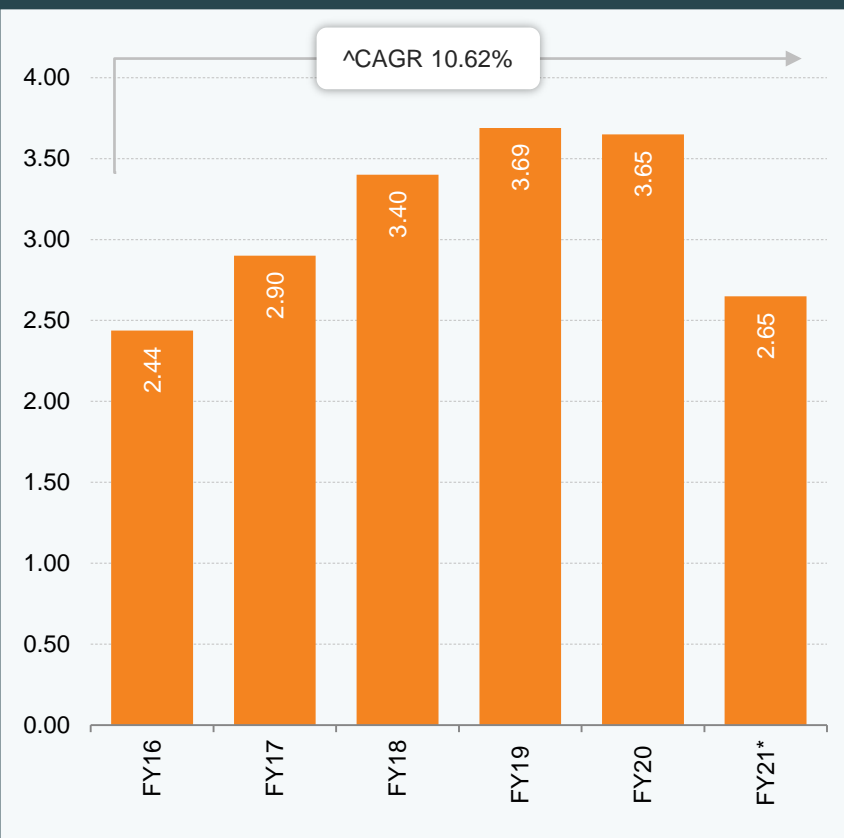
Note: ICRA - Information Credit Rating Agency Ltd.

Source: World Bureau of Metal Statistics (WBMS), Aluminium Association of India, Economist Intelligence Unit (EIU), ICRA Management Consulting Services Ltd (IMaCS)

Growing domestic demand to support Aluminium production

- Demand for aluminium is expected to pick up as the scenario improves for user industries like power, infrastructure and transportation.
- Production of aluminium stood at 3.65 million tonnes in FY20.
- Aluminium export from the country reached 1.50 million tonnes in FY19 and 0.52 million tonnes in FY20. In value terms, aluminium export from the country stood at US\$ 20.18 million in FY20.
- The National Aluminium Company (NALCO), a central government-owned entity, is set to join the club of million tonne producers in the metal segment by 2020. NALCO has readied about US\$ 3.72 billion investments for increasing its alumina, aluminium and power production capacities.
 - In April 2020, the Government of Odisha granted the mining lease of Utkal-D coal block in Angul district to NALCO. The initial capacity of Utkal-D coal block is 2 million tonnes per year with a total mineable reserve of 101.68 million tonnes.
- In May 2021, Vedanta Ltd. announced its plan to invest Rs.10,000 crore (US\$ 1.34 billion) in setting up an aluminum park in Odisha to facilitate companies that use metal to set up their manufacturing units in the facility.
- In January 2021, the National Aluminium Company (NALCO) announced that it would invest ~Rs. 30,000 crore (US\$ 4,102.51 million) by 2027-28 in capacity expansion and diversification.

Aluminium production (million tonnes)

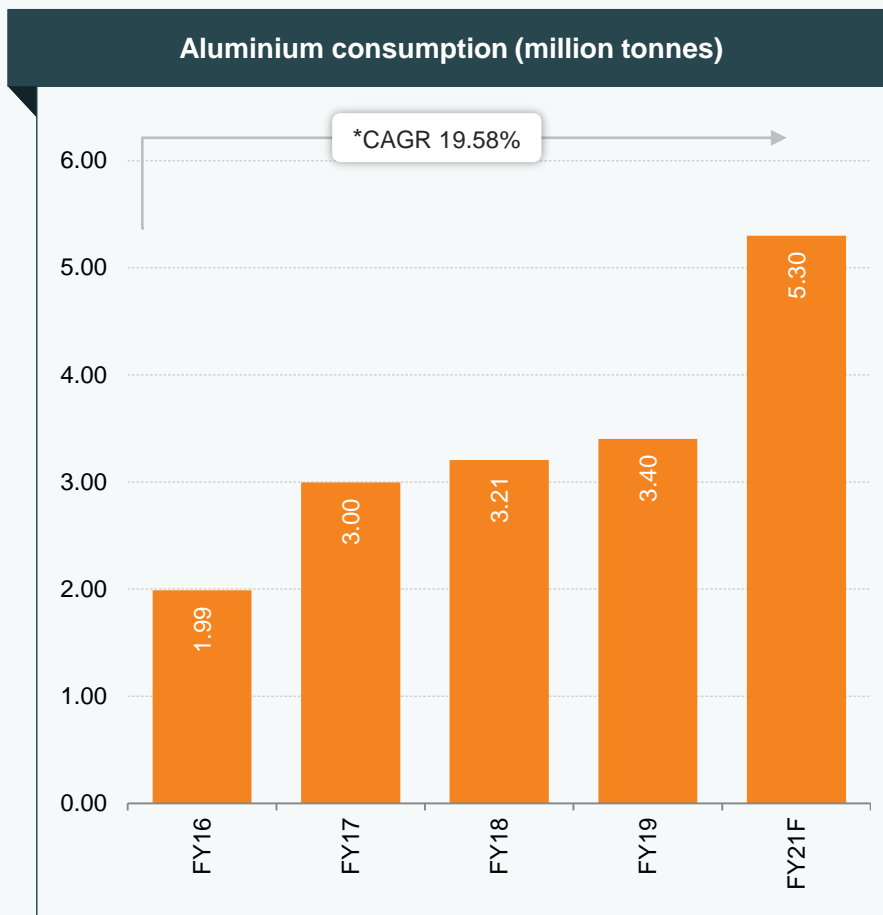


*Note: CAGR - Compound Annual Growth Rate, F- Forecast, ^CAGR is till FY20, *- Until December 2020*

Source: CARE Ratings, Ministry of Mines, DGCI, News Articles

Stronger economic growth to support Aluminium consumption



- Aluminum consumption in India is 2.5 kgs per capita.
- Aluminum consumption reached 3.40 million tonnes in FY19.
- Aluminum consumption is expected to reach 7.2 million tonnes in the next five years.



Note: CAGR - Compound Annual Growth Rate, F - Forecast, *CAGR is till FY19

Source: Care Ratings, Indian Bureau of Mines

Major metals and mining players in the country

Segment	Major player	Market share	Other players
Iron and Steel		NA	Sesa Goa, SAIL, Orissa Minerals
Coal	 <p>कोल इण्डिया लिमिटेड Coal India Limited भारत सरकार का उपक्रम A Government of India Undertaking एक महारत्न कंपनी A Maharatna Company</p>	80%	Singareni Collieries Company, Reliance Natural Resources
Aluminium		60%	National Aluminium Company (NALCO), Bharat Aluminium Company (BALCO)



Notable trends in the metals and mining sector... (1/3)

1

Captive mining for coal

- In captive mining for coal, companies are permitted to set up coal washeries and for specified end uses, including the setting up of power plants, fertilizers and steel units.

2

Longer duration lease

- India has seen a significant growth in minerals with the Government granting lease for longer duration, between 20-30 years.

3

Focus on domestic market

- Demand for metal and metal products is rising in the domestic market, with India focusing to expand its domestic manufacturing.
- In June 2021, Jindal announced its plan to build a 2.25 million tonnes capacity steel plant in Andhra Pradesh.
- In July 2021, Tata Steel announced that the company's crude steel production increased by 43% YoY to reach 7.94 million tonnes in the first quarter of FY22.
- In February 2021, two new iron ore mines were inaugurated in Odisha, with a production capacity of 15 lakh tonnes per month and ~275 million tonnes of consolidated iron ore reserves. These mines will bring in ~Rs. 5000 crore (US\$ 679.28 million) in annual revenue for the state and employment opportunities for locals.

4

Overseas ventures

- In search of greater mineral opportunities, an increasing number of Indian mining companies are venturing overseas in a bid to secure stable, long-term supplies of minerals especially in the areas of coal and iron ore.
- Adani Enterprises' Carmichael coal plant expects to make its first shipment by August 2021.

Notable trends in the metals and mining sector... (2/3)

5

Outlook of metal and mining

- In April 2021, the industrial output indices for mining stood at 108.0.
- For FY21, industrial output for mining stood at 101.0.

6

Build strategic alliances

- Alliance with global and domestic players help companies to improve their operational performance through technological improvement and cost optimisation.
- In July 2021, Coal India Ltd. (CIL) signed a contract with Iz-Kartex, (a Russia-based shovel manufacturing firm) to purchase 11 Russian rope shovels worth ~Rs. 1,462 crore (US\$ 196.30 million).
- In June 2021, Energy Efficiency Services Ltd (EESL) signed a memorandum of understanding (MoU) with MECON Ltd. to support energy efficiency in steel, mining industry.
- In May 2021, ArcelorMittal Nippon Steel (AMNS) signed a contract with Total (a France-based energy company) for supply of up to 500,000 tons of liquefied natural gas (LNG) per year until 2026.
- In February 2021, CIL signed a contract with Belaz, a Belarus-based mining equipment manufacturer, for procurement of dumpers with an investment amount worth Rs. 2,900 crore (US\$ 393.98 million).
- In February 2021, CIL also announced plans to invest Rs. 1.43 lakh crore (US\$ 19.43 billion) in 20 projects, including solar, thermal and aluminum projects.

7

International Collaboration

- In June 2021, the Union Cabinet, chaired by the Prime Minister Mr. Narendra Modi approved the memorandum of understanding (MoU) to be signed between the Ministry of Mines and the Secretariat of Mining Policy of the Ministry of Productive Development of the Argentine Republic.
- The MoU will provide an institutional mechanism for cooperation in the field of mineral resources.

8

Focus on technology

- Players in the industry are focusing on optimising technology to increase process efficiency.
- Coal India Ltd. has ambitious plans of using GPS/GPRS based vehicle tracking system to enhance productivity. It also has services such as E-auction and E-procurement of goods and services.
- Mining Industry in India has been dominated by surface mining. However, due to various challenges presented by surface mining, the move towards underground mining is considered inevitable. This presents an opportunity for players to enter the market with underground mining technology.
- In January 2021, the Ministry of Steel, Government of India, signed a Memorandum of Cooperation (MoC) with the Ministry of Economy, Trade and Industry, Government of Japan, to boost the steel sector through joint activities under the framework of India–Japan Steel Dialogue.
- To improve its business operations amid the pandemic, in May 2021, companies such as Vedanta Aluminium and Bharat Aluminium Company (BALCO) leveraged smart technologies—such as digital smelter solution for human-less monitoring of operations, advanced data analytics for predictive and prescriptive analytics, vision analytics for identification of hot spots in ICTs network to improve asset reliability—to boost production.

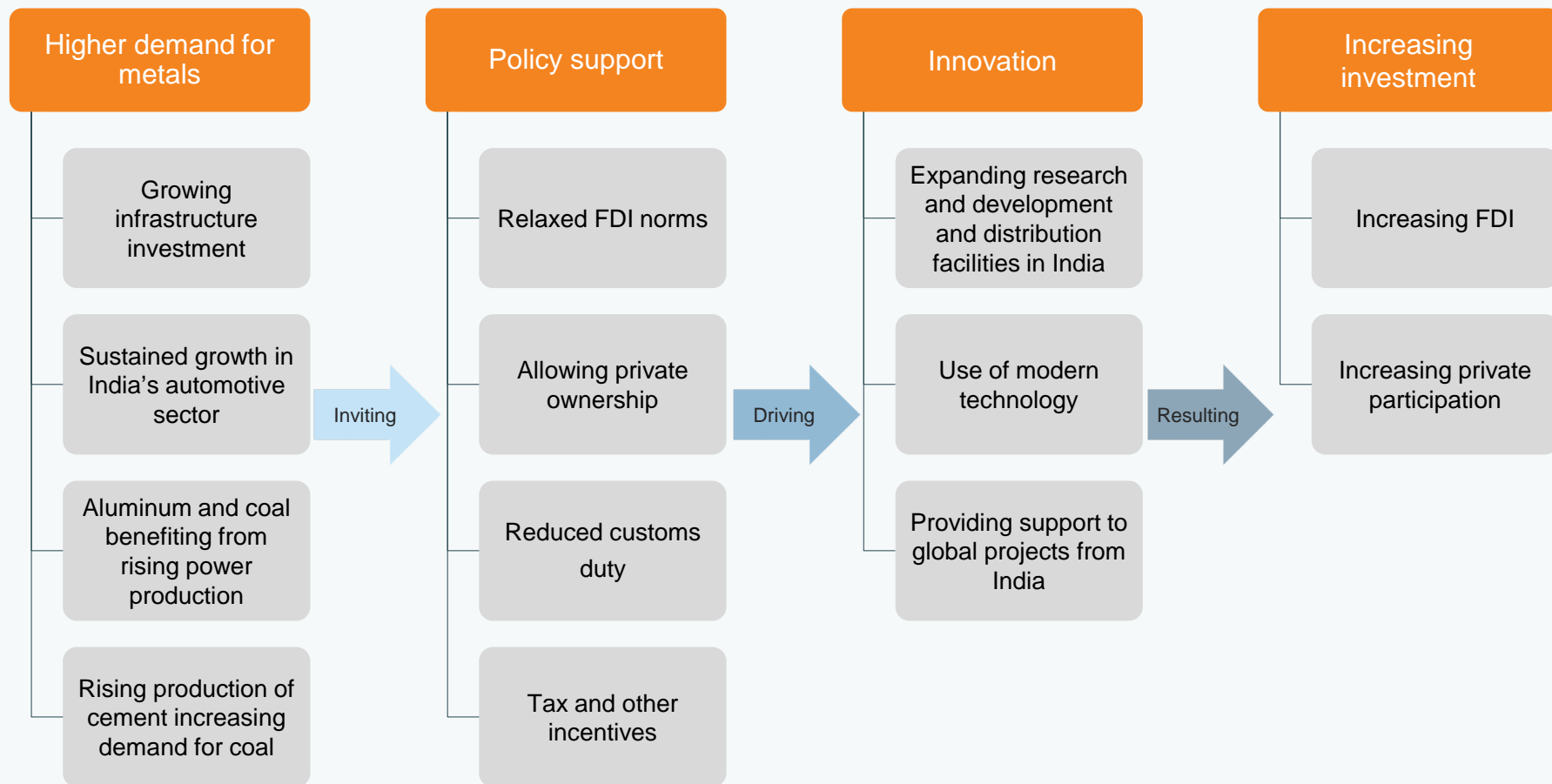
9

Cost optimisation

- Players in the industry are trying to minimise cost to gain competitive advantage.
 - For example, SAIL is trying to reduce cost by entering into an MoU for coal bed methane and propane gas to reduce cost of energy.
- Optimising input resources, operating efficiency for handling assets available with the company, reducing overhead costs and stabilising newly formed operation units.



Strong fundamentals and policy support aiding growth



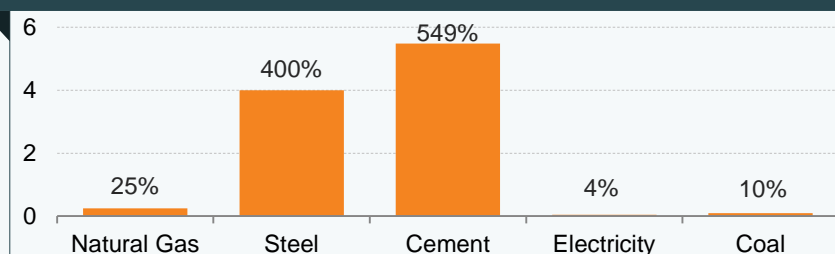
Notes: Manda - Mergers and Acquisitions, FDI - Foreign Direct Investment

Source: : TechSci Research

A fast-expanding construction sector has aided growth... (1/2)

- India is witnessing a sustained growth in the infrastructure build up.
- The Index of Core Industries (ICI) stood at 125.8, as of May 2021.
- In FY21, the NHAI completed construction of 136,440 kms of national highways.
- Revenue growth has been strong over the years. Indian Railways' earning from freight loadings reached Rs. 117,386.0 crore (US\$ 16.17 billion) in FY21.
- Cargo traffic handled at 12 major ports stood at 673 million tonnes (MT) in FY21.
- Electricity production reached 1,234.44 BU in India in FY21.
- It has been estimated that India is going to require US\$ 4.5 trillion of investment by 2040 for infrastructure development.
- The Government of India has allocated Rs. 111 lakh crore (US\$ 1.4 trillion) under the National Infrastructure Pipeline (NIP) for FY2019-25. Sectors such as energy (24%), roads (18%), urban (17%) and railways (12%) account for ~71% of the projected infrastructure investments in the country.

Production Growth of Key Core Industries (% YoY) in April 2021



Growth in infrastructure related activities in FY21 (%)



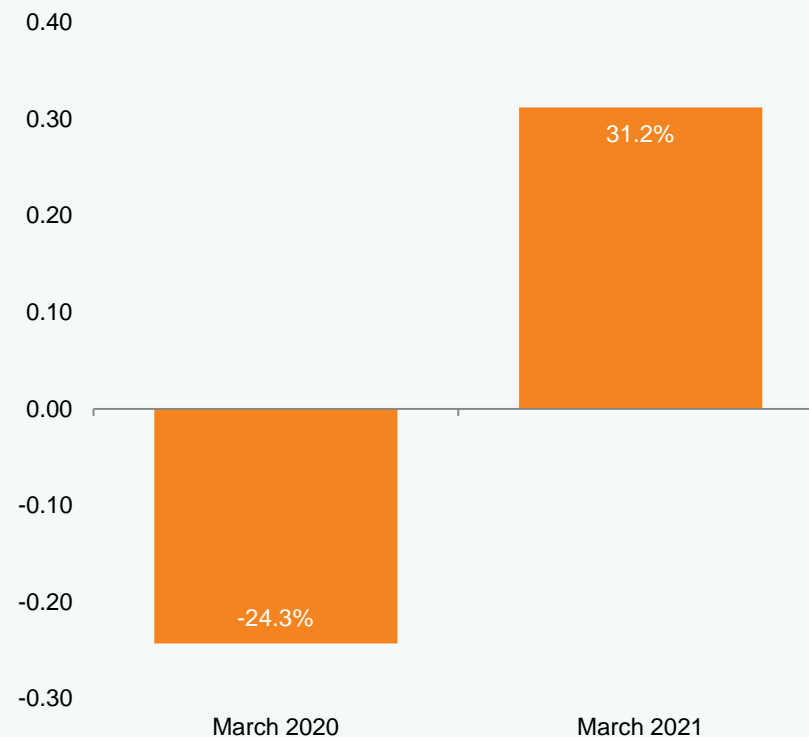
Note: F - Forecasts (by BMI), CAGR - Compounded Annual Growth Rate, BU- Billion Unit

Source: Business Monitor International's (BMI) Report on infrastructure industry in India

A fast-expanding construction sector has aided growth... (2/2)

- The construction sector's Gross Value Added (GVA) at current prices was estimated at US\$ 172.04 billion as per the second advanced estimate of FY21.
- Iron and steel being a core component of the real estate sector, demand for these metals is set to continue given strong growth expectations from residential and commercial building industry.
- In November 2020, Odisha-based Shiva Cement Ltd., a subsidiary of JSW Cement Ltd., announced plans to invest ~Rs. 1,500 crore (US\$ 202.98 million) in a new 1.36 million tonnes per annum (MTPA) clinker unit project in the state's Sundergarh district.

Annual Growth Rates of IIP (%) for construction



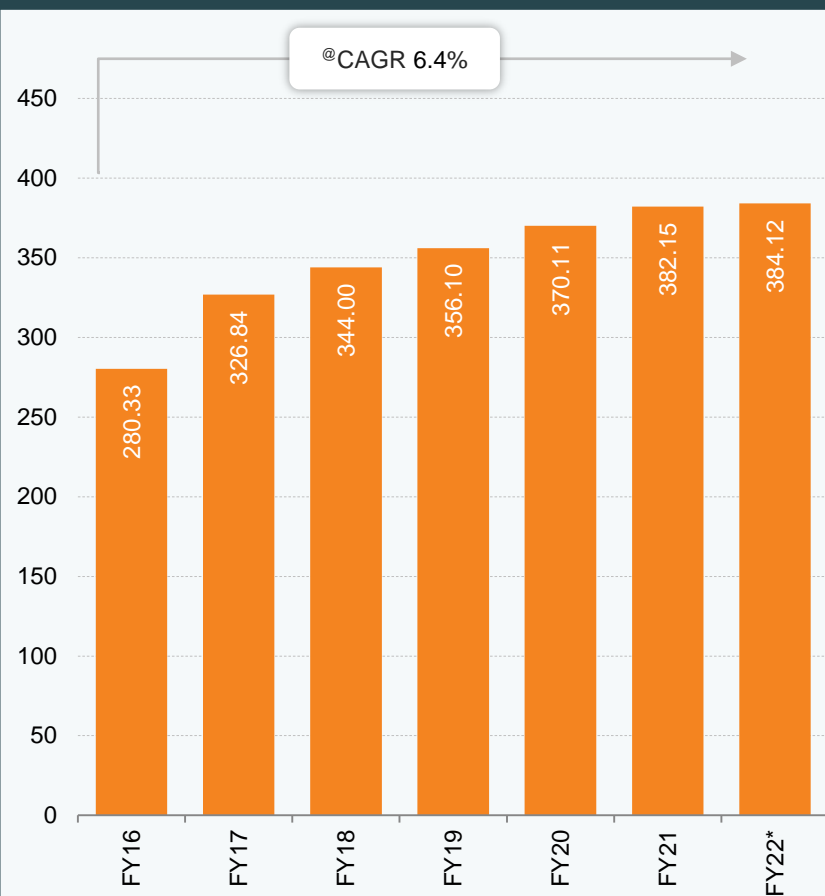
Note: PE - Provisional Estimated, YoY - Year on Year

Source: Business Monitor International's (BMI) Report on infrastructure industry in India

Power fuelling demand

- As of June 2021, the installed capacity in India stood at 384,115.94 MW.
- In FY21, the installed capacity in India stood at 382,151.22 MW.
- Installed capacity has increased steadily over the years, posting a CAGR of 6.4% in FY16-FY21.
- Energy generation from conventional sources stood at 97.70 billion units (BU) in March 2020. Between 2017 and 2022, conventional sources are expected to witness capacity addition of 58.38 GW.
- Around 81% of the total power generation was done through thermal power plants, while hydro and nuclear plants contributed 15% and 4% respectively in FY20.

Installed electricity generation capacity (GW)



Note: MW - Megawatt, ^ - Tentative, @ CAGR until FY21, *- Until June 2021

Source: Ministry of Power, Central Electricity Authority (CEA),

Favourable policies are supporting the sector growth

1. Mineral Laws (Amendment) Bill, 2020

- Aims to open a new era in Indian coal and mining sector, specially to promote 'ease of doing business'.
- It will boost coal production and will reduce dependency on import.

2. National Mineral Policy 2019

- To bring more transparency, better regulation and enforcement, balanced socio-economic growth along with sustainable mining practices.
- Proposed to grant 'industry' status to mining with an objective of boosting financing of private sector.
- Supported M&A of mining players.

3. Relaxed FDI norms

- FDI up to 100% is permitted under the automatic route to explore and exploit all non-fuel and non-atomic minerals and process all metals as well as for metallurgy.
- FDI cap in the mining and exploration of metal and non-metal ores have been increased to 100% under the automatic route.
- In March 2018, the Government allowed 100% FDI in coal mining.



4. Allowing private ownership

- Government of India is encouraging private ownership for steel operations and other high priority industry.

7. Bank Loans

- State Bank of India (SBI) is planning to introduce a policy to lend loans to the coal miners before the landmark auction.
- As per the planned policy, SBI is open to provide some of the financing required to put 41 coal mines with a combined annual production capacity of 225 million tonnes to private companies.

6. Skill Development Plan for the Mining Sector (2016-22)

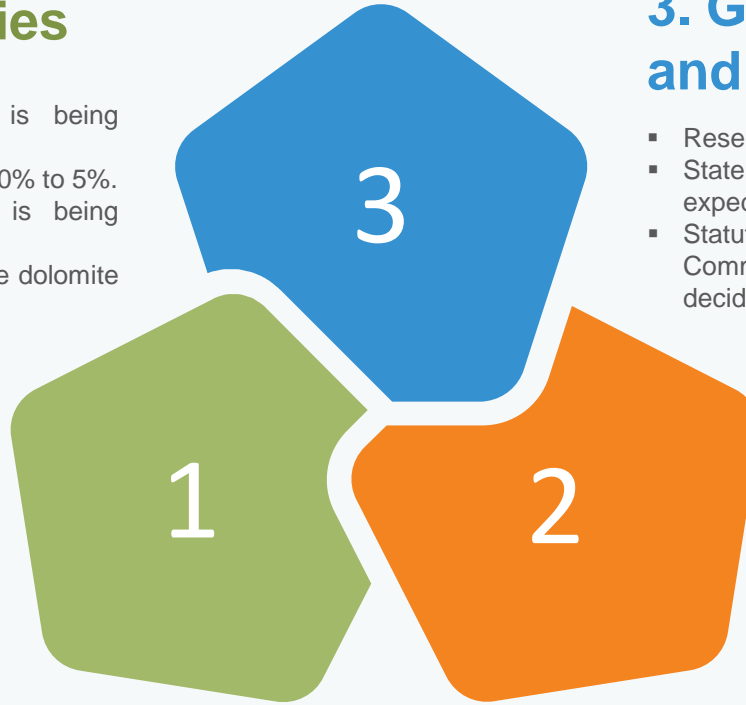
- Focus on upgradation of skill sets to foster adaptation of new state of art technology.
- Increase the capacity and quality of training infrastructure and trainers to address human resource needs.

5. Reduced custom duty

- Government of India significantly reduced the duty payable on finished steel products and has streamlined the associated approval process.

1. Relaxation on duties

- The Basic Customs Duty (BCD) on
 - ships imported for breaking up is being reduced from 5% to 2.5%.
 - coal-tar pitch is being reduced from 10% to 5%.
 - battery waste and battery scrap is being reduced from 10% to 5%.
 - steel grade limestone and steel grade dolomite is being reduced from 5% to 2.5%.



3. General restrictions and concessions

- Reservation of areas for PSUs removed.
- State Government to set special courts to expedite prosecution in illegal mining.
- Statutory Coordination cum Empowered Committee at central and state level to decide upon stringent penalties for offences.

2. Process of revenue collection and usage

- Central Government to establish National Mineral Fund, while individual state governments to establish State Mineral Fund(s).
- District Mineral Foundation will be set up by state Government and will work for the interest and benefit of persons or families affected by mining related operation in the district - it will be managed by a governing council.
- The mining tax collected will be spent within the district.

1. Auction modalities

- Auctions are conducted electronically, and bidding is done over two rounds.
- The first round requires bidders to furnish technical details and initial offer must be equal to or higher than the set 'Reserve Price'.
- The highest bid in the first-round acts as the 'reserve price' for the second-round in which only technically qualified bidders participate.



3. Mining lease

- Mining auctions conducted under the ambit of state Government.
- Types of lease granted:
 - Mining lease - where evidence of mineral contents is established.
 - Composite lease - combination of a prospecting licence and a mining lease.

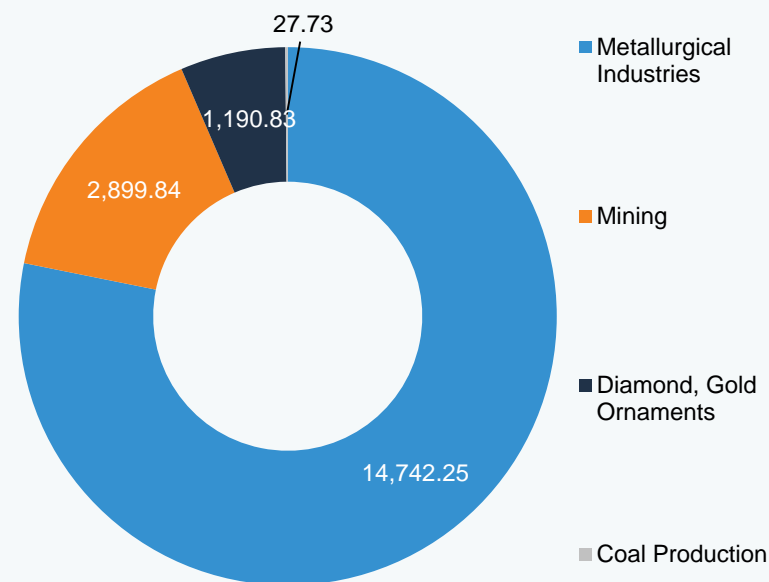
2. Net worth requirements

- For annual average production up to
 - Rs 2 crore (US\$ 311,090) - net worth required: Rs. 50 lakh (US\$ 77,773).
 - Rs 20 crore (US\$ 3.11 million) - net worth required: Rs. 10 crore (US\$ 1.56 million).
 - Small bidders can include value of unencumbered immovable property in net worth.

Foreign investments flowing in India

- FDI up to 100% is allowed in exploration, mining, minerals processing metallurgy and exploration of metal and non-metal ores under the automatic route for all non-fuel and non-atomic minerals including diamonds and precious stones.
- From April 2000 to March 2021, FDI inflows in the metallurgical industry stood at US\$ 14,742.25 million, followed by the mining (US\$ 2,899.84 million), diamond & gold ornaments (US\$ 1,190.83 million) and coal production (US\$ 27.73 million) industries.
- In April 2021, the directorate general of foreign trade (DGFT) notified that the import policy for copper and aluminium is amended from “free” to “free with compulsory registration” under the non-ferrous metal import monitoring system (NFMIMS). The policy is effective from April 12, 2021.

**FDI equity inflow in the sector from April 2000 to March 2021
(US\$ million)**



Source: Department of Industrial Policy and Promotion

Merger and acquisitions

M&A activities

Acquirer	Target	Acquisition price (US\$ billion)
JSW Steel Ltd.	Bhushan Power and Steel (BPSL)	2.69
ArcelorMittal	Essar Steel	6.01
Tata Steel	Bhushan Steel	7.04
Mr. Anil Agarwal	Anglo American (Partial stake purchased)	2.0
JSW Energy Ltd.	Jindal Steel and Power Ltd.	0.97
SAIL	Reiterated its interest to acquire majority stake in Neelachal Ispat Nigam Ltd (NINL) in Jajpur, Odisha	-
Joint Venture between Vedanta Resources and Sesa Goa	Merger of Sterlite Industries (Indian subsidiary of Vedanta Resources) and Sesa Goa	3.90
GVK Power and Infrastructure Ltd.	Hancock Coal-Queensland Coal	1.26
Sesa Goa Ltd.	Cairn India Ltd.	1.18
JFE Steel Corp.	JSW Steel Ltd.	1.03
Lanco Resources Australia	Griffin Coal Mining Co Pty Ltd.	0.72
Vedanta	Cairn India	1.56
Oil and Natural Gas Corporation (ONGC)	Gujarat State Petroleum - KG Basin	1.20
Tata Steel Ltd.	Brahmani River Pellets Ltd.	0.13

Source: Thomson Banker, Deal Tracker



1

Policy support

- The government took the following steps to allow imports of steel at lower prices and support the domestic industry.
- Tax on imports of iron and steel products has been exempted until March 31, 2022—it was originally 2.5% and has been reduced to nil in the Union Budget 2021.
- Anti-dumping and distributional duties on some steel products have been temporarily suspended until September 30, 2021.

2

Scope for new mining capacities in iron ore, bauxite and coal

- India has the world's seventh-largest reserve base of bauxite and fourth-largest base of iron ore, which accounts for about 7% and 11% of the total world production, respectively.
- Moreover, India had the world's fifth-largest coal reserve at 319.02 billion tonnes in FY19.

Source: WSA, Ernst and Young

3

Rapid growth of user-industries to drive demand for metals and minerals

- Strong long-term demand from the steel industry is expected to further boost the iron ore industry.
- Increasing power production is likely to catapult demand for coal.
- Booming construction, automobiles and packaging industries are expected to lend substantial support to the metals and mining sector.

4

Expansion by existing players

- The iron and steel segment offers a product mix which include hot rolled parallel flange beams and columns rails, plates, coils, wire rods, and continuously cast products such as billets, blooms, beams, blanks, rounds and slabs as well as metallics and ferro alloy
- Looking at the expected growth in the sector, existing manufacturers have a huge opportunity to expand their product line in new segments.
- In June 2021, Mukand announced to expand its production and sales of stainless steel to 1.5 lakh tonnes per annum from 1 lakh tonnes at Thane (Mumbai) unit, which is expected to boost its turnover by ~Rs. 7,000 crore (US\$ 939.88 million) per annum.

5

Ongoing feasibility study on steel projects

- In May 2021, ArcelorMittal Nippon Steel (AMNS) India collaborated with the Odisha government to carry out a feasibility study for a steel project in the state at a proposed capacity of 12 million tonnes per annum (MTPA). Estimated investment of the project stands at Rs. 50,000 crore (US\$ 6.89 billion).

Source: WSA, Ernst and Young, Press Release

Opportunities in the iron ore sector

1

Exploration in proposed exploration zones

- Odisha: Bonai (Keonjhar belt) and Tomka (Daitari and Umerkoke belts).
- Jharkhand: All major high-grade ore deposits; contain low-grade lateritic ores.
- Karnataka: Bagalkot, Tumkur, and Chitradurga districts.
- Maharashtra: Sindhudurg, Gadchiroli and Gondia.
- Chhattisgarh: All 14 deposits of Bailadila range, Dantewada district.
- Andhra Pradesh: Kadapa, Kurnool, Karimnagar, Adilabad, and Guntur districts.

2

Scope for new mining capacities in iron ore, bauxite and coal

- Pelletisation capacity is about 59.30 metric tonnes per annum (MTPA)*.
 - Sintering capacity is about 70.05 MTPA*.
- Scope for domestic and foreign firms to explore PPP opportunities.
 - Joint Venture or technical participation with midcap players with lease/license and seeking capital, expertise and technology.
 - Through the auction route, players can get access to coal mines and iron ore reserves.
 - Introduction of Mines and Minerals (Development and Regulation) Amendment Bill 2015 to encourage investment and introducing viable mining practices.




*Notes: MT - Metric Tonnes, MTPA - Metric Tonnes Per Annum, *: As per Indian Minerals Yearbook 2017*

Source: PwC, Ministry of Mines

Key Industry Contacts



Key industry contacts

	Agency	Contact Information
 <p>सेल SAIL</p>	<p>SAIL - Steel Authority of India Ltd.</p>	<p>Ispat Bhawan, Lodi Road, New Delhi - 110 003 Phone: 91- 11 24300100, 24367481-86 Fax: 91-11 24367015 E-mail: chairman.sail@sail.in Website: https://www.sail.co.in/</p>
 <p>FIMI Federation of Indian Mineral Industries</p>	<p>Federation of Indian Mineral Industries</p>	<p>FIMI House, B-311, Okhla Industrial Area Phase-I, New Delhi-110 020 Phone: 91-11- 26814596 Fax: 91-11- 26814593 E-mail: fimi@fedmin.com Website: http://www.fedmin.com/</p>
 <p>NISDA STAINLESS STEEL</p>	<p>Indian Stainless Steel Development Association</p>	<p>L -22/4, DLF Phase-II Gurgaon, Haryana-122 002 Phone: 91-124 - 4375501 Fax: 91-124 - 4375509 E-mail: nissda@gmail.com Website: https://www.stainlessindia.org/</p>



- BMI's Mining Business Environment Ratings
 - Market structure: It takes into consideration mining output in US\$ billion, sector value growth,% y-o-y r, mining sector,% of GDP
 - Country structure: It takes into consideration labour market infrastructure, physical infrastructure r, tax, and scope of state
 - Market risks: It considers metals prices, 5-year, forecast average, metals price forecast, average 5-year growth, regulatory framework, legal framework
 - Country risk: It considers, long-term external risk, corruption, bureaucracy, long-term policy continuity
 - Mining ratings: It shows the overall scores of the above indicators

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
- GOI: Government of India
- IBM: The Indian Bureau of Mines
- MoU: Memorandum of Understanding
- PPP: It could denote two things (mentioned in the presentation accordingly) -
 - Purchasing Power Parity (used in calculating per-capita GDP)
 - Public Private Partnership (a type of joint venture between the public and private sectors)
- PE: Private Equity
- US\$: US Dollar
- Wherever applicable, numbers have been rounded off to the nearest whole number

Exchange rates

Exchange Rates (Fiscal Year)

Year	Rs. 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
2019-20	70.49
2020-21	73.20

Exchange Rates (Calendar Year)

Year	Rs. 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
2019	69.89
2020	74.18
2021*	72.68

Note: As of June 2021

Source: Reserve Bank of India, Average for the year

Disclaimer

India Brand Equity Foundation (IBEF) engaged Sutherland Global Services Private Limited to prepare/update this presentation.

All rights reserved. All copyright in this presentation and related works is solely and exclusively owned by IBEF, delivered during the course of engagement under the Professional Service Agreement signed by the Parties. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of IBEF.

This presentation is for information purposes only. While due care has been taken during the compilation of this presentation to ensure that the information is accurate to the best of Sutherland Global Services' Private Limited and IBEF's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Sutherland Global Services Private Limited and IBEF neither recommend nor endorse any specific products or services that may have been mentioned in this presentation and nor do they assume any liability, damages or responsibility for the outcome of decisions taken as a result of any reliance placed on this presentation.

Neither Sutherland Global Services Private Limited nor IBEF shall be liable for any special, direct, indirect or consequential damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this presentation.

