ANNUAL PERFORMANCE REVIEW – STEEL BILLETS

2021-2022

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1. BACKGROUND

a) Brief about the commodity such as sample picture, lifecycle and various varieties/grade of the commodity found in India

India is the world's 2nd largest producer of Steel in the world, steel a highly durable and storable commodity is conducive for storage that creates opportunity for cash and carry making it suitable for trading. Steel a highly durable and storable commodity is conducive for storage that creates opportunity for cash and carry making it suitable for trading. Globally and in India, Steel is consumed and produced through-out the year Steel is used/consumed across the country in Construction, automotive, energy, packaging transports, appliance industries etc. hence a widespread demand across the country.

Major steel producing states include Punjab, Chhattisgarh, Jharkhand, Karnataka, West Bengal, Uttar Pradesh, Orissa and Gujarat

Source: India Mineral Yearbook

Steel Billets

Steel billet is a product of melting iron ore or scrap iron. It is generally known as a second stage product of steel production. Steel Billets are produced in two ways namely continuous casting or rolled directly from the casting process by billet mills. Steel billets soft and ductile and are produced in square cross-sections. They can be formed into a wide array of shapes, particularly square, rectangular and circular. They are not in usable form until they have been formed into various shapes and sizes, they are most often used for the production of steel rods and bars, wire and hollow sections and plates. They mostly used for the production of steel rods and bars, wire and hollow sections and plates.

Standards for billets vary, and each must feature the chemical composition necessary for producing the desired product.

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Steel - Value Chain

Standardization

Percentage of standard and certified steel produced by integrated steel plants varies from 80-90%. In secondary steel sector this percentage is low.

In India, Bureau of Indian Standards (BIS) is the National Standards Body, who are engaged in formulation and implementation of National Standards knows as Indian Standards. Adoption of Indian Standards or marking products to bear ISI Mark by its very nature is optional unless it is made mandatory under specific Law, Rules & Regulations. Section 16 of BIS Act, 2016 authorizes Union Government to make the use of ISI marks mandatory in the public interest.

Government has been pursuing imposition of steel quality control order for ensuring the availability of quality steel to the industry, users and public at large. During 2012-2018, Government notified 53 carbon steel, alloy steel and stainless-steel products to make available quality steel for the sectors mainly in construction, infrastructure, automobile, and engineering applications. Vide Gazette Notification dated 12th March 2012, Ministry of Steel had notified two Quality Control orders namely: Steel and Steel Products (Quality Control) Order, 2012 and Steel and Steel Products (Quality Control) Second Order, 2012. In the first order 7 Standards and in the second order 9 products (one product later withdrawn) were notified and now these products require mandatory Certification. Later, 18th December 2015, Ministry of Steel notified 15 more products vide order namely Steel and Steel Products (Quality Control) Order, 2015. This covers the major flat and long products to ensure safety & security of infrastructure & engineering products made of steel. Further, Government issued another quality control order namely Stainless-Steel Products (Quality

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Control) Order, 2016, dated 10th June 2016 covering thereby 3 categories of stainless-steel products covered under 3 Indian Standards.

Later, Ministry of Steel merged all the previous steel quality control orders and added 15 new standards into a single order notified on 13th August 2018, namely, Steel and Steel Products (Quality Control) Order, 2018 covering thereby 53 steel products.

b) Commodity fundamentals and balance sheet as per the following format (to be prepared based on publicly available information on best effort basis

Global Steel Scenario		
In Million tonnes	**2020**	**2021**
Opening Stocks	-	-
Production	1,880	1,952
Imports	386.3	-
Exports	396.0	-
Consumption	1,785	1,834
Closing Stocks	-	-
Source: World Steel Association		

India Steel Scenario		
In Million tonnes	**2020-21**	**2021-22**
Production	96.2	113.6
Import	4.75	4.67
Total Supply	101.0	118.3
Exports	10.78	13.49
Domestic Consumption	94.89	105.41
Source: JPC ***Finished Steel Numbers are considered***		

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Top 10 Major producing countries

Top 10 Major producing countries (in Million Tonnes)		
Country	**2020**	**2021**
China	1065	1032.8
India	100	118.1
Japan	83	96.3
United States	73	86
Russia (e)	72	76
South Korea	67	70.6
Turkey	36	40.4
Germany	36	40.1
Brazil	31	36
Iran (e)	29	28.5
Source: World Steel Association ***Crude Steel Number s are considered***		

Top 10 Major consuming countries

Top 10 Major consuming countries (in Million Tonnes)		
Country	**2019**	2020
China	1006.3	952
European Union (27)	131	153
India	89	106
United States	80	97
Japan	53	58
South Korea	49	56
Russia	42	44
Africa	35	37
Germany	31	35
Turkey	30	33
World Steel Association ***Apparent steel use finished steel products numbers are considered***		

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Top 10 Major Exporting countries

Top 10 Major Exporting countries (in Million Tonnes)			
Country	**2020**	**Country**	2021
China	51.4	China	66.2
Russia	31.5	Japan	33.8
Japan	29.8	Russia	32.6
South Korea	27.6	South Korea	26.8
European Union	22.6	European Union	26
Germany	21.2	Germany	23.9
Turkey	18.5	Turkey	22.1
India	17.1	India	20.4
Ukraine	15.2	Italy	17.2
Italy	14.9	Ukraine	15.7
Source: World Steel Association			

Top 10 Major Importing countries

Top 10 Major Importing countries (in Million Tonnes)			
Country	**2020**	**Country**	2021
China	37.9	European Union	48.1
European Union	32.6	USA	29.7
USA	19.9	China	27.8
Germany	18.2	Germany	23.3
Italy	15.5	Italy	20.8
Vietnam	13.7	Turkey	16.2
Thailand	13.1	Thailand	15.7
Turkey	12.5	Mexico	15.1
France	11.8	South Korea	14.1
South Korea	11.5	Poland	13.7
Source: World Steel Association			

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Top 10 Major producing States in India

State wise Steel Production 2020-21 (in Million Tonnes)	
State	**Production**
Odisha	21.43
Jharkhand	15.55
Chhattisgarh	13.18
Karnataka	11.69
Gujarat	8.40
Maharashtra	7.93
West Bengal	7.08
Andhra Pradesh	5.90
Punjab	2.92
Tamil Nadu	2.16
Source: JPC	

c) Major changes in the polices governing trade in the spot markets of the commodity

- Under the Union Budget 2020-21, the government allocated Rs. 39.25 crore (US$ 5.4 million) to the Ministry of Steel. The budget's focus is on creating infrastructure and manufacturing to propel the economy.
- In July 2021, the Union Cabinet approved the production-linked incentive (PLI) scheme for speciality steel. The scheme is expected to attract investment worth Rs. 400 billion (US$ 5.37 billion) and expand speciality steel capacity by 25 million tonnes (MT), to 42 MT in FY27, from 18 MT in FY21.

d) Geopolitical issues in the commodity and its impact on Indian scenario

Factors which affected Steel prices in FY 2021-22

- Conflict Between Russia and Ukraine
- Supply disruptions from Russia as it is the 5th largest producer and 2nd largest exporter of steel
- Higher iron ore prices also contributed towards the rise in steel prices
- Increase in input cost
- Rise in crude oil prices
- Elevated prices and the resultant inflationary pressure impacted sentiment across the globe
- Rising construction costs, and multiple price hikes by makers of automobiles, consumer appliances and durables drove down demand globally

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2. TRADING RELATED PARAMETER (Note: Contract was launched in July 2021)

a. Monthly and Annual traded volume

Month	Traded volume (In Kgs)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	37,10,000
Aug-21	1,19,40,000
Sep-21	1,33,10,000
Oct-21	1,62,50,000
Nov-21	2,41,30,000
Dec-21	1,99,40,000
Jan-22	1,03,30,000
Feb-22	81,70,000
Mar-22	99,20,000
Total	**11,77,00,000**

b. Annual traded volume as proportion of total deliverable supply : 0.099%

- Annual Traded Volume (kgs): 11,77,00,000
- Deliverable Supply (kgs): 1,18,30,00,00,000

c. Annual traded volume as proportion of total annual production: 0.104%

- Annual Traded Volume (kgs): 11,77,00,000
- Annual Production (kgs): 1,13,60,00,00,000

d. Annual average Open interest as proportion of total production: 0.0002%

- Annual Average OI (kgs): 1,90,000
- Annual Production (kgs): 1,13,60,00,00,000

e. Annual average Open interest as proportion of total deliverable supply: 0.00016%

- Annual Average OI (Kgs): 1,90,000

  Annual Supply (Kgs): 1,18,30,00,00,000

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f. Monthly and Annual value of trade

Month	Value Of trade (In Crores)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	26.28
Aug-21	53.55
Sep-21	58.48
Oct-21	79.87
Nov-21	108.48
Dec-21	87.55
Jan-22	48.44
Feb-22	41.32
Mar-22	59.04
Total	**563.01**

g. Monthly and Annual quantity of delivery

Month	Quantity of Delivery (In Kg)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	-
Aug-21	90,000
Sep-21	90,000
Oct-21	-
Nov-21	90,000
Dec-21	90,000
Jan-22	-
Feb-22	-
Mar-22	-
Total	**3,60,000**

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h. Monthly and Annual value of delivery

Month	Value of Delivery (In Rs.)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	-
Aug-21	38,82,600
Sep-21	40,84,200
Oct-21	-
Nov-21	38,87,100
Dec-21	40,66,200
Jan-22	-
Feb-22	-
Mar-22	-
Total	**1,59,20,100**

i. Monthly and Annual Average Open Interest (OI)

Month	Average Monthly OI (In Kg)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	1,30,000
Aug-21	2,80,000
Sep-21	2,20,000
Oct-21	70,000
Nov-21	1,80,000
Dec-21	2,10,000
Jan-22	1,90,000
Feb-22	1,80,000
Mar-22	2,20,000

Annual Average OI = 1,90,000 kg

j. Annual average volume to open interest ratio : 342.11%

- Average Traded Volume (Kgs): 6,50,000
- Average Open Interest (Kgs): 1,90,000

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k. Total number of unique members and clients who have traded during the financial year

- Unique Members = 16
- Unique Clients = 31

l. Ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest (Annual average as well as maximum daily value)

Not Available

m. Number of unique FPOs / farmers and VCPs/hedgers who traded in the financial year

Not Available

n. Algorithmic trading as percentage of total trading

13.01%

o. Delivery defaults

Number of instances = Nil

Quantity involved = Nil

Value involved = Nil

3. Price Movements

a. Comparison, correlation, and ratio of standard deviation of Exchange futures price vis-à-vis international futures price (wherever relevant comparable are available)

The correlation between Exchange Futures Prices and International Futures prices is 0.9483 for the period June 16,2020 to March 31, 2021

The ratio of Standard deviation for the same period June 16,2020 to March 31, 2021, was 0.80

b. Comparison, correlation, and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price)

- The correlation between Exchange Futures Prices and International Futures prices is -7.08%
- The ratio of Standard deviation was -0.21

Note: China Steel rebar 25mm spot prices are considered

c. Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.

- The correlation between Exchange Futures and Exchange Spot prices is 0.9889 June 16,2020 to March 31, 2021
- The ratio of Standard deviation for the same period was 1.14

d. Correlation between international futures & international spot prices along with ratio of standard deviation

- The correlation between International Futures Prices and International spot prices is 0.8760
- The ratio of Standard deviation for the same period was 0.98

e. Comparison of Exchange polled price and mandi price (in case of agricultural commodities) / other relevant price (in case non-agricultural commodities) at basis centre

f. Maximum & Minimum value of daily futures price volatility and spot price volatility along with disclosure of methodology adopted for computing the volatility

Commodity	Max of Daily Futures Price Volatility %	Min Daily Futures Price Volatility %	Max of Daily Spot Price Volatility %	Min Daily Spot Price Volatility %
Steel Billets	6.85%	-4.41%	5.64%	-5.21%

g. Number of times the futures contract was in backwardation/contango by more than 4% for the near month contract in the period under review

Instances Of backwardation – Nil

Instances of Contango – 1

4. Other's parameters

a. Qualitative and quantitative measure for Hedge effectiveness ratio and basis Risk (Volatility of Basis) along with disclosure of methodology adopted for such calculations

Hedge Effectiveness for FY 2021-22

Commodity	Hedge Efficiency
Steel Billets	98.73%

Note: Hedging efficiency is the 'R Square' value of the regression equation between BSE futures prices and BSE polled spot prices during the financial year.

Basis Risk for FY 2021-22

Commodity	Unit	Average Return of Basis (Unit)	Standard deviation
Steel Billets	Rs/MT	-0.14	4.22

Note: Basis Risk is computed as the Standard deviation of daily normal return in Basis, which is excess of Spot over Futures price.

b. Details about major physical markets of the commodity vis-à-vis market reach in terms of availability of delivery centres (information to be provided state-wise and UT-wise)

Name of State	Name of the physical markets	Market Reach of Exchange delivery centers
Chhattisgarh	Raipur	Basis Centre
	Raigarh	No Delivery Centre
	Durg	No Delivery Centre
Punjab	Mandi Gobindgarh	No Delivery Centre
	Jalandhar	No Delivery Centre
Uttar Pradesh	Ghaziabad	No Delivery Centre
	Muzaffarnagar	No Delivery Centre
	Aligarh	No Delivery Centre
	Varanasi	No Delivery Centre
	Gorakhpur	No Delivery Centre
West Bengal	Kolkatta	No Delivery Centre
	Durgapur	No Delivery Centre
	Asansol	No Delivery Centre

c. Details about major physical markets of the commodity and average Open Interest for each month generated from those regions.

BSE has its Delivery Centre as Raipur. Physical Marketwise OI data is not available

d. Details, such as number and target audience, of stakeholders' awareness programs carried out by the exchange

Sr. No.	Program Type	Location	Participants
1	Gk Group	Raipur	Traders Meet
2	Shyam Steel & Minerals	Raipur	Traders Meet
3	M. Ahuja Projects	Raipur	Traders Meet
4	Shree Shyam Rolling Mill & President of Rista (Raipur Iron & Steel Trade Association)	Raipur	Traders Meet
5	Mahendra Group	Raipur	Traders Meet
6	Vandana Global	Raipur	Traders Meet
7	Sunil Rolling Mill & Chhattisgarh Sponge Iron Manufacturers Association	Raipur	Traders Meet
8	Trade Links Enterprises	Raipur	Traders Meet
9	Sagar Sachdev	Raipur	Traders Meet
10	Alok Enterprises	Raipur	Traders Meet
11	Mata Rani Alloys	Raipur	Traders Meet

e. Steps taken / to be undertaken to improve hedging effectiveness of the contracts as well as to improve the performance of illiquid contracts

BSE has organised more than 15 webinars exclusively for Steel along with IMC, SUFI, and Steel Mint in last two years. Additionally business team has had one to one meeting conducted to create awareness among various value chain participants like Rolling Mills, Stockiest, Exporters, Brokers & Traders in various regions like Raipur, Jalna, Nagpur, Bhavnagar & Ahmedabad etc.

We propose to have the following to improve effectiveness in the contract.

- One to one meeting with corporate clients.
- Events at Delivery centre