ANNUAL PERFORMANCE REVIEW – STEEL BILLETS

2022-2023

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

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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	**2021**	**2022**
Opening Stocks	2021	2022
Production	-	-
Imports	1,962	1,885
Exports	445	-
Consumption	460	-
Closing Stocks	1,839	-
Source: World Steel Association		

India Steel Scenario		
In Million tonnes	2021-22	2022-23
Production	113.63	121.29
Import	4.67	6.02
Total Supply	118.30	127.31
Exports	13.49	6.72
Domestic Consumption	105.41	119.17
Source: JPC ***Finished Steel Numbers are considered***		

Top 10 Major producing countries

Top 10 Major producing countries (in Million Tonnes)		
Country	**2021**	**2022**
China	1,035.24	1,017.96
India	118.20	125.07
Japan	96.34	89.24
United States	85.79	80.54
Russia	77.02	71.47
South Korea	70.42	65.86
Germany	40.24	36.85
Türkiye	40.36	35.13
Brazil	36.07	33.96
Iran	28.32	30.59
Source: World Steel Association		
Crude Steel Numbers are considered		

Top 10 Major consuming countries

Top 10 Major consuming countries (in Million Tonnes)		
Country	**2021**	2022
China	953.9	920.9
India	106.2	114.9
United States	97	94.5
Japan	57.4	55
South Korea	56	51.2
Russia & other CIS + Ukraine	58.7	51
Russia	43.9	41.7
Germany	35.5	31.6
Türkiye	33.4	30.7
Italy	26.6	24.9
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	2021	**Country**	2022
China	66.2	China	68.1
Japan	33.8	Japan	31.7
Russia	32.6	South Korea	25.5
South Korea	26.8	Germany	22.3
European Union	26	Türkiye	18
Germany	23.9	Russia	17.9
Turkey	22.1	Italy	16
India	20.4	Belgium	14.7
Italy	17.2	Brazil	12.1
Ukraine	15.7	India	12.1
Source: World Steel Association			

Top 10 Major Importing countries

Top 10 Major Importing countries (in Million Tonnes)			
Country	2021	**Country**	2022
European Union	48.1	United States	28.9
USA	29.7	Germany	21
China	27.8	Italy	20.2
Germany	23.3	Türkiye	17.4
Italy	20.8	China	17.1
Turkey	16.2	South Korea	13.7
Thailand	15.7	Thailand	13.4
Mexico	15.1	Belgium	12.5
South Korea	14.1	Poland	12
Poland	13.7	France	12
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

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

Factors which affected Steel prices in FY 2022-23

- Decrease in production of steel in 2022.
- The global economic slowdown, high energy prices and accelerating inflation
- The impacts of the Russia -Ukraine war on supply chain
- Sharp downturn in China due to an ailing real estate sector and strict COVID lockdown policies.

2. TRADING RELATED PARAMETER

a. Monthly and Annual traded volume

Month	Traded volume (In Kgs)
Apr-22	80,20,000
May-22	1,02,90,000
Jun-22	1,26,90,000
Jul-22	1,13,80,000
Aug-22	1,27,40,000
Sep-22	94,50,000
Oct-22	24,60,000
Nov-22	61,50,000
Dec-22	63,00,000
Jan-23	64,00,000
Feb-23	58,00,000
Mar-23	27,20,000
Total	**9,44,00,000**

b. Annual traded volume as proportion of total deliverable supply : 0.074%

- Annual Traded Volume (kgs): 9,44,00,000
- Deliverable Supply (kgs): 1,27,31,00,00,000

c. Annual traded volume as proportion of total annual production: 0.0778%

- Annual Traded Volume (kgs): 9,44,00,000
- Annual Production (kgs): 1,21,29,00,00,000

d. Annual average Open interest as proportion of total production: 0.0003%

- Annual Average OI (kgs): 3,40,000
- Annual Production (kgs): 1,21,29,00,00,000

e. Annual average Open interest as proportion of total deliverable supply: 0.00027%

- Annual Average OI (Kgs): 3,40,000

  Annual Supply (Kgs): 1,27,31,00,00,000

f. Monthly and Annual value of trade

Month	Value Of trade (In Crores)
Apr-22	47.47
May-22	55.25
Jun-22	61.27
Jul-22	56.87
Aug-22	63.37
Sep-22	46.27
Oct-22	12.19
Nov-22	27.83
Dec-22	29.20
Jan-23	32.00
Feb-23	28.29
Mar-23	13.44
Total	**473.46**

g. Monthly and Annual quantity of delivery

Month	Quantity of Delivery (In Kg)
Apr-22	-
May-22	10,000
Jun-22	-
Jul-22	80,000
Aug-22	-
Sep-22	-
Oct-22	-
Nov-22	-
Dec-22	-
Jan-23	-
Feb-23	-
Mar-23	-
Total	**90,000**

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h. Monthly and Annual value of delivery

Month	Value of Delivery (In Rs.)
Apr-22	-
May-22	4,90,400
Jun-22	-
Jul-22	39,99,200
Aug-22	-
Sep-22	-
Oct-22	-
Nov-22	-
Dec-22	-
Jan-23	-
Feb-23	-
Mar-23	-
Total	**44,89,600**

i. Monthly and Annual Average Open Interest (OI)

Month	Average Monthly OI (In Kg)
Apr-22	1,40,000
May-22	2,50,000
Jun-22	6,50,000
Jul-22	6,50,000
Aug-22	3,90,000
Sep-22	1,60,000
Oct-22	2,30,000
Nov-22	2,30,000
Dec-22	3,80,000
Jan-23	3,10,000
Feb-23	3,30,000
Mar-23	2,90,000

Annual Average OI = 3,40,000 kg

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j. Annual average volume to open interest ratio: 108.82%

- Average Traded Volume (Kgs): 3,70,000
- Average Open Interest (Kgs): 3,40,000

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

- Unique Members = 12
- 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)

- -

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

- 29.24

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 was 0.7806
- The ratio of Standard deviation for was 0.82

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 spot Futures prices was 0.7508
- The ratio of Standard deviation was 1.32

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

- The correlation between Exchange Futures and Exchange Spot prices was 0.9666
- The ratio of Standard deviation for the same period was 1.03

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 0.9714
- The ratio of Standard deviation for the same period was 1.64

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	5.01%	-5.49%	8.68%	-7.43%

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 – 5
- Instances of Contango – 3

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 2022-23

Commodity	Hedge Efficiency
Steel Billets	93.92%

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 2022-23

Commodity	Unit	Average Return of Basis (Unit)	Standard deviation
Steel Billets	Rs/MT	1.02	8.75

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 centres
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

SNO	Programme Type	Location	No of participants
1	DISCUSSION ON BSE STEEL BILLETS FUTURES CONTRACT	Webinar	26
2	BSE SUFIBLT	Webinar	15
3	Discussion on BSE steel billets futures contract	Webinar	25
4	SUFIBLT: Tool to Manage Price Risk and as Investment Avenue in association with IMC	Webinar	57
5	Steel Conference	Mumbai	450
6	PAC Meet HRC	Mumbai	18
7	Discussion on BSE Sufi Steel Futures Contract	Webinar	25
8	Steel Futures - Hedging	Webinar	35
9	Awareness Program on BSE SUFI Steel Billets Futures: A Perfect Tool to Hedge Price Volatility in association with IMC	Webinar	61

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 9 webinars exclusively for Steel along with IMC, SUFI for FY 22-23. 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, Pune, Nagpur, Bhavnagar & Ahmedabad Ludhiana , Jalna and Delhi etc

In addition to the above ,Business Team also met The Association of Industrial & Trade Organisation along with their 25 Officials in Ludhiana to discuss about the Steel Billets Contract Specification .

Exchange also participated in the Steel Conclave held in Raipur . The event was attended by more than 300 participants .

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

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

- One to one meeting with corporate clients.
- Awareness sessions at Delivery Centres and various other potential centres and regions.
- Product Specific Seminars/Webinars with all the Association

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