



**NSE ZINC**  
**DERIVATIVES**  
**Performance Review**  
**2023-24**

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## **Performance Review of Commodity Derivatives - FY 2023-24**

Zinc Futures, Zinc Mini Futures & Zinc Options on Futures

### **1. Background**

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

Zinc, a versatile metal, plays a pivotal role in various industries due to its corrosion-resistant properties and electrical conductivity. As one of the most widely used non-ferrous metals, zinc finds applications in galvanizing steel, alloy production, and battery manufacturing. Its importance in infrastructure development, particularly in construction and transportation sectors, underscores its economic significance. Moreover, zinc serves as a vital component in health supplements and agricultural fertilizers. With its diverse industrial applications and growing demand, zinc remains a crucial commodity in global markets, influenced by factors such as industrial production, economic growth, and supply dynamics.

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

**Table – Fundamentals & Balance Sheet (Thousand metric tons)**

<b>Global Scenario</b>	<b>2022</b>	<b>2023</b>
Opening Stocks	-	-
Production	12,500	12,000
Consumption	-	-
Closing Stocks	-	-

**Note:** Quantity in Thousand Tonnes

**Source:** MCS USGS 2024

<b>Indian Scenario</b>	<b>2021-22</b>	<b>2022-23</b>
Zinc Concentrate Production	15,94,087	16,70,207
Zinc Ores & Conc. Export	1,762	43,877
Zinc Ores & Conc. Import	721	1,041

**Note:** Quantity in Tonnes

**Source:** Ministry of Mines, Government of India (mines.gov.in)

### Top 10 major producing countries (Thousand metric tonnes)

Countries	2024
China	4040
Peru	1370
Australia	1240
India	840
United States	761
Mexico	744
Bolivia	518
Kazakhstan	312
Russia	300
South Africa	238

Source: MCS USGS 2024

### Top 10 major consuming countries (Thousand metric tons)

Country wise consumption data is not available in public domain.

### Top 10 major exporting countries (in US \$ million)

Name of Country	2022	2023
Netherlands	1621.40	1390.86
Australia	1203.83	1304.81
Spain	1324.98	1301.21
Canada	1561.29	1251.38
India	1355.65	888.39
Finland	862.89	814.92
Belgium	744.84	762.70
France	687.66	609.31
Kazakhstan	834.45	603.70
Germany	812.00	596.07

Source: UN Comtrade Database, HS Code: 79

### Top 10 major importing countries (in US \$ million)

Countries	2022	2023
USA	2644.04	2644.04
Germany	1870.39	1870.39
China	1194.78	1194.78

Italy	1032.52	1032.52
Netherlands	957.33	957.33
Türkiye	863.50	863.50
India	850.72	850.72
France	725.70	725.70
Belgium	540.26	540.26
Malaysia	503.73	503.73

**Source:** UN Comtrade Database, HS Code: 79

### Top Major Producing Mines in India (Thousand metric tonnes)

Name	Location	2023
Rampura Agucha Mine	Rajasthan	462.75
Sindesar Khurd Mine	Rajasthan	176.54
Zawar Mine	Rajasthan	116.44
Rajpura Dariba Mine	Rajasthan	53.12
Kayad Mine	Rajasthan	34.47

**Source:** Mining-technology.com

### c. Major changes in the policies governing trade in the spot markets of the commodity

The policy changes in India's zinc import and trade have significantly impacted local manufacturers, particularly small and medium-sized enterprises (SMEs). The increase in customs duty on primary zinc products has protected domestic manufacturers from international competition, enhancing their market position. This protectionist measure has led to increased demand for local zinc products. The government's focus on exports through the Foreign Trade Policy has incentivized manufacturers to scale up production and improve quality to meet international standards. The Interest Equalization Scheme has provided financial support to exporters, enabling them to offer competitive pricing in the global market. District-level export hubs have encouraged local manufacturers to explore new markets and diversify their customer base. Automation and IT-based initiatives have streamlined the export process, making it easier for manufacturers to navigate the complexities of international trade. The reduction in fee structures has made it more affordable for MSMEs to access export benefits and participate in the global zinc market. The policy's emphasis on compliance with international regulations and integration with export control regime countries has led to an overall improvement in the quality of Indian zinc products, enhancing India's reputation as a reliable source of high-quality zinc in the international market.

#### **d. Geopolitical issues in the commodity and its impact on Indian scenario**

The trade of zinc in India between April 2023 and March 2024 was influenced by a complex interplay of geopolitical issues. The ongoing Russia-Ukraine conflict, which has persisted into 2024, has led to widespread economic sanctions and disruptions in global trade patterns, affecting the availability and prices of commodities, including zinc. Additionally, tensions in the Middle East, particularly the conflict in the Gaza Strip, have had ripple effects on global markets, creating uncertainties that can affect the trade of metals like zinc. India's trade relations with the US faced challenges due to allegations involving Indian officials, which could potentially impact bilateral trade agreements and negotiations.

Furthermore, the crisis in the Maldives, with the new government's "India Out" campaign, has strained relations in the region, possibly affecting India's trade routes and security concerns in the Indian Ocean, which are vital for the transportation of zinc and other commodities. The reduction in net imports of oil, chemicals, ores, and minerals, including zinc, has been attributed to India's narrowing trade deficit in FY24, despite the geopolitical challenges. This was partly due to the diversification of India's trade partners and the adoption of new trade routes to circumvent disrupted areas like the Red Sea route.

The Indian government's initiatives, such as the Production Linked Incentive (PLI) scheme and "Make in India" efforts, have also played a role in mitigating the impact of these geopolitical issues on the trade of zinc. By promoting domestic production and export of various goods, including electronic items where zinc is used, India has managed to maintain a level of trade resilience. However, the traditional labor-intensive sectors, which also use zinc, such as marine products and textiles, have seen a decline, indicating a need for sector-specific support to withstand global geopolitical pressures.

## **2. Trading related parameter**

NSE had the following Zinc derivatives available for trading on its Commodity Derivatives Segment in FY 2023-24.

- Zinc Futures
- Zinc Mini Futures
- Zinc Options on Futures

### **a. Monthly and Annual traded volume (quantity in appropriate units)**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

### **b. Annual traded volume as proportion of total deliverable supply (quantity in appropriate units)**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

### **c. Annual traded volume as proportion of total annual production (quantity in appropriate units)**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**d. Annual average Open interest as proportion of total production**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**e. Annual average Open interest as proportion of total deliverable supply**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**f. Monthly and Annual value of trade (in Rs. Crores)**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**g. Monthly and Annual quantity of delivery (in appropriate units)**

The deliveries for Zinc derivatives in FY 23-24 were NIL.

**h. Monthly and Annual value of delivery (in Rs. Crores)**

The deliveries for Zinc derivatives in FY 23-24 were NIL.

**i. Monthly and Annual Average Open Interest (OI) (in appropriate units)**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**j. Annual average volume to open interest ratio**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**n. Algorithmic trading as percentage of total trading**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

**o. Delivery defaults**

**i. Number of instances**

**ii. Quantity involved**

**iii. Value involved**

The deliveries for Zinc derivatives in FY 23-24 were 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 traded volume for Zinc derivatives in FY 23-24 was NIL.

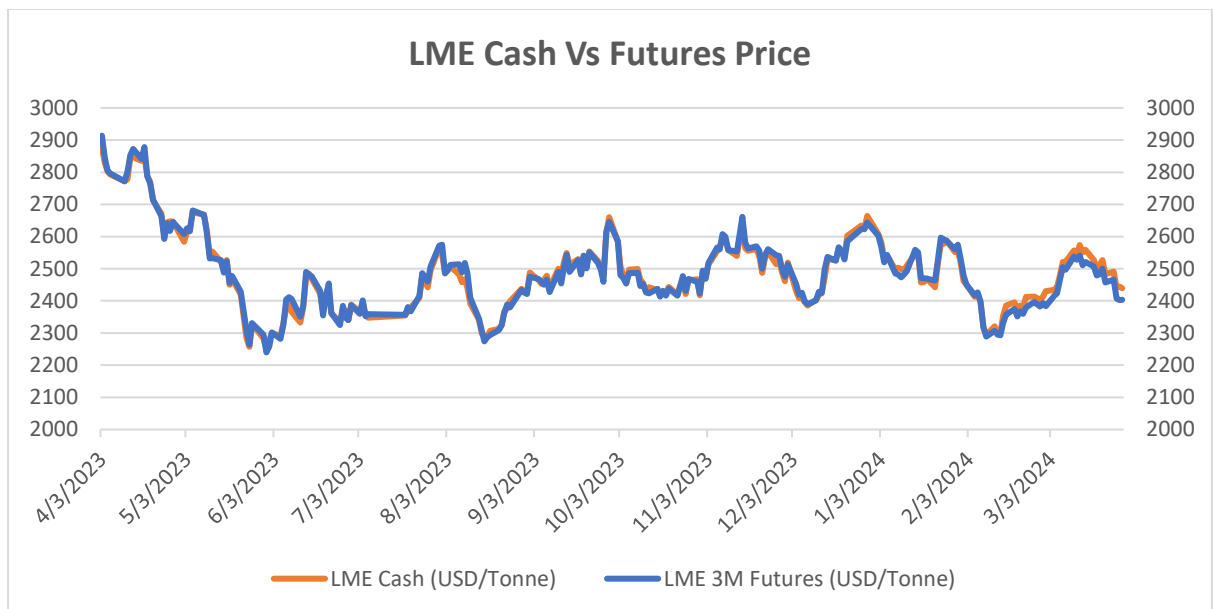
#### b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).

The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

The traded volume for Zinc derivatives in FY 23-24 was NIL.

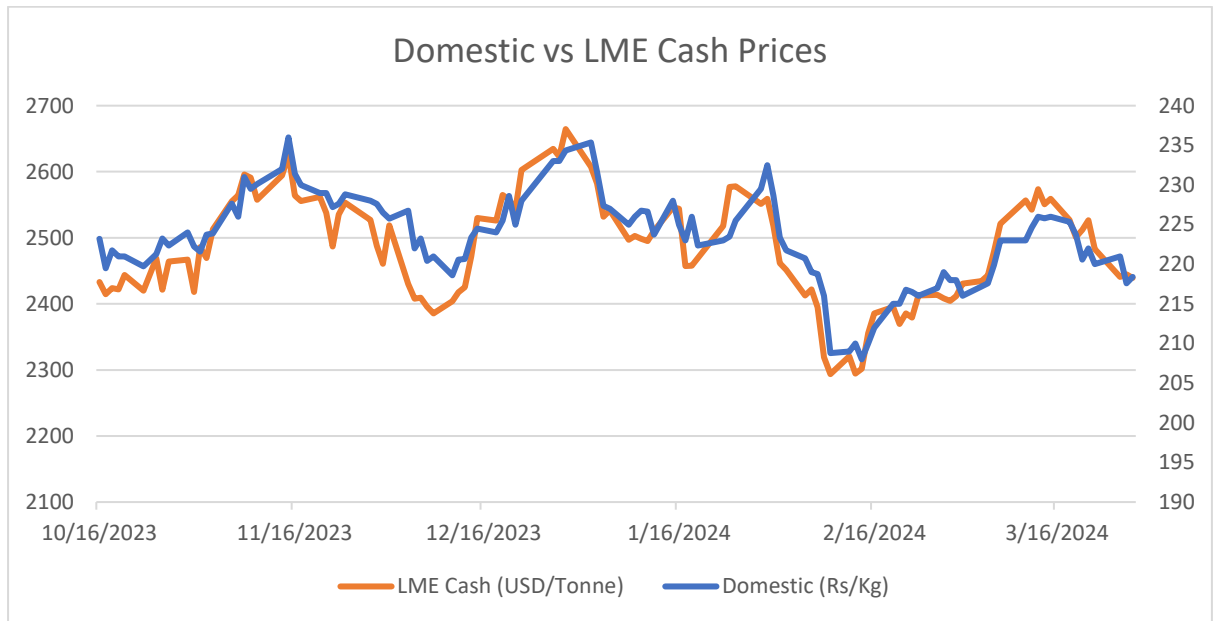
#### d. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).



Correlation: 99% | Ratio of Std Deviation: 0.97



- 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.



Correlation: 89% | Ratio of Std Deviation: 1.30

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

The traded volume for Zinc derivatives in FY 23-24 was NIL.

Commodity	Max Volatility in Futures Prices (%)	Min Volatility in Futures Prices (%)	Max Volatility in Spot Prices (%)	Min Volatility in Spot Prices (%)
Zinc	NA	NA	3.33	0.02

Volatility calculation:  $(\text{Day} - \text{Previous day's price}) / \text{Previous day's price}$

- 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.

The traded volume for Zinc derivatives in FY 23-24 was NIL.

#### **4. Other 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.**

The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

Zinc is the fourth most widely used metal across the globe, trailing only steel, aluminium and copper. The country has the self-sufficiency in respect of zinc. The major physical markets of Zinc are Panvel, Jalandhar, Faridabad, Raipur, Vadodara, etc. For NSE Zinc derivatives, Thane is the primary delivery center.

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

Major physical markets data provided in the point 4b. The traded volume for Zinc derivatives in FY 23-24 was NIL.

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

For education initiatives, the exchange has conducted 411 awareness campaigns across INDIA covering all the commodities available on the NSE platform. These programs were attended by more than 15,000 stakeholders.

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

NSE is constantly striving to encourage hedgers to participate in the Zinc contracts. We have value chain participants and associations such as Bombay Metal Exchange, Hindalco Ltd, Vedanta, Rashtriya Metal industries, etc. as part of our Base Metals PAC, who guide us on how to get more participation from physical market participants.

- 5. Any other information to be disclosed as deemed important by the exchange or as suggested by the PAC.**