



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

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

### Nickel Futures

#### 1. Background

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

Nickel is the main alloying metal required in the production of certain types of stainless steel. The strength and life span of products manufactured using stainless steel are superior to those produced by using non-stainless steel. Nickel is primarily used (65 per cent) in the manufacturing of stainless steel. About 18 per cent of the metal is used to produce other steel and non-ferrous alloys. Around 7 percent of nickel is used in electroplating, with about 6 per cent being used in coins and chemicals. It is also used in the production of superalloys which are used extensively in the aerospace industry. Nickel-cadmium and other nickel alloys are used to make batteries for electronic gadgets—mobile phones, computers, digital cameras, and other such products that need small, lightweight and high-capacity power sources.

##### 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 (In Tonnes)**

<b>Global Scenario</b>	<b>2022</b>	<b>2023</b>
Opening Stocks	-	-
Production	32,70,000	36,00,000
Consumption	-	-
Closing Stocks	-	-

**Source:** MCS USGS 2024

**Table - Indian Balance Sheet (In Tonnes)**

<b>Indian Scenario</b>	<b>2022-23</b>	<b>2023-24</b>
Nickel Production	-	-
Nickel Import	32,076.30	33,355.79
Nickel Export	2310.76	360.09
Nickel Consumption	29,765.54	32,995.70

**Source:** Ministry of Commerce and Industry, HS Code – 75021000

Consumption: Import - Export

### Top 10 major producing countries (In Tonnes)

Countries	2023	2024
Indonesia	1580000	1800000
Philippines	345000	400000
New Caledonia	200000	230000
Russia	222000	200000
Canada	143000	180000
Australia	155000	160000
China	114000	110000
Brazil	88500	89000
United States	17500	17000
Other Countries	404000	380000

**Source:** MCS USGS 2024

### Top 10 major consuming countries (In Tonnes)

Country wise consumption data is not available in public domain.

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

Name of Country	2022	2023
Canada	5239.56	4313.47
USA	3142.63	4071.62
United Kingdom	1958.75	2346.77
Germany	2056.24	2337.56
Norway	2060.04	2082.57
Finland	1730.65	1790.70
China	1184.72	1520.45
Japan	1011.39	1452.74
Netherlands	1338.20	1414.98
France	915.10	1218.25

**Source:** UN Comtrade Database, HS Code: 75

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

Countries	2022	2023
China	12744.92	11571.75
USA	4497.25	4432.56
Japan	4347.17	4185.44
Norway	3219.57	2743.69
Germany	2726.12	2619.05
United Kingdom	1539.79	1754.86
France	1543.38	1632.03
Italy	1240.86	1475.17
Netherlands	1544.09	1387.38
India	1229.14	1384.09

**Source:** UN Comtrade Database, HS Code: 75

### Top producing states in India

Since Nickel is a 100% imported commodity, it is not produced in India.

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

In the fiscal year 2023-24, India witnessed a significant transformation in its trade policies, particularly concerning the import and trade of nickel. The government introduced new regulations aimed at bolstering the domestic market and reducing dependency on imports. These changes were part of a broader strategy to enhance India's manufacturing sector, especially in industries that rely heavily on nickel, such as stainless steel and battery manufacturing for electric vehicles. The policy revisions included increased import duties on certain grades of nickel, which was a move to protect local miners and producers. Additionally, the government launched incentives for companies involved in the recycling of nickel-containing products, promoting a circular economy within the metal sector. These policy shifts were in line with the government's vision of self-reliance and were expected to encourage the development of a robust and self-sustaining nickel value chain in India. Furthermore, the export of nickel alloys saw a boost due to the implementation of quality standards that aligned with international benchmarks, opening up new markets for Indian producers. The overall trade deficit improved significantly, indicating a positive impact from these policy changes on India's trade balance. The government's focus on export promotion initiatives, such as the New Foreign Trade Policy launched in April 2023, played a crucial role in this improvement by providing a more structured and supportive framework for exporters.

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

The trade of nickel in India between April 2023 and March 2024 was influenced by a complex interplay of geopolitical factors. The ongoing Russia-Ukraine conflict and the war in the Gaza Strip had significant global repercussions, affecting diplomatic relations and international trade policies. India, while advocating for peace and a two-state solution to the Israel-Palestine conflict, faced challenges in maintaining its strategic autonomy amidst these global tensions.

Moreover, the "India Out" campaign in the Maldives led to a request for the withdrawal of Indian military personnel and the termination of a water survey pact, indicating a shift in regional alliances and collaborations. These events, coupled with China's assertive behaviour, created an environment of uncertainty and volatility in international relations, directly impacting the trade of critical minerals like nickel. The nickel market itself underwent fluctuations, with prices reaching record highs in March 2023 but experiencing a decline in the following months due to weak demand from China's battery sector and an increase in supply, particularly from Indonesia and the Philippines. This price volatility was further exacerbated by the protectionist policies and trade flow disruptions caused by geopolitical tensions. India, not being one of the top nickel-producing countries, had to navigate these turbulent market conditions and the shifting geopolitical landscape to secure its nickel supply, essential for its burgeoning industries, including the production of electric vehicles and other clean energy technologies.

The intricate dynamics of international relations and trade policies during this period underscore the delicate balance that India had to maintain to safeguard its economic interests while navigating the geopolitical challenges that arose. The situation highlighted the need for India to diversify its trade partnerships and develop a more resilient supply chain for critical minerals like nickel to withstand global geopolitical shifts. The interdependence of global markets and the influence of geopolitical events on commodity trade, such as that of nickel, demonstrate the complexities that nations face in an interconnected world economy.

## **2. Trading related parameter**

NSE had the Nickel Futures available for trading on its Commodity Derivatives Segment in FY 2023-24.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The deliveries for Nickel Futures in FY 23-24 were NIL.

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

The deliveries for Nickel Futures in FY 23-24 were NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures 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 Nickel Futures 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 Nickel Futures 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 Nickel Futures in FY 23-24 was NIL.

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

The traded volume for Nickel Futures in FY 23-24 was NIL.

**o. Delivery defaults**

**i. Number of instances**

**ii. Quantity involved**

**iii. Value involved**

The deliveries for Nickel Futures 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 Nickel Futures in FY 23-24 was NIL.

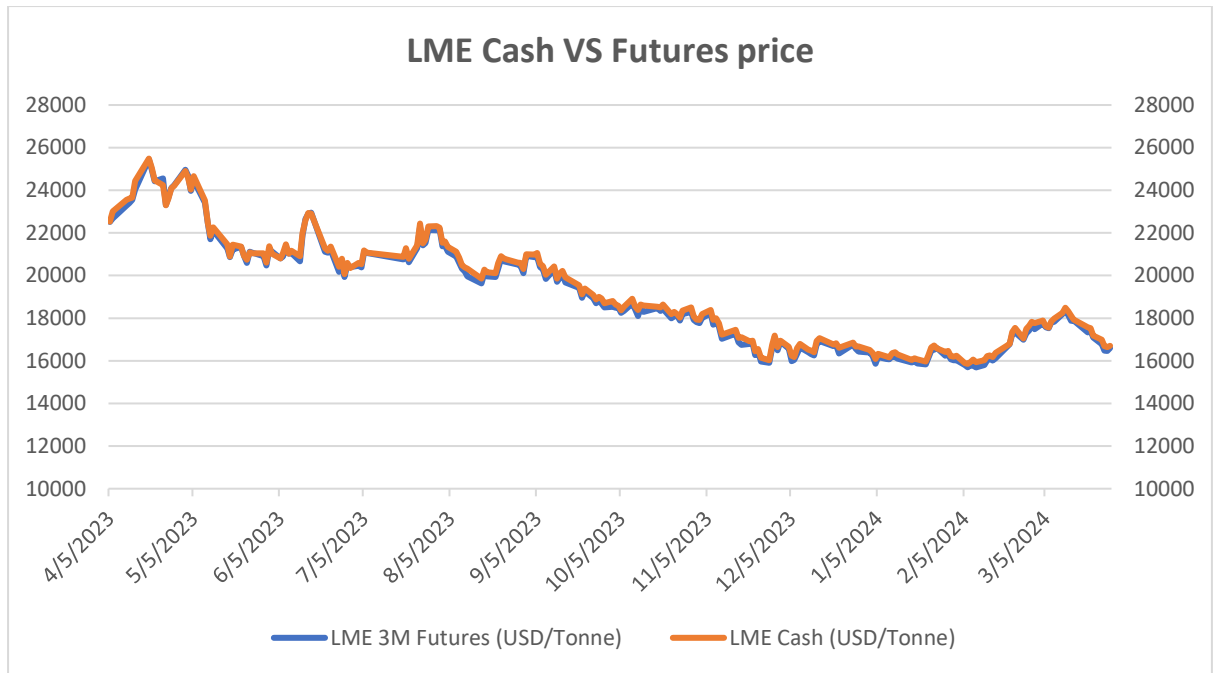
**b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).**

The traded volume for Nickel Futures in FY 23-24 was NIL.

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

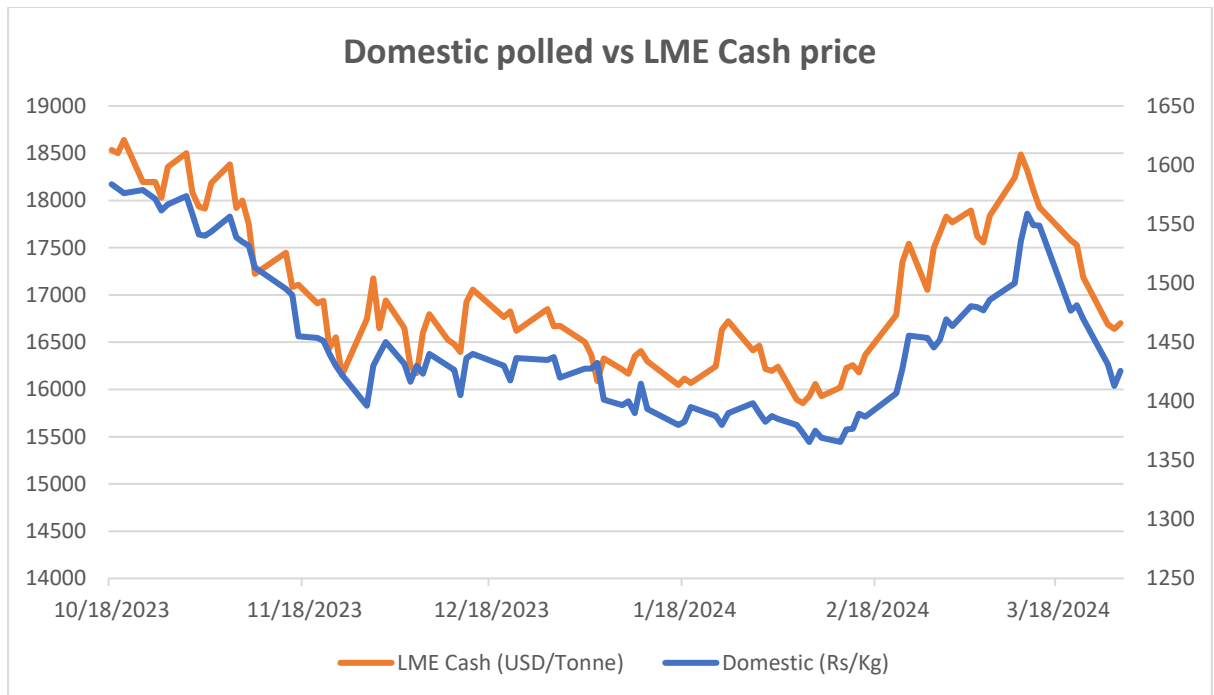
The traded volume for Nickel Futures in FY 23-24 was NIL.

**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: 0.98

**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.**



Correlation: 93% | Ratio of Std Deviation: 1.43



**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 Nickel Futures in FY 22-23 was NIL

Commodity	Max Volatility in Futures Prices (%)	Min Volatility in Futures Prices (%)	Max Volatility in Spot Prices (%)	Min Volatility in Spot Prices (%)
Nickel	NA	NA	2.42	0.01

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 Nickel Futures 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 Nickel Futures 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).**

Nickel is used in many specific and recognisable industrial and consumer products including stainless steel, alnico magnets, coinage, for filters & binders, rechargeable batteries, foundry, electric guitar strings, microphone capsules and special alloys. Thus, Nickel is consumed in industrial areas across the country such as Delhi, Ahmedabad, Mumbai, Kolkata, Chennai, etc. NSE has a delivery center in Thane (Mumbai) for Nickel Futures.

**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 Aluminium 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 Nickel 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.**