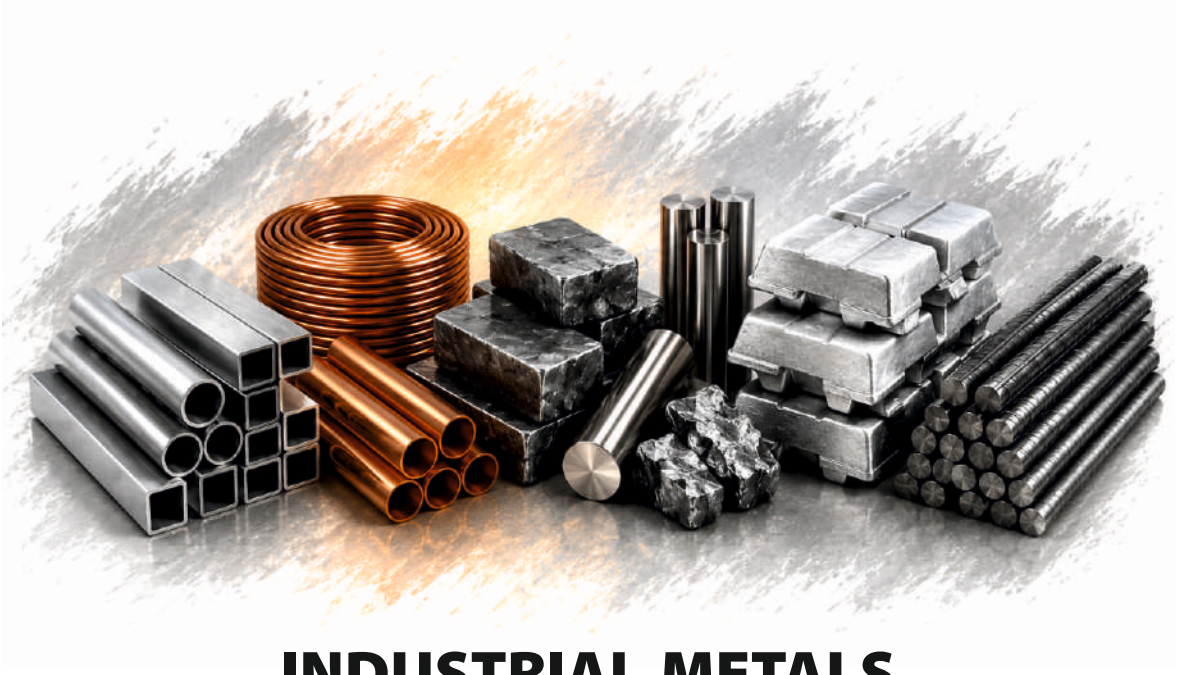


INDUSTRIAL METALS

INDUSTRIAL METALS

Key industrial metals such as copper, aluminium, zinc, lead and nickel are the foundation of industrial development and play a vital role in sectors including construction, automobiles, power, renewable energy, electronics and defence. As the global economy transitions towards cleaner energy and digital infrastructure, demand for these metals is expected to remain robust over the medium to long term.

The global metals market has witnessed significant changes over the last four years. The Russia–Ukraine conflict disrupted supplies of energy and raw materials, resulting in higher production costs and temporary shutdowns of several aluminium and zinc smelters in Europe. These developments reduced refined metal availability and increased dependence on imports from Asia and the Middle East. Although energy prices have moderated since their 2022 peak, production costs remain above historical averages, while global metal prices are now more sensitive to geopolitical developments.

A major development has been the growing influence of Indonesia in the global nickel industry. Through its ban on exports of unprocessed nickel ore and policies encouraging domestic processing, Indonesia has become the world's largest producer of nickel products. Massive investments in smelters and battery material facilities in the country have reshaped global supply chains and significantly influenced international nickel prices. Today, Indonesia is the most important country in determining global nickel market dynamics.

China continues to dominate the global base metals market, accounting for nearly half of worldwide consumption of copper, aluminium and zinc. While weakness in China's real estate sector reduced demand from construction, this has been partly offset by strong investments in renewable energy, electric vehicles, battery manufacturing and power transmission. Consequently, government stimulus measures and manufacturing activity in China continue to influence global metal prices.

India is emerging as one of the fastest-growing consumers of industrial metals. Rapid expansion in infrastructure, renewable energy, railways, electric mobility and manufacturing is expected to increase domestic demand for copper, aluminium and zinc over the coming decade. However, India continues to rely on imports for several critical metals, particularly refined copper and nickel, exposing industries to international price volatility. The country's resource base includes significant reserves of bauxite, zinc, lead and iron ore, providing a strong foundation for future growth.

GLOBAL DEVELOPMENTS SHAPING THE BASE METALS MARKET

The global industrial metals market has undergone significant changes since 2022. Geopolitical conflicts, changing trade policies, the clean energy transition and shifts in Chinese demand have fundamentally altered supply chains and price dynamics. These developments have increased the importance of effective price risk management through commodity derivatives.

- **Russia–Ukraine War**

The Russia–Ukraine conflict significantly disrupted global metal trade. Sanctions on Russia, a major producer of aluminium, nickel and copper, redirected exports toward Asia while European and North American buyers reduced purchases. At the same time, soaring energy prices forced several European aluminium and zinc smelters to cut production or shut down, reducing refined metal supply. Although energy costs eased in 2024–25, many smelters have not fully resumed operations, permanently changing global supply chains.

- **Middle East Tensions**

Geopolitical tensions in the Middle East have increased risks to global shipping and energy markets. Any disruption in the Strait of Hormuz raises fuel, freight and insurance costs, increasing production and transportation expenses for base metals. These uncertainties have encouraged industries to diversify supply sources, maintain larger inventories and use derivatives for price protection.

- **Indonesia's Nickel Expansion**

Indonesia has transformed the global nickel industry by banning exports of unprocessed nickel ore and promoting domestic processing. Supported by major investments, the country now accounts for more than half of global primary nickel production and is a key supplier to the electric vehicle battery industry. Increased production has kept nickel prices under pressure despite strong long-term EV demand, while also creating supply concentration risks.

- **China's Influence**

China remains the world's largest consumer of industrial metals. Although weakness in the property sector reduced demand for construction-related metals, government investment in renewable energy, electric vehicles, power infrastructure and advanced

manufacturing has supported consumption of copper and aluminium. As a result, Chinese economic data and policy announcements continue to drive global metal prices.

- **Zinc Market Developments**

The European energy crisis initially tightened refined zinc supply as smelters reduced output. More recently, improved mine production has increased concentrate availability. While zinc production has gradually recovered, the market remains sensitive to energy costs, environmental regulations and Chinese demand.

The global base metals market is increasingly influenced by geopolitical developments, government policies and the clean energy transition rather than traditional economic cycles alone. Russia–Ukraine conflict altered global trade flows, Indonesia transformed the nickel industry, China's policy decisions continue to determine demand, and energy costs remain a major factor affecting aluminium and zinc production. These structural changes have increased price volatility and reinforced the importance of well-developed commodity derivatives markets for managing business risks.

INDIA'S BASE METAL SECTOR

India is one of the fastest-growing consumers of base metals, supported by rapid urbanisation, infrastructure development, manufacturing expansion and the transition towards clean energy. Government initiatives such as Make in India, the National Infrastructure Pipeline (NIP), PM Gati Shakti, alongside the expansion of renewable energy capacity and the electric vehicle (EV) ecosystem, are expected to sustain strong demand for industrial metals over the coming decade.

- **India's Production and Import Dependence**

India has a strong mineral resource base and is among the world's leading producers of aluminium, zinc and steel. According to the Ministry of Mines, Government of India, during 2025–26, total aluminium production reached about 4.257 million tonnes, refined copper production increased to around 7.04 lakh tonnes, while zinc production exceeded 8.51 lakh tonnes and lead production reached 1.97 lakh tonnes.

Despite this progress, India continues to depend on imports for several critical metals. The country is a net importer of refined copper and almost entirely dependent on imports for nickel, making domestic industries vulnerable to fluctuations in global prices, freight costs and supply disruptions. As India's manufacturing sector expands, ensuring stable access to these metals will become increasingly important.

- **Energy Transition to Drive Long-Term Demand**

The transition towards a low-carbon economy is expected to significantly increase demand for base metals over the next decade. The biggest increase is likely to happen in copper and aluminium because they are widely used in renewable energy projects, electric vehicles (Evs), battery storage systems and electricity transmission networks.

An electric vehicle requires substantially more copper than a conventional internal combustion engine vehicle. Similarly, large-scale solar and wind power projects require extensive quantities of aluminium and copper for cables, transformers, transmission lines and supporting infrastructure. As countries continue investing in clean energy to meet their climate commitments, demand for these metals is expected to remain strong.

According to the International Energy Agency (IEA), the shift towards clean energy technologies is accelerating demand for several critical and industrial metals, making reliable supply chains and effective price risk management increasingly important.

- **AI, Data Centres and Grid Expansion**

A relatively new source of demand has emerged from the rapid growth of artificial intelligence (AI) and cloud computing. Large AI-enabled data centres consume enormous amounts of electricity and require significant investments in power infrastructure.

Meeting this growing electricity demand will require expansion of power generation, transmission and distribution networks. Copper is indispensable for electrical wiring, transformers and substations, while aluminium is widely used in overhead transmission lines because of its lightweight properties.

Although AI is often viewed as a digital technology, its expansion is creating substantial physical demand for industrial metals through investment in electricity infrastructure.

- **India's Manufacturing Opportunity**

Global manufacturers are increasingly diversifying supply chains to reduce dependence on a single country. India has emerged as an attractive destination because of its large domestic market, improving infrastructure, favourable policy environment and expanding manufacturing base. Government initiatives such as Make in India, Production Linked Incentive (PLI) Schemes, PM Gati Shakti, National Logistics Policy, and the National Critical Minerals Mission are expected to support long-term industrial growth. As manufacturing expands, domestic consumption of aluminium, copper, zinc and nickel is also expected to increase steadily. This presents an opportunity not only for physical metal production but also for developing a stronger domestic derivatives market that reflects Indian demand and supply conditions.

EVOLUTION OF METAL DERIVATIVES IN INDIA

India's commodity derivatives market has evolved significantly over the past two decades. Trading in base metal

futures has steadily gained acceptance among manufacturers, traders, importers and exporters. The market has gradually developed into an important platform for hedging and price discovery.

MCX currently offers futures contracts in aluminium, copper, zinc, lead, nickel and steel rebar, along with mini contracts in aluminium, lead and zinc. Options are available on copper and zinc futures, while the MCX METLDEX provides an index-based exposure to the base metals segment.

During the year 2025–26, around 92 lakh contracts (28% growth Y-o-Y) were traded in India's base metal derivatives market, with a notional turnover of about ₹18.43 lakh crore (114% Y-o-Y growth), reflecting growing participation across the value chain. These commodities together witnessed cumulative delivery of 5.6 lakh tons up to March 2026, while delivery during the year 2025-26 was 95,782 tons. The market is now one of the most active commodity segments in the country, reflecting growing awareness of price risk management among industry participants.

Looking ahead, India's aspiration to become a global manufacturing hub presents an opportunity to deepen its base metals ecosystem. Expanding the range of derivatives products, improving warehousing infrastructure, encouraging greater participation by industrial users and developing robust domestic price benchmarks will strengthen the country's risk management framework. A vibrant derivatives market can support investment, improve price discovery and enhance the competitiveness of Indian manufacturing in an increasingly uncertain global environment.

ALUMINIUM
FUNDAMENTALS

Aluminium fundamentals ('000 tonnes)

	2020	2021	2022	2023	2024	2025
World Scenario						
Primary Aluminium Production	65,325	67,092	69,038	70,581	72,800	74,000
Production capacity	76,000	76,000	78,500	79,000	78,800	79,700

Source: International Aluminium Institute, USGS; data downloaded on 14th June 2026.

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Indian Scenario						
Production	3,638	3,586	4,026	4,073	4,159	4,016
Imports	2,152	2,060	2,334	2,542	2,737	N/A
Exports	2,371	2,736	3,454	2,871	2,762	N/A

Source : Ministry of Mines, Ministry of Commerce & Industry; data downloaded on 10th June 2026.

	2020	2021	2022	2023	2024	2025
Major Producers of Primary Aluminum						
China	37,100	38,900	40,200	41,000	44,000	45,000
Russia	3,640	3,640	3,720	3,800	3,880	3,900
Canada	3,120	3,140	2,770	3,000	3,300	3,300
India	3,560	3,970	4,100	4,100	4,200	4,200
UAE	2,520	2,540	2,650	2,700	2,690	2,700

Source: USGS Mineral Commodity Summaries; data downloaded on 14th June 2026.
**Estimated, N/A : Not available.*

Major Importing and Exporting Countries

	2020	2021	2022	2023	2024	2025
Major Importers (USD billion)						
USA	19.1	28.7	36.7	28.3	28.3	26.4
Germany	15.0	21.3	26.7	22.8	20.4	22.8
China + Hong Kong SAR	6.5	9.6	10.6	8.2	15.0	NA
Mexico	6.1	8.5	9.9	8.7	10.2	10.5
Rep of Korea	8.1	12.5	11.7	12.3	8.7	9.1
Total	160.2	200.9	232.6	184.3	218.06	182.17
Major Exporters (USD billion)						
China	24.6	34.7	42.1	34.9	39.5	NA
Germany	14.8	18.8	21.1	19.4	18.4	20.7
USA	9.4	12.0	14.5	14.3	14.4	13.6
Canada	8.3	12.2	14.1	12.6	12.8	12.1
Italy	5.3	9.1	9.6	7.3	8.7	9.4
Total	161.6	204.7	229.4	190.6	212.92	154.00

Source: UN Comtrade Database (HS code 76); data downloaded on 24th June 2026.



ALUMINIUM
Fundamentals

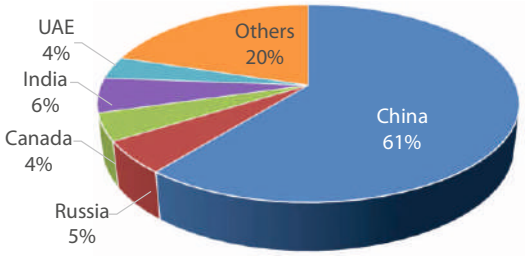
ALUMINIUM
FUNDAMENTALS

Major Import Sources and Export Destinations for India (Value in Rs. Cr)

2020-21		2021-22		2022-23		2023-24		2024-25		2025-26	
Country	Value	Country	Value	Country	Value	Country	Value	Country	Value	Country	Value
Imports Sources (HS Code 76)											
China P Rp	5,431	China P Rp	7,634	China P Rp	11,205	China P Rp	12,202	China P Rp	16,846	China P Rp	22,806
USA	3,692	USA	7,268	USA	8,432	USA	7,985	USA	7,686	USA	8,509
UAE	2,503	UAE	3,666	UAE	4,079	UAE	4,387	UAE	5,486	UAE	7,098
Malaysia	1,942	Saudi Arab	2,935	UK	3,305	Malaysia	2,869	Malaysia	4,357	Malaysia	5,939
UK	1,665	UK	2,752	Saudi Arab	3,256	UK	2,703	Saudi Arab	3,430	Saudi Arab	3,742
Total	29,913	Total	45,289	Total	56,291	Total	56,827	Total	69,988	Total	88,434
Exports Destinations (HS Code 76)											
Malaysia	9,088	Korea Rp	11,333	USA	8,812	Malaysia	9,074	U S A	7,286	U S A	9,694
Korea Rp	7,990	China P Rp	9,466	Korea Rp	7,417	USA	7,831	Turkey	6,460	Korea Rp	5,179
USA	3,751	USA	8,267	Netherland	6,825	Korea Rp	7,556	Korea Rp	4,950	Vietnam	4,657
China P Rp	2,986	Turkey	6,643	Malaysia	6,353	Japan	3,427	Mexico	3,242	China P Rp	3,463
Taiwan	1,608	Italy	501	Mexico	5,270	China P Rp	2,821	Japan	2,903	Japan	3,440
Total	42,776	Total	79,169	Total	70,931	Total	63,347	Total	57,738	Total	62,194

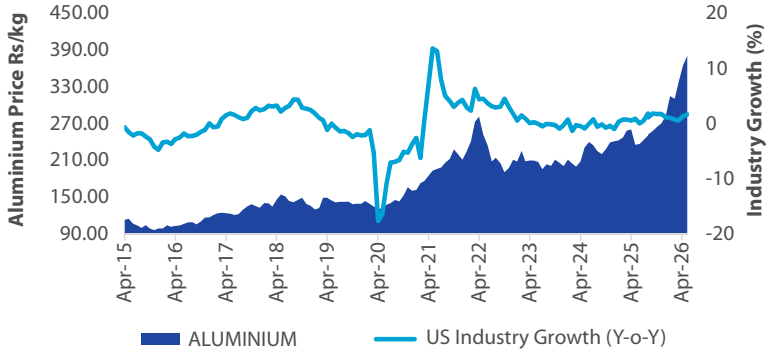
Source: Export-Import Data Bank, Ministry of Commerce, GoI; data downloaded on 10th June 2026.

Aluminium Production 2025



Source: USGS Mineral Commodity Summaries

Aluminium Prices and US Industry Growth (%)



Source: MCX and Federal Reserve Bank of St. Louis



ALUMINIUM
Fundamentals