NORNICKEL

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Quintessentially Copper

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KEY TAKEAWAYS

Over the past six months, copper prices have traded within an unusually wide range. The LME Copper Cash price increased from its December low of $11,285/t to a peak of $14,097/t in mid-May, implying a fluctuation of almost $2,800/t, broadly comparable with the full-year range recorded in 2025. The growth from the December low was driven primarily by shifting expectations around US monetary policy and front-loading, driven by heightened geopolitical risk linked to Iran and the broader Persian Gulf region. The transmission channel has been mainly indirect: risks to Persian Gulf energy flows have raised concerns over higher fuel costs, stronger inflationary pressure, reduced scope for Fed rate cuts and weaker global growth expectations. Since the conflict has not directly disrupted copper supply, we view it primarily as a short-term macroeconomic demand-side as well as sentiment risk for copper use and investment rather than a structural constraint on the market, unless the conflict leads to a sustained disruption of energy flows through the Strait of Hormuz.

Recent price formation has increasingly reflected regional market dislocations rather than the headline refined balance or aggregate exchange inventories alone. The US market continues to price in potential tariff-related risks, supporting a regional premium, while the China import arbitrage has also remained open. These two sources of regional physical demand have attracted metal and contributed to the redistribution of inventories between markets. As a result, total exchange stocks have increased, but readily available LME inventories remain low, making the location and accessibility of stocks more relevant than the global inventory figure.

The concentrate market remains the tightest segment of the copper value chain. Benchmark TC/RCs for 2026 were settled at $0/t and are likely to remain under pressure as smelting capacity still competes for scarce concentrate supply. However, weak TC/RCs alone do not imply widespread smelter closures. Smelter margins are also supported by by-product credits, particularly sulphuric acid, as well as by commercial arrangements and policy incentives to maintain utilisation rates. As a result, the first adjustment is more likely to come through tighter procurement, delayed ramp-ups and scheduled maintenance rather than broad capacity cuts.

In SX-EW operations, sulphuric acid plays a different role: while smelters can benefit from acid sales, SX-EW producers use acid as a leaching reagent, making it a cost and availability risk. Higher acid prices or tighter supply could raise costs, reduce leaching efficiency and constrain cathode output. The risk is material but concentrated: SX-EW accounts for around 21% of global copper mine production, or roughly 4.8 Mt in 2024. The main exposure is in SX-EW-heavy regions, particularly the DRC and potentially Chile. These pressures may become more visible in H2 2026, given the lag between sulphur supply disruptions and downstream acid availability.

Chinese smelters have mainly responded to the concentrate shortage through more cautious procurement, production-discipline messaging and delays to selected expansion projects, rather than through large-scale permanent curtailments. The immediate impact on refined supply has therefore remained limited. This reflects the broader smelter margin structure: even when TC/RCs are close to zero or negative, acid credits, integrated business models and local policy support can keep operations running. Hence, in China, supply-discipline statements should be read mainly as a sign of margin pressure and stronger bargaining discipline, not as evidence of an imminent closure cycle.

We estimate that the concentrate market will remain undersupplied in 2026, with a deficit of 751 kt, keeping pressure on processing margins. Any further adjustment is more likely to take the form of delayed ramp-ups, extended maintenance or selective reductions at less integrated assets. Clearer examples of capacity rationalisation have so far been more visible outside mainland China, including in Japan, where some producers have been shifting their raw-material mix towards recycled feedstock.

On **mine supply**, global copper mine production is expected to increase only modestly in 2026, to around 23.6 Mt, up about 1.6% y/y. Cobre Panama remains a structural absence from the concentrate market, although the lack of a near-term restart appears to have been largely priced in. More relevant risks now relate to disruptions at Grasberg, the slower-than-expected recovery at Kamoa-Kakula, infrastructure and logistics constraints in the DRC, and declining ore grades and operational complexity in Chile and Peru.

The project pipeline supports the medium-term mine supply outlook, but is unlikely to ease near-term constraints. On a probability-adjusted basis, projects are expected to account for only around 0.3 Mt of mine production in 2026 and 1.0 Mt in 2027, with a more meaningful contribution expected only from 2028 onwards.

Sulphuric acid availability should also be included in this risk set, as tighter acid supply or higher acid prices could affect SX-EW output through both cost and physical-availability channels. Overall, these factors continue to limit the industry's ability to respond quickly to higher prices.

Copper **demand** has remained relatively resilient despite weak macroeconomic signals. Industry contacts among cable and wire producers point to solid order books, indicating that end-users have not significantly reduced purchasing activity despite elevated copper prices. Demand continues to be supported by investment in power grids, electrification, renewable energy, battery manufacturing, energy storage and the expansion of AI-related data-centre infrastructure. Weakness in China's property sector and European manufacturing remains a constraint, but it has been offset by growth in power, digital and infrastructure-related segments.

Since our latest issue, our refined copper balance has shifted from an expected deficit to a moderate surplus, primarily reflecting an upward revision to refined supply. 2025 demand remains unchanged at 27.6 Mt, while refined supply is now estimated at 28.3 Mt, increasing the surplus to 0.67 Mt. However, this surplus should be interpreted with caution, as a significant part of the apparent surplus was absorbed by US inventory accumulation rather than reflecting a genuinely loose market. In 2025, around 600 kt of additional refined copper was effectively pulled into the US market. For 2026, the balance has also been revised from a previously expected deficit of 118 kt to a surplus of 0.25 Mt, as refined supply is now expected to be 28.6 Mt with demand reaching 28.3 Mt. However, the scale of US stockbuilding materially changes the interpretation of this balance. The estimated 450-500 kt of additional US inflows already accumulated in Jan-Apr 2026 is larger than the

projected full-year headline surplus of 0.25 Mt. This suggests that the apparent surplus is being absorbed by tariff-driven and investment-related inventory accumulation, while the underlying stock-adjusted refined market is likely tighter and may in fact be in deficit.

The main reason behind this revision is that tight concentrate availability has so far translated into refined production losses more slowly than previously expected. In addition, refined supply has been supported by SX-EW output, secondary production from scrap and the ramp-up of recently commissioned smelting and refining capacity. Refined output, particularly in Asia, has remained resilient, supported by new smelting capacity, continued efforts to maintain utilisation rates and by-product revenues from sulphuric acid. At the same time, announced production cuts and delays to selected smelting projects have had only a limited impact on refined supply to date. As a result, the refined market is now expected to remain in moderate surplus in the near term, even though the concentrate market remains structurally constrained.

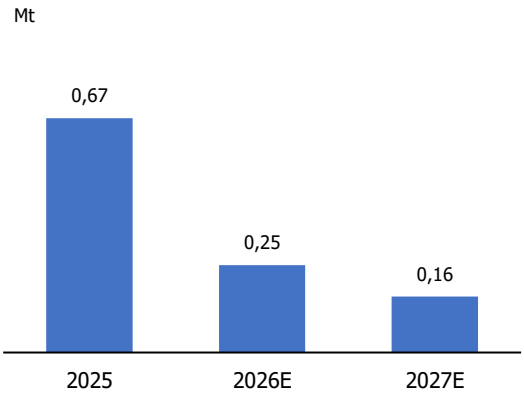
By 2027, the surplus is expected to narrow to 0.16 Mt as demand growth gradually catches up with supply.

Refined copper	2025	2026E	2027E
Demand, Mt	27.6 **(+3%)**	28.3 **(+3%)**	29.3**(+3%)**
Supply, Mt	28.2**(+5%)**	28.6 **(+1%)**	29.4**(+3%)**

Source: CRU, NN Analysis

Overall, the near-term copper outlook is dominated by two factors: the Iran/Persian Gulf risk channel and the changing expectations for the US monetary policy, including uncertainty around the incoming Fed leadership and the timing of rate cuts. Over the medium and long term, the market remains fundamentally supported by electrification, grid expansion, digital infrastructure, energy security and industrial regionalisation.

Refined Market Balance



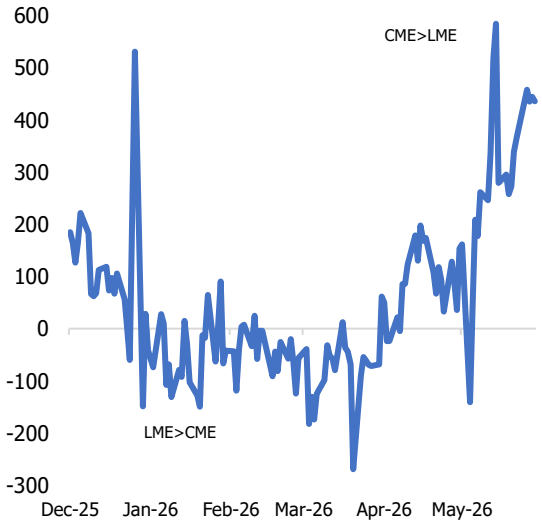
Sources: CRU, NN Analysis

MARKET SENTIMENT



Sources: LME, Reuters, Bloomberg, NN Analysis

LME & COMEX Arbitrage



Sources: LME, CME, NN Analysis

Between December 2025 and June 2026, the global copper market was shaped by three key themes: changing expectations for the US monetary policy, the Persian Gulf conflict and growing concerns over copper concentrate availability. Although exchange inventories increased sharply during this period, investor attention remained focused on constraints to future supply growth against the backdrop of already growing AI demand, helping copper prices rise to record highs by May 2026.

At the beginning of this period, copper prices traded around $11,300/t as investors continued to monitor US economic data and the outlook for the Federal Reserve policy. During late 2025, markets largely expected the Fed to continue easing monetary policy in 2026 as inflation gradually moderated. These expectations supported risk appetite across commodity markets and provided a favourable backdrop for industrial metals.

Market sentiment became more cautious in early 2026. Strong US economic data and persistent inflation raised doubts about the timing and scale of possible rate cuts. This shift was reinforced by the March FOMC meeting, where the Federal Reserve left rates unchanged at 3.50-3.75% and reiterated that inflation remained above target. As expectations for monetary easing were pushed further out, the US dollar strengthened and copper prices came under pressure.

The sharpest correction occurred in March following the outbreak of the Persian Gulf conflict. Copper prices weakened primarily for two reasons. Firstly, investors reduced exposure to risk assets amid concerns that the conflict could weigh on global economic growth and industrial demand. Secondly, the US dollar strengthened as capital flowed into safe-haven assets and markets reassessed expectations for the likely Fed policy. The combination of a weaker risk appetite and a stronger dollar pushed copper prices lower despite no meaningful deterioration in underlying fundamentals.

From late March, however, copper prices became less sensitive to DXY movements, as commodity-specific drivers started to dominate. De-escalation around Iran helped stabilise risk sentiment, while the widening LME-COMEX arbitrage, the reopening of the SHFE-LME import window and stronger China premiums pointed to firm refined cathode demand in both the US and China. As a result, copper remained well supported despite a firmer dollar, weakening the usual inverse relationship between copper prices and the DXY.

The Persian Gulf conflict influenced copper prices primarily through macroeconomic channels rather than direct supply disruptions. The greatest concern was the potential impact on global energy markets. Any disruption to oil flows from the region risked pushing fuel prices higher, increasing inflationary pressure and reducing the likelihood of near-term monetary easing. As a result, the conflict became an important source of volatility across commodity markets during the first half of 2026.

However, despite periods of macroeconomic weakness and uncertainty, copper prices strengthened considerably during the reported period. The rally was supported by concerns regarding future copper supply availability, renewed arbitrage opportunities between major exchanges, continued regional redistribution of metal flows, and resilient Chinese demand, including the demand linked to export-led manufacturing. On 13 May 2026, the LME Copper Cash price reached a period high of $14,097/t.

The premium of COMEX copper prices over the LME widened to $335/t on 12 May 2026, encouraging continued inflows of copper into the United States market. At the same time, the spread between SHFE and LME prices widened to $371/t on 19 March 2026, reflecting regional differences in market conditions and contributing to the growing fragmentation of global copper trade flows. These price dislocations created attractive arbitrage opportunities and played an important role in directing metal toward higher-priced regional markets.

These developments should be interpreted in the wider context of intensifying trade tensions, trade fragmentation and the increasing securitisation of strategic and critical minerals. The proliferation of critical-minerals lists has institutionalised this policy shift, as access to key raw materials is increasingly treated not only as a commercial issue, but also as an element of national security and industrial policy.

Against this backdrop, China and the United States have used different mechanisms to attract physical copper units. China has relied on its large-scale and efficient smelting and refining base. By expanding capacity ahead of concentrate availability, it has intensified competition for feedstock and helped push TC/RCs toward zero and, in the spot market, into negative territory, thereby encouraging inflows of copper units in concentrate form. The United States has taken a different route. Given the lack of sufficient domestic smelting capacity to process concentrates at scale, tariff-related risks under Section 232 have created a regional arbitrage that attracts copper units in refined form.

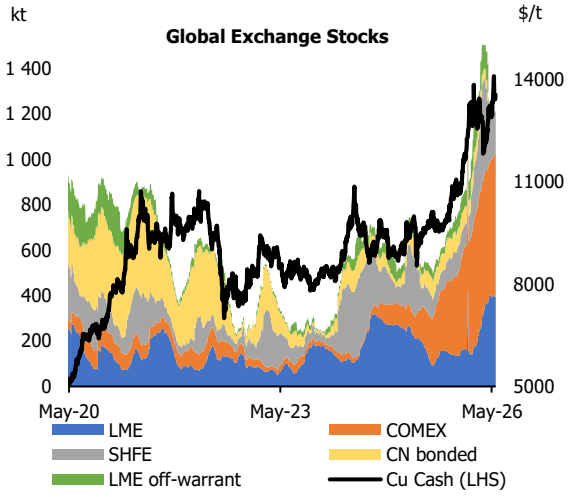
As both mechanisms are aligned with broader policy objectives related to resource security, supply-chain resilience and industrial regionalisation, the resulting distortions, including negative processing margins in China, US regional premiums and inventory redistribution, may persist for longer than a normal arbitrage cycle would suggest

Inventory dynamics remained one of the key drivers of market sentiment throughout the period. At the end of 2025, total visible copper inventories across LME, COMEX, SHFE, China bonded warehouses and LME off-warrant stocks stood at around 0.85 Mt. During this period, active stock redistribution toward COMEX warehouses was supported by favourable arbitrage conditions and coincided with uncertainty surrounding future US trade policy.

Total visible inventories increased rapidly during the first half of 2026, reaching around 1.35-1.40 Mt by late May. The build-up was driven primarily by COMEX stock accumulation, reflecting the continued redistribution of metal toward the US market, rather than a broad-based increase in immediately available metal across all regions. LME registered stocks also rose during the period, while SHFE inventories followed a seasonal pattern and China bonded stocks continued to decline.

In a longer-term context, the current level of total visible inventories does not appear extreme. Comparable levels were observed in 2020-2021, when a much larger share of metal was held in China bonded warehouses. The key change today is therefore the location and composition of inventories, with a greater share now concentrated on COMEX.

Although visible inventories increased significantly, the build-up did not fully remove concerns over near-term supply availability. A large share of stocks remained tied to regional markets or outside immediately deliverable exchange channels, meaning that higher headline inventories did not necessarily translate into a broad improvement in physical market liquidity. As a result, LME warranted inventories remain the most relevant indicator of immediately accessible exchange metal.



Source: LME, SHFE, CME, SMM

Despite the increase in visible inventories, market sentiment remained supported by concentrate market tightness, regional stock redistribution and front-loading related to tariff uncertainty. A key risk for H2 2026 is a potential slowdown in physical demand once front-loading effects begin to fade.

DEMAND

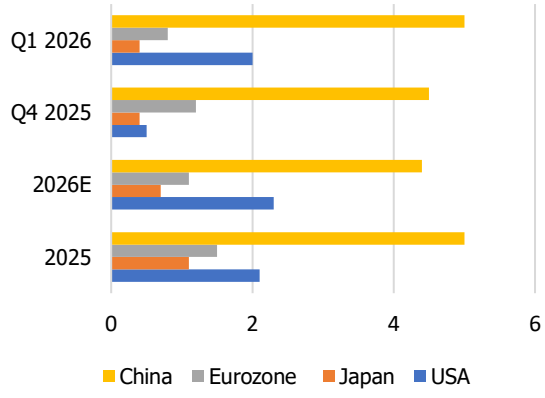
Copper demand continued to grow during the first half of 2026, supported by power infrastructure, electrification and digital investment, despite higher energy prices, high interest rates and weaker activity in several traditional end-use sectors. Construction and heavy manufacturing remained under pressure in a number of regions, but this weakness was offset by demand from power grids, batteries and data centres.

The baseline forecast is that global refined copper demand will continue to grow in 2026, broadly in line with the previous year. In China, refined copper use is expected to increase by around 3% YoY, while total copper use, including scrap, is expected to rise by around only 2% YoY, as a result of lower scrap use predominantly due to the changes in VAT regulation for scrap. In Asia excluding China, copper use is also expected to grow by around 3%, led by India and supported by infrastructure, power grid expansion and electrification. Europe remains the weakest major region, with only marginal growth expected in 2026, while North America continues to benefit from investment in data infrastructure, energy systems and domestic manufacturing capacity.

Near-term copper use has proven more resilient than the macroeconomic backdrop alone would imply. Higher oil prices, inflation and restrictive monetary policy remain clear risks, but industry feedback from cable and power-related segments points to front-loaded buying in several markets. Order books remain strong, and so far, customers keep accepting higher prices. As a result, H1 2026 demand was relatively resilient, and Q3 is also expected to remain stable. A more visible slowdown is more likely to emerge in Q4 if fuel prices and financing costs remain high.

The global economy continues to grow, although at a moderate pace. According to the IMF's April 2026 World Economic Outlook, global GDP growth is projected at 3.1% in 2026 and 3.2% in 2027. This is not a recessionary environment, but it does suggest that traditional copper-use sectors are unlikely to provide strong cyclical support. The IMF also expects global inflation to rise again in 2026 before returning to decline in 2027, increasing the risk that monetary easing may proceed more slowly than markets had previously expected.

GDP

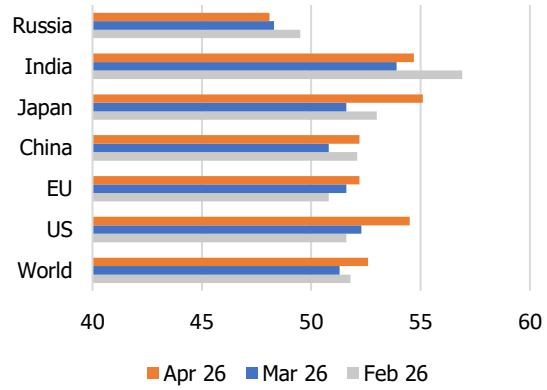


Source: IMF, NN Analysis

Against this background, manufacturing indicators remained broadly supportive. The global manufacturing PMI rose to 52.6 in April 2026, its highest level since March 2022, and held at the same level in May. With the index remaining comfortably above the 50-point threshold separating expansion from contraction, the data indicate continued growth in global manufacturing activity despite higher input costs, energy-price pressure and the effects of the Persian Gulf conflict.

The main risk is therefore not an immediate contraction in copper demand, but a delayed slowdown later in the year. More expensive fuel affects copper demand through the full cost structure of the economy. It raises costs not only in transportation, but also in mining, smelting, refining, construction, logistics and consumer goods production. For copper consumers, this creates a lagged risk: current demand is supported by existing orders and front-loaded purchases, but new investment decisions may become more cautious if high energy prices persist.

PMI



Source: National Statistics Bureau

Despite these challenges, copper demand remains fundamentally supported by ***electrification, power grid investment, renewable energy deployment and AI-related infrastructure.*** These sectors continue to offset weakness in more traditional end-use markets, particularly construction and heavy industry.

The electrification of transport remains one of the most significant contributors to the demand growth. Copper is used extensively in electric motors, batteries, wiring harnesses, charging infrastructure and the associated power grid systems required to support electric mobility. Although the growth rate of battery electric vehicle sales has become more uneven in some developed markets, the broader transition toward electrified transport remains intact. Hybridisation has also continued to gain importance as an intermediate route toward electrification, particularly in regions where charging infrastructure remains underdeveloped or where consumers remain highly price-sensitive.

China remains central to the EV and battery supply chains. Growth in these sectors directly supports copper use, drives power-grid investment and helps offset a weaker demand from the property sector.

The expansion of AI-related data-centre capacity provides additional demand through associated investment in power and electrical infrastructure. This trend is particularly visible in North America. In November 2025, Amazon Web Services, or AWS, announced an investment of up to $50 billion to expand AI and high-performance computing capacity for US government customers, with nearly 1.3 GW of additional capacity planned across AWS regions. More broadly, continued acceleration in data-centre build-outs could support around 200 ktpa of additional copper use in both 2026 and 2027, reflecting expected growth in the sector of approximately 45% in 2026 and 20% in 2027. Although data centres still account for only around 1.2% of global copper

use today, their share is expected to rise to around 2.3% by 2027. This confirms that digital infrastructure is becoming one of the key incremental demand drivers for copper

According to the IEA, electricity networks account for the largest share of copper demand from the energy transition, while EVs require approximately 2-4 times more copper than conventional internal-combustion vehicles. Data-centre expansion is also becoming an increasingly important source of incremental copper demand through investment in power and cooling infrastructure.

Copper use in electric vehicles, including light-duty vehicles, heavy-duty vehicles, buses and charging infrastructure, is expected to increase from 1.84 Mt in 2025 to 2.07 Mt in 2026, representing growth of around 12% YoY. By 2027, EV-related copper use is expected to rise further to 2.26 Mt, up around 9% YoY. Light-duty electric vehicles account for the largest share of this demand, at around 2.0 Mt in 2026.

Renewable energy remains another major structural driver of copper use. Wind and solar projects require copper across turbines, cables and transmission infrastructure. ***Global copper use in renewable energy is expected to fall by around 7% YoY to 2.24 Mt in 2026, reflecting lower solar-related copper use, before recovering by around 10% YoY to 2.46 Mt in 2027 and rising further to around 2.70 Mt by 2030. Solar remains the largest component, at around 1.56 Mt in 2026, 1.71 Mt in 2027 and 1.76 Mt in 2030. Wind-related copper use grows more steadily, rising from around 0.67 Mt in 2026 to 0.75 Mt in 2027 and 0.94 Mt by 2030, equivalent to growth of around 12% in 2027 and around 25% over 2027-2030.*** As renewable penetration increases, electricity systems become more decentralised and require substantial grid reinforcement. The Golden Plains Wind Farm in Australia provides a clear example of this trend. With an installed capacity of more than 1,330 MW, the project is expected to produce more than 4,000 GWh of renewable energy annually, supporting copper demand not only through generation assets, but also through associated transmission, distribution and storage infrastructure.

The global modernisation of power grids has therefore become a central component of the copper demand outlook. Power networks in many regions are increasingly under pressure due to the simultaneous growth of renewable generation, electric mobility, data centres and industrial electrification. Owing to its superior conductivity and reliability, copper remains a fundamental material of choice in both the transmission and distribution infrastructures. ***As a result, grid investment is expected to remain one of the most important sources of copper demand growth over the medium and long term.***

The Persian Gulf conflict affected the copper demand outlook mainly through energy prices, inflation expectations and interest rate expectations. It did not directly reduce copper use in the first half of 2026, but it increased the risk of slower demand growth later in the year if higher fuel prices persist.

If oil and fuel prices remain high, production costs rise across the economy. For copper demand, this channel is more important than logistical costs alone.

Our baseline scenario assumes that disruptions in the Persian Gulf and the Strait of Hormuz remain contained and won't last for more than three months or so. Under this scenario, the impact on copper demand is negative but manageable. Higher fuel prices and inflation delay some investment decisions, but underlying demand drivers remain supportive.

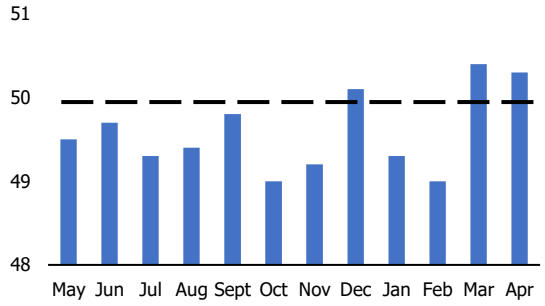
Under our downside scenario, the Strait of Hormuz remains mostly closed for more than three months. In this case, oil prices would remain high for longer, inflation expectations would rise further, and central banks would have less room for monetary easing. Industrial production would come under greater pressure, especially in energy-importing regions such as Europe, Japan and parts of Asia excluding China. In this scenario, 2026 refined copper demand growth could be around 0.5-0.8% lower than the baseline, with the impact most visible in Q4 and in 2027 contract negotiations.

A more positive scenario would require a faster normalisation of energy flows, lower fuel prices and clearer signals of monetary easing. In that case, front-loaded demand could be followed by a more stable recovery in traditional industrial sectors. Demand growth could exceed the baseline by around 0.2-0.3%, mainly through stronger orders in construction-related products, electrical equipment and semi-fabricated copper products.

As we take a closer look at the current situation in major economies, ***China's*** **macroeconomic data** show mixed but relatively resilient dynamics. China's official manufacturing PMI fluctuated around the neutral 50-point threshold throughout the reporting period, reflecting alternating phases of weakness and stabilisation. The PMI returned to expansion in March and April, reaching 50.4 and 50.3, respectively. In May, the index eased to 50.0, indicating that output activity continued to expand.

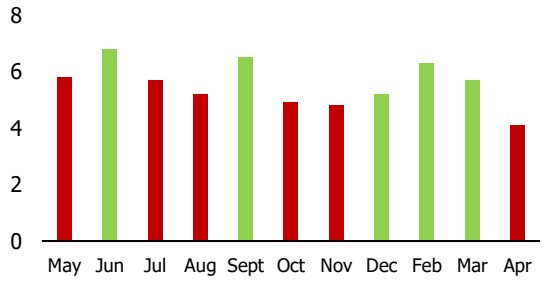
Industrial production remained more resilient than the PMI data would suggest, although the trend softened in April. Chinese industrial production grew by 4.8% YoY in November 2025 and accelerated to 5.2% in December. Growth strengthened further to 6.3% in January-February 2026 and remained solid at 5.7% in March before slowing to 4.1% in April. April figures point to a clear moderation in industrial momentum, likely reflecting weaker external demand, higher energy-related cost pressures and a less supportive operating environment for some downstream manufacturers. Nevertheless, the overall level of industrial activity remained comparatively robust, supported by export-oriented sectors, strategic manufacturing and continued policy support.

China PMI Index



Source: China Federation of Logistics and Purchasing

China IP



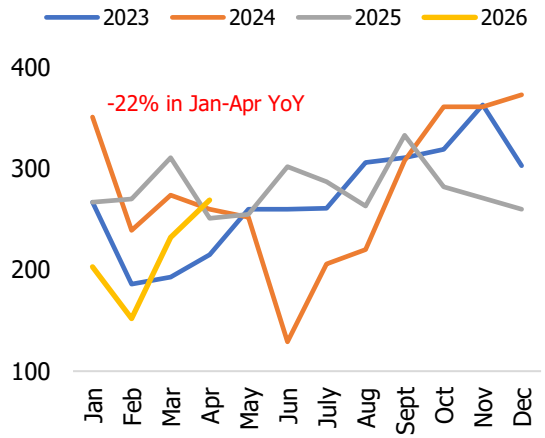
Source: National Bureau of Statistics of China; Red- lower than forecast, Green – higher than forecast

China's GDP growth also demonstrates the economy's relative resilience. Full-year GDP growth reached 5.0% in 2025, while Q4 2025 growth slowed to 4.5% YoY. In Q1 2026, growth rebounded to 5.0% YoY, supported by stronger industrial production and targeted policy measures. However, growth is expected to moderate to around 4.4% in 2026, reflecting weaker external demand, ongoing property sector adjustments and the broader impact of trade fragmentation.

State support remains targeted rather than broad-based. Chinese authorities continue to prioritise advanced manufacturing and AI-related infrastructure, while support for the electric-vehicle sector is becoming more selective as policymakers seek to address overcapacity and improve industry's profitability. At the same time, the property sector remains the main drag on domestic demand, weighing on household confidence, construction activity and private investment. As a result, weakness in property and construction continues to be offset by investment in power infrastructure, electrification, export-led manufacturing and strategic industries.

The SHFE-LME arbitrage was the main driver **of China's refined copper trade** flows in H1 2026. The import window remained largely closed through January and February, reducing the attractiveness of refined copper imports and encouraging metal to move from China to LME-linked markets. Refined copper imports declined from 203 kt in January to 152 kt in February, while exports remained high at 93 kt and 78 kt, respectively.

China Refined Copper Net Import



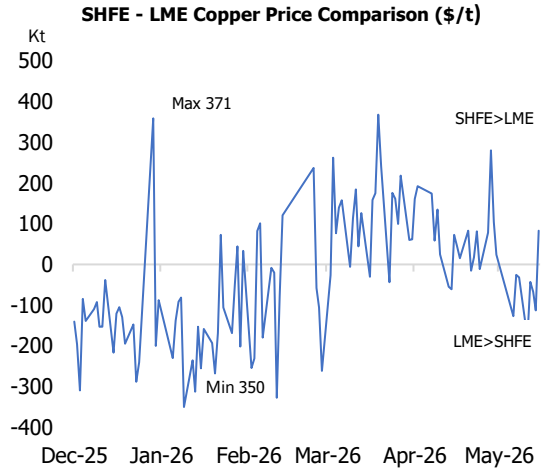
Source: TDM

Market conditions shifted in March as the SHFE-LME spread widened to $371/t, reopening the import window and reversing earlier trade flows. Refined copper imports recovered to 232 kt in March and increased further to 269 kt in April, while exports fell to 58 kt and 26 kt, respectively.

Copper concentrate imports totalled 9.9 Mt in January-April 2026, down 1% YoY. Although imports remained high in absolute terms, their growth slowed compared with previous years. Tight concentrate availability and exceptionally low treatment and refining charges continued to weigh on smelter margins. Elevated refined copper inventories and more cautious procurement amid volatile downstream demand also contributed to weaker import growth.

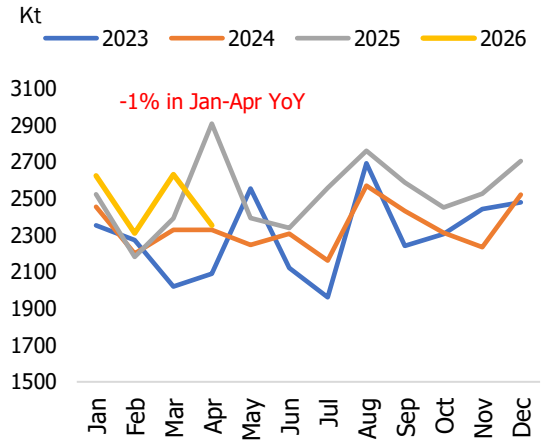
Copper scrap imports reached 840 kt in January-April 2026, up 8% YoY. High refined copper prices supported demand for secondary raw materials, while imported scrap remained an important supplementary source of copper for downstream processors. Demand for imported material was further supported by structural tightness in the supply of tax-invoiced domestic scrap. Growth in imports of lower-grade scrap remained constrained, however, as processing such material is generally less attractive for smelters because it does not generate the sulphuric acid credits associated with concentrate processing.

SHFE - LME Copper Price Comparison ($/t)



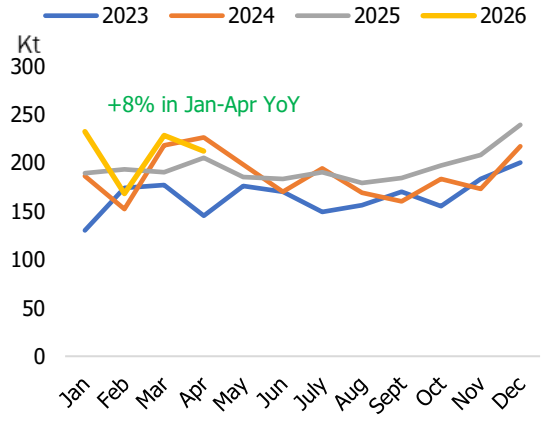
Source: NN Analysis

Copper Concentrate Import



Source: TDM

China Copper Scrap Import



Source: TDM

We expect Chinese refined copper use to reach 16.6 Mt in 2026, representing a growth of around 3% YoY. Demand is expected to grow further to 17.2 Mt in 2027, corresponding to a 4% increase.

In ***Asia, excluding China***, copper use is projected to grow by approximately 3% in 2026, reaching 5.6 Mt. India remains the region's key growth driver, with copper use rising to nearly 0.9 Mt, representing a 6% YoY increase. Looking ahead to 2026 and 2027, copper use in the region is expected to grow further, reaching 5.6 Mt in 2026 and 5.8 Mt in 2027, representing an annual growth of approximately 4%. India is expected to lead this expansion, with refined copper demand anticipated to reach around 0.96 Mt in 2026 and surpass 1 Mt in 2027.

Southeast Asian economies continue to benefit from manufacturing diversification and investment in industrial parks, electronics production and power infrastructure. This supports copper demand through new factories, grid connections, logistical systems and industrial real estate. However, the region is also exposed to higher fuel prices, which can raise production costs and delay some investment decisions. This exposure becomes particularly relevant under scenarios of prolonged disruptions in the Persian Gulf and the Strait of Hormuz.

Japan remains one of the largest copper-use markets in Asia outside China, with refined copper demand of 0.8 Mt per year. Unlike India, Japan is a mature market, so demand growth is likely to be more limited. However, Japan is highly sensitive to imported energy costs, including fuel sourced from or transported through the Middle East. This makes the Persian Gulf conflict an important downside risk for the Japanese industrial performance and copper use.

In ***Europe***, copper demand remains under pressure from weak industrial activity, high energy costs and fragile manufacturing performance. Although monetary conditions have gradually become more supportive, the pace of industrial recovery remains low. Energy-intensive industries continue to face higher production costs, while construction activity remains subdued in several major economies. Demand conditions also remain uneven across the region, with some southern European economies showing relative resilience while core manufacturing regions continue to experience weaker momentum.

European refined copper demand is expected to reach 3.17 Mt in 2026, representing marginal growth of only 0.1% YoY. A more visible recovery is expected in 2027, with demand projected to increase to 3.27 Mt, equivalent to growth of around 2% YoY. This recovery is likely to be supported by gradual monetary easing, public infrastructure spending, power grid investment, renewable energy projects and defence-related industrial activity. However, European long-term demand outlook remains gloomy because of structural competitiveness challenges, high energy costs, political uncertainty and exposure to external trade shocks.

According to Rosstat, industrial production in ***Russia*** increased by 1.3% in 2025 compared with the previous year. Growth was driven primarily by the manufacturing sector, where output rose by 2.6% YoY.

The strongest performance was recorded in industries associated with high technology and defence. Output of transport equipment, including aircraft and ships, increased by 32.0%, while production of fabricated metal products, excluding machinery and equipment, grew by 18.0%. Pharmaceutical production expanded by 15.4%, while output of computers, electronic and optical products increased by 11.7%. Industries benefiting from the state support made the largest contribution to the overall industrial growth.

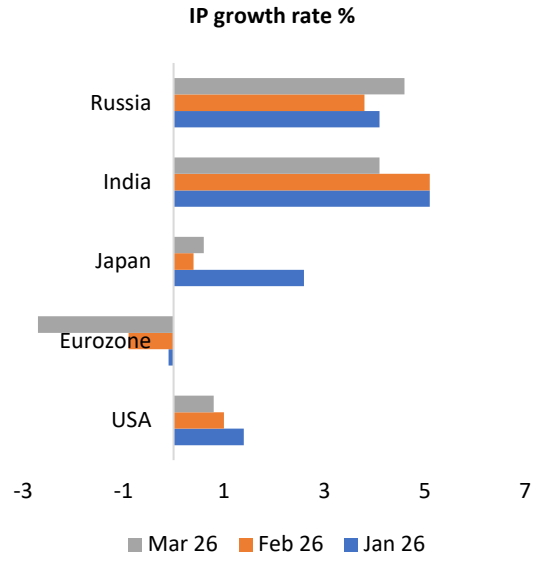
At the same time, output declined in a number of sectors. Production of motor vehicles, trailers and semi-trailers fell by 23.1%, while output of other mining and quarrying activities declined by 11.6%. Production of other non-metallic mineral products, including construction materials, decreased by 8.3%, machinery and equipment not classified elsewhere by 6.9%, furniture by 6.9%, and rubber and plastic products by 6.7%.

According to Rosstat, industrial production increased by 0.7% YoY in January-April 2026. The Ministry of Economic Development of the Russian Federation forecasts industrial output growth of 2.3% in 2026.

At the same time, domestic demand for copper products remained stable in 2025 at approximately 500 kt.

Although the Bank of Russia reduced its key policy rate to 14.5% in April 2026, this has not led to a significant increase in business investment activity.

Domestic copper demand is expected to decline slightly over the next several years as key copper-consuming sectors, including construction, power infrastructure, electrical engineering and automotive manufacturing, slow down amid weaker investment activity.



Source: National Statistics Bureau

The ***North American*** copper market continues to be supported by investment in data infrastructure, energy systems and domestic manufacturing capacity. Refined copper use in the United States reached 1.59 Mt in 2025 and is projected to increase to 1.72 Mt in 2026 (+8% YoY) and 1.85 Mt in 2027 (+7% YoY). Broader regional demand is expected to reach 2.36 Mt by 2027, supported by grid investment, AI-related infrastructure and manufacturing expansion.

The focus of the market has shifted from broader tariff risks to copper-specific measures under Section 232. The market increasingly appears to be pricing in the possibility of a 15% tariff on refined copper, with the potential for additional duties thereafter. These expectations have opened a significant arbitrage opportunity, encouraging copper flows into the United States.

As a result, imports have grown faster than domestic use, contributing to inventory accumulation. The immediate impact of Section 232 has therefore been most visible in trade flows, inventory levels and regional premiums rather than in end-use demand.

In summary, global copper demand remained resilient through H1 2026 despite higher energy prices, tighter-than-expected monetary policy and weakness in construction. The baseline forecast assumes that the Persian Gulf conflict remains contained and that any disruption to the Strait of Hormuz remains short-lived. Under this scenario, refined copper demand continues to grow in 2026, led by China, India and North America.

The main downside risk is a delayed slowdown if high fuel prices and restrictive monetary conditions persist. Europe, Japan and other energy-importing regions would be the most exposed.

SUPPLY

In our latest issue, we anticipated a modest contraction in the global mined copper production in 2026 amid persistent operational disruptions and limited concentrate availability. However, we have since revised our outlook and now expect global mined copper production to ***increase slightly from 23.5 Mt in 2025 to 23.6 Mt in 2026 (+0.2% YoY), before reaching 24.5 Mt in 2027 (+3.8% YoY).*** Despite this upward revision, upstream supply growth remains constrained by declining ore grades, technical disruptions, infrastructure bottlenecks, extended project development timelines and insufficient investment in new large-scale copper projects.

Recent miner guidance also supports a cautious approach to the mine supply forecasts. Several major producers have either missed initial guidance, or revised targets down during the year, or delivered close to the lower end of the revised ranges. Antofagasta produced 664 kt in 2024 against the guidance of 670-710 kt and 653.7 kt in 2025 against the declared 660-700 kt range. After the El Teniente accident, Codelco reduced its 2025 production target from 1.37-1.40 Mt to 1.34-1.37 Mt, while its actual annual copper production came in at 1.334 Mt. Glencore delivered 851.6 kt in 2025, within but close to the lower end of its revised 850-875 kt guidance range and 11% below the previous year. These examples show that mine supply forecasts remain exposed to often unpredictable grade decline, mine sequencing issues, accidents and slower ramp-ups, even when company guidance implies recovery.

At the same time, refined copper production is expected to outpace mine supply growth in 2026, although this dynamic is projected to reverse in 2027, with the expansion of refined output remaining increasingly dependent on the availability of concentrates, secondary raw materials and SX-EW performance. ***We estimate global refined copper production at 28.2 Mt in 2025, rising to 28.6 Mt in 2026 (+1% YoY). In 2027, refined output is expected to increase further to 29.4 Mt, representing a stronger 3% YoY rise, supported primarily by new and ramping refining capacity, particularly in Asia.*** However, this increase will require more than just new smelting and refining capacity. Higher refined output will depend on sufficient availability of concentrates, scrap and other feed materials. If feedstock remains tight, part of the new capacity may remain underutilised, delaying the expected rise in refined production.

The copper concentrates market remains the key constraint within the global supply chain. ***Concentrate production is estimated at approximately 18.4 Mt in 2025 and is expected to decline slightly to 18.3 Mt in 2026, representing a 0.3% YoY decrease. A more visible recovery is expected only in 2027, when concentrate production may rise to around 19.2 Mt, equivalent to a growth of approximately 4.7% YoY.*** Even with this recovery, the concentrates market is expected to remain in deficit. We estimate a concentrate shortfall of approximately 751 kt, while the refined copper market is expected to remain in a moderate surplus of around 254 kt. This divergence highlights the increasingly important distinction between the refined metal availability and the raw material base required to sustain smelting and refining.

TC/RCs have fallen to historically low levels, with 2026 annual terms reportedly agreed at $0/t, compared with $21.25/t for 2025. This represents the lowest level ever agreed in annual negotiations and illustrates the intense competition among smelters for the available concentrate. Spot processing fees have also moved into a three-digit negative territory, meaning that smelters have effectively been paying for the feed that would normally generate processing revenue.

Low TC/RCs have compressed smelter margins and forced processors to reassess operating rates, maintenance schedules and capacity expansion plans. China's major copper smelters announced plans to reduce production by more than 10% in 2026 in response to overcapacity and negative processing fees. At the same time, industry commentary implies that around 2 Mt of planned new Chinese smelting capacity has been delayed or suspended, showing that concentrate scarcity is already limiting downstream expansion.

These production-cut announcements should be treated with caution. Coordinated cuts by smelters are not always fully implemented and may take the form of extended maintenance, slower ramp-ups or temporary adjustments rather than permanent output reductions. Our forecast therefore still assumes some growth in Chinese and Asian refined copper production, but at a pace increasingly hampered by feedstock availability and processing economics.

Sulphur and sulphuric acid have become important variables in the copper supply chain. For smelters, higher sulphuric acid prices can partly offset weak TC/RCs through by-product credits. In this sense, expensive acid may soften the negative impact of lower treatment charges for some smelting operations. For SX-EW producers, however, sulphuric acid is a direct input cost and, in some cases, a physical constraint on output. The same price increase can therefore support smelter margins while raising the cost for leaching-based cathode producers.

China's suspension of ordinary sulphuric acid exports from May 2026 has further tightened regional acid balances. This has increased the importance of sulphur availability, acid logistics and regional acid pricing in the copper supply analysis. The impact differs by production route: smelters may receive higher by-product revenue from acid sales, while leaching operations face higher costs and potential production constraints if acid supply is unavailable.

Chile. The world's leading producer is expected to mine approximately 5.5 Mt in 2026, only slightly more than last year's 5.4 Mt (+0.6%), followed by a further rise in production in 2027 to 5.6 Mt. Meanwhile, Chilean refined copper production is projected to remain flat at around 2 Mt annually from 2026 to 2027.

Codelco remains central to the Chilean production outlook, but its recovery continues to be gradual rather than transformational. In 2025, Codelco's total copper production, including its stakes in El Abra, Anglo American Sur and Quebrada Blanca, declined marginally to 1,440 kt. Own copper production increased slightly, supported by improved mine sequencing at Ministro Hales, the ramp-up of Salvador's Rajo Inca project and higher sulphide production at Radomiro Tomic. These gains offset lower output at Gabriela Mistral, Chuquicamata and El Teniente.

Chile's production outlook remains constrained by declining ore grades, ageing assets and the technical complexity of maintaining output at mature operations. These pressures are likely to limit the pace of supply growth despite ongoing investment. Selected brownfield projects should provide some support. The *Mantoverde Optimized* project is expected to expand sulphide concentrator throughput to approximately 45,000 tpd, with the ramp-up beginning in Q4 2026 and sustained expanded throughput expected from early 2027. This should contribute to the incremental Chilean supply, although it is not large enough to offset the broader pressures affecting the country's mature mining base

Sulphuric acid availability is now the most important near-term supply risk for Chile. The issue is manifest in leaching and SX-EW operations, where sulphuric acid is a critical reagent. Market data show that SX-EW accounts for roughly 1 Mt of the Chilean copper production, making sulphuric acid availability a material issue for a significant part of the country's supply base. Chile imported close to 4 Mt of sulphuric acid in 2025, including around 1.5 Mt from China, which makes China one of the key external suppliers to the Chilean acid market.

The risk increased after Chinese sulphuric acid exports to Chile fell to zero in March 2026, compared with 31.9 kt in February 2026 and 151.3 kt in March 2025. China's suspension of ordinary sulphuric acid exports from May 2026 further tightened the market. Alternative supply is limited as Peru already sells most of its surplus acid to Chile, while suppliers such as Japan, South Korea, Mexico and Europe are smaller and more costly.

The impact on copper output is unlikely to be immediate because leaching cycles are long and many producers entered the period with some acid inventories. However, the key risk is not only higher acid prices but also its physical availability. Significant volumes of sulphuric acid are committed under long-term contracts, while disruptions in Chinese exports and the Persian Gulf sulphur flows have reduced spot-market liquidity. As a result, replacement supply may be difficult to secure even for producers willing to pay higher prices. Acid availability therefore remains a direct downside risk to Chilean SX-EW production, particularly in H2 2026.

The Democratic Republic of the Congo remains one of the most important sources of mined copper growth. Mined copper production in the DRC is estimated at 3.5 Mt in 2025 and is expected to rise to 3.7 Mt in 2026 (+7.5% YoY). In 2027, output is projected to increase further to 3.9 Mt (+6% YoY). Refined production is also expected to expand, rising from 2.8 Mt in 2025 to 3 Mt in 2026 (+6% YoY) and 3.1 Mt in 2027 (+3.6% YoY).

The Congolese growth profile continues to be supported by high-grade resources, large-scale assets and ongoing investment in processing capacity. However, the near-term outlook has become more exposed to operational risk, power availability, logistics and chemical input supply. The Kamoa-Kakula complex remains one of the most important copper assets globally, but its production profile depends on underground rehabilitation, dewatering and the successful execution of ramp-up plans following recent disruptions.

Sulphur and sulphuric acid are also becoming important constraints for the Congo. A meaningful share of Copperbelt production relies on hydrometallurgical processing, which requires sulphuric acid and related chemical inputs. The region depends heavily on imported sulphur and sulphuric acid, including supply chains linked to the Persian Gulf and China. Disruptions to these flows can therefore affect SX-EW operations more directly than conventional concentrate production.

Market reports show that the DRC producers entered the disruption with about 2-3 months of chemical inventories. However, if logistical delays and sulphuric acid shortages persist, production curtailments could become material. According to several sources, around 125–150 kt of the Congolese copper output could be at risk in 2026 if supply-chain delays extend beyond June. This should be treated as a downside-risk estimate rather than a base-case assumption, though.

Despite these constraints, the DRC remains structurally positioned to raise its share of global copper production. Its growth is supported by the resource quality and recent investment, but the near-term profile remains vulnerable to operational disruptions, power shortages, logistical constraints and chemical input availability.

Peru's copper supply outlook remains comparatively weak. Mined copper production is estimated at 2.7 Mt in 2025 and is expected to decline to 2.6 Mt in 2026 (-3% YoY). In 2027, output is projected to fall further to 2.5 Mt. Refined copper production is expected to increase from 332 kt in 2025 to 359 kt in 2026 (+8% YoY) and 383 kt in 2027 (+7% YoY), although refined output remains relatively small compared with the country's mined production.

Peru continues to face persistent structural and operational challenges. Production has remained broadly constrained by declining ore grades at large mines, a limited pipeline of new projects, social license issues and recurring transport disruptions. Industry reports indicate that Peru's copper production has been broadly flat since 2023, largely due to a lack of major new projects and declining ore grades at large operations. These factors limit Peru's ability to regain a stronger growth momentum despite its large resource base.

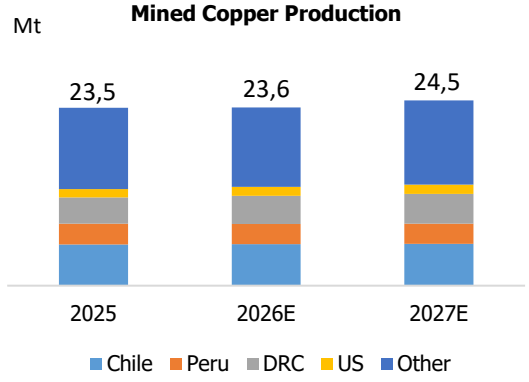
In ***the United States,*** mined production is estimated at 1.1 Mt in 2025 and is projected to rise to 1.2 Mt (+7% YoY). In 2027, output is expected to grow further to 1.3 Mt (+5% YoY). Refined production is expected to rise from 809 kt in 2025 to 839 kt in 2026 (+4% YoY) and 851 kt in 2027 (+1% YoY).

The US supply narrative is increasingly shaped by supply security, critical minerals policy and the desire to reduce import dependence. However, domestic production growth remains gradual and is unlikely to materially change the country's reliance on imported refined copper in the short term. The *Resolution Copper* project in Arizona remains one of the most significant future sources of the US copper supply. In March 2026, the congressionally mandated land exchange was recorded, and the US government issued the final Record of Decision, completing the federal land exchange process and authorising future special use permits for pipelines, power lines and roads. Nevertheless, Resolution remains a long-term supply option rather than a near-term contributor.

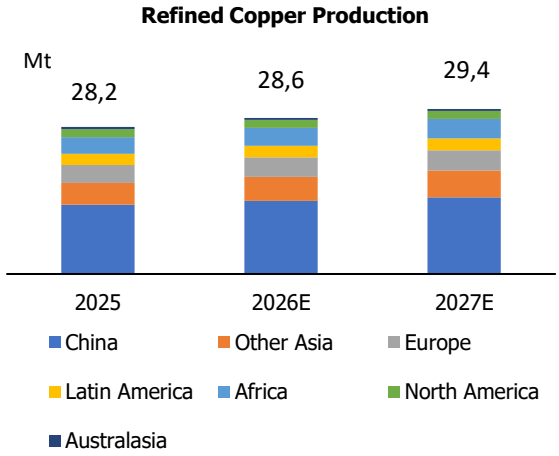
Near-term supply additions are smaller but strategically relevant. Rio Tinto's Nuton technology produced its first copper cathode at Gunnison Copper's Johnson Camp mine in Arizona, with the demonstration targeting approximately 30 kt of refined copper over four years. While this volume is modest in the context of the global market, the restart is important as a demonstration of technology that could

potentially unlock lower-grade or historically difficult-to-process resources.

US tariffs and broader protectionist measures may provide additional incentives for domestic copper production, but their impact should not be overstated. They can support local premiums, encourage investment and improve the economics of selected domestic projects, but they cannot rapidly overcome permitting timelines, technical complexity, smelting capacity constraints or the long development cycles typical of new copper mines. Therefore, the United States is likely to remain structurally dependent on external supply even as domestic production gradually increases.



Source: NN Analysis, CRU



Source: NN Analysis, CRU

China remains a sizeable mine producer and the dominant refined copper producer globally. Domestic mined copper production is estimated at 1.9 Mt in 2025 and is expected to rise to 2.1 Mt in 2026 (+8% YoY) and 2.3 Mt in 2027 (+7% YoY). Refined copper production is expected to grow from 13.4 Mt in 2025 to 14.1 Mt in 2026 (+5% YoY) and 14.7 Mt in 2027 (+5% YoY). However, the pace of the refined output growth is increasingly constrained by low TC/RCs, tight concentrate availability and pressure on smelter margins. The planned production cuts by major Chinese smelters and the suspension of some new smelting capacity demonstrate that China's refining expansion is no longer limited by plant capacity, but by feedstock availability and processing economics instead.

In Asia excluding China, mined copper production is expected to grow from 2.8 Mt in 2025 to 3 Mt in 2026 (+8% YoY). In 2027, the output is projected to rise further to 3.4 Mt (+11.5% YoY). Refined copper production is expected to increase, from 4.1 Mt in 2025 to 4.7 Mt in 2026 (+13% YoY) and 5.2 Mt in 2027 (+11.5% YoY). This implies additional refined output of around 0.6 Mt in 2026 and a further 0.5 Mt in 2027, making Asia excluding China the largest contributor to incremental refined copper supply. This growth reflects ongoing capacity additions in Indonesia, India and other regional markets, although the region remains heavily exposed to concentrate availability and ramp-up risks.

Indonesia is expected to become an increasingly important source of Asian supply growth, although the outlook remains heavily affected by the disruption at Grasberg. Indonesian mined copper production is estimated at 579 kt in 2025 and is expected to rise to 645 kt in 2026 (+11% YoY) before increasing more sharply to 910 kt in 2027 (+41% YoY). Refined copper production is projected to rise from 343 kt in 2025 to 563 kt in 2026 (+64% YoY) and 855 kt in 2027 (+52% YoY), supported by new smelter ramp-ups.

The Grasberg incident remains the key downside risk to Indonesia's near-term supply profile. Freeport reported that approximately 0.8 Mt of wet material entered the Grasberg Block Cave mine in September 2025, damaging infrastructure and suspending operations across the district. Freeport initially expected a phased restart and ramp-up to begin in 2026, but recent updates indicate that the return to full production has slowed down significantly.

Freeport has reduced its 2026 companywide copper sales guidance to around 1.41 Mt, reflecting delays in the Grasberg Block Cave ramp-up and related infrastructure constraints. The risk of further underperformance remains if material handling, dewatering and underground access recover more slowly than expected. This means Indonesia's 2026 concentrate availability and smelter feed remain exposed to operational execution risk.

India's refined copper supply is also expected to grow over the medium term, but the ramp-up of new capacity has proven challenging. Adani's Kutch Copper complex in Gujarat has annual capacity of 0.5 Mt and is strategically important for increasing non-China refining capacity. However, the plant has faced both feedstock and technical challenges. Technical reports show that the facility requires around 1.6 Mt of copper concentrate per year to operate at full capacity, while it has secured only a fraction of this during the early ramp-up period. Some recent reports also point to technical setbacks and repair work during the first year of operation.

While the ***copper project pipeline*** remains substantial, its contribution to near-term supply growth is likely to be limited. The current pipeline represents around 8.5 Mt of potential annual mine production by 2030 before probability adjustments, but only around 2.7 Mt of this volume is currently classified as committed, with the remainder still at the probable or possible stage. Major producers have also announced sizeable production-growth plans toward 2030, supported by a recovery in copper capex, but these targets should be viewed with caution given permitting, financing, construction and ramp-up risks, as well as the industry's track record of under delivering against initial guidance.

On a probability-adjusted basis, project-related mine output is expected to contribute only around 0.3 Mt in 2026 and 1.0 Mt in 2027, before rising more visibly from 2028 onwards. At the country level, before global adjustments, mine production growth in 2026 is expected to be led mainly by the DRC, China, Russia and Zambia, with additional support from Mongolia, the United States and Indonesia. In 2027, Indonesia, the DRC, Panama, Zambia, China and Russia become the main growth contributors. Longer-term additions could become more meaningful from 2028 onwards, a topic we will review in greater detail in the next issue.

The 2027 increase in mine supply is concentrated in a relatively small group of large assets. According to our asset-

level estimates, the five largest positive contributors: Grasberg, Collahuasi, Cobre Panama, Kamoa-Kakula and Kisanfu - together add around 0.87 Mt of copper in 2027, accounting for approximately 83% of the identified 1.05 Mt increase.

Grasberg is the largest expected contributor, with production projected to increase from 0.47 Mt in 2026 to 0.71 Mt in 2027, adding around 0.24 Mt. The increase mainly reflects a recovery following the disruption at the Grasberg Block Cave rather than a new source of supply. The asset already has the scale, infrastructure and processing capacity to support higher output, while the key uncertainty is the pace of underground rehabilitation, dewatering and mine sequencing. Given the size and quality of the operation, the economic case for restoring deferred production is strong, although execution risk remains high.

Collahuasi is expected to be the second-largest contributor, with output projected to rise from 0.42 Mt in 2026 to 0.61 Mt in 2027, an increase of around 0.20 Mt. This reflects a recovery and optimisation case at an existing large-scale operation, supported by better grades, improved recoveries and continued debottlenecking after a weaker 2026 base. Chilean supply remains constrained by declining ore grades, water availability and rising operating complexity, but Collahuasi is one of the few assets with sufficient scale to materially affect the country's production profile.

Cobre Panama is expected to add around 0.24 Mt of mine supply in 2027, following no mined production in 2026. The mine remains outside the base case for a full restart in 2026, while concentrate shipments from existing stockpiles provide only limited temporary relief and should not be treated as new mine output. Cobre Panama is the most politically exposed of the top contributors, and the 2027 forecast should therefore be viewed as a probability-adjusted restart assumption. However, the asset's installed capacity, resource base and economic importance for Panama create a clear incentive to reach a viable solution.

Kamoa-Kakula is projected to increase production from 0.40 Mt in 2026 to 0.52 Mt in 2027, adding around 0.12 Mt. The expected growth is linked to recovery and ramp-up following recent operational disruptions, including underground rehabilitation, dewatering and the return of higher-grade mining areas. The asset benefits from very high grades and existing processing infrastructure, which makes the recovery path relatively visible if operational constraints are resolved. The key risks remain power availability, logistics, underground execution and chemical input supply.

Kisanfu is expected to add around 0.07 Mt in 2027, increasing from no production in 2026 to 0.07 Mt in 2027. Unlike the other top contributors, it is primarily a committed expansion case rather than a recovery story. The forecast assumes a partial ramp-up rather than full nameplate delivery, supported by the existing operating base in the DRC, CMOC's execution track record and strong price incentives. The main risks are construction timing, ramp-up performance, power availability, logistics and reagent supply.

Several development projects are expected to support copper supply growth beyond 2026, although most are unlikely to provide immediate relief to the concentrate market. In the United States, Resolution Copper represents a major long-term supply option, while the Johnson Camp's restart provides a smaller but more immediate contribution.

In Argentina, Glencore's El Pachón project remains one of the major future copper developments, with the company submitting applications under Argentina's RIGI investment framework for El Pachón and Agua Rica. These projects are strategically important for the longer-term supply growth but remain subject to permitting, financing, infrastructure and development timelines.

In Chile, the Mantoverde expansion provides a visible near-term contribution through brownfield growth, with expanded throughput expected to be sustained from early 2027. In Australia, the Mt Chalmers copper-gold project is being advanced through a staged hub-and-spoke development strategy. A $15 million commitment from the Queensland Critical Minerals and Battery Technology Fund is expected to support its progress toward the final investment decision by mid-2027.

In 2025, ***Russian*** copper production was estimated at approximately 1.2 Mt of copper concentrates and 1.0 Mt of refined copper. These figures include both primary production and copper recovered from the secondary and intermediate feedstocks, including scrap, matte and blister copper.

In 2025, MMC Norilsk Nickel Group, including Bystrinsky GOK within the Trans-Baikal Division, reported copper production of 425 kt, down 2% year-on-year. The decline was mainly attributable to a temporary increase in the share of disseminated ores in the mining mix, which have a relatively lower content of valuable components. The company also continued to renew its mining equipment fleet with machinery sourced from new suppliers.

In Q1 2026, copper production by the Group, including the Trans-Baikal Division, declined by 10% year-on-year to 99 kt. The decrease reflected the higher comparison base of Q1 2025, as well as the redistribution of finished-product output between reporting quarters. At the same time, the Trans-Baikal Division increased copper-in-concentrate production by 6% year-on-year to 18.5 kt, supported by higher ore-processing volumes and improved metal grades in the processed ore.

For 2026, Nornickel Group's guidance for copper production is 336-356 kt, excluding the Trans-Baikal Division. The Trans-Baikal Division is expected to produce 69-73 kt of copper in concentrate.

As to Ural Mining and Metallurgical Company (UMMC) and Russian Copper Company (RMC), we estimate that their refined copper production remained broadly stable in 2025 at approximately 430 kt and 150 kt, respectively. In the absence of official announcements regarding capacity expansion, these levels are expected to remain broadly unchanged in the medium term. It should also be remembered that neither RMC nor UMMC have publicly disclosed detailed their copper production data since 2022.

In our assessment, following the exit of Novgorod Metallurgical Plant from the RMC Group, Kyshtym Copper Electrolytic Plant remains the Group's only refined copper producing asset. The plant has annual refining capacity of approximately 150 kt of copper cathodes, as well as production capacity of around 140 kt of copper wire rod and 1.2 kt of electrolytic copper foil. The plant is currently undergoing scheduled maintenance, which, in our assessment, should not materially affect the Group's total production volumes.

The main mining assets of RMC include the following operations:

Tominsky GOK has the design capacity of up to 160 kt of copper in concentrate per year. The operation has been active since 2023.

Mikheevsky GOK has the annual capacity of 445 kt of copper concentrate. The operation has been active since 2013.

Alexandrinskaya Mining Company has the copper concentrate production capacity of 66.5 kt per year.

ORMET has the annual output capacity of around 70 kt of copper concentrate. The operation has been active since 1995.

Malmyzhsky GOK has the ore-processing capacity of 104 Mt per year, with the operating life expected to extend to 2056. Key infrastructure facilities and the processing plant have already been completed, while the first ore-processing line was launched in 2024. The project is currently in the final commissioning stage. Malmyzhsky GOK is expected to reach its design capacity by the end of 2026. According to our estimates, Malmyzhsky GOK produced around 150 kt of copper concentrate in 2025, and its output is expected to increase to 250 kt in 2026.

UMMC Group is also expected to continue developing its own mining asset base, including the Yubileynoye, Dergamyshskoye and Podolskoye deposits. The Volkovskoye deposit in the Sverdlovsk Region is considered one of the largest deposits in the Middle Urals and contains copper, iron, vanadium, gold and other metals. In autumn 2026, UMMC plans to commission the third stage of the Volkovskoye project, which includes the development of an open-pit mine and the construction of a concentrator to process copper-iron-vanadium ores. Construction of the underground mine at the Novo-Uchalinskoye copper-pyrite deposit is also continuing, with commissioning scheduled for 2027.

According to our estimates, in 2025 Uralelectromed, UMMC Group's only refined copper asset, produced 430 kt of copper cathodes against its refining capacity of around 450 kt per year. Of this volume, around 404kt, or 94% of total output, was produced from the company's own raw materials, while the remaining 6% was produced from a third-party feedstock.

All these UMMC projects are aimed at achieving full self-sufficiency in raw materials for cathode copper production by 2028.

Udokan Copper Mining and Metallurgical Plant reached its highest production levels since its launch in September 2023. Total ore mined in 2025 amounted to 19 Mt, with an average copper grade of 1.29%. The first stage of Udokan Copper has the capacity of up to 150 kt of copper per year in the form of cathodes and concentrate, supplying both the Russian domestic market and exports to China.

In early 2026, the company restored its cathode production following the tank-house fire in late 2023. We expect Udokan to produce around 50 kt of copper cathodes this year. The company is also working on a threefold expansion of Udokan Copper's production capacity. This would allow the operation to produce around 0.5 Mt of copper per year and become one of the five largest copper producers globally.

The Ak-Sug copper deposit was acquired by a subsidiary of Intergeo, which is part of Rostec State Corporation. Mining at the deposit is not expected to begin before 2027. Geological reserves at Ak-Sug, classified as C1 + C2, are estimated at approximately 384.5 Mt of ore containing more than 3.26 Mt of copper. Following the change of ownership, no official updates on the Ak-Sug project have been released to date.

As of April 2025, construction of Baimsky GOK in the Chukotka Autonomous Region remained in the active phase. Work continued on external infrastructure, including Chaun Port, as well as a road and power transmission line extending more than 400 km to the deposit. The plant's design capacity is around 70 Mt of copper ore per year. The exact commissioning timeline remains difficult to determine, although commercial operation of Baimsky GOK is most likely to begin by the end of this decade, at the earliest.

In May 2026, Rosatom Group manufactured and shipped the first 58 MW RITM-200S reactor for the floating nuclear power plant that will supply electricity to the Far Eastern copper cluster, including Baimsky GOK in Chukotka. The floating nuclear power plant for Baimsky GOK is expected to consist of four PEB-106 floating power units. The first two units are scheduled for launch in Q1 2027, the third in Q1 2028, and the fourth in mid-2031.

We expect Russian copper production to continue growing in 2026, supported by the commissioning of new mining projects and the gradual ramp-up of existing concentrate production capacity toward their design levels. Annual copper concentrate production from mineral raw materials is expected to increase by 10%, while refined copper production is expected to remain broadly stable at around 1.0 Mt per year.

Summing up the supply, the copper production outlook remains constrained mainly at the mine and concentrate stages. The mine supply growth is still modest despite high prices, while concentrate availability remains tight relative to the installed smelting capacity. However, this should not be misinterpreted as a shortage of refined copper. The refined market is still expected to remain in moderate surplus, which means that the concentrate deficit is primarily a margin and utilisation issue for the processors rather than an immediate supply problem for the end-users.

New smelting and refining capacity, particularly in Asia, will not automatically lead to higher refined output. Growing output will depend on access to concentrates, scrap, blister copper and other feed materials. This is especially relevant to China, where processing capacity has expanded faster than the available concentrate base.

The main supply risks for 2026 are the pace of recovery at Grasberg, sulphuric acid availability for SX-EW operations in Chile and the DRC, feedstock availability for new Asian refining capacities and the ramp-up of Russian and other medium-term concentrate projects. Cobre Panama remains outside the base case for a full restart in 2026, while stockpile processing provides only some temporary relief.

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GLOSSARY OF TERMS

Abbreviation	Term
BEV	Battery Electric Vehicle
CNY	Chinese Yuan
COMEX	Commodity Exchange Inc.
DXY	US Dollar Index
ECB	European Central Bank
EV	Electric Vehicle
GDP	Gross Domestic Product
GOK	Concentrator
IMF	International Monetary Fund
IP	Industrial Production
kt	Thousand tonnes
ktpa	Thousand tonnes per year
LME	London Metal Exchange
MoM	Month-over-Month
Mt	Million tonnes
PMI	Purchasing managers' index
RC	Refining charge
RMK	Russian Copper Company
SHFE	Shanghai Futures Exchange
SX-EW	Solvent Extraction and Electrowinning
TC	Treatment charge
UMMC	Ural Mining and Metallurgical Company
YoY	Year-on-year
YTD	Year-to-date