

# Copper market

## Key market trends

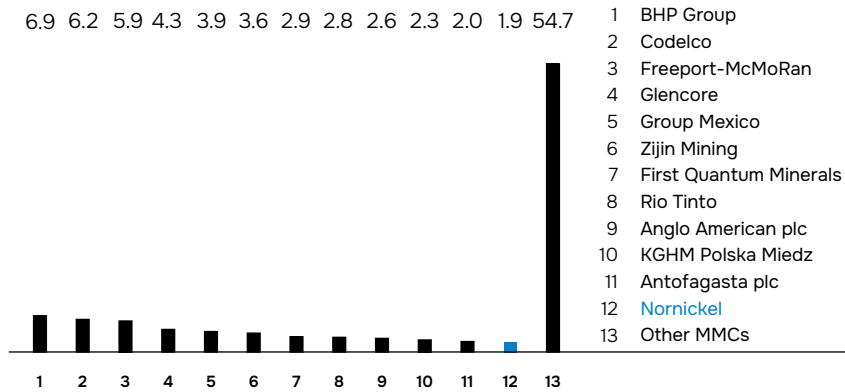
In 2023, factors that affected the copper market included: weaker-than-expected consumption growth in China amid the construction crisis; weak macroeconomic performance across global major economies; tougher monetary policies; low exchange and bonded stocks in China; strikes and social unrest in Latin America; new renewable installed capacity additions; and a stronger push for transport electrification.

During the year, copper prices showed mixed dynamics, trading between USD 7,900–9,400/t. Peak values were recorded in January amid the lifting of COVID-19 restrictions in China and low exchange stocks. Then, driven by higher interest rates in major global economies, fears of investors related to the US public debt ceiling, and weaker-than-expected demand in China, the price retraced down to USD 7,900/t towards the end of the first half of the year. Once the US public debt had been handled, the copper price rebounded to USD 8,700/t in early August. However, macroeconomic challenges, especially in China, continued to have a negative impact on the market, and the price dropped below USD 8,000/t in early October. Late in the year, protests in Panama resulting in the shutdown of the Cobre Panamá mine supported the copper price, which rose to USD 8,600/t.

The total exchange stocks on the LME, SHFE, and CME grew 13% to 215 kt but remain at their historically-low level. Bonded stocks in China plummeted 86% from the start of the year to 8 kt.

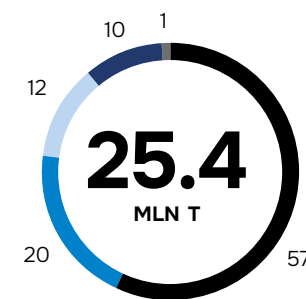
In 2023, the LME copper price averaged at USD 8,478/t vs USD 8,797/t in 2022 (down 4%).

## Nornickel – No. 12 in copper mine production, %



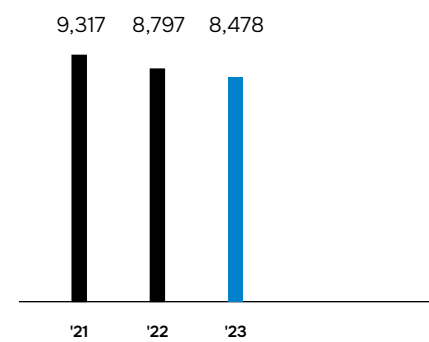
Sources: producer reports, Company analysis as of late March 2024

## Refined copper consumption by region, %



- China
- Rest of Asia
- Europe
- Americas
- Other

## Average annual copper prices, USD/T



Source: London Metal Exchange (cash settlement)

## Market balance

In 2023, copper mine output increased by 2% to 22.3 Mt, and refined copper production by 4% to 25.6 Mt. Global refined copper consumption totalled 25.4 Mt, up 2%. Overall, the copper market was balanced in 2023, with a statistical surplus of 130kt, or less than 1% of global consumption.

## Consumption

In 2023, global refined copper consumption totalled 25.4 Mt, up 2% y-o-y.

Despite weaker-than-expected demand recovery due to the construction crisis, China ramped up its domestic consumption to 14.5 Mt, or up 6% y-o-y. Imports of refined copper to China fell 4% y-o-y to 3.5 Mt, while imports of scrap and concentrates grew 12% and 9% to 2 Mt and 27.6 Mt, respectively.

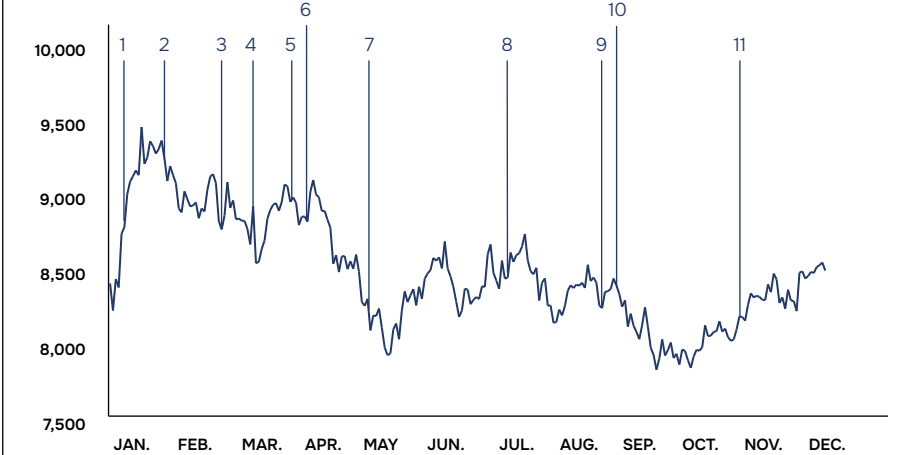
Demand in Europe and North America dropped to 3.1 Mt (down 5% y-o-y) and 2.1 Mt (down 4% y-o-y), respectively, while Asia (excluding China) showed a 1% growth to 5.2 Mt. In Russia, apparent primary copper consumption is estimated at 450kt.

## Supply

Global copper production increased 2% to 22.3 Mt driven by the launch of new and expansion of existing projects.

Chile, the world's leading copper producer, slightly cut its copper output in 2023, by 1% to 5.3 Mt, due to technical and operational disruptions faced by Codelco, the country's top producer of the metal. Meanwhile, Peru ramped up its output by 9% y-o-y to 2.7 Mt.

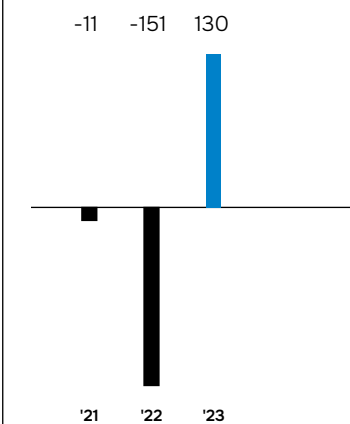
## LME copper price in 2023, USD/T



1. China lifts COVID-19 restrictions
2. The Las Bambas mine decides to suspend operations
3. US increases import tariffs for Russian metals
4. Start of the US banking crisis
5. Teck Resources rejects Glencore's 22.5 billion asset acquisition offer
6. BHP buys out OZ Minerals for USD 6.6 billion
7. Chile's senate approves progressive mining royalty bill
8. US sanctions UMMC
9. Udokan Copper starts Cu concentrate production
10. LME stocks are at 2-year highs
11. Cobre Panamá halts operations due to protests of local residents

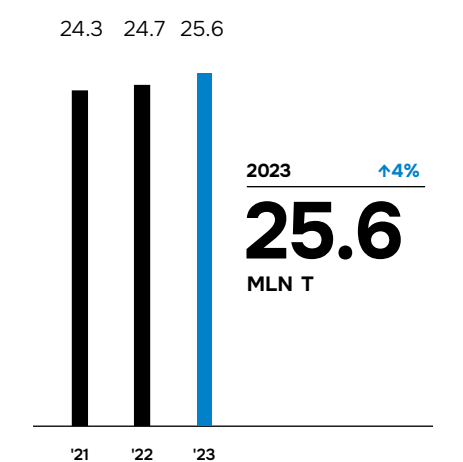
Source: London Metal Exchange, Company analysis

## Copper market balance, kt



Source: Company's data as of March 2024

## Production of refined copper, MLN T



Source: Company data

Africa managed to increase its output by 9% to 3.6 Mt, with DRC being the top producer through its Ivanhoe's Kamo-a-Kakula project.

China ramped up its production by 2% to 1.9 Mt, while copper mine production in Indonesia declined 5% to 0.9 Mt.

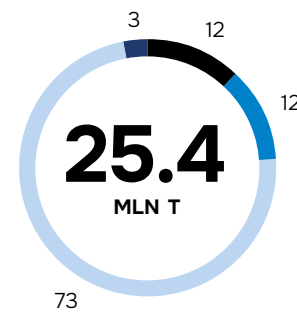
Production in North America decreased, except for Canada where the output grew 4% to 0.4 Mt. In the US, the decline was 8% to 1.2 Mt, and in Mexico 2% to 0.7 Mt.

Refined copper production grew 4% y-o-y to 25.6 Mt amid new capacity launches in China. In South and Central America, production dropped 4% to 2.5 Mt due to the macroeconomic pressure throughout the year. Africa saw a 16% increase in production to 2.2 Mt, while Asia (including China) ramped up its output by 5% to 15.6 Mt. China's refined copper output increased by 9% to 11.5 Mt, while in Japan it decreased by 1% to 1.5 Mt. Copper output in Europe fell 2% to 3.5 Mt, in North America 4% to 1.5 Mt.



### Refined copper consumption by industry

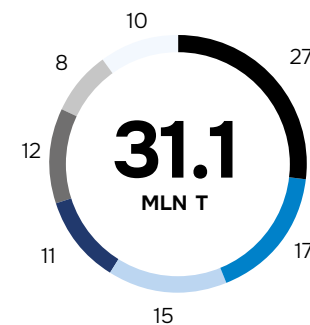
First use, %



- Tubes
- Flat rolled products
- Wire rod
- Other

Source: Company data

End use by industry, %

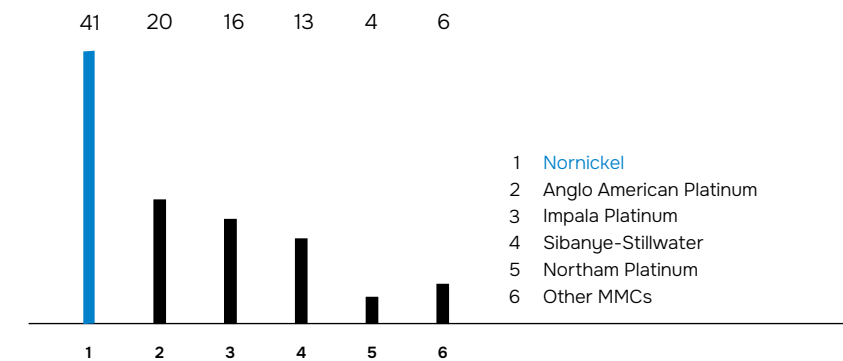


- Construction
- Utility
- Machinery
- Transport
- Consumer goods
- Air conditioning and refrigeration
- Other

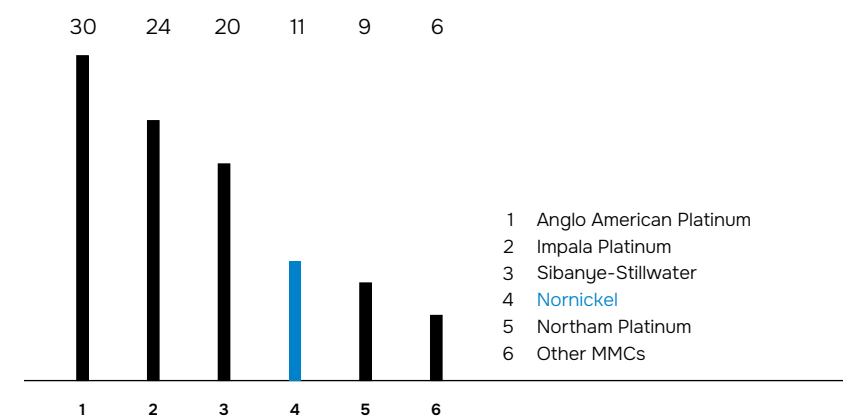
Source: Company data

## PGM market

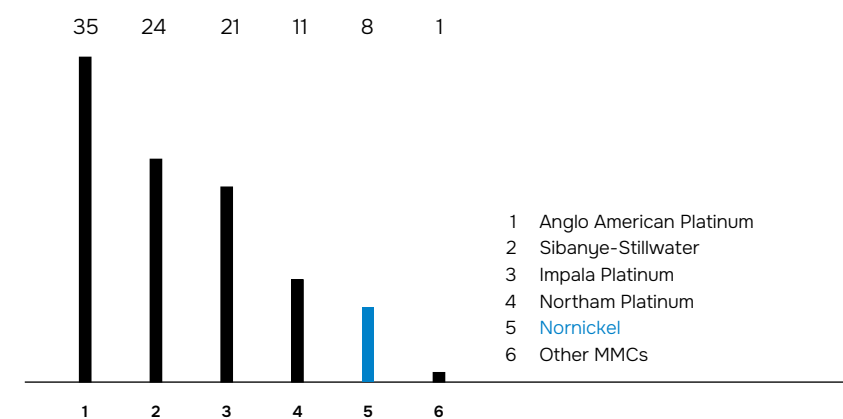
Nornickel – No. 1 in palladium production, %<sup>1</sup>



Nornickel – No. 4 in platinum production, %<sup>1</sup>



Nornickel – No. 5 in rhodium production, %<sup>1</sup>



Sources: producer reports, Company analysis as of early March 2024

### Key market trends

#### Palladium

Due to low ICE-powered vehicle sales in the first two months of 2023, the palladium price was declining, getting closer to the important USD 1,300/oz support level up until mid-March, when it entered into a horizontal trend, fluctuating between USD 1,300/oz and USD 1,600/oz levels. The trend change was triggered by the US banking crisis, which has supported prices for precious metals as the market lowered its expectations regarding the terminal rate level.

The price continued its downward movement in May to find the next support level at USD 1,225/oz by the end of June. Later, it started trading sideways, fluctuating between USD 1,225/oz and USD 1,300/oz as inflation expectations eased. The sideways trend continued until the beginning of October, when it made a stepdown to a lower price corridor, reaching its bottom at USD 1,125/oz. This occurred amid the Fed representatives' statements regarding the higher-for-longer interest rates environment.

The price plateaued at USD 1,125/oz up until 7 November, when it fell by 4% to USD 1,080/oz. Fed's hawkish statements yet again pressured all the precious metals. This led the palladium price to fall below the psychological level of USD 1,100/oz, which triggered a 3-year-record daily open interest increase on the NYMEX, dipping palladium down to USD 965/oz. Nevertheless, right after that, palladium bounced back and stabilised above the USD 1,050/oz level.

Late in the year, the palladium price showed increased volatility: the excessive volume of short positions resulted in a short squeeze in December, with prices soaring to USD 1,225/oz and then dropping again to USD 1,050/oz.

<sup>1</sup> Refined metal output including production from third-party feedstock and production from own feedstock by third parties under tolling agreements.