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Copper: Doctor Copper

The metal that wires the world: why its price is watched as a guide to the economy, how it travels from mine to cable, where it trades, and what drove its record highs in 2026

14 min read 8 quiz questions with answer key

COMMODITIES · BEGINNER · LESSON 11 OF 15

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IN ONE SENTENCE

Copper carries electricity in almost every building, power line, car and data centre, so its price is often read as a health check on the world economy. That is why traders call it Doctor Copper. Chile, the Democratic Republic of the Congo and Peru are the largest miners, but China refines and uses more copper than any other country, close to 59% of the world's refined copper. Copper trades on the London Metal Exchange, on COMEX in New York and on the Shanghai Futures Exchange. In 2026 it hit record highs above $14,500 a tonne, driven by mine problems, US tariff fears and the energy transition story, even while official forecasts pointed to a small surplus.

Why traders call it Doctor Copper

Copper is everywhere. It is in the wires inside your walls, the power cables under the street, the motor of an air conditioner, the electronics in a phone and the cooling systems of data centres. When the world builds more houses, factories, power lines and cars, it needs more copper. When building slows down, copper demand slows too.

For this reason, traders say copper has a **PhD in economics** and call it **Doctor Copper**. A rising copper price has often come before or alongside a stronger economy, and a falling price has often warned of a slowdown. Many investors watch copper next to stock indices and bond yields to judge where the economy is heading.

The nickname is useful, but it is not a law. In 2025 and 2026, copper rose to records while many factories in China and Europe were growing slowly. The rally came mostly from **supply problems**, **US tariff policy** and **investment funds** buying the long-term story of electrification and artificial intelligence. So treat copper as one voice in the conversation about the economy, not the final verdict.

Where copper goes

Copper conducts electricity and heat very well, it bends without breaking, and it does not rust easily. Only silver conducts electricity better, and silver is far too expensive for cables. That makes copper the standard metal for moving electricity.

The main uses are:

- **Buildings:** electrical wiring, plumbing and air conditioning. Construction, especially in China, is a very large source of demand.
- **Power grids:** cables, transformers and substations. Countries are spending heavily to upgrade grids for more electricity demand and renewable power.
- **Transport:** an electric car uses several times more copper than a petrol car, in its motor, battery and wiring, and charging stations need copper too.
- **Electronics and data centres:** chips, servers and the power and cooling systems of the data centres behind artificial intelligence.
- **Industrial machinery:** motors, pumps and equipment of every kind.

Copper is also one of the most recycled metals. It can be melted down and reused again and again without losing quality, and scrap is an important part of supply.

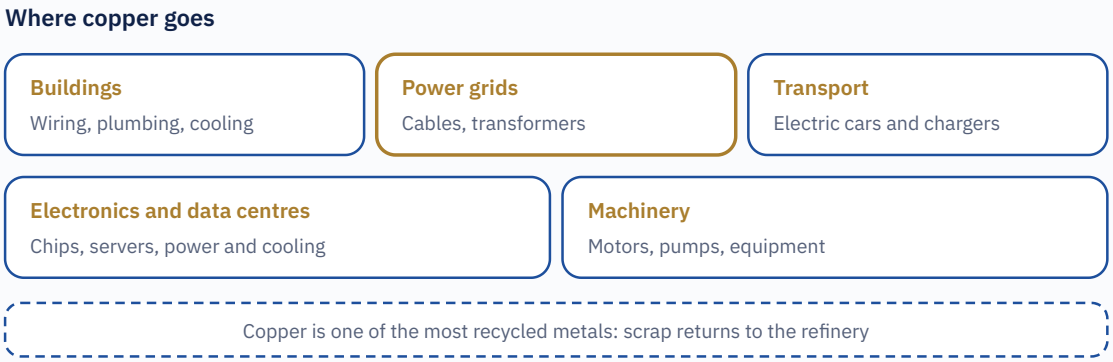


Figure 1. Copper goes wherever electricity flows, from houses to data centres.

From mine to cable

Copper ore usually contains less than 1% copper. The rock is crushed and processed at the mine into **concentrate**, a powder with around a quarter to a third copper. The concentrate is shipped to a **smelter** and a **refinery**, which turn it into **cathodes**: plates of almost pure copper. Cathodes are what the exchanges trade. Fabricators then make them into wire, rod, tube and sheet.

Mining is concentrated in a few countries. **Chile** is by far the largest producer, with about 23% of world mine output in 2024, followed by the **Democratic Republic of the Congo** and **Peru**. The largest single mine, Escondida in Chile, produced about 1.35 million tonnes of copper in 2025. Refining is concentrated too: China refines more than 40% of the world's copper, largely from imported concentrate.

Supply problems in 2025 and 2026 showed how fragile this chain is. A deadly mud rush stopped the Grasberg mine in Indonesia, one of the world's largest, in September 2025, and its recovery took

longer than planned. Kamoa-Kakula in the Congo was flooded after earthquakes. According to preliminary data from the International Copper Study Group (ICSG), world mine output fell 1.1% in the first half of 2026.

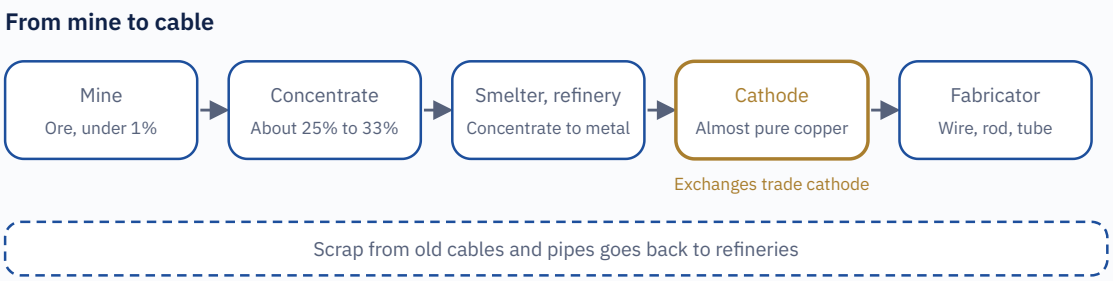


Figure 2. How copper travels from the mine to the products we use. Exchanges trade the refined cathode.

WHEN SMELTERS PAY THE MINERS

Normally a miner pays a smelter a **treatment charge** to process its concentrate. When concentrate is scarce, smelters compete for it and the charge falls. In 2026 the charge went below zero: in October, an Asia-Pacific index stood at about minus $272 a tonne, meaning smelters were effectively paying miners to get material. Watching treatment charges tells you how tight the mine side of the market is, even when refined copper looks plentiful.

China: the biggest buyer

No country matters more for copper demand than China. According to the ICSG, China accounts for about **59%** of all refined copper used in the world. Its factories make cables, motors, air conditioners and electronics for its own market and for export, and its huge construction and grid programmes use enormous amounts of copper.

This means Chinese data is copper data. Traders follow China's factory surveys (PMIs), property and construction figures, State Grid investment plans, copper imports, and stocks in Shanghai warehouses. Weak Chinese property news can hit the copper price within minutes.

China also matters on the supply side: it is the largest refiner and a large holder of copper stocks. In early 2026, ICSG data showed Chinese net imports of copper cathode falling sharply while metal was flowing towards the United States, which shows how trade flows can change quickly.

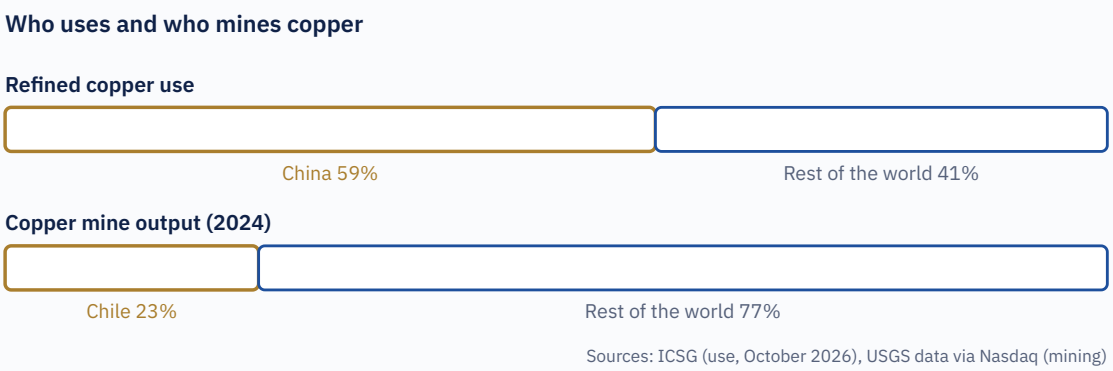


Figure 3. China uses more copper than the rest of the world combined, while Chile is the largest miner.

Where copper trades: London, New York and Shanghai

Three exchanges set the world price of copper:

Exchange	Quoted in	Contract size	Benchmark
London Metal Exchange (LME)	US$ per tonne	25 tonnes	The three-month price
COMEX, New York (CME Group)	US$ per pound	25,000 pounds (about 11.3 tonnes)	The HG futures contract
Shanghai Futures Exchange (SHFE)	Yuan per tonne	5 tonnes	The most active month

The LME is the traditional global benchmark, and its **three-month** contract is the price you see quoted in most news. COMEX copper, code HG, has a minimum tick of $0.0005 per pound, worth $12.50 per contract. Shanghai reflects Chinese supply and demand and trades in Chinese hours.

To compare prices, remember that one tonne is about 2,204.6 pounds. A COMEX price of $6.25 per pound equals about $13,780 per tonne. Usually COMEX and the LME are close. In 2025 and 2026 they were not, as the example below shows.

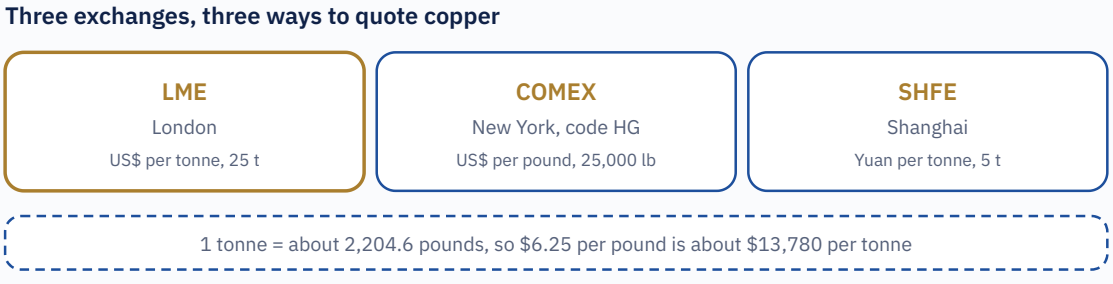


Figure 4. The same metal is quoted in three different ways. Always convert before comparing.

EXAMPLE: THE TARIFF GAP

In 2025 the US government began talking about import tariffs on copper. If copper brought into the US might soon be taxed, buyers wanted it inside the country first. COMEX prices rose above LME prices, and traders such as John, who works for a metals merchant, could buy copper in London, ship it to the US and sell it at the higher COMEX price.
So much metal moved that stocks piled up in US warehouses, where they were "locked in" and not easily available to the rest of the world. That made copper scarcer elsewhere and supported LME prices. When the gap later narrowed, the flow slowed and copper started to build up again in LME warehouses. Policy, not only mines and factories, can move a commodity.

Records in 2026, and a forecast of surplus

LME copper ended 2025 at **$12,423** a tonne after a year of mine accidents and tariff headlines. In early January 2026 it crossed **$13,000** for the first time. On **January 29, 2026**, the three-month price jumped to **$14,527.50**, its largest one-day rise since 2008, as Chinese buying in Shanghai spilled over to London. On **September 8, 2026**, it set a new record of around **$14,728**, while COMEX reached about $6.78 per pound.

Then prices fell. By November 2026, worries about the artificial intelligence boom, weak Chinese demand and rising LME stocks pushed copper down, and on November 18 the LME three-month price closed at **$12,471**.

Here is the puzzle for beginners. While prices were making records, the ICSG was forecasting a **surplus** of refined copper: about 104,000 tonnes in 2026 and 368,000 tonnes in 2027, according to its October 2026 forecast. A year earlier, it had expected a deficit for 2026. Forecasts change, they measure only part of the market, and prices also reflect expectations, stocks in the wrong place, and fund flows. A surplus on paper does not guarantee falling prices, and a deficit does not guarantee rising ones.

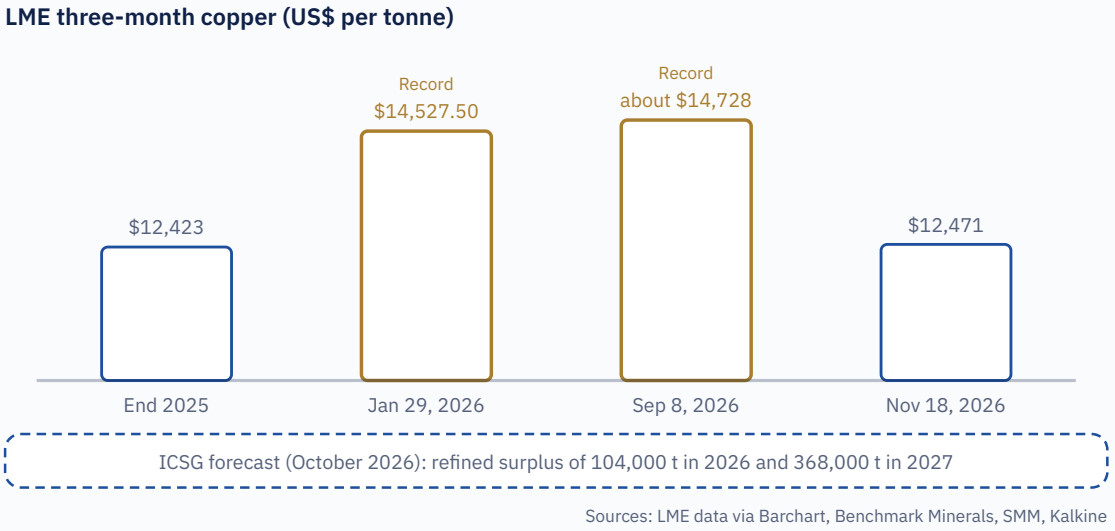


Figure 5. Copper set records in 2026 and then fell back. Dates run from left to right.

Why this matters for traders

- **Follow China first.** Chinese factory surveys, property data, grid spending and imports often move copper more than any other news.
- **Watch mine news.** Accidents, strikes, floods and export rules in Chile, Peru, the Congo and Indonesia can lift prices quickly.
- **Check the gap between exchanges.** The spread between COMEX and LME prices tells you whether metal is being pulled into the US.
- **Watch exchange stocks.** Daily LME, COMEX and Shanghai warehouse data show whether metal is plentiful or scarce where it is needed.
- **Use Doctor Copper with care.** Copper still reacts to growth news, but supply and policy can dominate for months.

Key terms

Doctor Copper	A nickname for copper, based on the idea that its price reflects the health of the world economy.
Concentrate	Processed ore from the mine, usually about a quarter to a third copper, that is shipped to smelters.
Cathode	A plate of almost pure refined copper; the form traded on exchanges.

Treatment charge	The fee a miner pays a smelter to process concentrate. A low or negative charge means concentrate is scarce.
LME three-month price	The London Metal Exchange price for copper delivered three months ahead; the most quoted copper benchmark.
HG	The code of the COMEX copper futures contract, 25,000 pounds, quoted in US dollars per pound.
Exchange stocks	Metal held in warehouses approved by an exchange and available for delivery against futures.
Arbitrage	Buying in one market and selling in another to profit from a price difference, such as between COMEX and the LME.

Key takeaways

1. Copper is used wherever electricity flows, so its price is often read as a guide to the economy: Doctor Copper.
2. The nickname is not a law. In 2025 and 2026 supply problems, US tariffs and funds drove copper more than economic growth.
3. Copper goes from ore to concentrate to cathode. Chile is the largest miner, and China refines more than 40% and uses about 59% of the world's refined copper.
4. The LME (US$ per tonne), COMEX (HG, US$ per pound) and Shanghai (yuan per tonne) set the price. One tonne is about 2,204.6 pounds.
5. LME copper hit records of $14,527.50 in January and around $14,728 in September 2026, then fell to about $12,471 by November 18, even as the ICSG forecast a small surplus.

Test yourself

Circle one answer for each question. The answer key with explanations is on the next page. You can also take this quiz online at markettalks.info and see your score instantly.

1. Why is copper called Doctor Copper?

A. Because it is used in medical equipment
B. Because its price is often seen as a guide to the health of the world economy
C. Because it was discovered by a doctor
D. Because its price never changes

2. What drove copper's records in 2025 and 2026, according to this lesson?

A. Mostly a boom in Chinese factory output
B. Mostly supply problems, US tariff policy and fund buying
C. A ban on copper recycling
D. The end of electric car sales

3. What is a copper cathode?

A. Crushed ore straight from the mine
B. A plate of almost pure refined copper, the form traded on exchanges
C. Copper scrap from old cables
D. A type of copper futures option

4. Which country is the largest copper miner?

A. China
B. Chile
C. United States
D. Australia

5. About what share of the world's refined copper does China use?

A. About 10%
B. About 25%
C. About 59%
D. About 90%

6. In 2026, treatment charges for copper concentrate fell below zero. What does this tell you?

A. Concentrate was plentiful
B. Concentrate was scarce, so smelters were paying to get it
C. Smelters had closed
D. Copper prices were negative

7. COMEX copper trades at $6.00 per pound. About how much is that per tonne?

A. About $6,000
B. About $13,200
C. About $2,200
D. About $25,000

8. Why did copper stocks pile up in US warehouses in 2025 and 2026?

A. US demand collapsed
B. Fear of US import tariffs pushed COMEX prices above the LME, so traders shipped metal into the US
C. The LME closed its US warehouses
D. Chile stopped exporting to Asia

Answer key

1 B

Because its price is often seen as a guide to the health of the world economy

Copper is used throughout construction, power and manufacturing, so its demand tends to follow economic activity.

2 B

Mostly supply problems, US tariff policy and fund buying

Mine accidents, tariff-driven flows into the US and investment in the electrification and AI story mattered more than strong economic growth.

3 B

A plate of almost pure refined copper, the form traded on exchanges

Ore becomes concentrate at the mine, and smelters and refineries turn concentrate into cathodes.

4 B

Chile

Chile produced about 23% of the world's mined copper in 2024. The Congo and Peru follow.

5 C

About 59%

The ICSG puts China's share at about 59%, which is why Chinese data moves the copper price so much.

6 B

Concentrate was scarce, so smelters were paying to get it

When smelters compete hard for scarce concentrate, the fee they charge miners falls, and can even turn negative.

7 B

About $13,200

One tonne is about 2,204.6 pounds, and 6.00 × 2,204.6 is about $13,228.

8 B

Fear of US import tariffs pushed COMEX prices above the LME, so traders shipped metal into the US

The COMEX premium made it profitable to move copper into the US before any tariff, leaving less metal elsewhere.

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