

Commodity Economics Comment

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'Dr Copper' and the 'super-squeeze'

Economics

No, this is not the title of the next Bond film or Marvel movie. An action-packed story it is though – at least for commodity market observers. Copper prices are up sharply since their October 2023 trough, to a two-year high in the past few weeks. Dr Copper's diagnoses – widely regarded as a bellwether for the global industrial cycle – could be that an upswing in the global industrial cycle has begun. But the 'super-squeeze', the burly hero in our story, has adjusted the plot. Underinvestment in copper mines, combined with a wave of 'green demand' that is coming from the energy transition, is making the copper market tighter than usual. Is 'Dr Copper' in the house, or it is a green imposter? We still have faith in the doctor.

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Copper prices have risen sharply in recent weeks, up by over 15% year-to-date and 15% y-o-y (Chart 1). As is also well understood, copper prices are regarded by many observers as a useful timely indicator of the global industrial cycle. 'Dr Copper', as the copper price is often referred to, could be telling us that the global industrial cycle has turned and an upswing is underway.

The idea, of course, is that the copper price is the nexus between demand and supply of the metal, and because copper is such a critical industrial commodity for so many manufactured goods, movements in its price can signal an early read on changes in global demand.

However, as with all products, and commodities in particular, shocks can come from both demand and supply.

As Chart 2 and Chart 3 below show, there has typically been a strong correlation between movements in copper prices and the global manufacturing PMI and China's industrial production, respectively. This correlation was particularly strong prior to 2022.

However, the correlation then dropped to zero in 2022, following Russia's invasion of Ukraine and the sharp supply shock that emerged.

More recently, the correlation between copper prices and global manufacturing has strengthened again.

But the copper market has changed in other ways too.

The copper-intensity of the energy transition means that copper demand is set to be structurally higher for decades to come. Keep in mind that copper is a key input into electrification, used in transmission lines, electrical infrastructure and vehicles. For example, electric vehicles use about four times more copper than internal combustion engine cars.

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On IEA estimates, copper demand from clean energy technologies will rise by between 1.7 and 2.7 times between 2020 and 2040, depending on whether the world tracks the 'stated policies scenario' or 'sustainable development scenario'. Global copper production is currently around 22 million tonnes a year and S&P forecasts that 50 million tonnes year will be needed by 2035 – just 11 years from now.

At the same time, investment in new mines has not been particularly strong. Indeed, the projected annual investment spend on copper over the next four years is less than half the nominal spend that occurred at the peak of the last China led 'super cycle', between 2011 and 2014. This has been alongside signs that copper producers would prefer to buy rivals than undertake new projects (Bloomberg, 27 April 2024). Environmental challenges are a key issue in constraining the pace of mine expansion and lifting its cost. Political considerations come into play here too. Copper production, like many other critical commodities, is quite geographically concentrated -- with Chile and Peru accounting for 37% of global supply.

This is part of what we have been calling a 'super-squeeze'. A persistent supply shortfall, in this case largely driven by the energy transition, while for other commodities the super-squeeze has been more about geopolitics recently. For copper, the super-squeeze is helping to explain why copper prices are still high, not just in nominal terms, but also in real terms (that is, relative to the prices of the rest of the consumer basket) (Chart 4).

However, the question remains whether the rise in copper price is just being driven by a more narrowly-based energy transition story, or is it the same powerful guide to the industrial cycle it has been in the past?

Is Dr Copper in the house, or is it a green imposter?

In some ways, it might not matter that much. The energy transition is so ubiquitous, in transportation, construction, energy networks and so many other activities that a green-led upswing in demand is broad-based enough to lift the overall industrial cycle.

Our colleague, Jonathan Brandt, HSBC's key copper market analyst, has recently revised up HSBC's forecasts for copper prices from 2024e-2028e. He describes the market as 'squeezed'. Recent disruptions to supply from a key mine in Panama (1% of global supply) and a cut in production guidance at key producers are playing a role.

As always, tracking both the levels and the changes in prices matters, as well as closely following supply-side developments, like those in Panama recently.

We still have faith in the doctor.

1. Copper prices have risen to a twomonth high



2. Copper prices and the global industrial cycle are closely associated





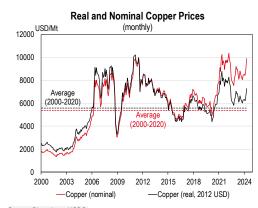
3. Copper prices and the manufacturing PMI have resumed a positive correlation

Correlation: Copper Prices and Industrial Indicators Copper and China Industrial Production Copper and Global Manufacturing PMI 2019 2020 2021 2022 2023 Latest (March 2024)

Source: Bloomberg; HSBC estimates.

Note: The chart shows the annual correlation between 1) Copper price inflation (% y-o-y) and the global manufacturing PMI (index), and 2) Copper price inflation (% y-o-y) and China's industrial production (% y-o-y).

4. Both nominal and real copper prices remain elevated



Source: Bloomberg; HSBC.

Note: Real copper prices calculated using US CPI; the recent spike is evident using core CPI and core PCE too.



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