Baillie Gifford™

Emerging Markets

Monthly insights

January 2024

Copper is an increasingly scarce resource. The energy transition has increased demand while supply remains sticky. As a result, copper theft is reaching all-time highs. This year, nearly $200 million of copper was stolen from Europe's largest producer, Aurubis. In the US, the LA Bureau of Street Lighting noted a tenfold increase in theft of copper cabling, plunging whole neighbourhoods into darkness. Since copper prices have increased significantly in the last five years, now is a critical time to consider the overall industry dynamic.

Since 2018, we have been building our exposure to the copper price through miners and financials in commodity-exporting economies, and our views on the supply and demand imbalance have remained relatively consistent.

As outlined in our year-end report, First Quantum Mineral's (FQM) Cobre mine in Panama has been moved to 'care and maintenance' whilst FQM and the government are locked in a dispute. This has been highly disappointing. The key question is: is now a good time to add to your copper exposure?

In assessing the supply and demand dynamics, the short answer for supply is that not much has changed. It takes an average of 16.5 years from investment to production; 12 years for exploration and feasibility studies and 4-5 years for the construction phase. The Cobre situation highlights the challenges in extracting this crucial resource, but FQM is not alone in facing challenges. Fires delayed progress in Russia's Udokan mine and a myriad of problems have affected Anglo American. Together, these issues represent millions of tonnes of global supply. In simple terms, this lag between supply and demand means that the copper supply we have today is a result of greenfield investment before 2008, when EVs weren't part of the consideration. For reference, Tesla didn't go public until 2010.

In September 2023, the International Energy Agency (IEA) published a stark gap between expected copper supply (25MT) and demand (35MT) in their anticipated Net Zero Scenario, 2030. As with all inputs, we should be cautious of placing too much emphasis on single data points that may have inherent biases. However, it is consensual that supply will barely grow between now and 2030!

However, differences of opinion begin to emerge on the demand side. There is good reason for this: copper has a variety of valuable properties, which means a wide variety of industries impact demand:

- Its conductive properties make it essential for copper wires in devices, homes, grids, electric vehicles, wind turbines, telecoms, etc.
- The combination of anti-corrosion and durability makes it an ideal choice in various industries, from ship hulls and ammunition to household plumbing.
- The anti-microbial properties make it an ideal choice for regularly touched surfaces, like door handles.

Nonetheless, we are increasingly cautious that high prices can lead to substitution and thrifting. I certainly didn't think twice when my plumber showed me the difference in cost between plastic and copper pipes under my floorboards. In cabling, copper isn't the only metal offering conductivity. Aluminium is one-third the weight of copper and 60 per cent cheaper, thanks to being 1,000 times as abundant.

An EV can use up to 80 kilograms of copper, a stark contrast to the 20 kilograms typically used in a conventional combustion engine vehicle, and a recent report by Goldman Sachs revealed that EVs accounted for two-thirds of the global copper demand growth last year. While the long-term trajectory for the EV industry remains clear, we are conscious that cost, lack of choice, and lack of infrastructure may slow global EV demand in the near term. Additionally, Elon Musk hopes upgrading batteries from 12V to 48V (which reduces electrical load) could reduce copper usage within EVs by 10-25 per cent.

Copper tends to trade as a bellwether of economic sentiment, where there are equally split opinions. There is much to consider here; on the one hand, the Fed cutting rates has typically been good for the price of copper. On the other hand, concerns around China's economy feel significantly pronounced and perhaps overblown. Some may argue that Chinese renewable installations are slowing, and others may point out that installations are outpacing grid capacity. Notably, China consumed more copper in 2023 than any year before.

With most of the world's copper produced in Emerging Market countries, keeping abreast of the market dynamics is important, as is constantly re-examining our long-term supply/demand assumptions. That said, our edge here likely lies in the ability to differentiate between what are simply short-term impacts on supply or demand and what are the levers that could significantly change our long-term supply-squeeze thesis. FQM's Panamanian squabbles are annoying but don't shift the dial materially. Substitution or a step change in battery or transmission technology is potentially far more significant. However, there is little to suggest these are sufficient to alter the imbalances we forecast. So, for the time being, our main challenge remains finding the best companies in EM to maintain or potentially increase your copper exposure.

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