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Think Piece

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Copper – Going Ballistic

"Weaponising" the Red Metal

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"Weaponising" the Red Metal

- + **Copper is starting a slow recovery after what looked like a bear raid orchestrated by China**
- + **The "weaponisation" of Copper as some sort of revenge for Trump's trade tariffs is an own-goal and an unsustainable strategy**
- + **Delay to projects and damage to financing prospects strengthens the copper price outlook for the future due to likely supply restraints**
- + **China has wasted reserves/stockpiles/armoury of Copper in this futile endeavour**
- + **It has failed dismally to damage the US (which is neither an exporter or significant copper producer) and instead has provided US economy with cheaper copper**
- ✘ **The decline in copper prices, albeit transitory, has damaged/delayed the financing prospects of various developers hoping to advance projects**
- ✘ **Stockpiles in China represent a threat to not only copper but other metals if they are mobilized to damage pricing in global markets**

Going Ballistic?

It was interesting to see that a London equities analyst put out a Morning Note ascribing the fall in the price of red metal to China and its "weaponisation of Copper". While we have argued for years that China was building a stockpile post-2008 so that it could control and bracket the price of the metal we had never thought of such a nifty and accurate explanation of what the Chinese had done. Indeed we can now take the concept and apply it retrospectively to Rare Earths where undoubtedly the Chinese "weaponised" that group of metals in 2011 and in the process of blowing up the TSX wannabes in the REE space they actually managed to damage themselves by continuing the ongoing giveaway of REEs at sub-economic levels as a means of maintaining that market under its control.

The latest pushing of the button and setting off the "copper bomb" owes more to Dr Strangelove than to a grand strategy to maintain control. What do we have here? Seemingly a fit of pique that the US has imposed tariffs on trade with China. So what does China do? Destroy the mark-to-market value of its own holdings of Copper (not that it marks anything to market if it can get away with it). To what effect? Well, it puts an extended dampener on development and exploration in the Copper space ultimately meaning higher prices down the line for the world's largest consumer of Copper… China. Nice own goal there.

How does this effect the US, which does not export Copper to China or import China from Copper?

Makes it cheaper for US manufacturers. Once again, an ill-thought out own goal.

Lesson in all this? One thing is to weaponise a metal and another thing is to then strap on said weapon and blow oneself up. Not that bright…

Our Take on Copper

Copper has managed to be one of the metals that is seen as both traditional and yet new-tech at the same time. Its *aficionados* can reel off how many kilos there are in the average EV and thus its fortunes are linked to the great new wave of the future.

One does not need to be a subscriber to apocalyptic views of shortages caused by the EV revolution to be nevertheless bullish on copper. The metal has not been as underinvested in recent times as say, Zinc, but the long period of quiescence in mining markets meant exploration was minimal and development to mining status was largely in the hands of the Chinese, (e.g. MMG at Las Bambas). Big mines (or rather big discoveries of potentially new big mines) though, are generally viewed to be a thing of the past. While it is not said out loud in public "Peak Copper" in Chile is a real threat. All this augurs well for upcoming new producers.

Manipulation? Never…

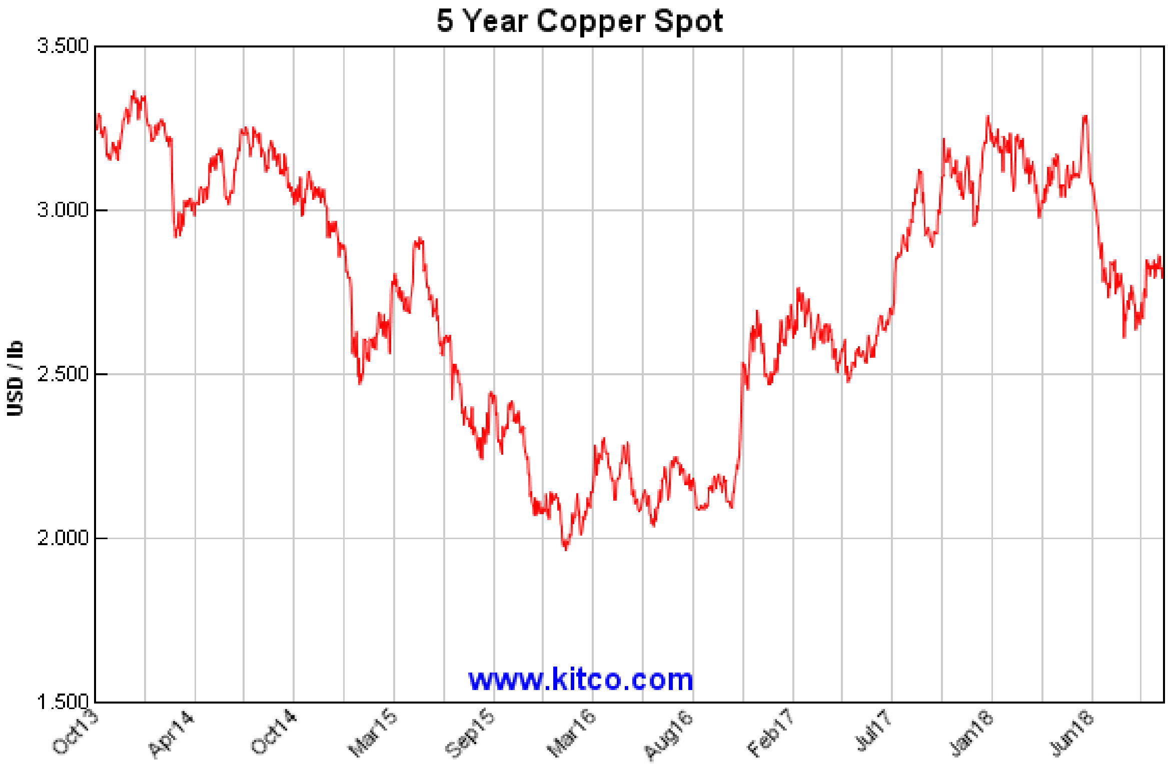
The global crisis of 2008 was a seminal year for the copper market. It was not that the metal went down. All metals did. It was that up until that time the global copper market had been in the hands of the major miners. While the prices did not always work out for them in the way they wanted they had quite a large degree of control over the stock of copper that was "seen" in the markets.

The wrenching effects of the crisis enabled the Chinese with trillions of dollars in accumulated reserves to devote some small part of the financial firepower to start to accumulate sizeable copper stockpiles in unmeasured warehouses and port facilities. Having substantial undisclosed" stockpiles meant that the Chinese could then add or subtract from exchange warehouses at will and pour cold water on the copper price when it was getting too overheated for Chinese purposes.

This new "nine-tenths of the iceberg one cannot see" provided the opportunity for scamsters on more than one occasion this decade to use the vagaries of stockpile sizes to borrow against supposed collateral with the likes of Standard Bank and Citibank falling prey to the ruse.

Some would dismiss this as mere conspiracy theory. However this period of Chinese control of the Copper price happens to have coincided with the depressed period of the mining sector in general (in a somewhat chicken-and-egg fashion) with the result that the Chinese have been able to position themselves in some of the most sizeable Copper assets under development such as Tenke Fungurume and Las Bambas. Most recently Zijin Mining made a breathtaking swoop in the sector, firstly acquiring the RTB Bor mine from the Serbian government and then swiftly following that up with the $1.4bn "white knight" offer for Nevsun, with its neighbouring Timok mine.

As the chart below shows the price started to pull out of its swoon in late 2016. It started a virtually unchecked march higher until it breached the $3 per lb level. It briefly hit $3.20 and then toppled under $3, losing 20% from its highs, in the backwash from the Trump-China trade tussle.



The Pipeline

Unlike metals like Zinc/Lead and Nickel, there was some copper development during the downtime (e.g. Las Bambas, Constancia etc) but this is not sufficient to replace mines that have exited or reduced production and deal with even conservative forecasts of growth in consumption.

Now that the uptime has arrived (came and went and is coming again) the small to medium projects that are dependent on gold credits (or vice versa) are having a tougher time gaining traction (or even attention as gold's prospects look so murky). That leaves the larger projects to attempt to fill the gap in the pipeline caused by so many years of the Copper price being in the dumpster.

It was surprising to recently review a listing of the top twenty western copper mines and see that two date back to the 19th century and more than half of the large producing mines date back to pre-1950s. On the next page we list the major projects that could make a difference to the copper supply situation though with the caveat that most are potentially only replacing existing production that is declining or being shuttered.

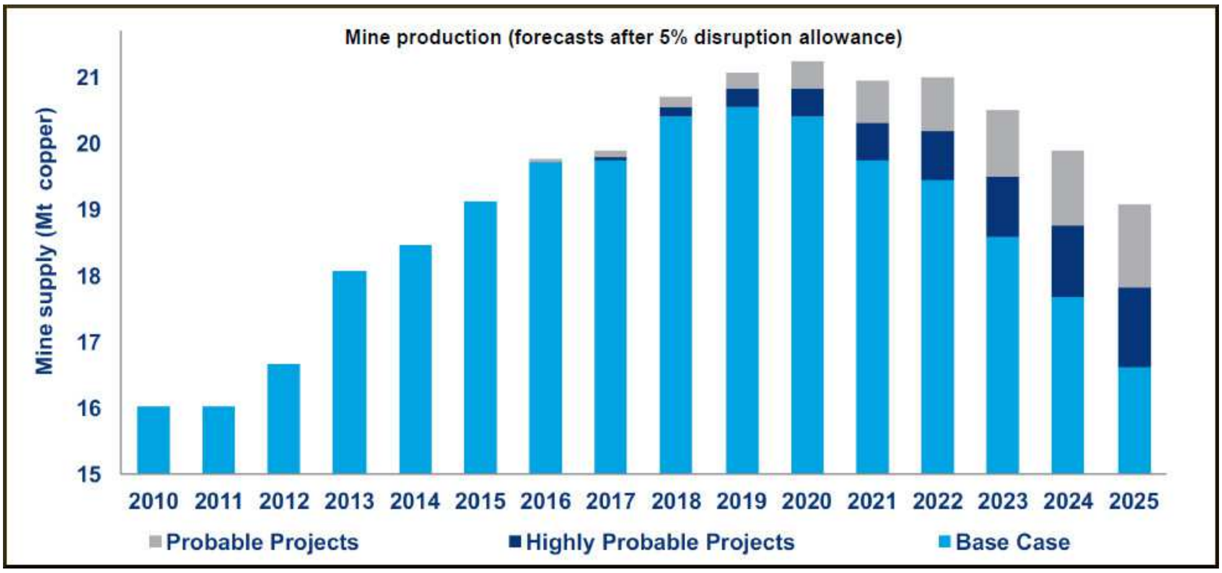
The list of upcoming mines of size by its very nature is exclusively composed of projects that are in the multi-billion dollar capex category. This means that they tend to be the hands of majors or will ultimately have to gravitate to majors to ever get off the starting blocks.

Realistic Additions to Cu Production over Years to 2025

Project	Jurisdiction	Contained Cu (tonnes)	Ownership
Carrapateena	Australia	1.4 mn	OZ Minerals
Cascabel	Ecuador	2.3 mn	Cornerstone Capital 15% and SolGold 85%
Casino	Yukon, Canada	2.04 mn	Western Copper & Gold
Cobre Panama	Panama	1.209mn	First Quantum 90%
El Espino	Chile	1.01mn	Pucobre 100%
Frieda River	PNG	13mn	PanAust (Guandong Rising) 80%; Highlands Pacific 20%
Kamoa	DRC	24.2 mn	Ivanhoe Mines 48%; Zijin Mining Group Co 47%; DRC government 5%
Khoemacau	Botswana	1.955mn**	Cupric Canyon
King-king	Philippines	1.86mn	St Augustine Gold and Copper 60%; NADECOR 40%
Michiquillay	Peru	4.6 mn	Southern Copper 100%
Productora	Chile	1.13m	Hot Chili 82.5%; CMP 17.5%
Quelleveco	Peru	6.05mn	Anglo-American 60%, Mitsubishi 40%
Resolution	Arizona, US	2.666mn*	Rio Tinto 55%; BHP Billiton 45%
Rosemont	Arizona, US	2.4 mn	Hudbay Minerals 80%; United Copper & Moly 20%
Timok (Upper)	Serbia	0.89 mn	Nevsun (now Zijin Mining) 100%

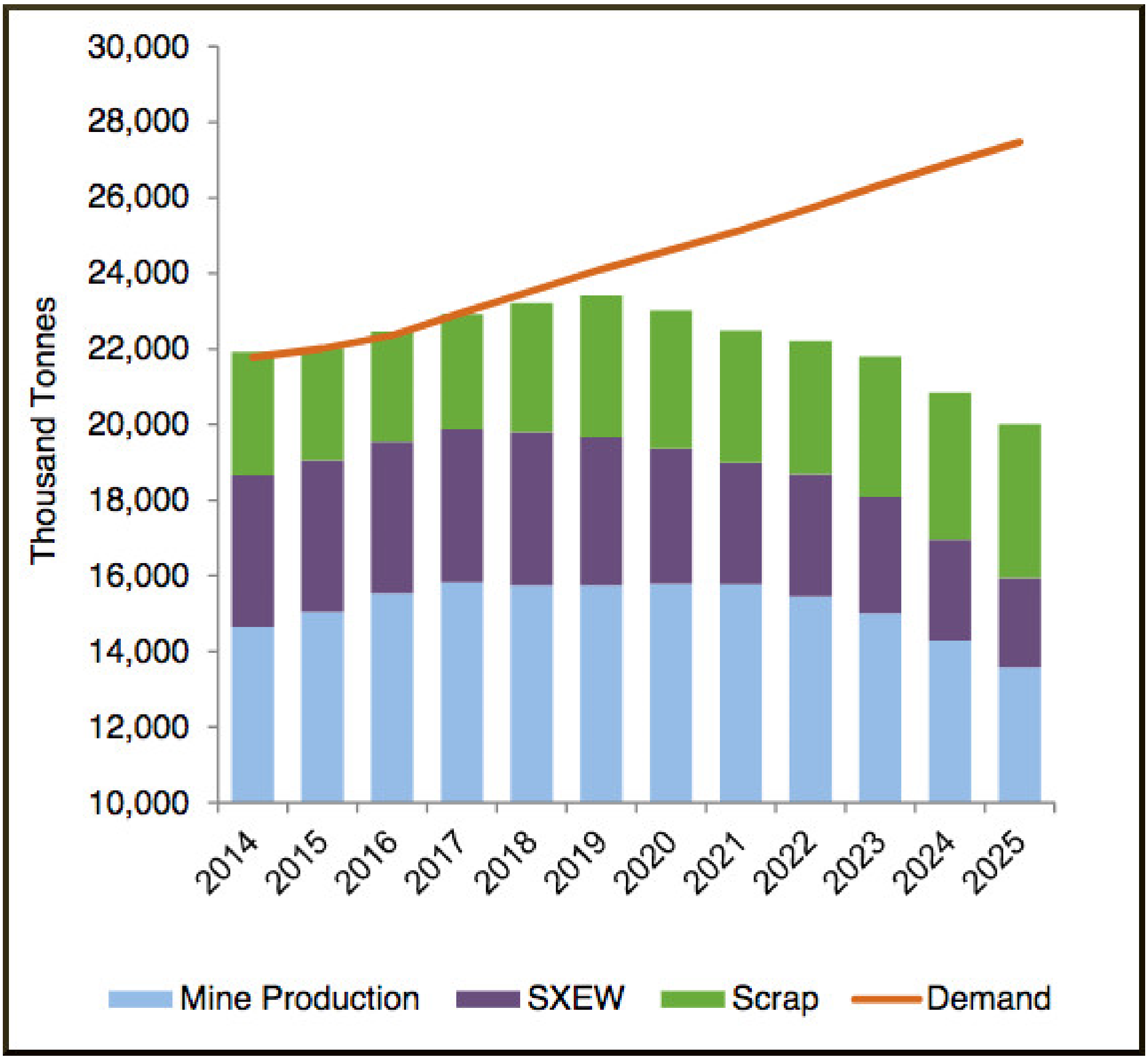
** M& I *Inferred Resource

The chart below shows Wood Mackenzie's estimation of how the mine supply situation might evolve when taking into account what the probable and highly probable projects might contribute. Not being privy to what WM deems to be the differentiation being highly probable and merely probable we cannot say if we agree with specific inclusions or exclusions but we do agree with the trend, which is less production rather than more.



Source: Wood Mackenzie, Hot Chili Copper

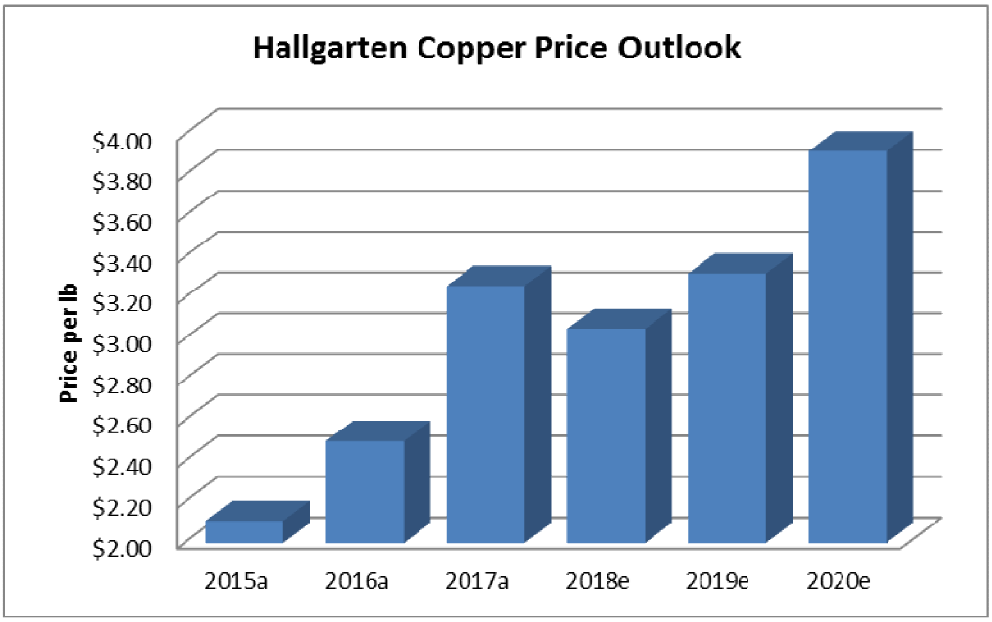
The chart (in another version) looks worse when demand is overlain (quite literally) on the production trend. Either demand must come down or production must soar. The latter is not likely to happen as long as some players think they can sabotage the metals price AND yet encourage future supply at the same time.



Source: Wood Mackenzie, CRU, ICSG, Teck

Below can be seen the LME warehouse stocks of copper. This shows steep fall in stocks, indeed precipitous, in the last two months that would normally fire up the copper price. It makes an interesting contrast to the Zinc price where a tug of war developed between a market that was running down stockpiles due to strong demand and yet someone kept moving in stocks to make it look like a stock build and then the price was slapped down again.

As the chart below shows we are looking for gradualism in our price projections from here through to 2020. We see resistance at US$4 per lb, not so much from the general marketplace, but from the Chinese. They do not want to be at the mercy of "Western" miners again in this metal. How the pushback might manifest itself is not clear, but the Chinese firepower is considerable and should not be underrated.



In any case, the Copper price lingering between $3 per lb and where we see the price in 2020 is a good place to be for copper miners and it ensures that mines with fair grades and CapEx numbers "within the ball park" will be seen as doable and desirable.

Conclusions

Much as we ascribe to the philosophy of Small is Beautiful, small, alas does not make a difference to the global copper supply balance, even if it may prove potentially more profitable than gargantuan mines. The smaller copper mines also have a two-edged sword, with many having a gold by-product or vice versa, hanging over them. Such is the size of the copper space that only big mines make a meaningful contribution and those types of mines (the Chilean super-pits) that moved the dial are things of the past. Now megamines tend to only replace other megamines that are going terminal. The growth in copper demand is inexorable; the supply of new production is not.

We had thought the Chinese had developed a "live and let live" attitude. They would buy and accumulate copper to ensure that price spikes and dumps did not occur. In the process they created an environment in which mine developers could feel confident that they would not see the dire situation of the late 1990s again but neither might they see prices over $4 per lb again. Then some "bad actors" ruined any chance China had of being a global (official) price-setter, via the Shanghai Metals Exchange, due to the warehousing scandals. Thus Copper prices remained set by bilateral means or through the avenue of markets like the LME. However to then see the Chinese act so ham-fistedly in their recent attempt to discipline the US through dumping on a broad array of metals was dismaying and cast the whole Chinese apparatus into the category of being "bad actors".

Despite these actions, the copper price has been clambering back towards the daylight. Damage has been done though with financing markets coming down with a case of severe parsimony which has choked off exploration and project advancement (for the moment). This ultimately will feed into lower supply and higher prices. Thus, an own-goal by the Chinese.

Important disclosures

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