

Insight: From the capital

A long wait for the next cycle

Shock (horror), metal prices will trend lower until demand stages dramatic return



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Until there is an unanticipated and above average surge in economic activity, another commodity price cycle is unlikely. That, in a nutshell, is the most obvious inference from an analysis of 170 years of metal and oil price data presented at the American Economic Association annual meeting in January.

Much of the capital that flows into the resources sector is based on a hope and a wish about the future direction of metal prices rather than confidence about the intrinsic worth of individual projects.

Among the larger companies, this is changing with more emphasis on short-term capital management, but the smaller end of the market still pitches for funds using the prospect of higher commodity prices as a primary lure.

Sell-side analysts encourage thoughts of commodity-driven investments. Even among the biggest of the brokerage firms, analysts still talk about their "favourite" commodities (ie those likely to rise soonest and fastest) to foster investor engagement. Judgments about sector attractiveness rest on the timing of supportive price movements.

It is now commonplace for analysts to forecast commodity prices using some variant of models that treat prices as a function of changes in inventory levels. Slightly more sophisticated versions might include a broader array of macroeconomic variables such as exchange rates to take account of prices being generally denominated in US dollars. Monetary indicators can help measure variations in speculative flows.

In essence, in such models, stable inventory levels imply stable prices. The modelling framework suggests even strong growth in demand may have little or no effect on prices if the extra tonnages of metal used are matched efficiently by additional supplies. There is evidence for this over the latest cycle.

Of the principal base metals, aluminium has had the strongest growth profile. Between 2000 and 2012, consumption appears to have grown at an average annual rate of 5.1% a year. In contrast, at 2.3% a year, copper consumption grew at less than half the aluminium usage growth rate.

Despite commentaries often referring to prices as though they were linked directly to demand growth, the relative growth in



demand between the two metals gives us little idea of how their prices moved. Of the six main London Metal Exchange base metals, copper prices actually rose the most over this period and aluminium prices went up the least, in direct contrast to the underlying growth in demand for each.

Annual primary aluminium supplies appear to have risen 21.9Mt between 2000 and 2012, while total metal supplies, including recycled materials, jumped 22.6Mt, well ahead of the extra 20.3Mt being used.

In the copper market, while usage grew by 4.9Mt, mine output increased by 3.8Mt. Over the entire period, 224Mt of copper were consumed despite only 196Mt being mined.

Copper mine output barely increased in 2006 and grew at half the long-term rate of growth over 2005 and 2006 as prices made their first push toward US\$4/lb.

Subsequently, copper mine output has continued to lag behind usage rates requiring prices well above industry marginal costs to close the gap by reducing demand and attracting more secondary material into the processing cycle. In contrast, aluminium prices have left large parts of the industry operating unprofitably to force closures and cut supplies.

Matching supply and demand reduces upward pressures on prices. However, changes in demand are more potent sources of pricing pressures than supply side adjustments.

The industry reacts to supply side disruptions more quickly than it can react to unexpected consumption increases. Restoring production following industrial disputes or temporary closures due to weather or technical mishaps can be relatively straightforward.

Adapting to an unanticipated surge in demand takes longer, especially when production rates might already be near full capacity.

A sharp acceleration in global growth is the circumstance most likely to cause a prolonged period of higher prices. This is one of the conclusions outlined in a paper by Martin Stuermer ('150 Years of boom and bust: what drives mineral commodity prices?') presented at last month's annual gathering of the American Economic Association.

Stuermer assembled datasets extending back 170 years for copper, lead, tin, zinc and crude oil to measure the impact on prices of supply and demand shocks. His key conclusion from an econometric analysis of the data was that prices are most likely to be driven by demand shocks, the effects of which can persist for up to 15 years. Supply shocks play a less frequent role and, when they occur, persist for a maximum of five years. In each case, there is a tendency for real prices to return to their stable or declining trends in the long run.

Where output growth displays less than usual volatility (as in current global economic circumstances), the chances of an unanticipated upside demand shock are relatively low limiting the likelihood of a cyclical upturn in prices.

The longer such moderate growth rates persist, the more likely the industry will be able to plan for and accommodate these expectations. The 3.5-4% global growth rates anticipated by economic forecasters as the upper limit to near-term growth appear insufficient to challenge the capacity of metal producers.

A precondition for any cyclical price rise is probably a sudden 5-6% global output growth surge that quickly uses up available supplies and leaves the industry struggling to respond.

Right now, with output growth in advanced economies running below potential and developing economies in a cyclical slide, a growth surge seems a dim prospect. Of course, that is what makes it unanticipated when it happens. Nonetheless, the current base case growth picture does not appear robust enough to underpin a cyclical price response during the upcoming three to five years. Something more dramatic will be needed.

Meanwhile, according to the Stuermer paper, prices are set to trend lower, at least in real terms, until an above average demand shock occurs again. ▼