Base Metals Market Update

National Australia Bank

- **Prices for most industrial metals have moved lower in response to growth concerns in China and uncertainty over the unwinding of commodity financing deals. However, supply side events are supporting prices for Nickel in particular.**
- **In aggregate, base metal prices are 1% lower in March to date to be around 9% lower over the year. Annual price movements vary across the metals complex, but most have lost significant ground.**
- **Partial indicators for the Chinese economy have generally been soft, while recent debt defaults have heightened concerns over the economy. However, there is growing anticipation in the market for potential stimulus measures in China. The US economic recovery experienced a set back, largely due to adverse weather, but is expected to get back on track over 2014 – tapering to conclude by year end.**
- **Most metals market balances are expected to loosen in 2013/14, as increasing metal supplies outpace the gradual improvement in demand. These market fundamentals are likely to limit price increases as the global economy improves.**
- **The NAB Base Metals Index (BMI) rose modestly in the March quarter. Prices are expected to be relatively flat over 2014 before rising modestly next year.**

Monthly Price Movements

Base Metals Prices*

Base Metal Prices

	Avg Price (US$/tonne) Mar-14	Monthly % change Mar-14	Mar-13 - Mar-14 % change
Aluminium	1704	0.5	-11
Copper	6664	-6.8	-13
Lead	2055	-2.5	-5
Nickel	15626	10.0	-7
Zinc	2021	-0.7	5
Base Metals Index		-0.8	-9

* Prices on an LME cash basis.

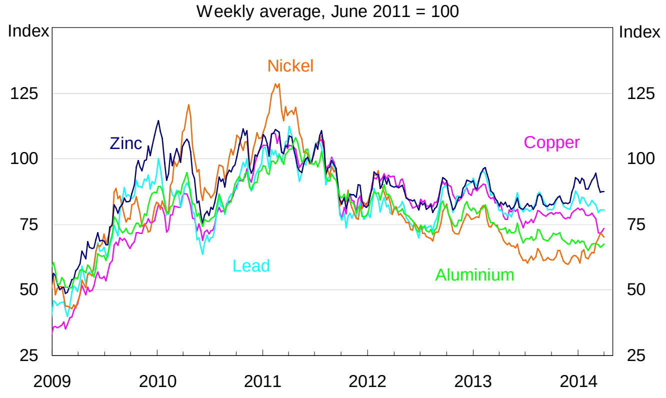
Sources: LME; NAB

This year has been a rollercoaster ride for base metal markets with prices fluctuating in response to mixed (albeit generally weak) economic data, and a series of market distortions that are creating uncertainty over the supply outlook for some metals. Additional QE tapering and comments from the Fed suggesting that interest rates could be hiked far sooner than most had expected, possibly contributed to the headwinds facing metals markets in the month. But, this was generally overshadowed by heightened concerns over signs of a sharper than expected deceleration in the Chinese economy – made worse by fears that China is facing its own financial crisis (or 'Minsky moment'). On a more positive note, comments from Chinese authorities pledging to introduce stimulus measures – particularly in town redevelopment projects – have been well received by markets, while in the US, partial indicators are suggesting that the impact of severe weather is passing and the economic recovery remains intact.

The weaker economic data out of China and concerns that commodity financing deals may be unwound (exacerbated by recent CNY depreciation, Chinese debt defaults and growing anticipation of US interest rate rises) and unleash significant metal supplies into the market, have seen prices fall across most of the base metals complex in March. More recently, declines were stemmed by comments about stimulus measures in China and suggestions that authorities in China will ease restriction on banks and property developers to spur growth. On the supply side, the Indonesian ore export ban and potential sanctions on Russia in response to its involvement in the Ukraine, have fed supply concerns that are supporting nickel prices in particular – Indonesia and Russia supply almost 20% and 10% per cent of global nickel mine supply respectively.

In aggregate, base metals prices on the London Metal Exchange (LME) have fallen by nearly 1% in March to date, following a similar sized decline in October, to be almost 10% lower over the year. The performance of metals prices over the year has been consistent with expectations for softening market balances as supply steadily increases in an environment of still relatively tepid demand. While physical demand conditions look set to improve in advanced economies, there is still significant uncertainty over emerging markets and how the eventual unwinding of monetary stimulus by the major central banks is likely to unfold. We can expect to see ongoing policy distortions to market pricing, contributing to market volatility, although some factors are likely to be offsetting.

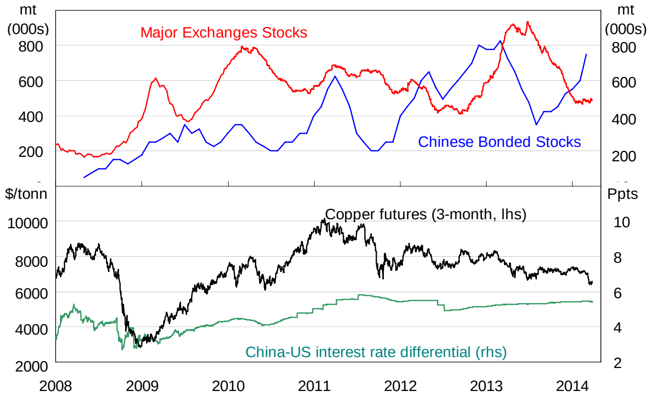
Base Metals Prices



Sources: NAB; Thomson Reuters

Price declines were recorded across most of the base metals in March to date, although the magnitude of decline has varied significantly. Nickel has continued to be a stand out performer, following poor results in previous years, recording solid price rises since the start of the year driven by recent supply concerns. Similarly, aluminium recorded a modest rise in the month, supported by tighter physical markets which have been further fuelled by Russia concerns and Indonesia's ban on bauxite exports, while already low prices are putting pressure on small marginal producers. Nickel prices rose by a strong 10% in March to date, while aluminium prices are up a much more modest ½%. Average copper prices are down the most in the month, falling by 6.8%, while declines in other metals varied with zinc prices down 0.7% and lead prices 2.5% lower. Nevertheless, underlying fundamentals in lead and zinc markets remain somewhat positive relative to the rest of the complex due to limited additions to supply capacity to come. In annual terms, lead and particularly zinc have been the best performers, the former falling by 5% over the year while the latter has risen by a comparable amount. Copper prices recorded the largest decline (down 13%), suggesting that the metal may have become further decoupled from advanced economies – calling into question its status as 'Dr Copper' – as they are still expected to improve over the course of 2014 despite recent signs of softening.

Interest arbitrage still incentive for copper financing (for now!)

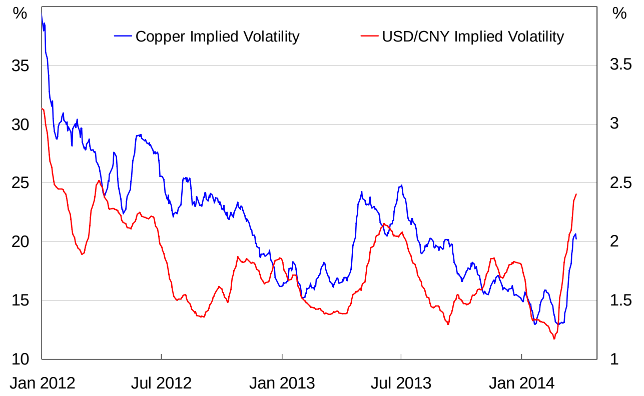


Source: Bloomberg, NAB

Most of the weakness in copper is stemming from signs of weakness in China (see discussion of demand below). One theme to gain particular prevalence in recent months is the general uncertainty surrounding the potential impact from a ramping up of commodity/copper financing deals in China. These financing deals are essentially carry trades that take advantage of interest rate arbitrage or help firms to skirt domestic funding constraints within China. A surge in Chinese bonded stocks since mid-2013 corresponded with both a liquidity squeeze in China (driving interest rates significantly higher) and a draw down of stocks from major exchanges, pointing to a shift in inventories for use in these financing deals – as opposed to an improvement in underlying fundamental demand for the metal. Tying up metal as financial collateral has artificially tightened physical markets, evidenced by elevated premiums. Analysis undertaken by Goldman Sachs indicates that up to 1 million tonnes of copper could be tied up in financing deals – relative to global refined copper usage of 21.2 million tonnes in 2013 reported by the International Copper Study Group.

However, attempts by Chinese authorities to rein in hot money inflows into China, including a managed depreciation of the RMB, have contributed to a spike in implied CNY volatility, increasing uncertainty over the profitability of these deals. So even though hedged commodity financing deals remain very profitable due to elevated interest rate differentials (market estimates suggests returns continue to be in the double digits), added FX and copper price volatility will lead to higher hedging costs that will eventually erode the interest rate arbitrage advantage. Consequently, the pace of copper financing is likely to slow, removing a source of demand as global supplies continue to rise.

Volatility in copper and CNY may impact financing deals

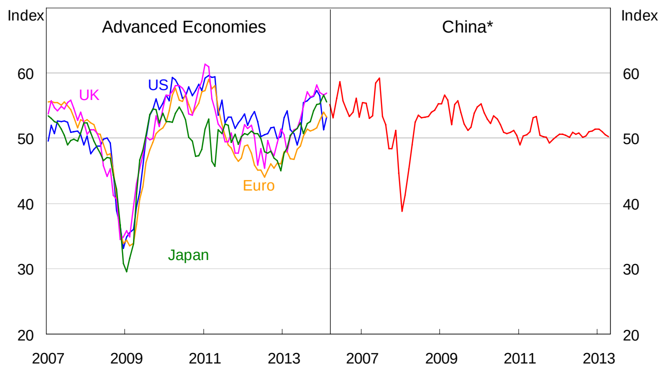


Source: Bloomberg, NAB

But while these factors remain a risk and may have contributed to the recent rout in copper prices, a number of factors suggest that soft demand conditions and strong copper supply have driven price movements rather than an unwinding of financing deals themselves. Additionally, speculators are also offloading copper into the market in anticipation of an unwinding of copper financing deals. The fact that many other commodities associated with financing deals have not experienced the same declines is quite telling – namely aluminium and gold. Also, the fall in spot has not been associated with a boost to futures prices, which would be expected as hedges are purchased back. Therefore, while financing deals certainly provide a risk (and source of volatility) to copper markets, we anticipate that the likely course will be a relatively gradual unwinding of these deals as US interest rates begin to rise – keeping spot copper prices muted, but not triggering a calamitous market collapse.

Metal Demand

PMI Surveys

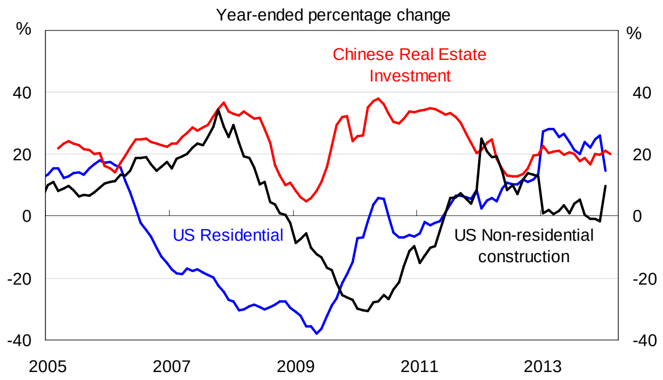


* Official PMI published by China's NBS.
Sources: Markit Economics; NAB; NBS

Partial economic indicators are painting a mixed picture of underlying fundamental demand for metals. Manufacturing PMIs indicate that industrial activity in the advanced economies has remained relatively positive despite significant disruptions from weather disruptions during the early months of the year. Fortunately, their underlying strength remains and activity growth should get back to its previous trend. But despite the improvement, interest rates look set to remain very low in the big advanced economies for some time yet. Nevertheless, Janet Yellen threw a spanner in the works recently by suggesting that the US Fed could potentially commence raising rates much sooner than most had expected (possibly April). While this suggests greater confidence in the economy, it could also run the risk of snuffing out the recovery (as well as impacting investor demand for metals). Nevertheless, other central banks will keep rates low, particularly the ECB which is still facing the prospect of deflation.

The economic performance of emerging economies has been mixed in recent months, but timely indicators suggest that emerging markets are experiencing their weakest growth in output since last September – driven by weakness in manufacturing. The HSBC emerging market index eased to 51.1 in February (from 51.4), reflecting the weakest rise in manufacturing output in five months. According to Markit Economics, contractions in China, Russia and South Korea weighed down manufacturing, while forward orders are suggesting soft conditions are likely to continue in coming months.

Construction spending

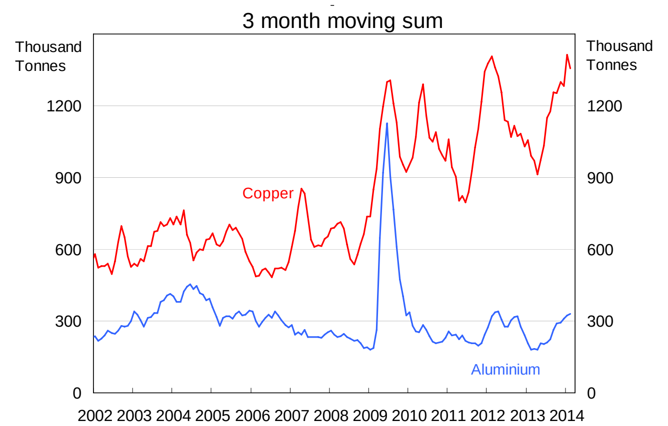


Source: US Census Bureau, NAB

The official Chinese data is held up by the usual start of the year delay but the monthly industrial business surveys for early 2014 are consistent with trend slowing in manufacturing. Nevertheless, construction appears to be holding up with real estate investment growth remaining at around 20% over the year. The construction sector is a major user of industrial metals, particularly copper, so signs of robust investment are a positive for the metals complex. However, a recent developer default and concerns over the availability of financing could potentially weigh in Chinese construction, although talk of stimulus measures have been welcomed by markets, as has the announced growth target for GDP of 7.5% for 2014, suggesting that authorities are unlikely to let the economy slow significantly. Construction activity in the US is also looking reasonably resilient. Growth in non-residential investment has picked up and, although residential growth has slowed, it continues to be strong.

Import demand for metals has remained strong in China, despite recent weakness in real activity, which probably reflects the demand stemming from financing deals (some estimates put this at up to half of the import demand for certain commodities in recent months). China's copper imports rose more than a third in the three months to February and were 37% higher over the year. Similarly, aluminium imports were up 13% in the three months to February, to be 83% higher over the year.

Chinese import volumes

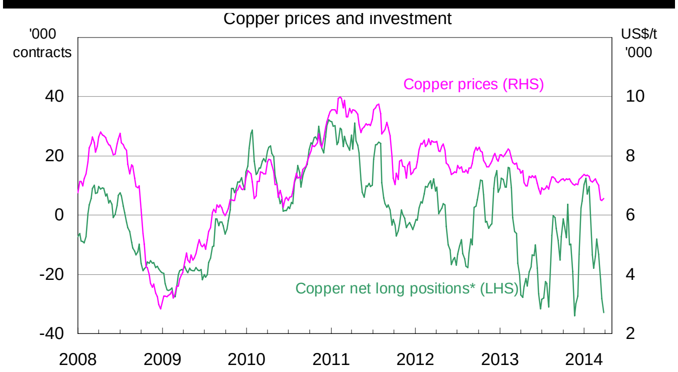


Source: CEIC Database, NAB Group Economics

Investment Flows

Since early 2008, a reasonably strong relationship has existed between the LME cash price for copper and the number of net long positions by non-commercial traders in US commodity markets (see Graph). Copper (non-commercial) net-short positions have increased notably in the wake of the weaker Chinese data and news of debt defaults, as well as suggestions that the Fed may raise rates sooner than expected. Copper prices have certainly responded to the shift in speculative flows, although there may be additional scope for a shift lower if there are any further shocks on the China front.

Investment Flows



* Combined futures and derivatives net long positions for non-commercial traders
Sources: CFTC; NAB

Metal Supply

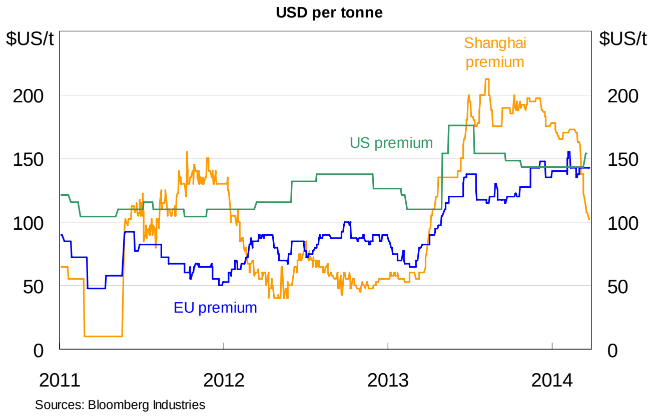
Market balances are generally expected to weaken in the metals complex as new supplies outstrip relatively tepid demand, although specific supply stories will continue to produce tighter supply conditions for certain metals. One supply side theme that has been lurking in the background over recent months has been the upcoming changes to LME warehousing rules to address the build up of metal tied up in financing deals – artificially tightening physical markets for consumers. Although there was a lot of uncertainty over how these rules (which were to become effective from April 1) would impact the market (we have previously explored some of the reasons to be sceptical over their effectiveness), they were in theory expected to unlock some of the tied up inventories and water down physical markets. However, the rule changes have apparently been shelved following a court decision in the UK stating that the changes were "unlawful and unfair". This is likely to be an ongoing issue that is unlikely to be resolved any time soon.

Copper supply

The copper surplus is still expected to emerge over the next couple of years, supported by new capacity, fewer supply disruptions, and an unloading of stocks currently tied up in financing deals as interest rates in the US and other advanced economies start to rise. Supplies of copper concentrate have already become more abundant, allowing smelters to stockpile in anticipation of improving TC/RC price settlements. However, the Indonesian export ban on copper concentrates has had an impact on market supply, although expectations are that restrictions could be loosened, while adequate supplies in China are helping reduce the impact of the ban. But while the Indonesian government has issued a number of export permits already, some large producers are yet to resume export shipments.

Nevertheless, according to preliminary data released by the International Copper Study Group (ICSG), refined copper recorded an apparent market surplus of 34,000 tonnes in the December quarter due to weak refined usage in major consuming regions during the yearend holiday period (in seasonally adjusted terms the market was actually in deficit by 57,000 tonnes – although this was the smallest deficit for the year). More recently, production of refined copper by the world's largest producer and consumer of the metal (China) appears to have slowed in the first two months of the year, down from the record high in November, although production is still up 8½ % from the same time last year. Softer demand in China is closing the SHFE-LME arbitrage window and dragging down Chinese premiums, but the ex-China market conditions may have stayed relatively tight as premiums have remained elevated – this could potentially drive higher copper **exports** from China.

Copper premiums drop in China, but remain high

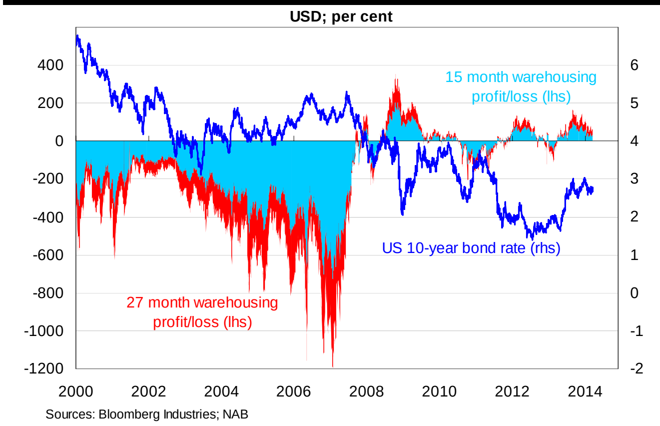


Sources: Bloomberg Industries

Aluminium supply

The global aluminium market remains in chronic oversupply, but bottlenecks at warehouses, the Indonesian export ban and financing deals are all keeping physical markets very tight and premiums elevated. Chinese production start ups eased off slightly in recent months, probably due to the Lunar New Year, while cost pressures are forcing smaller producers to cut back production or consider closure. Primary aluminium production in China eased slightly in the first two months of the year from the record high of 1.95 million tonnes in November, but is still up 7½% over the year; China is the world's largest producer of primary aluminium. While pressures on bauxite supplies from the Indonesian export ban has been relatively limited due to large Chinese stockpiles, these are only expected to last 3-6 months, suggesting the need for alternative sources is fast approaching.

Aluminium Financing Deal Incentives



Sources: Bloomberg Industries; NAB

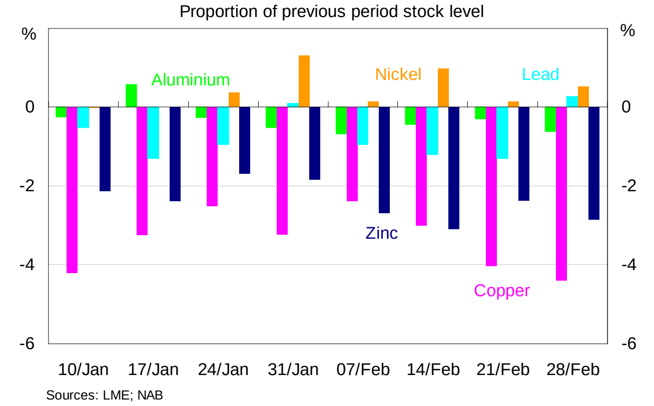
There continues to be a significant amount of aluminium stored in LME warehouses as a result of financing deals, and with interest rates to remain ultra low for the foreseeable future, low storage costs and contango in forward curves are keeping these deals attractive – Bloomberg calculations suggest that financing deals have remained profitable (see chart).

Nickel supply

The price of nickel remains low relative to recent years due to record high inventories that have hurt producers, but the Indonesian ban on ore exports (and concerns over potential sanctions on Russian exports) has seen prices rise strongly this year, outperforming the rest of the base metals complex. Indonesia and Russia account for around a third of the world's mined nickel supply. However, recent LME price rises may not be sustainable until we see a significant draw down of existing nickel inventories. In this respect, the higher price of ore could have a negative impact on Chinese nickel pig iron producers that are facing tough cost pressures, which should help to alleviate LME nickel stocks later in the year. Chinese imports of nickel ore from Indonesia have eased notably since the start of the year, although imports from other sources have also slowed.

LME Stocks

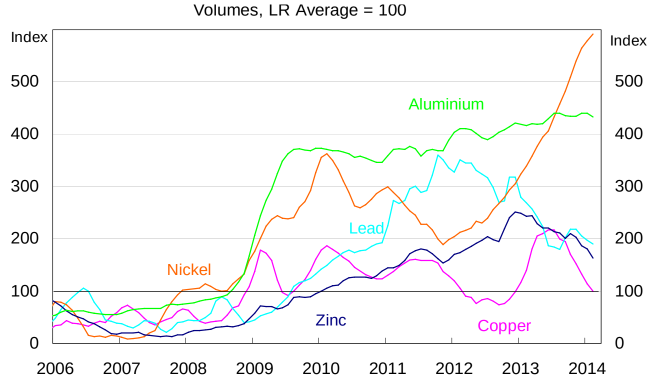
Weekly Change in LME Base Metal Stocks



Sources: LME; NAB

Weekly data show that copper stocks at LME warehouses were drawn down heavily over the past month, with a similar trend seen in zinc and to a lesser extent lead and aluminium. In contrast, LME stocks of nickel have continued to build on their already elevated levels.

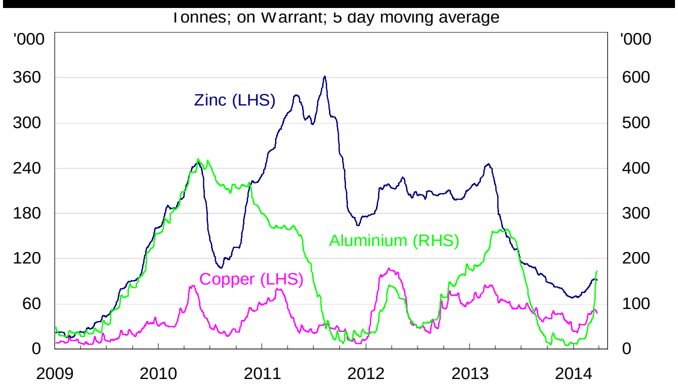
LME Base Metal Stocks



Sources: Datastream; NAB

Copper stocks at Chinese bonded warehouses and at the Shanghai Futures Exchange (SFE) have picked-up in recent months in response to the import arbitrage window (now closed) and increasing use in financing deals due to tight credit conditions in China (discussed above). Aluminium stocks at Shanghai warehouses have risen sharply in 2014, while Zinc stocks have also started to lift again after reaching their lowest levels since 2009.

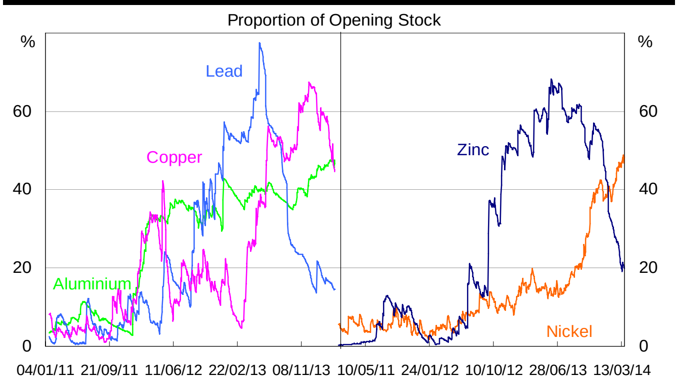
Shanghai Futures Exchange Stocks



Sources: Bloomberg; NAB

LME cancelled warrants across the base metals complex are suggesting varying rates of inventory draw downs in the near-term. Cancellations for copper, aluminium and nickel all remain high, largely reflecting the shift to bonded warehouses as opposed to an increase in user demand, although copper and zinc has eased off recently.

LME Cancelled Warrants



Sources: LME; NAB

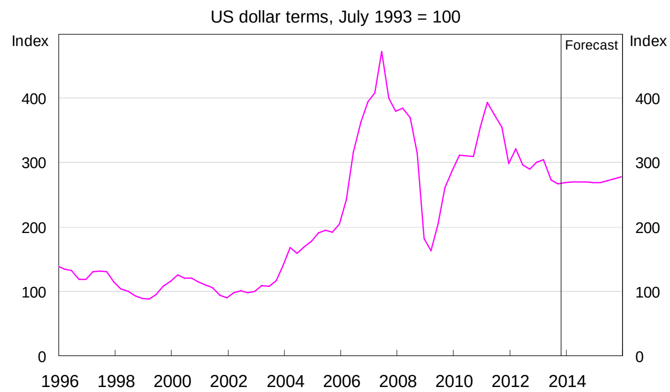
Outlook

Despite some setbacks at the start of the year, growth in the advanced economies is still expected to improve over 2014, which should prove to be a support for the base metals complex, particularly zinc and lead where fundamentals appear to be more positive. However, the Chinese economy is still of most concern to base metals and signs of further weakening of the economy are a concern. A GDP growth target of 7.5% for 2014 and suggestions that authorities are still willing to implement measures to spur growth can provide some comfort, although how stimulus is achieved could have ramifications for the longer term health of the Chinese economy. Supply disruptions from Indonesia (and potentially Russia) are adding some uncertainty to the market, but are likely to provide at least some support to prices in the near-term. However, it is the uncertainty over financing deals and how they will unravel that will probably shape the market over coming months (and possibly years) introducing even greater volatility to metals markets, particularly for copper. Nevertheless, we think that the majority of these deals remain profitable and are likely to be unwound in a relatively orderly manner as US interest rates rise (meaning that the Fed's intentions need to be monitored closely).

Supply and demand fundamentals vary across the base metals, but gradual improvements in demand will be largely matched by rising supplies of some metals from both new capacity and an unwinding of financing deals. Consequently, there is very little evidence to suggest that recent weakness is likely to be fully offset in the near-term, prompting us to revise our price forecasts lower. Nickel is the main exception, particularly now that the Indonesian government looks set to persist with their export bans – a potential offset is reduced uncertainty around Russia if tensions begin to ease. Similarly, an improved outlook for the auto manufacturing sector and limited additions to supply capacity should keep market fundamentals more positive for lead and zinc in 2014.

In aggregate, the NAB Base Metals Price Index rose by 0.6% over the December quarter 2013 and 0.5% in the March quarter 2013, with large falls in copper offset by a big increase in Nickel prices. Base metals are forecast to be relatively flat over 2014, but are expected to rise by 3.2% over 2015 (see Graph).

Base Metals Index



Sources: Datastream; NAB Group Economics

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Quarterly Price Profile

Base Metals Price Forecasts – Quarterly Average

Base Metal Forecasts - Quarterly Average Terms

	Spot	Actual	Forecasts							
US$/MT	Current	Mar-14	*Jun-14*	*Sep-14*	*Dec-14*	*Mar-15*	*Jun-15*	*Sep-15*	*Dec-15*	*Mar-16*
Aluminium	1716	1710	1761	1811	1858	1886	1904	1914	1914	1914
Copper	6686	7044	6654	6570	6504	6553	6602	6652	6702	6702
Lead	2045	2104	2073	2088	2104	2120	2136	2152	2168	2168
Nickel	15669	14627	16097	15936	15617	15305	15573	15845	16123	16123
Zinc	1963	2028	1967	1987	2007	2027	2047	2067	2088	2088
Base Metals Index	n.a.	270	270	270	269	270	272	275	278	278

Sources: Thomson Reuters; NAB Economics

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