

# Base Metals Market Update

## National Australia Bank

- **Metals prices remain well below peaks recorded earlier in the year but have seen some support recently from more upbeat economic data, particularly from the large advanced economies, although China is showing early signs of stabilising as well.**
- **In aggregate, base metal prices are 4% higher in August to date to be around 2% lower over the year. Annual price movements vary across the metals complex.**
- **With growth in the US gradually recovering in line with our expectations, it appears likely that the US Fed will begin to taper its asset purchasing program soon, removing support from commodity markets over coming months. We expect tapering to commence in September but this will be data dependent.**
- **Metals markets will be in surplus in 2013, as a result of increasing metal supplies and slower anticipated demand growth. This shift in market fundamentals combined with elevated inventory levels, will keep metals prices susceptible to any negative demand side shocks.**
- **The NAB Base Metals Index (BMI) is expected to decline by around 1¼% in the September quarter. Prices will recover gradually later in the year and into 2014.**

## Monthly Price Movements

### Base Metals Prices\*

	Avg Price (US\$/tonne) Aug-13	Monthly % change Aug-13	Aug-12 - Aug-13 % change
Aluminium	1820	2.8	-1
Copper	7185	4.0	-4
Lead	2169	5.9	14
Nickel	14370	4.5	-9
Zinc	1894	3.0	4
<b>Base Metals Index</b>		4.1	-2

\* Prices on an LME cash basis. August to date.

Sources: LME; NAB

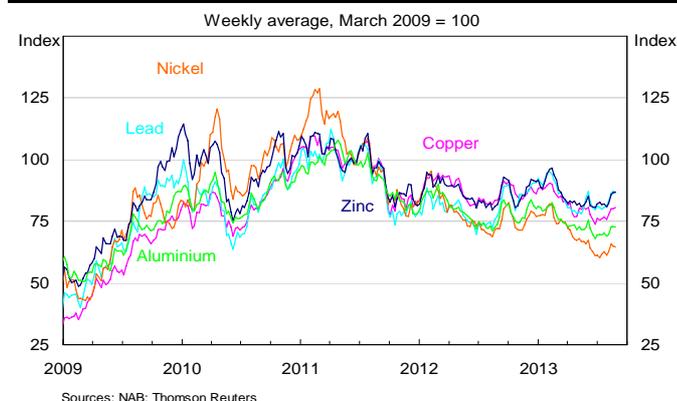
Market conditions appear to be taking a turn for the better with fears of a plunge in metals demand – largely stemming from a slowing Chinese economy – and an anticipated surge in supply, not playing out quite as the market expected. The Chinese economy is showing signs of stabilising, the US economy continues to improve, and even Europe managed to drag itself out of recession in the June quarter (although largely on the back of improvements in the core economies). Nevertheless, financial markets have remained susceptible to shifting expectations about the timing of Fed tapering, which has affected commodity markets. Central banks have made it more clear that they will not rapidly unwind loose monetary policy settings, signalling that interest rates are likely to remain very low for a long time to come (provided inflation remains low). However, we anticipate that the Fed will commence 'tapering' in coming months (likely September).

The flow of more positive news on the global economy has seen base metals prices rally from recent lows. The anticipated recovery in advanced economies in H2 2013 is playing out largely as expected, but while there are early signs that the Chinese economy is stabilising, policy 'fine tuning' may not be enough to prevent further slowing. Policy uncertainty stemming from the leadership's 'rebalancing' efforts could potentially present some additional risk.

In aggregate, base metals prices on the London Metal Exchange (LME) have risen by 4% in August to date, following a 2% decline in July, to be almost 2½% lower over the year. While more positive economic news has helped to bolster metals prices in recent weeks, soft physical demand and rising supplies have generally seen markets in surplus (or a smaller deficit), driving prices steadily lower over the course of the year. However, we may now be seeing demand for some metals – particularly those closely related to construction – pick up, leading to higher imports and a reduction in inventories.

Price rises were recorded for all of the base metals in August to date, although the magnitude of the increases has varied slightly across the complex. Average lead prices for the month are around 6% above their July averages, while copper and nickel prices are currently up 4% and 4½% respectively. Aluminium and zinc prices recorded a more modest gain of around 3%, with rises in aluminium limited as new smelter additions in China more than offset cuts to high-cost smelter capacity. In annual terms, lead has been the best performer, rising by 14% over the year, with prices buoyed by robust demand for lead-acid batteries and tight supplies of lead concentrate. Zinc has recorded positive price growth in year-ended terms (up 4%). Copper and nickel prices recorded the largest declines (down 4% and 9% respectively), while aluminium prices were 1% lower than August 2012.

### Base Metals Prices

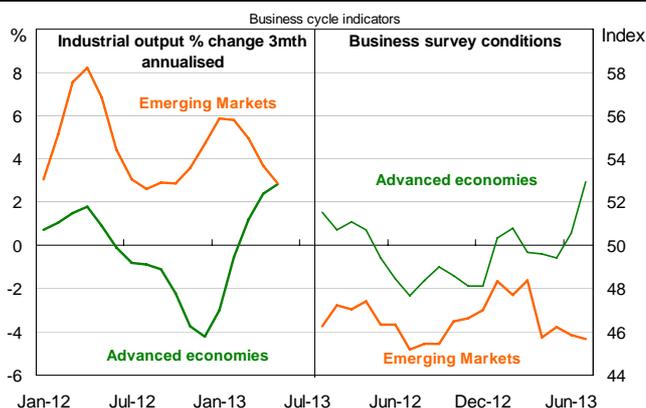


## Metal Demand

Demand conditions have turned out to be more upbeat than expected during August, with more positive news on the economy contributing to the exuberance of the market. The big advanced economies appear to be making progress towards recovery, and the most recent economic data out of China have helped to allay fears of a more protracted slowing in the economy. The long

awaited rotation of global growth towards the big advanced economies appears to be underway with business surveys there improving and growth in industrial output now picking up towards rates seen in emerging economies. Major central banks have also provided more clarity on their monetary policy intentions and quantitative easing, generally pledging to keep conditions loose for an extended period (although we expect the Fed to commence QE tapering in September). This means that markets are less worried about an imminent withdrawal of central bank liquidity that has helped to support higher commodity prices.

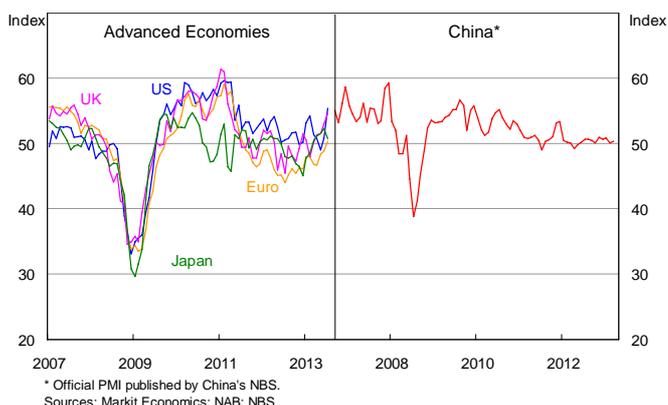
**Emerging and advanced economies**



Emerging economies generally fared the turmoil of recent years much better than the more developed economies, boosting their contribution to global demand. However, the tide appears to be turning with concerns now focussing on these economies, particularly the BRICs, where growth is either slowing or runs the risk of dipping below target rates. In response to this divergence in economic data, we have revised down our growth forecasts for some regions, but with growth improving in the advanced economies we are still expecting an upturn in global growth toward the end of the year.

A particularly positive trend for base metals has been the improving growth track seen in global manufacturing. Manufacturing PMIs in major economies have improved noticeably in recent months and are signalling stronger final demand that has helped to alleviate some of the inventory overhang that has emerged within the base metals complex. The US, UK and Euro PMIs have all reached their highest levels in more than two years. However, the Japanese PMI appears to have lost some momentum after improving following the introduction of government stimulus measures and despite a depreciation of the JPY/USD since mid-year.

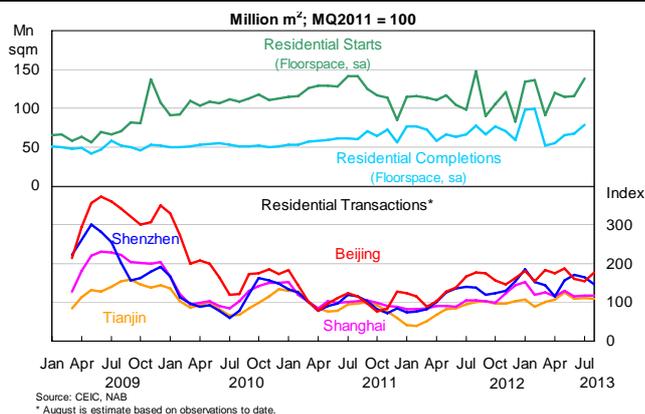
**PMI Surveys**



Chinese PMI indices also warrant close monitoring for signs that the economic slowdown still has further to run. There has been a

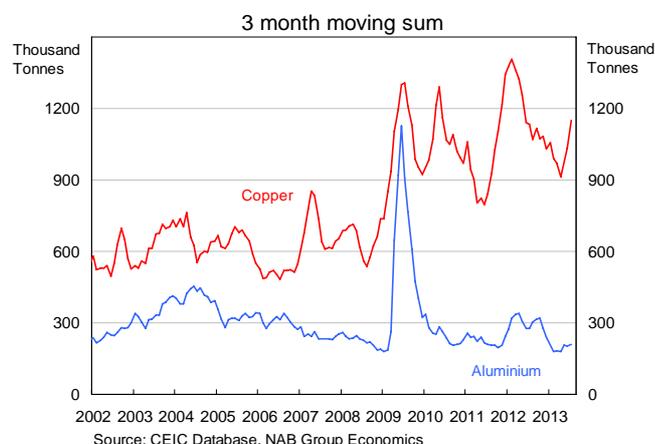
divergence between the official PMI - pointing to a moderate expansion - and the Markit PMI during the past quarter, which was signalling a considerable contraction (until the August 'flash'). The Markit series is a better representation of small and medium sized enterprises which have had greater difficulty in accessing finance, and were probably most affected by the 'liquidity squeeze' in late June. Although conditions have settled down, interest rates in China remain elevated compared to levels at the start of the year, particularly for longer dated securities, which is likely to weigh further on credit growth.

**Chinese construction becoming more supportive**



Despite an apparent tightening of monetary conditions and the threat of further government restrictions on real estate, China's construction sector – a major driver of most base metals – appears to be gaining some momentum. Strong sales and a pick up in construction starts is likely to lead to robust base metal demand over coming months, while investment in selected infrastructure projects (part of the policy 'fine tuning'/mini stimulus measures that are coming through) will be supportive as well. However, the rapid pick up in property prices this year may be cause for concern as it could prompt authorities to clamp down more heavily on the sector. Construction investment and robust demand for automobiles (auto sales have been growing at around 12% in annual terms during 2013 to date) should keep commodity demand robust and assist with the running down of metal stockpiles – a trend we have already started to see in recent months (see below).

**Chinese import volumes**



Larger premiums and strong import demand for some metals further highlight the apparent improvement of physical demand. China's copper imports jumped 8% in July to be 12% higher over the year (a 14 month high). In contrast, aluminium imports, while also picking up strongly in July, remain at levels well below the

same time last year (25% lower) due to continued strength in domestic primary production.

Aside from China, US GDP growth – although modest – was above expectations in the June quarter, driven by a pick-up in business investment and a much smaller detraction from growth from public demand. Housing investment again grew strongly but consumption growth was weaker than in the previous quarter. Early data for the September quarter is reasonably positive, although housing indicators have become increasingly mixed. In particular, both the ISM manufacturing and non-manufacturing surveys jumped higher in July. The regional Fed surveys available for August (Philadelphia, Empire State and Kansas) are tracking above their June quarter average (as is industrial production despite being unchanged in July). Core retail sales also got off to a reasonably strong start in July and the four-week average of initial jobless claims reached a new post recession low early in August.

As for the rest of Asia, we have seen a marked deterioration in non-Japan Asia, while Japanese activity has been relatively positive. In contrast to the improving fortunes of the major advanced economies, emerging Asia has been disappointing with sluggish export demand weighing on the industrial sector – as demonstrated by softer PMIs and industrial production, which is showing very few signs of turning around soon. In addition to headwinds from weak external demand, domestic demand has also been soft, partly due to the exhaustion of credit-led growth models in some countries. The looming conclusion of quantitative easing by the Fed is also casting a cloud over the region as the threat of capital flight could once again prove to be a destabilising factor. We are already seeing signs of capital flight from these countries putting downward pressure on nominal exchange rates and prompting central banks to manage external pressures by maintaining tighter monetary conditions or drawing on FX reserves.

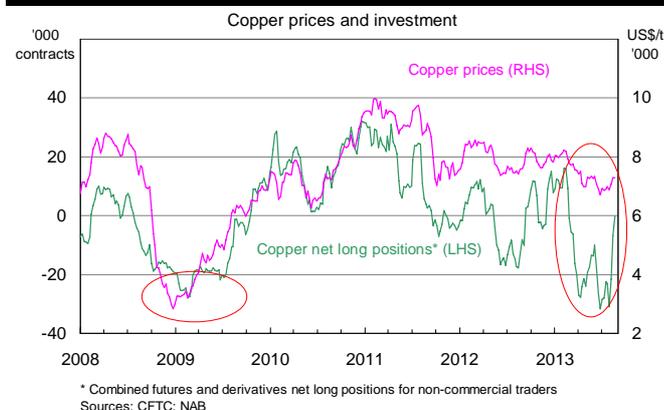
After a long period of deflation and weak economic growth, the Japanese authorities have adopted policies aimed at getting faster economic growth and 2% CPI inflation “at the earliest possible time”, and certainly within two years. The combination of fiscal stimulus, central bank asset purchases and a lower yen appears to have triggered an upturn, with exports, consumer spending and business conditions all moving up. However, there have been a few recent setbacks on this upward course and markets are watching to see if the growth momentum can be maintained.

## 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). While there has been some disconnect between the two series over the past year or so, there appears to have been some convergence of the two series recently following a very sharp contraction in copper (non-commercial) net-short positions following the release of more positive economic data (particularly from China). Copper prices have also risen but by a smaller magnitude. Copper's strong link to the Chinese economy (and construction), makes the metal highly sensitive to sentiment regarding China's economic outlook. However, it is still early days to be calling an end to China's deceleration, meaning we may still see some economic data that undershoots expectations and triggering routs in metals prices. Tightening of monetary conditions will also weigh on the construction sector, potentially stifling the recent improvement in leading indicators such as sales, developer credit and building starts. Expectations for US

QE in previous months may have also weighed on investor appetite. However, additional monetary easing in Europe and Japan may rekindle interest. Finally, copper premiums have remained very high, having risen sharply since March as warehouses offer incentives to lock up the metal in financing deals.

## Investment Flows

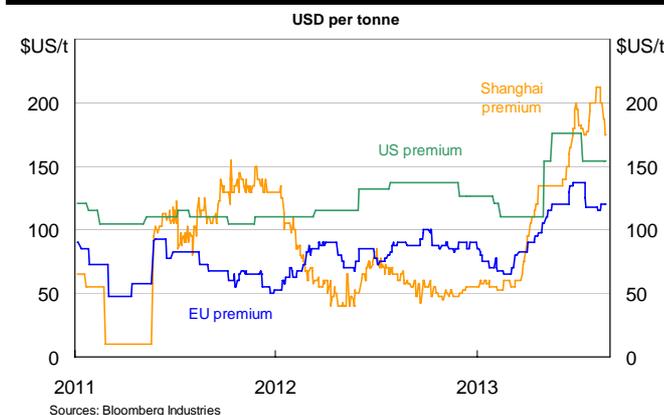


## Metal Supply

Over the past couple of months, costs to obtain physical metal have remained elevated as availability remains tight, helping to offset higher anticipated supply – including that associated with changes to warehousing rules designed to ease bottlenecks and improve access to metal. Aluminium premiums have been the exception, easing slightly as measures announced by the London Metals Exchange (LME) to reduce waiting times could potentially significantly ease up the supply of the metal.

## Copper supply

### Copper premiums remain elevated



According to the International Copper Study Group (ICSG), the copper market shifted into surplus late last year as supplies surprised heavily to the upside, while demand remained muted. A small deficit was recorded in May (the most recent available data) for the first time in seven consecutive months, although a surplus was recorded after adjusting for a seasonal pick up in demand. More recently, even with demand remaining well below levels seen during 2009-10, the combined impact of production problems at smelters, lower availability of raw materials and bottlenecks at warehouses have contributed to tighter market conditions. Production of refined copper by the world's largest producer and consumer of the metal (China) dipped lower in July to hit a five month low; although monthly production was still up by more than 10% on the same month last year due to an expansion in capacity. The cut in production was largely due to a shortage of raw material copper scrap. Consequently, Chinese

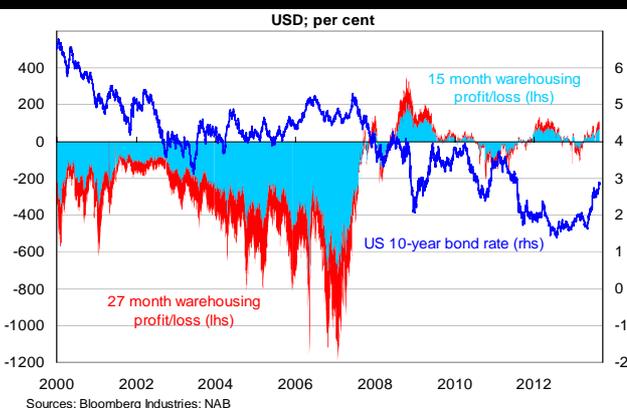
producers may need to rely more heavily on imported metal – Chinese copper imports already jumped in July to be 12% higher over the year (see above), although high premiums and new regulations from Beijing to clamp down on the use of copper to obtain credit may have contributed to stronger import demand as end-user demand remains relatively soft, particularly during the seasonally soft demand period.

The tighter market conditions have contributed to drawing down of copper stocks at LME warehouses. Similarly, despite a surge in copper imports to China, stocks in bonded warehouses in Shanghai have eased from the highs recorded earlier in the year. While current market conditions have turned out to be a little tighter than we previously expected, warehoused inventories remain elevated and the ICSG estimate that the refined copper production surplus for the first five months of the year was 228,000 tonnes, compared to a 480,000 tonne deficit in the same period of 2012. Some miners have reported higher production for the second quarter of 2013. BHP production rose 7% in the June quarter, while Rio Tinto's production rose 10% with more expected following Oyu Toigo's ramp up plan.

### Aluminium supply

Announcements regarding rules for delivery of metals from LME warehouses is of particular significance for the aluminium supply outlook. Aluminium has attracted the most financial interest out of all the base metals, leading to very large holdings of the metal at LME warehouses. While it remains to be seen how rule changes will play out, a rapid – regulation induced – decline in stocks would put significant pressure on premiums, adding to a global surplus and forcing more smelters to close down operations.

#### Aluminium Financing Deal Incentives



The new rules will slash the profitability of financing deals that have locked up metal in London Metal Exchange (LME) registered warehouses and kept millions of tonnes of aluminium off the market – 3.5 million tons by Bloomberg Industry estimates, which has supported prices. Furthermore, should interest rates continue to rise (particularly those in the US), and contango in the aluminium market reverse, premiums will likely fall and lead to an unwinding of financing deals. Nevertheless, Bloomberg calculations suggest that financing deals have remained profitable (see chart above).

Aside from financing deals, there has been a global glut of aluminium in spite of healthy demand and cuts to production (eg. curtailments by Chalco of 380kt, and 260 kt of backward capacity closures mandated by the Ministry of Industry and Information Technology of China). Russia's Rusal, the world's largest aluminium producer by output, may also delay the start of production at one of its biggest projects, seeking to ease a global glut of the metal. Yet, new capacity has outpaced the cuts we have seen to production to date, and commissioning capacity is estimated to be 3-4Mt in just the next 12 months, according to AME. New subsidies issued by provincial governments in China have also seen the resumption of up to 280ktpa of capacity.

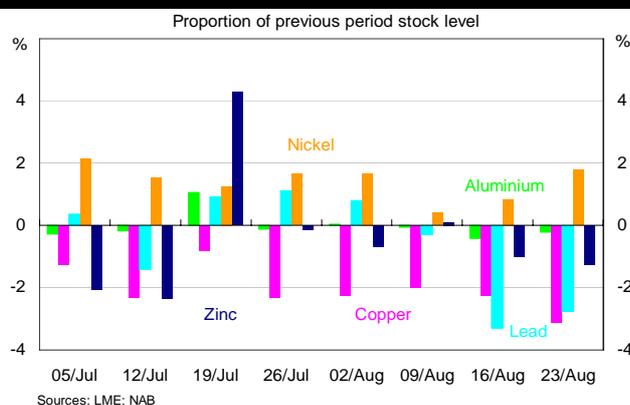
Nevertheless, with prices tracking close to cost in recent months, significant additional declines in prices appear unlikely.

### Nickel supply

The International Nickel Study Group (INSG) recently reported that the global primary nickel market was in a surplus of 74,200 tonnes in the first half of the year. Despite this, the market is expected to firm up later in the year as Indonesian export rules are tightened, although a structural oversupply – which has seen nickel prices fall more than the rest of the base metals complex over the year – is expected to remain. In early August, AME estimates that 30% of the nickel market was operating at a loss, suggesting that the current low price environment may be unsustainable. Nickel pig iron producers in China are also operating below capacity (70% are operating below costs at current prices according to AME). All the same, elevated LME inventories are likely to limit any price support.

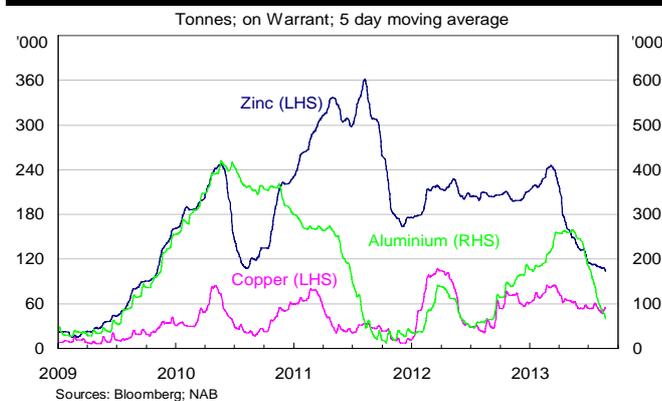
### LME Stocks

#### Weekly Change in LME Base Metal Stocks



Weekly data show that copper stocks at LME warehouses were consistently drawn down over the past month at a steady pace. In contrast, LME stocks of nickel have continued to build on their already elevated levels, while stocks of aluminium appear to have steadied at record high levels. Overall, aluminium stocks at Shanghai warehouses have fallen steadily since the middle of the year, while copper stocks have remained elevated, but are tracking lower. Zinc stocks have also been drawn down to around their lowest levels since 2010.

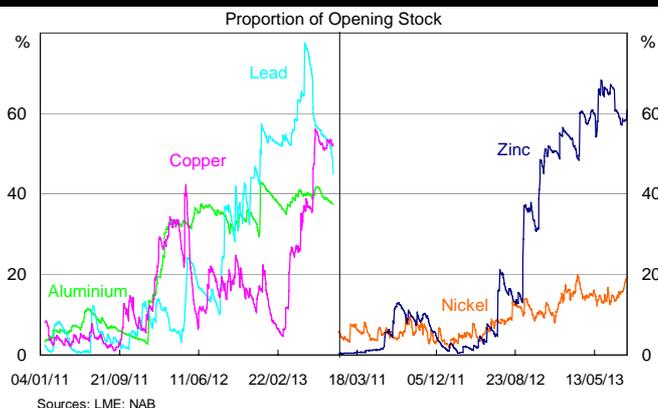
#### Shanghai Futures Exchange Stocks



Despite some signs of firming demand, a surplus of metal in the market has kept stocks elevated and has weighed on metal prices. However, a surge of cancelled warrants for some metals may suggest some improvement in physical demand – although temporary supply disruptions will also contribute to cancellations.

The resulting backlog of orders has also raised delivery premiums. Data for LME cancelled warrants (which indicate future stock withdrawals) show that cancellations for copper have remained elevated after rising sharply in previous months, which could in effect reduce the supply of metal available to consumers and provide some support to prices. Cancelled warrants for aluminium, lead and zinc all remain at very elevated levels, although this partly reflects the use of aluminium and zinc in financing deals, which has created a backlog for delivery.

**LME Cancelled Warrants**



**Outlook**

Signs that a recovery in the big advanced economies is gaining traction bode well for the metals demand outlook. However, the recovery is still in early days and the implications for policy stimulus provide headwinds to commodity markets. Signs that China's exports, manufacturing and construction sectors are improving (or may at least stop slowing), is a positive for the base metals complex and has contributed to a recent rally in metals prices. In contrast, concern is now shifting towards the big emerging economies that have largely driven global growth and commodity demand over recent years. These economies are now entering a period of slower (less credit driven) growth, and are expected to be vulnerable to the withdrawal of foreign capital as major economies wind back their monetary stimulus. However, an all out financial crisis in emerging economic regions is not our expectation, although policymakers will face a difficult balancing act of maintaining financial stability while stimulating their slowing economies. Overall, we expect the global economy to improve in H2 2013, with the recovery to continue in 2014.

Supply and demand fundamentals vary across the base metals, but soft demand and increasing supply suggest that metals markets will remain in surplus this year, although conditions in some markets appear tighter than anticipated in previous months. Nevertheless, copper is losing its long standing benefit from tight fundamentals, with the market expected to record its first surplus since 2009 – when prices dipped below US\$4,000 per tonne.

**Quarterly Price Profile**

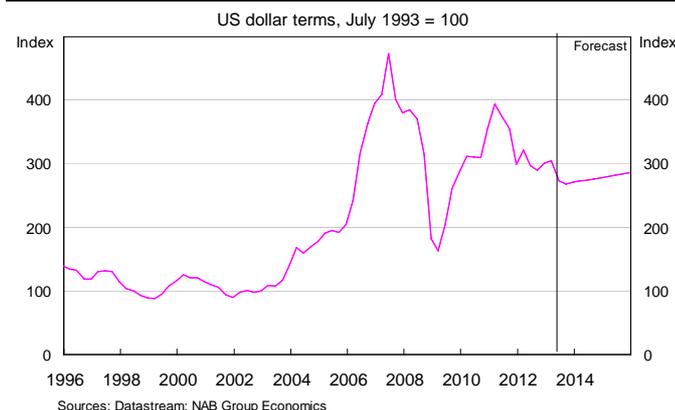
**Base Metal Forecasts - Quarterly Average Terms**

US\$/MT	Actual	Forecasts							
	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15
Aluminium	1836	1850	1870	1900	1930	1960	1990	2030	2070
Copper	7161	7020	7050	7090	7120	7160	7200	7200	7200
Lead	2053	2060	2070	2090	2110	2120	2140	2150	2170
Nickel	14967	14220	14590	14620	14660	14730	14810	14920	15070
Zinc	1842	1840	1850	1870	1880	1900	1920	1940	1960
Base Metals Index	273	270	270	270	270	280	280	280	280

Sources: Thomson Reuters; NAB Economics

Premiums have been elevated, but large stockpiles of metals are still suggesting weakness in physical demand and are likely to cushion metals markets – particularly aluminium and nickel – and prevent an abrupt recovery in prices once demand improves. On the other hand, prices of nickel and aluminium in recent months have been below cost for a large share of producers, suggesting significant falls below recent lows are unlikely. However, ongoing issues with warehouse incentives and financing deals (tying up metals) are introducing market frictions that could lead to additional volatility, particularly once the end to cheap finance comes into effect.

**Base Metals Index**



In aggregate, the NAB Base Metals Price Index declined by 10.4% over June quarter 2013 and is expected to fall by a further 1¼% in the September quarter 2013, reflecting sharp price falls over the quarter to date and adequate supply to meet still subdued physical demand. Longer term demand prospects still look relatively favourable, sustaining elevated prices at the end of the forecast horizon. Base metals are forecast to decline by around 10% over 2013, but are expected to rise by 2.7% over 2014 (see Graph).

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