Minerals and Energy Update – December 2013

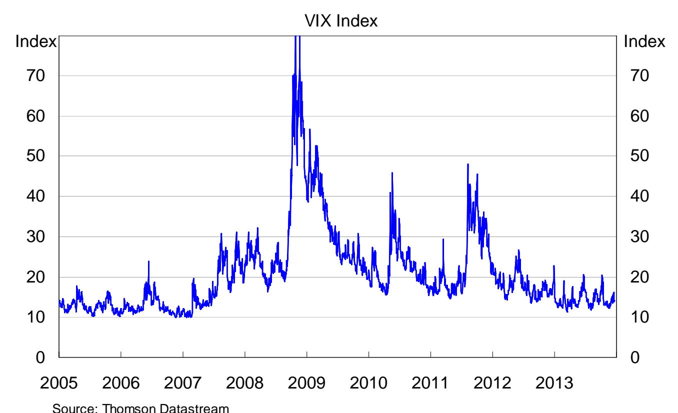
- **Global upturn continues with advanced economies seeing faster recovery after prolonged weakness post 2008/09 recession. Chinese and Indian economies faring better with no slowing in former and activity picking-up in the latter.**
- **The US Fed commenced tapering QE in December, but the immediate response by commodity markets was relatively subdued. Forward guidance appears to have helped allay fears of a more disruptive correction in markets.**
- **After showing synchronised falls in October and November, movements in oil indices in December were more mixed to date. WTI has risen from its recent lows on the back of signs of rising refining demand. Meanwhile, Brent and Tapis have been on a modest downward trajectory in anticipation of a recovery in Libyan supply, but still remain above November average in the month to date.**
- **Steel input markets have been mixed, with modest declines in metallurgical coal prices (on weak seasonal demand) and relatively stable trends for iron ore (boosted by a restocking phase). Thermal coal prices edged higher, on pre-winter purchases, but are well below the levels of a year ago.**
- **Base metals prices declined in November, but have gained some support more recently from generally positive economic data. However, any persisting USD strength following the FOMC announcement is likely to create headwinds.**
- **Market expectations regarding Fed tapering continued to be the major headwind to gold prices over the last month, driving prices lower – although they appeared to stabilise during the past week. Demand emanating from Asia (particularly China) is helping to partially offset the investor outflow.**
- **Overall, our forecasts for commodity prices have been left largely unchanged. We continue to expect only a modest recovery in demand over the forecast horizon, but the recovery is expected to be bumpy, ensuring ongoing volatility in commodity markets.**

Monthly Commodity Prices

The tone of global economic data has been quite positive of late, which has had a mixed effect on commodity prices as markets weigh up the more positive economic outlook against the implications of less 'easy money' to prop-up commodity prices as quantitative easing in the US starts to wind down. These factors have kept most commodity prices relatively range bound, despite the occasional bouts of volatility.

Nevertheless, after the US Fed announced at their December FOMC meeting that they were commencing tapering – reducing monthly asset purchases to US$75 billion (from US$85 billion) – the response in most commodity markets was relatively muted, although the VIX index of market volatility picked-up ahead of the US Fed meeting (but remains at relatively low levels). It remains to be seen how commodity markets will respond to additional tapering over coming months – (assuming the economy continues to improve as expected) a steady winding down that will completed by late 2014 – but the US Fed's focus on forward guidance should help to suppress market concerns, while stronger physical demand for industrial commodities will help to offset softening demand from investors.

Volatility picked up ahead of FOMC, but still at low levels



Source: Thomson Datastream

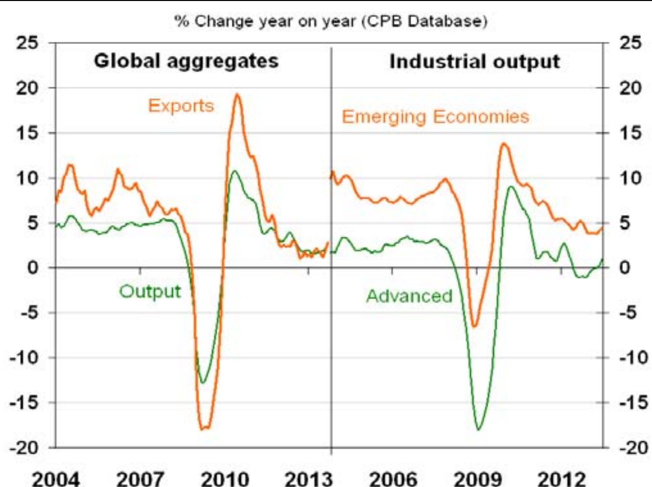
Conditions continue to look quite optimistic in China, which should give some comfort to commodity producers. Our expectation that China will achieve its growth target this year remains unchanged. Domestic demand has strengthened recently, with consumer confidence improving, while exports increased strongly during November – contributing to the widest trade surplus for four years. These trends were tempered by a slight easing in industrial production and slowing investment, but both continue to grow at a reasonably robust pace still. Our own contacts in China report stronger levels of business confidence post the Third Plenum, which could support stronger than previously expected private investment and boost growth. With that said, there is growing speculation that next year's growth target will be cut to 7.0%, as the government seeks to commence reforms that will attempt to rebalance the economy, but this will still imply relatively robust demand for raw materials.

Looking beyond China, September industrial output and broader measures of quarterly GDP are finally showing economic growth starting to lift in line with both the business surveys and our forecast for a global upturn in 2014 that is largely driven by the advanced economies. Despite the faster growth in sight, central banks across the big advanced economies are expected to keep their interest rates very low by historical standards as there is little evidence of inflationary

pressure in most economies and they want to support what has been a weak recovery from the very deep 2008/9 recession. Emerging market central banks face more of a dilemma with some raising rates recently to combat inflation (Indonesia, Brazil) and disappointing growth outcomes across large parts of SE Asia, India and Latin America.

The quarterly pace of economic growth in the 7 biggest advanced economies has accelerated from 0.5% in March to 1.1% in June and 1.3% in September. Nevertheless, there is a big backlog of lost output. GDP remains well below its early 2008 pre-recession level in the UK and Euro-zone, Japanese output is just getting back to its early 2008 peak and North America has seen the strongest recovery with US and Canadian GDP up by over 5% since early 2008.

Global trade and industrial output



Growth has also picked up slightly in the big emerging economies that have been driving most of the expansion in global output, commodity demand and Australasian exports in recent years. Indian economic performance has been a major drag on the region, repeatedly disappointing in recent years. However, the September GDP result was stronger, above expectations and in line with some of the partial data (but not many of the business surveys which remain weak).

As mentioned above, the directions of commodity markets over the past month have been mixed, and have generally prevented any clear price signals from emerging. Prices of bulk commodities have been relatively varied, but range bound, and influenced by seasonal trends – with restocking of thermal coal ahead of the northern winter, and softening metallurgical coal prices as the steel sector slows over the same period. Base metals prices gained some support from more positive signs on the economy in December, although USD strength in recent days has created headwinds. Market expectations regarding Fed tapering continued to be the major headwind to gold prices over the last month, driving prices lower – although they appeared to stabilise during the past week. Movements in oil price indices were also not as synchronised as the past two months, with recent US specific political and production factors influencing WTI more so than Brent. Meanwhile gas prices have gained momentum in line with developments in weather forecasts.

Summary of Price Developments

Oil

After showing synchronised falls in October and November, movements in oil indices in December were more mixed to date. WTI has risen from its recent lows on the back of rising demand, following signs of a pick-up in domestic refining activity as well as improving global demand. The largely anticipated mild US Fed tapering this past Wednesday has supported prices as well, as the move confirmed the positive growth momentum currently experienced by the US economy, the world's largest oil consumer. Weekly US crude inventory finally snapped out of its "restocking" mode after ten consecutive weeks of rises, having fallen in two out of the three weeks in December so far.

	Avg Price (US$/bbl) Nov-13	Monthly % change Nov-13	Nov-12 - Nov-13 % change
Brent	108	-1.3	-1.6
WTI	94	-6.7	8.3
Tapis	113	-3.3	-0.9

Sources: NAB Economics; Thomson Datastream

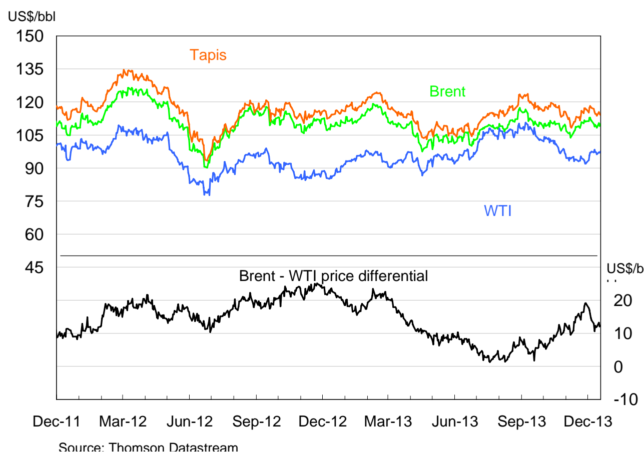
Also lending upward momentum to WTI has been the news that the southern leg of the Keystone XL Pipeline – a 1,897 km, 36-inch-diameter crude oil pipeline which is able to transport synthetic crude oil from the oil sands in Alberta, Canada, and crude oil in the northern US, to refineries in the Gulf Coast in Texas – will begin operation in January. It is estimated that the southern pipeline segment will be able to move 700,000 b/d of crude from the hub of Cushing, Oklahoma to Port Arthur, home to 6.1% of US refining capacity. Meanwhile, Brent and Tapis have been on a modest downward trajectory in anticipation of a recovery in Libyan supply and the unwinding of some of US Fed quantitative easing, but still remain above November average. As a result, month-to-date average oil prices have strengthened in December, with Tapis and WTI rising by around 3% so far relative to November average, while Brent's growth is more subdued at 2%. Consequently, the Brent-WTI differential narrowed from US$19, its widest in more than eight months, to the current levels of around US$11.

That said, the recent vigour in oil prices is expected to come under downward pressures from the reality of robust global supply prospects, largely driven by North America, which are in excess of demand growth. This in turn is likely to prompt a further reactionary response by Organisation of Petroleum Exporting Countries (OPEC) to limit production from member countries.

According to the Energy Information Administration (EIA), total global liquid fuels production was 90.6 mb/d in November, 0.9 million bbl/d higher than in the same month last year. US crude oil production continues to grow, recently topping 8 mb/d for the first time in a quarter of a century. In its latest Short-Term Energy Outlook Report, The EIA has forecast an acceleration of US production next year, from an average 7.5 mb/d in 2013 and increase to 8.5 mb/d in 2014. This, combined with the eventual slowing of US Fed bond purchases (and a corresponding rise in USD), will serve to weigh on WTI. Meanwhile, OPEC crude oil production averaged 29.3 mb/d in November, the lowest level in more than two years. Continued political turmoil in Libya resulting in the blockade of several oil-exporting ports and, to a lesser extent, routine maintenance and ongoing supply disruptions in

Nigeria, have constrained OPEC crude oil production. Unplanned supply outages among OPEC members rose to 2.5 mb/d in November, accounting for more than 80% of global outages, which exceeded 3.0 mb/d in November for the fourth month in a row.

Daily Oil Prices



Source: Thomson Datastream

In light of recent events of extreme unplanned disruptions in the Middle East in the second half of 2013, and earlier cut-backs in Saudi Arabian production in response to falling Brent prices, EIA expects total OPEC liquid fuels production to decline by 0.8 mb/d 2013 to an average of 35.9mb/d. The continued unrest in Libya looks set to continue into in the first quarter of 2014 at least, and is expected to keep 1mb/d off the global market. As such, EIA has forecast for a further fall in OPEC production in 2014 to 35.3mb/d, which is still above the organisation's quota of 30mb/d that has been left unchanged in its most recent meeting in Vienna on the 4th December. So far, the agreement reached between Iran and six major world powers, which offered Iran partial relief from the sanctions in exchange for a freeze in its nuclear programs, does not include the removal of a cap in its oil exports sales. However, data from the International Energy Agency (IEA) suggest that Iranian oil exports have jumped by 10% since the commencement of the deal, bringing its total volume to 850,000 b/d, which raises concerns that the country might be bypassing some of the sanctions.

On the demand side, global refinery runs have moderated from their peak in the summer months of the northern hemisphere. A rising number of European refinery plants have closed from low profitability and excess capacity as demand for refined products from the region by China and India wane, with these countries increasingly building their own refining capacity, while competition stemming from the Middle East also stiffens. According to IEA's latest report, OECD crude runs, led by Europe, have slumped to a 20-year low in October, averaging 34.5 mb/d. In particular, European crude throughputs stood at a 25-year low of 10.3 mb/d, almost 1.6 mb/d below the level a year before. However, refinery demand is expected to pick up in the first quarter of 2014 against a shortage in heating oil supplies, as middle distillates stocks remain low.

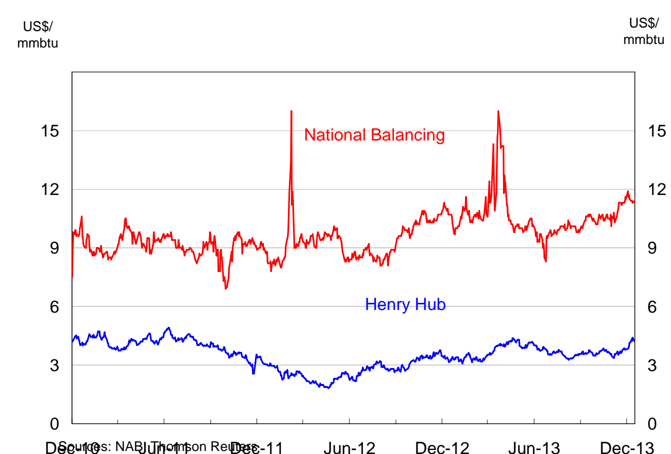
That said, we still expect overall 2014 global crude demand to exceed that of 2013 as the recovery in major advanced economies continue to gain traction from a sustained loose monetary environment. This is expected to have positive spill-over effects onto the growth trajectory of developing economies as well. Currently, EIA forecasts global consumption to rise by 1.2 mb/d to 91.43mb/d, with most of the growth in consumption to be accounted by growth in China, the Middle East, Central and South America, and other countries outside the OECD.

In recent weeks, Brent and WTI have converged after reaching an eight-month high in late November of around US$19, to be currently closer to US$10. The Brent-WTI differential narrowed rapidly in Q2 and Q3 as the bottleneck at the Cushing hub was alleviated with improved takeaway capacity via pipelines, railways, barges etc, in line with rising refinery demand at the Gulf Coast. In Q4, the gap has widened from political and supply factors which weigh on WTI disproportionately, such as the recent US government partial shutdown, and record pace of US crude production. Overall, Brent-WTI has averaged around US$11 year-to-date compared to US$19 last year. We forecast the differential to narrow further as the soon-to-be operating Keystone XL pipeline will add further takeaway capacity from Cushing, while Brent is likely to moderate from its current levels from potential recovery in Iranian and Libyan output, and rising global supply in general.

Natural Gas

In December to date, US natural gas prices have built on the momentum in November to breach US$4 per mmBtu for the first time since May from frigid winter temperatures in the first two weeks of December. Henry Hub climbed to $4.40 mmBtu in the second week of the month, the highest settlement since July 2011, as there have been large inventory withdrawals. Even the northern hemisphere is still the early days of its winter season. Natural gas working inventories fell by 162 Bcf to 3,614 Bcf during the week ending 29th November, the largest weekly net withdrawal for the month of November since the beginning of EIA's publication of weekly storage data in 1994. As a result, levels of working gas in underground storage recorded the first deficit to the five-year average since August and this trend persisted into December.

Henry Hub and National Balancing Point Prices



Sources: NAB, Thomson Reuters

The sharp withdrawals in inventories occurred even as natural gas production in the US proceeds at a record pace, driven predominantly by the Marcellus shale. Natural gas production in the northeastern United States, which houses the Marcellus shale formation, rose from 2.1 billion cubic feet per day (Bcf/d) in 2008 to 12.3 Bcf/d in 2013. This has encouraged greater use of natural gas in the region for power generation and

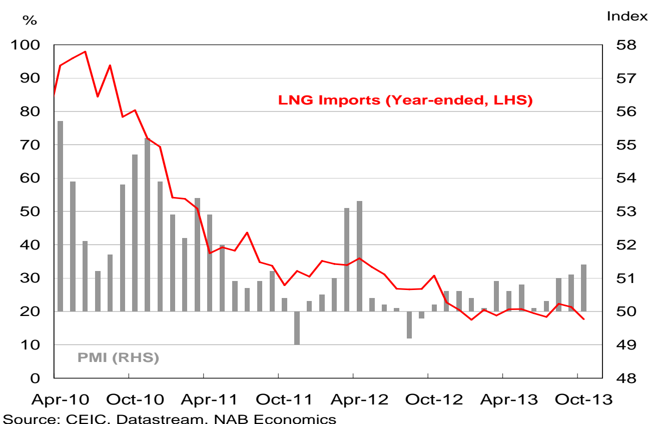
significantly reduced the inflows natural gas into the region from elsewhere such as the Gulf of Mexico, the Midwest, and eastern Canada.

Looking ahead, we anticipate the recent strength in natural gas prices to consolidate going into the US winter from intensifying cold weather. Also appearing to support prices is the slowing growth in production and inventory accumulation from their trailblazing pace from late 2011 through most of 2012, with actual monthly underground storage levels likely to stay below their five-year averages in the coming weeks.

UK natural gas prices, indicated by the National Balancing Point (NBP) index, continued to edge higher in December from a strengthening winter heating demand, to be currently around 40% above the June levels at US$11.50/mmbtu. The NPB hit the highest level in eight months at the start of December from a supply disruption due to an outage at Norway's Ormen Lange gas field and forecast cold weather. The reliance by the UK on imported natural gas for electricity generation purposes has subjected the country to volatile energy prices and the increasingly unreliable supply flows from the North Sea due to outages at oil fields. This has prompted the government to explore other more sustainable sources of fuel. It recently released a report which investigates the possibility of conducting shale gas hydraulic fracturing in parts of the country, with as many as 2,880 potential wells, generating up to a fifth of the country's annual gas demand at peak and creating as many as 32,000 jobs. However, the report also warned of the potential adverse impact of higher traffic in communities near sites where drilling takes place and environmental impacts on the countryside.

In Asia, spot LNG prices have stabilised at around US$19.00/mmBtu over the past four weeks according to the ICIS East Asia Index, as East Asian buyers resisted paying substantial premiums to oil parity for the fuel. Nevertheless, the price level is still historically elevated, supported by tight supplies from the lack of free-on-board cargoes and broad-based competition for winter cargoes by China, Korea and Japan. A strengthening industrial sector in Japan as its economic expansion gains pace has boosted its demand for the fuel when all its nuclear reactors remain inactive. Meanwhile, China's leading energy importing companies China National Offshore Oil Corporation (CNOOC) and Petrochina remained active in the market despite the latter managing to secure a string of cargoes from a Qatari supplier.

Chinese LNG Imports and PMI



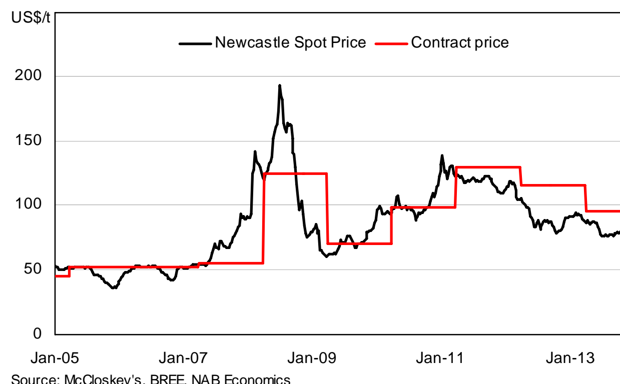
Source: CEIC, Datastream, NAB Economics

In the coming months, natural gas prices in the US and UK will continue to be largely driven by heating demand during winter months, with the latter bearing the additional risks of supply shortages due to the unpredictable disruptions of gas flow from the North Sea. In Asia, the continuation in the build-up of LNG stockpiling activity ahead of winter and synchronised move towards natural gas as the preferred fuel away from coal and nuclear energy is going to keep both prices and demand elevated in coming months. Overall, we have left our forecasts largely unchanged as they have managed to track actual outcomes and seasonal patterns reasonably well to date.

Thermal Coal

Thermal coal prices have continued to trend marginally higher in December, reflecting seasonal demand patterns (as northern hemisphere electricity generators restocked ahead of winter) combined with supply side management by higher cost producers. However, thermal coal prices remain comparatively weak when compared with recent history.

Coal Prices



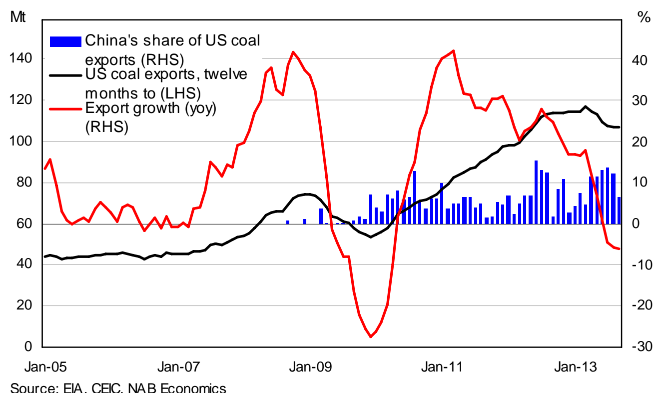
Source: McCloskey's, BREE, NAB Economics

The Newcastle spot price edged up to US$84.25 a tonne FOB in the week ending 13 December, marginally higher than the average across November. That said, these prices were well below the levels recorded in December 2012 – with prices above US$90 a tonne across the month.

Chinese domestic prices have also edged higher in recent weeks. Prices at Qinhuangdao (China's largest thermal coal port) were around RMB 617 a tonne FOB (excluding VAT) in mid December, the highest level since July.

There is currently considerable excess capacity to supply seaborne coal markets – reflecting recently developed operations in major exporting regions (in response to earlier high coal prices), along with rail infrastructure investment in China, which has improved the competitiveness of domestic coal in coastal markets. As a result, seaborne markets are expected to be well supplied in 2014, with Bloomberg Industries estimating new developments will add around 31 million tonnes, equivalent to 3.5% of total seaborne trade.

US coal exports softening, in line with weaker prices



Source: EIA, CEIC, NAB Economics

Excess supply capacity is reflected in declining exports from swing producers such as the United States. Around 90% of US coal exports are via ports located on either the Atlantic coast or the Gulf of Mexico – providing disadvantages in supplying key growth markets in Asia. First, they are more distant to these importers (resulting in a freight cost disadvantage compared with other major exporters) and second vessel sizes are limited by the Panama Canal. Despite these challenges, China has been a key export market for US coal in recent times, accounting for around 10% of US exports in 2012 (thermal and metallurgical coal combined). However, in the twelve months to September 2013, US coal exports declined by 6% to 107 million tonnes. China's share of total US coal exports fell from a peak of 14% in July 2013, to 7% in September. Given expectations of adequate supply for seaborne markets, the Energy Information Administration forecast US coal exports to fall by around 9% in 2014.

Idle export capacity may also grow in 2014 due to policy changes in Indonesia – the largest exporter of thermal coal. In addition to crackdowns on illegal mining and port operations and increased royalty payments to the Government, Indonesia's Energy and Mineral Resources Ministry announced in December that coal miners would not be permitted to increase production in 2014, in an effort to increase prices.

Coal demand is currently influenced by seasonal patterns, with robust imports in recent months driven by pre-winter restocking by electricity generators in the northern hemisphere.

Prospects for thermal coal markets in 2014 largely depend on China's demand. The China Coal Transport and Distribution Association expects coal imports to total 320 million tonnes in 2013 (an increase of 11%), but energy savings targets may begin to impact on the coal demand (and therefore imports). Following poor performance against official energy efficiency targets (which aim to reduce energy intensity by 16% between 2010 and 2015), the National Development and Reform Commission has announced accelerated targets. Greater availability of domestic coal in key coastal markets could also reduce demand for seaborne material – with a notable decline in the arbitrage window in 2013.

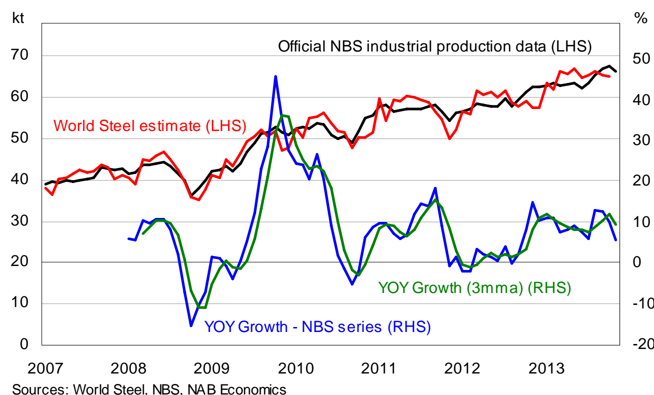
With adequate supply and idle production capacity capable of responding to any unexpected increases in seaborne demand, we expect thermal coal prices to ease after the northern winter. The 2014 Japanese financial year contract is forecast at US$86.50 a tonne, down from US$95 a tonne this year.

Metallurgical Coal & Iron ore

China remains the key global market for steel production – accounting for around 49.3% of global steel production over the first ten months of 2013.

Chinese steel production has grown strongly in 2013, after comparatively weak growth in 2012. According to official data from the National Bureau of Statistics, Chinese steel production totalled 708 million tonnes in the first eleven months of the year, an increase of 9.4% from the same period last year. China's Steel Planning Authority expects output to rise above 800 million tonnes next year, before peaking at 860 to 880 million tonnes in the next three to five years.

Chinese monthly steel production

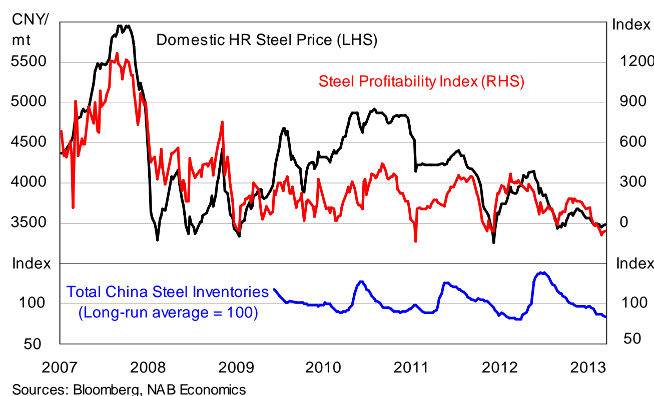


Sources: World Steel, NBS, NAB Economics

Profitability in the Chinese steel industry remains constrained by overcapacity. Bloomberg Industries estimates overcapacity could be as high as 250 million tonnes a year, and despite efforts to address this issue – such as demolishing capacity in Hebei and a proposed moratorium on new projects – analysts at Platts argue that these measures will have no significant impact in 2014, with some of these obsolete facilities not in active production.

The demolition program in Hebei commenced in November – with a goal of reducing capacity by 60 million tonnes a year by 2017. In Tangshan, China's largest steel producing city, the target is 40 million tonnes (40% of current capacity).

Chinese steel market conditions



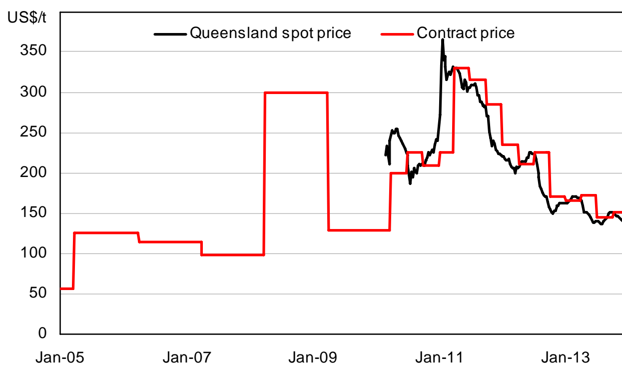
Sources: Bloomberg, NAB Economics

Steel prices in China have declined since late August, while domestic prices for raw materials have edged slightly higher, leading to a weakening in profitability. Stronger demand and low inventories may contribute to a strengthening in steel

maker profitability post winter, as construction activity rebounds from its seasonal lull.

Metallurgical coal prices have continued to ease in December, with Freight Investor Services reporting a spot price of US$133 a tonne in mid December (compared with US$137.50 a tonne in late November) – however this has not appeared to have filtered through into lower coke prices for steel mills.

Metallurgical coal prices

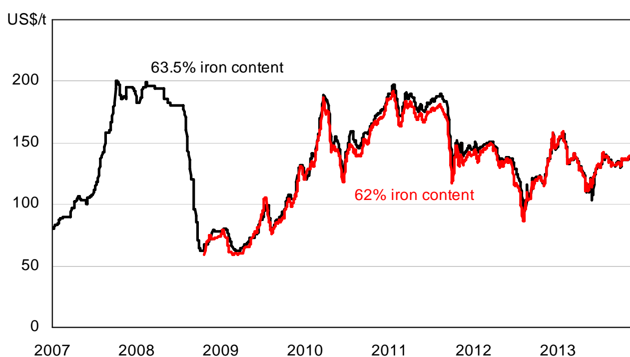


Source: Energy Publishing, Bloomberg, NAB Economics

Following stable conditions across most of November, spot prices for iron ore pushed up in early December, before easing back down to the November average. Mid-month, they were around US$136 a tonne CFR (62% fines at port of Tianjin), having peaked near US$140 a tonne earlier in the month.

Iron ore inventories at Chinese ports have been gradually trending higher since mid-October – providing support for spot prices in a period of typically weak seasonal demand. That said, inventories remain well below the levels recorded across most of 2012. The restocking phase may have been supported by expectations of weaker domestic ore production in coming months.

Chinese Iron Ore Prices*



* Includes the cost of freight
Source: Bloomberg, Thomson Datastream

Production of iron ore is expected to increase significantly in 2014, with the major supply additions expected in Australia, as BHP Billiton, Rio Tinto and Fortescue add new capacity in Western Australia. The new supply should add downward pressure to iron ore prices from the second half of 2014.

Chinese iron ore imports have remained strong, particularly in November, supported by the restocking phase. For the first eleven months of the year, China's iron ore imports were 747 million tonnes, an increase of 10.7% from the same period in 2012. Since August, the arbitrage window has increasingly favoured imports over domestically produced material – with imports around US$20 a tonne less expensive than domestic ore in the second half of December.

Prospects for Indian iron ore exports add some uncertainty to the outlook for 2014. Indian ore is typically lower grade than either Australian or Brazilian material, but with lower freight costs, it has also been a comparatively inexpensive alternative. However, exports have fallen sharply in both 2012 and 2013, as higher taxes and railway freight charges, along with court ordered mining bans, have limited deliveries. In the short term, we expect exports to remain weak.

Conditions for metallurgical coal should improve in line with the post-winter recovery in Chinese steel production. Prices have fallen towards the cash cost level of higher cost producers – with a noticeable decline in Canadian exports in recent months, along with the pull back from US producers (noted in thermal coal above). Expansions in Australia as well as the recovery of production from existing facilities in Queensland following flood related interruptions placed downward pressure on spot prices and pushed higher cost operators out of the market.

Price forecasts for metallurgical coal and iron ore remain unchanged. The growth in iron ore production in the second half of 2014 should push prices lower – down towards US$100 a tonne. A recovery in steel production should provide some support for metallurgical coal prices – edging up to US$160 a tonne by the end of 2014.

Base Metals

Price declines were recorded for all of the base metals in November, although the magnitude of the increases has varied slightly across the complex. Nickel and aluminium prices recorded the largest declines (around 3-4%) following the announced changes to LME warehousing rules. Average copper, lead and zinc prices also fell in the month by around 1 to 2%, although fundamentals for lead and zinc in particular remain positive. In annual terms, zinc and lead have been the best performers, falling by 2% and 4% over the year respectively, with prices buoyed by robust demand for lead-acid batteries and steel, while additions to supply capacity will be limited. Nickel and aluminium prices recorded the largest declines (down 16% and 10% respectively), while copper prices are 8% lower.

Base Metals Prices*

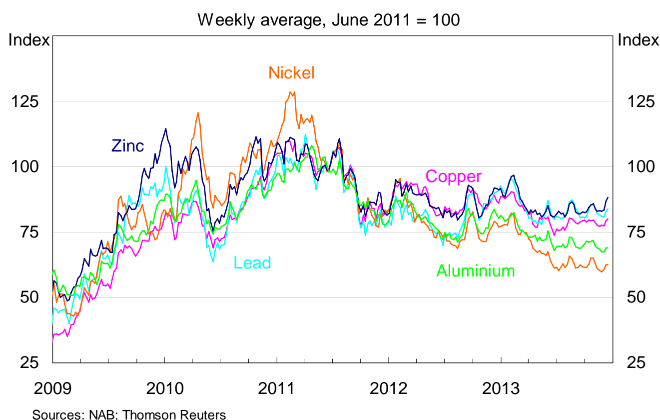
	Avg Price (US$/tonne) Nov-13	Monthly % change Nov-13	Nov-12 - Nov-13 % change
Aluminium	1748	-3.7	-10
Copper	7071	-1.8	-8
Lead	2090	-1.2	-4
Nickel	13684	-3.1	-16
Zinc	1866	-1.0	-2
Base Metals Index		-2.2	-10

* Prices on an LME cash basis.
Sources: LME; NAB

Prices across the base metals complex have remained at relatively low levels, but receiving support from better economic data during December. This suggests that some normality has returned to the market now that Fed tapering has commenced, and was largely priced in prior to this months FOMC meeting, although some drag was seen from any appreciation in the USD and higher jobless claims more recently. We suggested last month that the apparent disconnect between metals prices and equity performance

could pose some potential upside to metals prices if economic conditions continued to improve – something that now appears to be unfolding (albeit at a fairly restrained rate of adjustment to date).

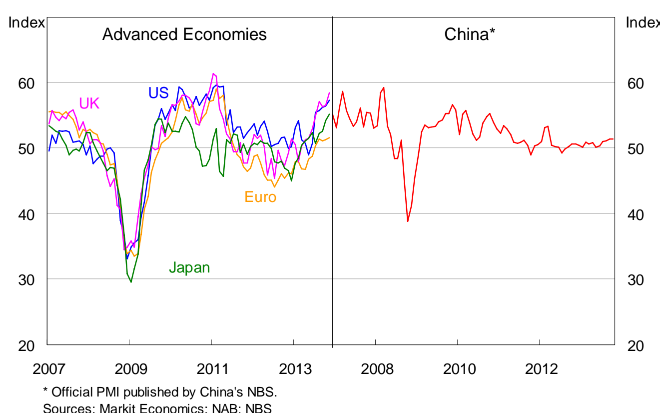
Base Metals Prices



Sources: NAB; Thomson Reuters

The stronger looking labour market in the US and relatively upbeat indicators of real activity have contributed to the recent turn around in metals prices. Industrial production in the US came in above expectations for November, consistent with recent strength in the manufacturing PMI indicators – a trend that has spread across most major economies in recent months. Construction indicators are also ticking along at a reasonable pace, while consumer spending appears to be on the rise. However, even though markets are not reacting as negatively as in recent months to positive US economic data, and the implications of QE.

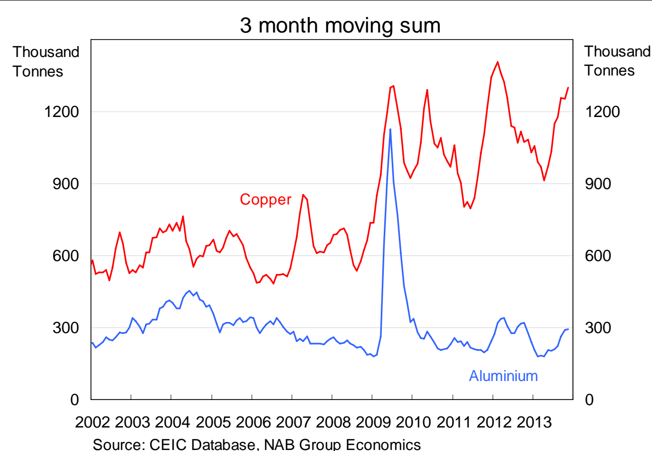
Global industrial activity is solid (PMI surveys)



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

Outside of the US, the business surveys show a ramping up in activity and confidence across all of the big advanced economies since early 2013. Industrial activity is now growing in all regions with a particularly solid upturn in Japan and the UK, while Europe has managed to remain in positive territory (PMI reading above 50). Indications from major metals consumer (and producer) China are consistent with a ramping up of demand in the second half of the year. China's domestic demand has strengthened recently, with consumer confidence improving, while exports increased strongly during November – contributing to the widest trade surplus for four years. However, these trends were tempered by a slight easing in industrial production and slowing investment in November, although annual rates of growth have remained quite good considering the stimulus measures introduced at the later stages of last year. Consequently, China's import demand for commodities has been quite solid, picking up in November (although outcomes have varied across commodities). Imports of copper jumped 7% in November to be up almost 20% over the year, while imports of aluminium dropped in the month, but are up more than 20% over the year.

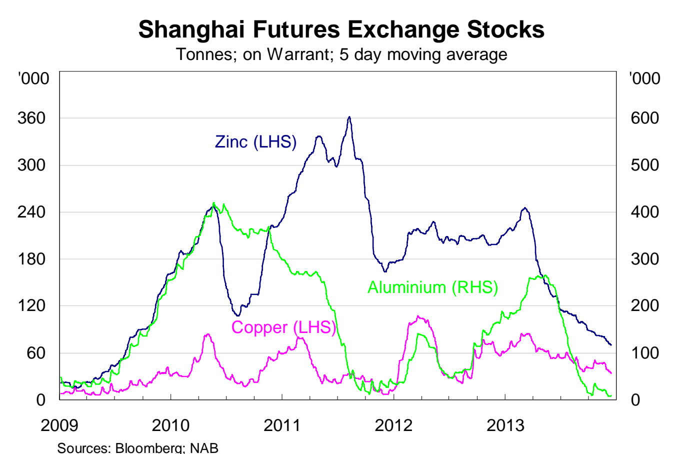
Chinese Import Volumes



Source: CEIC Database, NAB Group Economics

With the demand outlook improving, prices across the base metals complex are up from their end-November levels. Over December to date, zinc prices have risen around 7%, while nickel, aluminium, copper and lead are all 2½-4½% higher as well. This has been in line with the growing perception of tightness in some physical markets, which is contrary to the apparent emergence of excess supplies for much of this year. The copper market for example tightened considerably in Q3, largely due to an increase in Chinese end user demand. Nevertheless, elevated premiums received by smelters have been encouraging solid rates of refined metal production – Chinese supply of both refined copper and aluminium hit record highs in November. Refiners run the risk of building additional slack as production roars ahead of improving demand; according to the International Copper Study Group, the global surplus of refined copper could widen by over 60% in 2014.

SHFE stocks drawn down, driving up premiums

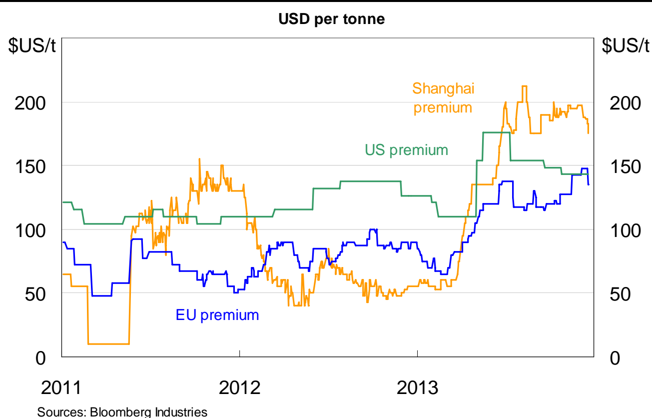


Sources: Bloomberg; NAB

Consistent with the reported tightness in physical demand, exchange stocks – particularly in Asia – have slumped considerably this year, while a significant amount of the metal stocks remaining in warehouses continues to be tied up in backlogs and financing deals. Consequently, buyers in Asia have been willing to pay elevated premiums to secure

physical supplies. Premiums in other regions have also been on the rise in line with improving economies and rising demand – Europe's copper premium has recently hit record highs. Global stocks of nickel however, have remained elevated despite reasonable demand due to significant oversupplies – despite persistently low nickel prices this year – which is limiting any upside momentum to prices.

Tight physical copper market keeping premiums elevated



Sources: Bloomberg Industries

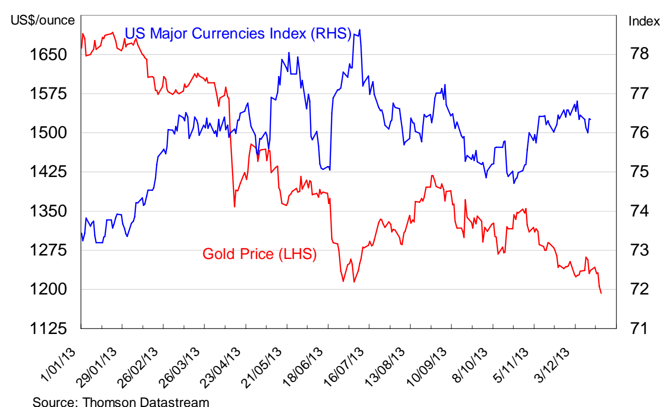
Despite this, reports suggest that the recent changes to warehousing rules may be masking the true level of inventories as metal is shifted into off-exchange stocks, which are not shown in exchange reports. The other supply side issue that continues to play on the market is the looming ban on raw materials exports from Indonesia, scheduled to come into force next year. Producers had hoped that the ban would be modified or scrapped in response to Indonesia's deteriorating current account and currency concerns. However, the government appears determined to press on with the ban, recently rejecting requests from mining companies to relax the restrictions – although debate over the terms of the ban continues.

The performance of metals prices over the year has been consistent with expectations for softening market balances. Nevertheless, physical markets appear to be tightening, which is supporting spot prices. In aggregate, base metals prices on the London Metal Exchange (LME) have risen by around 1¼% in December to date, following a 3% decline in November, to be more than 13% lower over the year. Supply and demand fundamentals vary across the base metals, but gradual improvements in demand will be largely matched by rising supplies, suggesting limited upside to prices in the near term – lead and (to a lesser extent) zinc markets are an exception as rising demand (mostly China) and softer supply growth have kept them in deficit. However, lower prices could see a consolidation of expansion plans, while production cut backs are expected for nickel and aluminium. Finally, monetary policies in major economies, changes to warehousing rules and the proposed ban on Indonesian exports all suggest a significant degree of uncertainty continues to cloud the outlook for metals markets.

Gold

Speculation over the US Fed's quantitative easing program continued to be the big driver of the gold market this month, with improving economic data in the US increasing bets of a stimulus withdrawal. Further improvements in the labour market and solid activity in the industrial sector saw most commodity markets price in a strong expectation that the Fed would begin tapering their QE program after the December FOMC meeting – this was realised with the Fed cutting monthly purchases to US$75 billion (down from US$85 billion). As a result, gold prices fell by a further 5% from late November, adding to the 25% decline seen since the start of the year. Although a December Fed tapering was largely priced in, gold prices have dipped a couple of percent following the Fed's decision following gains in equities and the USD – we had thought there was still a risk of a much sharper correction to the downside.

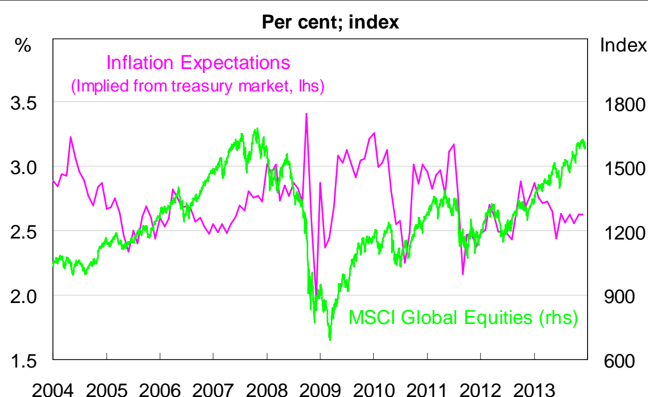
Gold Price and the US Dollar (Daily)



Source: Thomson Datastream

Looking through the volatility, the average price of gold has fallen by around 3½% in December to date, and is currently trading at slightly below US$1,200 per ounce. This follows a similar decline in November and broadly flat prices in the previous month. In year ended terms, the price of gold so far in December was nearly 27% below levels recorded in the same month of the previous year. Gold's inverse relationship with the US dollar remained intact through December, with the recent stalling in US dollar appreciation against the major currencies (prior to the FOMC meeting) coinciding with a more gradual decline in the price of gold compared to that seen in previous months. The US currency ebbed lower in the lead up to the FOMC meeting despite strong expectations for a December tapering.

US inflation expectations and global equities



While the markets more considered view towards Fed tapering (compared to earlier in the year) may help to reduce some of the headwinds to gold prices, the more positive economic data of late and a somewhat more optimistic verdict on the economy given by the Fed, suggests we will continue to see much more limited demand for safe haven assets such as gold. Certainly, riskier asset classes have been performing

much better than gold this year, which has triggered a sharp outflow of investors from gold ETF's; the MSCI All Country World Index of equities has gained almost 20% since the start of the year, while gold stocks held by exchange traded funds (ETF's) declined by a further 3% in December to date. ETF Holdings are now at their lowest levels since early 2009, while investor net long positions remain close to their lowest levels in around a decade. Furthermore, it appears as though the Fed has been very successful in anchoring inflation expectations in the US, limiting the allure of gold as an inflation hedge for investors. This has been evident in the relatively benign inflation pressures in the US to date.

US Exchange ETF Gold Holdings

On a more positive note, lower prices have kept Asian demand for gold strong in spite of government curbs on gold imports in India. This has helped to absorb much of the outflow from global ETF's. Most of this demand is emanating from China which looks set to overtake India as the world's largest consumer of gold this year; China's net imports of gold from Hong Kong in October reached their second highest level in a decade. In addition to lower gold prices, a stronger RMB is helping to bolster Chinese demand for the shiny metal. Indian imports of gold also jumped in October (increasing over 60% in USD terms), but this is still well below the levels seen prior to the government restrictions. Nevertheless, a rise in premiums for gold in India points to a significant amount of pent-up demand.

While we may see a pause in gold price declines in the near term as markets digest the recent Fed tapering, it will be interesting to see how the gold market responds to further winding down of QE. If the economy improves as forecast, we expect QE to be tapered in steady increments (although data dependent) and wound up by late 2014. We also don't expect to see any significant inflation pressures emerge in the US over the near-term. Political risks in the US also seem to have eased, although we should be getting more clarity on the debt ceiling early in the New Year. That said, an escalation of geopolitical tensions in regions such as Asia and the Middle East can not be discounted. On balance, the headwinds are expected to drag gold prices down further from current levels, although marginal costs of supply will eventually become a limiting factor.

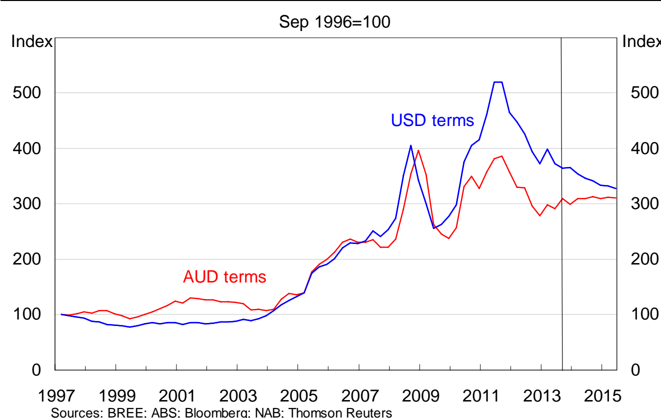
Outlook

Overall, recent economic data confirm the positive growth trajectories of the main advanced economies, with the recent initiation of US Fed tapering generally well-received by financial markets and boosting confidence that US economic recovery has been on track. Business surveys continue to point to an expansionary mode in industrial activity in most major economies, as central banks promise to keep interest rates low for a long time to come. The notable shift in global growth composition towards more contribution from advanced economies has prompted us to forecast an upturn in global growth in 2014 towards trend growth from a sub-par level this year, which is expected to provide a greater demand impetus for commodities next year on average.

Fiscal headwinds faced by the US have largely ameliorated in light of the recent bipartisan budget agreement between Republicans and Democrats which provided broad parameters for government spending next year, which should help avoid a messy debt ceiling negotiation and a repeat of the partial government shutdown event in October. Also, China's economy has stabilised and is expected to continue growing in excess of 7% pa, thereby ensuring a reasonably robust demand for bulk and energy commodities. That said, the commodity supercycles characterised by strong upswings in commodity demand and swelling prices observed in the past are unlikely to be repeated, given the Chinese government's continued efforts in weaning its economy off stimulus-led growth to those generated through market mechanisms. However, potentially causing some uncertainty in global financial markets in the near future will be the pace and timing of the subsequent tapering decisions by the US Fed that could render emerging economies vulnerable to large fluctuations in capital flows.

On the supply side, production of bulk commodities and some metals is expected to outpace the improvement in demand even as the global economy recovers, although the overhang for some metals has not turned out to be as large as expected at the start of the year. Record pace in crude and natural gas production in North America will also ensure a comfortable supply side which will cap upward potential in prices. Given all these factors, the improvement in overall global economic growth remains consistent with our expectation for commodity prices to ease, but remain at historically elevated levels.

NAB Non-Rural Commodities Price Index



In US dollar terms, the NAB non-rural commodity price index fell by around 20% over 2012. We are expecting another decline of around 1¾% in 2013, before easing by a further 8¾% over 2014 (see Graph). Given our forecast for the AUD/USD to depreciate further over the remainder of the forecast horizon, AUD prices are expected to rise by 7½% over the year to December 2013, before a more modest

increase of 3% over 2014. In aggregating the index, iron ore, thermal coal and metallurgical coal have a combined weight of around 55%.

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Commodity update release dates*

January 2014: Bulks – 3/2/2014
February 2014: Overview, Gold and Natural Gas–3/3/2014
March 2014: Overview, Oil & Base Metals – 31/3/2014
April 2014: Overview & Bulks– 5/5/2014
* Reports to be released by these dates.

Quarterly Price Profile

Oil Price Forecasts – Quarterly Average

	Actual	Forecasts							
	Sep-13	*Dec 13*	*Mar 14*	*Jun 14*	*Sep 14*	*Dec 14*	*Mar 15*	*Jun 15*	*Sep 15*
Brent US$/bbl	110	109	105	103	103	100	100	100	100
WTI US$/bbl	106	97	98	97	95	95	95	95	95
Tapis US$/bbl	116	115	111	109	109	105	105	105	105
Petrol AUc/L	150	147	150	150	152	151	152	153	155

Sources: NAB Economics; RACQ; Thomson Datastream

Natural Gas Price Forecasts – Quarterly Average

	Actual	Forecasts							
US$/mmbtu	Sep-13	*Dec 13*	*Mar 14*	*Jun 14*	*Sep 14*	*Dec 14*	*Mar 15*	*Jun 15*	*Sep 15*
Henry Hub	3.55	3.70	3.90	3.70	3.90	3.60	3.80	3.60	3.90
Japan LNG	15.73	16.50	16.00	15.50	15.50	15.30	15.00	14.50	14.35
Brent Oil	110	109	105	103	103	100	100	100	100

Source: Datastream, CEIC, NAB Economics

Bulk Commodities and Coal Quarterly Contract Price Profile ($US/T)

	Actual	Forecasts							
	Sep-13	*Dec-13*	*Mar-14*	*Jun-14*	*Sep-14*	*Dec-14*	*Mar-15*	*Jun-15*	*Sep-15*
Iron Ore*	121	122	114	108	105	100	100	95	95
Hard Coking Coal	145	152	155	160	160	160	160	160	160
Semi-soft Coking Coal	105	110	110	115	115	115	115	115	115
Thermal Coal	95	95	95	87	87	87	87	87	87

Source: NAB

* Calculated using weighted average of quarterly lag formulation and spot prices. Weights reflect industry information on ongoing composition changes to the contract porfolios of major Australian miners.

Base Metals Price Forecasts – Quarterly Average

	Actual	Forecasts							
US$/MT	Sep-13	*Dec-13*	*Mar-14*	*Jun-14*	*Sep-14*	*Dec-14*	*Mar-15*	*Jun-15*	*Sep-15*
Aluminium	1783	1770	1820	1860	1890	1920	1960	2000	2040
Copper	7086	7140	7170	7170	7190	7230	7230	7230	7230
Lead	2102	2100	2130	2150	2170	2200	2220	2230	2250
Nickel	13956	13890	14030	14270	14430	14590	14850	15100	15370
Zinc	1861	1890	1910	1920	1940	1960	1980	2000	2020
Base Metals Index	267	270	270	270	280	280	280	280	290

Sources: Thomson Reuters; NAB Economics

Gold Price Forecasts – Quarterly Average

	Actual	Forecasts							
	Sep 13	*Dec 13*	*Mar 14*	*Jun 14*	*Sep 14*	*Dec 14*	*Mar 15*	*Jun 15*	*Sep 15*
Gold - US$	1328	1270	1200	1160	1120	1080	1050	1060	1060
Gold - AU$	1450	1350	1290	1280	1260	1240	1230	1260	1280

Sources: Thomson Datastream; NAB

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