Minerals and Energy Update – September 2013

🚧 National Australia Bank

- In September, overall demand for commodities gained support from progress in the global economic recovery. Positive data from major economies is adding to confidence that the recovery in the big advanced economies is currently on track, with improved momentum in manufacturing activity likely to support demand for commodities.
- There was a notable increase in volatility across many commodity markets in the month. Contributing to this was the rise and ebb of the Syrian crisis, the uncertainty surrounding the timing of US Fed's tapering of its asset purchases and the partial shutdown in the US government.
- Oil prices were higher on balance in the month from the developments in the Syrian crisis and stronger real demand signals from the US, euro zone and China. However, WTI was disproportionately weighed down by the political uncertainty in the US.
- Steel input markets have been relatively robust as Chinese steel mills press on with solid rates of production. Iron ore prices have eased but remain elevated, while restocking and cuts to marginal production are helping to lift coking coal prices from recent lows. In contrast, thermal coal prices are still facing headwinds, but appear to have reached a floor.
- Base metals prices gained in August, largely reflecting better economic data, but have experienced volatility in September relating to uncertainty over US Fed tapering, the government shut down and the looming debt limit.
- Demand for gold continues to be influenced by the stalemate over the US government budget and debt limit, as well as changed expectations for the timing of Fed tapering. The average price of gold softened by 0.2% in September, following a 5.2% rise in August, to around \$1,310 per ounce currently.
- Overall we have made few changes to our forecasts for commodity prices. Our near-term forecasts for gold and some metals were lowered slightly, but these were largely offset by upward revisions to oil and coking coal. 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

In September, overall demand for commodities gained support from progress in the global economic recovery. Positive economic data from the major economies is adding to confidence that the recovery in big advanced economies is currently on track, and this is likely to lead to a more evenly distributed global growth pattern overall. Business surveys and industrial output data suggested that advanced economies were about to pull ahead of emerging economies, although data has become a little more mixed for these economies recently. A good run of Chinese manufacturing and trade data has provided some assurance that the world's second largest economy is stabilising, allaying some of the earlier concerns of a potential 'hard landing' in its economy.

The improving growth track seen in global manufacturing has also helped to support demand and, to some extent, prices for commodities more recently. Manufacturing PMIs in major economies have improved noticeably in recent months and are signalling stronger final demand that has helped to alleviate inventory overhang within some commodity markets. The US, UK and Euro PMIs have all reached their highest levels in more than two years. As such, the strong pace of manufacturing expansion in the September quarter suggests that the euro-zone may now have broken its recession curse to grow for the second consecutive quarter in Q3, and firming on the Q2 result of 0.3%. The headline manufacturing PMI averaged 50.9 in the third quarter of this year, which is the highest rate seen since June 2011, when the euro-zone economy expanded by 0.2%.

The Japanese PMI hit its highest level since early 2011, having gained some momentum in previous months, as Abenomics and external demand continue to support activity. The anticipated consumption tax hike (taking place in April 2014 as part of needed fiscal reforms) was confirmed recently and may weigh on confidence in Japan, although a new \$50 billion stimulus package will accompany the hike to help cushion the blow.

Emerging and advanced economies



The growth trajectory of the US has been relatively unperturbed in September, with the official unemployment rate falling to 7.3% (although that is partly a function of fewer people searching for work) and PMI results point to sustained growth in production and new orders, and employment rising to the highest this year. While a lift in real demand has supported prices of some commodities, there was a notable increase in volatility across many commodity markets in the month, as indicated by the VIX index, which stemmed from developments in once-off geopolitical and policy events resulting in mixed price outcomes. Energy and safe-haven assets like gold rose significantly towards the end of August and first week of September on the escalation of the Syrian crisis but then eased off quickly as its government tacitly agreed to surrender its chemical weapons to avert a military strike by the US. Later in the month, the surprise decision by the US Federal Open Market Committee (FOMC) not to commence the initial reduction of its \$85bn a month bond buying program during its 19 September meeting also caused a spike in the prices of precious metals and crude oil, but price gains have largely been unwound from investors' expectations that the delay is likely to be short-lived, with markets expecting the Fed to start tapering as early as December.

Prices of bulk commodities and base metals were relatively less affected, although they too experienced fluctuations around the last FOMC meeting, and continued to take their cues from Chinese industrial activity. Restocking activity along with improving sentiment towards the Chinese economy have helped to support prices for steel inputs, including iron ore, at higher than expected levels. On the other hand, thermal coal prices remain depressed from supply overhang and currency depreciations, but appear to have reached a floor.



Towards the last week of September, even before the ripples caused by the FOMC meeting could recede completely, global commodity markets were confronted with the increasingly palpable prospects of a partial shut-down in the US government over a political gridlock between the Republicans and Democrats on the passing of budget funding bills for the new fiscal year. Commodity prices fell moderately in anticipation of a shut-down on the 1st October, the first day of the US fiscal year, but when it did eventually take place, overall market reactions were relatively restrained with only minor falls in commodities on average. Market participants are taking the view that this partial shutdown will not be especially damaging for the economy but until the effects are known, the shutdown is a reason for the Fed not to commence tapering anytime soon.

Looking ahead, uncertainty about the duration of the partial US government shutdown, while unlikely to cause sharp falls in commodity prices unless proven to be protracted, is equally unlikely to provide much upward impetus either from thinner volumes of trading activity. This is likely to exert disproportionate downward price pressure on crude oil and precious metals. Potentially posing as a greater threat to the price outlook is the fast-approaching 17 October deadline for the US Congress to approve a higher debt ceiling or the US might lapse into a default. On the real side of fundamentals, better activity indicators for China in August and September which point to a stabilisation in growth and a better outlook for demand, is likely to provide a layer of underlying support for the prices of industrial commodities. Thermal coal prices appear to have hit a trough and may edge slightly higher as supply responds and elevated inventories are gradually drawn down.

Summary of Price Developments

Oil

In late August and early September, oil price movements were largely dictated by the developments of the Syrian conflict. Oil prices peaked towards the end of August amid concerns that a US-led military attack on Syria on the account of its government's alleged use of chemical weapons that killed 1400 civilians near Damascus could disrupt Middle East oil supplies, but fell substantially when the US agreed tacitly to Russia's diplomatic proposal that the Syrian government could potentially prevent an attack by surrendering its inventory of chemical weapons. Meanwhile, the restoration of oil production in Libya and Nigeria and the subsequent partial shut-down of the US government also weighed on prices. That said, oil prices still remain at elevated levels from a lack of a clear resolution of the Syrian issue. Currently the US and Russian negotiators remain at odds on a UN Security Council resolution that would hold Syria accountable if it fails to live up to pledges to dismantle its chemical weapons stockpiles.

While the developments in the Syrian conflict were the main market movers in the last two months, there were also signals that global demand could be picking up when supplies were tightening. Continued lower supplies from earlier disruptions in North and West Africa as well as the Middle East added to upward momentum. Seasonal maintenance also tightened the supply of North Sea crudes and limited the availability of some crude grades in the Asia-Pacific region. On the demand side, an improving US economy, tentative recovery in the euro zone as well as more robust oil demand figures from China have also added to bullish sentiments in the market. Speculative managed money activity in net-long positions was also rife in the lead-up to the FOMC meeting, following the cumulative views that the Fed could delay the initial tapering of its asset purchase programme following weak data on US home sales and durable goods orders, which came to fruition during their 19 September meeting.

Reflecting the above mentioned developments, average oil prices rose in September on balance, with Tapis and Brent showing more traction than WTI to rise by 2.0% (to US\$120 per barrel) and 0.8% (US\$112 per barrel) respectively. WTI prices remained largely unchanged in monthly average terms, as being a US benchmark it has shown a more negative reaction in the lead-up to the political impasse in the US. Counteracting some of this impact has been the steady fall in the inventory levels at Cushing, the delivery hub for the benchmark, to reach their lowest levels in 18 months in mid-September as US oil refineries maintained operations at more than 90% capacity while imports fell at the same time.

Daily Oil Prices



As a result of the relative strength in Brent over WTI in August, the differential between the two indices widened in August but narrowed substantially when the FOMC announced that they will postpone the start of a slowdown in the pace of their current bond purchases at USD 85 billion a month.

As previously discussed in our earlier note, unplanned supply disruptions, which rose to historically high levels due to geopolitical tensions in the Middle East, have particularly unsettled the oil market over the course of summer months in the Northern Hemisphere. According to US Energy Information Administration (EIA), disruptions to global crude oil and liquid fuels production reached 2.7 million barrels per day in August 2013, the highest level since the authority began tracking OPEC supply disruptions in January 2009. Of this volume, close to 80% or 2.1 million bbl/d was attributable to OPEC producers. Contributing to the bulk of this were Iran, Iraq, Libya and Nigeria, which have very limited surplus crude oil production capacity.



Despite the short-term price volatility and what appears to be some degree of market tightness at the moment, the overall picture of underlying fundamentals suggests that the global market outlook is likely to be largely balanced within the coming year. Medium-term oil demand prospects are likely to benefit from the cumulative traction in the recovery of advanced economies, which in turn derive support from the continuation of a very loose global monetary environment, while the energy consumption outlook within emerging economies continues to remain robust. EIA estimates that liquid fuels consumption in China will increase by 420,000 bbl/d in 2013 and by a further 430,000 bbl/d in 2014, compared with average annual growth of about 510,000 bbl/d from 2003 through 2012.

The more recent moderation in oil prices from their August and early September highs resulted from a lessened likelihood of a US military strike on Syria and restored supplies in Libya and Nigeria. The risk premium associated with the Middle East may play a more diminished role in influencing price movements in the coming months. That said, bouts of uncertainty ar possible, associated with negotiations between the parties involved in the UN resolution for the Syrian crisis. In the near-term, all eyes will be on the developments of the US political impasse and the economic implications of the current US government shut-down, but these developments will serve to limit upward price potential for crude oil rather than exerting a major downward dragging force. Another round of tussling about raising the debt ceiling limit in the US Congress come 17 October is also expected to cause some volatility in prices.

Despite the short-term volatility, we have always expected that oil prices would return to be more aligned with fundamentals in our forecast profile. We have tweaked our near-term forecasts at the margins to reflect the base effects of the stronger-than forecast levels of Q3 outcomes but the overall profile is largely unchanged from the previous month. We now expect Brent and WTI to average around US\$106 and \$100 per barrel by the end of this year.

Natural Gas

As with most other commodities, the price movements in US natural gas in September were largely influenced by the two key world events which took place: the escalation of the Syrian crisis which entailed a sizeable risk premium and the subsequent "surprise" decision by the Fed not to start its initial tapering of its asset purchases. This came at a time when major natural gas markets typically enter into the autumn shoulder period, characterised by lower seasonal demand due to milder weather. In this case, significant involvement by the US in both the events has an overriding effect over market fundamentals to see the Henry Hub index - the delivery benchmark for US natural gas - rise by 5.5% in the month. Prices reached their highest since the end of June during the second day of the FOMC meeting at US\$3.73/mmBtu but have since moderated, dropping to their lowest level in five weeks on the last week of September when the weekly storage report by the EIA showed an increase in storage that was above market expectations to be above the five-year average.

In the UK, natural gas prices rose about 4% in September. While the global impact of the Syrian crisis and FOMC tapering decision have culminated in rising energy prices in general, cooler than normal temperatures around mid-September and some disruptions in the supply from the Netherlands have further added fuel to the fire. In addition, ongoing Norwegian gas field maintenance and unplanned outages have led to a tight British market for most of the summer, despite demand being 30 to 40% below the seasonal norm. Further adding to the uncertainty to UK gas import





supply is the fact that it is a residual market for Norwegian



In Asia, the LNG market continues to be guite tight as the restocking season for winter continues, although prices have moderated slightly from the peak of summer as countries enter the shoulder period of relatively thin trading. In the last few months, India and China have increased their domestic price for natural gas as part of the countries' reforms in the natural gas market, which have been kept artificially low resulting in massive losses for state-owned LNG-importing utilities companies. China in particular has been attempting to steer towards a more natural gas intensive, cleaner energy mix as it steps up its efforts to reduce pollution in the country, and higher domestic prices are seen to be more likely to encourage investment in LNG importing infrastructure. As a result of the price hike in July, China's LNG imports rose by 35% in August. Japanese and Korean LNG demand has also been largely resilient in the last few months. With its last active nuclear reactor being turned off this month and currently no date scheduled for a restart amid strong public hostility to atomic power, Japanese imports of LNG are likely to stay reasonably strong in the coming months. Nonetheless, a lower yen and a corresponding soaring energy import bill is placing undue stress on the government, which shows more partiality towards some form of a return of nuclear energy generation in the near future, to act in a concerted manner to bring energy bills down as an interim measure. To increase their bargaining power, Japan and India agreed in September to set up a multilateral group of buyers for LNG to push for lower prices for the fuel, and they plan to ask other importers to join the consortium.

This act of backlash from two of the world's largest LNG importers could threaten to exert price pressure on the mammoth LNG operations in Australia currently under construction. The first one starts production next year. Woodside Petroleum is reported to be under increasing pressure from two of its major buyers, Tokyo Gas and Kansai Electric, to consider the expected new order of global market dynamics, led by the boom in US shale gas, in pricing its longterm contracts when they are due for renewal in 2015.



Source: CEIC, NAB Economics

Looking ahead, the inelastic demand for imported LNG by Japan and India, alongside greater policy resolve by the Chinese government to pivot towards more LNG and away from coal in its energy mix is likely to support near-term LNG prices. Nonetheless we have forecast for the price to ease gradually in the medium term as US shale gas exports play a prominent role as a cheaper alternative to traditional sources of LNG exports.

Coal



Bulk commodity prices continued their relatively mixed performance over the past month with prices for steel inputs maintaining their good run, while thermal coal prices have remained soft. Solid increases in thermal coal supplies from Australia and Indonesia have kept coal inventories elevated and prices compressed. Spot prices for coal shipped from Newcastle have remained below US\$80 per tonne (FOB) since late June. Prices at these levels are well below the contract price for the Japanese fiscal year, which were settled at US\$95 per tonne (FoB) earlier in the year. Looking through the daily volatility, the average spot price of thermal coal shipped from Newcastle (FOB) rose by a modest 0.8% in September, following another moderate rise in average prices during the previous month. Higher cost production is being shut down in response to falling prices, and while AUD depreciation has helped to cushion some miners, Yancoal's Stratford operation was one of the first Australian operations to close due to unprofitability recently.

Growth in thermal power generation has been picking up, but coal supplies have been keeping pace. Nevertheless, lower prices have prompted a cutting back of Chinese domestic coal production, which is helping bring down the overhang of coal in the Chinese market. Inventories in India have also been trending down from their highs over the past month or so, although they still remain at very elevated levels. The arbitrage window for China has remained favourable for coal imports, although the recent completion of key transport infrastructure in China has lowered the cost of delivering domestic coal to southern regions, allowing Chinese producers to better compete with landed coal; arbitrage windows appear to have narrowed.

Thermal Coal Demand and inventories



Coking coal prices have taken a while to lift from their depressed levels, but resilient Chinese steel production has led to some restocking demand by steel mills, while the suspension of some marginal coal production is bringing the market back into balance. Prices have been tracking steadily higher in recent weeks. The improvement in prices was well timed for coal producers, prompting a higher settlement for December quarter contracts. It was reported that Nippon Steel and BHP settled the Q4 contract price for premium coking coal at US\$152 per tonne (FoB), which was a little better than our earlier expectations and 7 cents higher than the September quarter contract. With prices dipping as low as US\$129 per tonne in July, there was a risk that contract prices could hit a new low. But despite the increase in price, this is still the second lowest contract price since quarterly contracts commenced in 2010.

Average spot prices for premium hard coking coal rose by 6% in September, following an 8½% rise in August. Although conditions have been improving, there still appears to be adequate supplies of coking coal in the market that are keeping spot prices more than 15% below this year's high achieved in February. The current spot price of around US\$148 per tonne (FoB) for premium coking coal is slightly below the negotiated contract price set for Q4 (2½% below), and solid increases in Australian supplies may work to keep prices relatively contained.

Iron Ore

Global steel production has been robust in recent months, rising 5.4% y-o-y in August, driven by strength in Chinese production. Despite calls from China's leaders to cut significant overcapacity in the steel industry (excess capacity has been estimated at around 300 million tonnes), production recorded double digit growth in August for the first time since November last year. Nevertheless, excess capacity in the Chinese steel industry is keeping operating conditions difficult for steel mills. After a short lived rally, steel prices have again started to slump. The price of Chinese rebar fell around 3% from the end of August and is now more than 20% below last years peak (recorded in April). Futures prices for steel have also shifted lower since last month, although high inventory levels have kept the curve in contango.



The most recent rally in iron ore prices has stalled and prices have edged lower over the past month with Chinese import demand easing from the record high in July. Spot prices are currently around US\$131 per tonne (CFR, Tianjin), having peaked at US\$143 per tonne in mid-August. Nevertheless, iron ore prices have been more resilient than steel prices as mills restock while maintaining high output. However, stocks of iron ore at ports remain at very low levels and restocking at mills still has further to run, which should help to support iron ore prices despite soft steel market conditions - at least until year's end. Demand for seaborne iron ore is also receiving support from a favourable price differential to domestic ore; although the window has narrowed since earlier in the year. Expected expansions in global iron ore capacity on the other hand will create headwinds to seaborne prices and provide disincentives for restocking in the near term. Major miners are expected to press on with their expansion plans. Rio Tinto commenced loading their first shipments from its expanded capacity in September - this year Rio has sought to raise output by 65 mtpa.

Chinese Iron Ore Prices*



Overall, the average price for iron ore (62%) is estimated to have been around US\$124 per tonne FOB for August and US\$120 per tonne FOB in September, up from the most recent low of US\$102 in June. We expect prices to remain relatively range bound at US\$120-140 per tonne FOB for the remainder of this year, due to seasonal strength in demand, before rising supplies and modest demand growth cause prices to undertake a structural decline towards US\$100 per tonne FOB over the following 12-18 months. China's gradual shift away from its heavily investment intensive growth model will see steel demand increase at a slower pace than in previous years.

Base Metals



Prices for base metals were spurred on in late August and early September by more positive data on manufacturing in the US and Europe, as well as China. However, the recovery was relatively short-lived as upbeat data for the US brought forward expectations for a US Fed tapering of stimulus that pushed up the USD. Even though manufacturing and construction activity has long been a major driver of prices across the base metal complex, fundamentals have shifted in recent years as US stimulus became a significant support for commodities. The Fed surprised the market at the September FOMC meeting when it did not commence the tapering of monetary stimulus, lending support to some commodity prices including the metals. However, tapering remains on the cards by the end of the year, limiting the potential rally in prices, especially in the near term as the US government shutdown and looming debt ceiling add yet another layer of uncertainty to the outlook.



In aggregate, base metals prices on the London Metal Exchange (LME) fell by 2.2% in September, following a 4% rise during August, to be around 13% lower over the year. While economic conditions have generally improved in recent months, end-user demand remains relatively muted, keeping prices well down on last year. Demand from emerging markets (ex-China) has also been undermined by falling corporate profits and tightening lending standards, which have seen these economies slow noticeably. At the same time, carry trades in metals are likely to become less attractive as bond yields begin to rise in the US, which will lower spot prices as physical supplies rise. These headwinds are expected to become increasingly evident in market balances this year. For example, the International Nickel Study Group (INSG) anticipates a surplus of 136.9kt this year, which is a record high, before easing back to around 114kt next year.

Base Metals Prices*

	Avg Price (US\$/tonne) Sep-13	Monthly % change Sep-13	Sep-12 - Sep-13 % change
Aluminium	1761	-3.1	-15
Copper	7159	-0.5	-11
Lead	2085	-4.1	-4
Nickel	13801	-3.6	-20
Zinc	1847	-2.7	-8
Base Metals Index		-2.2	-13

Prices on an LME cash basis

Sources: LME; NAB

Prices fell for all of the base metals in September, although the magnitudes of the increases have varied slightly across the complex. Average lead and nickel prices were around 4% below their August averages, while aluminium and zinc prices were down by around 3%. The price for copper recorded a more modest fall of around ½%. In annual terms, lead has been the best performer, falling by 4% over the year, with prices buoyed more than other metals by robust demand for lead-acid batteries and tight supplies of lead concentrate. Zinc has recorded the next best price growth in year-ended terms (down 8%). Aluminium and nickel prices recorded the largest declines (down 15% and 20% respectively), while copper prices were 11% lower than in September 2012.

Base Metals Prices



On a positive note, better conditions in China's property sector and stimulus spending on infrastructure have been a support to base metal markets. Cash positions of real estate developers have improved, which has led to an increase in construction starts since the beginning of the year. Property prices have also risen sharply, driven largely by first tier cities where undersupply remains a big issue. Continued rapid price inflation in these cities raises the possibility that authorities will take additional measures to cool the market, which could weigh on demand for metals such as copper that are used heavily in construction. However, prospects for demand in other emerging countries may now be looking up with financial conditions stabilising somewhat, while lower interest rates in countries like Thailand and more competitive exchange rates in India and Indonesia may help to support growth in these economies.

Finally, the debate over regulations for LME warehouses continues as costs to obtain physical quantities remain elevated despite rising oversupply in some markets. The LME has proposed that from next April, warehouse companies with a waiting time of more than 100 days in a single location must load out more metal than they take in (according to a formula). Under current LME rules, warehouse companies with more than 900,000 tonnes in one location are required to load out metal at a minimum rate of just 3,000 tonnes per day, regardless of how much is delivered into the facility. Most market participants have welcomed the suggestion, although some argue that 100 days is still too lenient, while others claim that the restrictions will simply see a shift of stockpiles into non LME warehouses. Copper premiums have remained elevated despite LME's recent efforts to address the warehousing backlog.

Copper premiums



Gold

Demand for gold continues to be influenced by the stalemate over the US government budget and debt limit, as well as changed expectations for the timing of Fed tapering. The gold price surged to around \$1,370 per ounce immediately following the Fed's surprise decision to maintain its asset purchasing program at \$85 billion a month, with the continuation of very easing monetary policy settings helping to support the perceived value of gold as an alternative investment. The gold price gradually eased towards \$1,300 per ounce following the Fed's decision, as markets re-formed their views for the commencement of tapering. The price of gold edged higher in the lead up to the US government shutdown as concern about the economic cost of the stalemate and the impact it will have on confidence increased. This resulted in a shift in investor demand away from riskier assets and towards alternative assets, including gold. However, with the shutdown in place for a week now, investors appear to have reassessed the appropriate value of gold's safe-haven premium, with the metal giving back earlier price gains. This outcome is consistent with the market realisation that the shutdown will only be short-lived.

The average price of gold softened by 0.2% in September, following a 5.2% rise in August, but a general decline in price over the month has seen gold fall from above \$1,390 per ounce at the beginning of September to \$1,330 per ounce at the end of the month. The price of gold fell below \$1,300 per ounce at the start of October when the US government shutdown commenced, but has recovered to around \$1,311 per ounce.

Daily Gold Price and the US Dollar



While government setbacks and uncertainty surrounding the imminent tapering of US Fed stimulus are likely to see near-term gold price volatility persist, it remains our expectation that prices will gradually soften over the forecast horizon. While external influences are likely to keep demand for gold varied over the remainder of 2013, we generally expect the price to moderate to around US\$1,300 an ounce by the end of 2013, before gradually declining to around US\$1,100 an ounce by the end of 2014, as growth in the major advanced economies regains momentum and investors increase their demand for riskier assets.

Outlook

The positive note underpinning many of the recent economic indicators have reaffirmed our view that the recovery in the advanced economies is currently underway and should be supportive for most commodity prices in the near term. However, there had been notable increase in volatility in commodity prices lately from once-off geopolitical events in the Middle East and uncertainty surrounding the timing of US Fed's tapering and now, the duration of US government shutdown and implications from potentially another debacle in the US Congress involving debates on whether to raise the US debt ceiling on 17 October.

The earlier concerns expressed about the outlook for growth in the big emerging economies have abated somewhat, following the falls in US government bond yields in September which have the effect of slowing the pace of capital outflows from emerging economies. Nonetheless, credit growth in these countries is less robust than before, and is expected to remain vulnerable to the withdrawal of foreign capital as major economies begin to tighten monetary policy. Overall, we expect the global economy to improve in H2 2013, with the recovery to continue into 2014. However, any price gains as a result of the resulting increase in global commodities demand are expected to be largely offset by higher levels of production from pent-up supplies.



In US dollar terms, the NAB non-rural commodity price index fell by around 20% over 2012. We are expecting another decline of around 3½% in 2013, before easing by a further 8%

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 9% over the year to December 2013, before a modest increase of 1% 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*

October 2013: Gold, LNG, Overview – 4/11/2013 November 2013: Oil, Metals, Overview – 2/12/2013 December 2013: Overview – 23/12/2013 * Reports to be released by these dates.

Quarterly Price Profile

Oil Price Forecasts – Quarterly Average

	Actual				Fore	casts			
	Sep-13	Dec 13	Mar 14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15	Sep 15
Brent US\$/bbl	110	106	104	103	100	100	100	100	100
WTI US\$/bbl	106	100	98	97	95	95	95	95	95
Tapis US\$/bbl	116	111	110	109	105	105	105	105	105
Petrol AUc/L	142*	141	140	140	141	142	142	143	143

Sources: NAB Economics; RACQ; Thomson Datastream

*Estimate only; full quarter data not yet available

Natural Gas Price Forecasts – Quarterly Average

	Actual	Jal 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	3.60	3.90	3.70	3.90	3.60	3.80	3.60	3.90	
Japan LNG	16.00*	16.50	16.00	15.50	15.50	15.30	15.00	14.50	14.35	
Brent Oil	110	106	104	103	100	100	100	100	100	

*Estimate only; full quarter data not yet available

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

	Actual				Foreca	asts			
	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15
Iron Ore*	121	120	114	108	105	100	100	95	95
Hard Coking Coal	145	152	155	160	160	160	160	160	160
Semi-soft Coking Coal	100	105	105	110	110	110	110	110	110
Thermal Coal	95	95	95	90	90	90	90	90	90

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	1810	1840	1860	1890	1920	1960	2000	2040
Copper	7086	7120	7090	7120	7160	7190	7190	7190	7190
Lead	2102	2060	2090	2100	2120	2140	2150	2170	2180
Nickel	13956	13960	13990	14030	14100	14170	14270	14410	14560
Zinc	1861	1870	1870	1880	1900	1920	1940	1960	1980
Base Metals Index	267	270	270	270	270	270	280	280	280

Gold Price Forecasts – Quarterly Average

	Actual				Fore	casts			
	Sep 13	Dec 13	Mar 14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15	Sep 15
Gold - US\$	1328	1300	1250	1200	1150	1110	1060	1060	1060
Gold - AU\$	1450	1410	1380	1350	1330	1310	1280	1290	1300

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