

Minerals & Energy Update – August 2013

National Australia Bank

- **More positive news on the major economies has provided a slight boost to most commodity prices in August, with the long awaited rotation of global growth towards the big advanced economies seemingly underway. Global manufacturing activity also appears to have gained momentum more recently, signalling stronger demand.**
- **Some commodity prices have risen on the back of the most recent outburst of conflict in Syria, especially oil and safe-haven assets. But speculation about US involvement will add to volatility in the commodities complex over coming weeks.**
- **The most severe supply disruptions since early 2009, predominantly due to escalated tensions in the Middle East, have contributed much of the oil market volatility in July and August, also keeping oil prices buoyant.**
- **Steel input markets were more robust in recent months than expected. Iron ore prices have remained elevated, while coking coal prices have started to rise. In contrast, thermal coal prices still facing headwinds.**
- **Base metals prices gained in August, largely reflecting better data out of China. Gold prices also surged ahead in August on the back of rising fear about the conflict in Syria, which has also pushed oil prices higher on the back of supply concerns.**
- **Reflecting some recent unexpected improvements in prices, we have raised our near-term forecasts for some commodities. We continue to expect only a modest recovery in demand over the forecast horizon, but this should help to stabilise prices. The recovery is expected to be bumpy and conditions in many emerging markets appear to be deteriorating, presenting ongoing risks to commodity markets.**

Monthly Commodity Prices

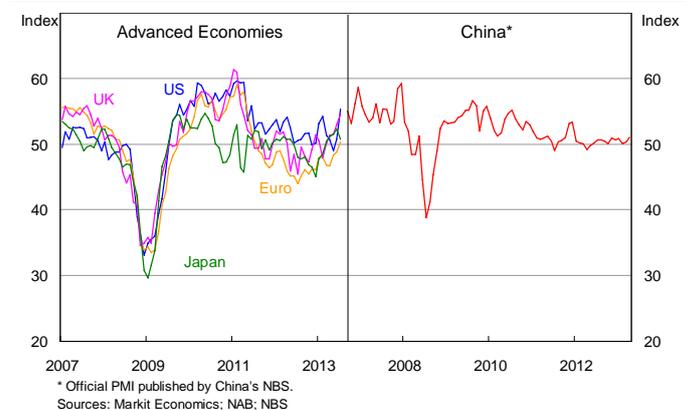
Demand conditions appear to have exceeded expectations during August, with more positive news on the economy providing a slight boost to most commodity prices in the month. The big advanced economies appear to be making progress towards recovery, and the most recent economic data out of China have helped 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. This sentiment has firmed following a better-than-expected upward revision to US GDP in the June quarter, providing evidence that growth momentum is rising, although some housing indicators have softened recently. Major central banks have also provided a little more clarity on their intentions for monetary policy settings, including 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.

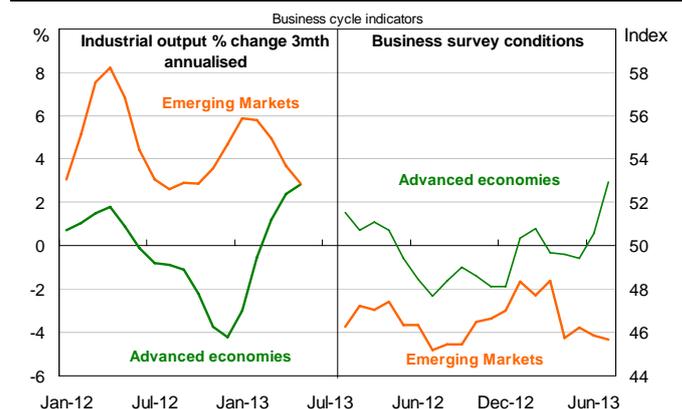
In addition to better real demand, some commodity prices have risen on the back of the most recent conflict in Syria, which has prompted US officials to discuss with allies the possibility of military action. The most notable impact has been on the price of oil, with action in Syria potentially compromising oil pipelines and creating increased uncertainty about future supply. Safer assets have also been a notable beneficiary, with the price of gold and US Treasury 30-year bonds rising as investors weigh the chances of military action. However, price gains have largely been unwound on the expectation that any potential strike action will be short lived. Speculation about US involvement is expected to add to volatility in the commodities complex over coming weeks.

The improving growth track seen in global manufacturing has also helped to support prices 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. However, the Japanese PMI appears to have lost some momentum.

PMI Surveys



Emerging and advanced economies



Overall, uncertainty about the timing of QE tapering by the US Fed as well as the intensification of the conflict in Syria have contributed to heightened volatility in commodity markets. However, better activity indicators for China in July, which point to a stabilisation in growth and a better outlook for demand, have provided renewed support to the industrial commodities. Base metals in particular have benefited this month, with prices rising by around 4% on average. Gold prices also surged ahead in August, hitting a two month high towards the end of the month on the back of rising fear about the conflict in Syria, which saw investors flock towards the safe-haven asset. Middle East conflict and the more recent threat of military action by the US in Syria have fuelled oil prices higher. Bulk commodity prices have generally performed better than expected; iron ore prices have remained elevated, while coking coal prices have started to rise. In contrast, thermal coal prices continued to face headwinds.

Summary of Price Developments

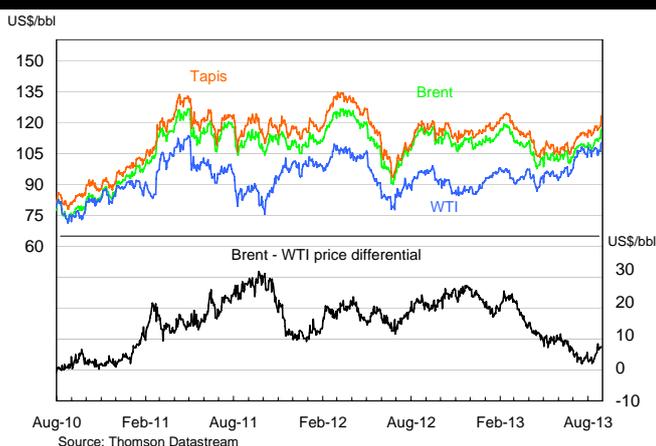
Oil

Average [oil prices](#) rose sharply in July and consolidated further in August. In July, heightened concerns over the security of supply with the violent unrest in Egypt, an uptick in Asian crude demand due to improved margins, as well as rising refinery runs and strong speculative activity fuelled notable rises across the three indices of Brent, WTI and Tapis. Supply-side factors continued to dominate the oil market in August as tensions in the Middle East mounted, reaching a pinnacle when the US rallied allies to take military action on Syria for its alleged use of chemical weapons on its civilians. Tensions subsequently receded when the UK parliament voted against military action and President Obama made US action conditional on Congressional approval, but the cumulative effects on oil prices are likely to linger.

Escalated uncertainty in the Middle East has largely benefited Brent prices, which rose by 4% in July and 3% in August, reaching a six month high of US\$117.3 at the end of August. Tapis followed a similar trend to Brent, rising by 5% and 4% in July and August respectively to be currently around US\$123/bbl.

Less influenced by supply-side factors in the Middle East, WTI prices charged ahead in July and August for slightly different reasons. WTI trail-blazed its way to end 9% higher in July to US\$105/bbl and a further 2% in August to be around US\$107/bbl, largely driven by markets' perceptions that easing of the crude stockpile bottleneck in Cushing – the delivery point for the US benchmark – is likely to be sustainable. In addition, speculative activities played a big part fuelling the rise in prices, with net length in managed money Nymex WTI futures reported to have reached 362,941 lots in the last week July, the highest level since the US Commodity Futures Trading Commission (CFTC) started its weekly disaggregated reporting in September 2009.

Daily Oil Prices



Since mid-February, the differential between Brent and WTI has narrowed steadily and gained further traction in July to be the lowest since January 2011 in monthly average terms and a hair's width away from effectively closing the gap. While we have always forecast the two oil indices to converge eventually, the speed at which it happened over July caught us by surprise somewhat.

The intensification of conflict in the Middle East in the past two months has led to severe disruptions in oil supply. According to EIA, disruptions to global crude oil and liquid fuels production reached nearly 2.7 million barrels per day in July 2013, the highest level since at least January 2009. Disruptions to production in Iraq and Libya which took place over the course of summer have particularly affected the Mediterranean market, an important market for Brent-priced crude oils. Adding to the uncertainty has been the intensification of the stand-off between Egyptian military and supporters of the ousted ex-President Mohammed Morsi and the recent Syrian civil war. While Egypt and Syria are not major oil producers and so far have not contributed directly to the oil shortage, prolonged unrest has incited fears that there could be spill-over effects onto other parts of the region that potentially disrupt transportation of oil via closures of country-crossing pipelines and the Suez Canal trade route.

Meanwhile, global refinery crude oil runs reached their expected 2013 peak from an uptick in seasonal demand and an improved economic outlook in advanced economies more generally, with recent Chinese economic indicators consistently surprised on the upside.

Looking ahead, the likely shift in the growth contribution from emerging economies to advanced economies suggests that risks to the global oil demand outlook are largely balanced. Forward guidance issued by central banks in big advanced economies have signalled that interest rates are likely to remain very low for a long time to come, which will serve to buoy market confidence and support energy consumption.

We continue to expect that the unprecedented increase in production by non-OPEC countries will overcome short-term supply shocks to serve as a cap on upward price pressures. As such, we have revised up our forecasts for Brent and WTI prices for the near-term to capture recent price developments. Meanwhile, we have also lifted our Brent forecasts relative to WTI in the out years (see forecast table in Appendix) to reflect our expectation that the Brent-WTI differential will widen from its current lows towards a more sustainable equilibrium, as US refinery utilisation rates decline from recent highs to lower post-summer seasonal levels and as crude oil production in North America continue to increase, outpacing takeaway capacity.

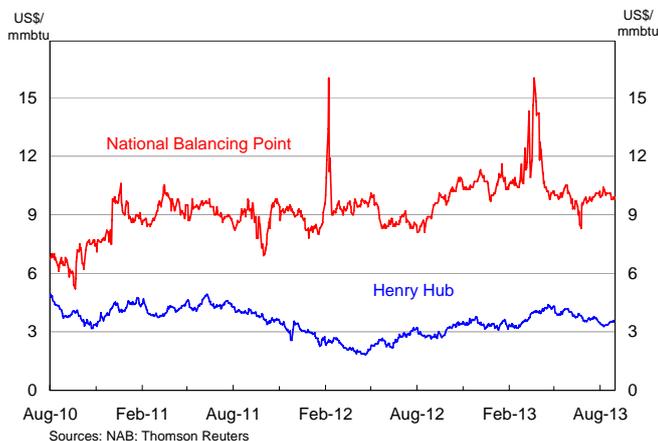
Natural Gas

US natural gas spot prices were significantly higher during the first half of 2013 compared to the same period in 2012, reflecting the weak base of 2012 and unseasonably cold weather around March and April. Prices at Henry Hub—a key benchmark and major trading location—averaged \$3.75/mmbtu during the first half of 2013, up 57% from the \$2.39/mmbtu average spot price for the first half of 2012. However, prices started to enter a phase of gentle decline from early May as weather turned milder and a forecasted warmer-than-average summer at the start of the season failed to eventuate. The absence of a strong uplift in cooling demand more broadly saw natural gas prices languish further in July and August to reach the lowest monthly level in close to six months of US\$3.43/mmbtu in August.

As the US enters into autumn, we expect prices to stay range-bound between US\$3 and US\$4/mmbtu before tracking up more notably towards the end of the year as colder winter temperatures

(relative to record-warm temperatures in 2012) are expected to increase the amount of natural gas used for residential and commercial space heating. However, EIA forecasts that stronger prices this year are expected to reduce usage of natural gas for electric generation by the order of around 11%. In terms of inventory levels, lower-than-expected demand during summer has seen stocks build up steadily, but still remain below the five-year average levels.

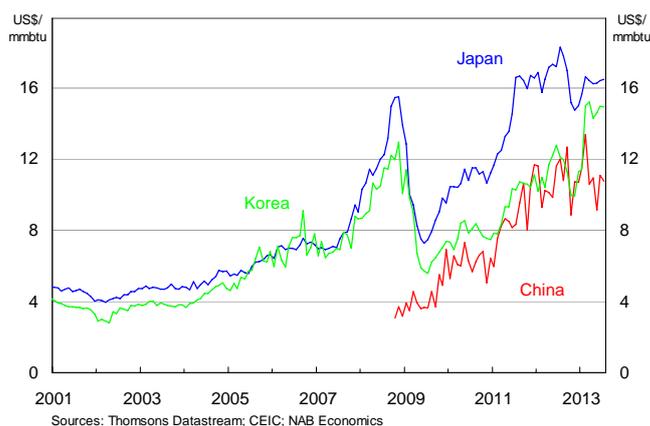
Henry Hub and National Balancing Point Prices



In the UK, natural gas prices rose about 5% and 1% higher in July and August respectively. Prices have been firm this summer, and are trading at around 15% higher in July relative to the same time last year as ongoing Norwegian maintenance has curbed the flow of gas that would usually be used to top up depleted storage sites. This was after a period of rapid stock depletion and the UK gas supply struggled to cope with one of the coldest winters on record earlier this year, prompting a shortage scare in March that sent gas prices skyrocketing. This was exacerbated by a supply disruption as a technical fault caused one of its main import pipelines to shut down, which then forced the UK to import gas at spot prices which were comparable with those paid by high-paying Asian buyers. In preparation for winter, utilities companies in most European nations, including the UK, are replenishing natural gas reserves at the fastest pace on record, keeping gas prices buoyant.

In Asia, the LNG market continues to be quite tight, with a more significant imbalance between supply and demand looming ahead as northern hemisphere winter approaches. Currently, there are more import terminals coming online across the region than global export supply can keep pace with. While many of the new terminals already have long-term supply agreements in place, there is still demand for spot cargoes, especially from China. As a result, LNG prices have been maintained at historically elevated levels, with import prices in Japan and Korea around US\$16/mmbtu and US\$15/mmbtu respectively in July. There is significantly more volatility in the Chinese LNG import prices as Chinese energy companies tend to import oil from spot markets to offset the shortfalls from domestic production. Weaker industrial activity has weighed on Chinese LNG import demand for some time but there have been signs of stabilisation in China's economic activity more recently. Meanwhile, weaker Asian currencies are weighing on LNG demand in the more cost-sensitive markets like India, where the rupee depreciated by close to 20% this year to hit a record low against the US dollar in late August.

Asian LNG Prices



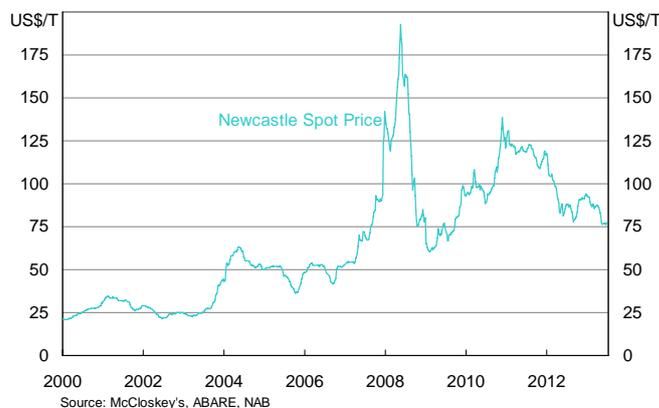
Looking ahead, the slow progress in the restart process of idling nuclear reactors in Japan indicates that LNG demand by that country is likely to stay resilient in the coming months. A more stable economic outlook in China suggests that it is likely to meet the 16.5 million tonnes for 2013 imports forecast by top oil and gas producer China National Petroleum Corp. As such, we expect LNG prices in the region to stay relatively robust.

Coal

While markets for steel inputs, particularly iron ore, have been looking more positive in recent months, prices for thermal coal continue to lag behind, dipping to their lowest levels since 2009. Spot prices at these levels (US\$75-80 per tonne FOB) are well below the contract price for the Japanese fiscal year, which was settled at US\$95 per tonne (FOB) earlier in the year.

Prices slid despite some signs of restocking demand in China as well as a string of more positive economic data during the month. Chinese thermal electricity generation picked up nearly 16% to a record high in the month of July, consistent with a rise in utilisation rates of thermal power, to be almost 17% higher over the year. The recent improvements in industrial activity in China are providing support for demand and are expected to stabilise over the remainder of the year, partly supported by improving demand from the major developed economies.

Coal Prices

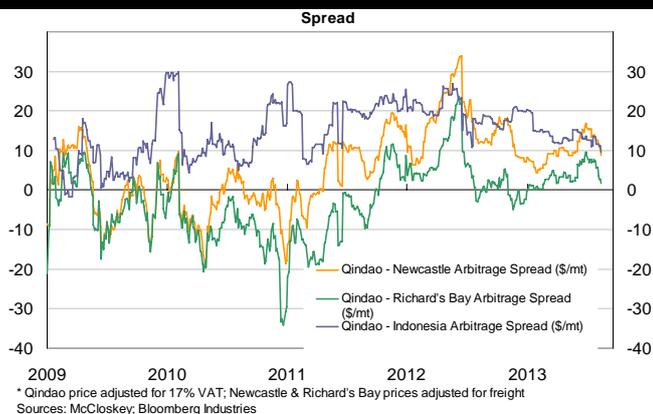


Reports suggest that stocks of coal held by Chinese utilities are currently low – although data on inventories at port remain elevated – which may prompt restocking pressures ahead of the winter demand period. The US has also seen some better demand conditions of late, despite ongoing competition from natural gas. While there is a structural shift towards permanent replacement of coal-fired power generation in the US, data from the US Energy Information Administration (EIA) shows that there

has been a trend towards greater domestic coal use for power generation so far this year (rising 10% ytd in May from the same period last year). India's thermal coal demand has also been growing, including greater demand for higher quality coal. India has over six 'ultra mega power plant' planned and under construction, which will bolster coal demand once completed.

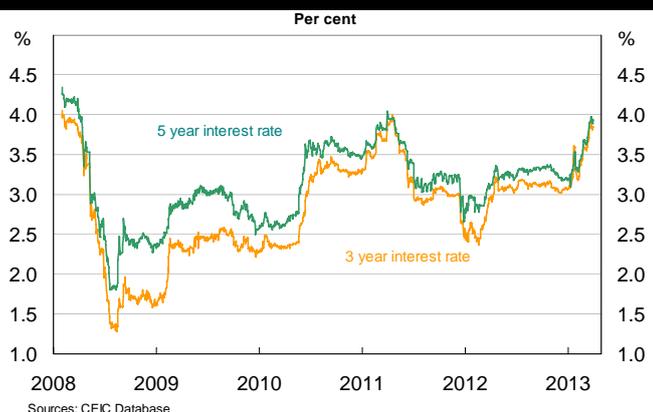
On the supply side, Australian and Indonesian exports have kept thermal coal prices muted, although tighter margins are expected to rein in US supplies. Australian exports of thermal coal jumped 25% in June, driven by a 24% rise in exports to Japan and a 48% increase to China. Indonesian coal exports rose almost 5% in May to be up 15% over the year. While Chinese producers are competing for market share, price differentials continue to suggest that Australian and Indonesian producers remain competitive in the market. US coal production has fallen 3% over the year to mid-August according to EIA estimates using railway car loadings.

Coal import price competitiveness (China)



The average spot price of thermal coal shipped from Newcastle (FOB) was broadly flat in August after falling 6½% in July. Current cost structures suggest thermal coal prices are approaching a trough, while signs of improvement in the Chinese economy could suggest little scope for further declines. However, the recovery in advanced economies (and stabilisation in China) is still in its early stages, and risks to emerging economies are mounting. A weaker AUD could also provide headwinds to coal prices.

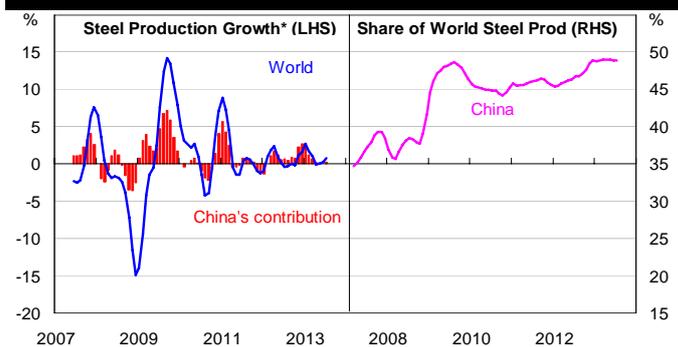
Monetary conditions have tightened in China



Turning to steel inputs, markets for these commodities have shown unexpected resilience in recent months, despite what is traditionally a seasonally soft period for demand over summer, on the back of ongoing strength in Chinese steel production. Despite showing signs of stabilisation, the Chinese economy is now growing at a more modest pace than in previous years, and we still see risks to Chinese steel demand as a concern. In particular, monetary conditions have been tightening which will weigh heavily on credit growth and is likely to filter through to the real

economy, particularly through the construction sector which is a major consumer of steel.

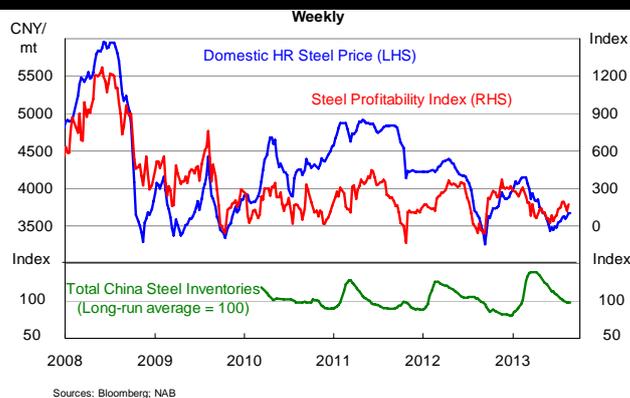
World steel production



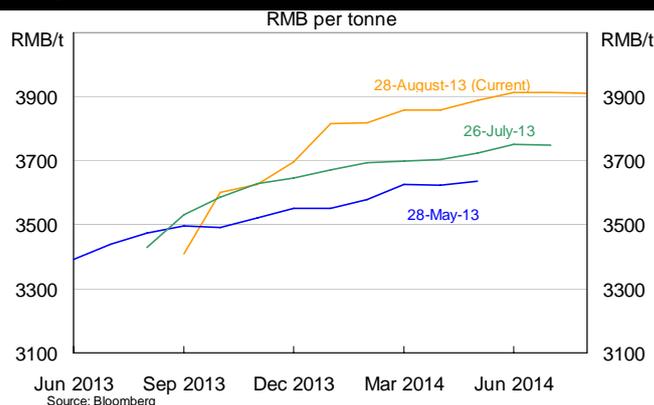
* Calculated as the 3month/3 month percentage change of seasonally adjusted steel output. Source: World Steel Association, NAB

There has been a raft of government stimulus measures announced in recent months that are expected to continue supporting economic activity in China. Spending on public infrastructure projects is likely to provide a significant source of steel demand, while measures such as tax cuts for small firms and assistance to exports will make a contribution as well. Some of these factors are already playing out in steel markets. Steel production is ebbing higher, but inventories are being drawn down while prices have tracked higher, driving an improvement in the steel producer profitability index. The price of Chinese rebar has risen by around 6¼% from the end of June, although it remains almost 20% below last years peak (recorded in April). The futures curve for rebar has shifted into even steeper contango as paper markets price in the possibility of a stronger recovery in demand – and factoring in Chinese production controls – at the longer end of the curve, although very near-term contracts have eased a little.

Conditions still tight but improving for Chinese mills



Shanghai Rebar Futures



The apparent shift in market conditions for steel have flowed through to coking coal, which has proven to be far less resilient than iron ore for most of this year. While improving demand has been a factor, the market balance has also been assisted by a supply response as marginal producers cut back production. Prices for premium hard coking coal temporarily dipped below US\$130 per tonne, which is estimated to be around the marginal cost of production. Consequently, there were further coal supply cut-backs announced in July, while future expansion projects continue to be curtailed. However, spot prices have now lifted to around US\$145 per tonne, which is up 11% from the end of June. This price is consistent with the Q3 contract price, which was previously settled at around US\$145 per tonne FOB. Average spot prices for premium hard coking coal fell by 1.9% in July, but rose by 7.3% on average during August. Given the expectation for ongoing supply rationalisation, prices could continue to rise from current levels if the positive trend emerging in steel markets continues – supported by favourable policies in China and a gradual recovery in the major advanced economies. However, a seasonal slowing in steel demand remains a possibility, while appreciation of the AUD will most likely provide a buffer to lower seaborne USD coal prices.

Iron Ore

Iron ore markets have shown surprising strength in recent weeks as indicators point to tightening market conditions. This was in stark contrast to the supply glut that appeared imminent just a few months ago when the Chinese economy was slowing and supply capacity was set to come online. However, iron ore production did not pick up quite as expected, while iron ore demand has remained resilient due to robust steel production in China. Spot prices are currently around US\$138 per tonne (CFR, Tianjin), having remained above US\$135 per tonne for much of August. Falling steel inventories and very low iron ore stockpiles are contributing to demand for seaborne ore as mills look to restock. However, mills seem to be content with running on a minimum level of raw material inventory and replenishing as needed, which may limit the prospects for a significant restocking rally

China's iron ore import market

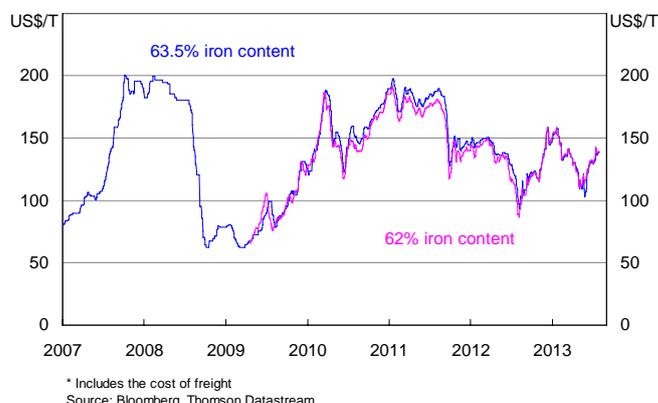


Iron ore supplies are expected to continue rising as new supply capacity comes online, but it is the uncertainty surrounding India's mining and export policies that has been gaining increased attention. India is the world's third largest producer of iron ore. With the economic situation in India deteriorating and concerns about financing the high current account deficit (CAD), authorities are looking for ways to boost the country's exports and the iron ore market could be a means to achieve this.

One way is to lower the current export tariff on iron ore to 20% (from 30% currently). The tariff was originally introduced to support the domestic steel industry. Estimates suggest that such a change to the export tariff could see Indian exports rise to 20

million tonnes, as opposed to 10 million tonnes. If authorities were to go a step further and remove mining bans in Karnataka and Goa, the global supply glut could be damaging. By comparison, BREE's latest outlook expects government bans on Indian mining to reduce exports further over the next two years, with India becoming a net importer in 2014.

Chinese Iron Ore Prices*



The average price for iron ore (62%) is estimated to have been around US\$123.6 per tonne FOB for August, up from US\$113 in July, and a low of US\$102 per tonne in June. We have revised our near term expectations higher to reflect the stronger than anticipated outcomes in the past month, as well as the additional support the market should receive from more accommodative government policies in China. While there is scope for prices to continue surprising on the upside, we still expect to see spot prices ease over coming months as supplies of ore pick up. New supply should start to outstrip demand growth over the medium term which will eventually see contract prices for iron ore average closer to US\$100, although we have pushed out our anticipated timing for this until late 2014.

Base Metals

The flow of more positive news on the global economy has seen [base metals](#) prices rally from recent lows. In aggregate, base metals prices on the London Metal Exchange (LME) rose by 4.1% in August, following a 2% decline in July, to be around 2% 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.

Base Metals Prices*

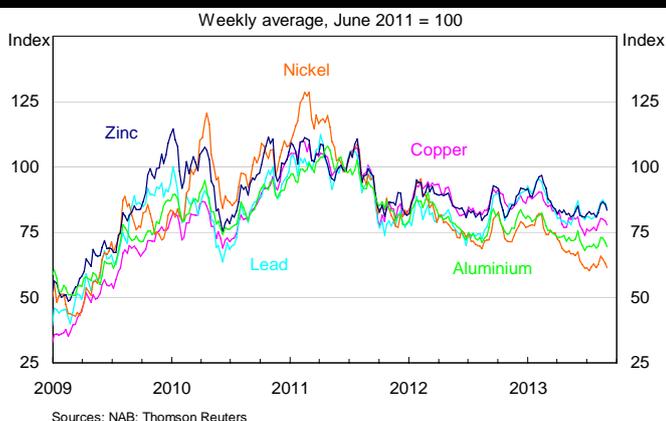
	Avg Price (US\$/tonne) Aug-13	Monthly % change Aug-13	Aug-12 - Aug-13 % change
Aluminium	1818	2.7	-2
Copper	7193	4.1	-4
Lead	2174	6.2	14
Nickel	14315	4.1	-9
Zinc	1899	3.3	4
Base Metals Index		4.1	-2

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

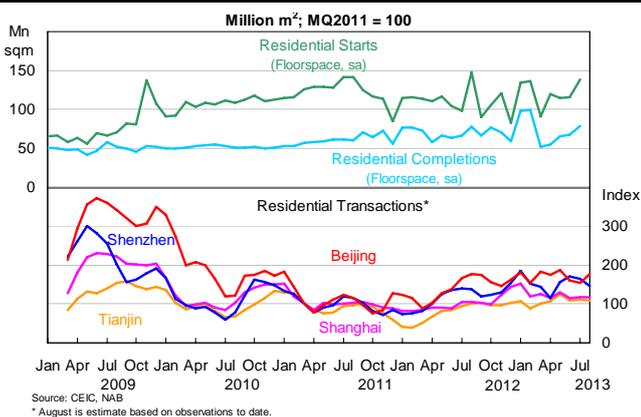
Prices rose for all of the base metals in August, although the magnitude of the increases has varied slightly across the complex. Average **lead** prices were around 6% above their July averages, while **copper** and **nickel** prices were up by 4%. **Aluminium** and **zinc** prices recorded more modest gains 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 2% lower than in August 2012.

Base Metals Prices



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. 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.

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.

Gold

Since peaking in late 2011, there has been a clear shift in expectations about the future path of the [gold price](#). Prior to the most recent price slump, there was significant speculation that the

price would push through \$2,000 per ounce. Almost two years later, many are now forecasting gold to crash below \$1,000 per ounce within the next year or two. Compounding the current weakness in the gold price is the relative strength of other asset classes that have benefited significantly from extremely loose monetary policy, including equities, real estate investment trusts, listed infrastructure and riskier forms of debt. While very accommodative monetary policy conditions have helped to support the perceived values of these alternative investments, just like gold, they too remain vulnerable to future changes in policy settings. Over more recent days, the flare up of political tensions in the Middle East and speculation of an American-led attack on Syria have boosted demand for gold due to its safe-haven appeal. This scenario presents an additional risk to the future gold price.

Indian Gold Price & the Rupee



A slower growth outlook and a return of stability in the major advanced economies have seen investors shy away from currencies of the emerging market economies. India is the second largest consumer of gold, so the recent sharp depreciation of the Indian rupee is of particular importance for gold. Just last week, the value of the rupee crashed to a record low of over 64 per US dollar. For gold, a devalued rupee makes the purchase of the shiny metal relatively more expensive for Indian buyers, dampening Indian gold demand. But despite the declining value of the rupee, gold imports appear to have held up well, rising solidly in July. In a move to reduce Indian gold demand and to curb dollar spending, the Indian government has lifted the import duty on gold for a third time this year (from 8% to 10% on 13 August). It also wants to limit gold imports to no more than 850 tonnes per year by banning imports of coins and medallions, making purchasers pay in cash and enforcing a requirement that 20% of imports are used for exports. However, Indian gold purchasing has remained reasonably solid to date. In the longer term, higher duties could see Indian gold demand retreat, helping to reverse some of the recent depreciation of the rupee. However, wealth creation and rising incomes should help to underpin robust consumer demand.

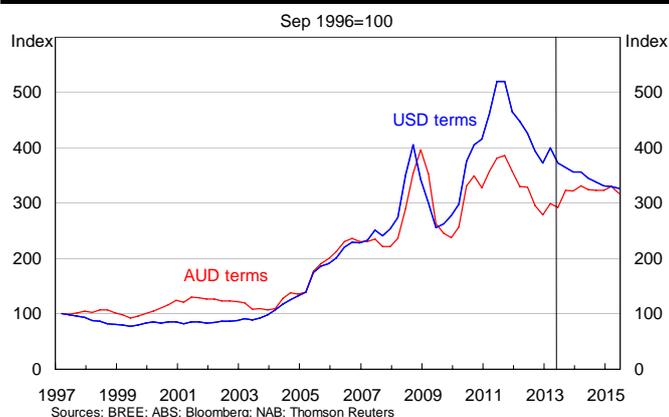
Taking all of the risks into account, as well as the outlook for rising global supply, it remains our expectation that prices will gradually soften over the forecast horizon. While external influences are likely to keep demand for gold varied over the remainder of 2013, we generally expect the price 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 transition towards growth in the big advanced economies is gaining traction, which should be supportive for most commodity

prices. However, it is still early days for the recovery and it is anticipated that the implications of easier monetary policy will cause headwinds to commodity prices. Furthermore, the recent conflict in Syria is likely to keep prices of some commodities reasonably volatile. Nonetheless, there are signs that China's exports, manufacturing and construction sectors are improving (or may at least stop slowing). This should be supportive for commodity markets, as it is expected to boost demand and limit the overhang of supply that has formed in some markets. However, there are rising concerns about the outlook for growth in the big emerging economies, which were the main drivers of global growth in the post-GFC period. These economies are now entering a period of slower (less credit driven) growth, and are expected to remain vulnerable to the withdrawal of foreign capital as major economies begin to loosen monetary policy. Overall, we expect the global economy to improve in H2 2013, with the recovery to continue into 2014. Any price gains as a result of the resulting increase in global commodities demand should be largely offset by higher levels of production.

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 4% in 2013, before easing by a further 7% 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 15½% through the year to December 2013, before remaining broadly flat 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*

September 2013: Bulks, Overview – 7/10/2013
 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	Forecasts							
	Jun-13	Sep 13	Dec 13	Mar 14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15
Brent US\$/bbl	103	108	105	104	103	100	100	100	100
WTI US\$/bbl	94	104	100	98	97	95	95	95	95
Tapis US\$/bbl	108	113	110	110	109	105	105	105	105
Petrol AUc/L	132	139	141	142	143	143	142	138	143

Sources: NAB Economics; RACQ; Thomson Datastream

Natural Gas Price Forecasts – Quarterly Average

US\$/mmbtu	Actual	Forecasts							
	Jun-13	Sep 13	Dec 13	Mar 14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15
Henry Hub	4.01	3.60	3.90	3.70	3.90	3.60	3.80	3.60	3.90
Japan LNG	16.29	16.50	16.00	15.50	15.50	15.30	15.00	14.50	14.35
Brent Oil	103	107	105	104	103	100	100	100	100

Source: Datastream, CEIC, NAB Economics

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

	Actual	Forecasts							
	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15
Iron Ore*	123	126	121	118	108	105	100	100	95
Hard Coking Coal	172	145	145	155	160	160	160	160	160
Semi-soft Coking Coal	121	100	95	105	105	105	105	105	105
Thermal Coal	95	95	95	95	95	95	95	95	100

Source: NAB

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

Base Metals Price Forecasts – Quarterly Average

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 Inde	273	270	270	270	270	280	280	280	280

Sources: Thomson Reuters; NAB Economics

Gold Price Forecasts – Quarterly Average

	Actual	Forecasts							
	Jun 13	Sep 13	Dec 13	Mar 14	Jun 14	Sep 14	Dec 14	Mar 15	Jun 15
Gold - US\$	1417	1310	1290	1240	1190	1150	1100	1060	1060
Gold - AU\$	1427	1460	1480	1460	1430	1400	1370	1350	1340

Sources: Thomson Datastream; NAB

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