# Minerals and Energy Update – October 2013

National Australia Bank

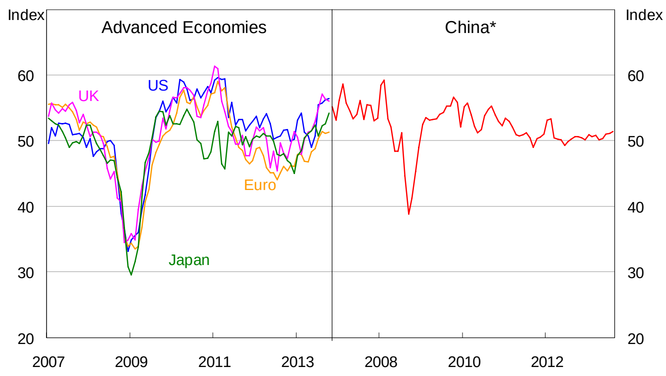
- **In October, indicators of global economic activity were mixed, casting some doubt over signs of recovery in the advanced economies that emerged in previous months. The upturn is still under way, but the pace of industrial growth and business sentiment in some big advanced economies has stopped improving. Activity in emerging economies has also varied.**
- **Volatility has remained a feature of financial and commodity markets given political uncertainties and hesitation over the timing of US Fed tapering.**
- **Oil prices were lower on balance in the month from the dissipation of geopolitical risks in the Middle East and data on rapid crude stocks accumulation in the US. However, WTI was disproportionately weighed down by the political uncertainty in the US while Brent was supported somewhat by renewed unrest in Libya. As such, the differential between Brent and TWI is wider than at anytime since March this year.**
- **Steel input markets have been held up by improved activity in China, but we are entering a seasonally soft period for construction which should keep prices relatively range bound for the rest of the year. Thermal coal prices have now lifted slightly from their recent floors.**
- **Base metals prices rose modestly in October, helped by stronger than expected growth in China in the September quarter as well as reduced fears of a potential US economic meltdown.**
- **With the market currently anticipating no change to the Fed's asset buying program until early 2014, investors seem reasonably comfortable holding gold in their investment portfolios, providing some support to prices in the second half of October. Nonetheless, the average price was around 2½% lower in October.**
- **Overall, our forecasts for commodity prices have been left largely unchanged. Our near-term forecasts for some metals were raised slightly, while we have also widened our forecast for the WTI-Brent spread. 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

Indicators of global economic activity were mixed in October, casting some doubt over signs of recovery in the advanced economies. Although an upturn is still under way, the pace of industrial growth and business sentiment in some big advanced economies has stopped improving. Trends in the emerging market economies have been mixed with Chinese growth showing signs of stabilising, largely due to government efforts to stimulate growth via infrastructure investment. In contrast, India – Asia's third largest economy – has remained weak while there are only signs of a very modest improvement across the rest of emerging Asia and Latin America.

It is too early to become overly concerned about the dips in advanced economy industrial growth or in the European business surveys – it is still just one month's data, not a trend. In terms of the demand conditions facing commodity markets, timely PMI indicators of global manufacturing have remained robust. PMIs for the US, UK Euro, Japan and China all point to ongoing expansions.

Global manufacturing PMI's

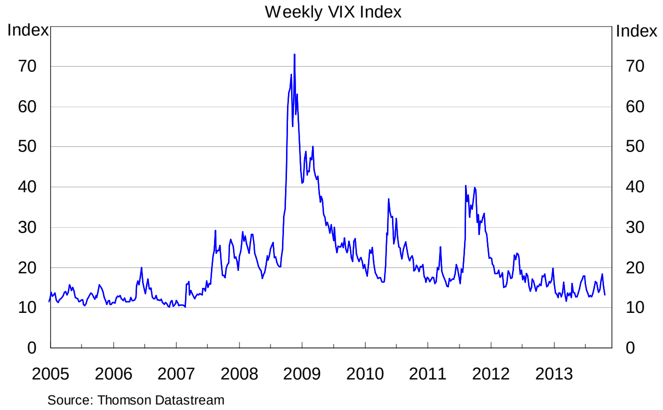



* Official PMI published by China's NBS.
Sources: Markit Economics; NAB; NBS

Aside from industrial activity, political uncertainties have been having a significant impact on financial markets, with flow on effects to some commodities. This was highlighted by the partial US government shutdown, although the unresolved issue of the Federal government's debt limit is likely to have a longer lasting impact. Failure to resolve the problem will have extremely serious consequences. The partial shutdown of the Federal US government began on 1 October with the failure of Congress to agree on a bill to fund the government. In mid-October, a US Budget deal was reached, extending US borrowing authority through 7 February 2014 and restoring federal funding through to 15 January. While this is a positive step in the immediate term, it still threatens further problems early next year.

The shutdown is anticipated to have only a relatively small impact on GDP growth, with direct effect of a four week closure estimated to cut quarterly growth by around 0.1 percentage points. However, the bigger concern is how the requirement to increase the Federal government's debt limit would affect consumer and business confidence, which could damage other parts of the economy, as occurred around the 2011 debt limit debate. The general uncertainty has seen a rise in market volatility, although the VIX index is not raising any red flags.

### Index of Market Volatility




Another source of uncertainty has been the eventual timing of the withdrawal of US Fed stimulus. Rising expectations that the US Fed will postpone tapering its $85 billion monthly debt buying program and maintain current easy monetary conditions provided support to some commodity prices in October. Recent poor US jobs data provided evidence that the economy is not yet on a sustainable growth path, boosting confidence that tapering will be delayed until early next year. This positive response in commodity markets highlights the distortions that have prevailed in the wake of quantitative stimulus measures in advanced economies.

Weighing up improving economic growth in China and solid global PMI indicators against political uncertainty and some disappointing economic indicators, there has been no clear direction given to commodity markets. Prices of bulk commodities have been relatively mixed, but range bound, as rising supplies are offset by robust steel production and rising energy demand ahead of winter. Base metals prices were buoyed by stronger than expected Chinese activity in the September quarter as well as reduced fears of a potential US economic meltdown. With the market currently anticipating no change to the Fed's asset buying program until early 2014, investors seem reasonably comfortable holding gold in their investment portfolios, providing support to prices in the second half of October. Supply side factors weighed on oil prices, while higher speculative demand ahead of winter has seen gas prices turn a corner.

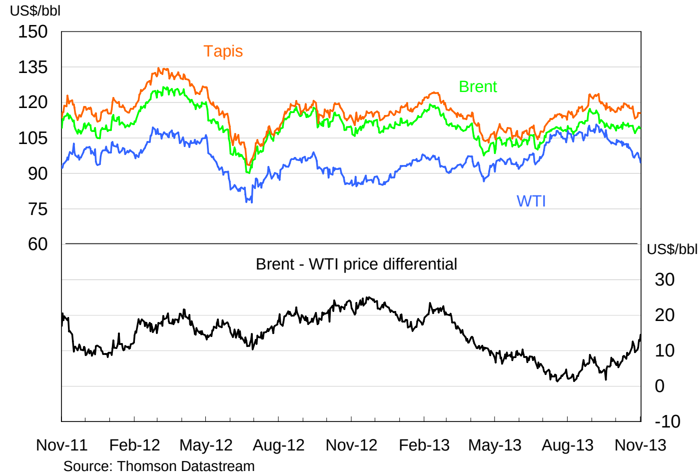
## Summary of Price Developments

### Oil

In October, oil prices were largely dominated by supply-side factors and fell from their highs in September, as the geopolitical risks premium associated with the Syrian crisis and unrest in other parts of the Middle East dissipated, while the surge in unconventional production in the US served as a drag on prices.

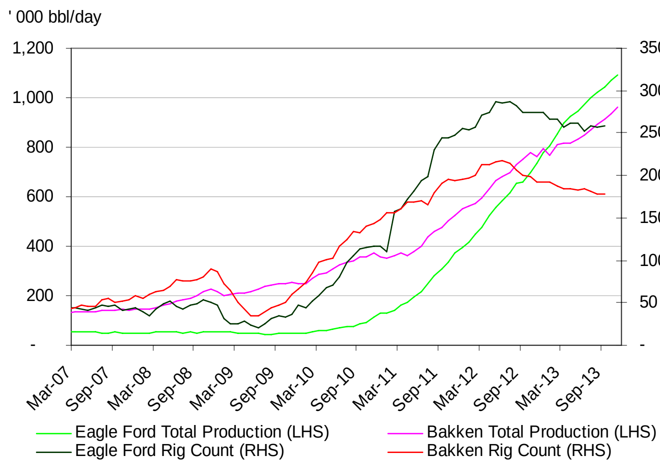
In monthly average terms, Brent and Tapis fell by 2% while the West Texas Intermediate (WTI) recorded a more significant decline of 5%. In mid-October, WTI has fallen below the USD $100 mark for the first time in more than three months, on speculation that the energy statistical arm of the government, Energy Information Administration (EIA), will report US stock levels rising to a close to a four-month high. Indeed, the inventory figures subsequently issued by the EIA confirmed that oil stocks have risen to their highest level since late June, from lower refinery runs at the US Gulf Coast due to weaker seasonal demand, combined with a pick-up in crude production in shale rock formations of Bakken in Dakota and Eagle Ford in Texas.

### Daily Oil Prices




In its inaugural Drilling Productivity Report, the EIA showed that the Bakken and Eagle Ford shale formations have increased US crude production by almost 550,000 barrels a day over the past year to September, despite their combined rig count in the same period having fallen by 8%. The data highlights the staggering extent of productivity gains that have been achieved by new wells with the aid of more advanced drilling technologies, i.e. fracking. This in turn fed into higher crude stocks at Cushing, the delivery point for benchmark WTI crude futures, which recorded its largest weekly gain this year during the week ending 25 October of 2.2m to 35.52m barrels. Stocks at Cushing fell sharply in the third quarter to levels seen in early 2012, as historically high refinery capacity utilisation rates at the US Gulf Coast (exceeding 90%) and greater takeaway capacity via pipelines, railways and trucks helped to alleviate the supply bottleneck at the delivery hub. However, stock levels started rising again in October.

### Eagle Ford and Bakken Production and Rig Count




Apart from supply-side dynamics, WTI was also disproportionately impacted in the month by the partial US government shut-down for the first half of the month as well as ongoing political wrangling around the debt ceiling between the Republicans and the Democrats.

While Brent also moderated from highs in August and September, its decline was contained by renewed unrests in Libya which restricted exports, as well as weaker supplies from Nigeria and Iran. This is in spite of a partial recovery in southern Iraqi exports and a third month of Saudi Arabian output at around 10 mb/d. According to a survey by Reuters, Libya contributed the most to the fall in OPEC production in the month, where labour protests at oilfields and terminals nipped in the bud of the tentative recovery in the country's production from the severe disruptions in August and early September. Towards the end of October, Libya was only producing around 300,000 bbl/d, well short of its 1.4 mb/day capacity. As a result, OPEC's October output is the lowest since October 2011, leaving supply below the organisation's nominal target of 30 mb/d for the first time since it came into effect in January 2012. The divergent factors facing Brent and WTI led to the widening of the differential between the two indices over the month, to record a more than US$14 gap on the first trading day in November, the largest since March this year.

Despite the short-term price volatility, 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 derives 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 global consumption will average around 90.26mb/day in 2013 and increase to 91.43mb/day in 2014, with most of the contribution to growth stemming from non-OECD countries. Meanwhile, global supply is expected to average slightly below demand at 90.07 and 91.30 mb/d for 2013 and 2014 respectively. Global supply figures have been revised lower this month in line with a higher level of supply disruptions in the Middle East, and an overall decrease in Saudi Arabia's production in response to the increase in non-OPEC supply. That said, OECD commercial oil inventories are expected to remain substantial, to average around 56 days of supply for both 2013 and 2014.

We have adjusted our near-term forecasts to account for the widening of the Brent-TWI differential, lifting from the initial US$6 to US$9 for the December quarter. We now expect Brent and WTI to average around US$108 and $98 per barrel respectively by the end of this year.

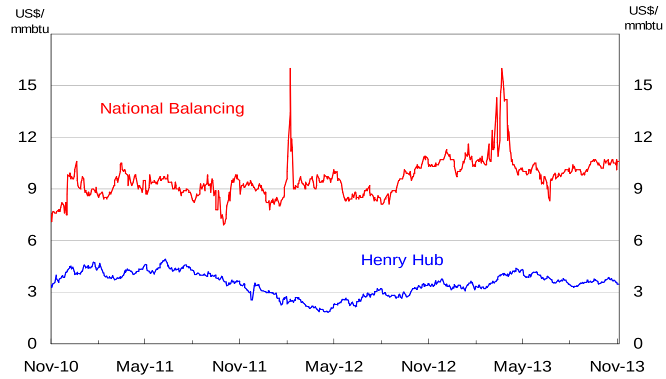
## Natural Gas

After falling over April and August from seasonally low demand, the US natural gas spot prices turned the corner and rose gradually over September and October in anticipation of winter heating demand. Nevertheless, there was a significant amount of volatility in the US Henry Hub index in the lead-up to the partial US government shutdown, falling to its lowest point in two months of around $3.50 just before the commencement of the shutdown, but quickly resumed its upward trajectory after that. In mid-October, natural gas futures climbed to their highest level in almost four months in New York on forecasts for below-normal temperatures for the second half of October. Overall, the monthly average of the index grew by 5% and 2% in September and October respectively. In the first couple of trading days of November, the HH Index appeared to have lost some steam on the forecast of mild weather for the first two weeks of November, currently trading below $3.50 per mmBtu.

Meanwhile, supply-side factors remain comfortable, with the building of gas inventories maintaining strong momentum throughout summer and autumn months for underground gas storage levels to maintain slightly above 5-year average levels since early August.

Looking ahead, we anticipate the recent strength in natural gas prices to consolidate going into the US winter. At the moment, winter is forecast to be colder than average for much of the continental US, which is likely to support heating demand, although not to the same extent as the past winter when prolonged chilly conditions were experienced. 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 closely tracking their five-year averages.

Henry Hub and National Balancing Point Prices

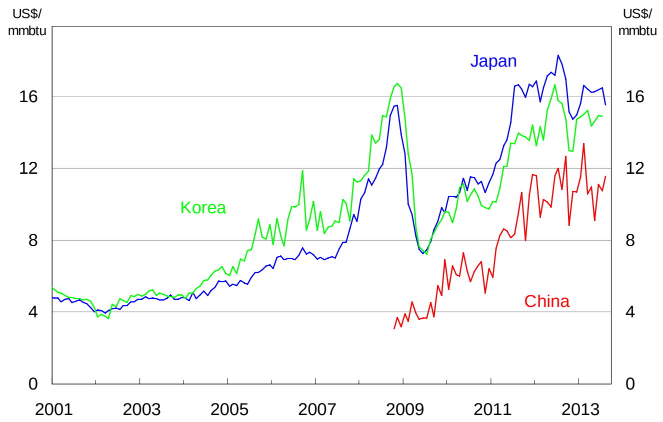



Sources: NAB; Thomson Reuters

In the UK, natural gas prices have tracked consistently higher in the past two months as well, with the National Balancing Point (NBP) price rising in monthly average terms by 4% and 0.5% in September and October respectively. Being a spot price index, the NBP is not linked to long-term oil contracts like those in continental Europe which obtain most of its supplies from Russia. Oil price movements nevertheless still play a part in affecting the NBP via arbitrage opportunities via the Interconnector pipeline linking the UK and continental Europe hubs. Therefore, some of the strength in the NPB can be explained by the strong uptick in the Brent oil index in the third quarter from the escalation of geopolitical risks in the Middle East, more positive economic data from the US and China, as well as the decision by the US Federal Open Market Committee not to initiate the tapering of its asset purchases which maintains loose monetary settings. More recently, unplanned disruptions in supplies from Norway, the largest source of UK gas imports, due to an outage at Troll field which produces around 35% of Norwegian gas, have also helped to prop up prices.

In Asia, LNG prices continued to benefit from the Fukushima crisis in 2011 to trade at near-record levels, rising to a seven-month high towards US $17 per mmBtu in the third week of October according to anecdotal evidence, as Japan, Korea and China vied for November cargoes to bolster their supplies for what is expected to be a chilly winter. In September, the shutdown of the last of Japan's 50 atomic nuclear reactors indefinitely for maintenance and inspection lent a symbolic suggestion that perhaps a return to some form of nuclear energy production by the country will not occur as quickly as most Japanese politicians had hoped, as they continue to face overwhelming objections from the public, as well as new regulatory standards posed by the independent Nuclear Regulation Authority (NRA) on any potential restarts of nuclear plants.

Asian LNG Prices



Sources: Thomsons Datastream; CEIC; NAB Economics

Also fuelling upward price pressure on LNG in the month had been the announcement by the Argentinean authorities that they were seeking tenders for 48 LNG cargoes, most to be delivered in 2014 and the rest in 2015. The tender was eventually won by BP Limited which will supply 40 of the 48 cargoes, while the remaining will be supplied by Russian state-owned natural gas giant Gazprom and Norway's Statoil.

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 former likely to receive support from forecasts of a colder winter in general despite some spurts of mild weather, while the latter is also likely to experience some seasonal upward pressure, but with the additional risks of supply shortages due to the unpredictable disruptions of gas flow from the North Sea. In Asia, the 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. The nuclear dilemma faced by the Japanese and Korean governments is unlikely to be resolved anytime soon, with strong public opposition likely to defer any plans to tilt the countries' energy policies towards nuclear generation.

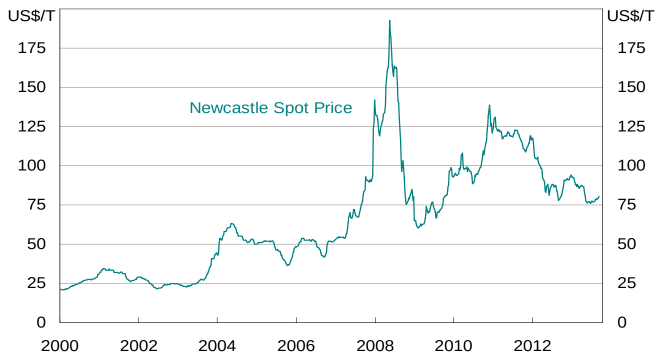
In the longer term, the likely emergence of the US as an unrestricted global exporter suggests that the currently fragmented global natural gas market is likely to consolidate and prices paid by different regions will begin to converge, although the momentum will only start to build up substantially in 2015 when Sabine Pass, the first export terminal approved in the US starts its operation.

Overall, we have decided to leave our forecasts unchanged from last month as we consider the forecast profile to be adequate in capturing all the aforementioned risks for the time being.

## Coal

Bulk commodity prices have managed to hold up relatively well over the past month, buoyed by further signs of improvement in the Chinese economy, and to a lesser extent, the US Fed decision to postpone tapering of quantitative easing. Robust prices for steel inputs have been a little surprising given the soft performance in steel markets, but conditions in energy markets are looking a little better due to stabilising demand in Asia ahead of winter and gradual cuts to marginal coal production.

Coal Prices

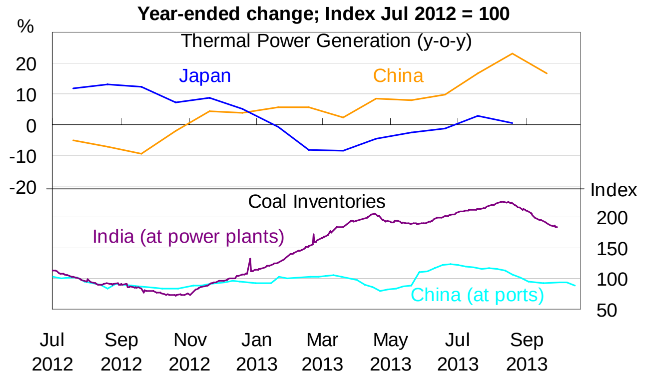


Source: McCloskey's, ABARE, NAB

Spot prices for coal shipped from Newcastle broke back up through US$80 per tonne in late October for the first time in around four months. Contract prices have also remained at a premium with reports that TEPCO and Xstrata settled an annual contract at US$85.9 per tonne, commencing in October. The majority of Australian thermal coal exports are still sold via annual contracts and previous years suggest an average premium of around US$7.5 per tonne to spot. Nevertheless, this contract prices is almost 10% below that set for the Japanese fiscal year (settled at US$95 per tonne (FoB)). Looking through the daily volatility, the average spot price of thermal coal (Newcastle, FOB) rose by 2.3% in October, the largest monthly increase since December 2012.

Higher cost production is starting to be wound back in response to falling prices, but production reports from major producers highlights ongoing strength in overall production. BHP Billiton and Rio Tinto reported a combined increase in thermal coal output of around 6% in the September quarter. In the year-to-date, Rio's thermal coal output was up 20% on the same period last year, driven by increased production rates at Clermont and brownfield expansions in the Hunter Valley. BHP's thermal production rose 3% over the same period, achieving record production levels at NSW Energy Coal and Carrejon Coal (Columbia). Nevertheless, lower coal prices appear to be having an impact on the amount of US coal entering the market. According to the US Energy Information Administration, US exports in H1 2013 were down by 5 million short tons on the same period last year and are expected to decline by a further 7 million short ton in the second half.

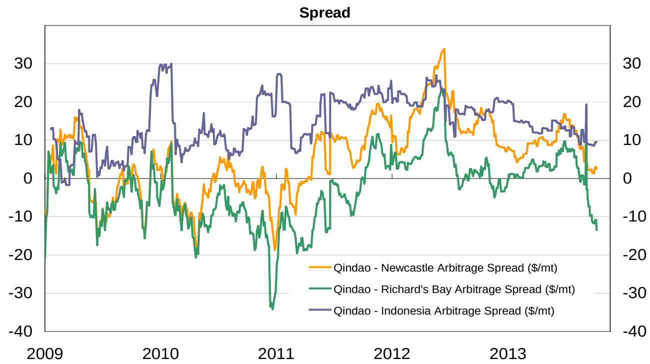
## Thermal Coal Demand and inventories



Sources: CEIC; Bloomberg; NAB

On the demand side, growth in thermal power generation has improved in some of the major markets, helping to reduce coal stockpiles from their recent peaks. Inventories in India have been trending down, but remain elevated. Chinese stocks have also eased, but are still slightly higher than is usually seen at this stage of the restocking cycle. The arbitrage window for China has remained favourable for coal imports for an extended period of time, but recent price movements indicate that the window may now be closing – assisted by infrastructure improvements within China's coal industry and competitive pricing (often at a loss) to maintain market share.

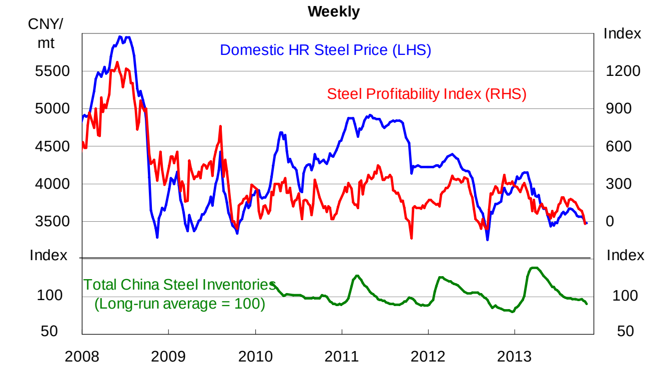
## Thermal Coal Arbitrage Window - China



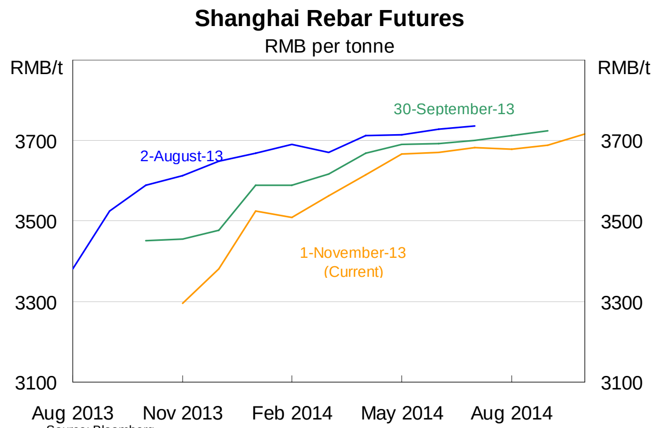
* Qindao price adjusted for 17% VAT; Newcastle & Richard's Bay prices adjusted for freight
Sources: McCloskey; Bloomberg Industries

Global steel production has continued to gain momentum with growth picking up to 6.1% y-o-y in September, from 5.5% in August, raising global steel capacity by almost 3½ percentage points in the month to 79.3%. Chinese steel production fell slightly in September, but is still up around 11% on last year. Steel prices in China recorded a temporary rally during the September quarter as hopes of an investment led recovery in the economy bolstered hopes for steel demand. While infrastructure investment in China has improved, excess capacity in the steel sector continues to be the defining factor that has seen steel prices subsequently fall nearly 4% from the August high (more than 20% below last years peak). New orders have also been softening in the lead up to winter, when construction activity normally slows. Consequently, operating conditions facing Chinese steel mills deteriorated noticeably over the past month as steel prices underperformed relative to the cost of raw materials. Futures prices for steel have also shifted lower since last month, although high inventory levels have kept the curve in contango.

## Chinese steel market conditions



Sources: Bloomberg; NAB



Source: Bloomberg

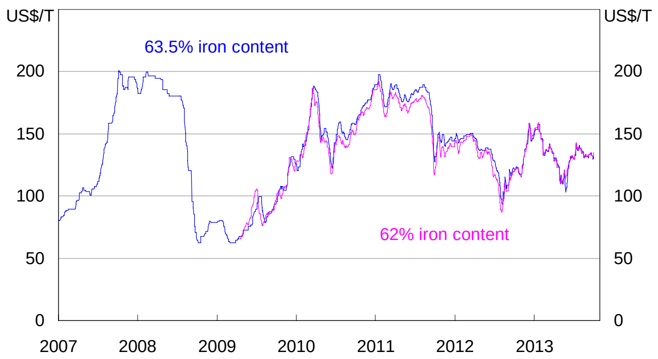
Given these conditions, the recent rally in coking coal prices appears to have stalled. Spot prices for premium HCC peaked at US$152.5 per tonne (FoB) in the second half of September, up from a low of US$129 per tonne in July. Prices have since ebbed back down to around US$145 per tonne by the end of October. This is more than 4% below the Q4 contract price of US$152 per tonne (FoB) reportedly negotiated between Nippon Steel and BHP, but is in line with the record low quarterly contract price seen in Q3 2013. Average spot prices for premium hard coking coal fell by 2.8% in October, following an 7½% rise in September. Although conditions have been improving, there still appear 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.

Robust Chinese steel production has translated into improved demand for coking coal in China, while demand for seaborne coal is further assisted by favourable incentives as currency depreciation and cost reductions in exporting countries add to competitiveness. China's coking coal import volumes in the year-to-date have increased almost 50% from the same time last year. However, metal output in Asia (ex China) suggests that demand elsewhere has not been growing as quickly. At the same time, Australian coking coal exports have remained solid, although September quarter production reports from major miners were mixed. BHP Billiton and Rio Tinto reported a combined decline in coking coal output of around 6% in the September quarter. In the year-to-date however, Rio's coking coal output (hard and semi-soft) was up 3.6% on the same period last year due to productivity improvements in the Hunter Valley operations. BHP's coking production rose 14% over the same period, underpinned by the continued ramp up of Daunia, record quarterly production at South Walker Creek and improved Coal Preparation Plant performance at Blackwater and Saraji.

### Iron Ore

Iron ore prices have remained relatively range bound over the past month, remaining above US$131 per tonne (CFR, Tianjin) despite a squeeze on profit margins received by Chinese steel mills and concerns towards the end of the month over (the lack of) liquidity in China's money markets. Spot prices are currently around US$135 per tonne (CFR, Tianjin), having peaked at US$143 per tonne in mid-August.

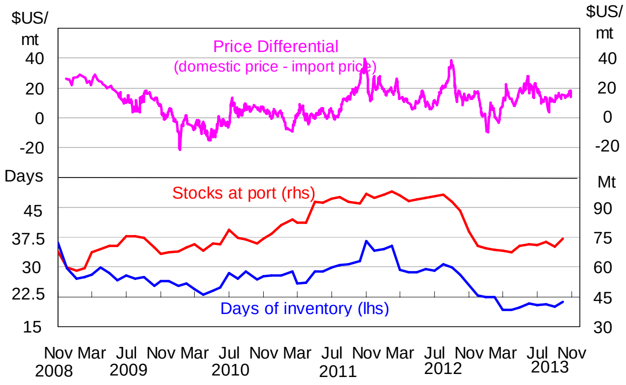
**Chinese Iron Ore Prices***




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

Iron ore demand in recent months has been supported by robust steel production in China, while favourable price differentials and increasing global supplies contributed to China's record high iron ore imports in September. Stocks of iron ore at port remain at low levels relative to recent years, but have been building on the back of solid imports and reports of more subdued buyer interest in recent weeks – possibly due to difficulties raising finance as the government looks to consolidate the industry.

**China's iron ore import market**




Sources: Bloomberg; NAB

Expected expansions in global iron ore capacity 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. According to quarterly production reports, Rio Tinto and BHP increased their iron ore output by 3 per cent in the September quarter. Rio Tinto achieved record production and shipments from their Western Australian operations in the quarter, following the opening of their Pilbara 290 port and rail expansion (ahead of schedule).

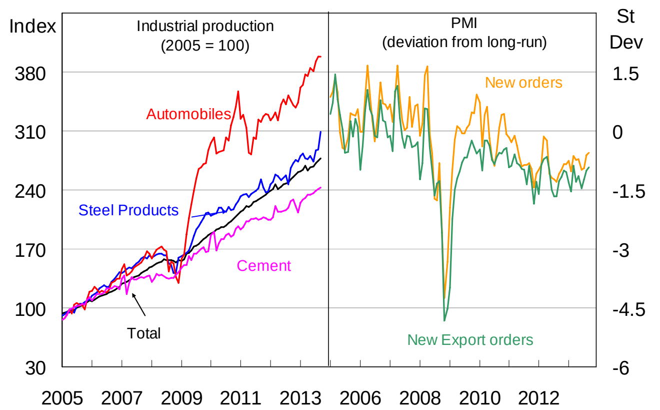
BHP's Western Australian Iron Ore operation also achieved record production levels in the quarter, driven by strong productivity and first production from the Jimblebar mine (also ahead of schedule).

Overall, the average price for iron ore (62%) is estimated to have been around US$120 per tonne FOB for September, easing to US$118 per tonne FOB in October, which is still well 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, 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

While supply and demand fundamentals remain varied across the base metals complex, relatively stronger demand for all of the industrial metals helped to support prices throughout October. The main drivers of higher prices included stronger than expected growth in China in the September quarter as well as reduced fears of a potential US economic meltdown. Chinese industrial production data for automobiles and steel products have been robust in recent months, supported by the Chinese government's mini-stimulus program which has fuelled stronger investment activity. The return of Chinese buyers to the market following the National Day holiday at the beginning of the month also saw a slight post-holiday bounce in demand. Meanwhile, the market's response to the September FOMC minutes when the decision of whether or not to taper was live was also positive for metals. The minutes indicated that the decision to maintain the full level of stimulus in September was a close call, but given the downward revision to growth and disappointing payroll data, it seemed that the Fed had become more willing to delay its decision to reduce the flow of asset purchases until either later this year or in early 2014. Metals gained from the expectations that tapering would be delayed, although price increases were somewhat constrained with investors on the sidelines while the US government shutdown remained in play.

**Chinese industrial production and demand**




In aggregate, base metals prices on the London Metal Exchange (LME) rose by 3.0% in October, following a 1.6% fall in September, to be around 10% lower over the year. While economic conditions have generally improved in recent months, end-user demand remains relatively soft, keeping prices below levels one year ago. While activity in the emerging markets has generally softened as the economies rebalance towards more consumption oriented growth and away from investment and export driven growth, investment activity in China has improved over recent months recently, assisted by the government's mini stimulus program.

### Base Metals Prices*

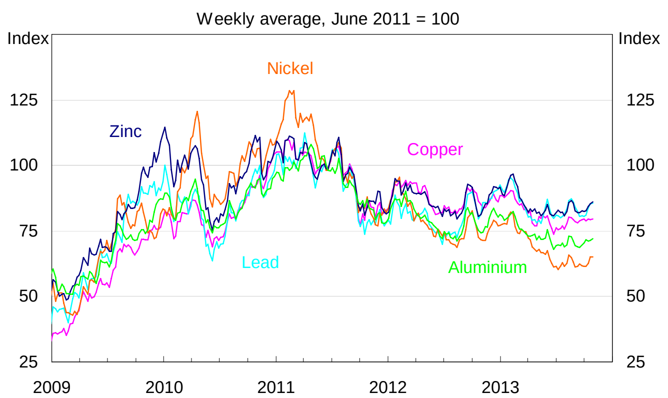
| | Avg Price (US$/tonne) Oct-13 | Monthly % change Oct-13 | Oct-12 - Oct-13 % change |
|---|---|---|---|
| **Aluminium** | 1815 | 3.0 | -8 |
| **Copper** | 7203 | 0.6 | -11 |
| **Lead** | 2115 | 1.5 | -1 |
| **Nickel** | 14118 | 2.3 | -18 |
| **Zinc** | 1885 | 2.1 | -1 |
| **Base Metals Index** | | 1.6 | -10 |

* Prices on an LME cash basis.

Sources: LME; NAB

Prices rose for all base metals in October, with the degree of price increases ranging from +0.6% for copper, to +3.0% for aluminium. The solid rise in aluminium prices appears to have reflected improved auto demand, especially from Japan where consumers are rushing to purchase vehicles before the government imposes higher sales tax in April next year. There are also signs of recovery in the US auto market. The nickel price recorded a more modest rise of 2.3% in the month but has been the worst performing base metal over the year, with stocks at LME warehouses at very high levels. Average prices for zinc and lead lifted by 2.1% and 1.5% respectively in October with supply side tightness providing support to prices. While at 0.6%, the growth in average copper prices was not as significant as the other base metals, prices regained some positive momentum in the second half of October in response to rising expectations that the US Fed will postpone tapering its $85 billion monthly debt buying program and maintain current easy monetary conditions until early next year. In annual terms, lead and zinc have been the best performers, falling by 1% over the year, with prices buoyed by still strong demand for lead-acid batteries as well as tight supply-side factors. Aluminium has recorded the next best outcome over the year, with prices down 8% over the year, while nickel and copper prices were down by 18% and 11% respectively compared to October 2012 prices.

### Base Metals Prices




Sources: NAB; Thomson Reuters

While the outlook for metals demand remains positive with advanced economy growth expected to gain more momentum through 2014, their near-term path for metals demand remains clouded in the current uncertain environment. With China entering winter, construction activity is expected to slow and this is likely to directly impact metals demand. Furthermore, it remains unclear how long the Chinese mini-stimulus program will contribute to investment growth, but a recent slowing in steel orders could be a sign that activity is already starting to soften. And finally, markets have tended to get excited about poor US economic data, which are helping to delay the tapering of stimulus. Whether this positive sentiment will persist on further signs of softening is yet to be seen.

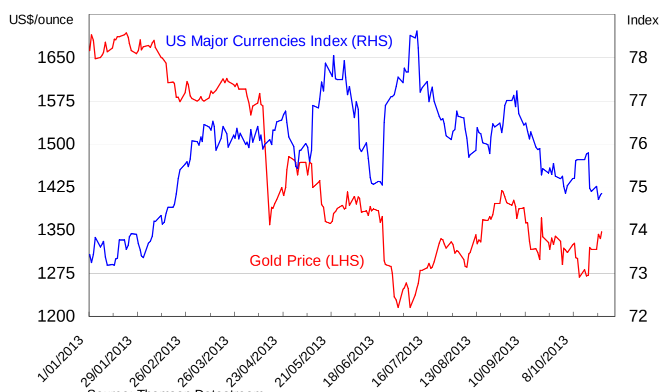
## Gold

The trend in gold demand has been highly influenced by events in the US, including the likely timing of Fed tapering and the outcome of the requirement to lift the debt ceiling. With the market currently anticipating no change to the Fed's asset buying program until early 2014, investors seem comfortable holding gold in their investment portfolios. Central banks also continue to purchase gold, but demand is dwindling on reduced fears of a bad event and the outlook for still soft inflation. However, demand from the world's largest gold consumer India is under threat as its government tries to rein in the economy's large current account deficit, with gold becoming the main casualty.

Over October, the price of gold fluctuated widely largely on the back of US uncertainty. The average price fell by around 2½% in October, and is currently trading at around US$1,315 per ounce. This followed no growth in September and a 5% rise in August. In year ended terms, the price of gold in October was around 25% below levels recorded in the same month of the previous year.

Gold's inverse relationship with the US dollar has continued through October, with the recent softening in the US dollar coinciding with a rise in the price of gold. The US currency has fallen back over recent weeks reflecting changed views about the outlook for the commencement of Fed tapering following softer data outcomes and the partial US government shutdown. This has made investors less certain about the outlook for the US economy. The shift in market sentiment has seen investors limit their demand for US denominated assets and flock towards more desirable safe haven assets, such as gold.

### Gold Price and the US Dollar (Daily)




Source: Thomson Datastream

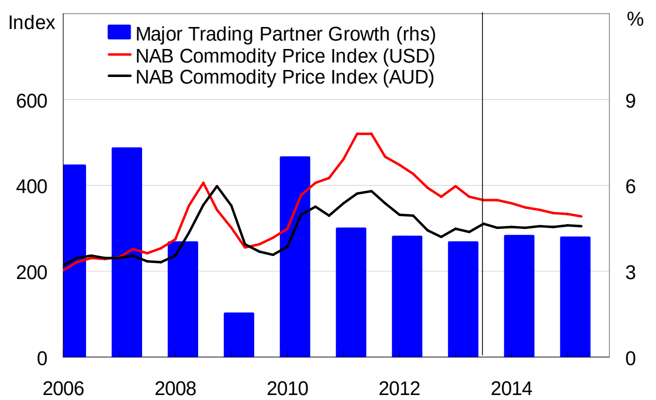
The very high price of gold denominated in Indian Rupees is likely to limit Indian demand for gold in the near term. While Indian demand is typically strong in the first week of November during the Diwali festival – the biggest gold buying period of the year – the high price of Indian gold is likely to keep demand relatively soft this year. This is likely to limit potential growth in prices during November, especially when compared to increases over previous years; the average price of gold over the past decade (in US dollars) has risen by 3.0% in the month of November, compared to average monthly growth over the same period of 1.2%. In China, things also remain uncertain, with authorities determined to keep a 7% floor under economic growth. While slowing economic activity could weaken underlying support for the shiny metal, Indian and Chinese buyers are likely to continue to purchase gold because, for these countries, this is the traditional way to preserve wealth.

### Outlook

Volatility is likely to remain a key theme in commodity and financial markets in the near term, with uncertainty over the timing of the withdrawal of central bank stimulus continuing to be an important driver of prices. Nevertheless, even though the recovery has faltered slightly, advanced economies are expected to see an improvement in growth over the next year or so, while growth in the emerging economies stabilises. However, any price gain pressures resulting from an increase in global commodities demand are expected to be limited by higher levels of production from pent-up supplies.

Looking through the near-term uncertainties, our expectation is that the long anticipated global economic rebalancing will gradually play out as growth in advanced economies improves and growth in emerging economies eases to more sustainable levels. The global economy is expected to record another year of sub-trend growth this year but the pace of expansion is expected to gradually accelerate from just under 3% this year to around 3½% in 2014. This upturn in growth reflects a lift in growth in the big advanced economies from around 1¼% this year to 2¼% next year while the growth performance of the emerging economies remains unchanged at around 5%. This is particularly the case in China where we see growth slowing from the double digit pace of growth from previous years, to a rate closer to 7% in 2015. But how does this improvement in global growth shape up against our expectation for softer prices for Australian commodity exports (in USD terms).

Commodity intensive economies steady, rather than accelerating




Firstly, the magnitude of improvement in economic growth is much less in Australia's major trading partners, which is more heavily concentrated in emerging Asia. Consequently, while global growth is forecast to improve by 0.6 percentage points in 2014, Australia's major trading partners are only expected to lift by 0.2 percentage points. Manufacturing and investment tend to account for a far greater share of GDP in these economies, making them far more commodity intensive. Secondly, the US economic recovery is expected to lead to appreciation of the USD, which will weigh on commodity demand – our forecast for NAB's AUD commodity price index is broadly flat over the forecast horizon. Finally, global supplies of Australia's major commodities are expected to rise significantly over coming years as capacity expansions are completed and operations commence, particularly for iron ore and LNG. 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.

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 8½% 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 modest increase of 1% over 2014. In aggregating the index, iron ore, thermal coal and metallurgical coal have a combined weight of around 55%.

james.glenn@nab.com.au
vyanne.lai@nab.com.au
alexandra.knight@nab.com.au
rob.brooker@nab.com.au

**Commodity update release dates***

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 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sep-13 | *Dec 13* | *Mar 14* | *Jun 14* | *Sep 14* | *Dec 14* | *Mar 15* | *Jun 15* | *Sep 15* |
| Brent US$/bbl | 110 | 107 | 104 | 103 | 103 | 100 | 100 | 100 | 100 |
| WTI US$/bbl | 106 | 98 | 98 | 97 | 95 | 95 | 95 | 95 | 95 |
| Tapis US$/bbl | 116 | 116 | 114 | 109 | 109 | 105 | 105 | 105 | 105 |
| Petrol AUc/L | 150 | 146 | 148 | 149 | 149 | 150 | 151 | 151 | 152 |

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 | 3.60 | 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 | 103 | 100 | 100 | 100 | 100 |

Source: Datastream, CEIC, NAB Economics

*Estimate only; full quarter data not yet available

### 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 | 120 | 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 | 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 | 7160 | 7120 | 7160 | 7190 | 7230 | 7230 | 7230 | 7230 |
| Lead | 2102 | 2120 | 2150 | 2170 | 2190 | 2200 | 2220 | 2230 | 2250 |
| Nickel | 13956 | 14160 | 14200 | 14240 | 14310 | 14380 | 14490 | 14630 | 14780 |
| Zinc | 1861 | 1890 | 1910 | 1920 | 1940 | 1960 | 1980 | 2000 | 2020 |
| Base Metals Inde | 267 | 270 | 270 | 270 | 270 | 280 | 280 | 280 | 280 |

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 | 1300 | 1250 | 1200 | 1150 | 1110 | 1060 | 1060 | 1060 |
| Gold - AU$ | 1450 | 1400 | 1370 | 1350 | 1330 | 1310 | 1280 | 1290 | 1300 |

Sources: Thomson Datastream; NAB

# Global Markets Research

Peter Jolly
Global Head of Research
+61 2 9237 1406

## Australia

### Economics

Rob Henderson
Chief Economist, Markets
+61 2 9237 1836

Spiros Papadopoulos
Senior Economist
+61 3 8641 0978

David de Garis
Senior Economist
+61 3 8641 3045

### FX Strategy

Ray Attrill
Global Co-Head of FX Strategy
+61 2 9237 1848

Emma Lawson
Senior Currency Strategist
+61 2 9237 8154

### Interest Rate Strategy

Skye Masters
Head of Interest Rate Strategy
+61 2 9295 1196

Rodrigo Catril
Interest Rate Strategist
+61 2 9293 7109

### Credit Research

Michael Bush
Head of Credit Research
+61 3 8641 0575

### Equities

Peter Cashmore
Senior Real Estate Equity Analyst
+61 2 9237 8156

## New Zealand

Stephen Toplis
Head of Research, NZ
+64 4 474 6905

Craig Ebert
Senior Economist
+64 4 474 6799

Doug Steel
Markets Economist
+64 4 474 6923

Mike Jones
Currency Strategist
+64 4 924 7652

Kymberly Martin
Strategist
+64 4 924 7654

## UK/Europe

Nick Parsons
Head of Research, UK/Europe,
and Global Co-Head of FX Strategy
+ 44 207 710 2993

Gavin Friend
Markets Strategist
+44 207 710 2155

Tom Vosa
Head of Market Economics
+44 207 710 1573

Simon Ballard
Senior Credit Strategist
+44 207 710 2917

Derek Allassani
Research Production Manager
+44 207 710 1532

# Group Economics

Alan Oster
Group Chief Economist
+61 3 8634 2927

Tom Taylor
Head of Economics, International
+61 3 8634 1883

Rob Brooker
Head of Australian Economics
+61 3 8634 1663

Alexandra Knight
Economist – Australia
+(61 3) 9208 8035

Vyanne Lai
Economist – Agribusiness
+(61 3) 8634 3470

Dean Pearson
Head of Industry Analysis
+(61 3) 8634 2331

Robert De Iure
Senior Economist – Industry Analysis
+(61 3) 8634 4611

Brien McDonald
Economist – Industry Analysis
+(61 3) 8634 3837

Gerard Burg
Economist – Industry Analysis
+(61 3) 8634 2778

John Sharma
Economist – Sovereign Risk
+(61 3) 8634 4514

James Glenn
Economist – Asia
+(61 3) 9208 8129

Tony Kelly
Economist – International
+(61 3) 9208 5049