MINERALS & ENERGY OUTLOOK

JULY 2016

National Australia Bank

Key Points:

- The more favourable USD has been a source of support for most commodity markets in the first half of 2016, but **heightened uncertainty has seen additional volatility across financial markets,** including commodity markets, more recently. Nevertheless, it is **the fragile balance of other supply-demand factors that are most material to the outlook** for commodity markets – especially given the context of a subdued global economic outlook (including for emerging markets) and ongoing production growth for key commodities.
- Uncertainty around the outlook for commodity prices has ramped up further in the wake of the recent Brexit decision. In contrast, emerging signs of strength in Chinese construction and heavy industries is encouraging, although the long-term sustainability of the rebound is debatable. On balance, market fundamentals suggest that the recent rally in NAB's commodity price index will prove short-lived, and a gradual decline will recommence going forward – albeit at a slower pace than in recent years. **The NAB USD non-rural commodity price index is expected to fall by around 13% in 2016, and a further 8% in 2017**, led by iron ore prices. **However, USD appreciation will help to partially offset price declines in AUD terms.** NAB forecasts the AUD to bottom at around 69 US cents by early 2017, but stabilise in the mid-70s by late 2018. **Overall, these trends suggest the Australian terms of trade will continue its gradual descent, following a brief rise in Q2 2016.**
- Despite the Brexit referendum outcome, **oil market volatility has been relatively contained** by comparison. Given the absence of an OPEC output cap and an expected recovery from supply disruptions, there are **significant upside risks to global oil supply in the short term** despite falling US production. This **suggests upward movements in prices are expected to be relatively constrained in the near term**. We expect oil prices to fluctuate between USD45 to 50 a barrel in Q3 2016, before reaching low the USD 50s/bbl by end-2016 and around USD 60/bbl by end-2017. **LNG prices are subdued and likely to remain that way** unless there is a substantial jump in the price of oil.
- **Iron ore and metallurgical coal prices have risen considerably in recent months** – as a credit-fuelled rebound in China's construction activity has underpinned stronger steel demand. We argue that **this rebound is unsustainable** (given excess property supply in many locations) and prices should fall on weaker demand – although uncertainty around the duration of this current trend adds upside risk to our forecasts. Iron ore prices are forecast to average USD42.5 a tonne in H2 2016 and USD40 a tonne in calendar year 2017. Hard coking coal contract prices will average USD89 a tonne in H2 2016 and USD84 a tonne in 2017. Thermal coal prices are expected to decline in the next Japanese financial year (from April 2017) to USD58 a tonne.
- **Base metal prices have been stable to higher since their January lows**. Stronger than expected demand from China has supported copper prices while aluminium faces favourable long-term demand from car making and power generation. For nickel, weak prices have delayed rather than cancelled new supply. Zinc had been the best performing base metal, with deficits expected for both 2016 and 2017. The lead market remains well supplied with more production cuts needed.
- On the back of the UK's "Brexit" vote, we believe that the US Fed is likely to take a more cautious stance in its current monetary tightening cycle. This suggests **further upside potential for gold prices in the near term,** but we expect gold prices **to resume a moderate downward trend in Q4 2016** in line with further US monetary tightening. We now expect gold above USD1300/oz for the rest of Q3, ending 2016 at USD1280/oz before moderating to USD1100/oz by end-2017.

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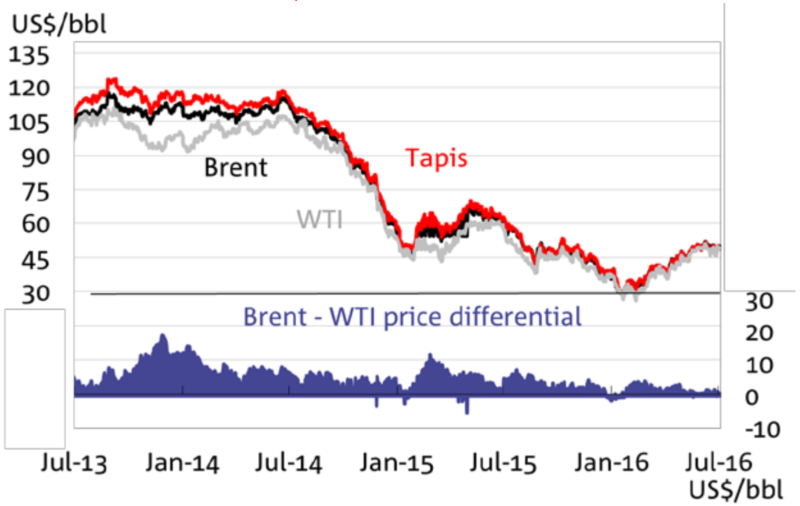
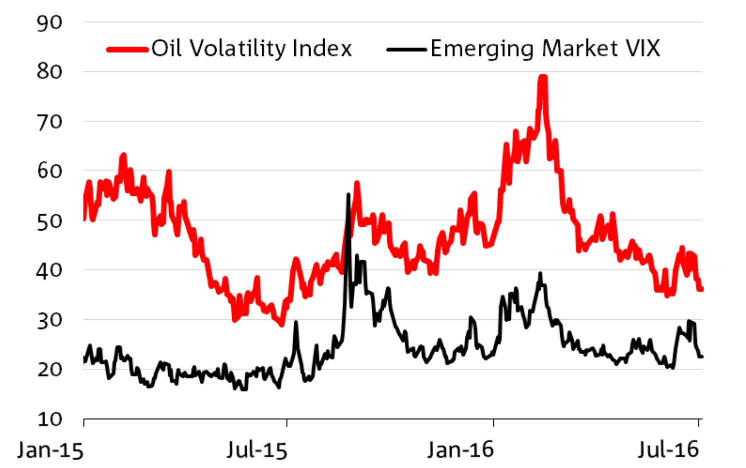
OIL

DAILY OIL PRICES (USD/BARREL)



Source: Thomson Datastream

OIL AND EMERGING MARKET VOLATILITY



Source: Bloomberg, NAB Group Economics

- Despite the Brexit referendum outcome which has resulted in a sharp pick-up in global financial market volatility, oil market volatility has been relatively contained by comparison. This is because the UK and EU more broadly play only a limited role in generating oil demand growth as a region, with the greatest growth potential for crude and refined products having long shifted to the developing countries in Asia-Pacific, especially China, and to some extent the Middle East and even the United States.
- The UK accounts for less than 2% of world's oil demand, and its demand for refined crude products is undergoing a structural decline. As a whole, Europe accounts for around 15% of the world's crude oil demand, but its relative share is also expected to decrease over time as the demand in other regions such as the US, China and India is expected to grow much more quickly.
- Since recording their lowest levels in more than 12 years in January, average oil prices are currently around 80% higher on average. Oil benchmarks have been hovering around the USD 50/bbl since mid-May, which is slightly below the average cost-breakeven level experienced by US shale producers. In June, the different oil benchmarks rose by similar percentages, with Brent, Tapis and West Texas Intermediate (WTI) growing by 4.5%, 3.5% and 4.1% respectively, to average around USD50, USD49 and USD49 a barrel. As the US supply-side eases, the Brent-WTI differential has narrowed substantially to average around USD1.1/bbl in June, compared to USD3.40/bbl in February.
- Most of the price rises to-date can be attributable to supply-side factors, such as the continuous slowing in US production, stabilisation in OPEC supply, as well as planned and unplanned supply outages, ranging from the wildfires in Canada that erased output of around 700k bbl/day in May, internal conflicts in Libya, to a wave of militant attacks in Nigeria which resulted in its production falling to the lowest level in more than a decade. However, some of these countries have since seen a partial recovery in their output.
- As a result of the above supply-side factors and a continuous pick-up in global oil demand, excess supply is easing and we expect the global market to return to balance by H1 2018. However, the repeated failures by OPEC members to reach an agreement to freeze output at around their current levels leave room for potential expansion in OPEC production should competition in EU and Asia-Pacific regions intensify. Furthermore, a recovery of Canadian, Libyan and Nigerian production from supply disruptions are also expected to add to upward supply-side pressure, which suggest upward movements in prices could be relatively constrained in the near term.
- We have revised our forecasts higher since our last oil publication in light of recent events. Oil prices are expected to fluctuate between USD45 to 50 a barrel in Q3 of 2016, before reaching low USD 50s/bbl by end-2016 and around USD 60/bbl by end-2017.

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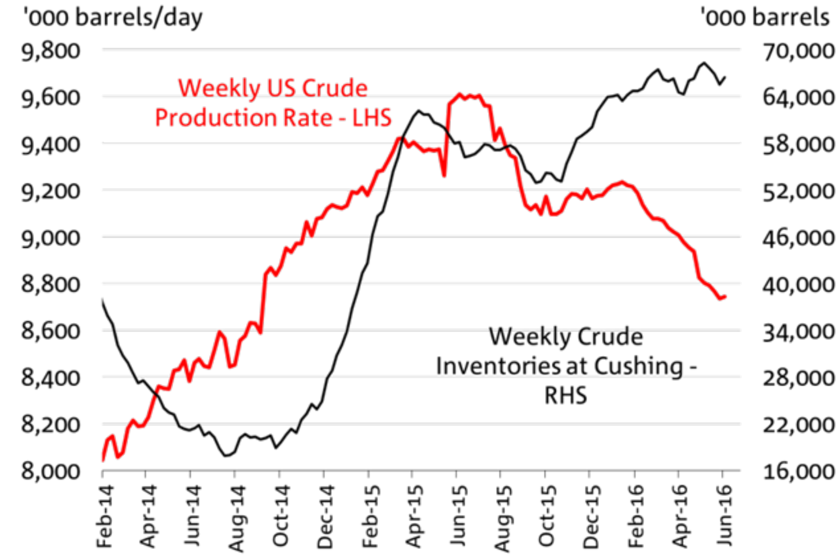
OIL cont.

US CRUDE PRODUCTION AND INVENTORIES AT CUSHING

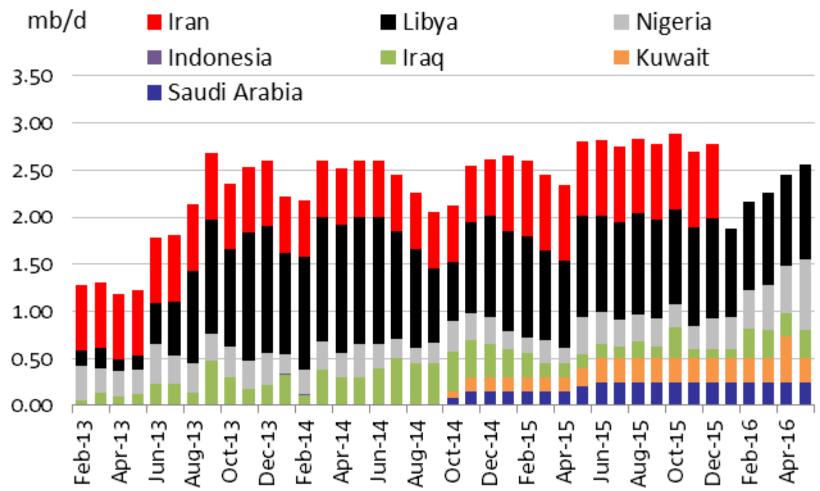


Source: EIA, NAB Group Economics

US

- The decline in US crude production has quickened in recent months. Combined with a pick-up in seasonal demand associated with the US driving season, this has seen the level of commercial inventories at Cushing delivery hub stabilise, albeit near a historically high level. We expect US crude inventories to ease from their current levels as US summer advances, offering disproportionate support to WTI relative to Brent.
- Based on the weekly production data, US crude production averaged around 8.7mb/day in June, from the peak of 9.6mb/day in June last year. A period of stable oil prices appears to have encouraged a pick-up in rig activity in the US, with the rig count growing in the first three weeks of June, the longest stretch of gains in 2016. This potentially signals a return of optimism among some oil firms in the outlook of oil prices, which could lead to a recovery in investment spending in the near term.
- Based on our oil price forecast of around USD 50 for the remaining of 2016, we expect US production to continue to moderate gradually. The EIA estimates US crude production to average 8.69mb/day in 2016, compared to 9.43mb/day in 2015.

ESTIMATED HISTORICAL UNPLANNED OPEC CRUDE OIL PRODUCTION OUTAGES



Source: EIA, NAB Group Economics

OPEC

- OPEC crude output has maintained its momentum since hitting a record high in January. Based on some initial data, OPEC's output for June appeared to have broken the record reached in January, driven by a partial recovery in Nigerian output after a series of militant attacks, and to a lesser extent, Libya, as well as an increase in the output of Saudi Arabia and United Arab Emirates.
- Against a backdrop of rising Iranian exports and the absence of an output quota for OPEC as an organisation, major OPEC producers are expected to continue to maintain oil output at historically elevated levels as competition in the European markets intensifies. This suggests limited positive impetus on Brent crude price in the near term from OPEC-specific factors, although an expected general reduction in global supply largely stemming from the US over the coming year will offer underlying support to all price indices.

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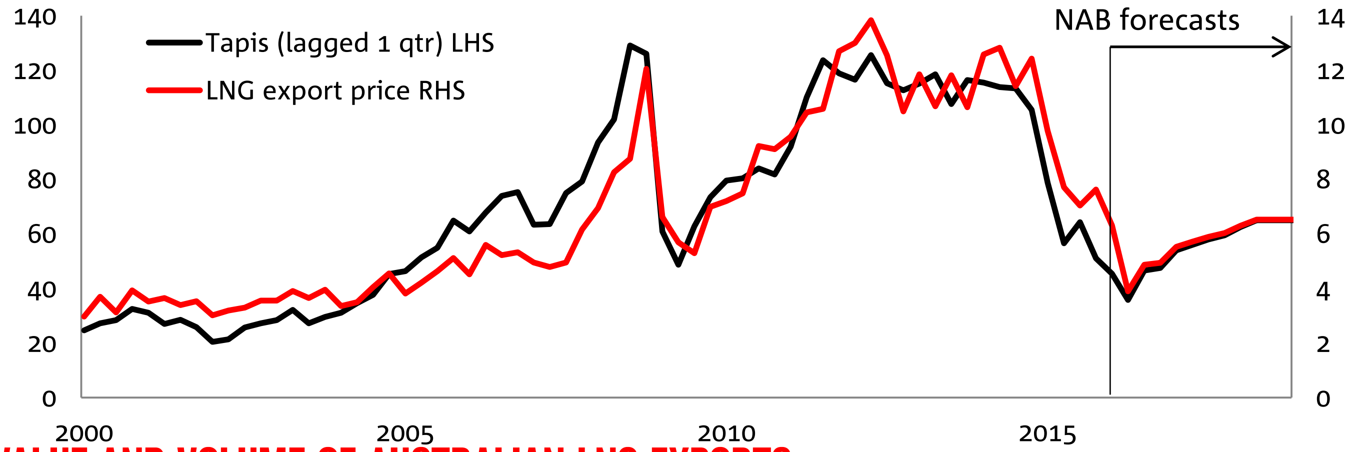
NATURAL GAS

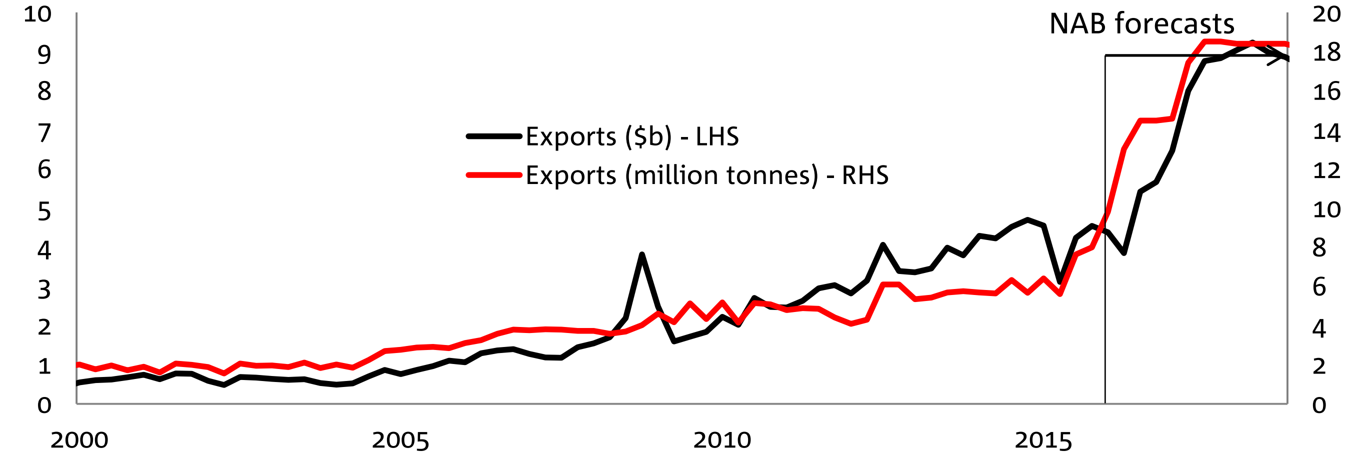
NAB LNG EXPORT PRICE INDICATOR AND LAGGED OIL PRICES

USD/bbl (LHS), USD/GJ (RHS)



VALUE AND VOLUME OF AUSTRALIAN LNG EXPORTS

AUD billion per quarter (LHS), million tonnes per quarter (RHS)



Source: Bloomberg, Poten & Partners, APPEA, Department of Industry, Australian Bureau of Statistics and NAB Group Economics

- Our LNG export price indicator is based on the total value of LNG exports and actual LNG cargoes. Prices have fallen significantly since mid-2014 on the back of lower oil prices, to which many LNG contracts are tied.
- We expect prices to remain low for the remainder of 2016, although 2017 should see prices begin to drift up in line with our forecast partial recovery in oil prices. We place the Australian LNG export prices at AUD7.06/GJ by the end of 2016.
- In export value terms, the lower prices will be offset by the increased supply. Australia is significantly ramping up LNG production capacity, with new terminals in Western Australia, Queensland and the Northern territory opening over the coming two years (shown on the following pages). This will give Australia the world's largest LNG nameplate production capacity. We see the value of Australian LNG exports at just under AUD19.3billion in 2016, a slight increase on 2015. However, the value of exports should begin to climb again by early 2017, totalling AUD32.1billion for the year.
- The exposure of eastern Australia to LNG export markets will have far reaching implications for domestic gas use. Wholesale prices are likely to increase significantly and some questions remain over long-term feed gas availability based on mixed well performance assessments.

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LNG TERMINALS: WESTERN AUSTRALIA AND NORTHERN TERRITORY

Wheatstone LNG
- Capacity: 8.9 mtpa
- Status: Completion in 2017
  Ownership: Chevron 64.14%, KUFPEC 13.4%, Woodside 13%, Wheatstone 8%, Kyushu 1.46%
- Cost: AUD32.2 billion
- Employment: 5,000 construction 400 ongoing

Ichthys LNG
- Capacity: 8.9 mtpa
- Status: Completion in 2017
- Ownership: INPEX 62.245%, Total 30%, others 7.755%
- Cost: AUD37.7 billion
- Employment: 4,000 construction 700 ongoing

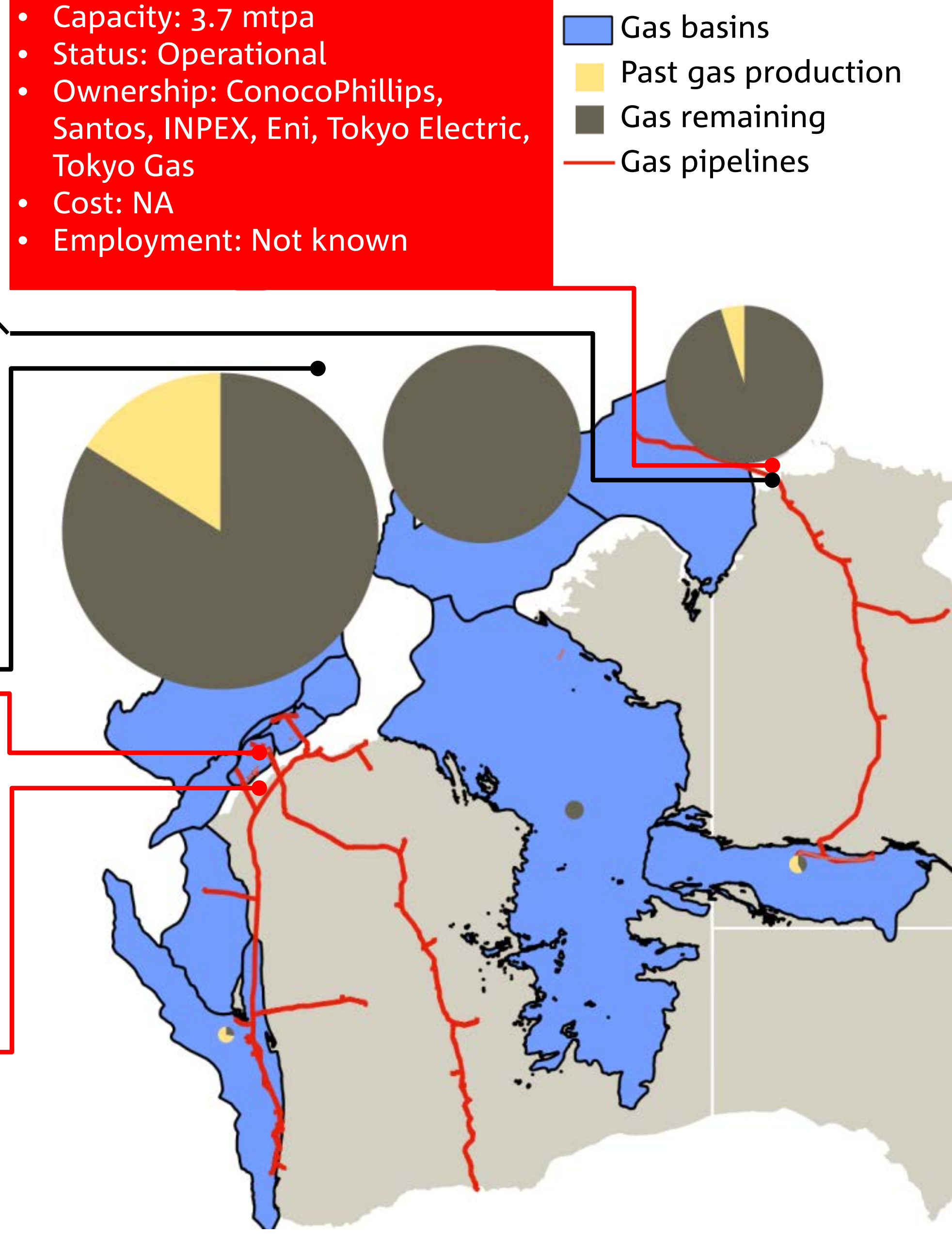
Darwin LNG
- Capacity: 3.7 mtpa
- Status: Operational
- Ownership: ConocoPhillips, Santos, INPEX, Eni, Tokyo Electric, Tokyo Gas
- Cost: NA
- Employment: Not known

Gorgon LNG
- Capacity: 16.6 mtpa
- Status: Operational since 2016
- Ownership: Chevron 47.3%, ExxonMobil 25%, Shell 25%, Osaka Gas 1.25%, Tokyo Gas 1%, Chubu 0.417%
- Cost: AUD60 billion
- Employment: 10,000, 300 ongoing

Prelude FLNG
- Capacity: 3.5 mtpa
- Status: Completion in 2017
- Ownership: Shell 67.5%, INPEX 17.5%, Kogas 10%, OPIC 5%
- Cost: AUD12.6 billion
- Employment: Not known

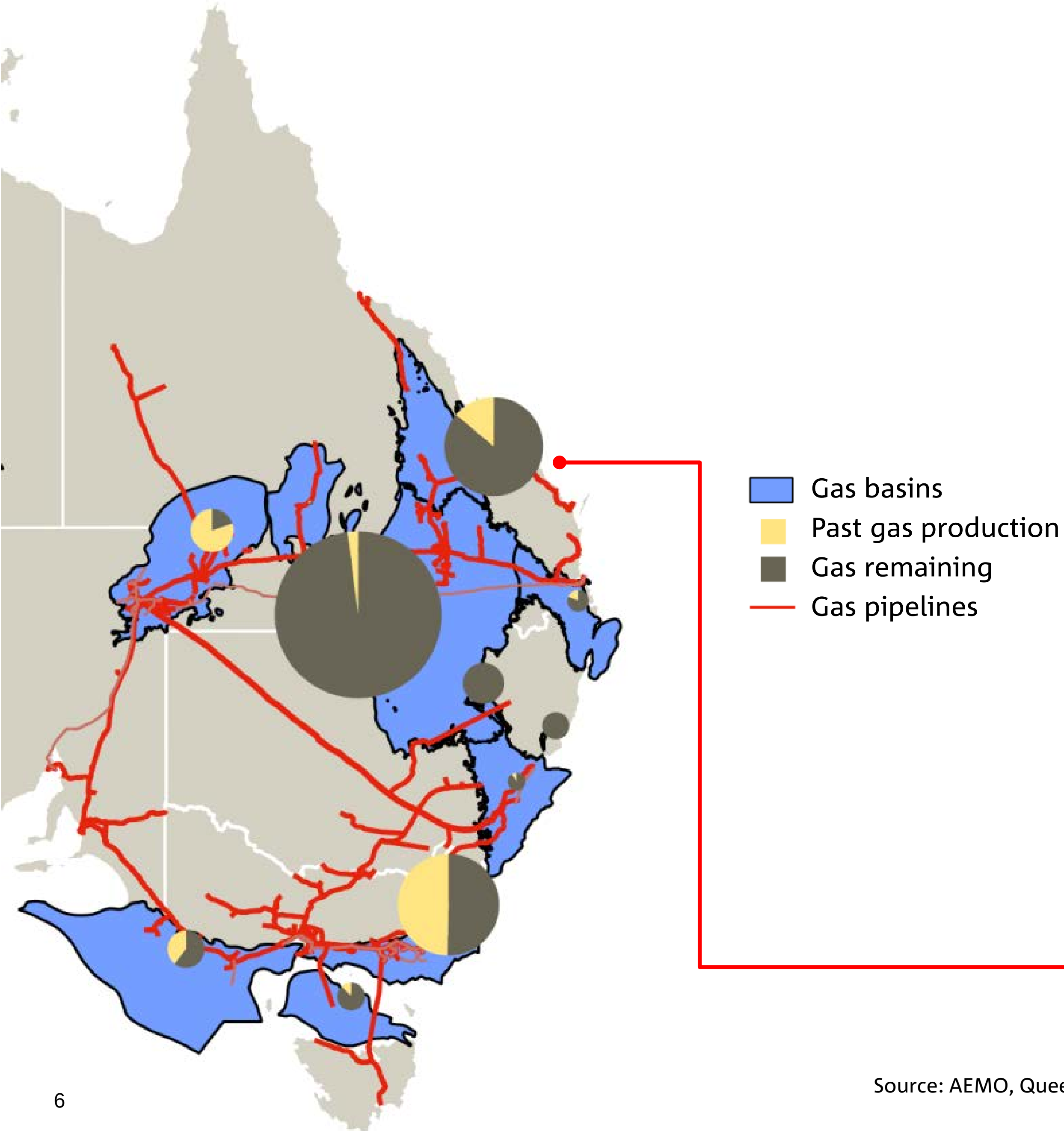
North West Shelf
- Capacity: 16.3 mtpa
- Status: Operational since 1989
- Ownership: BHB Billiton, BP, Chevron, MIMI, Shell, Woodside
- Cost: NA
- Employment: 1,000+ ongoing

Pluto LNG
- Capacity: 4.3 mtpa
- Status: Operational since 2012
- Ownership: Woodside
- Cost: NA
- Employment: Not known



Source: Company reports, APPEA, Oxford Institute for Energy Studies, Department of Industry, Geoscience Australia, Australian Bureau of Statistics and NAB Group Economics

LNG TERMINALS: EASTERN AUSTRALIA



Australia- Pacific LNG (APLNG)

- Capacity: 9.0 mtpa
- Status: Operational since 2015 (1 of 2 trains)
- Ownership: Origin 37.5%, ConocoPhillips 37.5% Sinopec 25%
- Cost: AUD24,700 billion
- Employment: 6,000 construction 1,000 ongoing

Gladstone LNG (GLNG)

- Capacity: 7.8 mtpa
- Status: Operational since 2015
- Ownership: Santos, Petronas, Total, Kogas
- Cost: AUD21.2 billion
- Employment: 5,000 construction 1,000 ongoing

Queensland Curtis LNG (QCLNG)

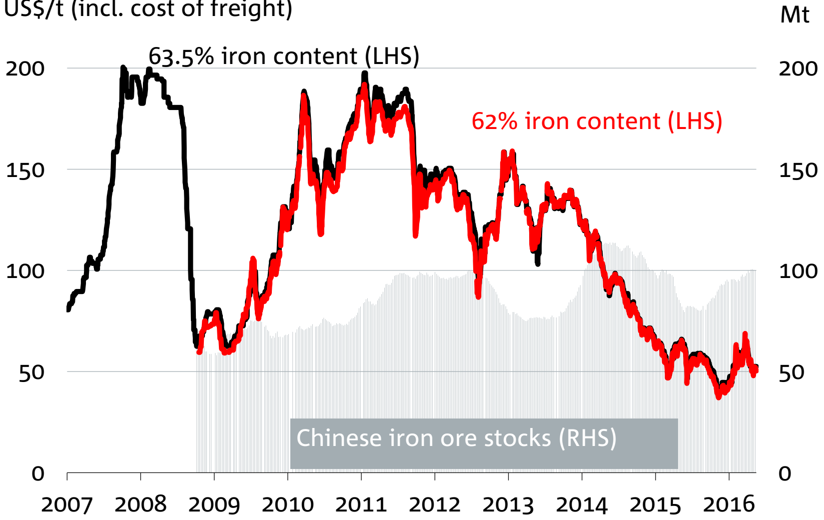
- Capacity: 8.5 mtpa
- Status: Operational since 2015 (1 of 2 trains)
- Ownership: British Gas (being acquired by Shell) 73.75%, CNOOC 25%, Tokyo Gas 1.25%
- Cost: NA
- Employment:5,000, 1,000 ongoing

Source: AEMO, Queensland Government, APPEA and NAB Group Economics

IRON ORE

IRON ORE PRICES VOLATILE IN H1 2016

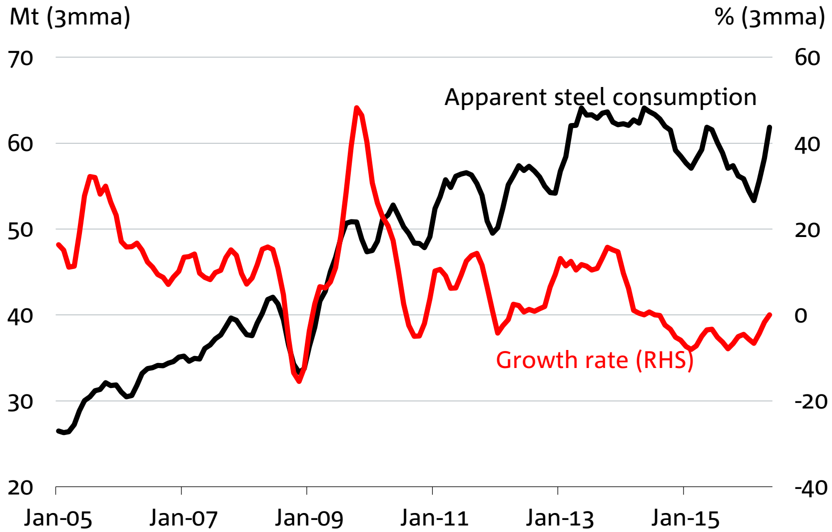
Settling near US$50/t following March-April rally



Source: Bloomberg, Thomson Datastream, NAB Economics

CHINESE STEEL CONSUMPTION REBOUNDING

Driven by unsustainable construction activity



Sources: CEIC, Bloomberg, NAB Economics

- From a virtual all-time low in December 2015, iron ore prices rallied in early 2016, particularly from mid-February onwards – reaching almost USD70 a tonne in late April (for 62% ore landed in China) – before retreating and settling around USD50 a tonne in late May.
- A credit-fuelled recovery in Chinese real estate construction – and therefore demand for steel and iron ore – contributed somewhat to this stronger trend. Construction starts grew by 16% yoy in the first five months of the year – following declines across 2014 and 2015. China's construction sector is a key consumer of steel – accounting for almost 56% of the country's steel use in 2013 (MIPRI).
- As we noted last month, the rapid iron ore price surge across March and April was exacerbated by speculative inflows on the Dalian Commodity Exchange. From mid-April, regulation of the exchange has tightened – with minimum margin rates lifted, transaction fees for iron ore increasing and supervision of the market stepped up. In response, trading volumes have returned to levels typical across much of 2015, and spot iron ore prices have retreated.
- There are still fundamental issues in China's real estate sector – with excess supply persisting in many locations, and spectacular price growth largely confined to the tier one cities. Relaxed purchase requirements, looser credit and the poor performance of alternative investment options have started to re-inflate the property bubble that had somewhat deflated across 2014 and 2015. As a result, we argue that the construction boom is unsustainable – as is the increase in steel and iron ore demand.
- The rebound in steel production commenced in March – away from four year lows across January-February of near 60 million tonnes a month – to around 70 million tonnes a month across March to May (modestly below the all time peak production in mid-2014).
- Profitability for Chinese steel mills briefly improved in April – with steel prices rising more rapidly than raw material prices up until the late April peak. At this point, Chinese steel price benchmarks were at their highest levels since September 2014, but steel profitability was at its highest level since mid-2009. The subsequent retreat in steel prices from May onwards brought profitability back down – near the lower levels of the range recorded across most of the 2009-2014 period.

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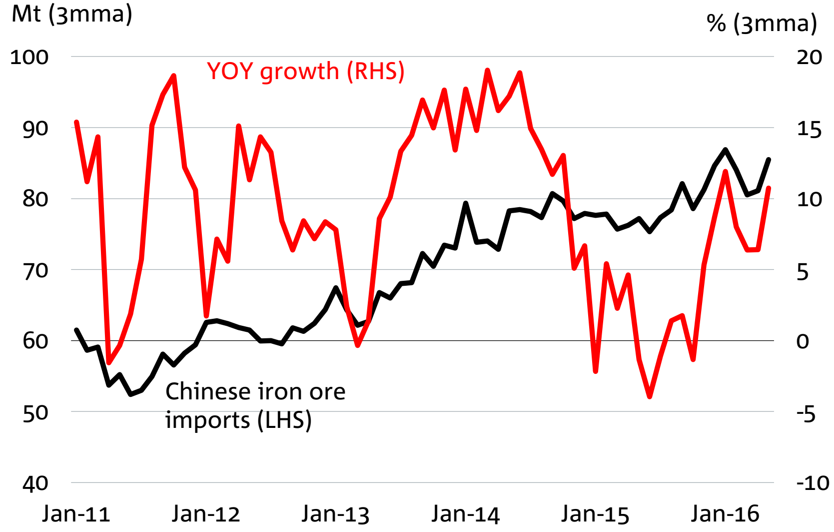
IRON ORE cont.

CHINA IRON ORE IMPORTS

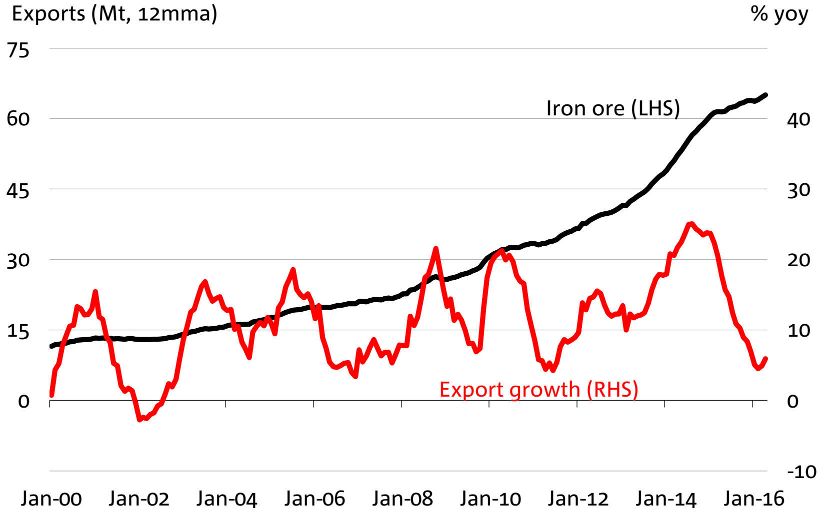
Ramped up in early 2016 – following weakness in 2015



Source: CEIC, NAB Economics

AUSTRALIAN IRON ORE EXPORTS

Slowing growth trend set to continue in 2016



Sources: Bloomberg, NAB Economics

- The rebound in Chinese steel production has been fed by iron ore imports – with domestic iron ore production contracting by 6.4% yoy over the first five months of the year. In contrast, imports rose by 9.0% over the same period. Domestic ore is typically higher cost and lower quality than internationally traded material. As a result, further declines in Chinese output are likely in coming months – particularly if steel output falls.
- Stronger unsustainable steel demand, allied to a short-term increase in prices and profit margins, should not be allowed to overshadow the significant long-term challenges that China's steel industry needs to address. According to the Ministry of Industry and Information Technology, China's steel production capacity is currently 1.13 billion tonnes – over 300 million tonnes larger than China's output in 2015.
- China's State Council announced plans in February to cut crude steel capacity by between 100 and 150 million tonnes over the next five years – however this alone will not be enough to eliminate spare production capacity. There is limited upside to China's steel consumption – with the China Iron and Steel Association arguing that consumption peaked and will now enter a long-term declining trend.
- Export markets offer limited opportunity for Chinese steel producers in coming years, given that steel exports are already generating significant trade tensions. In March, the US Department of Commerce imposed a preliminary 266% duty on steel from a range of countries (including China) in response to alleged dumping. Chinese steel export volumes have risen significantly in recent years – particularly as domestic construction has slowed – rising to almost 100 million tonnes in 2015 – comparable to Japan's total steel output.
- Given the negative outlook for China's steel sector, the outlook for Australian iron exports is subdued. Over the first four months of 2016, Australian exports rose by 5.9% yoy, considerably weaker than rates recorded across much of 2015. Almost 82% of this volume was exported to China, meaning that prospects for further growth are limited.
- While we argue that the rebound in China's steel production is unsustainable, the duration of this period of higher output is uncertain. We expect iron ore spot prices to fall as production slows – averaging USD47 a tonne in 2016 – however persistent production presents upside risk to this forecast. Over the medium term, we expect prices to settle around USD40 a tonne – a level that should support narrow profit margins for lower cost producers.

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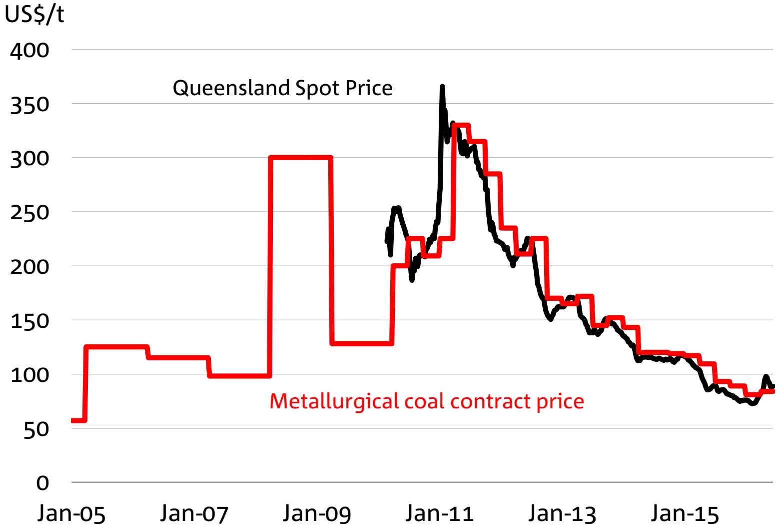
METALLURGICAL COAL

METALLURGICAL COAL PRICES SLIGHTLY HIGHER

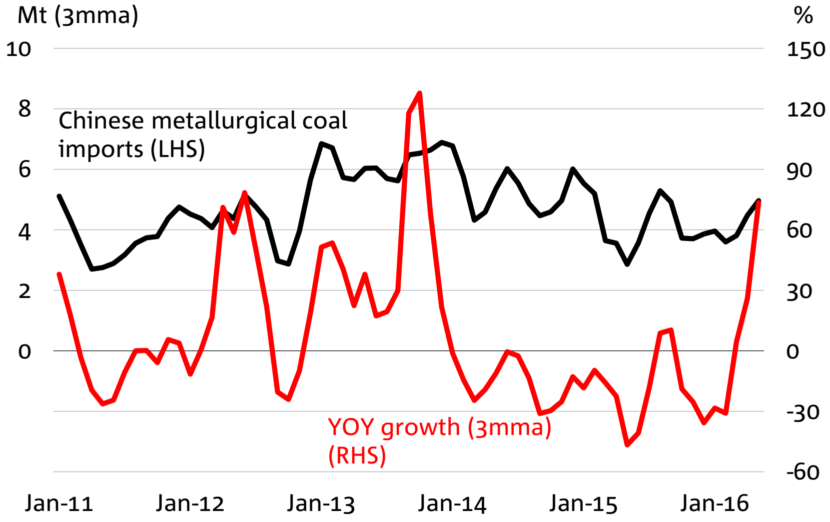
Modest uptick compared with iron ore



Source: Energy Publishing, Bloomberg, NAB Economics

CHINA IMPORTS TREND UP FROM MARCH

Reversal of two years of declines



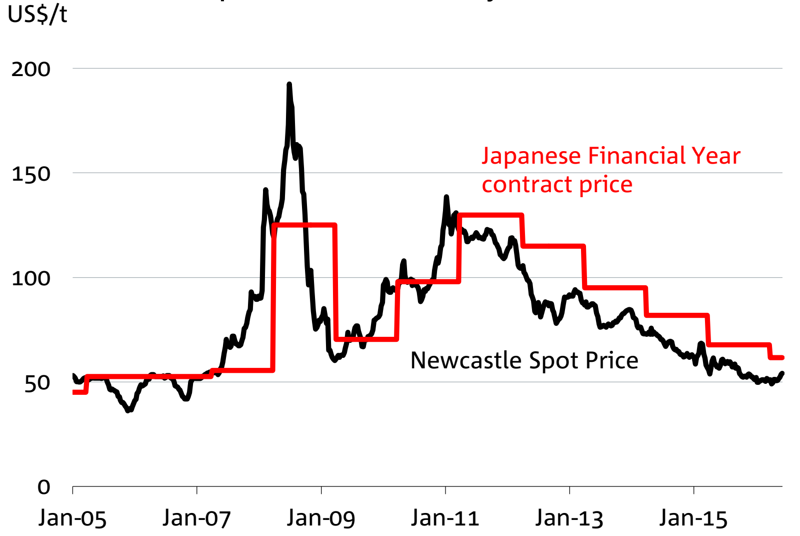
Source: CEIC, NAB Economics

- Spot prices for hard coking exhibited a similar (although less significant) rebound to iron ore – reflecting the stronger demand from China's property construction/steel recovery. The Asia Clear Australian contract drifted near or below USD75 a tonne between mid-November 2015 through to early March 2016 – before pushing back closer to USD100 a tonne in late April. Prices have subsequently retreated – settling around the USD90 a tonne range from late-May onwards.
- Higher spot prices have followed through into benchmark quarterly contract prices – which were recently settled at USD92.50 a tonne for Q3 (up from USD84 a tonne in the June quarter).
- That said, media reports suggest that the quarterly contract framework – which has been the primary price setting mechanism for metallurgical coal since annual contracts were abandoned in 2010 – may soon come to an end. Anglo American – who have led contract negotiations on the supply side – are selling its key Queensland coal mines and as yet no producer has assumed their negotiation role. The market may soon switch to a spot basis, similar to iron ore's transition in recent years.
- China's metallurgical coal imports accelerated from March onwards, reversing a declining trend from the past two years. Over the first five months of 2016, China's metallurgical coal imports totalled 21.2 million tonnes – an increase of 28% yoy.
- Domestic coal provides the bulk of China's steel industry requirements – however the share has declined in early 2016 – down to 90.3% in the first five months of the year (from 92.8% in the same period of 2015). According to Platts, authorities in China's main coal producing regions have restricted domestic production – limiting mining to 276 days a year (from 330 days previously) – increasing China's import requirements.
- Australian metallurgical coal exports grew modestly in the first four months of 2016 – up by 1.4% to 59.4 million tonnes. This increase was driven by larger volumes to China – which increased by over 19% yoy – while exports to other markets fell by 2.4% yoy over this period.
- Contract prices for metallurgical coal are forecast to decline in coming quarters – as conditions in China's steel industry soften. However the inherent uncertainty around the duration of the construction-led rebound in China's economy adds some upside risk to our forecasts. We expect the contract price to decline to USD85 a tonne in Q4, and average USD84.25 a tonne in 2017.

THERMAL COAL

THERMAL COAL PRICES MARGINALLY HIGHER

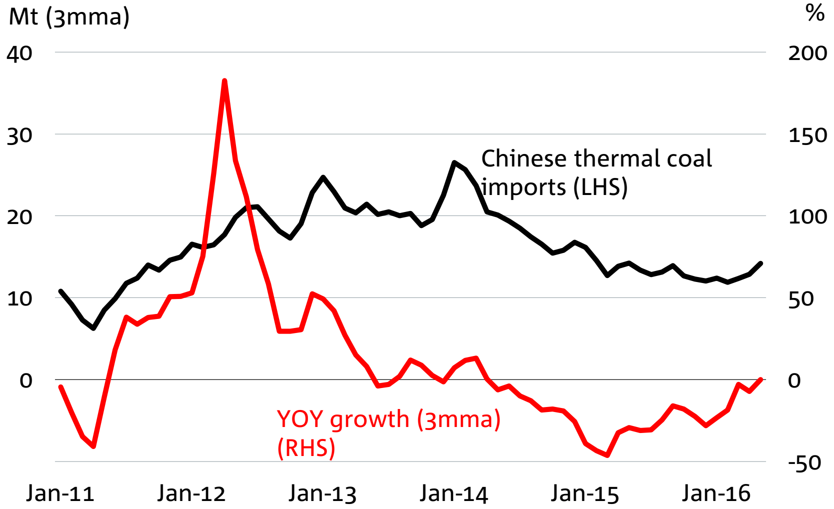
...but modest uptick versus multi-year downward trend



Source: Bloomberg, BREE, NAB Economics

CHINA IMPORTS EDGE HIGHER IN APRIL & MAY

Imports well below 2013-2014 levels

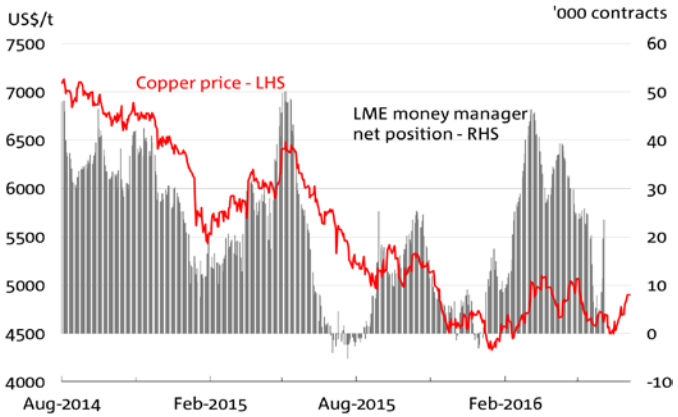


Source: CEIC, NAB Economics

- Spot prices for thermal coal edged marginally higher in May and early June – pushing back above USD50 a tonne, but lacked the momentum seen in other commodity markets. The fundamentals of the market remain broadly weak – as exhibited by the decline in the annual Japanese financial year contract – which was settled at USD61.60 a tonne (down from USD67.80 a tonne previously).
- Demand from key seaborne markets like China and India has continued to soften in 2016, while supply remains plentiful – with considerable excess capacity in the form of idle higher cost mines globally.
- China's imports fell considerably in 2015, and have continued to ease in 2016 – down 2.5% in the first five months of the year. There has been a slight uptick in imports across the past three months – likely associated with stronger coal consumption to support the property-led rebound in industrial activity – however as we have noted, we don't believe that this trend is sustainable.
- Changing trade patterns in India are likely to weaken seaborne markets in coming years. Thomson Reuters estimate that Indian imports fell by 5.4% yoy in the first five months of the year – as domestic material replaces imported supply. India's government has targeted production of 1.5 billion tonnes in 2020 – more than double the level in 2015 – 677 million tonnes (BP).
- Indonesia's domestic consumption has been rising (up almost 15% in 2015) , restricting the country's exports – however delays to new coal-fired generation could result coal intended for domestic use being exported instead. That said, higher cost producers are likely to cut back further – with the Energy and Mineral Resources Ministry anticipating weaker production in 2016 and 2017 than the peak levels across 2013 and 2014.
- Australian thermal coal exports have dipped marginally – down 1.0% yoy in the first four months of 2016. The weak conditions in key Asian export markets will likely restrict further export growth in the short term.
- Given the subdued nature of thermal coal markets – it is unlikely that spot prices will rise considerably this year. Therefore this should place further downward pressure on contract prices for the next Japanese financial year (commencing April 2017) – with contract prices forecast to decline to USD58 a tonne.

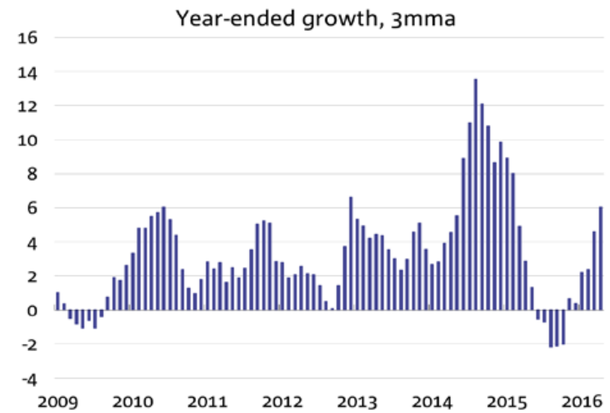
COPPER

COPPER PRICES & POSITIONING



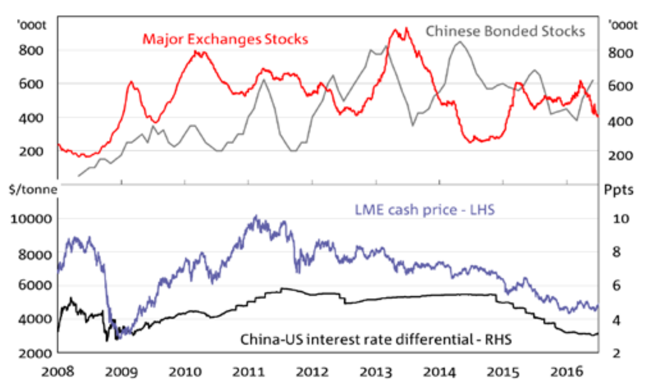
Sources: Bloomberg, NAB

GLOBAL REFINED COPPER PRODUCTION



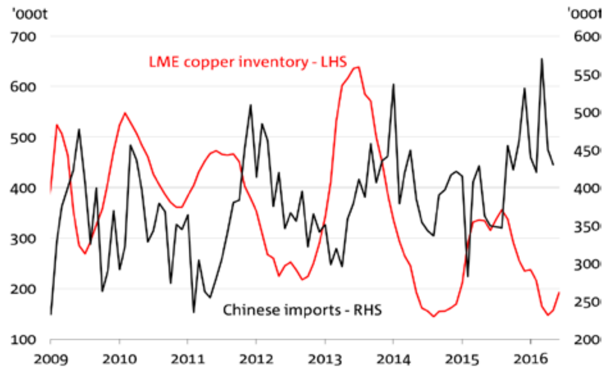
Sources: Bloomberg

COPPER FINANCING INCENTIVES



Source: Bloomberg, NAB

LME INVENTORY & CHINESE IMPORTS



Sources: NAB; Thomson Reuters

Base Metal Prices*

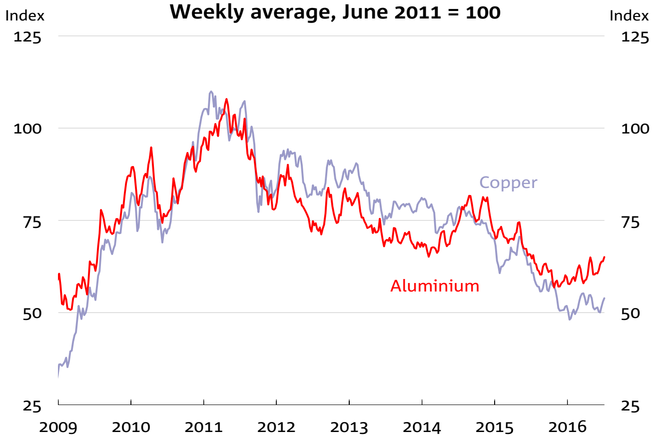
	Avg Price (US$/tonne) Jun-16	Mar-16 to Jun-16 % change, quarterly	Jun-15 to Jun-16 % change, annual
Aluminium	1594	4.5	-6
Copper	4642	-6.3	-20
Lead	1713	-4.7	-6
Nickel	8928	2.5	-30
Zinc	2026	12.5	-3
Base Metals Index		-0.4	-17

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

- Copper prices have stablised since start of the year, hovering around USD4800/t at the time of writing. Chinese demand has surprised on the upside, while the feared release of large quantity of metals from bonded warehouses has not hit the market. Both have provided support for prices and sustained the expansion effort of copper miners, with significant new mined supply still scheduled for 2016.
- Chinese residential construction starts rose by a stronger-than-expected 16% y/y through to May, underpinning demand for key commodities including copper. Property prices also continued to strengthen. However, the recovery in the housing market has been largely policy driven rather than supported by fundamentals. The growth outlook for China and any policy developments will be keenly watched in H2 2016.
- In addition to underlying demand, there is a significant amount of copper tied up in metal financing deals. While the yuan continues to depreciate, the interest rate differential seems to have stablised somewhat, sustaining such carry trades. In fact, Chinese imports have improved while LME inventory fell. However, should conditions change, these trades could be reversed easily, releasing significant supply into the market in a relatively short time span.
- Global supply is estimated to increase by over 40% by 2020, according to Bloomberg. The lower energy costs and higher grade ores at the new mines have pushed down costs, supporting the completion of projects even as prices remain low.
- Overall, we forecast a small market surplus for 2016 and 2017, with prices averaging USD4800/t.

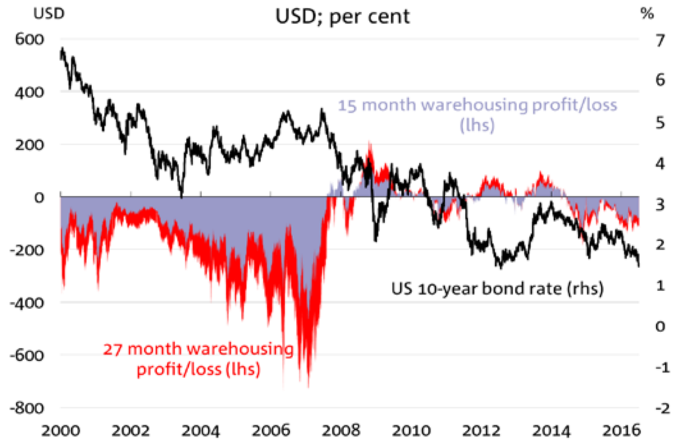
ALUMINIUM

COPPER & ALUMINIUM PRICES (LME)



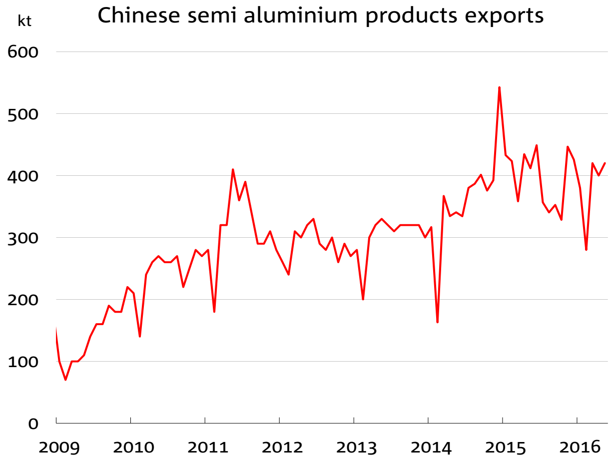
Sources: NAB; Thomson Reuters

ALUMINIUM WAREHOUSE INCENTIVES



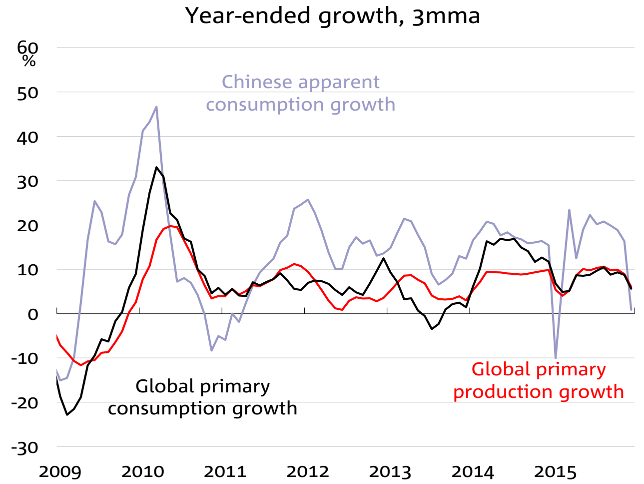
Sources: Bloomberg Industries; NAB

CHINESE SEMI ALUMINIUM EXPORTS



Sources: Bloomberg

ALUMINIUM PRODUCTION & CONSUMPTION

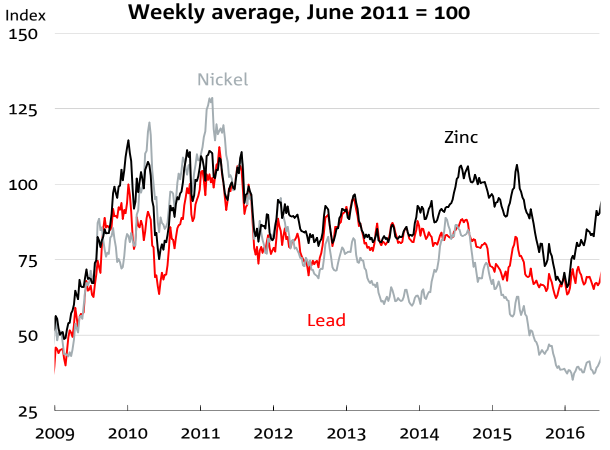


Sources: Bloomberg

- Aluminium prices have had a stronger rebound than copper in 2016, up over 10% now from the January lows. Supply is likely to continue increasing, as new smelting capacity is scheduled and agreed restarts have slowly begun. Demand is also set to grow, with the use of aluminium sheets in car making set to increase demand.
- China will continue to dominate the aluminium market, with the country planning to add more smelting capacity than the rest of the world combined. Over half of its new capacity will be located in the northwestern regions of Xinjiang and Inner Mogolia, with access to captive mines and lower energy costs. While Indonesia has banned bauxite exports and China faces declining domestic ore quality, Chinese firms are increasingly sourcing alumina from lower cost destinations including Australia and Guinea. The added capacity has seen Chinese exports of semi aluminium products rise. The cost competitiveness of Chinese smelters and slowing domestic demand could see exports rise, potentially putting downward pressure on prices.
- LME warehouse loadout queues have declined, likely indicating re-warranting of metal in financing deals, a similar trend to that observed in copper markets.
- On the demand side, carmakers substituting lighter weight aluminium for steel will be an important long-term trend. In power generation, aluminium wires are also increasingly replacing copper ones, further supporting aluminium demand.
- Overall, we forecast a small deficit in 2016 and 2017 with demand outgrowing new supply and prices averaging USD1570 and USD1680 respectively.

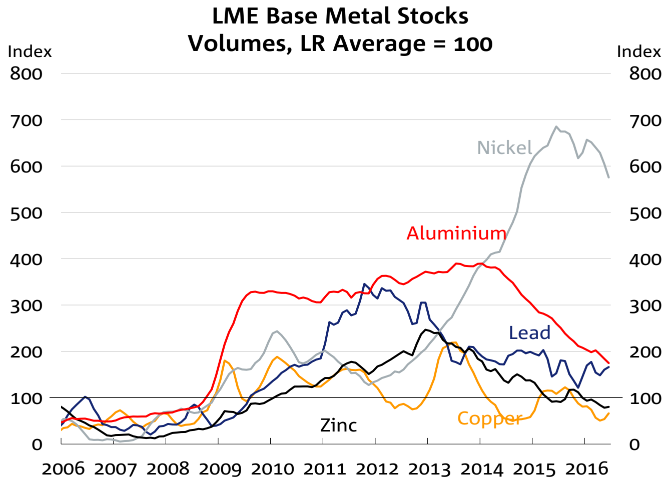
NICKEL, LEAD & ZINC

NICKEL, LEAD & ZINC PRICES (LME)



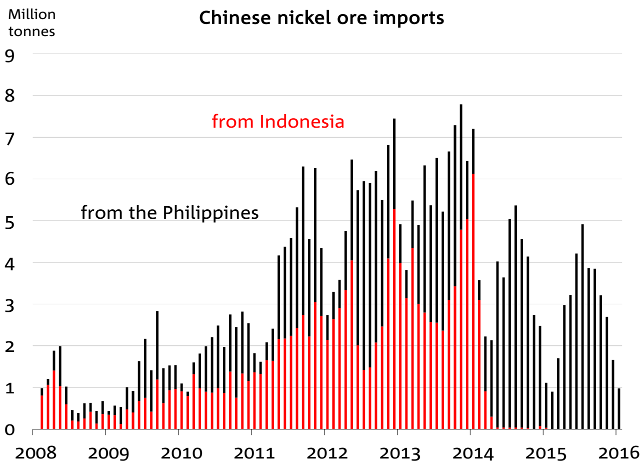
Sources: NAB; Thomson Reuters

LME STOCKS



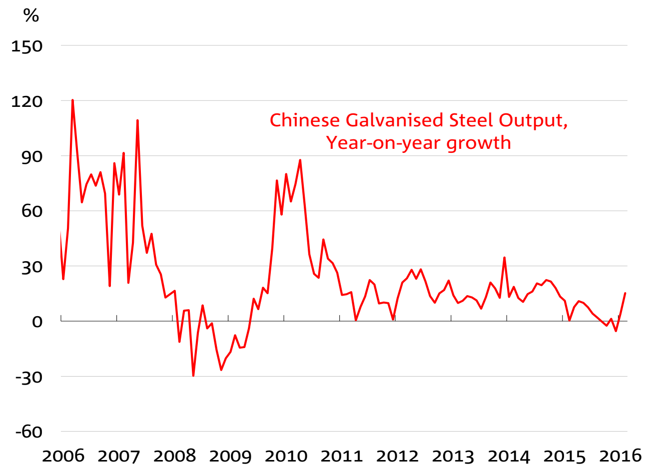
Sources: Datastream; NAB

CHINESE NICKEL IMPORTS



Source: Bloomberg; NAB Economics

CHINESE GALVANISED STEEL OUTPUT



Sources: Bloomberg; NAB Economics

- **Nickel** prices had declined the most among all base metals, however there are signs of the market stablising. Stock levels at the LME continued to decline, although somewhat offset by rising inventories at the SHFE. Significant production cuts have occurred due to the low prices causing wide-spread production losses. That combined with the temporarily stronger residential construction in China will move the market to a small deficit in 2016. However, as strong housing starts were driven by policy rather than fundamentals, it is likely to be short-lived. Furthermore, Indonesia nickel smelters could be ramping up supply on favourable tax incentives. We therefore forecast average prices at USD9100/t in 2016 and USD9800/t in 2017.
- **Zinc** was the best performer among the base metals complex, with prices rising by almost 50% since January and stocks at LME and SHFE continuing to draw down. The closing of aged mines and production cuts by major producers including Glencore will keep supply growth subdued. While China has been able to sustain refined production growth with domestic concentrates output, it is not enough to offset the global cuts. As a result, both concentrate and refined markets are likely to remain in deficit in 2016 and 2017, with prices averaging USD2000/t and USD2200/t.
- The **lead** market remains well supplied, with LME stocks rising since April. Stricter environmental regulations and weaker demand for bike batteries in China saw demand weaken and production levels cut. More supply cuts will be needed to balance the market and therefore we see prices averaging at USD1750/t in 2016 before recovering slightly on higher electric car demand to USD1820/t in 2017.

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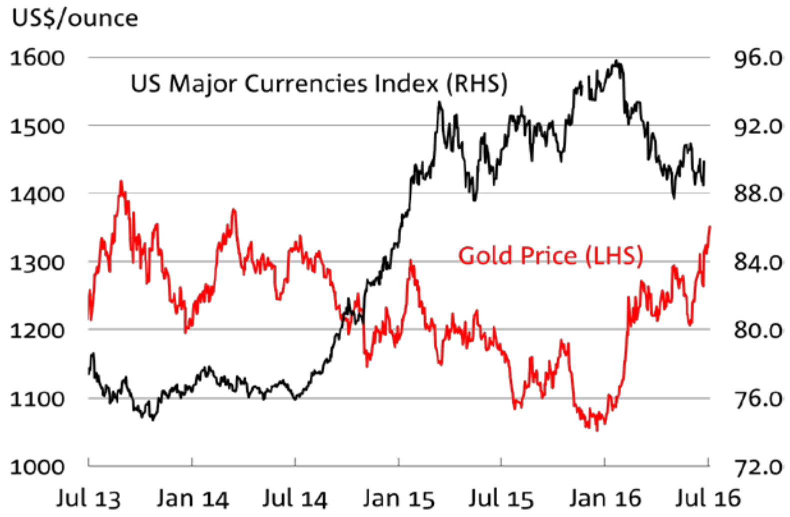
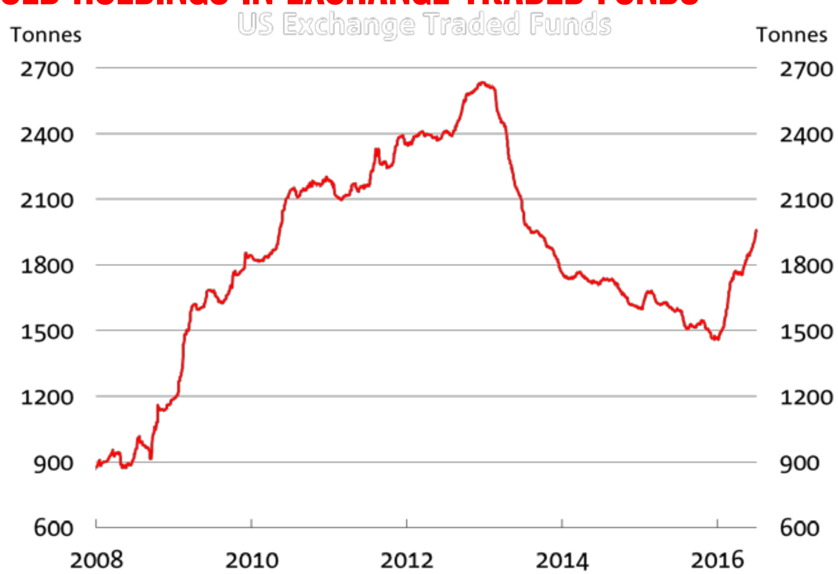
GOLD

GOLD & USD INDEX



Source: EIA, NAB Group Economics

GOLD HOLDINGS IN EXCHANGE TRADED FUNDS



Source: EIA, NAB Group Economics

- Since its impressive surge at the start of the year, gold prices have gained traction over time, benefiting from a series of monetary easing actions by major central banks around the world, a continuous push-back in the expected timing of the next Fed funds rate hike by the Federal Reserve, and more recently, the financial market turmoil arising from the "Brexit" referendum outcome in support of UK leaving the EU.
- The magnitude and duration of the rally in gold prices in the year to-date have defied market expectations at the start of the year that gold would enter its fourth year of a bearish market as the US Fed hikes interest rates. Since their recent low in mid-December, gold prices have surged by around 28% to average around mid-USD1300 per ounce. In the aftermath of the Brexit vote, gold prices have risen by around 7% to date, despite financial markets' relatively quick return to "business-as-usual" mode after an initial knee-jerk reaction.
- Having said that, the Brexit outcome has irreversibly increased the level of market and business uncertainty over the medium term, which is likely to be exacerbated by the disorderly fallout in the British political system as a result. The lack of details about the timeline and next steps in the UK's negotiations with the EU about its departure from the bloc is likely to keep financial markets on their toes for some time to come. As a result, we believe that the US Fed is likely to take a more cautious stance in its current monetary tightening cycle, which prompts us to push out the timeline for our next US Fed Fund rate hike forecast to December this year from Q3. This suggests further upside potential for gold prices in the near term, but we expect gold prices to resume a moderate downward trend in Q4 2016 as the US Fed hikes rates.
- The rebound in gold prices over the period corresponded with a decline in the USD Index. The USD index has softened since the start of this year following the delay in US rate hike expectations, which was in turn influenced by a slew of weaker-than-expected domestic data, including Q1 GDP and employment figures.
- As one of the main driving forces behind the sustained rally in gold prices, net-long positions in non-commercial gold futures have risen in all but five weeks in the first half of 2016, according to the US Commodity Futures Trading Commission.
- The return in investors' optimism in gold as an investment class is also evident in the sustained pick-up in demand for holdings backed by gold in Exchange Traded Funds (ETFs), which reached an inflection point in early January and has now risen to the highest level since August 2013.
- In light of the financial market uncertainty stemming from Brexit which has raised the safe-haven appeal of gold as an investment, we have revised our gold price forecasts upwards for the near term. We now expect gold above USD1300/oz for the rest of Q3, ending 2016 at USD1280/oz before moderating to USD1100/oz by end-2017.

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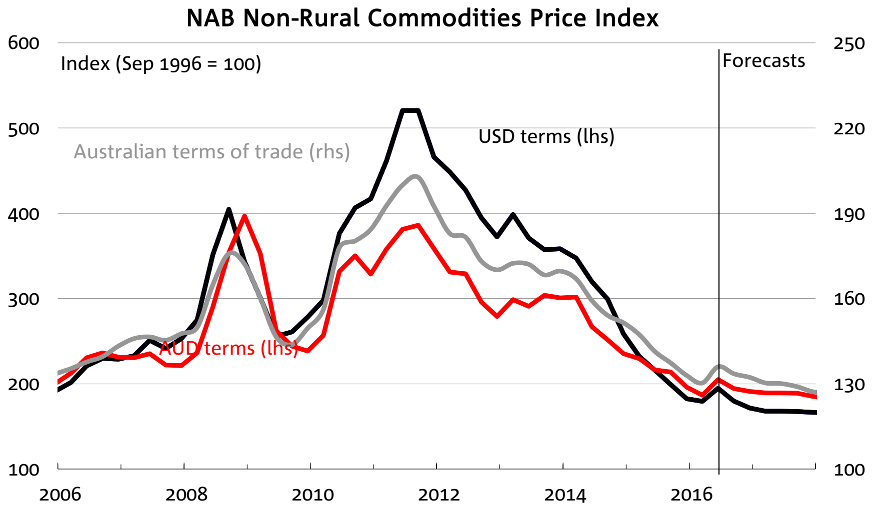
OUTLOOK

Lower bulk commodity prices lead US index down. USD strength supporting AUD prices near term

Index, September 1996 = 100



source: ABARES, ABS, Bloomberg, Thomson Datastream, NAB

- NAB's non-rural commodity price index is expected to jump by around 8½% q/q in June (in US dollar terms). This was the first quarterly rise in the index since late 2013, and the largest increase since 2011. The rise in Q2 primarily reflects a strong increase in iron ore prices, although most metal and energy prices rose in the quarter – coal prices being the main exception.
- Mixed economic data out of the US and heightened uncertainty in global financial markets – fuelled by events such as the recent Brexit vote – has seen a degree of volatility in the USD and other financial markets. Looking through the volatility, the loss of momentum for the USD since the start of the year has been somewhat supportive for commodity markets. Recent flight to safety has seen the USD start to strengthen again, but not significantly.
- Despite the potential for near-term fluctuations, the USD is expected to take a back seat to other supply-demand fundamentals going forward. The recent rally in the commodity price index is expected to be short lived and is expected to be more subdued going forward – albeit primarily driven by lower bulk commodity and gold prices – given ongoing concerns over emerging market (especially Chinese) demand, coinciding with additions to supply capacity. In contrast, base metals and oil, which have a smaller weight in the index, are forecast to rise from current levels.
- In annual average terms, the US dollar denominated NAB non-rural commodity price index is expected to fall by around 13% in 2016, followed by a more moderate decline in 2017 (down around 8%). Once again, iron ore is the main drag, although energy prices are making a meaningful contribution to the decline this year.
- In Australian dollar terms, commodity price declines in 2016 are slightly less substantial due to USD appreciation as the US Fed resumed gradual normalisation of monetary policy. The expected trough for the AUD is still expected to be around the high USD 0.60s, but is likely to delayed (until early 2017). After falling nearly 20% in 2015 (in average terms), prices are forecast to decline a further 9% in 2016 and a more moderate 3% fall in 2017.
- In light of these commodity price projections, NAB is forecasting the Australian terms of trade to rise in June, but resume its gradual decline thereafter – at a slower pace than recent years. In annual average terms, the terms of trade are forecast to fall around 5% in 2016 and a further 3% in 2017.

NAB COMMODITY PRICE FORECAST

		Spot	Actual				Forecasts				
	Unit	01-07-2016	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18
WTI oil	US$/bbl	49	33	45	45	52	54	56	58	60	63
Brent oil	US$/bbl	49.9	35	47	47	53	55	57	59	62	64
Tapis oil	US$/bbl	49	36	47	48	54	56	58	60	63	65
Gold	US$/ounce	1336	1180	1260	1320	1300	1250	1210	1170	1120	1080
Iron ore (spot CFR)	US$/tonne	54	47	48	44	41	40	41	41	40	39
Hard coking coal*	US$/tonne	n.a.	81	84	93	85	83	84	85	85	85
Semi-soft coal*	US$/tonne	n.a.	62	66	72	66	65	66	66	66	66
Thermal coal*	US$/tonne	51	68	62	62	62	62	58	58	58	58
Aluminium	US$/tonne	1655	1513	1580	1590	1610	1640	1670	1710	1740	1780
Copper	US$/tonne	4900	4679	4750	4650	4750	4790	4840	4890	4940	4960
Lead	US$/tonne	1848	1739	1710	1750	1780	1800	1800	1800	1800	1800
Nickel	US$/tonne	9927	8509	8820	9090	9450	9830	10220	10630	11060	10730
Zinc	US$/tonne	2152	1678	1910	1910	2010	2030	2040	2050	2060	2070
Henry Hub	US$/mmbtu	2.88	2.50	3.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Aus LNG**	AUD/GJ	n.a.	8.23	5.33	6.75	7.06	8.01	8.27	8.54	8.61	8.87

* Data reflect NAB estimates of US$/ tonne FOB quarterly contract prices (thermal coal is JFY contract). Actual data represent most recent final quarterly contract price. ** Implied Australian LNG export prices

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