Minerals & Energy Commodities Update

by NAB Group Economics

September 2015

Key Points:

- **NAB's non-rural commodity price index is expected to fall a further 8% in the September quarter (in US dollar terms)** – following an anticipated 7% decline in June. The fall is larger than previously anticipated, reflecting the response in commodity markets to concerns over China's economic growth outlook, and ructions in financial markets that have seen the USD strengthen further. **Commodity price declines are expected to be more moderate in 2016** than they have been this year. **Iron ore will again be the main drag, although gold and coal declines will make a meaningful contribution**. USD strength should offset price declines next year in AUD terms. NAB forecasts the AUD to bottom around 68 US cents by early 2016, although the expectation for the AUD to drop to 70 US cents by year end has materialised a little earlier than predicted, suggesting further downside risk.
- Bulk commodities have exhibited differing trends – iron ore prices have been highly volatile in recent months – likely impacted by sell-offs related to China's equity market – while coal prices have been relatively stable. **Weaker demand prospects, largely driven by China, and ample supply will push bulk commodity prices lower in 2016 – US$53/t for iron ore, US$93/t for hard coking coal and US$62/t for thermal coal.**
- **Oil prices were one of the main casualties of the global stock rout that caused wild gyrations in commodity prices in the third week of August.** Heightened risk aversion following the global equity market fallout sent emerging market and oil market volatility indices to the highest levels since 2011 and March this year respectively. As a result, oil prices retraced sharply in August, with Tapis falling by 18%, while Brent and West Texas Intermediate (WTI) were both 17% lower. The former two averaged at US$47 a barrel in the month, while WTI was around US$43. **Oil prices are now expected to stay around current levels until the end of 2015, before rising to the mid to high 50s by the end of 2016.** Higher global LNG supply, combined with subdued oil prices, continue to weigh on LNG prices. **We forecast Australian LNG export prices to reach AUD 10.07/GJ in Q4 2015 and AUD 10.16/GJ in Q1 2016.** Even if prices stay low, the volume increase will see the value of Australian LNG exports increase considerably over the coming years.
- **The base metals index is forecast to gradually recover**, with nickel and zinc leading the pack and copper lagging. **There were some signs of a return of gold's safe haven allure in August, but gains are likely to be short-lived with the further declines in gold prices expected into 2016.**

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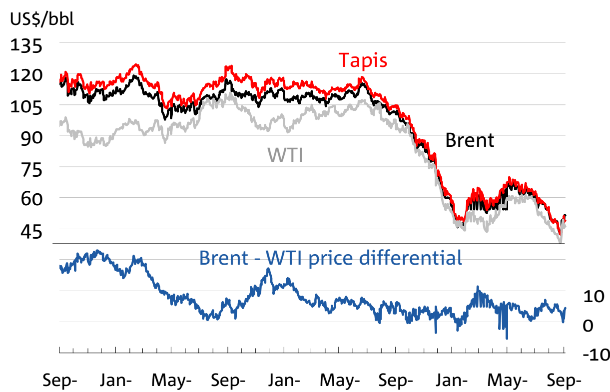
Oil

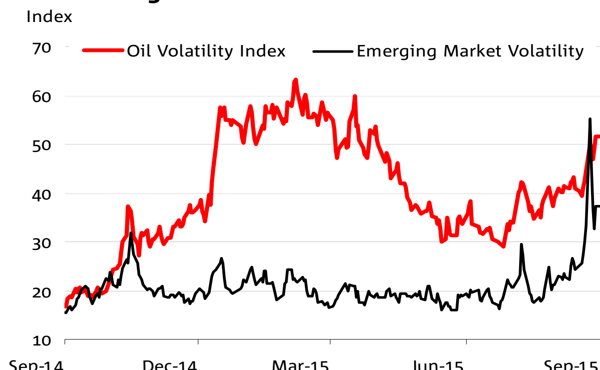
- **Oil prices were one of the main casualties in the global stock rout that caused wild gyrations in commodity prices in the third week of August.** Global market risk aversion skyrocketed on the back of the sharp corrections in the Chinese equity market, active devaluation of yuan by the Chinese government and poor PMI data from the country, which stoked concerns that the Chinese economy might be slowing by much more than its official figures indicate. This cast a shadow over the oil demand outlook by the largest net crude importer in the world, of which expected demand growth is deemed to be pivotal to the eventual rebalancing of global oil fundamentals.
- **Heightened market risk aversion following the global equity market fallout sent the emerging market and oil market volatility indices to the highest levels since 2011 and March this year respectively.** Significantly weaker investor sentiment is evidenced in the spike in short managed fund positions and a fall in long positions at the same time, sending the long-to-short ratio to the lowest since late March. This , combined with a continuous build-up in global crude inventories that maintains the overall glut, plus expectations that Iranian output will increase significantly in a post-sanctions era, have all served as negative forces on prices in the month. **As a result, oil prices retraced sharply in August, with Tapis falling by 18%, while Brent and West Texas Intermediate (WTI) were both 17% lower. The former two averaged at US$47 a barrel in the month, while WTI was around US$43.** Since then, prices have rebounded sharply to be above US$50 for Brent and Tapis on the back of downgraded US output estimates by the Energy Information Administration (EIA) for the first five months of 2015 and an OPEC report which acknowledges its concerns about the new lows in oil prices and financial hardships faced by its members.
- After a prolonged period of low oil prices, even the larger OPEC producers are no longer immune to the financial strains caused. Saudi Arabia, the leader of OPEC, is forecast by the IMF to record a fiscal deficit of just under 20% of GDP in 2015 from lower oil revenue and higher military spending from its intervention in the war in Yemen against ISIS. **That said, Saudi's total reserve assets remain elevated which will afford it the resources required to withstand low prices for longer**. Smaller OPEC members, such as Algeria, Ecuador and Venezuela, who have been under significant budgetary and economic stress due to weak oil revenues, have upped their pressure on the larger members to revive possibilities of fresh discussions of the group's strategy. Subsequently, OPEC released a report last week which suggested that the organisation is ready to talk to the smaller producers. This marks the start of a more open position by the organisation towards potential production cuts. However, it is unlikely that OPEC will commit to a unilateral output reduction unless they have the confidence that Russia, another major oil producer, will act similarly. The still relatively strong US production, which is a result of a much more decentralised market, will also be weighing against the decision by OPEC to pare back its production quota. **As such, we are of the view that there is only a very slim chance of an emergency meeting being called prior to the next scheduled meeting date of 4 December and for the current output quota to be tighten as a consequence.**
- Given the recent financial market turmoil and concerns about China's growth, we have captured some of the downside risks in our forecasts. **Oil prices are now expected to stay around current levels by the end of 2015 and mid to high 50s by the end of 2016.**

Daily oil prices (USD/barrel)



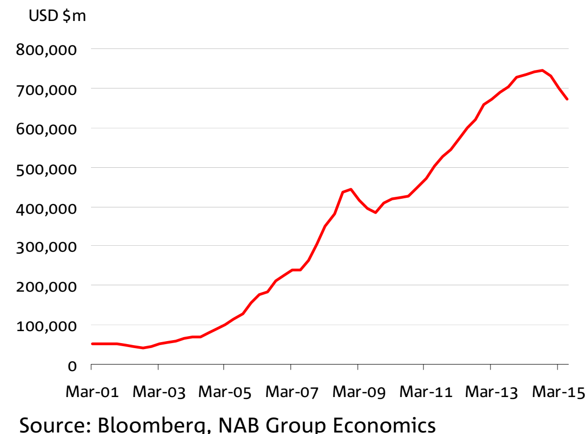
Source: Thomson Datastream

US Weekly Crude Production and Inventories at Cushing



Source: Bloomberg, NAB Group Economics

Saudi Arabia Total Reserve Assets



Source: Bloomberg, NAB Group Economics

Oil – Supply and Demand Factors

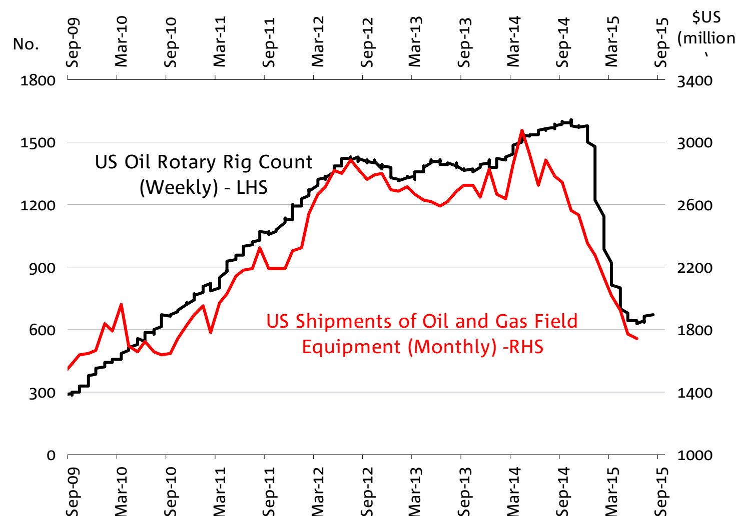
US

- **One of the key drivers propping oil prices higher in the last few days had been the newly revealed survey-based reporting of monthly crude oil production by the EIA, which showed downward revisions to previously reported monthly figures for January to May by 40,000 b/d to 130,000 b/d.** The new June monthly estimate included in the survey also showed a decisive drop of around 100,000b/d from the May figure to 9.4mb/d, which lends further evidence that US production has probably peaked in Q2 this year.
- The more timely but possibly less accurate weekly production series provides indication that production has slowed further in July and August. This, combined with relatively strong summer demand for gasoline and distillate fuel, has capped the rise in inventories which have been largely tracking sideways since June, albeit at historically elevated levels still. Given the peak demand season for US oil product consumption is now over for the year, there could be some upside risks on inventories based on recent production trends.
- So far the moderation in US production has been much more gradual than expected. However, it appears that the downward trend has commenced since June and is likely to gain further traction in the coming months. **A sharp contraction in the rig count and investments in oil and gas infrastructure this year points to a more pronounced fall in the next 6 to 9 months, when the depletion of spare capacity and efficiency gains from existing wells will no longer be sufficiently offset by added capacity from new wells.** EIA estimates that US crude production will average 8.96mb/d in 2016, compared to 9.36mb/d this calendar year.

OPEC

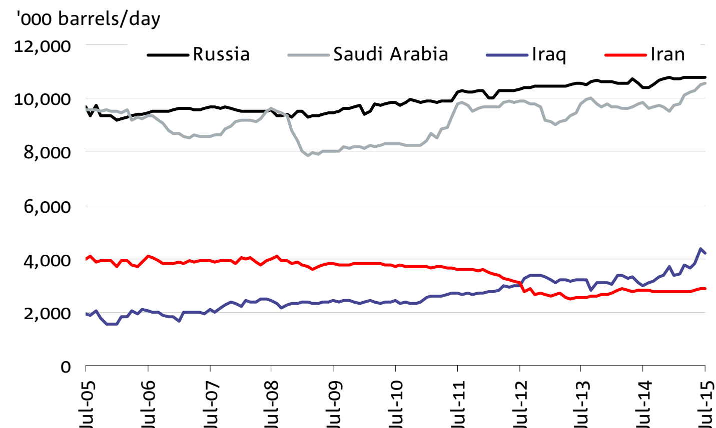
- OPEC output slowed marginally in July to 32.1 mb/d relative to a month ago, but it represents the 14th consecutive month that the organisation has produced above its 30 mb/d target. **Output from Saudi Arabia expanded again in the month to be closer to 10.6mb/d, but its growth momentum has slowed markedly from H1 of this year, presumably to accommodate an expected rise in Iranian production.** The latter's growth momentum picked up moderately in the last two months, despite international sanctions not being officially lifted. That said, the current production of 2.9mb/d is still more than 1mb/d less than its maximum pre-sanctions level.
- We estimate that Iranian output can rise by as much as 500,000 b/d in the first six months of 2016, but this is contingent on other OPEC members easing their output levels to make way for a return of a more sizeable Iranian share of the pie.
- **Barring a voluntary cutback in its production quota by OPEC, a potential surge in Iranian output represents an upside risk to global production that is likely to outweigh any reduction in US output, thereby perpetuating the current glut well into 2017. Given this expectation we are forecasting prices to remain range bound between US$50 and $60 a barrel next year.**

US Rig Count and Shipments of Oil and Gas Field Equipment



Source: Thomson Datastream

Output by Russia and Selected Major OPEC Producers

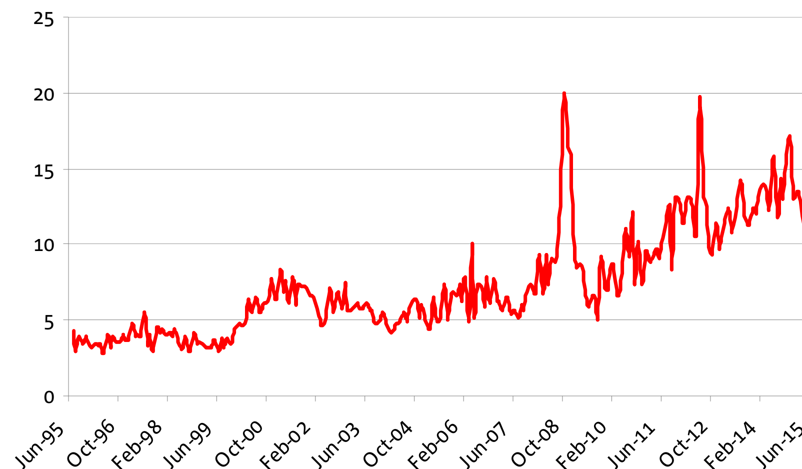


Source: Bloomberg, NAB Group Economics

Natural Gas

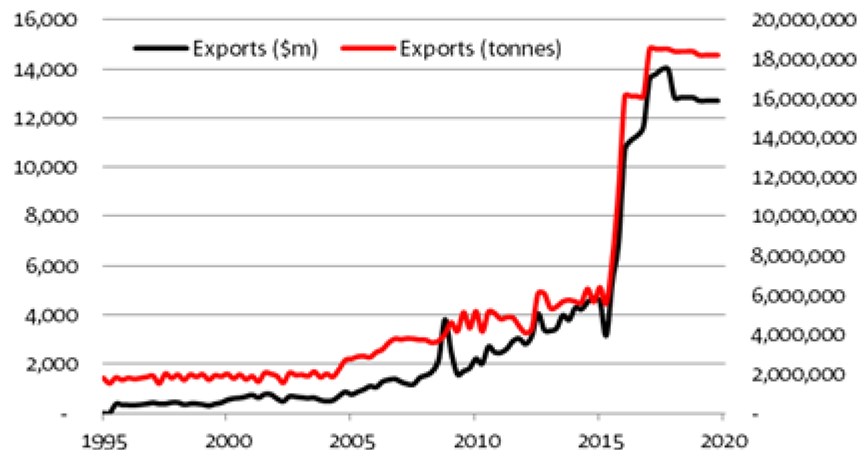
- Higher global LNG supply, combined with subdued oil prices, continues to weigh on LNG price indices although the lower AUD has provided some support in local terms. The NAB Australian LNG export price indicator, which is based on the value of Australian export cargoes, slumped to AUD10.19/GJ in Q2 2015. The prices are derived from Australian LNG export contracts and typically lag spot oil prices by two quarters. **We forecast that the indicator will rise slightly on a lower AUD but will find little support from oil prices, reaching AUD 10.07/GJ in Q4 2015 and AUD 10.16/GJ in Q1 2016.**
- The Australian natural gas industry continues to undergo significant transformation as significant new LNG export capacity nears completion. Australian LNG terminal capacity will increase by more than 40 million tonnes per annum to a total terminal capacity of 64.6 million tonnes per annum by the end of the year and 85.4 million tonnes per annum by 2017. **Even if prices stay low, the volume increase will see the value of LNG exports increase considerably over the coming years.**
- The linking of Eastern Australia to export markets for the first time (through the construction of three LNG terminals at Curtis Island in Queensland) will greatly transform Eastern Australia's gas markets. This will manifest itself in two ways: firstly the need to secure additional supply as a contingency against possible future underperformance of coal seam gas fields and secondly through new (and mostly higher) prices to reflect global netback prices, underwritten mostly by long term contracts.
- While the nameplate capacity of eastern Australia's gas producers exceeds AEMO's long term forecasts, most plants are currently producing significantly less than their capacity. 2015 H1 average production is currently running at just over 42% of capacity. The ability to run close to maximum capacity, which is necessary to supply sufficient gas to meet forecast domestic and international demand, is dependent on sufficient feed gas availability.

NAB Australian LNG export price indicator (AUD/GJ)



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

Actual and forecast quarterly value of Australian LNG exports



Source: Poten & Partners, Bloomberg, Australian Bureau of Statistics and NAB Group Economics. Note Excludes Browse

Iron ore

- Iron ore prices have exhibited considerable volatility over the past few months – reflecting in part the concerns around China's economic prospects (given weakness in the industrial sector) and the impact of the equity market fallout – which led to general commodity selloffs to meet margin calls. In the past, iron ore was less vulnerable (than other commodities) to trends in equity markets given a limited futures/forwards market, however increased paper trading on markets such as the Dalian Commodity Exchange has altered this dynamic.

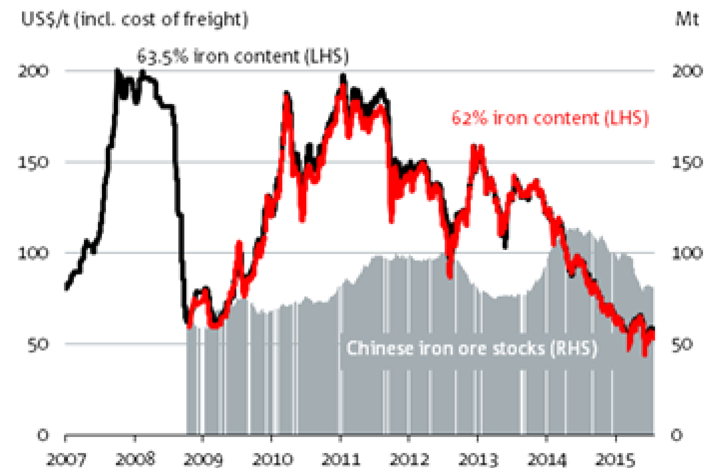
- China remains the key economy for iron and steel demand, however demand has weakened in 2015. **According to our estimates, China's apparent steel consumption fell by around 5% year-on-year in the first seven months of the year** – broadly in line with the falls reported by the China Iron and Steel Association (CISA).

- In a large part, weakness in China's steel consumption has been driven by the construction sector – which accounts for over half of the country's steel demand. In the first seven months of 2015, construction starts for residential property and commercial & office property fell by 18% yoy and 14% yoy respectively.

- Reflecting the drop off in Chinese steel consumption that occurred in the latter part of 2014, the full year falls may be less than the 5% level for the year to date. **That said, we expect the decline in China's steel consumption to drive the global total lower – between 1.5%-2% for the full year.**

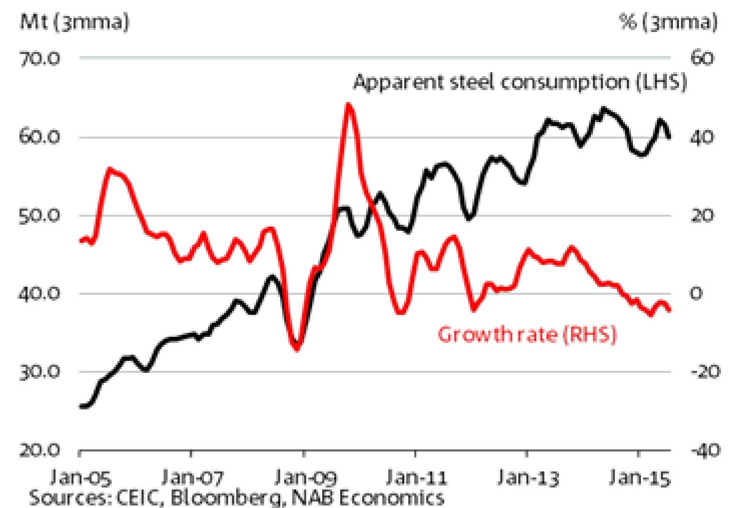
- **Similarly, steel production in China is expected to contract in 2015 – directly impacting demand for iron ore. According to CISA, steel output peaked in 2014 and will fall this year by just over 1%** – the first time since 1981 that annual output will have declined. With production down around 1.7% over the first seven months, the CISA forecast may be an underestimate, and we see little scope for improvement in 2016 (given demand conditions).

Recent volatility in iron ore prices may reflect moves in other markets, rather than underlying fundamentals



Source: Bloomberg, Thomson Datastream, NAB Economics

China's steel consumption has fallen in 2015, led by falls in the country's construction sector



Sources: CEIC, Bloomberg, NAB Economics

Iron ore

- Elsewhere, weakness in domestic demand and trade conditions across the rest of Asia is constraining steel production in these regions – with output down around 1.4% yoy over the first seven months of 2015.

- Weaker steel production follows through into weaker demand for iron ore – however the impact of falling Chinese steel production is being cushioned by falling domestic output of ore – with lower grade, higher cost material being pushed out of the market. Over the first seven months of 2015, China's domestic iron ore production fell by 9.3% yoy, more rapidly than steel output.

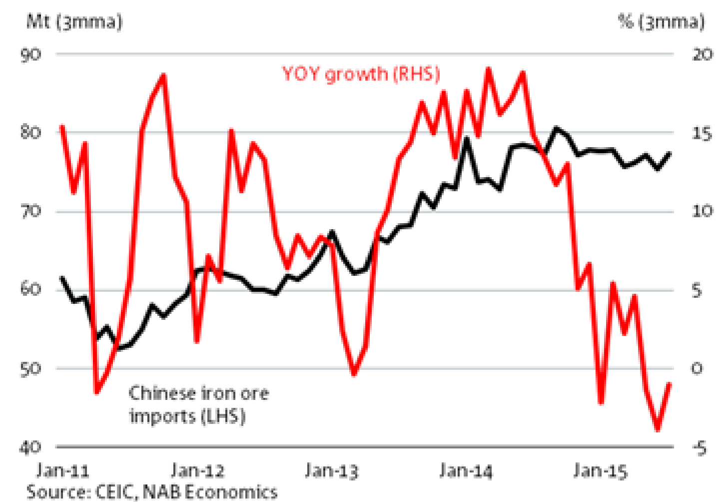
- As a result, falls in Chinese iron ore imports have been less severe – with a modest downward trend since the peak recorded in December 2014. In the first seven months of 2015, iron ore imports fell by just 0.1% yoy.

- **Despite the modest decline in the Chinese seaborne trade, Australian exporters have increased their supply to China – with exports growing by over 11% yoy in the first half of the year,** to 299 million tonnes. Over 80% of Australia's iron ore exports were shipped to China over this period, with growth in non-China exports far more subdued, at just 0.4% yoy.

- That said, growth in Australian iron ore exports is clearly slowing – with some higher cost producers struggling at current price levels, despite some offset from the Australian dollar and lower energy prices. **We expect full year growth in exports to slow to around 5%-6% (from 9.1% yoy in the first half), with only modest expansion in 2016.**

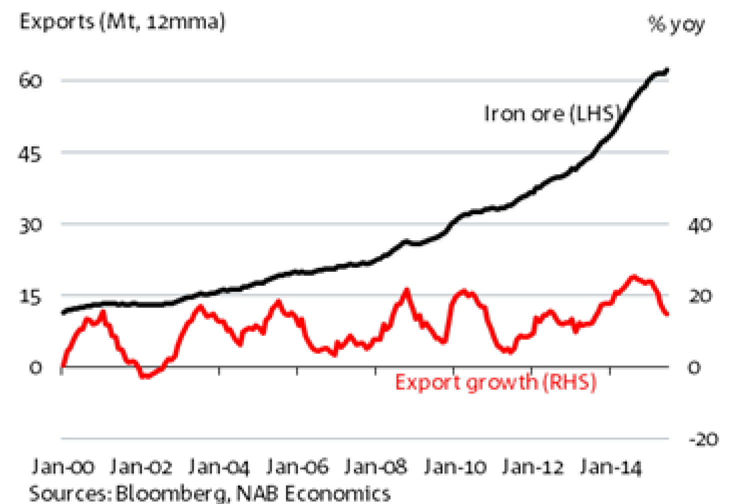
- **We forecast spot prices to average US$57 a tonne in 2015 and ease further to US$53 a tonne in 2016, reflecting the weakness in Chinese seaborne demand and ample global supply capacity.**

China's iron ore imports have trended modestly down across recent months



Source: CEIC, NAB Economics

Australia's iron ore exports have continued to increase in the first half of 2015, but the rate of growth is slowing



Sources: Bloomberg, NAB Economics

Metallurgical coal

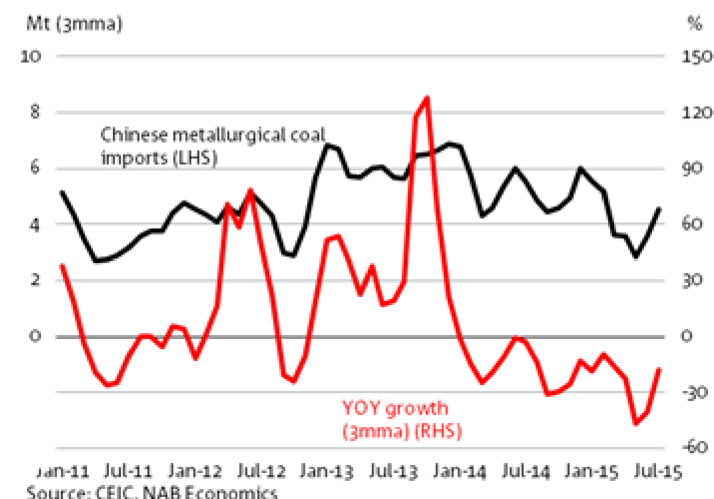
National Australia Bank

- Spot prices for hard coking coal have essentially stabilised since mid-May, trading near US$85 a tonne (for the Asia Clear Australian active contract), having fallen considerably since the start of the year. Quarterly contract prices were settled a little higher – at US$93 a tonne – for the third quarter, and we expect slightly weaker prices for Q4 – at US$88 a tonne.
- **Demand for seaborne metallurgical coal has weakened in 2015, driven by falling Chinese imports.** In the first seven months of the year, China's imports totalled 28 million tonnes – a year-on-year decline of 22%. Further weakness in China's steel industry is likely to result in an acceleration in this rate of decline across the remainder of 2015.
- **The coal requirements of China's blast furnace steel production are increasingly being supplied by domestic producers.** By our estimates, consumption of domestic metallurgical coal has fallen much more moderately – down around 2.0% over the first seven months of the year – with domestic supply accounting for around 91% of steel market requirements.
- Australia's exports of metallurgical coal have continued to increase – albeit the rate of growth has slowed in recent times. In the first half of 2015, Australian exports rose by 1.1% yoy to 91 million tonnes (compared with growth of 9.8% in 2014). Reflecting weakness in the seaborne market, there is little prospect for an acceleration in growth in the short term.
- Other major global producers have responded to weak demand and falling prices. US exports of metallurgical coal fell by almost 17% yoy in the first five months of 2015, while Canadian exports fell by over 12% yoy over the same period. We expect supply from these producers to remain constrained.
- **Weak market fundamentals are expected to keep contract prices subdued in the short term. Hard coking coal contract prices are forecast to average US$102 a tonne in 2015 and US$93 a tonne in 2016.**

Metallurgical coal prices settled around US$85 a tonne since mid-May

Source: Bloomberg, NAB Economics

China's steel sector demand increasingly met by domestic coal supply



Source: CEIC, NAB Economics

Thermal coal

- Spot prices for thermal coal have been relatively stable since late April – with the active Newcastle contract on the Intercontinental Exchange trading in the mid-US$50s to US$60 a tonne range. While prices have generally settled around these levels, they remain weaker than a year ago.

- China remains the world's largest coal producer – however coal production has fallen in 2015, as domestic producers struggle for profitability in a weak demand environment. Total production was around 2.1 billion tonnes over the first seven months, a decline of 5.1% yoy. For the full year, the China National Coal Association forecasts a 5% fall. **China's imports of thermal coal have also fallen significantly – over the first seven months, imports totalled 93 million tonnes, down 37% yoy.**

- Thermal coal demand in Japan is likely to decline in the short term, as the phased restart of the country's nuclear generation capacity gathers pace. In August, generation at Kyushu Electric's Sendai No. 1 reactor restarted, with the company anticipating an additional reactor to resume in October. In total, Japanese utilities have applied to restart 25 reactors, with regulators approving five applications so far. Utilities turned to coal and liquefied natural gas (LNG) to meet the shortfall in electricity generation due to the nuclear shutdown.

- There is considerable uncertainty around Indian seaborne demand in coming years – with the government's stated goal to end coal imports in the next two to three years. While this energy plan calls for increased domestic coal use, and a greater share for renewables longer term, this may prove unobtainable – supporting import volumes for some time.

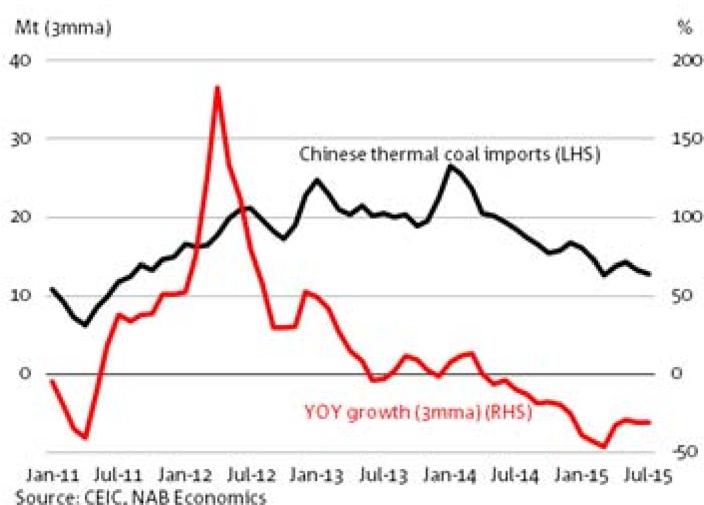
- **Weak trends in key import markets have prompted production cuts that have largely stabilised markets. Indonesian production fell by over 19% yoy in the first five months of the year,** while export growth from Australia slowed to 3.8% yoy in the first half of 2015 (from 6.7% in 2014).

- **We expect prices to remain largely range bound – with demand limiting the upside, and cost pressures the downside. The 2016 Japanese financial year contract price is forecast at US$62 a tonne (from US$67.80 this year).**

Spot prices have stabilised since April and are expected to remain range bound on weak demand and falling supply

Source: Bloomberg, BREE, NAB Economics

Weaker imports (and domestic production) points to falling thermal coal demand in China

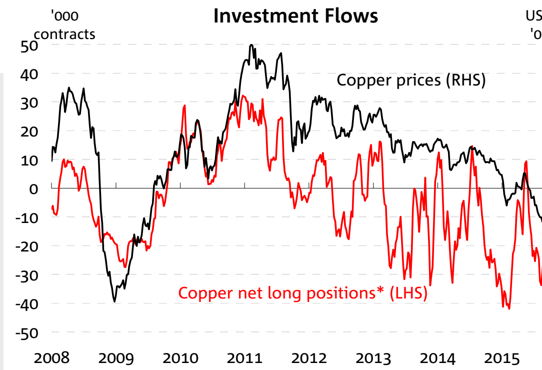


Source: CEIC, NAB Economics

Base metals: Copper

- Copper price was sitting at $5147/tonne on 31 August. Prices fell with the commodities complex, declining 6% in August to be 27% lower compared to a year ago.
- Global growth is running below trend, limiting the pace of expansion in commodity demand. In particular, the stock market meltdown in China and a softening in fixed investment spending are limiting demand for copper.
- Investor positioning has been mostly negative in 2015, but has reversed somewhat recently. It is possibly due to short traders taking profits in the price downturn but may well signal market rebalancing.
- Short term supply remains abundant. A small drawdown of Chinese bonded stocks was more than offset by inventory increases at the major exchanges. Both US and EU premiums remain low while Shanghai premium rose sharply from a historic low.
- **We are still forecasting strong increases in copper supply over the next two years**, with two new projects in Indonesia and Chile and production ramping up at several other sites. Supply growth is expected to peak in 2016, but could push back to 2017 due to a range of uncertainties including weather and strikes at mine sites.
- The International Copper Study Group forecasts world refined copper production to exceed apparent refined copper demand for both 2015 and 2016.
- Overall, in the short term downside risks remain with the weak global outlook, especially the slowdown in China, offsetting the support effects of lower energy prices and weaker commodity currencies. **Prices are forecast to remain depressed in 2016 at around $5300/tonne as new capacity is added, however supply disruptions might remain an ongoing theme.**

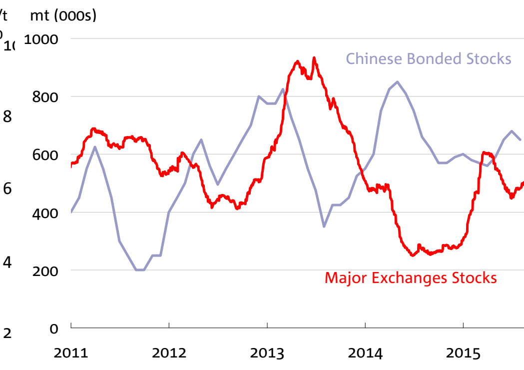
Copper Prices & Investment



* Combined futures and derivatives net long positions for non-commercial traders

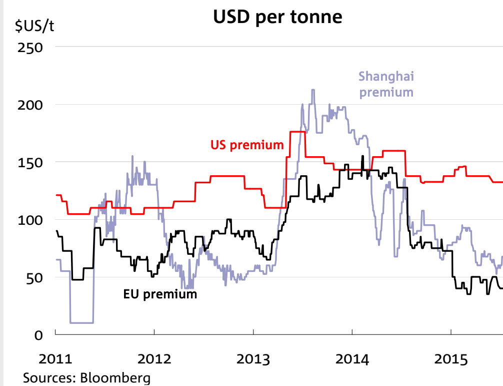
Sources: CFTC; NAB

Copper inventories



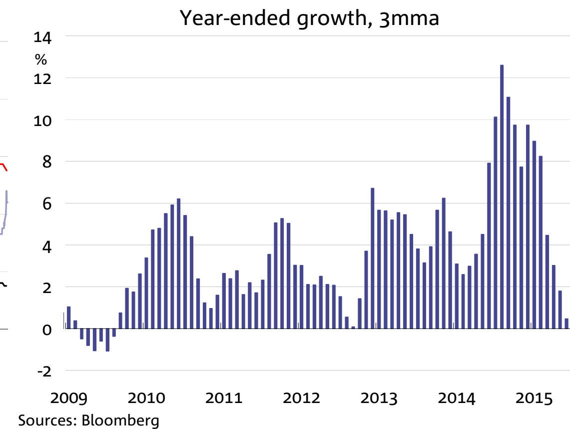
Source: Bloomberg, NAB

Copper Premiums



Sources: Bloomberg

Refined copper production



Sources: Bloomberg

Base Metal Prices*

Base Metal Prices

	Avg Price (US$/tonne) Aug-15	Monthly % change Aug-15	Aug-14 - Aug-15 % change
Aluminium	1550	-5.5	-24
Copper	5128	-6.0	-27
Lead	1705	-3.3	-24
Nickel	10369	-9.1	-44
Zinc	1808	-9.6	-22
Base Metals Index		-6.7	-30

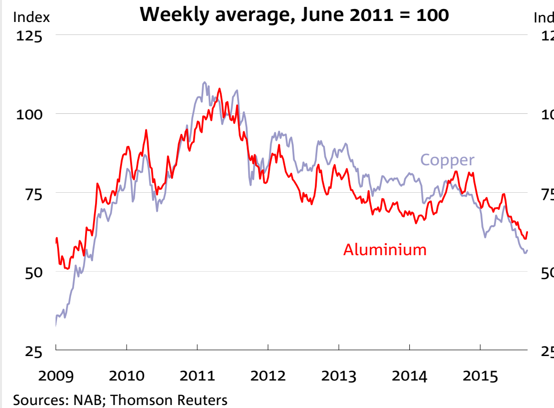
* Prices on an LME cash basis.

Sources: LME; NAB

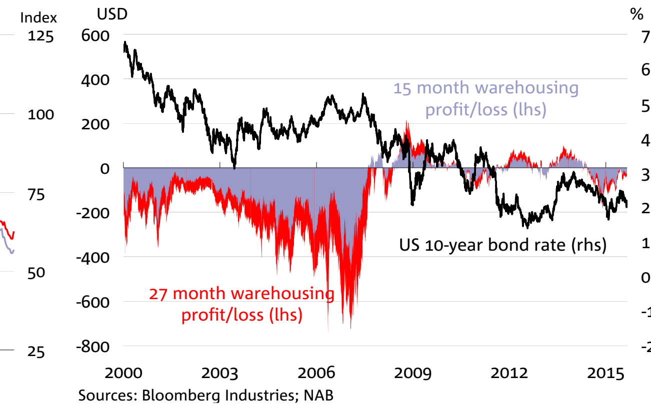
Base metals: Aluminium

- Aluminium prices continued falling on the back of weaker global growth and demand for commodities, down 5.5% in August to be 24% lower than a year ago.
- With China set to add the majority of world's new aluminium capacity and at lower costs, prices will remain subdued. Especially, new projects in the north-western region of Xinjiang will have access to captive coal mines and power plants with significantly lower electricity costs, putting downward pressure on prices. Cost consolidation in the domestic coal industry has further lowered input prices for aluminium smelters. Combined with the soft domestic demand, record levels of exports (in the form of semi aluminium products) continue to flow out of China, despite the price gap closing due to bigger falls in LME prices than the SHFE prices.
- Ex-China market remains in deficit , with LME inventories continuing to decline. However, the strong increase in Chinese production and exports have shifted the global market from a slight deficit in 2014 to a surplus.
- The rebound in the US economy has driven aluminium demand growth, while growth remains subdued outside the US. Over time, production is likely to increase with new projects and added capacity, especially in the Middle East and India. Demand may also rise as car manufactures are increasingly substituting aluminium for steel to build light weight cars.
- **We continue to forecast depressed premium levels (average $1680/tonne in 2016) with an oversupplied China market and a well supplied global market.**

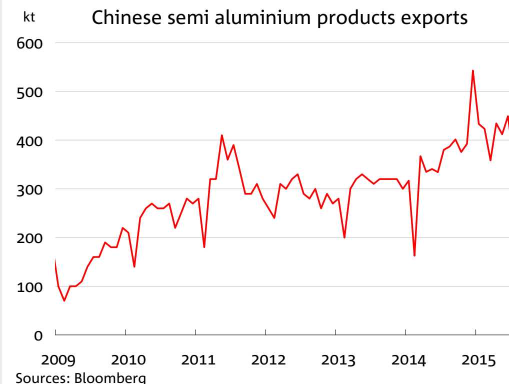
Copper & Aluminium Price (LME)



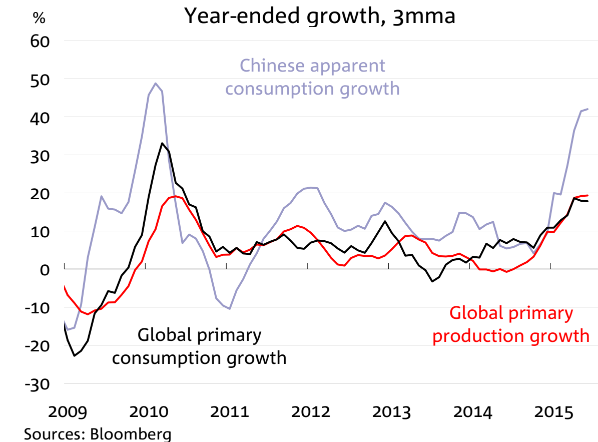
Aluminium Warehouse Incentives



Chinese aluminium exports



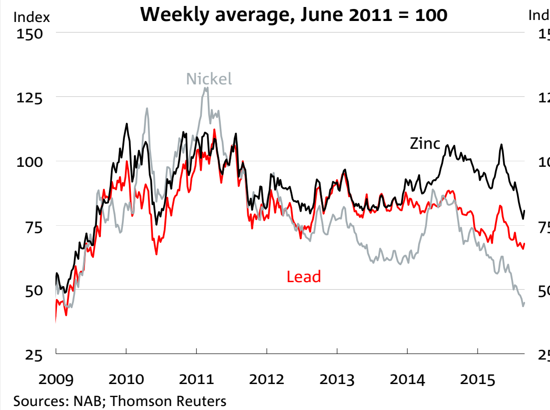
Aluminium Production & Consumption



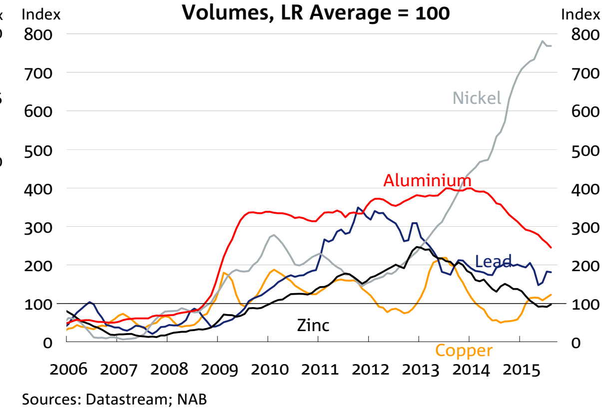
Base metals: Nickel, Lead, Zinc

- With inventory levels remaining high, nickel prices have declined more rapidly compared to the other base metals. Chinese imports of nickel ore from the Philippines continue to rise. However a depletion of higher quality ore stocks (mostly imported from Indonesia previously) means the increased reliance on lower grade ore will soon reach its limits. The timing seems to have been pushed back as the Philippines increases their output of medium and high grade ore. The decline of stockpiles of nickel ore at Chinese ports have stabilised while Chinese NPI production also increased, suggesting the supply is not as constrained. **Therefore, we forecast no strong price recovery in 2015, with average price of $12420/tonne.**
- The zinc market has been in deficit for the past three years, with overall exchange stocks continuing to decline. The deficit has resulted in some short-term supply response, with increases in mined supply. The strong demand in late 2014 has not continued, with Chinese economy and galvanised steel output growth slowing down. **With the planned closures of a few big mines from 2016 imminent, we forecast a medium term market deficit with average price of $2100/tonne, however downside risks remain with the slow recovery in China.**
- Lead prices fell back after surging by over 20% following a large cancellation of LME warrants in late March. The long-term fundamentals still point to a lack of new mined supply outside China and tighter environmental controls on the refined lead industry in China. However in the medium term demand remains weak and auto sales in China have begun to slow. **Overall we forecast a balanced market in 2015, with prices averaging $1800/tonne.**

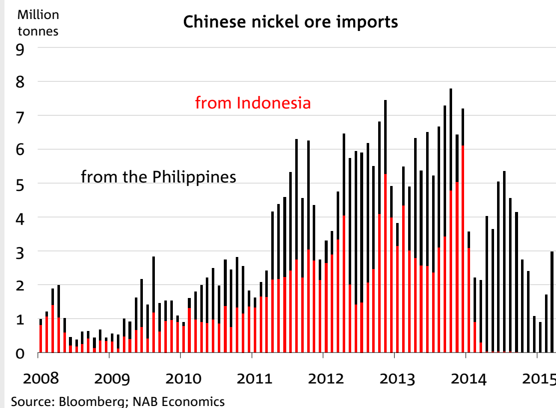
Nickel, Lead, Zinc Prices (LME)



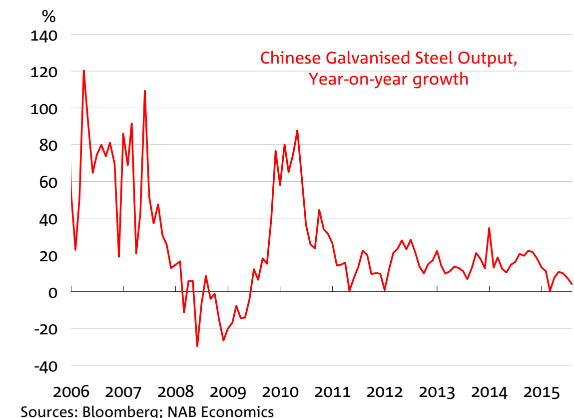
LME Base Metal Stocks



Chinese Nickel Imports



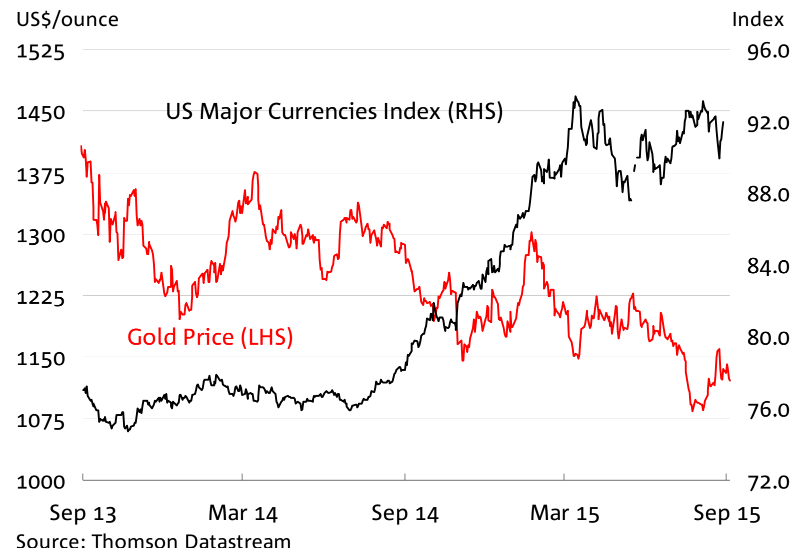
Chinese Galvanised Steel Output, YoY Growth



Gold Market

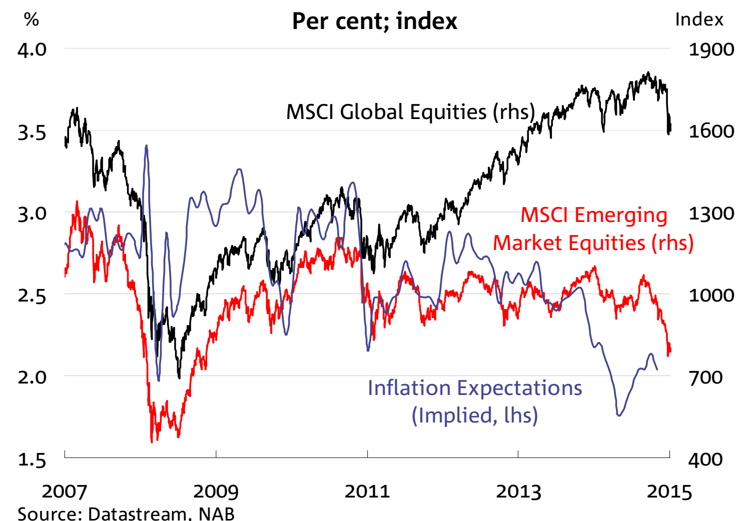
- **There were some signs of a return of gold's safe haven allure in August, but they were driven by market volatility and not expected to last.** Prices of the shiny metal staged a notable rebound in the last three weeks of August amidst a global equity rout and suggestions of a sharper-than-expected slowdown in China. However, August prices still averaged 1% lower than July at USD1119/ounce due to a low base at the start of the month.
- That said, the rally was relatively contained against the extreme volatility and increased market aversion witnessed in global financial markets.
- Gold's safe haven asset status has been challenged after its prices failed to pick up in response the earlier Greek crisis and sharp corrections in the Chinese equity markets. **It is our view that gold has become increasingly more of a hedge against currency risks, especially those stemming from the US, rather than general economic and geopolitical risks.** Against an overarching backdrop of likely further appreciation in the USD in line with the approaching US Fed tightening cycle (which we now expect to commence in December), gold prices remain entrenched in a long-term bearish cycle. The recent rallies are expected to be just once-offs, unless sustained market uncertainty translates into substantially slower global economic activity. **We forecast gold prices to fall below US$1000/oz by H2 2016.**
- **Investors' bearish sentiment was demonstrated by the holdings in the Exchange Traded Funds (ETFs), which resumed a downward trend after a brief respite in the March quarter.** ETF holdings are still expected to follow a mild downward trajectory as the US dollar appreciates. This trend will be further accentuated by the lack of inflationary pressures globally at present, which reduces demand for gold as an inflation hedge.
- **In Q2, jewellery demand from emerging countries fell sharply.** Indian jewellery demand recorded a 25% yoy fall as rural income was significantly impaired by damaged crops from unseasonal rainfall. Chinese purchases were also hit (-3% yoy) as consumer sentiment soured from slowing economic growth and skyrocketing equities which offered more attractive returns. In the near term, Chinese gold demand is likely to stay muted from heightened consumer caution despite the low prices. Meanwhile, European investor demand for gold bars and ETFs rose 14% yoy on the back of the Greek crisis.
- **Gold holdings by central banks continued to rise in Q2, to be 15% above its five-year average, as a number of central banks (led by Russia) leverage on gold as a means to diversify their reserve asset base.** People's Bank of China reported that it had increased its gold reserves by 57% since its last announcement in 2009, which was below market expectations, but confirmed the growing trend in gold reserve accumulation by institutions.

Gold & USD Index



Source: Thomson Datastream

Market Equity Indices and US Inflation Expectations



Source: Datastream, NAB

Outlook

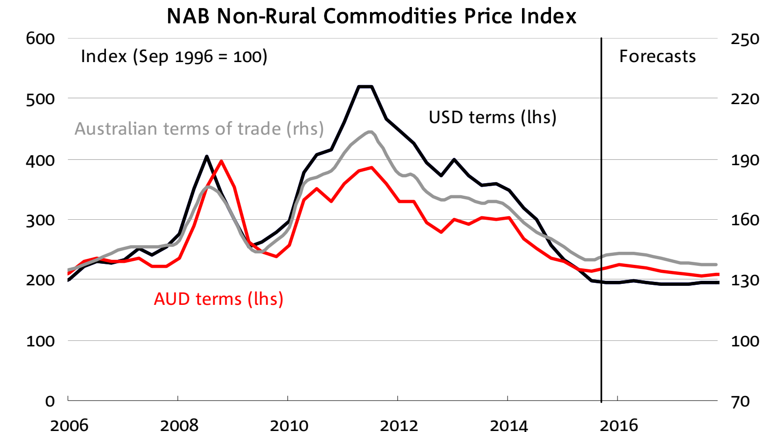
- **NAB's non-rural commodity price index** is expected to fall a further 8% quarter-on-quarter in September (in US dollar terms) – following an anticipated 7% decline in June. The decline in the quarter was larger than previously anticipated, reflecting the response in commodity markets to concerns over China's economic growth outlook, and ructions in financial markets that have seen the USD strengthen further. Over the past twelve months, declines in iron ore prices – Australia's largest single commodity export – have been a major driver of the index. A number of other commodities have also experienced significant declines, with falls in oil and copper prices making a notable contribution to the index decline.

- In annual average terms, **US dollar denominated non-rural commodity prices are expected to fall more than 30% in 2015, before experiencing a more moderate decline in 2016 (down around 7%).** Once again, iron ore is the main drag, although gold and coal are expected to make a meaningful contribution.

- **In Australian dollar terms, commodity price declines are slightly less substantial due to USD strength** – a trend that is expected to continue in the medium term as the US Fed starts to normalise monetary policy from late in the year. **After falling around 10% in 2014 and 17% in 2015 (in average terms), prices should start to stabilise in 2016 (broadly flat).**

- In light of these commodity price projections, along with expectations for relatively subdued import price growth (given currency pass-through has been relatively muted to date), **NAB are forecasting the Australian terms of trade to broadly stabilise** – rising modestly in the near term. In annual average terms, the terms of trade are forecast to fall around 9¼% in 2015 and flat in 2016.

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



Sources: ABARES, ABS, Bloomberg, Thomson Datastream, NAB Economics

	Unit	Spot 04-09-2015	Actual Jun-15	Forecasts Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17
WTI oil	US$/bbl	46	58	47	46	49	52	54	55	58	61
Brent oil	US$/bbl	51.4	63	51	50	52	55	57	57	60	63
Tapis oil	US$/bbl	49	64	51	50	53	56	58	58	61	64
Gold	US$/ounce	1121	1190	1120	1090	1050	1010	990	990	970	970
Iron ore (spot)	US$/tonne	55	58	53	55	54	55	53	51	50	50
Hard coking coal*	US$/tonne	n.a.	110	93	88	90	93	94	95	99	102
Semi-soft coal*	US$/tonne	n.a.	81	74	70	69	73	74	74	77	80
Thermal coal*	US$/tonne	60	68	68	68	68	62	62	62	62	62
Aluminium	US$/tonne	1587	1770	1590	1600	1630	1670	1700	1730	1770	1800
Copper	US$/tonne	5132	6055	5330	5360	5330	5300	5280	5280	5330	5380
Lead	US$/tonne	1652	1940	1740	1740	1780	1790	1810	1820	1830	1830
Nickel	US$/tonne	9924	13050	11090	11150	11590	12120	12660	13290	13830	14380
Zinc	US$/tonne	1779	2189	1930	1960	2000	2060	2150	2190	2200	2210
Henry Hub	US$/mmbtu	2.67	2.50	2.50	3.00	3.50	3.50	3.50	3.50	3.50	3.50
Aus LNG**	AU$/GJ	n.a.	10.19	12.33	10.07	10.16	10.61	11.05	11.45	11.29	11.71

* 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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