

# Minerals & Energy Commodities Update

by NAB Group Economics

June 2015



National  
Australia  
Bank

## Key Points:

- There were no signs of global growth accelerating in early 2015. Weak GDP results in the US, UK and Canada outweighed a pick-up in Japan and the Euro-zone and there were similarly mixed trends among the big emerging economies, see [Global & Australian Forecasts](#). In China, economic partials remain soft despite a loosening of monetary policy, prompting the People's Bank of China to cut its growth outlook (see [China Economic Update](#)). Heightened financial market volatility associated with a potential Greek default has had a moderate impact on some commodity prices more recently.
- Commodity prices have been mixed, partly in response to USD movements. The greenback recorded decent gains over May, but gave back ground in early June. The US Fed is expected to remain on hold at this point, but with markets having an eye to a September hike, that might push yields up and support the USD, which will mostly weigh on commodity prices. Additionally, improved US economic data is still expected to assist the USD rise. Offshore events remain key, with Greece and the ECB in particular, influential. NAB's AUD/USD forecast is unchanged, bottoming at around 73 cents in early 2016.
- Trends in bulk commodity markets were mixed in May. Iron ore prices have recovered from recent lows (on the back of production cuts in higher cost regions, including China) while metallurgical coal prices have continued to ease (reflecting oversupply). Iron ore prices are expected to average US\$60 a tonne in 2015 and ease further to US\$57 a tonne in 2016. Thermal coal prices were stable, following annual contract settlement.
- Oil prices rebounded sharply in April and May, benefiting from a stall in the USD rally, signs of slowing inventory build-up in the US, as well as unabated geopolitical volatility in the Middle East. However, they lost some momentum in June to-date following OPEC's decision to maintain its output quota and continuous global production strength. Oil prices are likely to remain around current levels in the near term, but supply consolidation and improving demand will drive prices gradually higher over 2016. Higher global LNG supply, combined with subdued oil prices, continue to weigh on LNG prices, although most indicators suggest prices have flattened out since March in AUD terms.
- The base metals complex had a strong rally till 5 May but it was driven more by speculation than fundamentals. Prices have since fallen back and are still declining. A low-volatility global environment for equity and commodity markets lately have helped to keep gold prices largely range bound.

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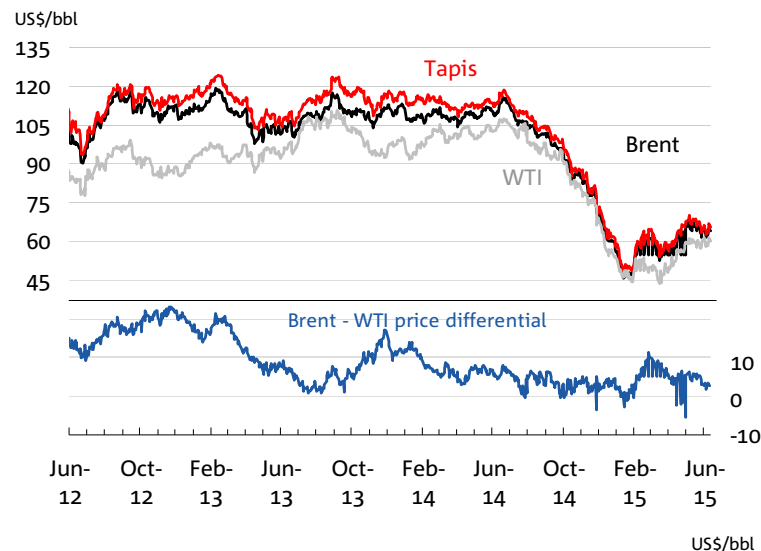
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# Oil

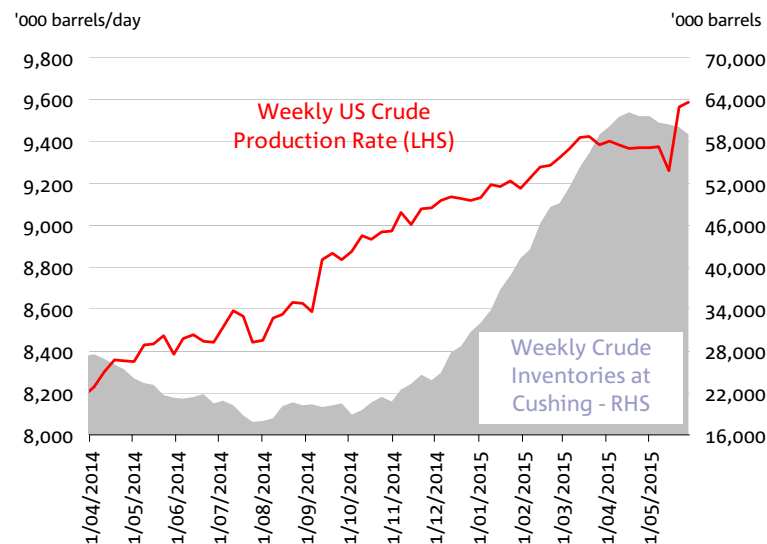
- Oil prices rebounded sharply in April and May, benefiting from a confluence of factors: a stall in the USD rally, signs of slowing inventory build-up in the US, as well as unabated geopolitical volatility in the Middle East marked by civil unrests in Yemen. In May, Brent and West Texas Intermediate (WTI) indices both rose by 9%, while Tapis charted an increase of 8% to average at US\$65, US\$59 and US\$67 a barrel.
- In the first week of June, oil prices lost some momentum ahead of the OPEC meeting and have remained subdued for June to date. In line with market expectations, OPEC decided to keep its output quota of 30 million barrels a day unchanged during the meeting. This, combined with weak Chinese crude import data for May, as well as a resilient US dollar on the back of a potential Greek debt default, weighed on oil prices in the past fortnight.
- Persistently strong production from OPEC members in an already oversupplied global market (exceeding the organisation's output quota for the 11th month to April), is likely to perpetuate the global oil glut for the rest of 2015 and possibly in 2016.
- US weekly field production of crude started to slow in late March, with the 60% fall in rig count since December finally showing some effects on overall crude production. However, a remarkable rebound in oil prices in April and May appeared to encourage a pick-up in crude production towards the second half of May, with weekly production rates for the two weeks spiking to around 9.6 million barrels a day, the highest weekly rate since 1970. This suggests that there is still plenty of latent production capacity in the US which can respond very quickly to price changes.
- Evidence from secondary sources suggests that US oil producers are working through a large backlog of drilled but uncompleted wells, which have a significantly lower cost hurdle to achieve production, and an estimated number of these wells from Bloomberg Intelligence points to a figure as large as 4,500 in Q1. This estimate, if credible, constitutes some upside risks to our expectations that US oil supply will come off notably more quickly in H2 2015. Combined with sustained strength in OPEC production, the current oil glut is expected to persist for longer than previously expected, thus limiting the upward mobility in prices for the rest of 2015 and 2016. As such, we expect oil prices to stay around current levels in the coming months before embarking on a more sustainable, albeit gradual, upward trajectory in 2016. For more information, please refer to our latest [Oil Market Update](#).

Daily oil prices (USD/barrel)



Source: Thomson Datastream

US Weekly Crude Production and Inventories at Cushing

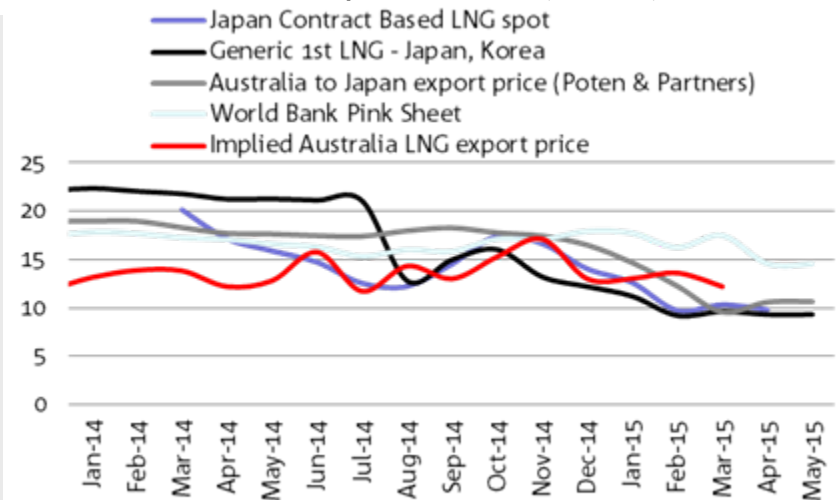


Source: EIA, NAB Group Economics

# Natural Gas

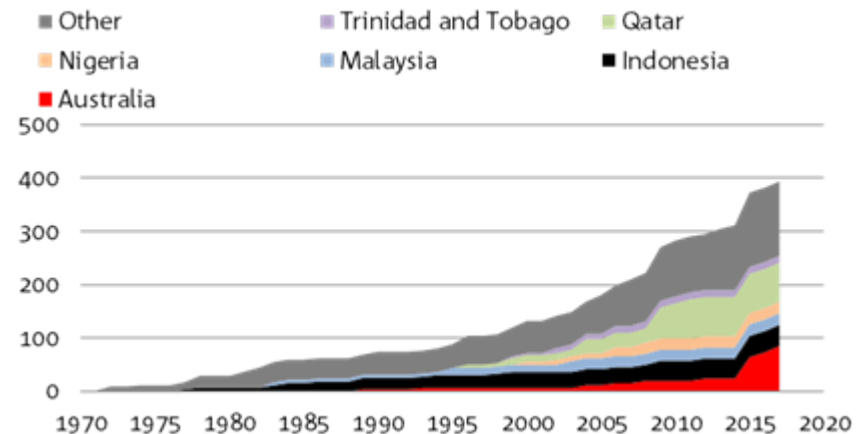
- Higher global LNG supply, combined with subdued oil prices, have continued to weigh on LNG price indices in recent months, although most indicators suggest that prices have flattened out since March when measured in AUD terms.
- Generic 1<sup>st</sup> LNG for Japan and Korea was unchanged in May, while the Poten & Partners Australia to Japan export price was up 0.4% in AUD terms to AUD10.65/GJ. The World Bank Pink Sheet Japan LNG price indicator was also virtually unchanged in AUD terms, down 0.1% to AUD14.56/GJ. The World Bank's data series can lag as it is based on estimates for the most recent two months, which may partly explain its elevated level compared to other LNG price benchmarks.
- 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 in 2015 to a total terminal capacity of 64.6 million tonnes per annum.
- In particular, 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 through 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) domestic prices to reflect global netback prices, underwritten mostly by long term contracts. Developments this year, such as Shell's takeover bid for BG Group (which in turn owns Queensland Gas Company's Queensland coal seam gas fields and the QCLNG LNG terminal) as well as AGL's new contract for 198PJ of gas from BHP Billiton/Exxon Mobil's Bass Strait fields from 2018 to 2020, underline these dynamics.
- Elsewhere, while Henry Hub prices in the US remain somewhat isolated from global financial and trading movements, they have traded between US\$2.64/mmbtu and US\$3.07/mmbtu in May, currently trading closer to the lower end of this range.

Selected benchmark LNG price indicators (AUD/GJ)



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

Actual and projected LNG terminal capacity by country to 2017 (million tonnes per annum)

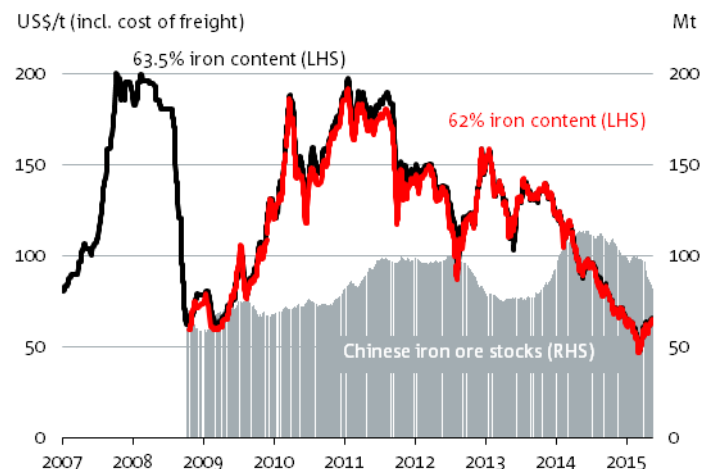


Source: Oxford Institute for Energy Studies, APPEA and NAB Group Economics

# Iron ore

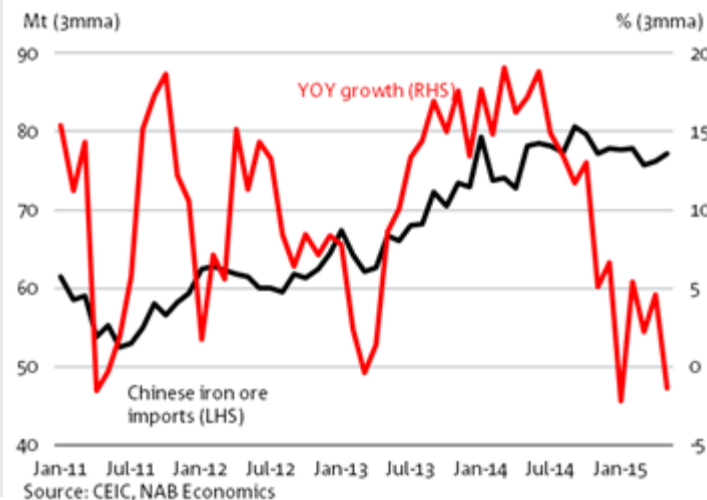
- Iron ore spot prices trended slightly higher in recent months – pulling away from levels that were effectively all time lows (since spot markets became more active less than a decade ago) near US\$45 a tonne in early April to US\$65 a tonne in mid June. Despite the upturn, prices are around 27% lower than a year earlier.
- The downward pressure on iron ore prices over the past eighteen months has been driven in part by the rapid increase in global supply. Australian producers have accounted for the majority of the increase – up around 9.3% yoy in the first four months of the year – with similar growth from Brazil, at around 12% yoy over the same period. In contrast, output from other higher cost producers has contracted.
- China’s domestic production of iron ore finally appears to be responding to weaker market prices. Chinese ore typically has a lower iron content than internationally traded ores and suffers significant cost disadvantages when compared with exporters such as Australia and Brazil. Until the end of 2014, Chinese ore production had remained strong (despite these factors), but it has fallen by 10% yoy in the first five months of the year.
- Iron ore stocks at Chinese ports appear to be falling – reflecting weaker imports and slowing domestic production. In mid June, stocks totalled 82 million tonnes – the lowest level since January 2014. This appears to indicate that supply has slowed more rapidly than iron ore demand (from weaker domestic steel output) – supporting the slight uptick in prices.
- China remains the key market for global iron ore imports, however the rate of growth has slowed considerably (particularly compared with the first half of 2014). In the first five months of the year, China’s iron ore imports totalled 378 million tonnes, an decrease of 1.2% yoy.
- We forecast spot prices to average US\$60 a tonne in 2015 and ease further to US\$57 a tonne in 2016.

Spot prices recorded a modest recovery from early April to mid June but still much weaker in year-on-year terms



Source: Bloomberg, Thomson Datastream, NAB Economics

China’s import demand slowed considerably across the second half of 2014 and remains comparatively weak

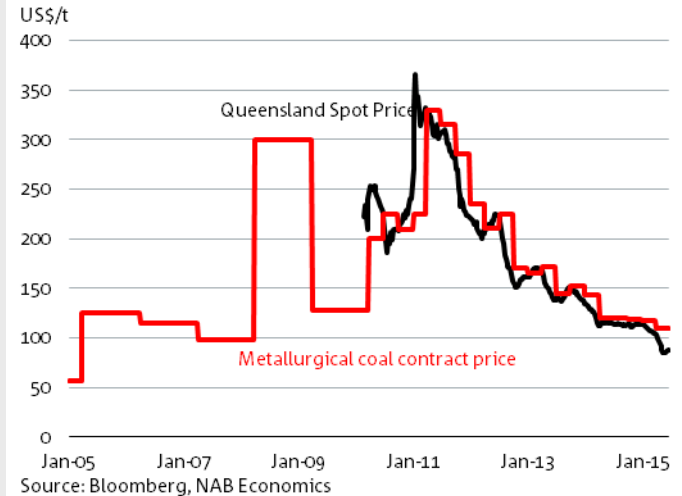


Source: CEIC, NAB Economics

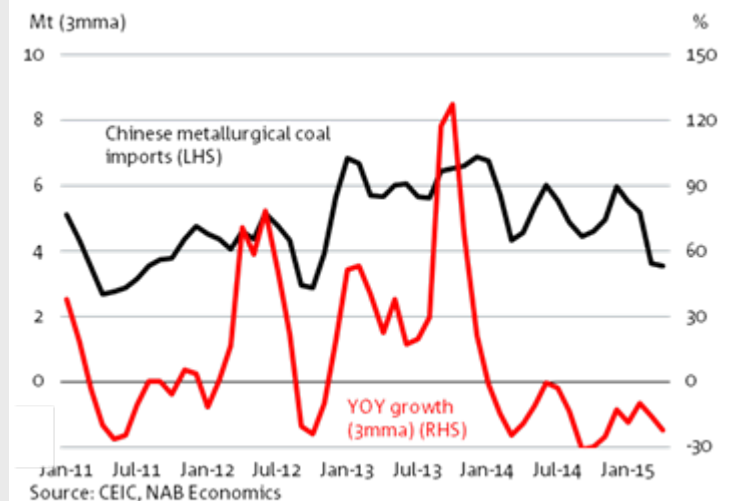
# Metallurgical coal

- Prices for hard coking coal remained largely unchanged in the twelve months to March 2015 (trading in a range of around US\$5 a tonne over the period). However since this time, spot prices have fallen – down from around US\$114 a tonne at the start of the year to US\$85 a tonne in mid-May (for the Asia Clear Australian active contract). The price subsequently stabilised before edging back to around US\$87 a tonne by mid-June.
- These prices are well below current contract levels – which were set at US\$109.50 a tonne for Q2 – indicating that the third quarter contract will be settled at a considerably lower level.
- Global metallurgical coal markets remain influenced by the weakness in China’s seaborne demand. In the first four months of the year, China’s imports of metallurgical coal totalled 14.7 million tonnes, a year-on-year decline of almost 25%. We don’t anticipate a major recovery in China’s imports – reflecting the ongoing weakness in the country’s steel sector.
- Recent price trends appear to indicate that the market has been oversupplied in early 2015 – following on from a balanced market for much of 2014 (as production cuts in North America offset weaker Chinese demand). Further strength in Australian exports and lower Chinese import volumes have softened the market once again – and further supply cuts may be required.
- The supply picture remains mixed. Australian exports are continuing to increase in early 2015, while Canadian exports have fallen by around 5% yoy in the first three months of the year. US export data for the first quarter has not yet been released, however total exports in 2014 fell by 4%.
- Further cuts to metallurgical coal production are likely to be necessary, given the sharp fall in prices across recent months. Quarterly contract prices are forecast to average US\$105 a tonne in 2015 and US\$95 a tonne in 2016, though current weakness highlights downside risk.

## Metallurgical coal prices have fallen significantly in recent months (following twelve months of stability)



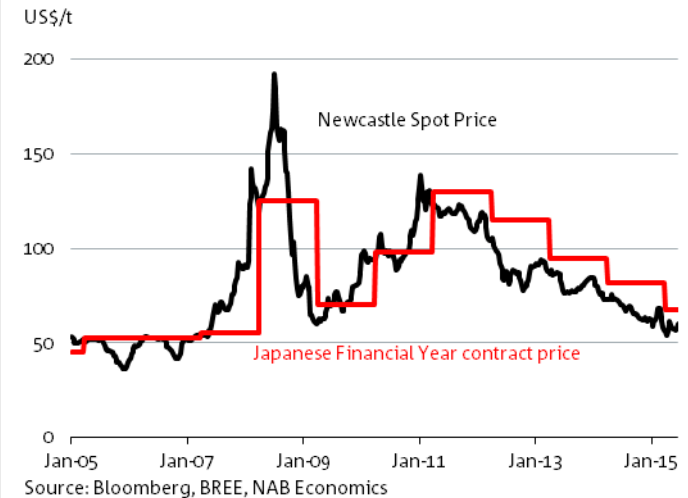
## China’s metallurgical coal imports have trended down from a late 2013 peak – driving prices lower



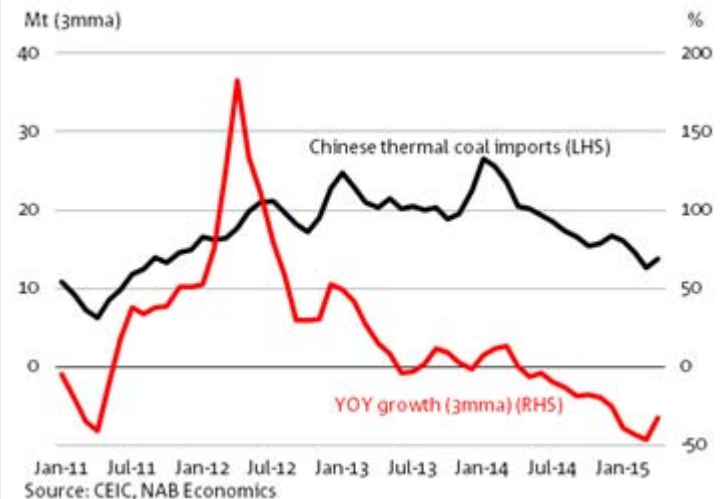
# Thermal coal

- Spot prices for thermal coal were relatively stable in May – having recovered from sub-US\$60 a tonne prices in April. The active Newcastle contract on the Intercontinental Exchange traded in a \$2.50 range across the month, trending back towards US\$60 by mid-June – around 16% lower than a year earlier.
- Minimal volatility in prices followed on from the settlement of Japanese financial year contracts in April – which set the annual contract price at US\$67.80 a tonne (a fall of 17% from the previous contract).
- Falling prices since early 2014 in part reflect the declining demand from China for internationally traded coal. China’s imports of thermal coal fell by almost 41% yoy to 54.4 million tonnes in the first four months of the year.
- Although coal remains the dominant fuel in China’s energy mix, coal consumption is falling, as authorities attempt to address the country’s air pollution crisis. Total coal production was around 1.15 billion tonnes in the first four months of the year – a decline of 6.1% yoy. Falling production and imports point to much weaker demand than in previous years.
- The China National Coal Association forecast production to fall by 5% in 2015. This trend is set to continue, with official targets to cut coal consumption by 13 million tonnes in the five years to 2017.
- Outside China, thermal coal demand in Japan is likely to be impacted by the phased restart of the country’s nuclear generation capacity. In late May, the third and final approval was granted to the Kyushu Electric Power Company to restart two units at the Sendai nuclear plant – likely in mid-July. The company expects the plant to return to normal operation by mid-August.
- Reflecting the softer thermal coal demand conditions and excess capacity for supply, we expect weak conditions to persist. The 2016 Japanese financial year contract price is forecast at US\$62 a tonne (from US\$67.80 this year).

Spot prices stabilised in May and early June , following on from the 17% fall in contract prices settled in April



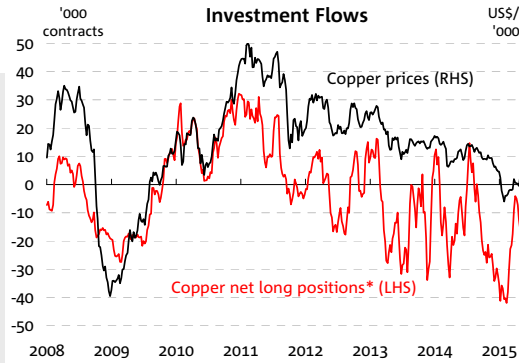
The plunge in China’s imports has been a key driver of the softening conditions in the thermal coal market



# Base metals: Copper

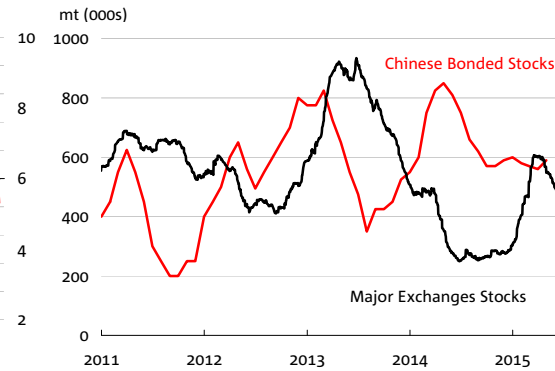
- After recovering strongly from the January lows, copper prices started correcting on 5 May have since declined around 7%.
- Demand remains weak, due to the subdued global economic recovery. Monthly global manufacturing output and world trade numbers were soft, particularly the latter, and business surveys do not show any clear evidence yet of an imminent lift in growth momentum. Growth numbers from China, the biggest consumer of many base metals including copper, have been soft and hopes for a strong government stimulus have not been realised.
- On the supply side, production has been rising and the latest International Copper Study Group reported a production surplus for February 2015. Attractive TC/RCs might induce further investment in smelter facilities. Improved scrap availability could also increase refined copper surplus and place further downward pressure on prices.
- Nevertheless, since April, rising inventory levels were reversed somewhat. Overall, we forecast a small surplus to balanced market in 2015 and strong mined supply growth in 2016. Given that China is settling into a slower pace of economic growth and hence lower commodities demand, the copper market is likely to remain in surplus in 2016 with prices depressed.
- Overall, prices in 2015 are expected to remain subdued, with downside risks from a slowing China and increasing new supply. However the risk remains that recent supply disruptions might become an ongoing theme.

## Copper Prices & Investment



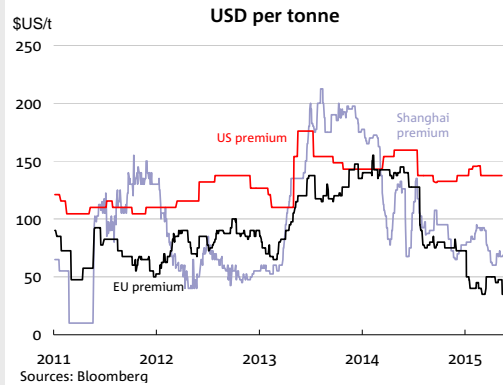
\* Combined futures and derivatives net long positions for non-commercial traders  
Sources: CFTC; NAB

## Copper inventories



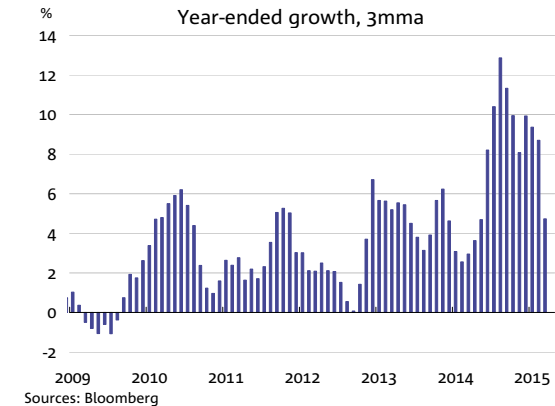
Source: Bloomberg, NAB

## Copper Premiums



Sources: Bloomberg

## Refined copper production



Sources: Bloomberg

## Base Metal Prices\*

Base Metal Prices			
	Avg Price (US\$/tonne)	Monthly % change	May-14 - May-15
	May-15	May-15	% change
Aluminium	1805	-0.6	3
Copper	6294	4.2	-9
Lead	1995	0.0	-5
Nickel	13480	5.0	-30
Zinc	2280	3.4	11
<b>Base Metals Index</b>		<b>3.1</b>	<b>-11</b>

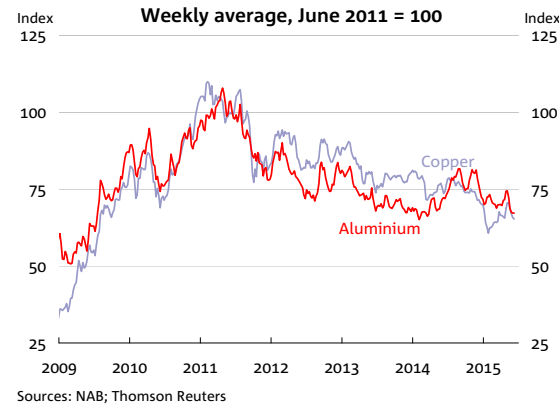
\* Prices on an LME cash basis.

Sources: LME; NAB

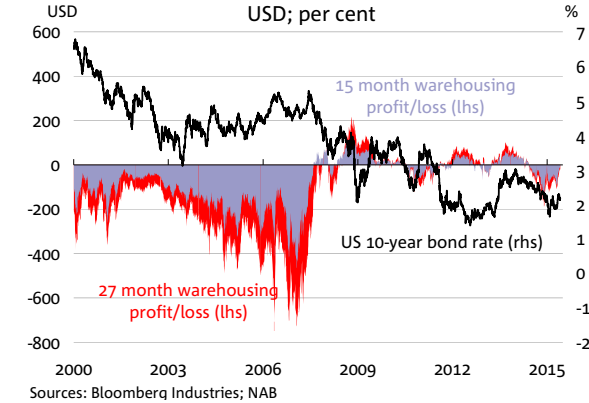
# Base metals: Aluminium

- Aluminium prices recovered along with the rest of the base metals complex from the January lows, and reversed some of the gains since early May. The average aluminium spot price declined 0.6% in May, to be 3% higher than a year ago, and continued declining into June.
- Record levels of exports (in the form of semi aluminium products) continue to flow out of China as the country adds over 90% of world's new aluminium capacity. With a slowing property market and weak industrial production data, domestic demand growth in China has been weak. 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 further downward pressure on prices and keeping SHFE prices lower than LME prices. With an oversupplied domestic market and higher premiums overseas, exports of semi products are forecast to continue increasing.
- Ex-China market remains in deficit, with LME inventories continuing to decline. Over time, production is likely to increase with new projects and added capacity, especially in the Middle East and India. Demand growth remains subdued outside the US. However, increasing demand is coming from the automotive industry which uses aluminium to build light weight cars.
- We continue to forecast depressed premium levels with an oversupplied China market putting downward pressure on prices and demand remaining weak globally, with deficits slowly easing ex-China.

## Copper & Aluminium Price (LME)



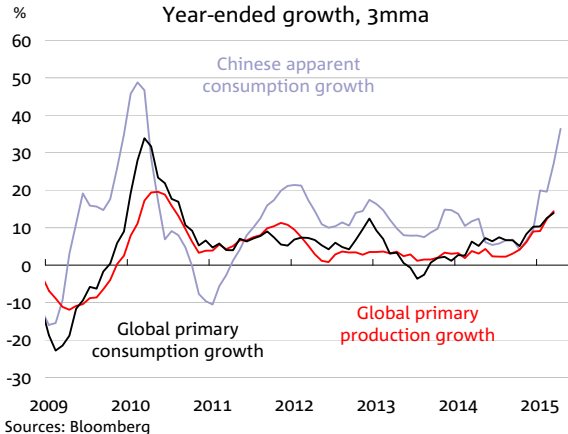
## Aluminium Warehouse Incentives



## Chinese aluminium exports



## Aluminium Production & Consumption

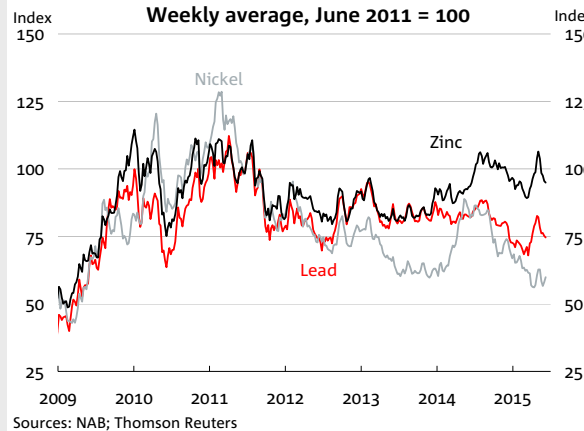




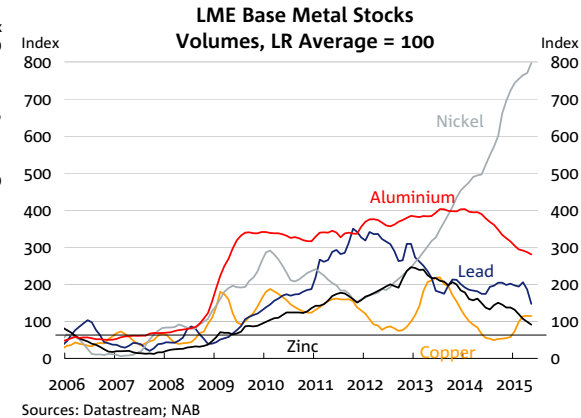
# Base metals: Nickel, Lead, Zinc

- Nickel prices were supported briefly by the rally in the overall base metals complex and a Colombian mine strike, despite its ample supply. The price gains following the introduction of Indonesia's exports ban have been completely reversed. The anticipated undersupply did not materialise as China is able to source nickel ore and concentrates from other sources (namely the Philippines). However, a depletion of higher quality ore stocks means the increased reliance on lower grade ore (largely sourced from the Philippines) will soon reach its limits. Stockpiles of nickel ore are already depleting at Chinese ports and Chinese NPI production growth has been slowing down. The timing for when high-grade ore will be depleted is uncertain, but is expected later this year.
- Zinc stock drawdowns continue to happen at LME, and now SHFE too. Prices rose strongly from January lows but retreated from early May along with other base metals. The zinc market has been in deficit for the past three years but short-term responses have increased mined supply. We forecast a more balanced market for 2015, but with the planned closures of a few big mines from 2016 and the stabilisation of the Chinese economic slowdown, a medium term market deficit is a possibility.
- Lead prices fell back, after surging by over 20% following a large cancellation of LME warrants on 23 March. Prices are likely to remain elevated for some time. 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. Strong auto sales in the US and China are also positive for the industry, although downside risks remain given the weakening Chinese economy.

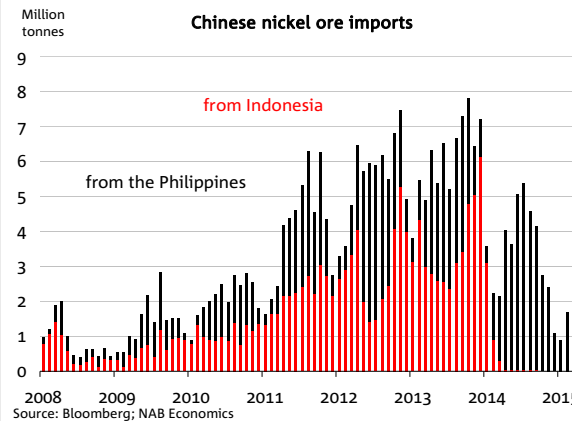
**Nickel, Lead, Zinc Prices (LME)**



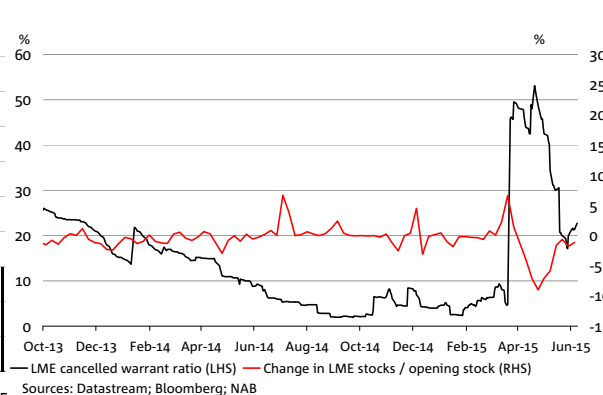
**LME Base Metal Stocks**



**Chinese Nickel Imports**



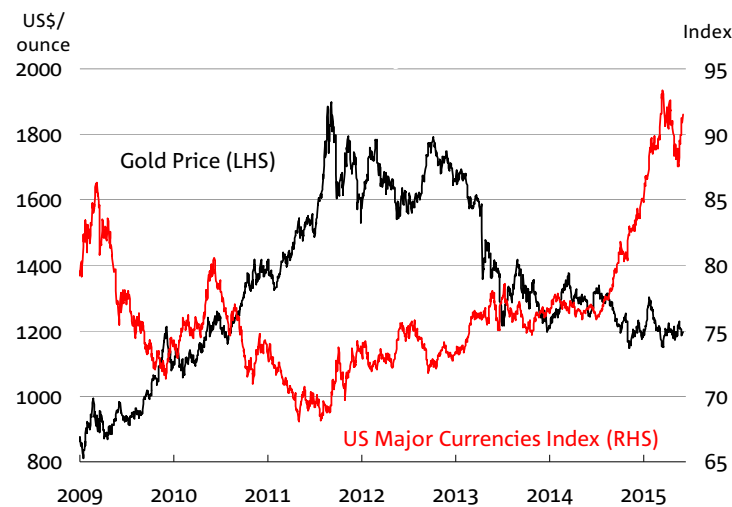
**LME Cancelled Warrants & Stocks**



# Gold Market

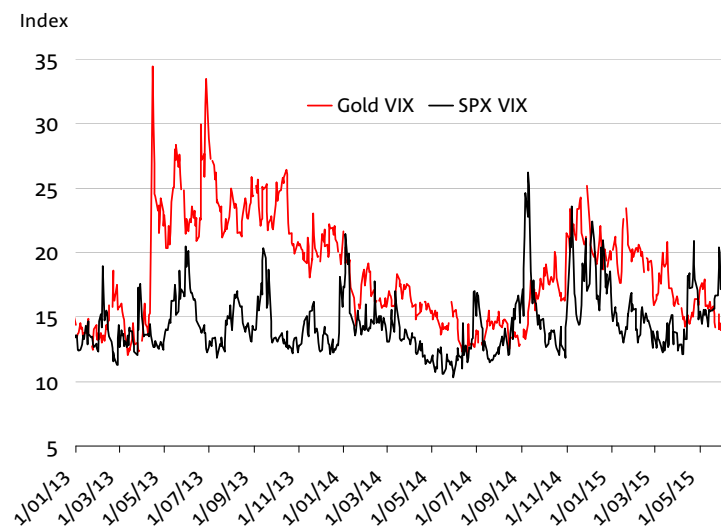
- A low-volatility global environment for equity and commodity markets in April and May has helped to keep gold prices largely range bound between US\$1170 and US\$1230 per ounce over the period. In May, gold prices averaged at around US\$1199 per ounce, largely unchanged compared to April. More recently, the heightened financial market volatility associated with a potential Greek default has provided some support to gold prices, although this has been partly offset by a stronger USD on the back of a stream of positive US economic data.
- The reduction in volatility was largely associated with contained macroeconomic volatility, as most major economies continue to be on a path of gradual recovery, notwithstanding a stall in US growth in Q1, while deflationary risks in the euro zone have somewhat receded from their peak at the start of the year. Policy stimulus from European Central Bank's quantitative easing program helped shore up inflation expectations from an 11-year low in April.
- Since the start of this year, investors' bearish sentiments on gold appear to have bottomed out, with the net flows into Exchange Traded Funds recording the first positive quarterly reading in the March quarter since the December quarter 2012.
- That said, ETF holdings are still expected to follow a mild downward trajectory as the US dollar appreciates, in line with the approaching US Fed tightening cycle which we expect to commence in September. 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 Q1, notable falls in jewellery demand were recorded in the US and Europe, corresponding to improving returns from equity markets. Conversely, major jewellery consumers of China and India recorded marginal increases, but the former showed a sharp year-on-year ( Q1 2015 vs Q1 2014) decline of 10%.
- Central banks have maintained their gold holdings at a strong level in Q1, despite a slight fall from the previous quarter, as the depreciating trend in a number of major currencies against the USD spurred central banks to shore up their asset bases. According to Bloomberg Intelligence's estimate, the gold holdings by the People's Bank of China may have tripled since it last updated them in April 2009, to around 3,500 mt, which makes it only second to US holdings of around 8133mt. For more information, please refer to the latest [Gold Market Update](#).

## Gold & USD Index



Source: Thomson Datastream

## Implied Gold and Market Volatility (VIX)



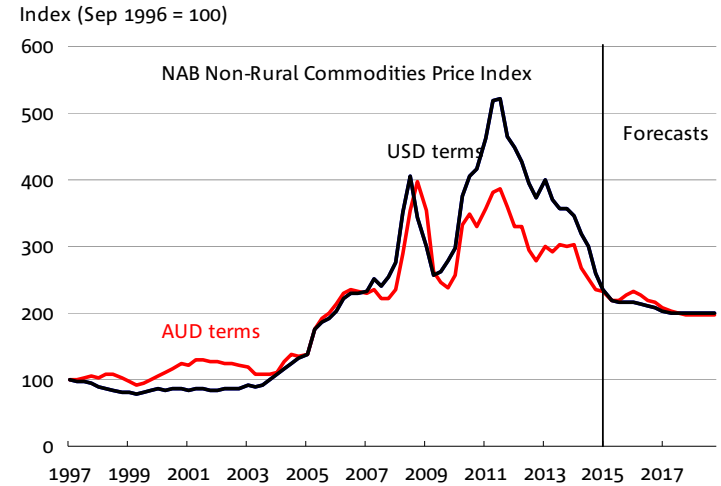
Source: Bloomberg

# Outlook

- NAB's non-rural commodity price index is expected to fall a further 2% quarter-on-quarter in September (in US dollar terms) – following an anticipated 7% decline in June. Over the past twelve months, declines in iron ore (and other bulk commodity) prices – Australia's largest commodity export – have been a major driver of the index. A number of other commodities have also experienced significant declines, with falls in the oil price making a notable contribution.
- In annual average terms, US dollar denominated non-rural commodity prices are expected to fall almost 30% in 2015, before experiencing a more moderate decline in 2016 (down around 4%). Once again, iron ore is the main drag.
- In Australian dollar terms, commodity price declines are slightly less substantial. After falling around 10% in 2014 and 15% in 2015 (in average terms), prices should start to stabilise in 2016 (down 1%) – the slightly more moderate rate of decline reflects expected depreciation of the Australian dollar as US monetary policy normalises.

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## 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	Actual		Forecasts						
		24-04-2015	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17
WTI oil	US\$/bbl	56	49	52	55	60	63	65	68	70	70
Brent oil	US\$/bbl	63.4	54	57	60	63	66	68	70	72	72
Singapore gasoil	AUc/litre	0.76	0.58	0.58	0.61	0.63	0.65	0.67	0.68	0.70	0.70
Tapis oil	US\$/bbl	63	57	60	63	65	68	70	72	75	75
Gold	US\$/ounce	1178	1220	1180	1150	1070	1060	1060	1060	1060	1060
Iron ore (spot)	US\$/tonne	57	63	58	60	61	60	58	56	54	52
Hard coking coal*	US\$/tonne	n.a.	117	110	98	95	94	93	96	97	99
Semi-soft coal*	US\$/tonne	n.a.	83	78	70	68	67	66	68	69	71
Thermal coal*	US\$/tonne	64	82	68	68	68	68	62	62	62	62
Aluminium	US\$/tonne	1843	1802	1790	1790	1800	1840	1880	1910	1950	1990
Copper	US\$/tonne	6031	5841	5900	6080	6260	6230	6200	6170	6170	6230
Lead	US\$/tonne	2060	1810	1960	2030	2050	2090	2110	2130	2140	2160
Nickel	US\$/tonne	13158	14396	13530	14340	15210	16120	16760	17430	18130	18860
Zinc	US\$/tonne	2244	2080	2180	2210	2220	2260	2310	2350	2400	2410
Henry Hub	US\$/mmbtu	2.56	2.87	2.50	2.50	3.00	3.50	3.50	3.50	3.50	3.50
Japan LNG**	US\$/mmbtu	n.a.	14.31	12.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00

\* 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.

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