# COPPER MARKET OUTLOOK

## JUNE 2017

**Author: Amy Li, Economist**

# HIGHLIGHTS

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Copper prices have unwound most of the gains that followed last November's US election and the March quarter supply disruptions from major mine strikes. The LME cash price sits around US$5700/tonne at the time of writing, down from a high of around $6100/tonne reached in mid February. **We forecast the market to be largely balanced or in small deficit in 2017 and 2018, with prices moving sideways given uncertainties on both the supply and demand sides.**

Some of the world's largest copper mines faced supply disruptions earlier this year, including a six week strike at Escondida, the world's biggest copper mine, and a ban on exports in Indonesia which saw Freeport's production and shipments fall. While these disruptions have been resolved and operations returned to normal, the ongoing dissatisfaction among workers over contract conditions (which were settled during a period of low prices and low profitability) could see them strike again. Weather is also a factor that could cause disruptions, given many of the mines are in areas prone to cyclones and flooding. **Going forward, supply disruptions are likely to remain an ongoing issue. Companies seem to be getting better at managing worker demands, however, weather factors are harder to manage.** While these risk factors are known and have been somewhat priced in, uncertainty about the extent of future disruptions could still have an impact on prices.

**Demand growth in China, copper's biggest consumer, is expected to slow gradually.** Construction activity has remained stronger than expected, however our view remains that it should gradually slow due to tighter regulations and policy restrictions aimed at tightening the housing market. US demand is expected to improve, especially given the proposed large infrastructure spending. However to date little details have been revealed on Trump's infrastructure package and the market less sure about whether such measures will pass in Congress. **Given that the size of US copper demand is dwarfed by Chinese demand, any increase in US spending will be more of a support to sentiment, rather than changing the demand picture substantially.**

In the meantime, **large quantities of copper tied up in Chinese bonded warehouses pose significant upside risk to supply,** especially given the narrowing interest rate differentials which could see copper carry trades unwound and inventory released into market.

**Given uncertainties on both sides, we forecast the refined copper market to be balanced (or in small deficit) in 2017 and 2018, with prices moving sideways, averaging at US$5720/tonne.**

## CONTACTS

**Amy Li**
Economist
+61 3 8634 1563





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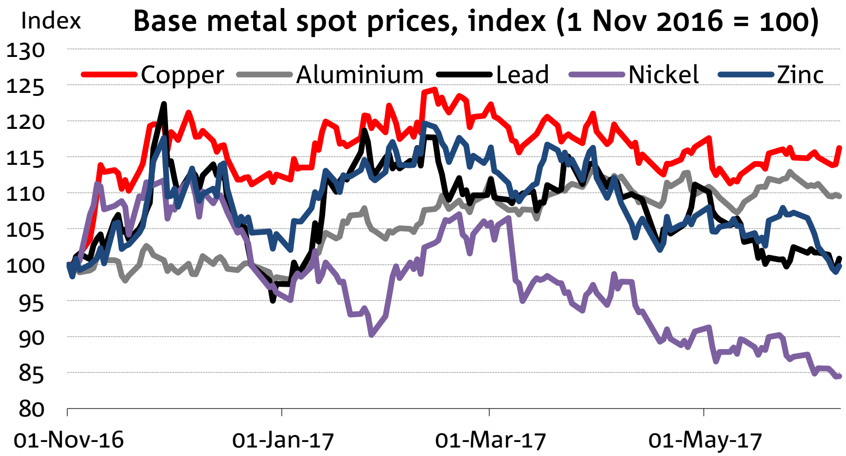
# COPPER PRICE MOVEMENT

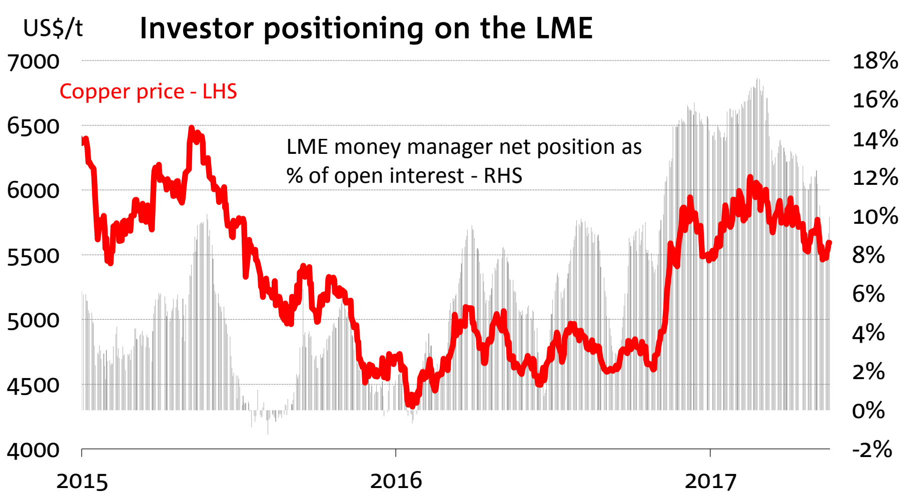
*Trump rally losing momentum*

## TRUMP TRADE HAS BEEN UNWOUND FOR MOST METALS




Source: Bloomberg

## INVESTOR OPTIMISM WANED IN Q2




Source: Bloomberg

- Copper, along with other industrial metals, surged following the US elections in November 2016. Sentiment improved on Trump's proposed infrastructure plan, which would see demand for industrial metals including copper increase.
- Copper price reached a high in February and has since fallen back. Most of the price gains since last November have now been unwound. The lack of details on the infrastructure package and doubt over President Trump's ability to pass legislation in Congress has dampened the previously buoyant sentiment.
- Strikes at some major copper mines in South America and an export ban in Indonesia have reduced copper concentrates supply significantly in Q1, providing support for prices. Most of the strikes have now been resolved, but supply disruptions are likely to remain an ongoing issue.
- Investor positioning turned more bullish towards the end of 2016, on an improved global economic outlook and more positive market sentiment following the US elections. Net long positions have since pared back, but remain at elevated levels. Going forward, uncertainty around mined supply and global economic growth, especially Chinese growth, will likely see investors constantly searching for new signals and revising their positioning.



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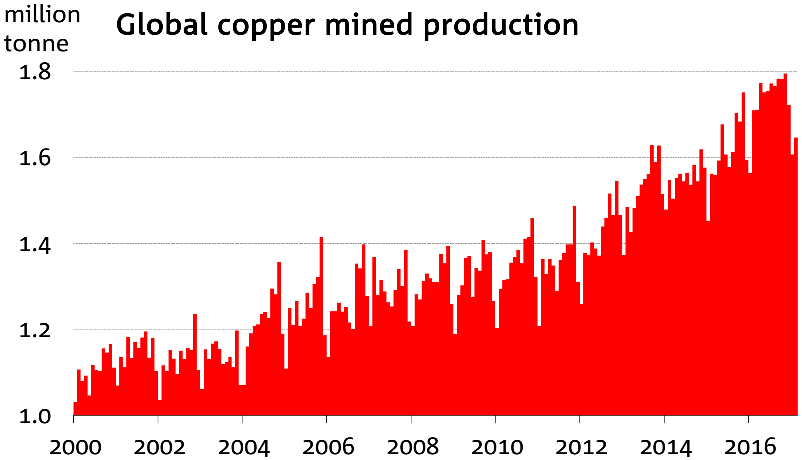
# MINED SUPPLY

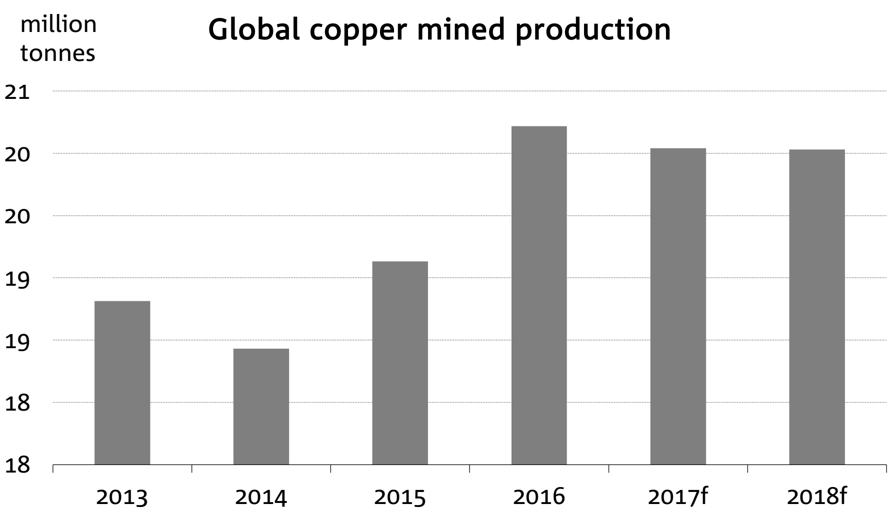
## *Production growth to slow down*

### MINED PRODUCTION INCREASED SIGNIFICANTLY IN 2016




Source: Bloomberg

### PRODUCTION GROWTH TO DECLINE OR SLOW IN 2017 & 2018




Source: International Copper Study Group, NAB

- Global mined production increased strongly in 2015 and 2016, up 4% and 6% respectively. New and expanded capacity combined with relatively few weather and strike disruptions contributed to the rise.
- The same rate of growth is no longer expected in 2017 and 2018. While concentrate supply is expected to remain steady in 2017, solvent extraction-electrowinning (SX-EW) production is expected to fall, overall resulting in a small decline in world mined production (see bottom chart).
- Supply disruptions are likely to remain an ongoing issue. Chilean production was down earlier this year, due to the strike at Escondida and lower output from Codelco mines. The six-week strike at Escondida ended in late March, with output estimated to have fallen 60% over the quarter. Strikes at Southern Copper's Peruvian mines and refinery were resolved in late April after two weeks, with limited supply disruptions as the company used temporary workers to maintain production. Freeport also resumed exports in late April from its Grasberg mine in Indonesia, after being suspended by the government since mid January. However, union workers started a strike on 1st May over job security, which could last until the end of June.
- Supply disruptions due to worker strikes or weather will remain an ongoing theme. Workers are increasingly demanding the renegotiation of contracts previously settled during a period of low prices, and failure to obtain better working conditions could see further strike action. While such risks are known and have been somewhat priced in, the uncertain extent of future disruptions could still have an impact on prices.
- No significant supply additions are currently expected from new projects or expansions, however the recent higher prices could change the picture.

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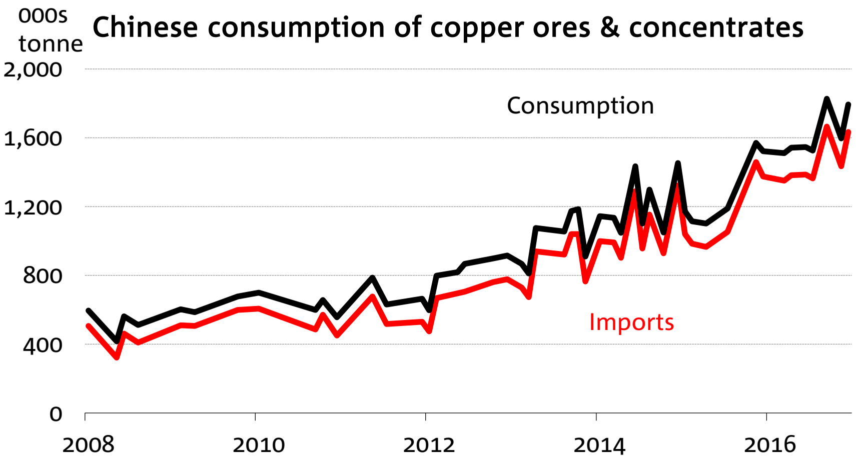
# REFINED SUPPLY

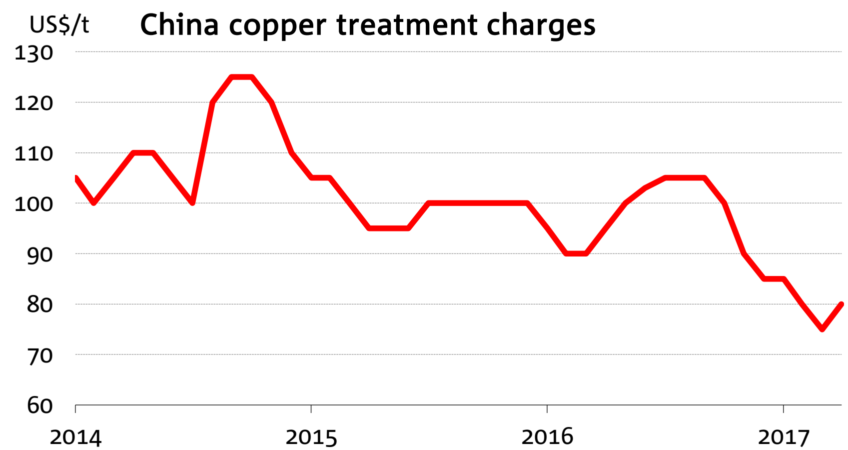
## *Slower growth in world refined production*

### CHINA RELIES ON IMPORTS FOR CONCENTRATES



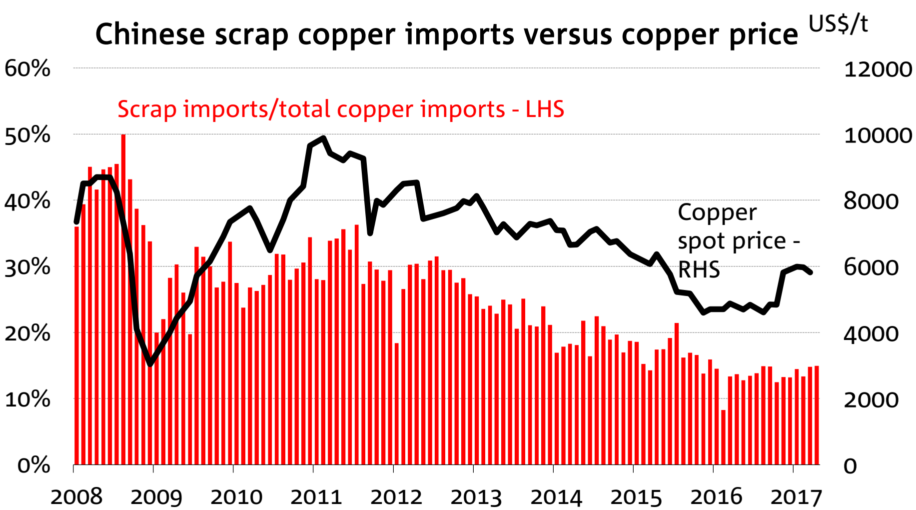

Source: Bloomberg, NAB

### TC/RC REMAIN CONTAINED




Source: Bloomberg

### SCRAP IMPORTS CORRELATE WITH PRICES




Source: Bloomberg

- China has a heavy reliance on imports for ores and concentrates supply, most of which comes from South America, as domestic Chinese ores are mostly of poor grade. Towards the end of 2016, concentrates supply tightened, which saw refiners lower TC/RC to attract business. The major supply disruptions in early 2017 further exacerbated the situation, together with increased refining capacity, saw TC reached below $80/t. improved supply conditions have since saw TC/RC rise again. China also tends to increase scrap imports as concentrate supply tightens.
- The International Copper Study Group forecasts world refined production to increase by around 2% in 2017 and 1.5% in 2018. China is expected to remain the biggest contributor to refined production growth in 2017 and 2018, while world ex-China production is expected to remain largely unchanged.

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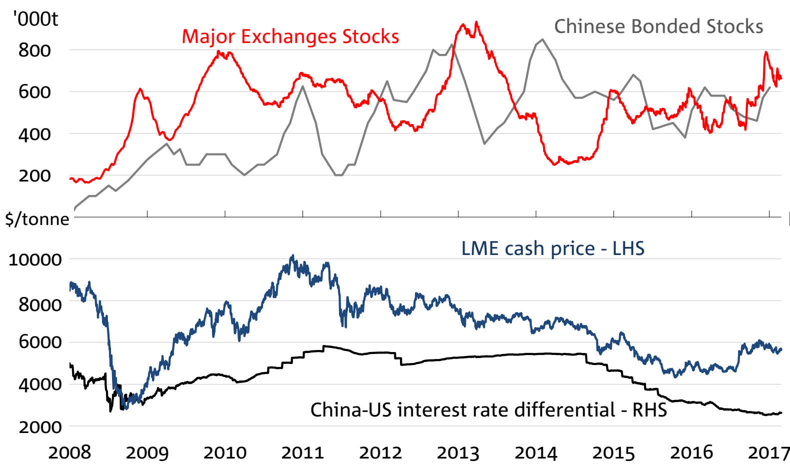
# CHINESE BONDED STOCKS

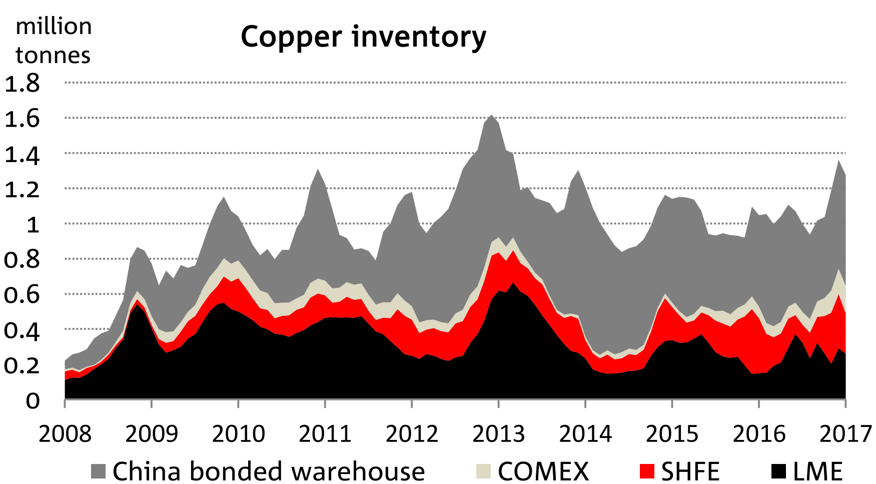
## *Significant bonded stocks pose upside risks to supply*

### NARROWING INTEREST DIFFERENTIAL




Source: Bloomberg, NAB

### SIGNIFICANT INVENTORY AT BONDED WAREHOUSE




Source: Bloomberg

- Inventory financing using copper and other metals has long been a popular trade, especially given the tight credit control in China and the interest rate differential. Arbitrageurs would borrow offshore at low interest rates using copper as collateral, and invest in higher-yielding Chinese assets, to take advantage of the interest differential.

- However as the Chinese central bank cut interest rate to stimulate its economy and the US Fed has started raising rates, the China-US interest differential has narrowed substantially. The incentive for engaging in copper carry trades has diminished somewhat as a result.

- There is however still large quantity of copper tied up in Chinese bonded warehouses. Some estimates put it at 10% of global copper demand (Chinese apparent demand accounts for around 45% of global copper demand). At the height of these financing deals, around 70% of Chinese refined copper imports were believed to be used to obtain financing rather than industrial consumption.

- Chinese bonded stocks have risen again since the start of 2017, as LME inventory is being run down and in line with more bullish market sentiment compared to 2016. There is significant risk of these bonded stocks re-entering the market, potentially increasing supply substantially. Given the narrowed interest rate differential, these carry trades are likely to be unwound eventually. The speed at which this happens could have important implications for copper supply and therefore prices.



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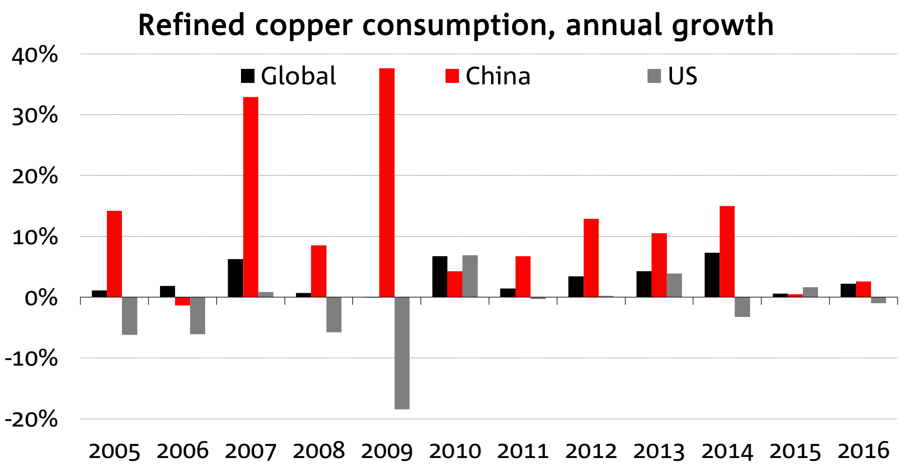
# DEMAND

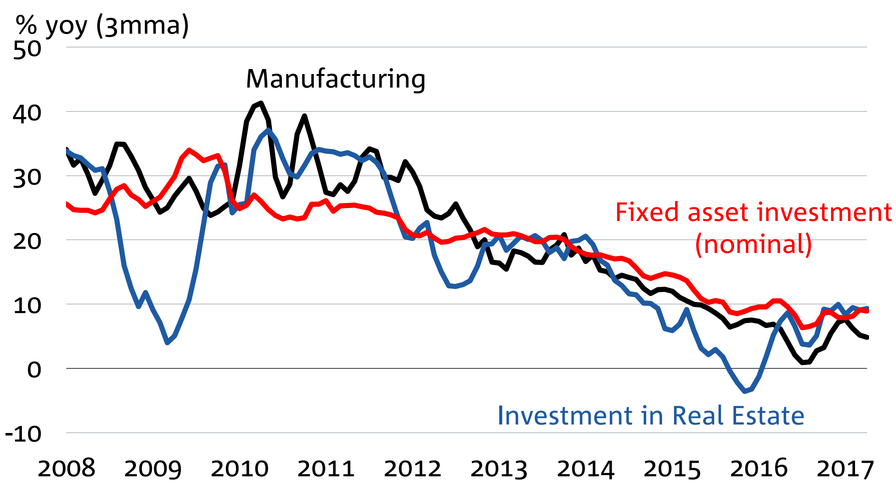
## *Chinese demand to slow gradually*

### COPPER CONSUMPTION GROWTH DRIVEN BY CHINA




Source: Bloomberg

### MANAGED GROWTH SLOWDOWN IN CHINA




Source: CEIC, NAB Economics

- China has been driving global copper consumption growth in the past decade and is expected to continue to do so. The global economic outlook has improved since last year. The November US elections also proved supportive to sentiment, especially given the proposed large infrastructure spending. However, at this stage little detail has been revealed around the infrastructure package, while US copper consumption is relatively small compared to major users such as China in any case. The improvement in the global economic outlook has been driven more by the advanced economies, with the outlook for developing economies weakening somewhat. Despite that, infrastructure development in major countries including China, the US and India will continue to sustain copper demand.

- Indicators on the Chinese economy continue to point to an easing in growth, rather than sharp slowing. Given the strong results in the March quarter, fiscal spending in the coming months will likely be weaker. NAB's forecasts remain unchanged – with China's economy to grow by 6.5% in 2017 (with risk weighted to the upside), before slowing to 6.25% next year and 6.0% in 2019. Despite efforts to cool the housing market, investment in real estate has continued to grow. Our view remains that construction activity should slow, due to tighter regulations and policy restrictions, however the slowdown is likely to be a gradual process. As the Chinese economy cools, demand growth for copper and other metals is likely to slow as well, but at a gradual and controlled pace rather than a sharp slowdown.



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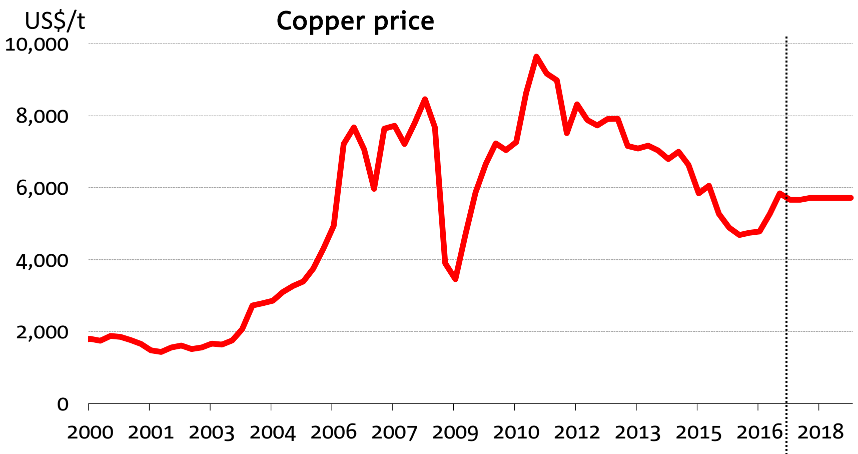
# FORECASTS

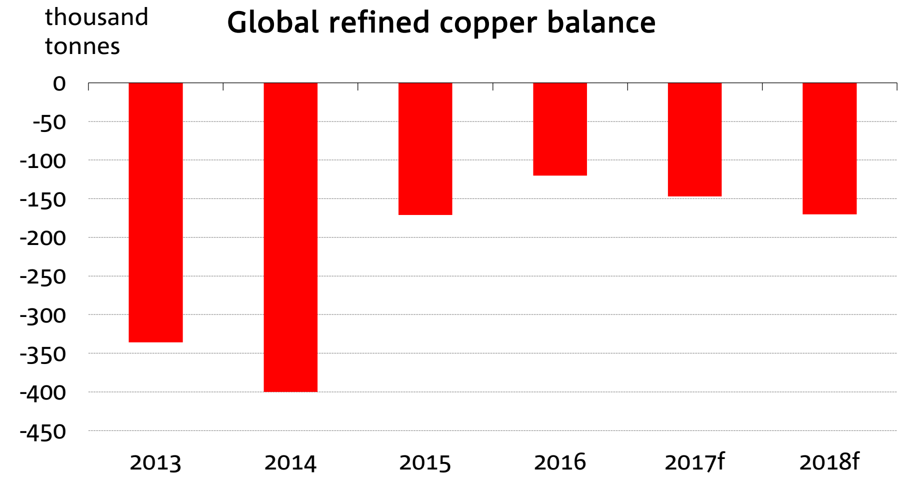
## *Small deficit forecast for 2017 and 2018*

### COPPER PRICE TO MOVE SIDEWAYS IN 2017 AND 2018




Source: Datastream, NAB

### ICSG FORECASTS SMALL DEFICITS




*China apparent usage basis
Source: International Copper Study Group, NAB

The International Copper Study Group (ICGS) forecasts a small deficit in the refined copper market in 2017 and 2018, based on apparent Chinese consumption. ICGS have revised their forecasts since their October 2016 meeting, to reflect the improved global outlook. Their forecasts do not, however, take into account the large Chinese bonded warehouse stock. The unwinding of copper carry trades could potentially release significant supply from these warehouses and put downward pressure on prices. Therefore we believe the deficits could be smaller than ICGS forecasts. We believe Chinese demand growth will gradually slow, while supply disruptions will remain an ongoing issue. As a result, we forecast copper prices to move sideways in 2017 and 2018, averaging $5720/tonne.

**NAB Forecasts - Quarterly Average Terms**

| | Spot | Actual | Forecasts | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| US$/tonne | 07/06/17 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 |
| Copper | 5592 | 5837 | 5660 | 5660 | 5720 | 5720 | 5720 | 5720 | 5720 |

Sources: Thomson Reuters; NAB Economics

## Group Economics


Alan Oster
Group Chief Economist
+61 3 8634 2927

Jacqui Brand
Personal Assistant
+61 3 8634 2181


## Australian Economics and Commodities


Riki Polygenis
Head of Australian Economics and Commodities
+(61 3) 8697 9534

James Glenn
Senior Economist – Australia
+(61 4)55 052 519

Amy Li
Economist – Australia
+(61 3) 8634 1563

Phin Ziebell
Economist – Agribusiness
+(61 4) 75 940 662


## Behavioural & Industry Economics


Dean Pearson
Head of Behavioural & Industry Economics
+(61 3) 8634 2331

Robert De Iure
Senior Economist – Behavioural & Industry Economics
+(61 3) 8634 4611

Brien McDonald
Senior Economist – Behavioural & Industry Economics
+(61 3) 8634 3837

Steven Wu
Economist – Behavioural & Industry Economics
+(613) 9208 2929


## International Economics


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

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

Gerard Burg
Senior Economist – Asia
+(61 3) 8634 2788

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


## Global Markets Research


Peter Jolly
Global Head of Research
+61 2 9237 1406


## Australia

**Economics**


Ivan Colhoun
Chief Economist, Markets
+61 2 9237 1836

David de Garis
Senior Economist
+61 3 8641 3045

Tapas Strickland
Economist
+61 2 9237 1980


**FX Strategy**


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

Rodrigo Catril
Currency Strategist
+61 2 9293 7109


**Interest Rate Strategy**


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

Alex Stanley
Senior Interest Rate Strategist
+61 2 9237 8154


**Credit Research**


Michael Bush
Head of Credit Research
+61 3 8641 0575

Andrew Jones
Credit Analyst
+61 3 8641 0978


**Distribution**


Barbara Leong
Research Production Manager
+61 2 9237 8151


## New Zealand


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

Craig Ebert
Senior Economist
+64 4 474 6799

Doug Steel
Markets Economist
+64 4 474 6923

Kymberly Martin
Senior Market Strategist
+64 4 924 7654

Jason Wong
Currency Strategist
+64 4 924 7652

Yvonne Liew
Publications & Web Administrator
+64 4 474 9771


## Asia


Christy Tan
Head of Markets Strategy/Research, Asia,
+ 852 2822 5350

Julian Wee
Senior Markets Strategist, Asia
+65 6632 8055


## UK/Europe


Nick Parsons
Head of Research, UK/Europe,
and Global Co-Head of FX Strategy
+ 44207710 2993

Gavin Friend
Senior Markets Strategist
+44 207 710 2155