

## DOMESTIC MARKETS REVIEW: MARCH 2015

### Summary

Forward cash rates implied by overnight indexed swaps (OIS) have increased following the Board's decision not to change the cash rate target at the March meeting and the release of the minutes (which were not as dovish as some participants had expected). The commencement of bond purchases by Eurosystem central banks has seen yields on long term Commonwealth Government Securities (CGS) decline over the past month to be only slightly above the historic lows reached last month. The spread between CGS and US Treasuries compressed further over the past month to fresh multi-year lows, while yields on semi debt declined roughly in line with CGS.

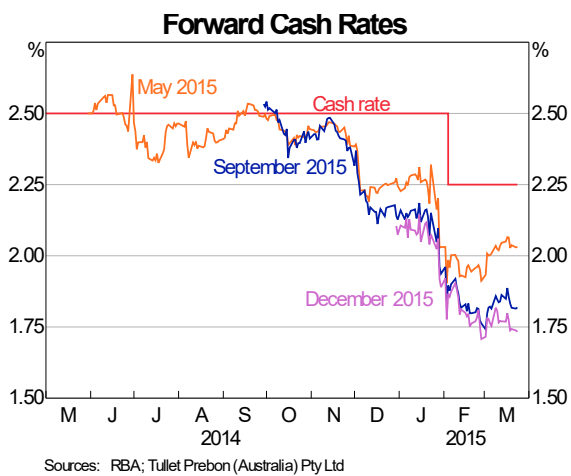
Australian resident non-government entities have issued around \$12.8 billion in bonds since the end of February, half of which was issued by banks. Bank issuance spreads have been broadly stable, but secondary market bank bond spreads to CGS have widened by 5 basis points since the end of February. There were a number of securitised deals in the month, with \$4.6 billion raised across five deals, including the first non-conforming RMBS deal of 2015. Hybrid activity also continued, with five banks raising \$2.4 billion across Tier 1 and Tier 2 hybrid issues. Bond issuance by Australian corporates picked up, with four entities raising \$6.4 billion. Yields on A-rated corporates' bonds widened by around 6 basis points. Australian equity prices rose slightly in March, with a slightly better-than-expected domestic data flow partially offset by a number of large companies trading ex-dividend. Banks' share prices rose while the resources sector fell alongside commodities price declines and the performance of other sectors was mixed.

The February cash rate reduction has now been fully reflected across most new lending and deposit rates, with yield curves flattening noticeably. Estimated outstanding lending rates for the major banks have fallen by slightly less than funding rates. As a result the implied spread between the major banks' lending rates and funding costs has widened marginally since the cash rate reduction. Credit growth slowed a little in February, but continued to increase on a six-month annualized basis. Housing credit grew at a similar pace than in recent months at around 7½ per cent, on a six-month annualized basis, with credit for investors still above 10 per cent. Business credit increased strongly on a six-month annualized basis, although it was slower in the month. In contrast with previous months, business credit was not boosted by valuation effects. Net housing loan approvals declined a little in February largely driven by approvals for investors. In contrast, approvals for refinancing continued to increase strongly for both owner-occupiers and investors. Net commercial loan approvals declined slightly in February, partially offsetting the strong increase in January.

## NON-INTERMEDIATED MARKETS

### Money and Bond Markets

Forward cash rates implied by overnight index swaps (OIS) have increased modestly over the past month. Markets adjusted after the Board’s decision not to change the cash rate target at the March meeting (prior to which a 25 basis point cut was about 50 per cent priced in), with the OIS curve moving higher again following the Board minutes which were interpreted as less dovish than expected. The market currently prices a 25 basis point cut by June (from May at the time of the previous monthly note), with another 25 basis point cut priced in by November.



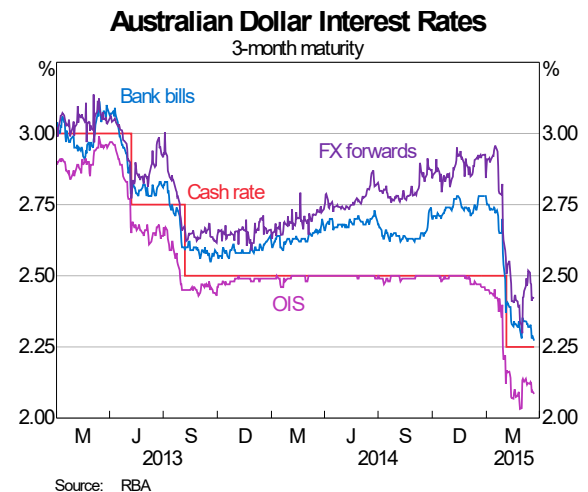
Market economists’ cash rate forecasts are little changed since the previous monthly note. Most major forecasters expect a 25 basis point cash rate reduction by June, with no forecasters in our sample anticipating any increases to the cash target until at least mid-2016.

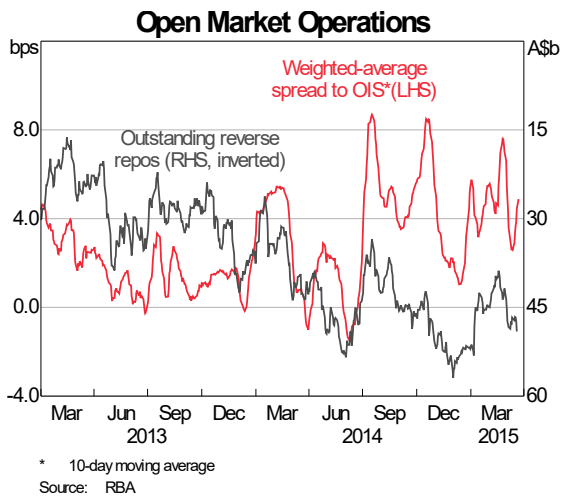
Market Economists’ Cash Rate Forecasts\*  
(report issued 24/03/15)

	as at	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16
ANZ	20-Mar	2.00	2.00	2.00	2.00	2.00
Citigroup	20-Mar	2.00	1.75	1.75	1.75	1.75
Commonwealth Bank	20-Mar	2.00	2.00	2.00	2.00	2.00
JP Morgan	20-Mar	2.00	2.00	2.00	2.00	--
Macquarie	20-Mar	2.25	2.00	1.75	--	--
NAB	20-Mar	2.00	2.00	2.00	2.00	--
UBS	20-Mar	2.00	2.00	2.00	2.00	2.00
Westpac	20-Mar	2.00	2.00	2.00	2.00	2.00
Median		2.00	2.00	2.00	2.00	2.00
(previous)		(2.00)	(2.00)	(2.00)	(2.00)	(2.00)
Mean		2.03	1.97	1.94	1.96	1.95
(previous)		(2.03)	(2.00)	(2.00)	(2.00)	(2.00)
Low		2.00	1.75	1.75	1.75	1.75
High		2.25	2.00	2.00	2.00	2.00

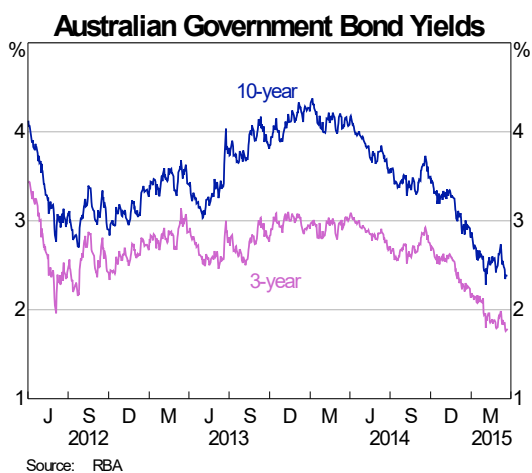
\*Quarter-end forecasts

Spreads between bank bills and certificates of deposit (CDs) and OIS have narrowed modestly over the past month. The cost of Australian dollar funding accessed through the forward FX market was relatively stable in March, but continues to be elevated relative to rates in domestic money markets. Dealing rates at the Bank’s open market operations have eased somewhat over the past month though remain relatively high at an average of around 4 basis points above OIS. This is consistent with repo desks reporting relatively tight conditions in the General Collateral repo market.

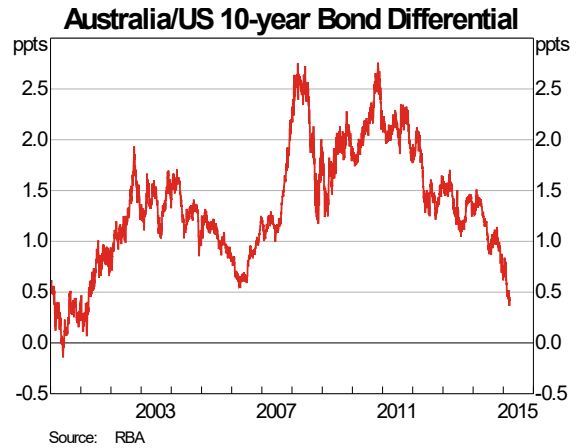




Yields on 10-year Commonwealth Government Securities (CGS) climbed to 2.74% over the first week of March but have since fallen to around 2.35% – just a handful of basis points above the historical low reached in February. Early in the month, long-dated CGS sold off after the March Board meeting and the release of stronger-than-expected US non-farm payrolls data. However, CGS subsequently rallied following the commencement of Eurosystem bond purchases and downwards revisions to FOMC projections. Yields on 3-year CGS are little changed over March, and consequently the yield curve has flattened modestly.



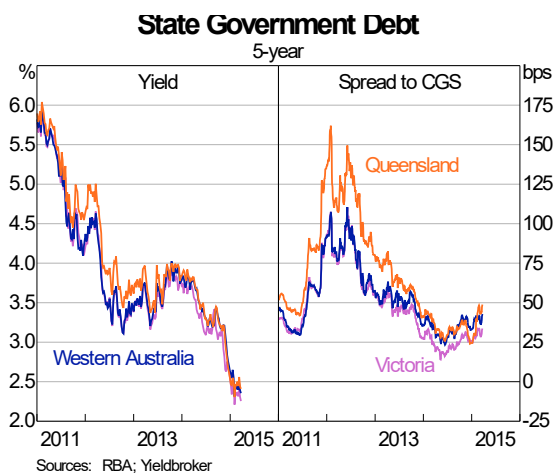
Generally better-than-expected US data has seen the spread between 10-year CGS and US Treasuries narrow further to within 40 basis points, the tightest since early 2001.



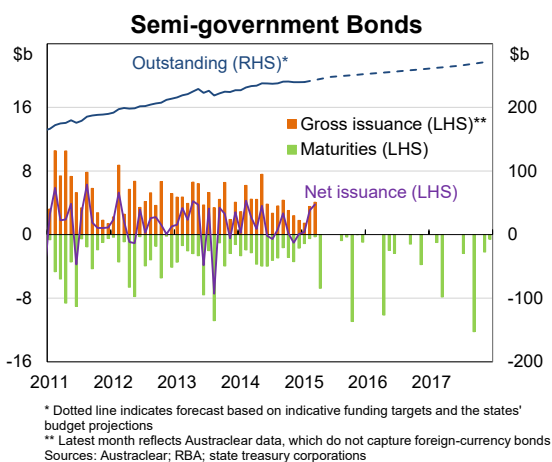
Breakeven rates on inflation linked bonds and rates on inflation swaps have decreased modestly over the past month.

The AOFM has issued \$14.8 billion of CGS since the previous monthly note, including \$4.25 billion via a syndicated issue of a new June 2035 nominal bond issued at a yield of 2.86½ per cent. The AOFM’s weekly bond tenders have been well received, generally pricing rich to secondary market levels with coverage ratios similar to auctions last year. In contrast, Treasury notes have continued to be issued at a discount to OIS.

Spreads between bonds issued by the state borrowing authorities (‘semis’) and CGS are broadly unchanged over the past month, with yields continuing to trade near record lows.



Activity in the primary semi-government (semi) bond market has been strong, with around \$4.1 billion in gross issuance since the end of February. Issuance has primarily been from Queensland Treasury Corp, which has raised \$2.8 billion in the month so far, including a \$1.4 billion tap to its 2025 line and a \$1.25 billion tap to its 2018 line. The South Australian Financing Authority also tapped its 2023 domestic line by \$500 million. Total net semi issuance was \$3.8 billion.



\* Dotted line indicates forecast based on indicative funding targets and the states' budget projections  
 \*\* Latest month reflects Austraclear data, which do not capture foreign-currency bonds  
 Sources: Austraclear; RBA; state treasury corporations

## Credit markets

### Issuance and Pricing

## Financials

Bond issuance by Australian banks has totalled \$6.4 billion in March so far, with banks issuing primarily in offshore markets. Issuance spreads have been comparable to those seen in February but wider than those seen in late 2014.

CBA (rated AA-) issued three US dollar-denominated bonds in the US market, raising \$3.8 billion. The bonds were:

- A \$1.6 billion 3-year fixed-rate bond. The bond priced at 92 basis points over CGS, which is 24 basis points tighter than a comparable issue by ANZ in January.
- A \$1.3 billion 5-year fixed-rate bond. The bond priced at 131 basis points over CGS, which is 14 basis points tighter than a comparable issue by NAB in December 2014.
- A \$1 billion 3-year floating-rate bond. The bond priced at 97 basis points over CGS, which is 17 basis points tighter than a comparable issue by ANZ in January.

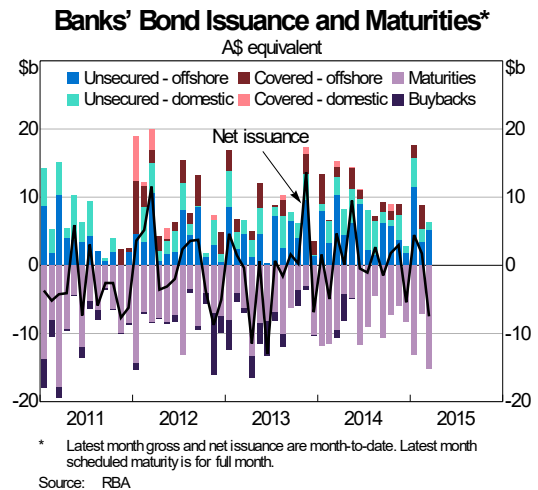
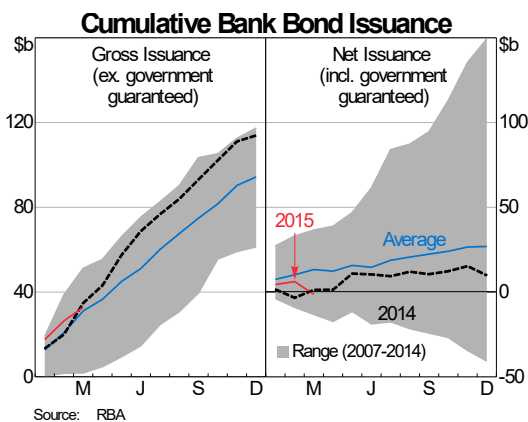
Bank of Tokyo-Mitsubishi UFJ Sydney Branch (rated A+) raised \$750 million in the domestic market across two 4-year bonds. The \$600 million floating-rate bond and \$150 million fixed-rate bond priced at 133 basis points over CGS, which is around 30 basis points wider than a comparable issue by the bank in September last year.

Macquarie Bank (rated A) issued a \$330 million 5-year yen-denominated bond offshore. The fixed-rate bond priced at 166 basis points above

CGS, which is 8 basis points tighter than a comparable issue by the bank in January.

ME Bank (rated BBB+) issued a \$200 million, 1-year floating-rate bond into the domestic market. The bond priced at 87 basis points over CGS, which is 10 basis points wider than a comparable issue by Bendigo and Adelaide Bank (rated A-) in February.

Bank of China Sydney Branch (rated A) issued a \$140 million 1-year euro-denominated bond into the offshore market. The bond priced at 97 basis points over CGS. There is no recent comparable issuance. With a considerable volume of redemptions scheduled for March, the outstanding stock of bank bonds has fallen by \$7.5 billion since the end of February.



Australian banks also raised \$2.4 billion through one Tier 1 and four Tier 2 hybrid issues in March. AMP (rated A) issued a \$275 million Tier 1 hybrid in the domestic market. The notes were open only to wholesale investors, the first such issue since a Tier 1 issue by NAB in 2008. Subject to certain conditions, the hybrid has an optional conversion, redemption or resale at 5 years and a mandatory conversion at 7 years. The hybrid priced at 400 basis points above BBSW, which is 50 basis points wider than the Tier 1 hybrid issued by NAB (rated AA-) last month.

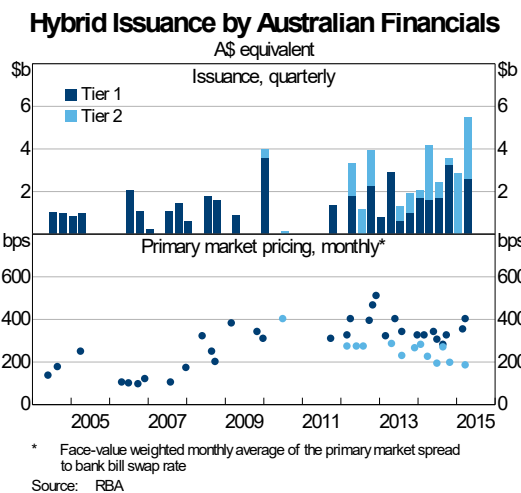
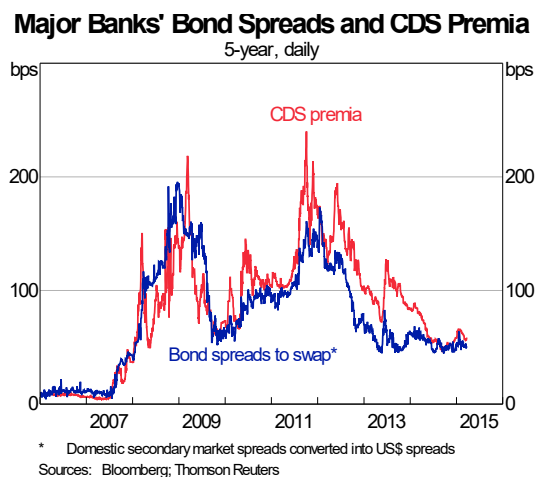
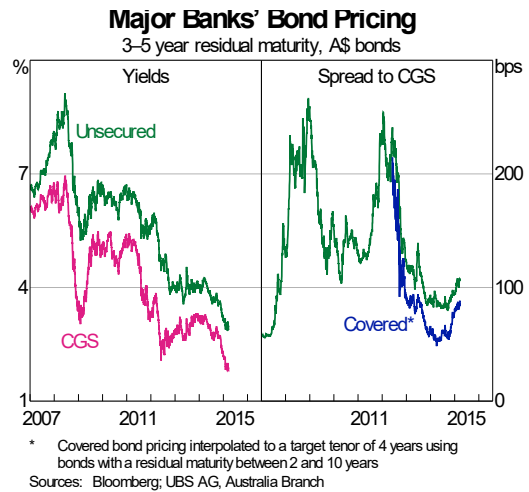
NAB (rated AA-) issued a \$1.1 billion Australian dollar-denominated Tier 2 hybrid into the domestic market. The hybrid has a final maturity of 10 years, is callable in 5 years, and has a floating coupon of 185 basis points over BBSW. The hybrid priced 10 basis points tighter than a similar deal by CBA in October last year.

ANZ (rated AA-) issued a \$470 million Singapore dollar-denominated Tier 2 hybrid offshore. The hybrid has a final maturity of 12 years, is callable in 7 years, and has a fixed 3.75 per cent coupon.

If not called after 7 years, the coupon will convert to a floating rate of 1.372 percentage points above the Singapore dollar swap rate.

Westpac (rated AA-) issued a 12-year Australian dollar-denominated Tier 2 hybrid into the offshore market, raising \$350 million. The security is callable in 7 years and offers a fixed coupon of 4.5 per cent. If not called after 7 years, the coupon will convert to a floating rate of 1.95 percentage points over swap.

CBA (rated AA-) issued a 10-year renminbi-denominated Tier 2 hybrid into the offshore-renminbi market, raising \$200 million. The security is callable in 5 years, and offers a fixed coupon of 5.15 per cent. If not called after 5 years, the coupons will convert to a floating-rate of 86.4 basis points over CNH Hibor.



Secondary market spreads to CGS for the major banks' Australian dollar-denominated unsecured and covered bonds widened by around 5 basis points in March, to be around levels previously seen in August 2013. Major banks' CDS premia have remained steady since the end of February.

There has been one bond issued by a non-bank financial corporation in the month to date. Mercedes Benz Australia (rated A-) issued a 3-year fixed-rate Australian dollar-denominated bond into the offshore market, raising \$100 million. The bond priced at 58 basis points over CGS, which is 9 basis points wider than their comparable issue in January.

Following the implementation of S&P's criteria for rating mortgage insurers, S&P reviewed its ratings on mortgage insurers based primarily in Australia and the US. As part of this, S&P downgraded its rating on QBE Lenders Mortgage Insurance from AA- to A+ with a stable outlook,

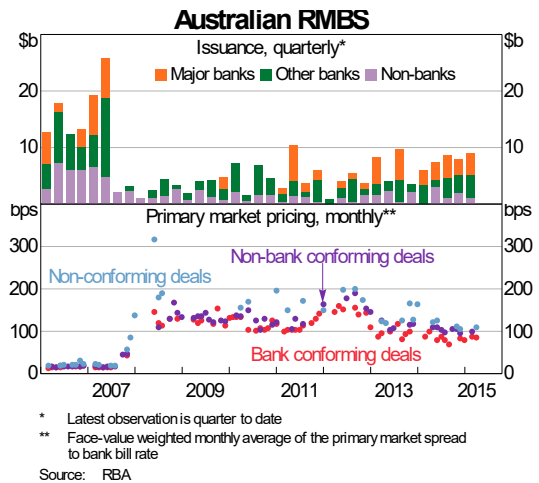
which reflects the insurer’s stand-alone credit profile. Other Australian mortgage insurers including Genworth (rated A+) and Westpac LMI (rated AA-) had their ratings affirmed.

Moody’s placed a number of banks on review following the introduction of their new rating methodology for global banks. Ten banks with outstanding lines in the domestic market were placed on review for an upgrade, and five banks were placed on review for a downgrade. Heritage Bank, which was placed on review for a possible downgrade, is the only Australian bank on review.

Moody’s upgraded Volkswagen Financial Services by one notch to A2, following an upgrade of the parent company last week. Ratings for the company remain on review and could be upgraded further following the introduction of Moody’s new banking rating methodology.

Securitisation

Securitized issuance remained strong in March with \$4.6 billion raised across five transactions, including the first non-conforming RMBS deal of 2015. Issuance spreads on RMBS were generally in line with those on comparable deals in late 2014. At almost \$9 billion, RMBS issuance in the quarter to date is at the highest level since the September 2013 quarter.



NAB priced a prime RMBS (National RMBS 2015-1), raising \$1.75 billion across 3 tranches (A, B and C). The deal was the first RMBS issue by NAB since December 2012, and was upsized from \$750 million at launch. The \$1.6 billion AAA rated A tranche has a weighted average life (WAL) of 3 years and priced at 80 basis points over BBSW, which was in line with a comparable deal by CBA in February. Pricing was not disclosed on the lower tranches. All tranches were structured as Australian dollar-denominated floating-rate pass-through notes. The quality of the collateral pool was subpar for a major bank. At launch, the pool had an LVR of 64 per cent (a little above average for major banks), seasoning of 25 months (lower than average), and the proportion of interest-only loans was a little elevated at around at 23 per cent. All loans in the pool are fully documented. LMI covers 15 per cent of the pool. The proportion of refinanced loans, for which S&P assumes a higher default probability, was high at 31 per cent. The subordination and ratings structure is identical to that of CBA’s Medallion series, with 8 per cent and 2 per cent credit

subordination supporting the AAA rated senior and A+ rated mezzanine tranches, respectively.

Bank of Queensland priced its first RMBS (REDS 2015-1) since mid-2013, raising \$900 million across five tranches (A, AB, B, C and D); the deal was upsized from its \$500 million launch. The \$830 million AAA rated A tranche has a WAL of 2.9 years and priced at 90 basis points above BBSW, matching the pricing on the comparable tranche of the Suncorp deal last month. The AAA rated \$50 million mezzanine AB tranche, which has a longer WAL of 6.7 years, priced at 180 basis points above BBSW, which was slightly wider than the pricing on the comparable tranche of the Suncorp deal. Pricing for the remaining non-AAA rated subordinated notes ranged from 235–485 basis points. All tranches are structured as floating-rate pass-through notes. With the latest data at launch, the collateral pool has an average LVR of 50 per cent (below average for regional banks) and a seasoning of 37 months (average). The proportion of interest-only loans is 25 per cent. The loan pool is geographically concentrated, with 55 per cent of properties located in Queensland and 33 per cent located in non-metropolitan areas. All loans in the pool are fully documented.

Resimac priced the first non-conforming deal of 2015 (Bastille Trust Series 2015-1NC), raising \$375 million across eight tranches; the deal was upsized from its \$300 million launch. The \$260 million and \$45 million AAA rated tranches

(both of which have a WAL of 1.8 years) priced at 105 basis points and 135 basis points respectively. This was slightly wider than the pricing on the comparable tranches of a non-conforming Liberty deal late last year. Pricing for the remaining non-AAA rated subordinated tranches ranged from 190 basis points to 700 basis points. All tranches are structured as floating-rate pass-through notes. With the latest data at launch, low-documentation loans make up 70 per cent the collateral pool. The pool has an LVR of 70 per cent (around average for non-ADIs), and a low seasoning of 22 months. The pool is geographically diverse, and credit-impaired loans comprise 29 per cent of the pool.

Macquarie Leasing priced an ABS deal (SMART 2015-1US), raising \$755 million across 8 tranches (A-1, A-2a, A-2b, A-3a, A-3b, A-4, B and Seller), upsized slightly from \$740 million at launch. The deal consists of 5 US dollar-denominated tranches totalling \$460 million and 3 Australian dollar-denominated tranches totalling \$295 million. The largest \$197 million, Australian dollar-denominated, AAA-rated tranche priced at 100 basis points over BBSW, which was around 30 basis points wider than Macquarie's previous ABS deal mid last year. The collateral pool consists of hire purchases and chattel mortgages. Around 63 per cent of these contracts are novated.

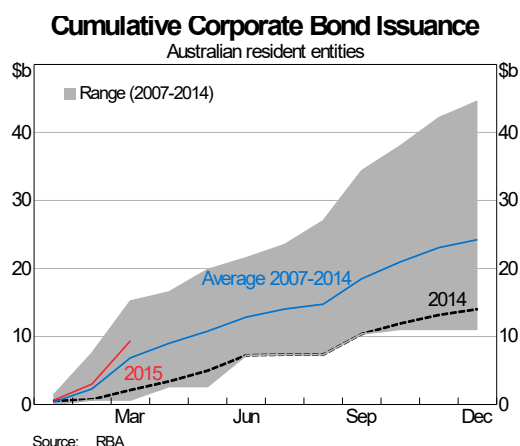


Westpac priced an ABS deal (Crusade ABS Series 2015-1 Trust), raising \$800 million across six tranches (A, B, C, D, E and Seller); the deal was upsized from \$500 million at launch. The \$648 million AAA rated A tranche priced at 78 basis points over CGS and has a WAL of 2.6 years. Pricing was 2 basis points tighter than that on the AAA rated tranche of the previous Crusade ABS deal in 2013. The collateral pool consists of receivables backed by motor vehicles and all loans are originated by St George Finance, which is a subsidiary of Westpac.

Moody's placed on review for upgrade one CMBS tranche and three RMBS tranches from four Australian deals, following the introduction of the Counterparty Risk Assessment as part of Moody's bank methodology update. Following the update, Moody's will assess swap counterparty risk in structured finance transactions using the Counterparty Risk Assessment, instead of the swap providers' senior unsecured debt ratings. None of the tranches on review are currently repo-eligible.

### Corporates

Bond issuance by Australian corporates picked up in March with four entities raising \$6.4 billion, primarily in offshore markets. Cumulative bond issuance by corporates in 2015 to date is around \$2 billion higher than the 2007-2014 average.



APT Pipelines (rated BBB) raised \$4.9 billion across five fixed-rate bonds in offshore markets. APT Pipelines is the financing subsidiary of the utilities company APA Group. The funds raised will be used to finance the purchase of an LNG pipeline network in Queensland.

- The \$1.4 billion 10-year US dollar-denominated bond priced at 276 basis points above CGS, which is around 60 basis points wider than the comparable deal by Woodside (rated BBB+) in February.
- The \$1.2 billion 15-year sterling-denominated bond priced at 254 basis points above CGS; there is no recent comparable issuance.
- The \$970 million 7-year euro-denominated bond priced at 230 basis points above CGS, which is 22 basis points wider than a comparable issue by ConnectEast in February.
- The \$900 million 12-year euro-denominated bond priced at 253 basis points above CGS; there is no recent comparable issuance.
- The \$400 million 20-year US dollar-denominated bond priced at 348 basis points above CGS; there is no recent comparable

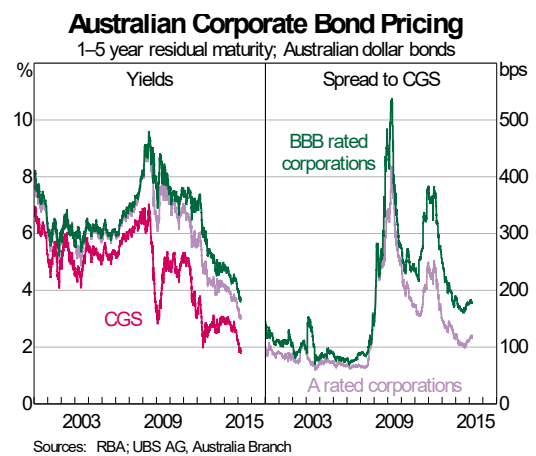
issuance. This is the longest maturity bond issued by an Australian corporate since BHP issued a 30-year bond in September 2013.

BHP Billiton (rated A+) issued a \$1 billion 5-year fixed-rate Australian dollar-denominated bond in the domestic market, their first raising since September 2013 and first domestic issue since October 2012. The bond priced at 128 basis points above CGS, which is 4 basis points tighter than a comparable Korea National Oil Corporation Kangaroo issue in September last year.

Holcim Finance Australia (rated BBB) issued a \$250 million 5-year bond into the domestic market. The fixed-rate bond priced at 184 basis points over CGS, which is in line with a comparable deal by Crown Limited in November last year.

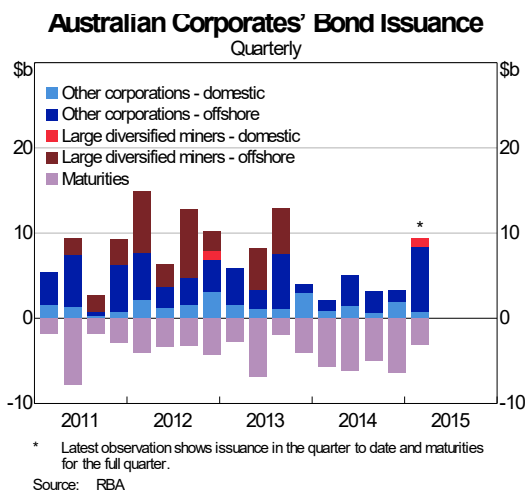
Downer EDI (rated BBB) issued a \$250 million, 7-year floating-rate bond into the domestic market. The bond priced at 216 basis points over CGS, which is 9 basis points wider than a comparable issue by ConnectEast in February.

In the secondary market, yields on A rated Australian-dollar corporate bonds increased by 6 basis points since the end of February, though they remain around the lowest levels seen since the 1990s. With CGS yields unchanged, spreads to CGS for these bonds also increased by 6 basis points. Yields and spreads to CGS for BBB-rated Australian-dollar denominated corporate bonds remained steady.



Moody’s upgraded Sydney Water’s rating from A+ to AA- (S&P equivalent). The upgrade reflects Moody’s expectation of increased stability in revenue due to improved transparency in the regulatory framework.

S&P placed Fortescue’s debt ratings (BBB for senior secured and BB for senior unsecured) on negative credit watch, following the group’s launch of a new US\$2.5 billion secured debt issuance, which was to be used to refinance several of the company’s existing debt issues. S&P indicated that the proposed deal because of its secured nature would likely ‘weaken the recovery prospects’ of existing debt holders. However, following Fortescue’s subsequent



withdrawal of the proposed debt issue (due to its inability to source funds on the terms it sought), S&P affirmed the company's debt ratings with a stable outlook.

S&P downgraded mining services company Ausdrill by one notch to B+, with a stable outlook. The downgrade reflects the weakness in commodity prices that has led to a reduced demand for Ausdrill's services. S&P expects Ausdrill to continue facing challenging conditions in the mining services sector, with no immediate prospect of recovery.

Kangaroos

Kangaroo bond issuance slowed in March, with \$1.4 billion raised in the month so far. Issuance spreads have been broadly in line with those seen in February.

IBRD (rated AAA) issued a \$550 million, 5-year fixed-rate Kangaroo bond. The bond priced at 48 basis points over CGS, which is 3 basis points tighter than their comparable issue in February.

Rentenbank (rated AAA) raised \$350 million across two taps to existing Kangaroo bond lines.

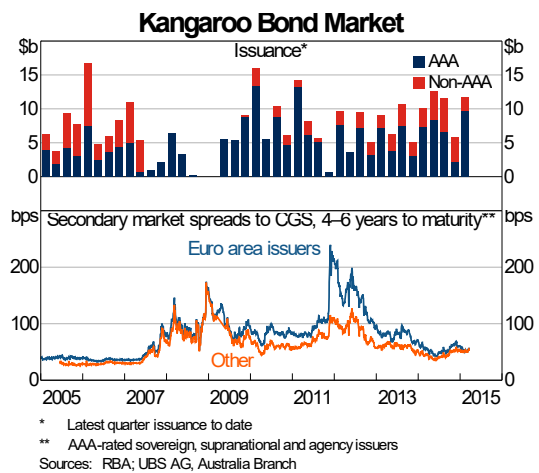
- A \$200 million tap to its January 2020 Kangaroo line, bringing the total outstanding to \$1 billion. The tap priced at 49 basis points over CGS, which was in line with their most recent tap to this line in February.
- A \$150 million tap to its 2022 Kangaroo line, bringing the total outstanding to \$400 million. The tap priced at 54 basis points over CGS,

which is 2 basis points tighter than their previous tap to this line in February.

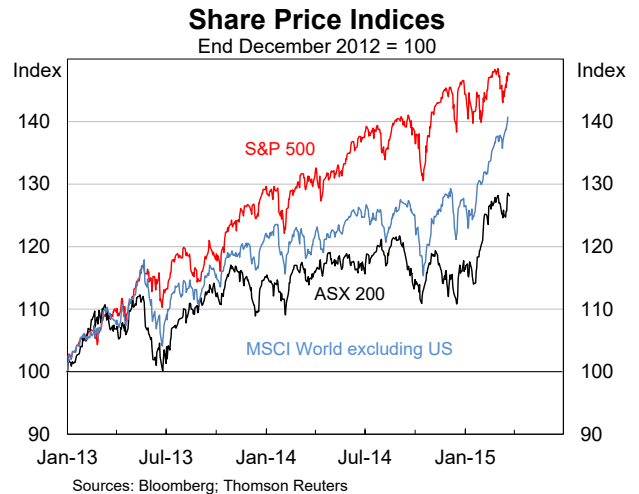
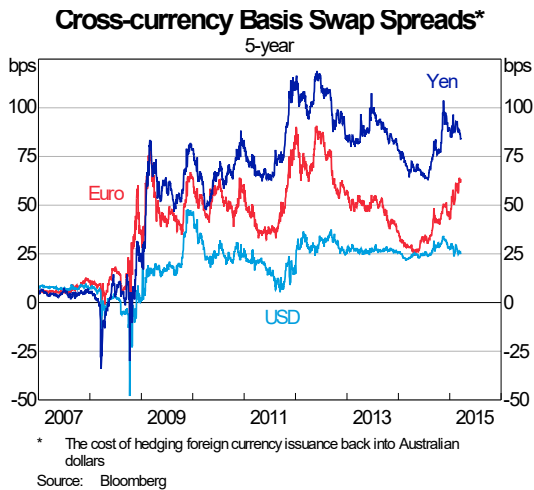
NIB (rated AAA) tapped its 2020 Kangaroo line for \$200 million, bringing the total outstanding to \$500 million. The tap priced at 51 basis points over CGS, which is in line with a comparable deal by Rentenbank last month.

Kommunalbanken (rated AAA) tapped its 2024 Kangaroo line for \$100 million, bringing the total outstanding to \$550 million. The tap priced at 58 basis points over CGS, which is around 3 basis points wider than a comparable deal by IADB in February.

Secondary market spreads on Kangaroo bonds have risen slightly in March; spreads to CGS widened by around 3-5 basis points for European and non-European issuers.



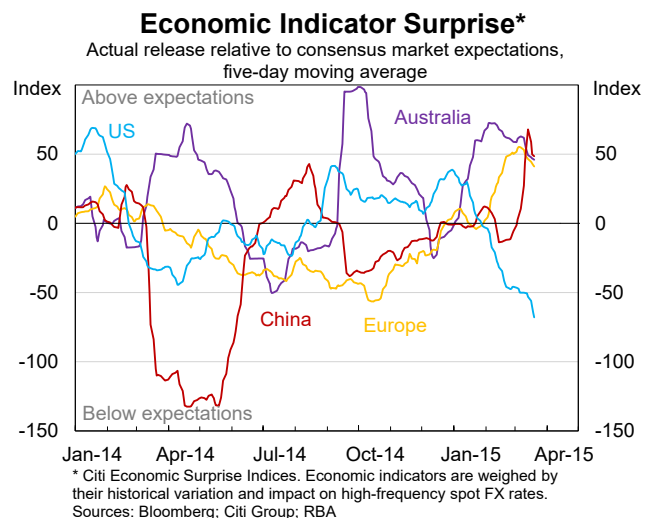
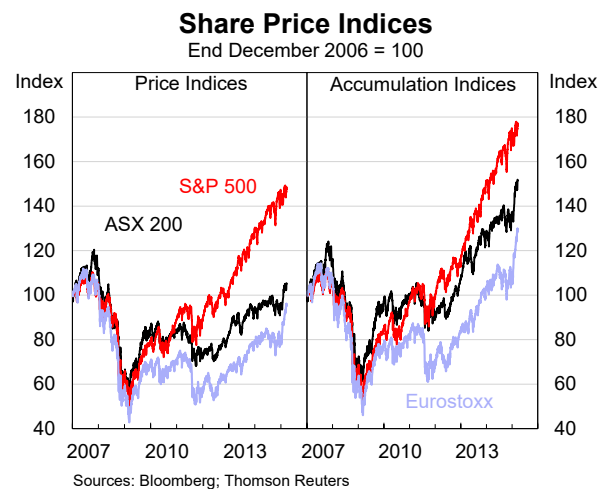
Cross-currency basis swap spreads widened by 5 basis points for the euro, and narrowed by around the same amount for the yen. Spreads for the US dollar have remained steady since the end of February.



## Equities

### Prices

Australian equity prices rose slightly in March, in line with generally better-than-expected domestic economic data. A number of large companies traded ex-dividend in the month, subtracting around three-quarters of a percentage point from share prices. The Bank's cash rate decision also weighed on the market, while speculation that monetary policy tightening by the Fed would be delayed supported higher yielding stocks. The ASX 200 outperformed the S&P 500 but underperformed the Eurostoxx, even accounting for dividend payments. These same trends are visible in the year-to-date performance of US and European stock markets relative to the Australian market. By sector, resources stocks fell substantially in March alongside lower commodities prices, while financial sector stocks rose and other sectors were mixed.



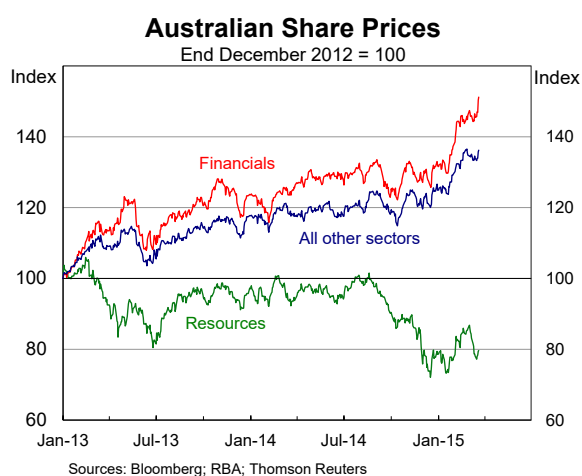
### Equity Markets Price Changes\*

	Since end February	Year-to-date
Australia	0.5	10.1

Resources	-6.6	2.0
Financials	2.8	14.2
Other	0.6	8.6
China	11.4	14.0
Europe	2.8	17.6
Japan	5.1	13.2
United States	0.0	2.2
MSCI World	1.1	6.3

\* As of 24 March 2015

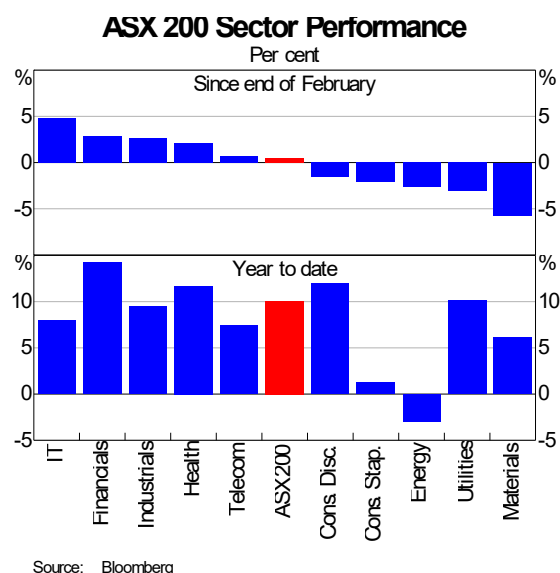
Resources sector equity prices have fallen by 7 per cent since the end of February. The materials sector fell 6 per cent, driven by a 13 per cent decline in iron ore prices and BHP and Rio Tinto trading ex-dividend. Fortescue's shares fell 20 per cent after it cancelled its planned US\$2.5 billion debt refinancing. Energy sector share prices decreased 3 per cent as the oil price fell by a further 12 per cent.



Financial sector share prices have increased by 3 per cent since the end of February. The banks outperformed with shares rising 4 per cent, particularly following the FOMC announcement and related commentary. Diversified financials also rose 4 per cent, with Macquarie's shares rising 7 per cent following their \$5 billion aeroplane lease acquisition and subsequent

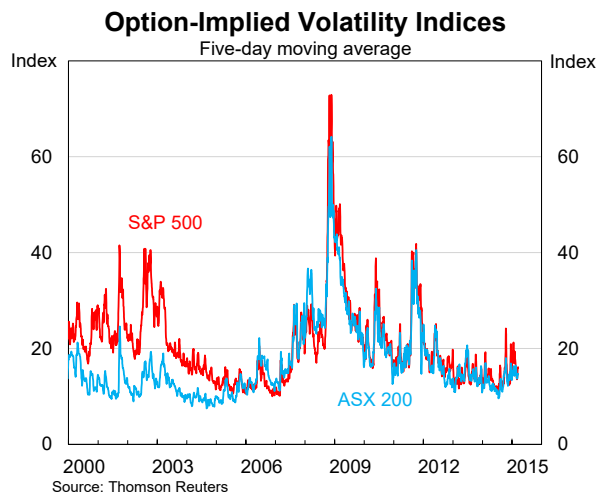
equity raising. Real estate and insurance companies' shares were little changed.

Share prices were mixed across the other sectors. The industrials and health sectors outperformed, with prices rising 2–3 per cent. The consumer sectors fell 2 per cent; weaker consumer confidence data, Woolworths trading ex-dividend and a fall in Myer's share price following its December half profit outweighed stronger retail sales data. The utilities sector underperformed, but remains in line with the year-to-date performance of the aggregate index.

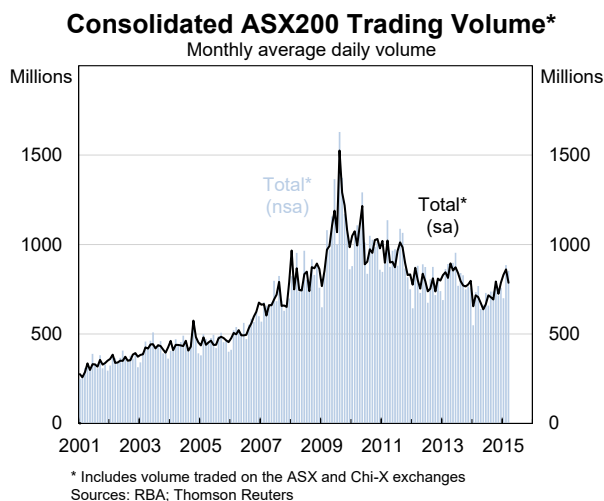


## Volatility and Trading Activity

Option-implied volatility has been broadly unchanged since the end of February, and remains above the low levels reached in mid 2014.



Trading activity decreased in March but remained above the subdued levels prevailing in early 2014.



### Short Selling

Short selling interest in Australian equities was slightly lower in aggregate during March, but remains above its 2014 average. Short selling interest remained elevated relative to 2014 averages in the consumer sectors and rose in the energy sector, but eased in all other sectors. Short selling of Myer's and Fortescue's shares rose around the time of their profit

announcement and debt refinancing respectively.

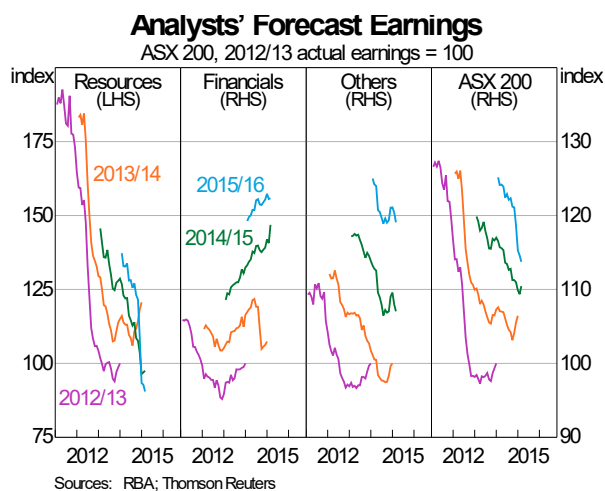


Top 5 Companies by Short Interest*		
Company	Short interest (%)	Change in short interest (ppt)
Myer	19.7	0.3
Metcash	13.3	-2.0
Fortescue	11.6	0.8
UGL	11.4	0.1
Primary Healthcare	11.3	2.9

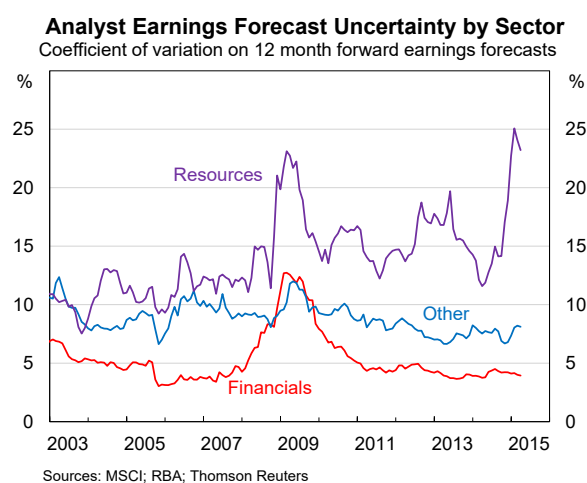
\* Average short interest as percentage of shares outstanding  
Source: Bloomberg; RBA

### Valuation

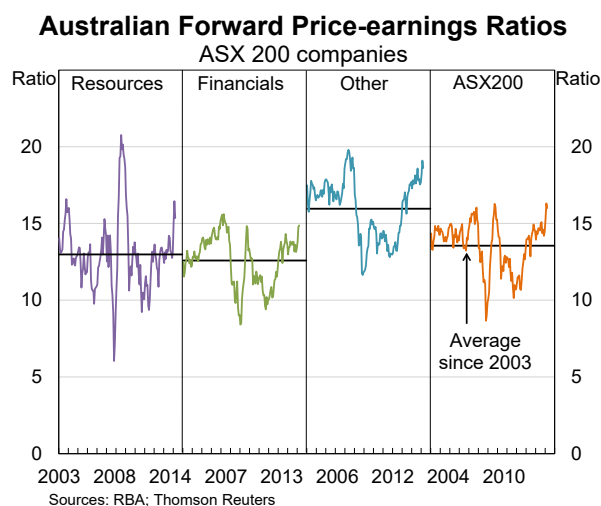
Analysts' earnings expectations for the 2014/15 period rose in aggregate since February, driven by the financial sector, but fell slightly for 2015/16.



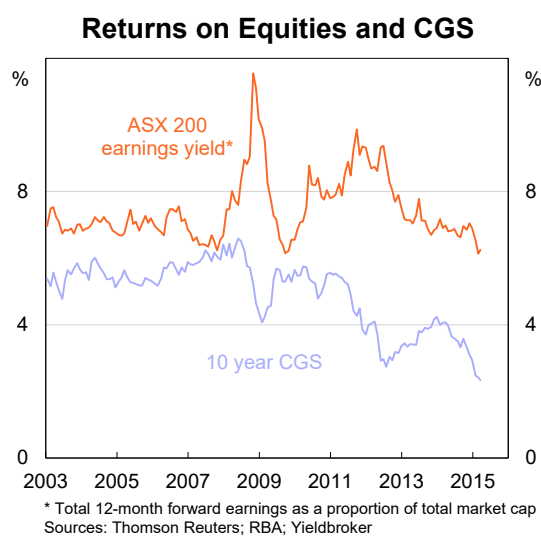
The level of disagreement among analysts regarding expected earnings (measured as the coefficient of variation for 12-month forward earnings forecasts) declined since the end of February, but remains elevated for the resources sector.



The aggregate forward price-earnings (PE) ratio for Australian equities has declined slightly since the end of February after rising in previous months. Valuations fell across the resources and 'other' sectors, with prices declining by more than earnings expectations. However, the aggregate forward PE ratio remains around its highest level in over 10 years.



Conversely, the equities earnings yield ticked up slightly in March. However, earnings yields have fallen since the start of the year to be at a low level, in line with declines in fixed income yields.

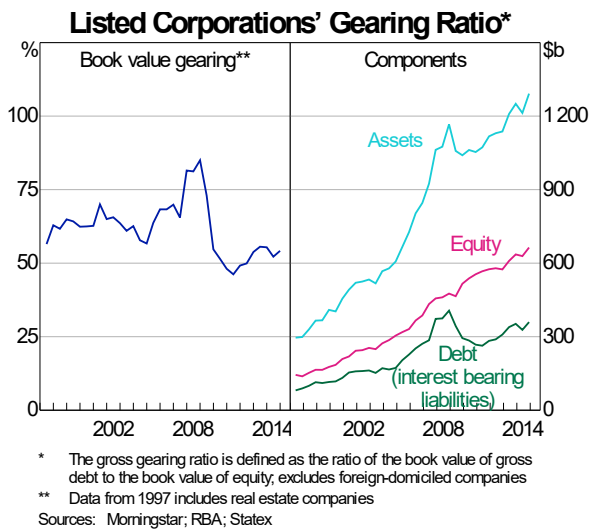


## Balance Sheets

Total gearing for listed non-financial companies (including real estate companies) increased by 2 percentage points over the December half to 54½ per cent.<sup>1</sup> Much of this increase reflected the depreciation of the Australian dollar against

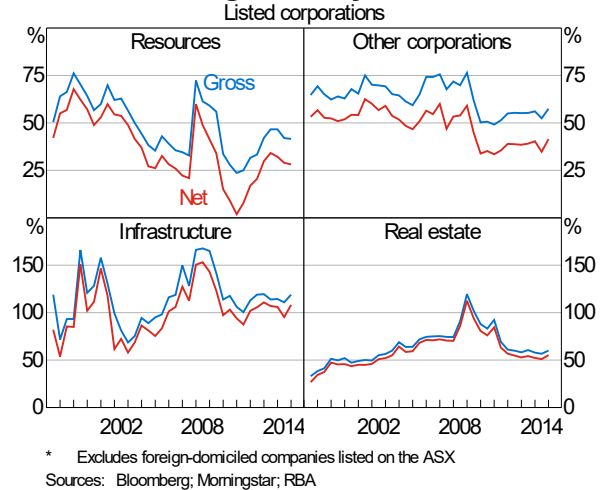
<sup>1</sup> Gearing is defined as the ratio of gross debt to the book value of equity.

the US dollar, which raised the Australian dollar value of US dollar-denominated debt; it also reflected the completion of a number of large acquisitions. Assets increased by 6½ per cent, also supported by the depreciation of the Australian dollar.



Gearing in the resources sector declined 1 percentage point to 41 per cent after falling substantially in the previous half, as miners continued to focus on paying down outstanding debt. Gearing among energy companies rose 2½ percentage points, with debt increasing due to capital expenditure and acquisitions. Assets in the resources sector rose despite a number of large write downs, supported by the depreciation of the Australian dollar.

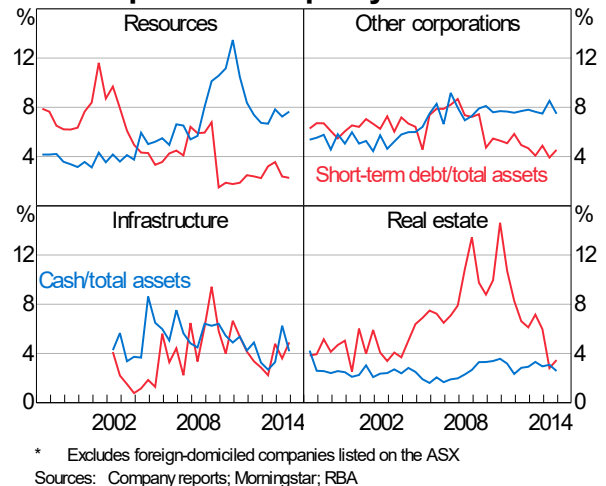
**Gearing Ratios by Sector\*\***



Infrastructure companies' gross gearing and assets rose, driven by acquisitions by Transurban and AGL. Real estate companies' gearing also rose, due to higher debt from the Westfield restructure. Gearing rose in most other sectors, particularly in the health care and consumer staples sectors following acquisitions and debt issuances.

Aggregate cash balances fell slightly, as an increase in cash holdings at resources companies was more than offset by falls across the other three broad sectors.

**Components of Listed Corporations' Liquidity Positions\***

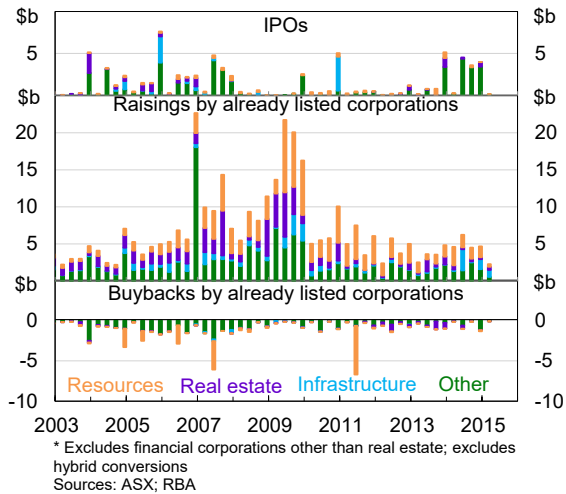




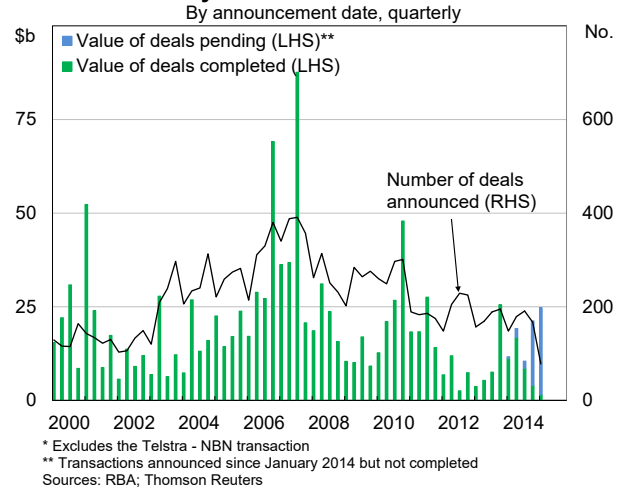
## Equity Raisings

Net equity raisings by listed corporations were subdued in February, totalling \$800 million. Capital raisings by already listed corporations fell to \$800 million, while there was little IPO or buyback activity.

### Equity Raisings by Non-financial Corporations\*



## M&A by Listed Australian Entities\*



## M&A

M&A activity by listed corporations was slightly above average in March, totalling \$7 billion. This included Macquarie's \$5.1 billion acquisition of an aircraft operating lease portfolio from AWAS Aviation and TPG's \$1.3 billion takeover offer for iiNet.

## INTERMEDIATED MARKETS

### RFI Balance Sheets

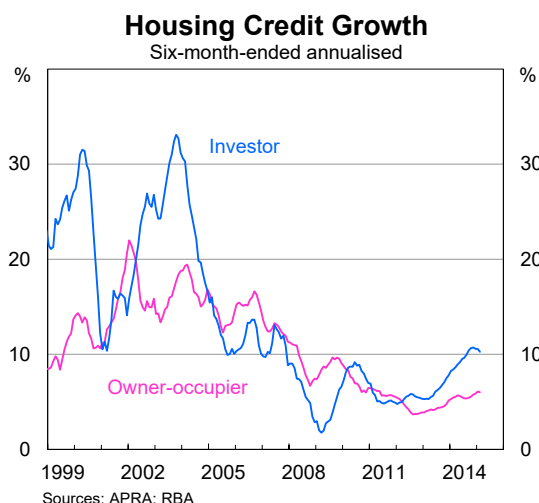
Preliminary estimates indicate that total Reporting Financial Institutions (RFI) credit grew at a slightly slower pace in February from January, although in six-month annualised terms it continued to pick up. While growth in both housing and business credit eased a little over the month, the pick-up in six-month annualised credit growth reflects a steady household credit growth and an increase in business credit growth.

Growth in Financial Aggregates*				
	Per cent			
	Monthly		6-month annualised	
	Jan 2015	Feb 2015	Aug 2014	Feb 2015
Total credit	0.6	0.5	5.7	6.8
- Household	0.5	0.4	6.4	6.6
- Housing	0.6	0.5	6.9	7.4
- Owner-occupied	0.5	0.4	5.4	6.0
- Investor	0.8	0.7	10.0	10.3
- Personal	-0.1	-0.4	1.2	-0.5
- Business	0.9	0.6	4.2	7.0
Broad money	0.5	1.1	7.9	7.8

\*Preliminary estimates  
Sources: ABS; APRA; RBA

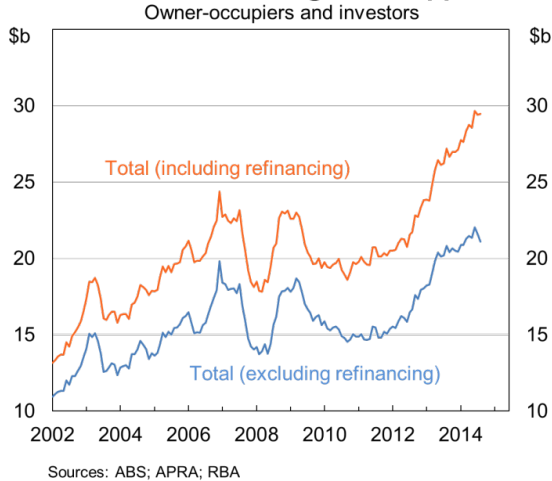
Housing credit growth was only slightly lower in February, although the monthly growth was at its slowest pace since July 2014. Growth in credit to owner-occupiers eased to its slowest pace since July 2014 while growth in credit to investors eased to a pace last seen in the first half of 2014. While housing credit growth appears to be stabilising, the seasonal component to growth estimates in the first part

of the year is larger, adding more uncertainty to the February data. Furthermore, investor credit growth remains a little above 10 per cent in six-month annualised terms.

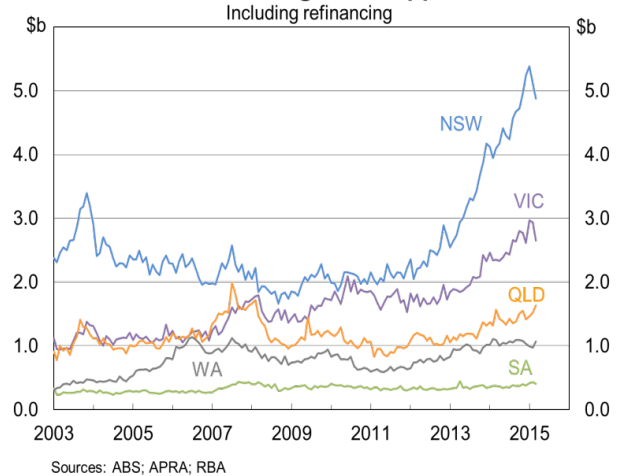


The easing in housing credit growth in February is consistent with housing loan approvals which have fallen in the past two months. Preliminary APRA data for February show that the total value of housing loan approvals (excluding refinancing) fell by 2.3 per cent in February following a fall of 1.4 per cent in January. The falls have been largely driven by a decrease in investor construction approvals, which have fallen back from a very high level. However, owner-occupier and investor approvals for new and existing dwellings have also moderated over the past 2 months. Despite decreasing in the last two months, housing loan approvals remain at a high level and will support credit growth in coming months.

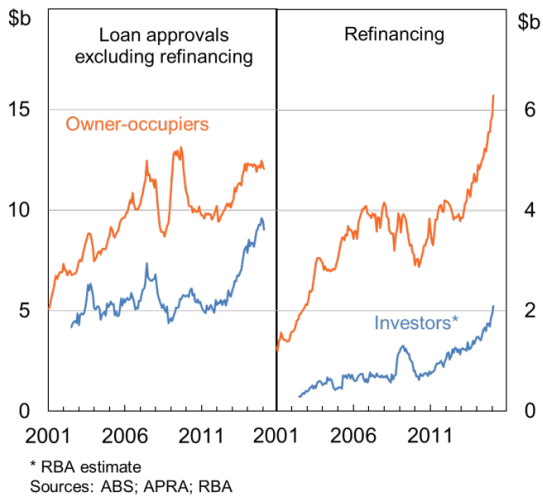
### Total Value of Housing Loan Approvals



### Investor Housing Loan Approvals



### Value of Housing Loan Approvals

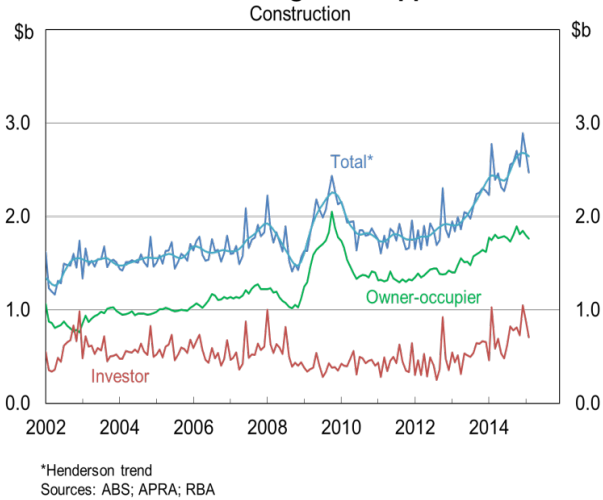


Investor loan approvals for refinancing grew strongly in February. Excluding refinancing, investor approvals fell by 4.2 per cent in the month with the decline concentrated in Victoria and New South Wales.

Owner-occupier approvals for refinancing also increased strongly in February with activity broad-based across states. Outside of refinancing, approvals fell almost 1 per cent to around the average level seen in 2014. Like investor approvals, there has been a pullback in owner-occupier approvals for construction in the past few months. First home buyer approvals increased slightly, but remain around record lows as a share of credit.

Loan approvals for construction have fallen sharply in the last two months. This is due largely to a pullback in investor construction approvals which are volatile and were at a high level. Owner-occupier construction loan approvals have also moderated. However, construction approvals grew at around 16 per cent in year-ended terms.

### Value of Housing Loan Approvals



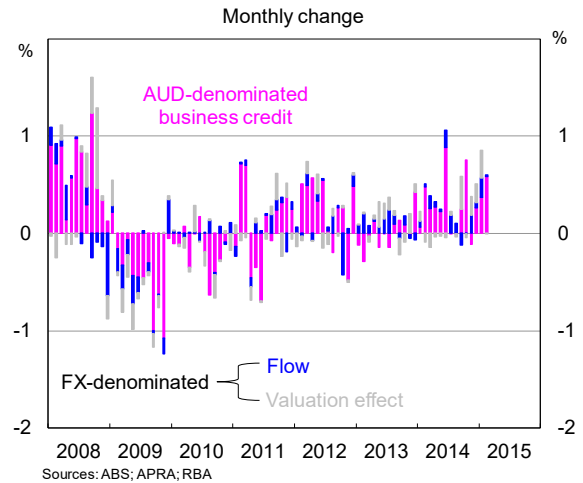
Business credit growth eased in February, following a strong increase in January. Growth was almost entirely driven by an increase in AUD-denominated business credit. In contrast to previous months, the Australian dollar exchange rate was little changed and valuation effects made no contribution to growth over the month.

In six-month-annualised terms, business credit grew at its strongest pace since 2008. FX valuation effects have boosted headline business credit growth in the past 6 months. Excluding this effect business credit growth is closer to the pace experienced over the middle of 2014. However, restructuring activity and the use of bridging facilities boosted credit growth through mid-2014.

Lending by the major and foreign banks continued to drive business credit growth. Business credit extended by foreign banks increased by 15 per cent in six-month-

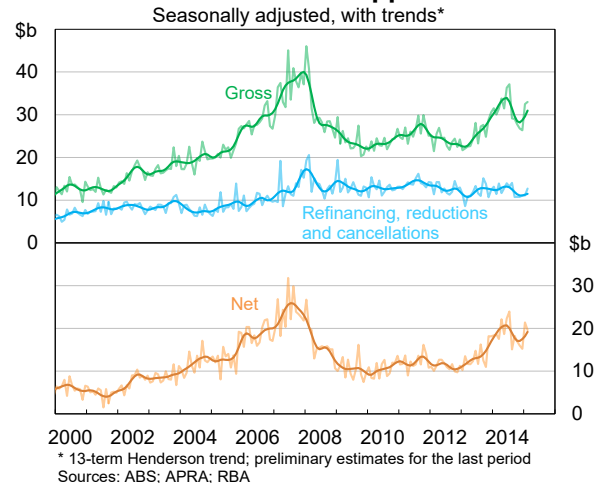
annualised terms, maintaining the growth experienced over most of 2014.

### Business Credit



Net commercial loan approvals declined slightly in February, following a strong recovery in January. In trend terms, net approvals remain around their average levels over 2014, indicating that the supply of business credit remains strong.

### Commercial Loan Approvals



Approvals to the health sector increased, mainly reflecting a \$1 billion syndicated loan to

InfraShore Finance following its acquisition by AMP Capital.<sup>2</sup>

Personal credit outstanding fell in February, with a broad-based decline in all components. The previous two months have also been revised to show slight falls, with six-month-annualised growth now at -0.5 per cent.

### Monetary Policy Pass-through

The February cash rate reduction has now been fully reflected across most new lending and deposit rates. The majors and most other lenders have reduced their standard housing variable rates by about 25 bps. On top of this, average discounts on housing loans have increased in the past 2 months according to industry sources. The majors have also announced updated fixed rate loan pricing, with the 5-year fixed rate reduced the most.

Major banks' advertised small business lending rates were lowered towards the end of February to reflect the cash rate reduction. All major banks reduced their small business variable indicator rates by 25 basis points for residentially secured products and other secured products. The majors have also reduced their small business fixed indicator rates, with the average 3-year rate on residentially-secured loans declining by around 40 basis points since the February cash rate reduction.

2 Westpac and ANZ provided around half of the total funding, with Bank of Tokyo-Mitsubishi and Natixis making up the balance. InfraShore Finance is the private consortium delivering major infrastructure developments to the Royal North Shore Hospital.

Lenders have also reduced personal lending rates, but the pass-through of February cash rate reduction has varied across different products. The majors have reduced their interest rates on home equity loans by 25 basis points. Most lenders have also reduced their margin lending rates by 25 basis points. In contrast, most lenders' advertised rates on personal unsecured loans and credit cards have remained unchanged.

All the major banks have reduced their online, bonus saver and cash management deposit rates by about 25 basis points since the cash rate reduction. Similarly, the major banks have also reduced their term deposit rates, in some cases by more than 25 basis points. In particular, average term deposit specials have declined by about 45 basis points since the cash rate reduction. These reductions have been particularly pronounced for deposits with maturities longer than one year.

### Monetary Policy Pass-through

Basis points change since February cash rate reduction; as at 24 March

	ANZ	CBA	NAB	WBC
<b>Housing loans</b>				
Variable	-25	-25	-25	-28
Fixed (5-year)	-40	-40	-40	-30
<b>Deposits</b>				
Term special <sup>(a)</sup>	-46	-42	-43	-45
Bonus saver	-25	-25	-45	-20
<b>Small business<sup>(b)</sup></b>				
Variable	-25	-25	-25	-25
3-year fixed	-49	-40	-15	-60
<b>Personal</b>				
Home equity	-25	-25	-25	-28
Margin loans	-25	-25	-25	-25 <sup>(c)</sup>

(a) Average of 1-12, 24-, 36-, and 60-month terms

(b) Indicator rates; residentially secured

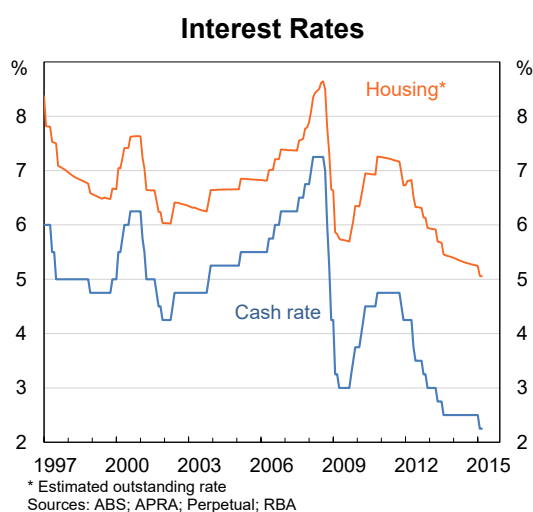
(c) BT's standard rate (BT is a subdivision of WBC)

Sources: ABS; APRA; banks' websites; CANSTAR;

Perpetual; RBA

## Access to Household Finance

The estimated average interest rate on outstanding housing loans has fallen by about 20 basis points following the February cash rate reduction. The aggregate decline in outstanding rates is less than the 25bps reduction to variable rates as it takes some time for fixed rate loans to roll over.



### Intermediaries' Lending Rates

Variable	Current level 24 Mar 2015 <i>per cent</i>	Change since	
		end Feb 2015 <i>basis points</i>	end Jan 2015 <i>basis points</i>
<b>Cash rate</b>	2.25	0	-25
Housing <sup>(a)</sup>	4.82	0	-26
Personal <sup>(b)</sup>	11.66	0	-4
<b>Small business</b>			
Term loans <sup>(c)</sup>	6.85	0	-25
Overdraft <sup>(c)</sup>	7.72	0	-25
Average rate <sup>(d)</sup>	6.31	0	-25
Large business <sup>(d)</sup>	4.12	-11	-25
<b>Total outstanding</b>			
Housing	5.05	-1	-19
Small business	6.00	-4	-20
Large business	4.21	-10	-23

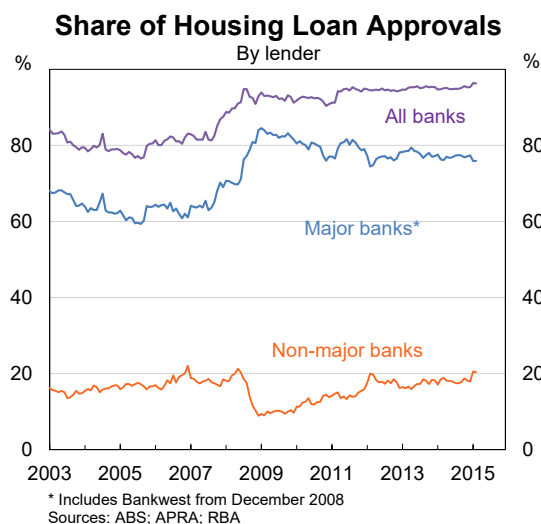
(a) Average of the major banks' discounted package rates on new \$250 000 loans (includes St George)

(b) Weighted average of variable rate products

(c) Residentially secured, advertised

(d) RBA estimate; average variable rate on outstanding lending  
Sources: ABS; APRA; CANSTAR; Perpetual; RBA

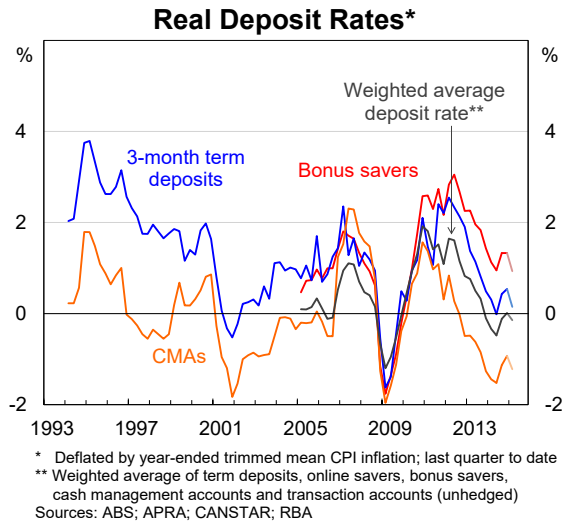
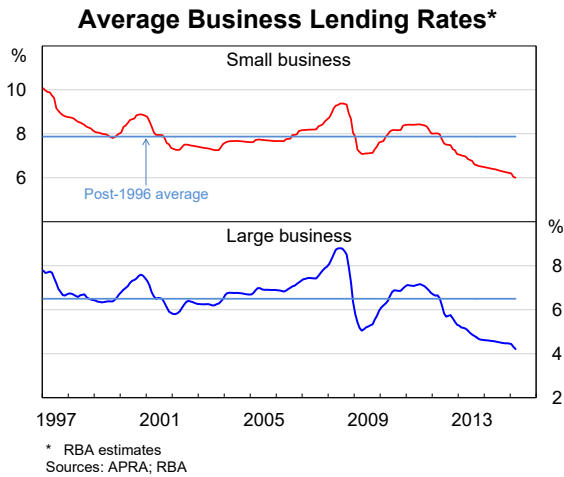
The non-major banks' share of approvals was around 20 per cent in the month, up from 18 per cent through most of 2014.



## Access to Business Finance

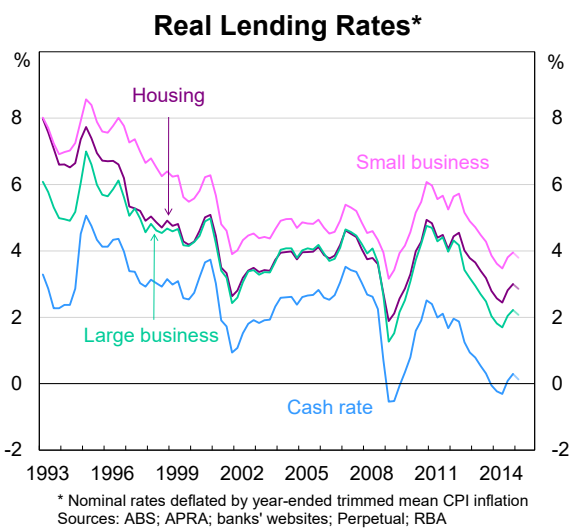
The estimated cost of intermediated borrowing for small and large businesses has declined by 20 and 23 basis points, respectively, following February's cash rate reduction. Some adjustment in outstanding business lending rates is expected to continue over the next couple of months as existing facilities continue to reprice. As mentioned in the February Review, there is a greater level of uncertainty around our estimates of the average outstanding large business rate due to data limitations.<sup>3</sup>

<sup>3</sup> IMS is currently looking into this issue. Preliminary estimates suggest that the outstanding large business rate could be around 20 basis points lower than current figure.



## Real Interest Rates

Real lending and deposit rates have fallen in line with nominal rates over the past month, broadly reflecting the pass-through of February's cash rate reduction. In general, real interest rates remain above their mid 2014 troughs, reflecting the fall inflation.



## Real Interest Rates\*

	Current level** Per cent	Difference from	
		Mar-2009 trough Basis points	Decade average Basis points
<b>Cash rate</b>	<b>0.13</b>	<b>67</b>	<b>-143</b>
<b>Lending rates***</b>			
Housing	2.86	97	-80
Small business	3.80	64	-89
Large business	2.08	81	-132
Small and large business	2.62	81	-121
<b>Deposit rate****</b>	<b>-0.15</b>	<b>106</b>	<b>-60</b>

\* Deflated by year-ended trimmed mean inflation.

\*\* Calculated as the average over the calendar quarter to date. The previous quarter inflation rate is used as a proxy for the current quarter.

\*\*\* Average outstanding rates

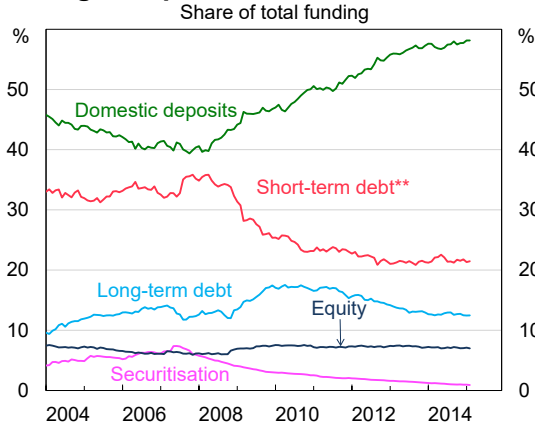
\*\*\*\* Weighted average rate on outstanding deposits (unhedged)

Sources: ABS; APRA; CANSTAR; banks' Websites; Perpetual; RBA

## Funding Costs and Lending Rates

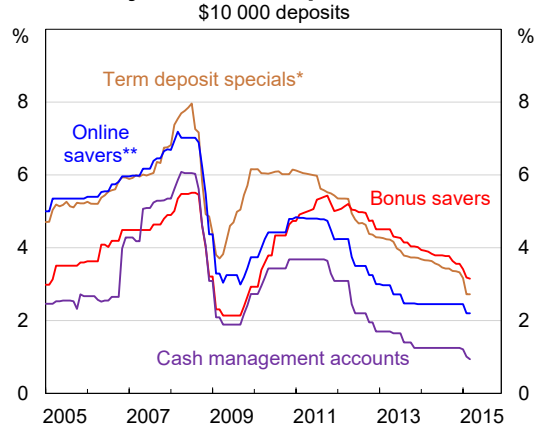
Banks' funding mix has been little changed over the first few months of 2015, with deposits accounting for just over 58 per cent of funding liabilities.

### Funding Composition of Banks in Australia\*



\* Adjusted for movements in foreign exchange rates  
 \*\* Includes deposits and intragroup funding from non-residents  
 Sources: APRA; RBA; Standard & Poor's

### Major Banks' Deposit Rates

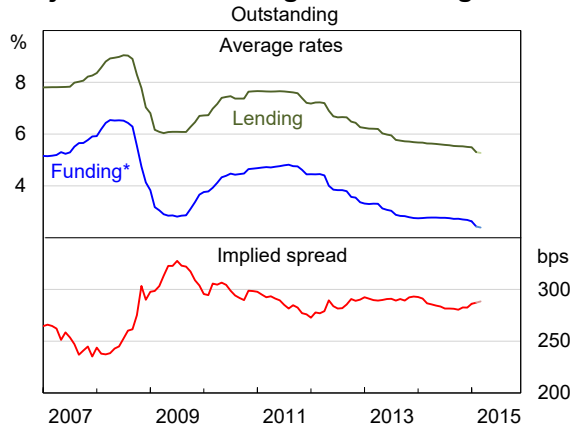


\* Average of 1-12, 24, 36, and 60-month terms  
 \*\* Excludes temporary bonus rates  
 Sources: Canstar; RBA

The major banks' estimated outstanding funding costs have declined by close to 25 basis points since the February cash rate reduction and by close to 30 basis points in 2015, reflecting the repricing of at-call deposits, interest rate hedges and roll over of other liabilities. Outstanding lending rates have fallen by a slightly lower amount than funding rates. This has resulted in a marginal increase in the implied spread. As mentioned before, the size of the movement increase in margin is subject to greater uncertainty due to estimation issues with business lending rates.

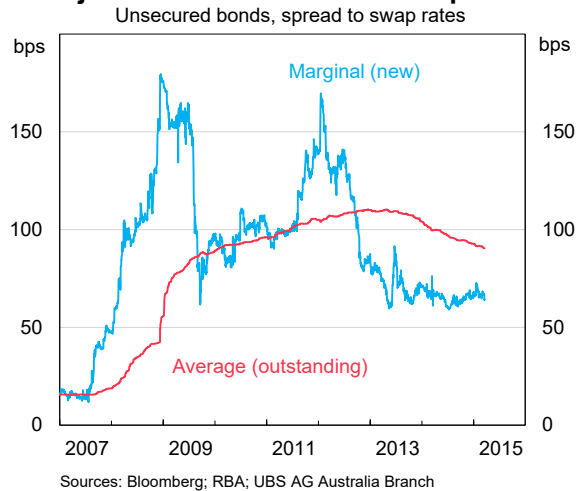
Conditions in wholesale funding markets remain favourable. The major banks' spreads on new long-term wholesale debt issuance to swap rates have continued to narrow a little over the month. The average outstanding spread continues to edge down as debt issued at higher rates is replaced by lower cost issuance.

### Major Banks' Lending and Funding Rates



\* Assumes interest rate swaps and replicating portfolio hedges  
 Sources: APRA; Bloomberg; Financial Reports; RBA; UBS AG, Australia Branch

### Major Banks' Domestic Bond Spreads



Sources: Bloomberg; RBA; UBS AG Australia Branch



## MONETARY POLICY NEAR THE ZERO LOWER BOUND

(2015) finds that there is a 14 per cent probability of the cash rate being at zero by February 2017. A review of the literature and of the experience of other central banks yields a strong consensus that policy should be looser than otherwise when interest rates are near the zero lower bound. According to John Williams, President of the San Francisco Fed, “‘Keeping your powder dry’ is precisely the worst thing to do.’

(2015) finds a 14 per cent probability that the cash rate will reach zero by February 2017. Hitting the zero lower bound (ZLB) can be costly. It limits our ability to respond to economic conditions, and this can result in higher unemployment and lower inflation than desired. Therefore, an important consideration is how the possibility of hitting the ZLB *later* should affect monetary policy *today*.<sup>1</sup>

One possibility is to keep interest rates higher than economic conditions recommend. By ‘keeping our powder dry’, we remain distant from the ZLB, leaving room to respond to future economic downturns. A number of commentators seem to prefer this option (e.g. Richardson 2015; McKibbin 2012; Bassanese 2012). The argument to ‘keep our powder dry’ might be based on a perceived need to look responsive if we were to suffer a negative shock. This seems to prioritise appearances over economic management. Alternatively, the argument might be based on an assumption that a cut in interest rates at the time of a crisis would be more effective than a cut delivered earlier.

I have not been able to find evidence to support either of these arguments. Empirical models and the experience of other central banks suggest the *opposite* remedy to the ZLB: a pre-emptive cut reduces the likelihood and severity of hitting the ZLB.

In response to a collapse in asset prices and economic activity, the Bank of Japan (BOJ) cut interest rates to near zero in 1995 and to zero in 1999.<sup>2</sup> A major study by a team of very senior US Federal Reserve (Fed) economists made a concerted effort to learn from the experience of Japan at the ZLB (Ahearne *et al* 2002). The Fed drew three important lessons. First, deflationary episodes are difficult to predict. The degree of weakness in the Japanese economy surprised both public and private forecasters, including the Fed and International Monetary Fund. The result was that stimulus provided by the BOJ was inadequate to stave off a prolonged period of deflation.<sup>3</sup> Second, the ZLB creates an asymmetry in the ability of central banks to respond to economic shocks. Central banks can easily offset stronger-than-expected outcomes by raising interest rates. In contrast, they are limited in how much stimulus they can inject to offset weaker conditions when the ZLB is a binding constraint. While there is general agreement that unconventional tools, such as forward guidance and outright asset purchases, can be useful at the ZLB, they are not perfect substitutes for interest rates (e.g. Evans *et al* 2015). Finally, because downturns are difficult to predict and policy suffers from an asymmetry near the ZLB, central banks should take out insurance against deflation by pre-emptively setting looser policy when in the vicinity of the ZLB.

Another widely cited paper, Riefschnieder and Williams (2000), came to similar conclusions using the Fed’s large-scale FRB/US macro model. They found that more responsive Taylor rules near the ZLB deliver more stable inflation and activity. The implication is that policy should be more aggressive to signs of economic weakness as interest rates approach zero.

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1 Of course, the lower bound on interest rates may not be zero. Some suggest the number could be a small positive number; the experience of other economies, such as Sweden and Switzerland, suggest the number could be a potentially large negative number. In the absence of clear direction, I am agnostic about where the lower bound lies, but use the term ‘zero lower bound’ for familiarity.

2 Browne (2001) provides a very useful summary of the Japanese experience through the 1990s.

3 Ahearne *et al* (2002) suggest that another 200 basis points before 1995 would have been warranted with hindsight.

These papers, among others, formed the foundation of the Fed's thinking on this topic. For example, Ben Bernanke (2010) stated:

*'FOMC decisions during [2002–2003] were informed by a strong consensus among researchers that, when faced with the risk of hitting the zero lower bound, policymakers should lower rates pre-emptively, thereby reducing the probability of ultimately being constrained by the lower bound on the policy interest rate.'*

FOMC member John Williams (2009, p 6) summarised the research this way:

*'A common theme in that research is that when the economy weakens significantly or deflation risks arise, the central bank should act quickly and aggressively to get interest rates down, to maximize the monetary stimulus in the system when the economy is weakening. "Keeping your powder dry" is precisely the worst thing to do.'*

Recent views of senior Fed officials, informed by the Fed's own experience with the ZLB, have not changed. John Williams (2014) and fellow FOMC member Charles Evans (*et al* 2015) have recently argued that policy should be looser than otherwise when in the vicinity of the ZLB.

Evans *et al* (2015) explained that pre-emptively loosening of policy can assist through two channels: an *expectations* channel and a *buffer stock* channel. The expectations channel operates because forward-looking agents reduce consumption and set lower prices today when faced with the possibility that interest rates will hit the ZLB in the future. Setting looser policy today helps to offset these effects. The buffer stock channel recognises that inflation and employment exhibit persistence. Evans *et al* argued that building up a buffer of inflation and employment today will reduce the likelihood and severity of a binding ZLB constraint in the future. The economy will be in a better position to absorb negative shocks.

I aim to quantify these effects in future work.

Economist  
Research  
Economic Research Department  
21 April 2015

## Resources

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MARCH 2018

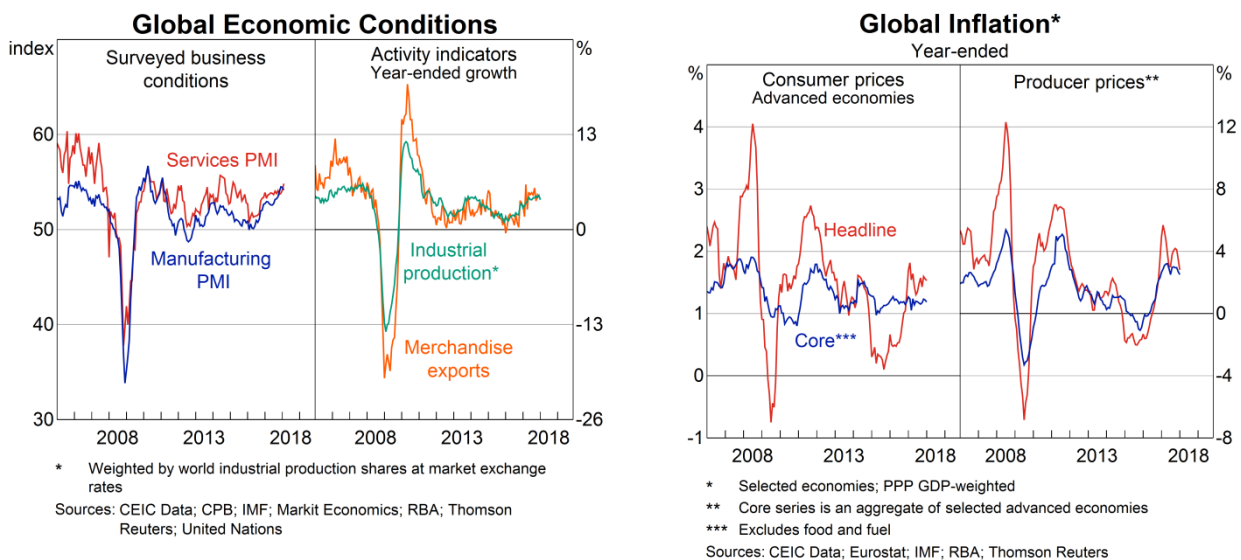
## Summary of Economic Conditions

### International Economic Conditions

Global economic conditions strengthened over 2017. However, there are tentative signs that the upward growth momentum has eased a little in early 2018, particularly in the Asian region, although growth is likely to remain relatively high. Industrial activity and trade growth have settled at post-crisis high rates. Surveyed business conditions also remain around their recent multi-year highs.

Monetary policies remain accommodative, but are expected to gradually tighten. United States fiscal policy is becoming sharply expansionary through tax cuts and increased spending; this will support higher-than-otherwise growth in the United States over the next couple of years and will add to inflationary pressures. However, the corresponding large increase in the fiscal deficit, at a time of full employment, may reduce policy space.

The risk of protectionist trade policies has risen sharply in recent weeks. The United States has imposed wide-ranging steel and aluminium import tariffs. The direct impact of these tariffs will be small, but retaliation from trading partners and emboldened US administration may escalate the protectionist push which would have significant negative consequences for global growth and inflation (see Special Topic: Implications of an Increase in Global Trade Protectionism for further details).



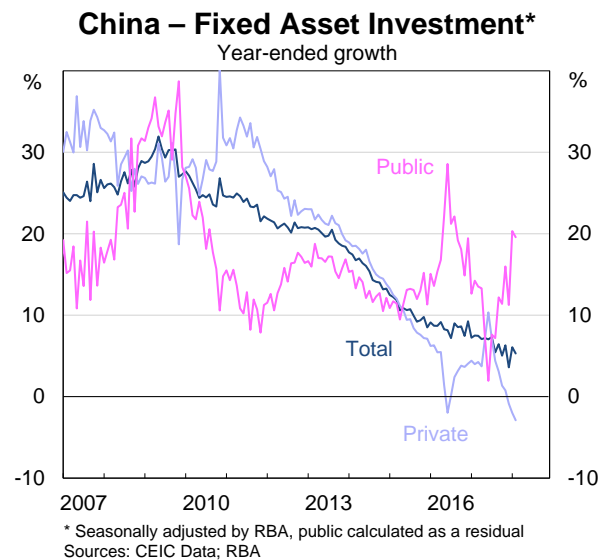
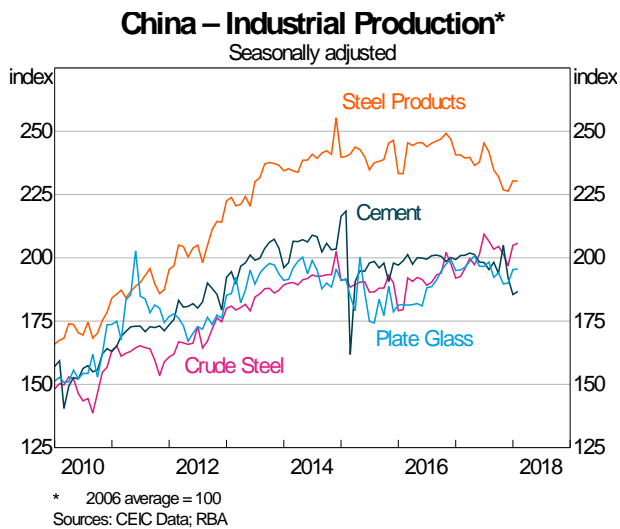
The above-potential growth over recent years has reduced spare capacity in the advanced economies. Unemployment rates have declined to below estimates of full employment in a number of these economies. Nominal wages growth in most advanced economies remains low but has increased a little in some economies. Core inflation remains low. Nonetheless, inflationary pressures have increased with the absorption of spare capacity. This is most evident in producer price inflation, which is at its highest since 2012. Business surveys also suggest increasing input price pressures. Inflation expectations have increased a little over the past year too.

### China

In China, the authorities announced a 2018 GDP growth target of 'around 6.5 per cent' at the National People's Congress (NPC) earlier in March (the target for 2017 was also 6.5 per cent, but also included the clause 'higher if possible'). Other economic targets were consistent with relatively stable growth. Growth

exceeded the target in 2017, and this has provided the authorities with some room to tighten financial conditions a little in recent months, in line with their objective of keeping macro leverage broadly stable.

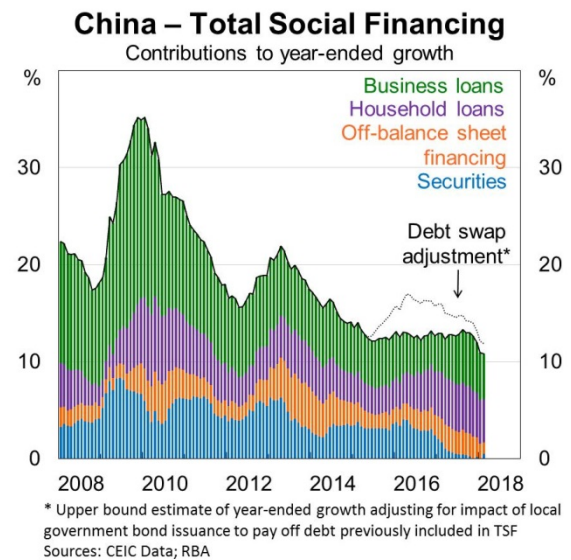
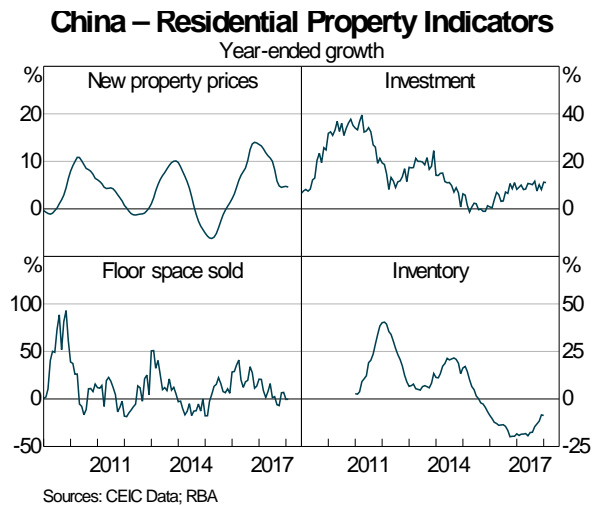
Growth in Chinese activity appears to have been broadly stable in the first two months of 2017, but recent data should be treated with some caution due to the uncertain effects of Chinese New Year. Investment growth has been relatively stable as an acceleration in public investment has offset a marked deterioration in private investment. Industrial output across a range of sectors has been subdued in recent months. Crude steel production remains elevated, despite production constraints (aimed at improving air quality) that were in place in most cities until mid-March; the strong steel production has provided ongoing support for bulk commodity imports.



Headline inflation has increased in recent months, supported by strong growth in fresh food prices. Producer price inflation has moderated further.

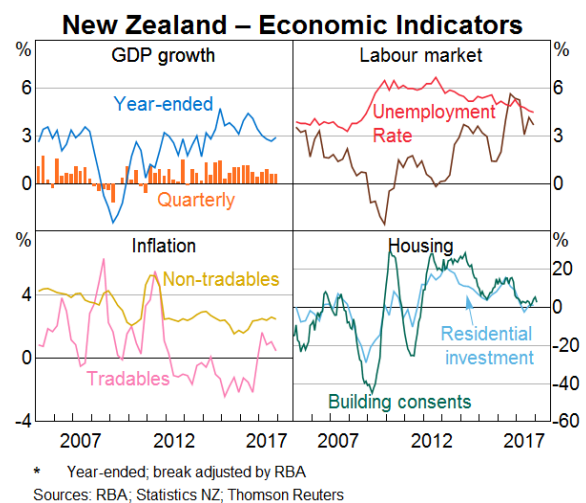
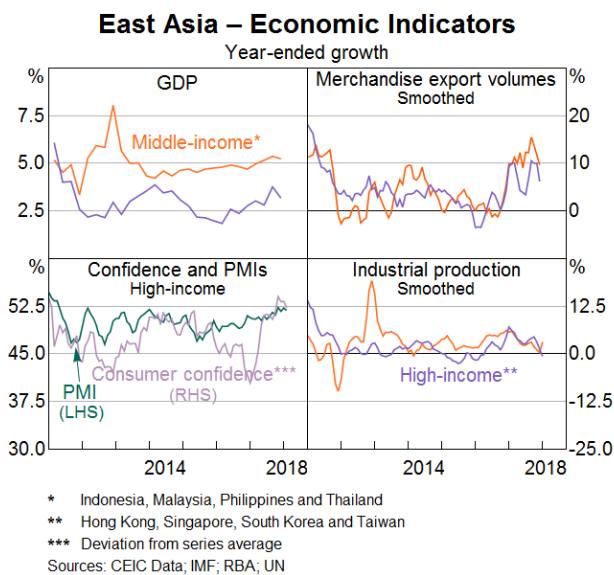
Activity in Chinese property markets has remained stable. Housing price inflation has been modest and mainly outside the largest Chinese cities. Investment in the largest cities has moderated in recent months and overall, but picked up in other cities. Floor space sold has been little changed, weighed down by the fall in floor space sold in cities with controls on housing purchases in place. Housing starts remain at a high level and below sales, consistent with the decline in inventory of unsold housing in many parts of China. Messaging from recent political meetings suggests that control over housing markets will remain tight in 2018, with differentiated regulations calibrated at the local level remaining in place in most cities.

Growth in total social financing (TSF) over recent months remains below the average pace over 2017, consistent with authorities' objectives of controlling the growth of leverage and efforts to rein in shadow banking activities. Bank lending to both business and households remains strong and corporate bond issuance has been broadly stable.

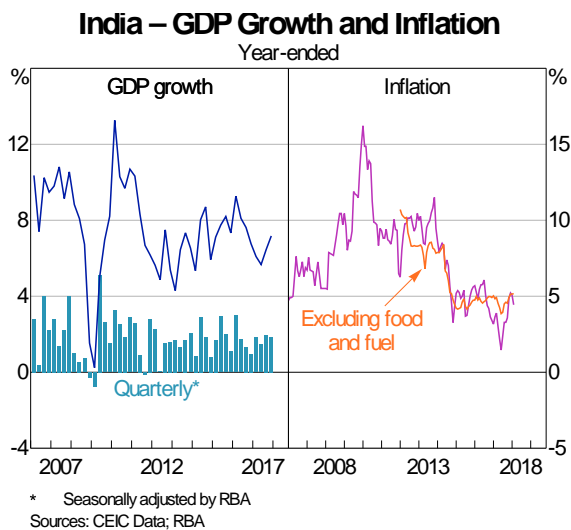


## Asia-Pacific

In other east Asian economies, GDP growth slowed in late 2017 as growth in industrial production and trade eased. In part this is a 'payback' for the strong growth earlier in the year and timing of long holidays in Korea. Indicators for early 2018 have been mixed: business surveys were little changed, industrial production and trade growth rates declined, consumer confidence edged lower but remains high, and inflation has picked up in Hong Kong in particular. However, the effect of the Lunar New Year makes the interpretation of the data interpretation difficult. Monetary and fiscal policies have been little changed in recent months and remain accommodative.



In India, GDP growth strengthened noticeably in the second half of 2017, supported by a strong recovery in private investment growth. The Indian Government's recapitalisation plan for state-owned banks over the next two years is expected to further support investment by increasing credit supply; however, excess capacity in the industrial sector and corporate indebtedness may weigh on credit demand. Private consumption growth has also moderated further. Headline inflation has strengthened in recent quarters (driven by food and fuel price inflation) and remains above the Reserve Bank of India's medium-term inflation target of 4 per cent. Core inflation has also strengthened.

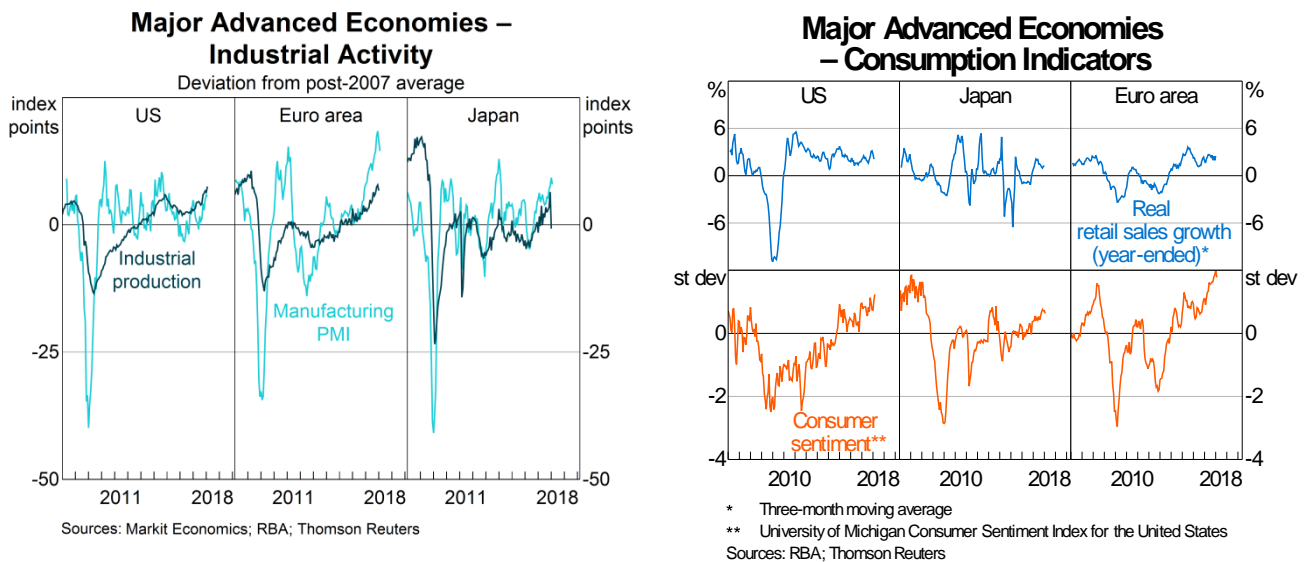


GDP growth in New Zealand eased over the past year to around its long-run average, but is expected to strengthen and exceed estimates of potential this year. Residential investment growth slowed in 2017 due to construction industry supply constraints and the tightening in lending criteria, but it increased a little since late 2017 and the RBNZ has announced plans to ease some of its housing macro prudential policies. Growth in other components of domestic demand has been strong supported by historically high immigration and accommodative monetary policy; increased government spending and higher terms of trade are also expected to support GDP growth. The labour market remains strong: employment growth is very high and the unemployment rate has declined further. The rapid working-age immigration in recent years and the broad-based increase in participation rates across gender and age cohorts since 2016 (likely due to cyclical factors) have boosted the labour supply. This has contributed to the sluggishness in wages growth; substantial increases to the minimum wage over the next few years should generate spillovers for other low wage workers, and alongside the tightening labour market, should support wages growth. Non-tradables inflation remains below average; however with the output gap around zero, and growth expected to exceed potential, capacity pressures should put upward pressure on inflation.

### Major Advanced Economies

GDP in the major advanced economies grew faster than estimates of potential growth in the December quarter. The growth in the euro area over the past year has been broad-based across countries, although more of it has been driven by external demand recently. Japan has experienced its longest period of uninterrupted quarterly growth since 1986, supported by stronger business investment and external demand. In the United States, domestic demand increased broadly, and there has been a sharp pickup in business investment growth since mid-2016.

The above-potential GDP growth that has been experienced in the major advanced economies over recent years is expected to continue for some time. Monetary policies remain expansionary but are expected to gradually tighten. In the United States, fiscal policy is becoming sharply expansionary, which should boost growth in the short term. Fiscal policy is also expected to be more expansionary in Germany over the next few years due to higher government spending as a result of the renegotiated agreement of the governing coalition. The United Kingdom and the European Union have agreed on a 21-month transition period maintaining trade access on current terms. The major risk to the outlook is from increased protectionism, with the United States imposing tariffs on steel and aluminium imports and the risk of further escalation.



Business investment has grown strongly in the major advanced economies over the past year, with the strength likely to continue in the next several quarters supported by diminishing spare capacity. Industrial production, business confidence, and broader business conditions have stabilised at multi-year highs in the US and euro area. In Japan, industrial activity appears to have slowed-down temporarily due to winter weather disruptions; however, surveyed business conditions remain strong. Investment intentions are especially elevated in the United States, in part due to the recent US corporate tax cuts.

While consumption continues to grow strongly in the major advanced economies, growth has eased a little recently. US consumption growth weakened in early 2018 as the boost from the post-hurricane rebuilding, especially in vehicle sales, has dissipated. Growth has also eased a little in the euro area in late 2017 and there has been weather-related weakness in Japan in early 2018. Strong employment growth, above-average consumer confidence, and rising asset prices should continue to support strong consumption. Residential investment growth has been weak in the United States since late 2016, due to supply constraints and rising input costs, although rebuilding activity from the 2017 hurricanes has spurred activity more recently. Residential investment growth has eased over the past couple of quarters in Japan but has remained strong in the euro area.

Strong employment growth has seen labour markets tighten substantially. Unemployment rates have declined to below estimates consistent with full employment in the major advanced economies and are at multi-decade lows in a number of economies (although there is significant variation within euro area members). Reports of difficulties in filling jobs have increased. Despite the drag from ageing populations, over recent years the participation rate has been flat in the euro area and has increased in Japan. The participation rate has also stabilised recently in the United States, after declining a little faster than what would have been suggested by ageing alone between 2007 and 2013.

The large inflows of asylum seekers in the euro area in 2015 and 2016 have had minimal impact on labour market so far. The asylum applications have been concentrated in countries with low unemployment rates, such as Germany, but the effect has been limited due to the strong labour demand and the very gradual impact on the labour supply. Over the longer-term the resulting increase in the labour supply in the euro area is estimated to be fairly small at less than 0.5 per cent.

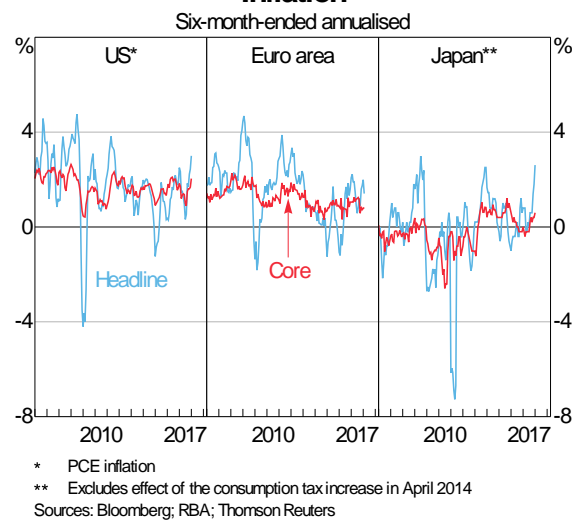
Nominal wages growth has picked up a little, although it remains low. In Japan, hourly wages growth in the more-flexible part-time sector of the labour market has increased steadily since 2010 and is around its highest rate in two decades. Full-time wages growth has picked up in recent months and has been positive for a few years now, following a decade of slightly negative growth. This year's annual labour unions-employer negotiations have so far resulted in notably higher wages growth agreements. A range of wages growth measures in the United States are above their post-crisis troughs. Wages growth has also increased a little in the euro area.



### Major Advanced Economies – Labour Market and Wages



### Major Advanced Economies – Inflation



In Japan and the United States, headline and core inflation have picked up a little in recent months; inflation expectations have also increased: market expectations have increased since late 2017 in all three economies and consumer expectations in the United States have picked up notably. Core inflation has been little changed in the euro area and remains low. Major central banks expect inflation to increase towards their targets over the next few years, as rising capacity pressures put upward pressure on wages and prices.

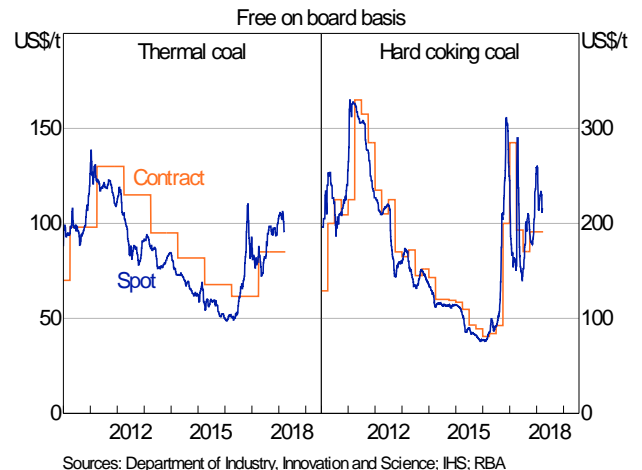
### Commodity Prices

Commodity prices have generally fallen since the previous meeting, led by lower iron ore, coal and rural commodity prices. The spot price of iron ore (US\$60 per tonne) has decreased by 13 per cent, weighed down by a number of demand-related concerns, including: whether Chinese demand after the New Year holiday will be sufficient to clear a large build up in steel inventories; reports that some Chinese cities will extend the winter production cuts through to the end of March; and concerns that US tariffs on imported steel and potential counter-measures from large steel producing countries could weigh on global steel demand.

#### Chinese Steel and Iron Ore Spot Prices



#### Coal Prices

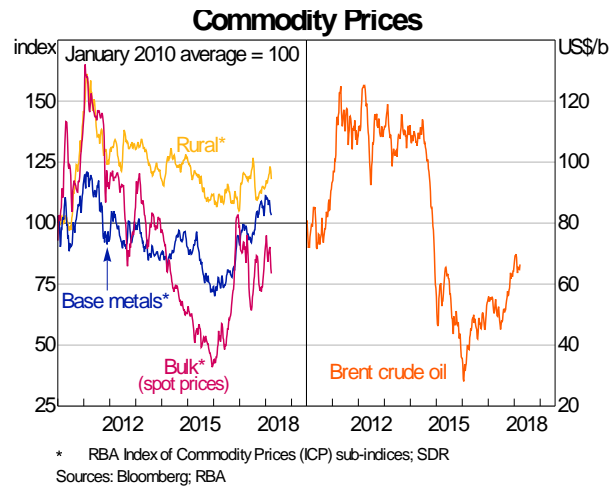


The spot price of premium hard coking coal (US\$216 per tonne) has fallen by 7 per cent since the previous meeting, alongside the fall in the iron ore price and reported concerns about Chinese steel demand. The spot price of Newcastle thermal coal (US\$96 per tonne) has declined by 5 per cent since the previous meeting on reports that Chinese demand has eased.

The price of Brent crude oil (US\$67 per barrel) has increased by 2 per cent since the previous meeting, but remains around 6 per cent below its January peak with higher US production weighing on prices in recent months. The rural sub-component of the RBA ICP has declined by 5 per cent since the previous meeting, led by lower wheat prices amid better-than-expected weather conditions in US wheat growing areas.

Commodity Prices Percentage change; SDR terms			
	Since previous meeting	Since previous SMP	Since year ago
<b>Bulk commodities<sup>(a)</sup></b>	-10	-9	-12
- Iron ore	-13	-15	-33
- Coking coal	-7	-3	27
- Chinese steel	-5	-1	7
- Thermal coal	-5	-7	12
<b>RBA Index</b>			
- with spot bulk prices	-6	-6	-4
<b>Rural<sup>(b)</sup></b>	-5	-1	-2
<b>Base metals<sup>(b)</sup></b>	-2	-3	4
<b>Gold</b>	-1	-1	-1
<b>Brent oil</b>			
- US\$ terms	2	2	31
- SDR terms	2	2	22

(a) Spot prices  
(b) RBA Index of Commodity Prices sub-indices  
Sources: Bloomberg; IHS; RBA



## Domestic Economic Conditions

Real GDP increased by 0.4 per cent in the December quarter and by 2.4 per cent over the year, which was broadly in line with our February Statement forecasts and a little below estimates of potential growth. Growth in the quarter was supported by strength in household consumption, which was also revised up in previous quarters. Non-mining business investment and public demand also made strong contributions to growth, while net exports, mining investment and dwelling investment subtracted from growth.

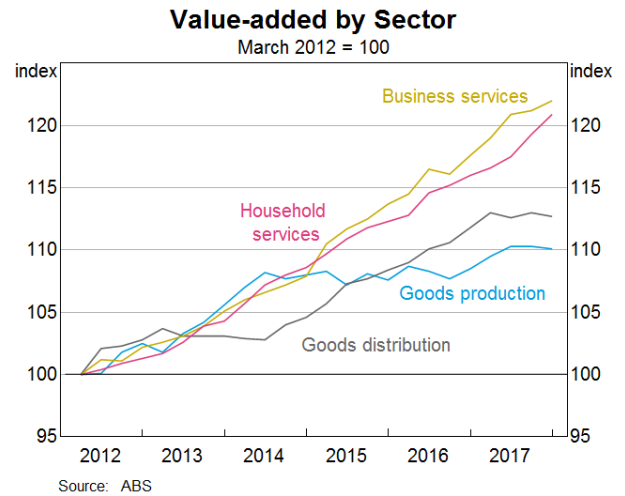
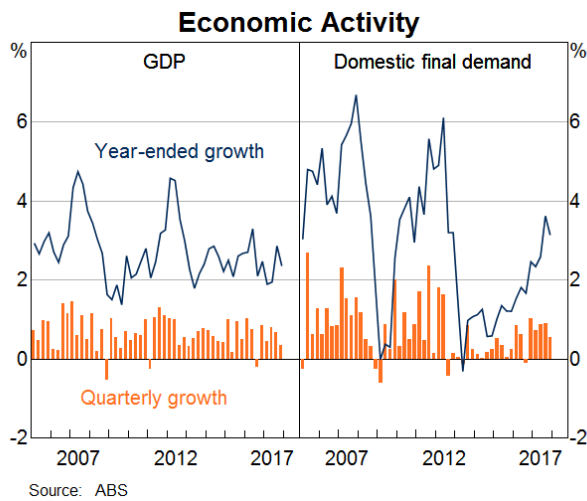
By industry, growth remained strongest in household and business services. Growth was particularly strong in healthcare and social assistance – which is consistent with strong employment growth – and accommodation and food services. In goods-related industries, growth remained weak, particularly for agriculture and goods distribution industries.

Quarterly GDP growth is expected to increase in the March quarter as exports recover from the weak outcome in the December quarter. Business conditions remain around their highest level recorded, while

National Accounts Percentage change			
	Dec qtr	Sep qtr	Year to Dec qtr
<b>GDP</b>	<b>0.4</b>	<b>0.7</b>	<b>2.4</b>
Domestic final demand	0.6	0.9	3.1
- Consumption	1.0	0.5	2.9
- Dwelling investment	-1.3	-1.7	-5.8
- Mining investment	-10.2	-1.8	-12.0
- Non-mining investment <sup>(a)</sup>	2.1	5.0	12.4
- Public consumption	1.7	0.2	4.9
- Public investment <sup>(a)</sup>	-0.9	5.3	4.9
Change in inventories <sup>(b)</sup>	0.0	0.1	-0.1
Exports	-1.8	1.2	0.8
Imports	0.5	2.2	6.6
Terms of trade	0.1	-0.2	-1.0

(a) Excludes second-hand asset transfers  
(b) Contribution to GDP growth  
Source: ABS

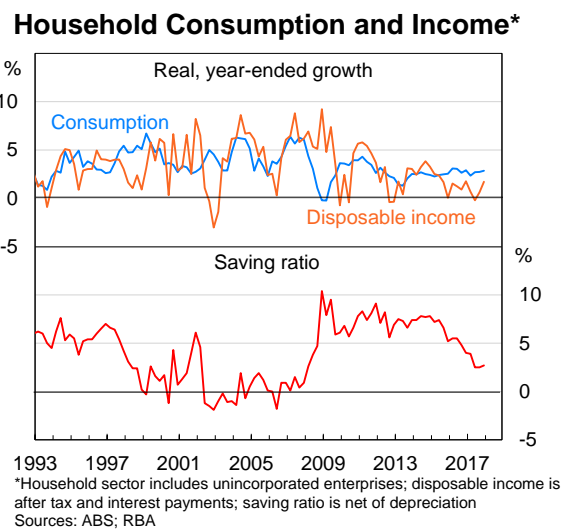
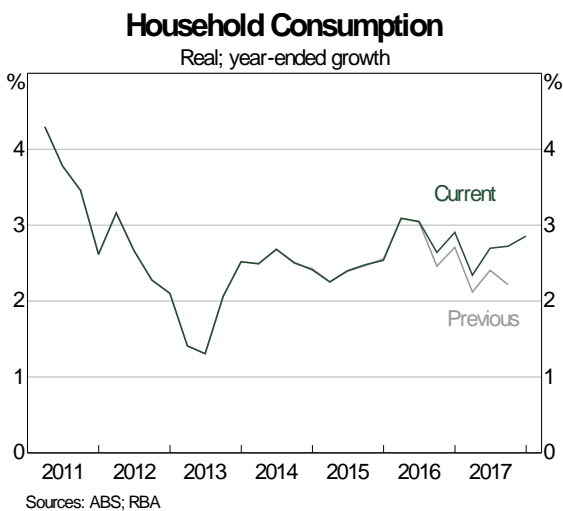
households' perceptions of their personal finances are above their long-run average. In the established housing market, conditions look to have eased further in Sydney and, to a lesser extent, in Melbourne, while conditions in Brisbane and Perth are little changed.



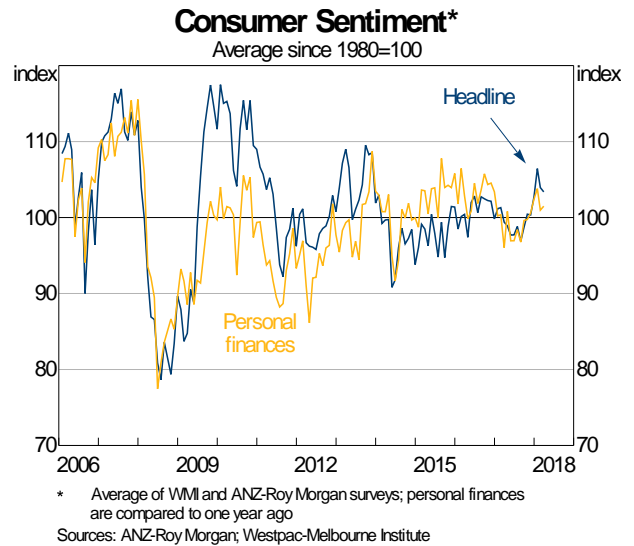
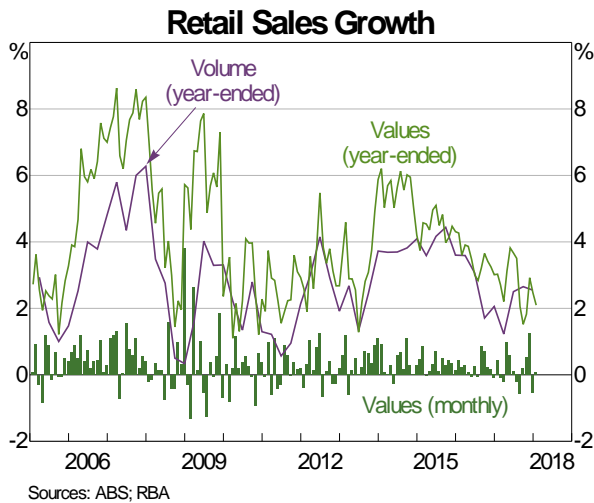
### Household Sector

Household consumption grew strongly in the December quarter, consistent with the strength in retail trade volumes over the quarter. This follows substantial upwards revisions to consumption growth in previous quarters that saw consumption growth increase to almost 3 per cent in year-ended terms. Most of the revisions to consumption were for food and recreation and hospitality consumption.

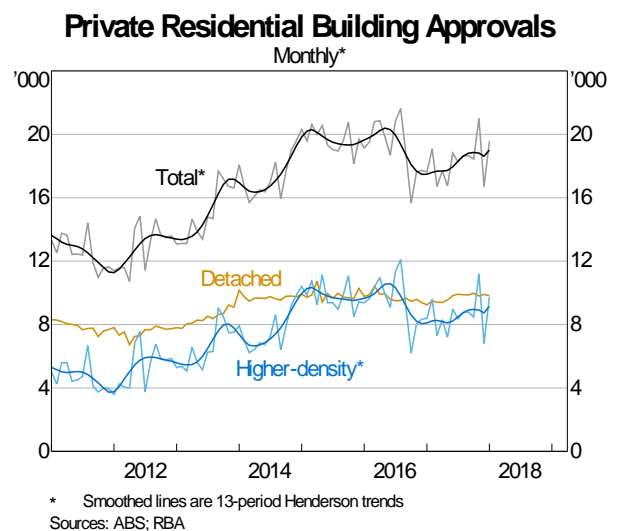
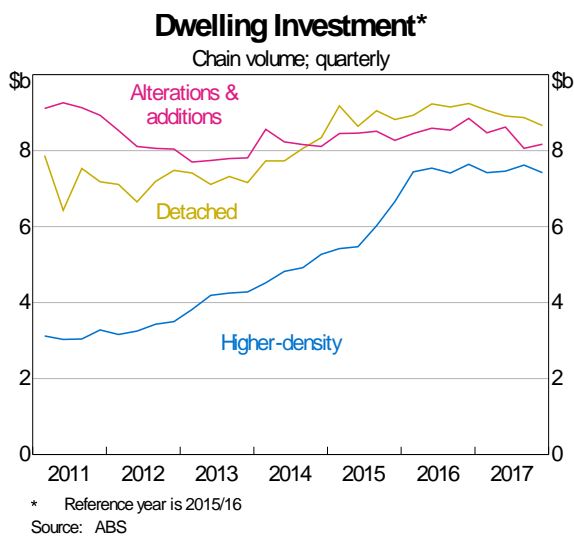
Consumption growth has been supported by stronger growth in household disposable income. Nominal household disposable income grew by 3 per cent over 2017, which is the highest rate since 2015, though still below average. Strong growth in employment and the profits of unincorporated enterprises supported household income growth over the year, while growth in average labour income remained subdued. With income growing by more than consumption, the household saving ratio increased a little in the quarter.



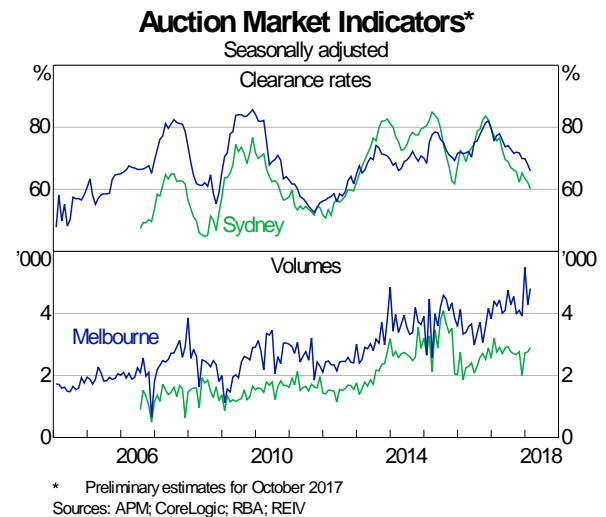
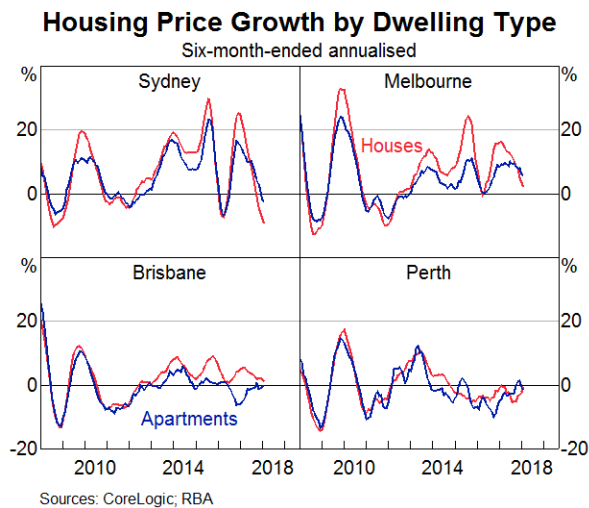
More recently, growth in the value of retail sales was subdued in January. Some of this likely reflects ongoing weakness in prices for department stores and clothing and footwear retailers, with volumes for these retailers growing strongly over 2017. Information from liaison with retailers suggests trading conditions have remained stable and consistent with below average growth. Consumer sentiment has declined a little in early 2018, although is well above the level during the second half of last year.



Dwelling investment declined in the December quarter and over the year, especially in Victoria. After falling over late 2016 residential building approvals have edged up, driven by strength in higher-density dwelling approvals in Victoria. Liaison with developers indicates that there has been little change in the new housing market so far this year. Off-the-plan apartment sales in the major east coast cities slowed considerably in the second half of 2017. The pipeline of work approved but yet to be done remains close to historically high levels and should continue to support a high level of dwelling investment over the next year or so.



Conditions in the established housing market have eased a little further in Sydney and Melbourne. Preliminary data indicate that housing prices continued to decline in both cities, although more so in Sydney and particularly for more expensive properties. Auction clearance rates have continued to trend down over the year-to-date. Meanwhile, conditions in Brisbane and Perth have been little changed, while the housing market in Hobart continues to show strength.



### Housing Prices

Percentage change

	CoreLogic <sup>(b)</sup>		APM <sup>(a)</sup>	
	Hedonic		Stratified median	
	March three-month-ended annualised	March six-month-ended annualised	Jan three-month-ended annualised	Jan six-month-ended annualised
Sydney	-6.6	-7.4	-7.9	-3.2
Melbourne	-1.1	1.2	3.7	8.3
Brisbane	0.1	0.7	5.4	-0.8
Perth	-1.7	-0.6	-1.5	-2.9
Adelaide	-1.3	-0.1	-4.4	1.0
Hobart <sup>(c)</sup>	13.4	13.7	na	na
Canberra <sup>(c)</sup>	-0.8	2.3	na	na
Australia	-3.3	-2.7	-1.4	1.0

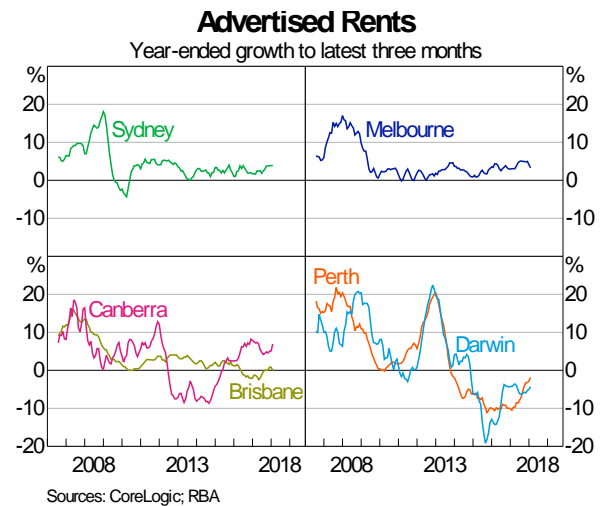
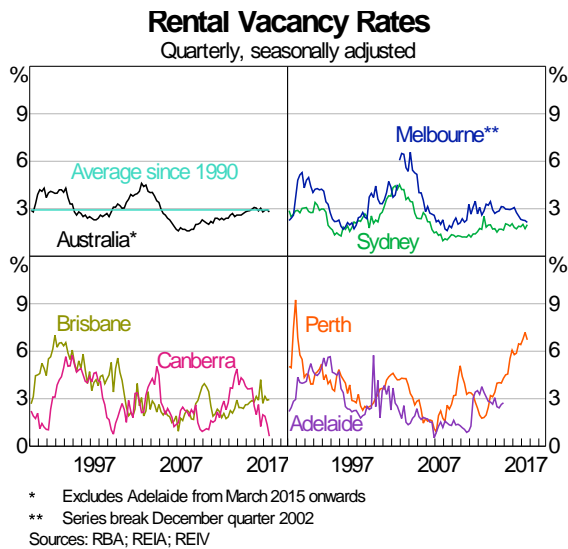
(a) Seasonally adjusted

(b) Preliminary estimates for March

(c) CoreLogic's February data is provided for these cities. APM does not report monthly observations for Canberra and Hobart due to low observations

Sources: APM; CoreLogic; RBA

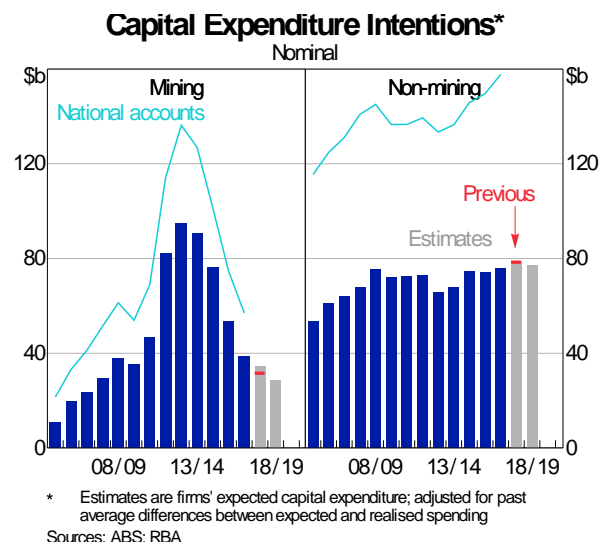
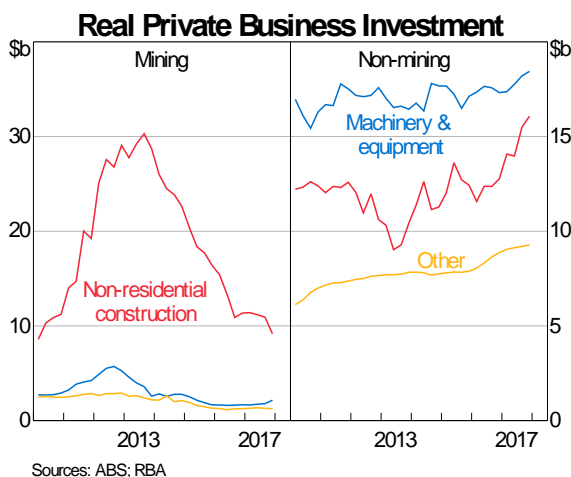
Growth in advertised rents has picked up in recent months, particularly in Sydney and Melbourne, where rental vacancy rates are a little below average. Advertised rents typically lead rent inflation in the consumer price index. In Perth, the rental vacancy rate ticked down in the December quarter, but remains at a high level and the rate of decline in advertised rents has slowed. In Brisbane, the rental vacancy rate ticked down slightly and advertised rents remained largely unchanged.



## Business Sector

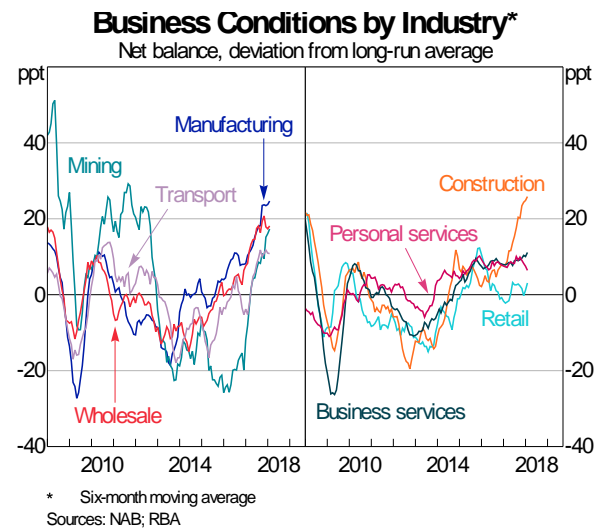
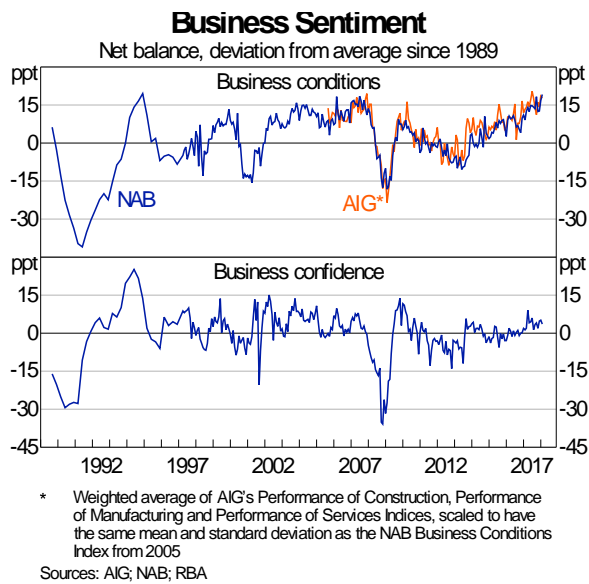
Private business investment declined by 1 per cent in the December quarter, which was a bit less of a decline than expected at the time of the February *Statement*. The decrease was led by mining investment, as non-residential construction work at some LNG projects neared completion, as had been expected for some time. Non-mining investment grew solidly in the quarter and was broad-based by asset type. Non-mining investment has increased by around 12½ per cent over the past year, of which 8½ percentage points was due to non-residential construction; detailed data on the composition of this building activity will be released in April.

The December quarter capital expenditure survey provided the fifth estimate of nominal investment intentions for 2017/18 and the first estimate for 2018/19. For the mining sector, survey respondents expect investment to decline in 2017/18 and 2018/19, implying that the trough in mining investment could be later than we had previously forecast. In the non-mining sector, survey respondents expect capital expenditure to remain around its current level over the next year or so. Non-residential building approvals declined sharply in January, after remaining elevated throughout most of 2017.



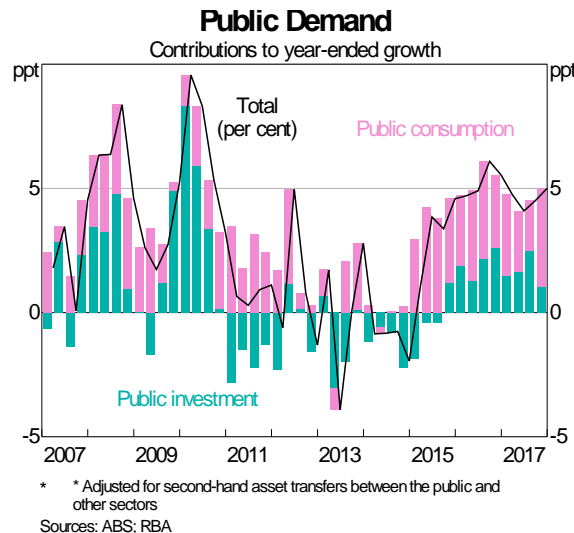
Private non-financial corporate profits (gross operating surplus) increased in the December quarter, owing to an increase in mining sector profits; non-mining profits were broadly unchanged. More recent indicators of business conditions continue to be positive. The NAB survey measure increased in February to be at its highest level since the monthly survey started in 1997, with all industries reporting above average conditions. The improvement in business conditions over the past year has been led by goods-related firms

(except retail) and the mining sector. In contrast, business conditions in the services sector have been little changed over the past 12 months.



## Government Sector

Public demand growth remained strong in the December quarter. Public consumption growth picked up, particularly at the national level, supported in part by spending associated with the National Disability Insurance Scheme. Public investment declined a little following strong growth in the previous quarter.



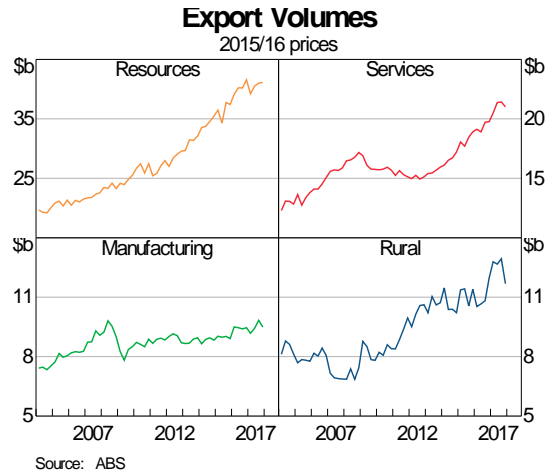
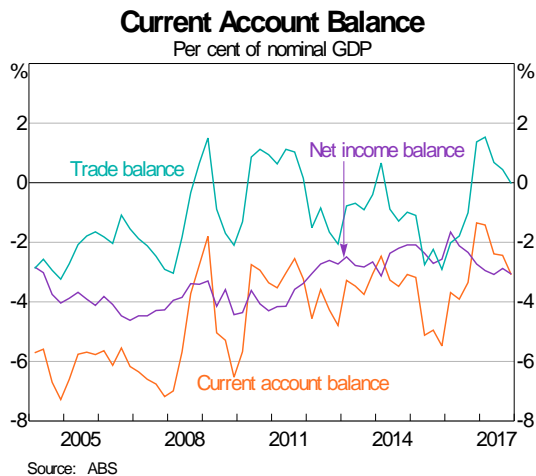
## External Sector

As expected, net trade subtracted ½ percentage point from GDP growth in the December quarter. Export volumes declined, as lower *rural, services, manufactured* and *coal, coke and briquettes* exports more than offset increases in *metal ores and minerals* and *other mineral fuel* exports. Import volumes increased, led by consumption and intermediate imports. The terms of trade was little changed in the quarter. As a result, the trade balance returned to a very small deficit in the quarter and, with the net income deficit widening, the current account deficit widened to 3 per cent of nominal GDP.

Export values increased strongly in January driven by higher resources, manufactured and service export values, while import values decreased in the month.

LNG export volumes increased in the month alongside the ramp up of projects in Western Australia, while iron ore volumes fell slightly and coal export volumes were flat. The anticipated recovery in coking coal

export volumes, following a number of temporary disruptions in Queensland, is likely to be slower than previously expected due to a heavy maintenance schedule at terminals over the next few months, and changes to rail maintenance schedules on the rail network. In particular, Queensland rail operator Aurizon announced that in response to a proposed reduction in its regulated maintenance budget, there will be an increase in disruptions on the network due to reduced flexibility in maintenance scheduling.



## Labour Costs

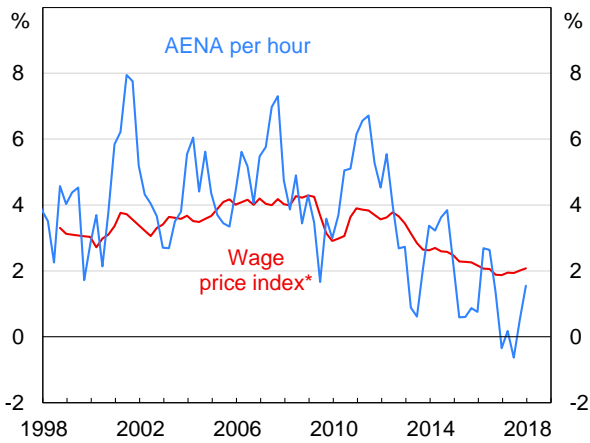
Data from the national accounts suggest that growth in average earnings (AENA) per hour remains weak. AENA per hour declined in the December quarter and had grown around 1½ per cent over the year. Growth in AENA, while more volatile, has been below growth in the wage price index (WPI) for most of the past 5 years. AENA is a broader measure of labour costs than the WPI as it includes non-wage payments and includes the effect of compositional changes in the labour market on average earnings. The difference between growth in AENA and the WPI is most apparent in Western Australia and Queensland, and in the goods and household services sectors.

The effect of labour cost growth on inflation depends on the extent to which it is offset by higher labour productivity. For around the past five years, productivity growth has largely offset increases in labour costs, leaving unit labour costs little changed. However, the decline in labour productivity over the past year has seen a pick up in unit labour costs.



### Wage Growth

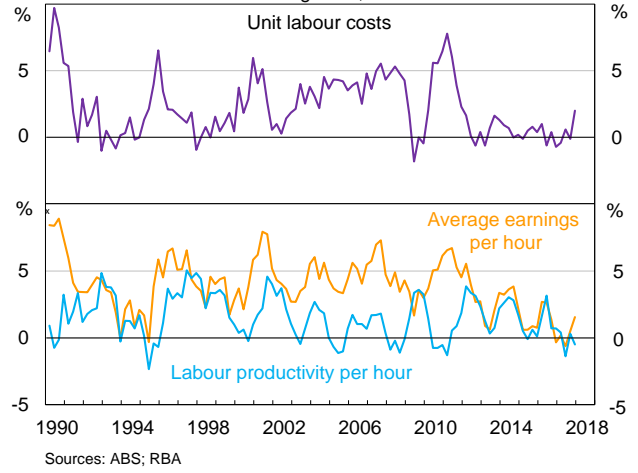
Year-ended, non-farm



\* Total pay excluding bonuses  
Sources: ABS; RBA

### Unit Labour Costs Growth

Year-ended growth, non-farm



Sources: ABS; RBA

## Special Topic: Implications of an Increase in Global Trade Protectionism

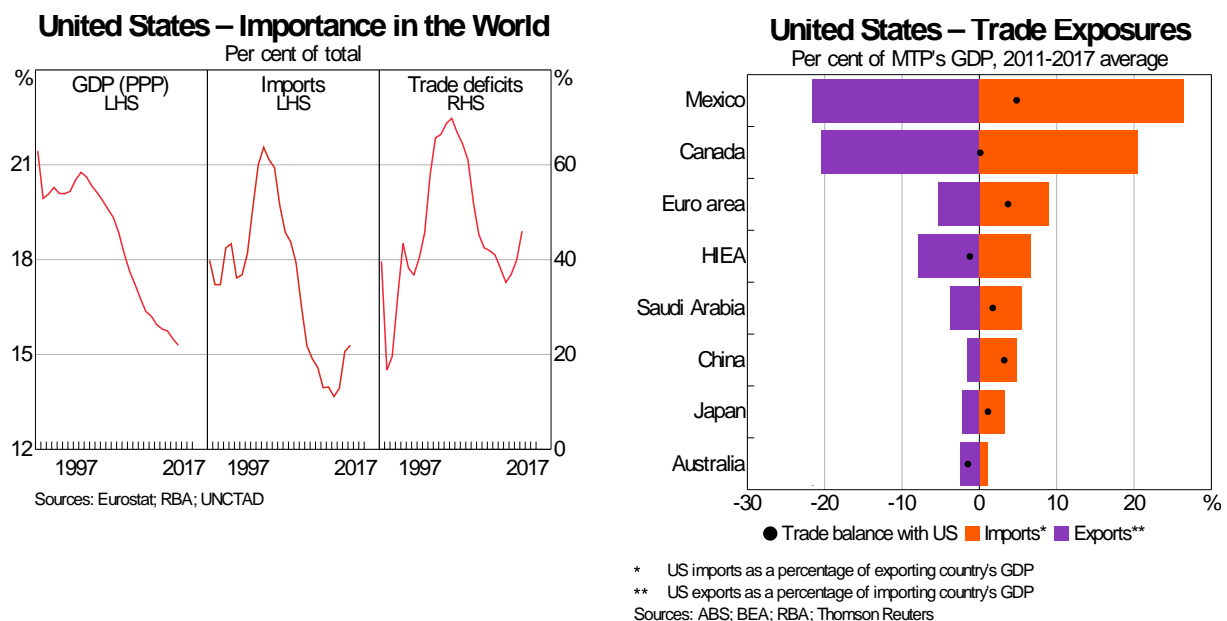
The United States has announced wide-ranging tariffs on steel and aluminium imports, in effect from late March. The share of US imports affected by the tariffs is small, at 1½ per cent, but these measures may have broader implications for future global trade policies. For instance, some countries have suggested that they may retaliate in response. Moreover, the United States is reported to be considering imposing further wide-ranging tariffs on China.

To quantify the global and domestic economic impact of a possible ‘trade-war’ we use Economic Analysis’s macroeconomic model, MARTIN, and a model of global linkages from Oxford Economics. We explore three scenarios with increasing severity of trade protectionism:

1. US steel and aluminium tariffs only: The newly-imposed tariffs on US imports of steel (25 per cent) and aluminium (10 per cent) with exemptions on Canadian, Mexican and Australian imports.
2. Wide-ranging US tariffs: The United States applies a 20 per cent tariff on all goods imports from all countries, including Australia.
3. Retaliation: All countries except Australia retaliate to the wide-ranging US tariffs and impose tariffs of 20 per cent on all of their US goods imports.

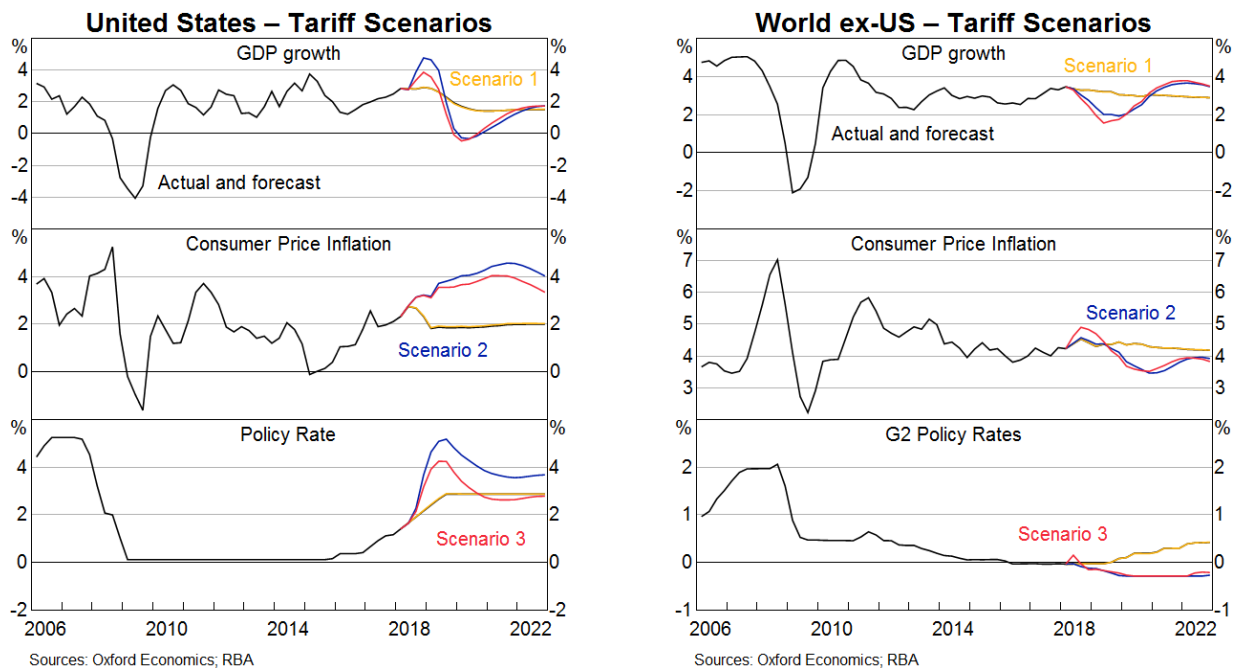
### Implications for the World Economy

Although its share of world GDP and trade has declined over the past three decades, the United States remains the major source for global final demand. The United States currently accounts for only around 15 per cent of global imports but for about half of the trade deficits. The exposure to US trade varies significantly across economies. A US centred ‘trade-war’ will likely have bigger impact on economies with larger US trade exposures relative to their GDP, including China, the euro area and Mexico. However, given the interconnectedness of the global economy the impact is likely to be broader, including on Australia.



In the first scenario there is only negligible effect on the United States or the rest of the world because share of affected US imports is very small.

The effects are larger in the more-protectionist scenarios. The key macroeconomic variables evolve somewhat differently in the United States and the rest of the world, given that the United States is at the centre of the protectionist push.



**In the United States**, the tariffs provide a short-term boost to activity but subsequently GDP growth declines significantly and inflation increases substantially. The key channels are:

- Initially, the **price effect** of the 20 per cent across-the-board tariff reduces US import volumes by 8 per cent. The increase in import prices induces a substitution to domestic production, which causes US GDP to increase above baseline for the first year or so.
- This is subsequently offset by a **negative income effect and tighter monetary policy**. The higher import prices flow through to domestic US inflation. More importantly, the initial pickup in GDP growth pushes inflation higher as it opens up a large positive output gap, given that the United States is currently at full employment. As a result, US inflation increases by around 2 percentage points.
- The sharp pick-up in inflation lowers real incomes, which weighs on domestic demand. This effect is reinforced by the tighter monetary policy. The US Federal Reserve responds to the above-target inflation by significantly increasing the fed funds rate. US long-term interest rates increase, equity prices decline and the US dollar appreciates. This tightening in financial conditions has negative effect on activity. By 2019, the income effect, the tighter monetary policy and tighter financial conditions outweigh the positive GDP effect from substitution to domestic production and the US enters a recession.
- In Scenario 3, there is an additional negative external demand effect. Retaliatory tariffs on US exports reduce other economies demand for US produced goods. This weighs on US GDP and mutes the increase in US inflation and the fed funds rate relative to scenario 2.

**Outside of the United States**, GDP growth declines markedly in the more-protectionist scenarios as US demand for overseas-produced goods falls, global trade slows and global financial conditions tighten. This reflects the decline in the external demand faced by the rest of the world from the substitution to US domestic production and the subsequent decline in US growth as US monetary policy is tightened. The increase in long-term US interest rates initially leads to higher long-term rates in the rest of the world. This, together with lower equity prices, depresses GDP in the rest of the world further. In the retaliation scenario, global GDP growth declines by a bit more in the near term as the retaliatory tariffs on US exports raise inflation outside the US initially and lower real incomes and demand. Overall, Australia's major trading partners GDP growth is between 3 and 3½ per cent lower in levels terms by 2020 relative to baseline.

Unlike in the United States, the more protectionist scenarios are deflationary for the rest of the world. This is because:

- In the rest of the world the substitution to domestic production is much smaller than is the case in the United States. The scenarios assume that in the rest of the world tariffs are raised only on imports from

the US, but that in the United States tariffs are raised on all imports. As a result, the affected imports in the rest of the world are much smaller as a share of GDP than are the affected imports in the United States.

- The decline in external demand (from the decline in exports to the United States and as non-US growth declines) and the tightening in financial conditions create spare capacity in the rest of the world. The effect of this on inflation more than offsets the inflationary impact of the retaliatory tariffs beyond the first year.
- In some of the affected economies (mainly the euro area and Japan) the scope for monetary policy support is limited as policy rates are close to the effective lower bound.

## Implications for Australia

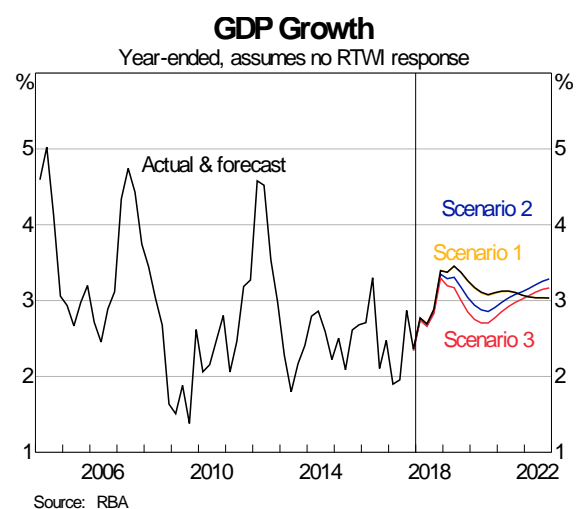
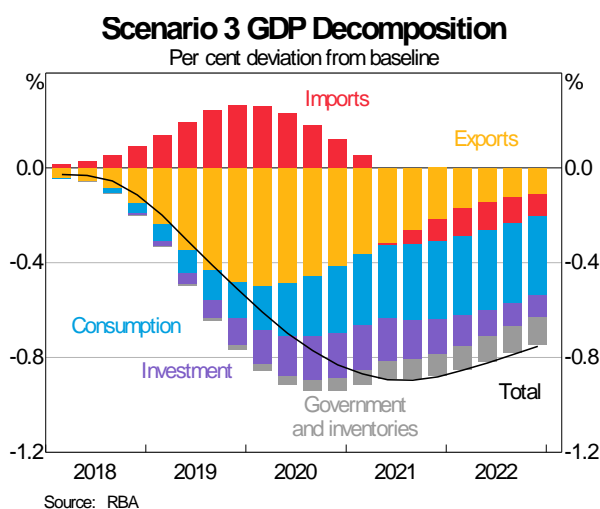
To aid in understanding the impact of the modelled global outcomes on Australia, we assume that the domestic cash rate is unchanged (that is, monetary policy does not respond) and the real exchange is fixed. This exchange rate assumption is discussed further below. We also assume that the changes in global financial variables affect Australia too, so that share prices and household wealth are lower and corporate borrowing rates rise.

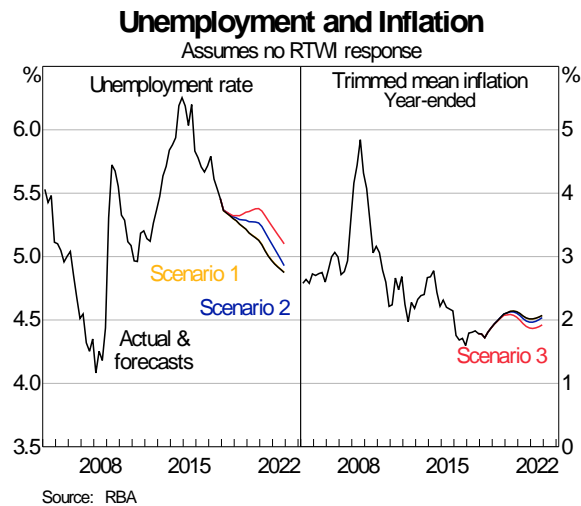
The effects of the scenarios on Australian economic conditions come through two main channels:

- The **demand channel**: The imposition of tariffs raises the price of Australian exports for US consumers, lowering US demand for these goods. The reduction in Australian export volumes then leads to lower export revenue. This reduces domestic income, which weighs on consumption and investment. Lower domestic demand and higher world prices also lead to less demand for imports.
- The **financial conditions channel**: Lower equity prices reduce household wealth, which leads to lower consumption. Wider spreads on corporate borrowing rates also weigh modestly on investment.

Putting the effects of the two channels together, the largest impact occurs in the retaliatory scenario (Scenario 3). At its trough in 2021, the level of GDP is around 1 per cent lower. The unemployment rate is  $\frac{1}{4}$  percentage points higher and inflation is around 0.2 percentage points lower. The effects of the full US tariff scenario (Scenario 2) are around half the size.

Under the limited tariff scenario (Scenario 1), the effects on Australian GDP are negligible. This magnitude is in line with the very small global effects. Even without the exemption on Australian products, the impact would be small; Australia's exports of aluminium and steel account for less than 1 per cent of total export values. Additionally, the indirect effects on demand for Australian iron ore are also expected to be small as the tariffs on US steel imports are not expected to have a substantial effect on Chinese steel production.





We leave the exchange rate unchanged as its response to trade protection is uncertain. On the one hand, a deterioration in global economic conditions, heightened risk aversion and a fall in commodity prices would typically be associated with a depreciation of the Australian dollar. In that case, the consequences of the scenarios for economic activity in Australia would be less severe, as it would support exports. On the other hand, Australia may be less exposed to the scenario than other economies that rely more on global trade flows as a source of demand for their products and who have larger manufacturing sectors. As a result, it is possible that the Australian dollar could appreciate. Were this to occur, the downside risks of this scenario would be greater. To illustrate the potential magnitude of these effects, when we allow the exchange rate to respond to the imposition of tariffs in the Scenario 3, it suggests that the real exchange rate would appreciate by 6 per cent. GDP would then fall by an additional 2.5 per cent. A lower cash rate could largely offset these effects in the long run.

Economic Group

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