

# Statement on Monetary Policy

FEBRUARY 2017



RESERVE BANK  
OF AUSTRALIA

# Statement on Monetary Policy

FEBRUARY 2017

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*Statement on Monetary Policy* enquiries

Secretary's Department  
Tel: +61 2 9551 8111  
Fax: +61 2 9551 8033  
Email: [rbainfo@rba.gov.au](mailto:rbainfo@rba.gov.au)

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# Overview

The global economy entered 2017 with more momentum than earlier expected. Along with various survey indicators pointing to improved sentiment, growth in global industrial production and merchandise trade have picked up. Partly reflecting the run of recent data, the outlook for GDP growth in Australia's major trading partners has improved. GDP growth in China has been stronger than earlier anticipated, supported by accommodative macroeconomic policies, although growth is still expected to slow over coming years and the credit-based financing of some of the expansion poses risks. The largely policy-induced rebound in residential investment in China has spurred stronger demand for construction-related materials, such as steel, which in turn has boosted demand for iron ore and coal. High and rising debt, combined with excess capacity in some sectors, remains a risk to the medium-term outlook for growth in China. Growth in the major advanced economies is expected to be above potential, although there is significant uncertainty around policy in the United States and its effect on global growth and prices.

Global inflationary pressures are somewhat stronger than they have been for some time, because of accommodative policy settings, the recent increases in commodity prices and limited spare capacity in a number of advanced economies. Reflecting this, sovereign bond yields have risen (though only back to levels of a year ago), the Federal Open Market Committee raised the federal funds rate, and there is no longer an expectation of further monetary easing in the other major advanced economies. The

adjustments in global financial market prices have been orderly and measures of market volatility remain low.

The prices of bulk commodities increased significantly over the past year. Australia's terms of trade have consequently risen by more than 15 per cent since mid 2016, following the large falls over the previous few years. These higher price levels are unlikely to be sustained. Coal prices have already fallen from very elevated levels, partly because some earlier supply disruptions have been resolved. Also, additional low-cost iron ore production from Australia and Brazil is expected to come on line over the period ahead. The forecasts accordingly assume that much of the recent increase in the terms of trade and commodity prices will be unwound over the next couple of years, although the terms of trade are expected to remain above the lows of a year ago.

The higher commodity price levels are boosting the profits of resource firms. At this stage, this is not expected to translate into materially higher investment or employment in the resources sector, because the recent increases in prices are widely expected to be temporary. Some of the additional income is likely to accrue to foreign shareholders of resource firms; the proportions received by domestic shareholders and governments are unlikely to add much to domestic demand. However, if commodity prices do not fall by as much as anticipated, the boost to Australia's domestic income growth and economic activity could be more material. The recent increases in the terms of trade have been associated with an appreciation of the Australian

dollar. The depreciation of the Australian dollar since 2013 has contributed to the ongoing adjustment of the domestic economy to the end of the mining investment boom; an appreciating exchange rate could complicate that process.

Real GDP declined in the September quarter, a significantly weaker outcome than was anticipated. Some of the decline can be attributed to disruptions to coal supply and bad weather affecting construction activity. This weakness is not expected to continue and real GDP looks to have increased in the December quarter. Beyond that, the outlook for the domestic economy is little changed from three months ago and the ongoing adjustment to the end of the mining investment boom is expected to continue. GDP growth is expected to pick up over 2017 to 2½–3½ per cent, supported by low interest rates, the diminishing drag on growth from falling resource investment and rising resource exports. In particular, liquefied natural gas exports are projected to add around ½ percentage point to GDP growth in each of 2017 and 2018. However, overall growth is not expected to be sufficient to generate much of a decline in the unemployment rate over the forecast period.

Non-mining business investment has remained at relatively subdued levels for some years, although it expanded moderately over the year to the September quarter. Over the past few years, it has grown relatively strongly in New South Wales and Victoria, the states that have been least affected by the declines in the terms of trade and the end of the mining investment boom. In contrast, non-mining investment has been weak in Queensland and Western Australia. Some pick-up in non-mining investment is expected over the period ahead, although the timing of this upswing remains uncertain. Complementing this expected increase is a sizeable pipeline of public infrastructure projects.

Consumption growth moderated in mid 2016, although it looks to have picked up more recently. Growth in retail sales volumes increased in the December quarter; households' perceptions of their personal finances are around average; and expectations of unemployment are at relatively low levels. However, subdued growth in household income is likely to continue to constrain consumption growth over the period ahead. The forecast for consumption growth has been scaled back a little to reflect recent data and a view that consumption is unlikely to grow materially faster than income over the next couple of years.

Private dwelling investment declined unexpectedly in the September quarter, largely because poor weather disrupted construction. Dwelling investment nonetheless continued to grow at an above-average rate over the year, supported by low interest rates. The large amount of work in the pipeline suggests that dwelling investment will remain at high levels over the next year or so. However, if investors were to reassess expected returns to property investment, some projects currently in the pipeline could be at risk of not going ahead.

Overall conditions in the established housing market have strengthened further, although there is significant variation across the country. Housing prices continue to rise briskly in Sydney and Melbourne, while housing prices have fallen further in Perth. The recent increases in housing loan approvals have been driven largely by investors and have resulted in housing credit growth picking up a little. At the same time, conditions in most apartment markets appear to be softening. A further considerable flow of new apartments is coming onto the market over the next year or so, primarily in the eastern capital cities. Past increases in supply are weighing on rents in most cities, especially in Perth and

Brisbane, where economic conditions have been weaker and apartment prices are falling.

The unemployment rate increased slightly in late 2016 to 5.8 per cent, which is around its level of a year earlier. Employment rose modestly in the December quarter. All of the increase was in the full-time component, reversing the pattern of the previous few quarters. The divergence in labour market conditions across states continued: employment in Queensland and Western Australia declined over the year, in contrast to the growth recorded in New South Wales and Victoria. Forward-looking indicators point to a pick-up in employment growth over the period ahead.

The current rate of unemployment suggests that there is still a degree of spare capacity in the labour market, which has contributed to subdued wage pressures. Low wage growth might also have partly reflected businesses' responses to increased competitive pressures. More recently, there has been some evidence from surveys and liaison with firms suggesting that wage growth is unlikely to ease further.

Inflation remains quite low. Headline inflation was 0.5 per cent in the December quarter and 1.5 per cent over the year, as had been expected. Underlying inflation was little changed at 1½ per cent over 2016. Prices of most tradable items

have been declining, especially for consumer durables, reflecting among other things heightened competitive pressures on retailers. The effects of the earlier depreciation of the exchange rate are thought to be no longer putting upward pressure on prices. Domestic cost pressures remain subdued, largely because growth in labour costs has been slow. However, non-tradable inflation looks to have stabilised over recent quarters.

Inflation is expected to increase as the effects of some factors that have been weighing on domestic cost pressures dissipate, including the earlier decline in the terms of trade and falling employment in mining-related industries. Wage growth is forecast to increase only gradually. Headline inflation is expected to pick up to 2 per cent in early 2017. The increase in underlying inflation is likely to be gradual. These forecasts are little changed from those published in the November *Statement on Monetary Policy*.

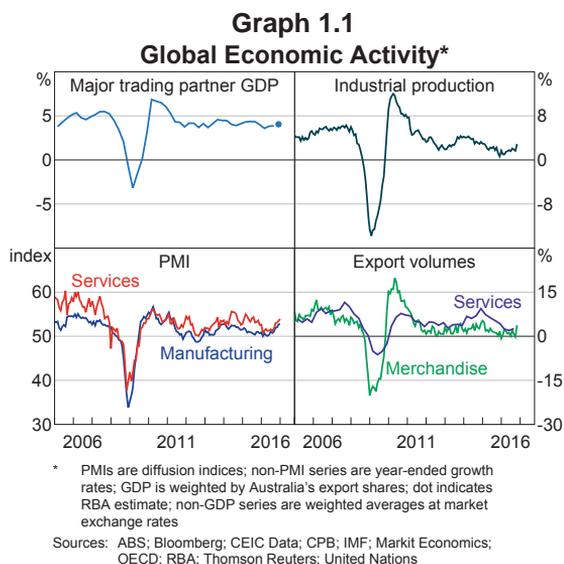
Taking account of the available information, and having eased monetary policy in 2016, the Board judged that holding the stance of policy unchanged at recent meetings would be consistent with sustainable growth in the economy and achieving the inflation target over time. ✎



# 1. International Economic Developments

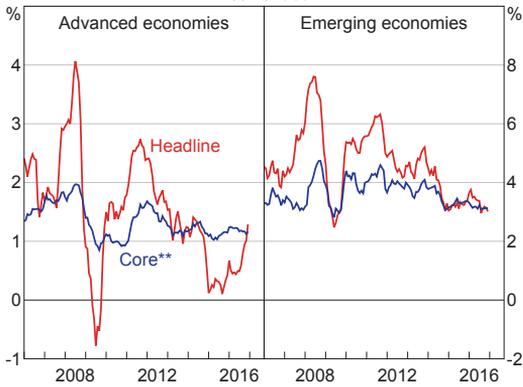
GDP growth in Australia's major trading partners increased a little over recent quarters, and is within the range of estimates of potential growth (Graph 1.1). Economic growth picked up in China in mid 2016, supported by accommodative financial conditions and fiscal policy, following slower growth at the beginning of the year. Growth in east Asia has been little changed over the past year or so, and growth in New Zealand and India has been relatively strong. GDP growth in the advanced economies has been at or above potential. This is expected to continue over the next couple of years, which should reduce excess capacity further. Potential growth in Australia's major trading partners is estimated to have declined relative to previous decades, reflecting factors such as population ageing as well as lower growth in productivity and capital accumulation since the global financial crisis. This decline is most notable in China, the major advanced economies and the higher-income economies in east Asia.

Growth in global industrial production and merchandise trade picked up in late 2016, albeit from relatively low rates. Surveyed business conditions have also increased noticeably since late 2016, and conditions in the global manufacturing sector are now at a three-year high. Consumer sentiment has risen sharply in some of the major advanced economies, and has been at or above average levels for a few years.



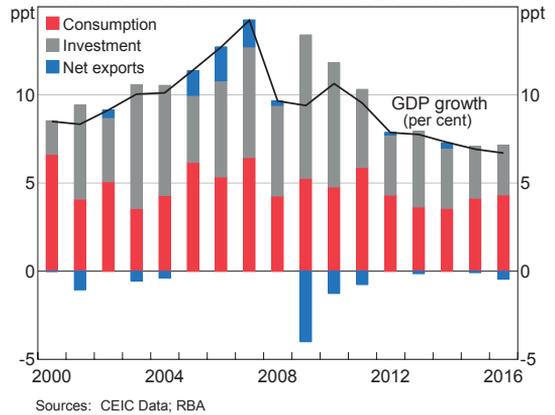
The increase in oil prices over 2016 has contributed to global inflationary pressures. Headline inflation has picked up in the major advanced economies, and is now close to the central bank's target in both the United States and euro area (Graph 1.2). Core inflation edged higher in the United States over 2016, but remains low in the euro area and Japan. In emerging market economies, headline inflation was broadly unchanged over 2016 as food price inflation eased and increases in consumer energy prices were constrained by administrative controls. Globally, a range of measures of inflation expectations increased in late 2016. Market-based measures of expected inflation largely reversed their declines over the previous few years, reflecting the prospect of more expansionary fiscal policy in the United States at a time of limited spare capacity in the labour market.

**Graph 1.2**  
**Global Inflation\***  
Year-ended



\* PPP-weighted; sum of advanced and emerging economies accounts for around 80 per cent of world GDP  
\*\* Excludes food and fuel  
Sources: CEIC Data; IMF; RBA; Thomson Reuters

**Graph 1.3**  
**China – Contributions to GDP Growth**



## China and Asia-Pacific

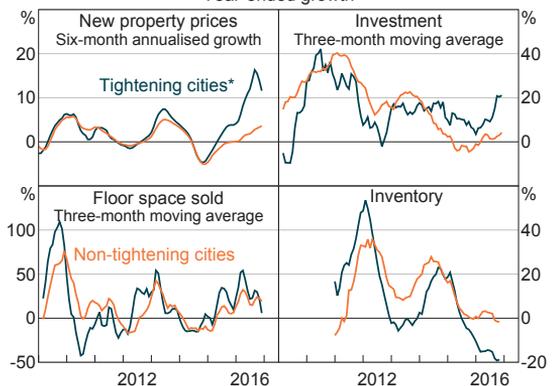
In China, economic growth picked up in mid 2016, following slower growth at the beginning of the year, as the authorities conducted expansionary fiscal policy and permitted rapid growth in financing to meet their annual GDP growth targets. The accompanying rebound in property construction and continued strength in infrastructure investment boosted conditions in the manufacturing sector and growth in the output of a range of construction-related materials, including steel. For the year as a whole, GDP growth moderated a little further (Graph 1.3). Investment growth slowed slightly, while consumer spending was resilient.

To date, the recent resurgence in residential investment has been concentrated in cities near the eastern seaboard. A considerable overhang of inventory has persisted in inland cities. Tightening measures introduced by city-level authorities through 2016 to dampen speculative activity and keep prices in check (including housing purchase restrictions and reduced loan-to-value ratios) have placed downward

pressure on growth in sales in those cities in recent months (Graph 1.4). Although residential property prices have continued to rise, price inflation has generally eased since October, especially in the cities where tightening measures have been introduced; these cities account for 23 per cent of floor space sold and 33 per cent of residential investment.

The acceleration in residential investment through 2016 contributed to stronger growth in the manufacturing sector, including industries that supply inputs to construction. This has helped support demand for iron ore and coal.

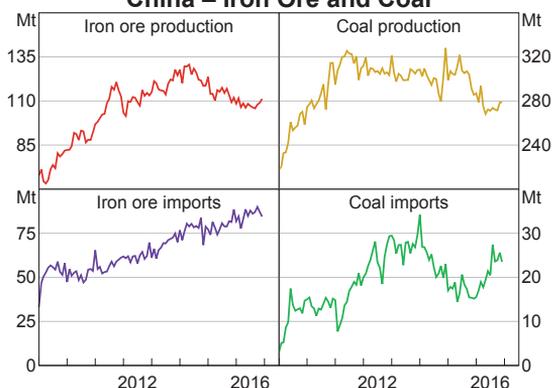
**Graph 1.4**  
**China – Residential Property Indicators**  
Year-ended growth



\* Cities that introduced tightening measures in 2016  
Sources: CEIC Data; CRIC; RBA

Resource imports (including from Australia) grew strongly, offsetting earlier cuts to Chinese production of these commodities (Graph 1.5). More recently, however, resource imports have declined a little. This is consistent with the stabilisation in Chinese production of coal and iron ore, as earlier restrictions on production have been loosened and global bulk commodity prices have risen.

**Graph 1.5**  
**China – Iron Ore and Coal**



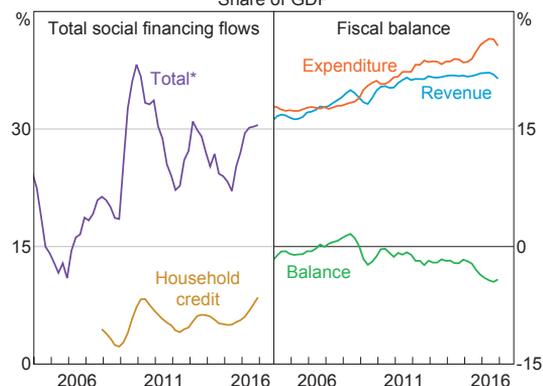
Sources: CEIC Data; RBA

Higher commodity prices have also contributed to a steady pick-up in Chinese producer price inflation in recent months. To date, this is yet to pass through appreciably to CPI inflation, which remains contained overall. However, some sectors, such as transportation services, that are exposed to commodity prices via fuel costs have reported slightly higher inflation. To the extent that continued official efforts to restrict property price growth lead to lower growth in residential investment and weigh on Chinese demand for construction materials, there may be less upward pressure on steel production, iron ore prices and coking coal prices in coming quarters.

Chinese fiscal policy and financial conditions remain highly accommodative (Graph 1.6). The fiscal deficit widened through 2016 as revenue growth slowed sharply, partly due

to the replacement of the business tax with a value-added tax. On average, growth in total social financing (TSF) continued at almost double the pace of GDP growth over 2016, implying an ongoing rise in China's debt-to-income ratio. However, TSF growth eased a little in December because net corporate bond issuance contracted sharply following tighter money market conditions in November and December (see the 'International and Foreign Exchange Markets' chapter). Rapid lending to households (mainly mortgages) has been partly offset in recent months by falling growth in corporate credit.

**Graph 1.6**  
**China – Growth of Finance**  
Share of GDP

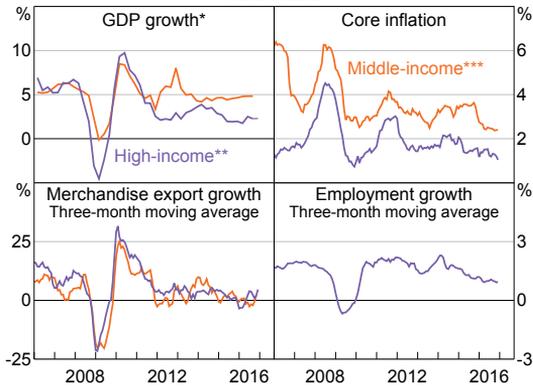


\* Upper bound estimate adjusting for impact of local government bond issuance to pay off debt previously included in TSF

Sources: CEIC Data; RBA

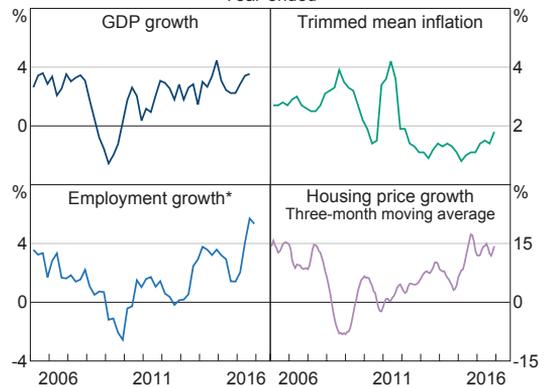
Developments in China continue to influence outcomes in other Asian economies, which account for a significant share (20 per cent, excluding Japan) of Australia's exports. GDP growth has picked up a little in the high-income east Asian economies recently, consistent with the pick-up in global trade, as these economies are relatively exposed to trade (Graph 1.7). This follows subdued growth over the previous couple of years. In particular, business investment growth has declined, although strong construction investment in Korea and more accommodative monetary and fiscal policies

**Graph 1.7**  
**East Asia – Economic Indicators**  
 Year-ended



\* Estimate for December quarter 2016  
 \*\* Hong Kong, Singapore, South Korea and Taiwan  
 \*\*\* Indonesia, Malaysia, Philippines and Thailand  
 Sources: CEIC Data; IMF; RBA; Thomson Reuters

**Graph 1.8**  
**New Zealand – Economic Indicators**  
 Year-ended



\* Break adjusted by RBA  
 Sources: RBA; REINZ; Statistics New Zealand; Thomson Reuters

have provided some offset. Employment growth has also slowed, and consumption has grown only modestly in more recent quarters. In the middle-income east Asian economies, growth has edged higher over recent years. Domestic demand remains resilient, despite slowing a little over 2016, and will continue to be supported by accommodative monetary and fiscal policies.

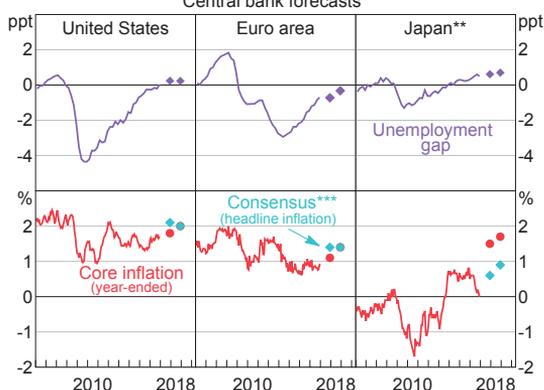
The New Zealand economy grew at an above-average pace in 2016 (Graph 1.8). Growth has been supported by record high net immigration and accommodative monetary policy. The policy rate has been reduced by 175 basis points since mid 2015. Employment growth has been very strong and the unemployment rate is around an eight-year low. Despite this, wage growth has been subdued because record net immigration has contributed to strong growth in labour supply. Housing price growth has stabilised following the tightening of tax and regulatory measures, but remains high. Inflation has increased, but remains low. Non-tradables inflation has picked up since mid 2015 and rising petrol prices have also contributed to inflationary pressures recently.

The exchange rate appreciation in 2016 has put downward pressure on the prices of traded items. The economic consequences of the strong earthquake centred near the South Island in November appear to be limited, as the most severely affected areas are sparsely populated.

## Major Advanced Economies

GDP growth in the major advanced economies has been at or a little above estimates of potential over recent years, supported by accommodative monetary policies and, more recently, less contractionary fiscal policies. This has led to a gradual absorption of spare capacity and the US, Japanese and some euro area economies are now around estimates of full employment (Graph 1.9). With growth in the major advanced economies expected to be above potential over the period ahead, inflationary pressures should increase. Policymakers in the United States expect to reach their inflation goal in 2018. The projected pick-up in Japanese inflation is slower, despite the already-tight labour market, because inflation expectations and wage growth remain low following the earlier prolonged period of

**Graph 1.9**  
**Major Advanced Economies –**  
**Unemployment Gaps and Inflation**  
 Central bank forecasts\*



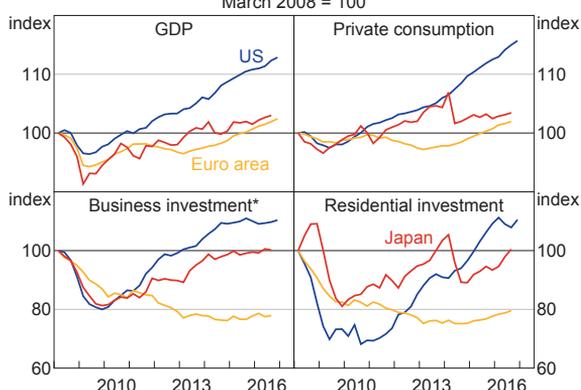
\* Unemployment rate forecasts from central banks; NAIUR estimates from the CBO and OECD  
 \*\* Inflation forecasts are for CPI excluding fresh food in 2017 and 2018; inflation data exclude the effects of the consumption tax increase  
 \*\*\* Adjusted for the difference between CPI and PCE in the United States  
 Sources: Bank of Japan; CBO; Consensus Economics; ECB; FOMC; OECD; RBA; Thomson Reuters

deflation. The projected pick-up in core euro area inflation is less pronounced, given the higher degree of spare capacity. Inflation in the euro area and Japan is expected to remain below their central banks' targets until at least 2018.

Year-ended GDP growth picked up over 2016 in Japan and over the second half of the year in the United States, while in the euro area it remained above potential and around the rates of recent quarters. Private consumption has been a key driver of growth in the United States and the euro area over the past two years, while in Japan it has remained subdued following the consumption tax increase in early 2014 (Graph 1.10). Household consumption in the major advanced economies will continue to be supported by low borrowing costs, recovering housing prices, strong employment growth and above-average consumer confidence.

Private investment growth in advanced economies has been weak in recent years. There has been a broad-based slowing in US business investment growth since late 2014, including a

**Graph 1.10**  
**Major Advanced Economies –**  
**GDP and Components**  
 March 2008 = 100



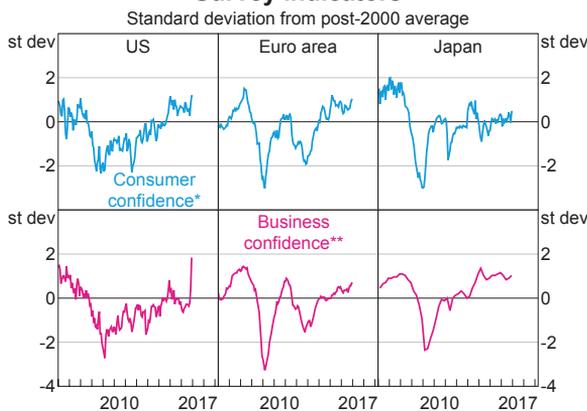
\* Non-residential public and private investment shown for euro area  
 Sources: RBA; Thomson Reuters

sharp fall in energy sector investment. The rise in oil prices provided some support to energy sector activity over the second half of 2016, and should continue to do so in the near term. Residential investment growth also slowed in the United States in 2016. In the euro area, investment remains well below pre-crisis levels, but has grown modestly since early 2015, driven by machinery and equipment investment. Japanese residential investment has grown strongly since 2015, reflecting accommodative monetary policy, internal migration and a pull-forward of activity in anticipation of the now-delayed consumption tax increase in 2017. Large revisions to Japanese GDP – particularly to the measurement of research & development and construction investment – indicate that business investment growth was stronger than previously thought, especially around 2013 and 2014. Business investment in Japan has been little changed recently, although the recent yen depreciation should provide some support to investment and net exports. More broadly, business investment in the major advanced economies could be boosted by further tightening of labour markets and, if sustained,

the recent pick-up in consumer and business confidence (Graph 1.11).

Fiscal policy in the United States has become less of a drag on economic activity since 2015, and indications from both the new administration and the Congress are that it is likely to provide additional support to activity in the period ahead. Fiscal policy has also become less contractionary in the euro area and Japan.

**Graph 1.11**  
**Major Advanced Economies – Survey Indicators**



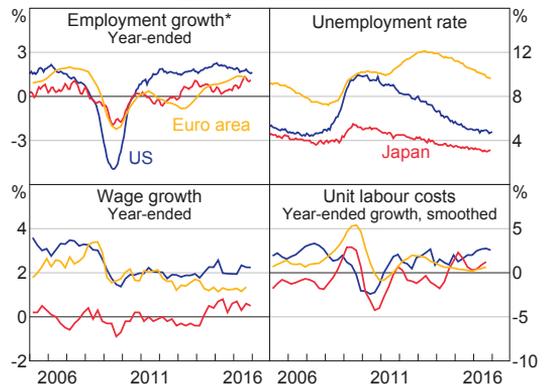
\* University of Michigan composite index for US; European Commission consumer sentiment index for Euro area; Cabinet Office consumer confidence index for Japan

\*\* NFIB small business optimism for US; European Commission manufacturing, trade, construction and services sentiment for Euro area; Bank of Japan Tankan – all industries for Japan

Sources: CEIC Data; RBA; Thomson Reuters

Labour markets have improved considerably over recent years across the major advanced economies (Graph 1.12). Employment growth has been robust and workforce participation has increased modestly, providing some offset, at least temporarily, to the effects of population ageing on labour supply. Unemployment rates have declined considerably in the major advanced economies, and are currently around estimates of full employment in the United States and Japan. While tightening labour markets in these two economies have been accompanied by moderate growth in some measures of labour compensation, overall nominal wage growth

**Graph 1.12**  
**Major Advanced Economies – Labour Markets**



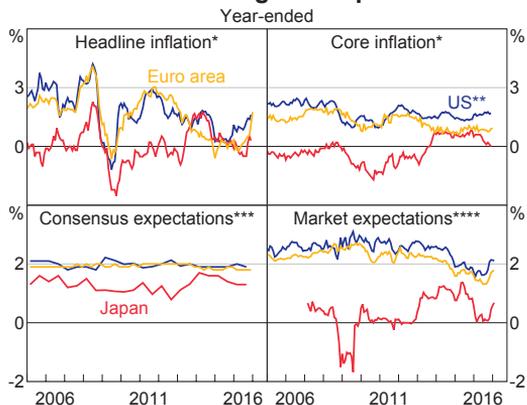
\* Three-month moving average for Japan  
Sources: Eurostat; RBA; Thomson Reuters

remains low. However, low productivity growth has resulted in above-average growth in unit labour costs. The improvement in the euro area labour market has been less pronounced, but unemployment has still declined to its lowest rate in over seven years.

Headline inflation in the major advanced economies increased noticeably in 2016 as oil prices rebounded, and is now close to the central bank's target in both the United States and euro area (Graph 1.13). Core inflation has been more stable. In the United States, core inflation has edged higher in year-ended terms and is close to the Federal Reserve's inflation goal. In the euro area, core inflation has remained low for three years, at or a little below 1 per cent. In Japan, core inflation has fallen to its lowest rate in three years as the effects of the yen depreciation between mid 2012 and 2015 have faded and domestic inflationary pressures are yet to emerge.

In the United States and the euro area, short-term measures of inflation expectations have rebounded, coinciding with movements in oil prices and prospects of higher inflation following the US election. Longer-term market-based measures of inflation expectations have

**Graph 1.13**  
**Major Advanced Economies –**  
**Inflation and Long-run Expectations**



\* PCE inflation for the US; CPI for the euro area and Japan; Japan data exclude the effects of the consumption tax increase in April 2014  
 \*\* US expectations adjusted to reference PCE inflation  
 \*\*\* Euro area series is from the Survey of Professional Forecasters  
 \*\*\*\* Monthly average of inflation expectations from 5 and 10-year inflation swaps; latest observation is an average of the month to date  
 Sources: Bloomberg; Consensus Economics; ECB; RBA; Thomson Reuters

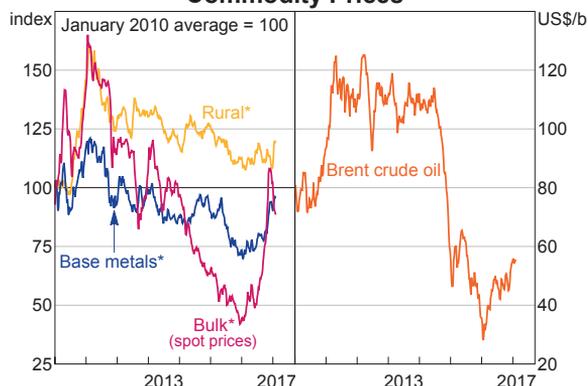
also picked up from record lows, although these measures can also reflect financial market developments, such as changes in risk premia. Economists' longer-term expectations have been relatively steady and remain close to each central bank's inflation target, suggesting that their expectations remain relatively well anchored. In Japan, inflation expectations declined in

early 2016 and remain low, at around levels that prevailed shortly before the Bank of Japan started its quantitative easing and announced its inflation target in 2013.

## Commodity Prices

Commodity prices have declined a little since the previous *Statement*. Large declines in coal prices from very high levels have been partly offset by significant increases in the prices of iron ore, oil and base metals (Graph 1.14; Table 1.1). The increases in commodity prices over 2016

**Graph 1.14**  
**Commodity Prices**



\* RBA Index of Commodity Prices (ICP) sub-indices; SDR  
 Sources: Bloomberg; RBA

**Table 1.1: Commodity Price Growth<sup>(a)</sup>**  
 SDR, per cent

	Since previous <i>Statement</i>	Over the past year
Bulk commodities	-7	94
– Iron ore	33	88
– Coking coal	-34	126
– Thermal coal	-24	70
Rural	6	12
Base metals	12	31
Gold	-3	8
Brent crude oil <sup>(b)</sup>	18	67
RBA ICP	16	55
– using spot prices for bulk commodities	-2	55

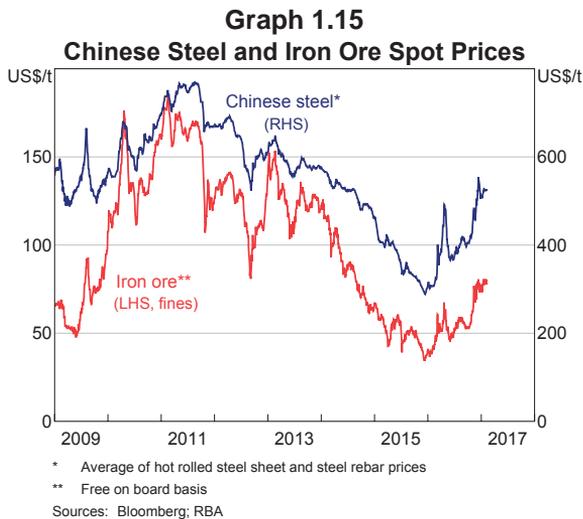
(a) Prices from the RBA Index of Commodity Prices (ICP); bulk commodities prices are spot prices

(b) In US dollars

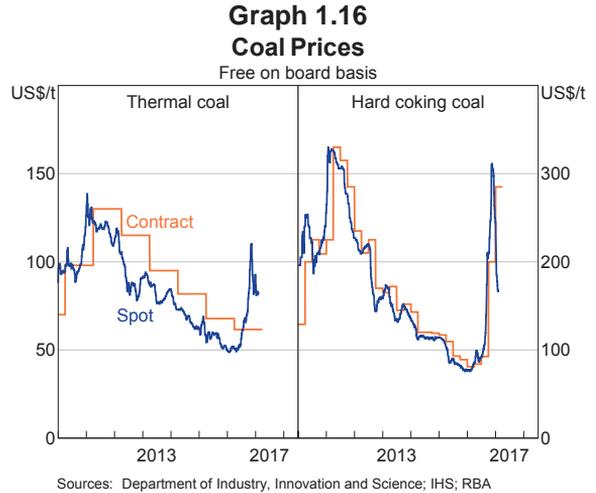
Sources: Bloomberg; IHS; RBA

have driven Australia's terms of trade higher. As discussed in the 'Economic Outlook' chapter, the terms of trade are expected to be higher over the next couple of years than previously envisaged and are expected to remain above their recent trough.

The spot price of iron ore has increased noticeably since the previous *Statement*, partly due to a pick-up in Chinese steel production and increased demand for high-quality iron ore in steel production to minimise coking coal inputs, for which prices increased sharply over 2016 (Graph 1.15). The iron ore spot price has more than doubled since its low in December 2015, but it is expected to decline gradually as additional low-cost production from Australia and Brazil comes on line.



The spot prices of both hard coking coal and thermal coal have declined sharply since the previous *Statement*, from very high levels (Graph 1.16). Coking and thermal coal prices are around 45 per cent and 25 per cent lower than their mid-November highs because temporary disruptions that affected seaborne coal supply in late 2016 have been largely resolved and Chinese authorities have loosened



some of the production restrictions that have been in place since April. In both cases, prices are still significantly higher than they were at the beginning of 2016. Coking coal contracts for the March quarter settled at US\$285 per tonne, an increase of more than 40 per cent from the December quarter benchmark price. Most of Australia's coal exports are still sold under contract at prices that currently differ substantially from those in the spot markets. While the profitability of Australian coal miners has improved, the Bank's liaison suggests that prices would need to remain elevated for some time to induce any noticeable increase in Australian production.

Oil prices have increased over the past few months, after OPEC and non-OPEC members agreed to reduce oil production by around 1.8 million barrels per day for six months, effective from January (Graph 1.14). Prices are currently around their highest levels in over a year, but still remain well below their highs of early 2014. The increases in oil prices since the start of 2016 have started to feed through to higher liquefied natural gas export prices. The increase in base metals prices over recent months has been broad based. ↘

## 2. International and Foreign Exchange Markets

The US election result has led financial markets to reassess the economic and policy landscape. Market participants expect some degree of corporate tax reduction, deregulation and increased fiscal expenditure in the United States, although there remains considerable uncertainty around what form these policies will take. The US election result came amid an improving outlook for global growth and inflation that has been building since mid 2016. As a result, bond yields in developed markets have risen substantially in recent months, share prices are higher, particularly for financial institutions, the US dollar has appreciated and the expected stance of the major central banks' monetary policies has become less accommodative. The US election result weighed on most emerging markets; the asset markets of countries with significant US dollar liabilities or trade exposures to the United States have generally underperformed and their currencies have generally depreciated. Despite the significant changes in global financial market prices, the adjustments have been orderly and measures of market volatility remain low.

### Central Bank Policy

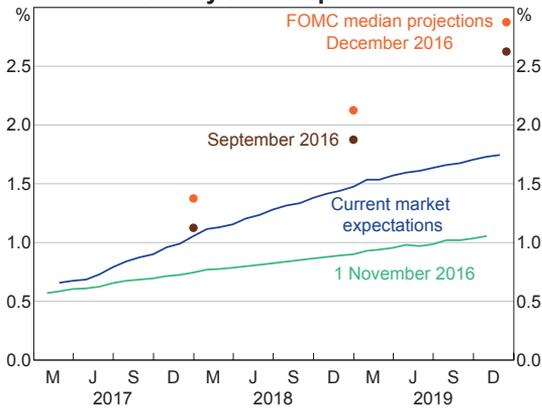
Monetary policy remains very accommodative. The European Central Bank (ECB) and Bank of Japan (BoJ) have kept interest rates at extremely low levels and the Bank of England (BoE) cut interest rates further in August 2016. While the US Federal Reserve recently raised interest rates, its policy rate is lower than had been expected at the beginning of 2016. Many central banks

also continue to purchase large quantities of assets. However, expectations for central bank stimulus have been scaled back somewhat since mid 2016 as the outlook for growth and inflation has improved.

The US Federal Open Market Committee (FOMC) voted in December to raise its target range for the federal funds rate by 25 basis points to 0.5–0.75 per cent, citing realised and expected labour market tightening, as well as an increase in inflation. At the same time, FOMC members revised up their projections for the pace of future rate increases, with a median projection of 75 basis points of rate increases in 2017. The market's expected path for interest rates has also steepened, although the implied pace of tightening remains slower than that projected by FOMC members (Graph 2.1). FOMC members have since stated that, with the economy near full employment and inflation moving towards target, expansionary fiscal policy may result in a faster pace of interest rate increases. Some FOMC members have suggested that a reduction of the Federal Reserve's balance sheet may be brought forward as well.

In December, the ECB extended its asset purchase program from March 2017 until the end of 2017 – which was a little longer than had been expected – noting that core inflation lacked a convincing upward trend. But the ECB also reduced the extent of monthly purchases from €80 billion to €60 billion, noting that the longer term of the program, relative to expectations, would be more effective in maintaining a longer-lasting transmission of

**Graph 2.1**  
**US Policy Rate Expectations**



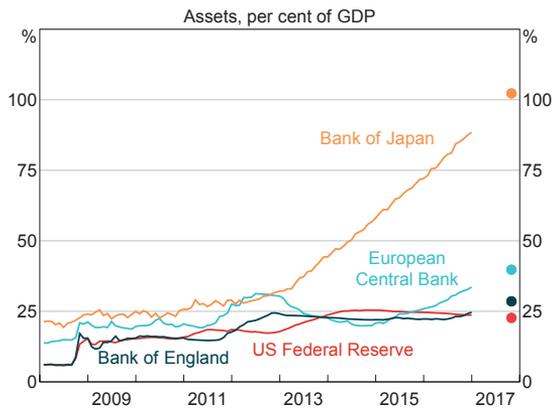
Sources: Bloomberg; Board of Governors of the Federal Reserve System

the ECB's stimulus measures, notwithstanding the slower accumulation of assets. To ensure the continued smooth implementation of its program, the ECB also made technical changes to the program, reducing the minimum maturity for bond purchases from two years to one year, and removing its restriction on purchasing bonds with yields below the deposit rate (currently  $-0.40$  per cent). The ECB continues to operate its bank lending schemes to support monetary policy pass-through and credit growth. The total stock of its longer-term refinancing operations grew by around €90 billion in 2016, to €560 billion (about 5 per cent of GDP).

Although the BoE was widely expected to ease policy further following its initial response to the UK referendum result, stronger-than-expected economic data and a stronger outlook for inflation have resulted in the BoE leaving interest rates unchanged and noting that it might now move policy in either direction. The BoE expects inflation to pick up and overshoot the inflation target temporarily, as the recent depreciation in the pound passes through to consumer prices. It has stated that it is prepared to tolerate some overshoot, but that this tolerance is limited, particularly if the resulting increase in inflation affects expectations for ongoing inflation.

The BoJ has left monetary policy unchanged since instituting its yield curve control policy in September 2016. The overnight interest rate is  $-10$  basis points, the target yield on 10-year government bonds is around zero and asset purchases are continuing at broadly the same pace as before (Graph 2.2). The BoJ has noted that the Japanese economy has continued to recover, and it expects inflation to pick up. Market expectations for further cuts to the overnight interest rate have been unwound in recent months, although the BoJ has reiterated that it is prepared to ease further should that be necessary to meet its inflation target.

**Graph 2.2**  
**Central Bank Balance Sheets\***



\* Dots are RBA projections for end 2017 based on central bank communications

Sources: Central banks; IMF; RBA; Thomson Reuters

Some other advanced economy central banks have eased policy in recent months in response to subdued domestic inflation (Table 2.1). The Reserve Bank of New Zealand lowered its policy rate by 25 basis points to 1.75 per cent at its November meeting, but noted that it now sees the current level of interest rates as sufficiently low to return inflation to the middle of its target band. The Swedish Riksbank announced an extension of its asset purchase program at its December meeting, noting downside risks to inflation after some recent weaker-than-expected economic data.

**Table 2.1: Monetary Policy**

	Policy rate Per cent	Most recent change
Euro area <sup>(a)</sup>	-0.40 ↓	Mar 16
Japan <sup>(a)</sup>	-0.10 ↓	Jan 16
United States <sup>(b)</sup>	0.625 ↑	Dec 16
Australia	1.50 ↓	Aug 16
Brazil	13.00 ↓	Jan 17
Canada	0.50 ↓	Jul 15
Chile	3.25 ↓	Jan 17
India	6.25 ↓	Oct 16
Indonesia	4.75 ↓	Oct 16
Israel	0.10 ↓	Feb 15
Malaysia	3.00 ↓	July 16
Mexico	5.75 ↑	Dec 16
New Zealand	1.75 ↓	Nov 16
Norway	0.50 ↓	Mar 16
Russia	10.00 ↓	Sep 16
South Africa	7.00 ↑	Mar 16
South Korea	1.25 ↓	Jun 16
Sweden	-0.50 ↓	Feb 16
Switzerland <sup>(b)</sup>	-0.75 ↓	Jan 15
Thailand	1.50 ↓	Apr 15
Turkey	8.00 ↑	Nov 16
United Kingdom	0.25 ↓	Aug 16

(a) Marginal rate paid on deposits at the central bank

(b) Midpoint of target range

Sources: Central banks; RBA; Thomson Reuters

A number of emerging market central banks have also recently adjusted policy settings, many in response to significant currency and asset price moves following the US election. The central banks of Mexico and Turkey increased their policy rates by 100 basis points and 50 basis points, respectively, citing the need to manage inflation expectations following large depreciations of their currencies. Several other central banks intervened in foreign exchange markets (see Foreign Exchange) and both Bank Indonesia and the Bank of Korea intervened in domestic government bond markets following sharp

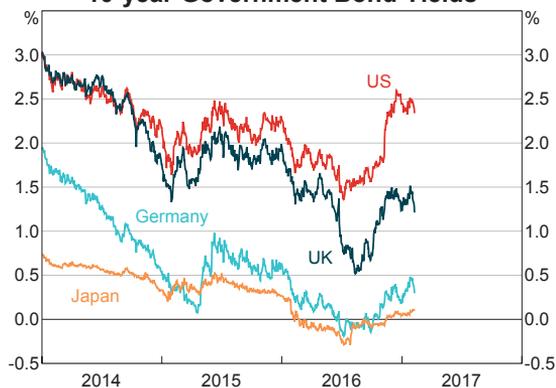
moves in yields. In contrast, the central bank of Brazil decreased its policy rate by 100 basis points due to weak domestic growth and noted that further reductions in the policy rate are likely to be necessary.

In China, the level and volatility of interbank interest rates has remained elevated in recent months. In addition, the People's Bank of China (PBC) increased the interest rates it charges on its main liquidity operations by 10 basis points. The PBC has allowed money market conditions to tighten recently due to concerns about leverage and higher inflation.

## Sovereign Debt Markets

Major market sovereign bond yields have increased significantly from their mid-2016 lows as the outlook for growth has improved and concerns about disinflationary pressures have eased (Graph 2.3). The rise in yields has been most pronounced in the United States, where 10-year Treasury yields are around 100 basis points higher than their mid-2016 levels. Around half of this increase has occurred since the US election, due to expectations for fiscal stimulus and less monetary stimulus. In addition, around half of the rise in yields has been attributable to an increase in market-based measures of

**Graph 2.3**  
**10-year Government Bond Yields**



Source: Bloomberg

inflation compensation, some of which reflects increased compensation for uncertainty about future inflation. Nonetheless, nominal Treasury yields remain at low levels relative to history. This partly reflects the continued low level of the term premium – the additional compensation investors require for holding long-term bonds – which, despite having risen recently, is currently estimated to be around zero.

Signs of a firming economic recovery and rising headline inflation have also been evident in the euro area, though to a lesser extent than in the United States, and have contributed to a 50 basis point rise in German Bund yields since mid 2016. The ECB’s December decision to adjust the parameters of its asset purchase program, allowing for the purchase of shorter-dated and lower-yielding securities, has contributed to a modest steepening of the German sovereign yield curve.

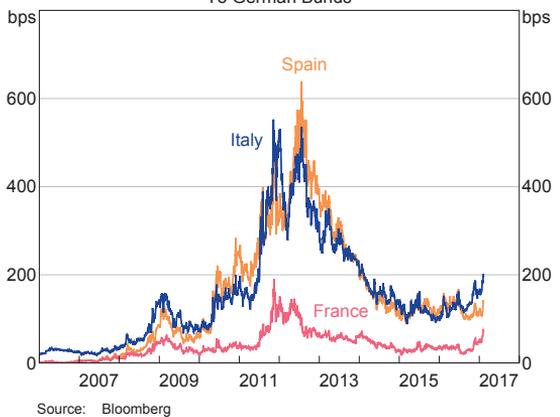
In the United Kingdom, yields on 10-year gilts have risen by around 70 basis points from their August trough, partly because economic data in the months following the UK referendum have been stronger than expected, which has caused the BoE to remove its easing bias. Market-based measures of inflation compensation have increased since August, following a significant depreciation of the UK pound because expectations of a ‘hard’ exit from the European Union have risen. Prime Minister May has pledged to begin the formal process of withdrawing from the European Union by the end of March.

In Japan, 10-year government bond yields have remained close to zero per cent. This is despite the rise in other major market sovereign bond yields and is consistent with the BoJ’s policy of yield curve control.

Spreads on euro area government bonds have generally risen relative to German Bunds since mid 2016 amid the increasing

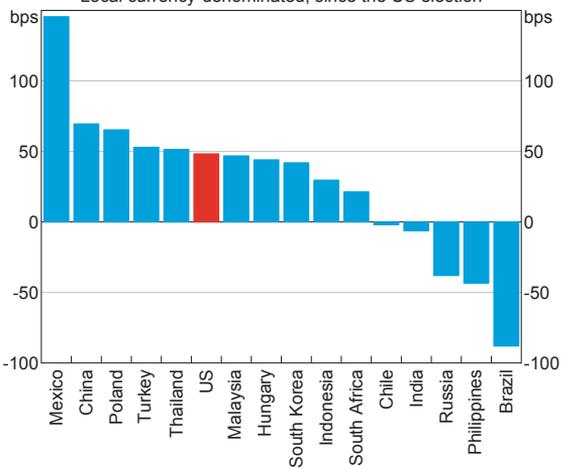
popularity of euro-sceptic political parties in a number of European countries (Graph 2.4). In early December, Italians rejected reforms that would have reduced the powers of the Senate and regional governments, which led to the resignation of Prime Minister Renzi. In the coming months, it is likely that political developments will continue to have an important influence on European government bond yields ahead of national elections in the Netherlands (March), France (May), Germany (September) and Italy (due by May 2018).

**Graph 2.4**  
Euro Area 10-year Government Bond Spreads  
To German Bunds



In emerging markets, yields on local currency-denominated sovereign bonds have generally risen since the US election (Graph 2.5). The largest rise in yields has occurred in Mexico, reflecting its trade linkages with the United States and is consistent with increases in the Bank of Mexico’s policy rate and expectations of higher inflation owing to the depreciation of the Mexican peso. In China, the rise in yields partly reflects stronger Chinese economic activity and inflation data, and higher short-term interbank interest rates. One exception has been in India, where local-currency government bond yields have declined since the government announced that the country’s two highest

**Graph 2.5**  
**Change in 10-year Government Bond Yields**  
 Local currency-denominated, since the US election



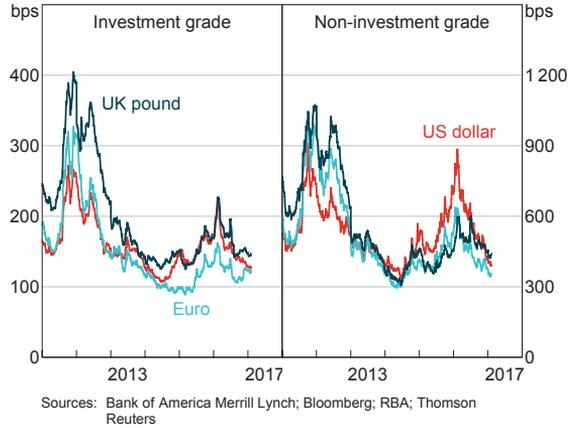
Source: Bloomberg

denomination banknotes would cease to be legal tender.

### Credit Markets

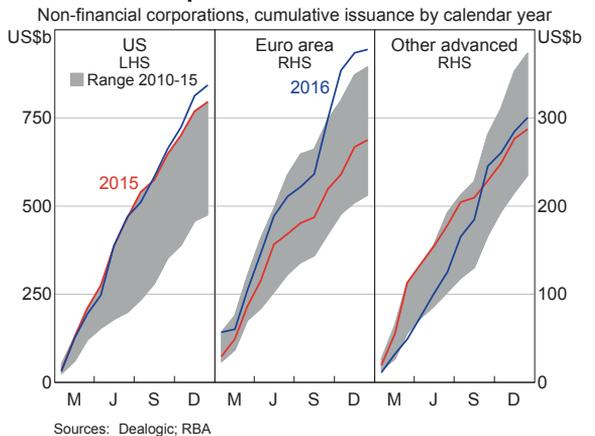
Spreads on corporate bonds in advanced economies have narrowed significantly since early 2016, supported by better-than-expected economic data and higher commodity prices, which in turn have supported expectations of better debt serviceability, particularly for resource-related companies (Graph 2.6). In the United States, the US election has given extra impetus to this narrowing as expectations of corporate tax reform, deregulation and increased fiscal expenditure have all supported the outlook for corporate profitability. In the euro area and the United Kingdom, ongoing central bank purchases have also supported corporate bond markets. The positive sentiment towards credit markets has generally extended to emerging market corporate bond spreads, which have narrowed since early 2016 despite a period of widening following the US election.

**Graph 2.6**  
**Corporate Bond Spreads**  
 To equivalent government bonds



Corporate bond issuance was strong in advanced economies over 2016 as firms took advantage of low interest rates to reduce their debt costs and to finance mergers and acquisitions (Graph 2.7). In addition, a rise in the premium earned from swapping US dollars into other currencies (see below) has led to an increase in the issuance of US dollar-denominated bonds by non-US domiciled firms. Bond issuance has also been strong in 2017 to date reflecting narrow spreads and low market volatility. Bond issuance by emerging market corporations increased in the second half of 2016 after a slow start to the year.

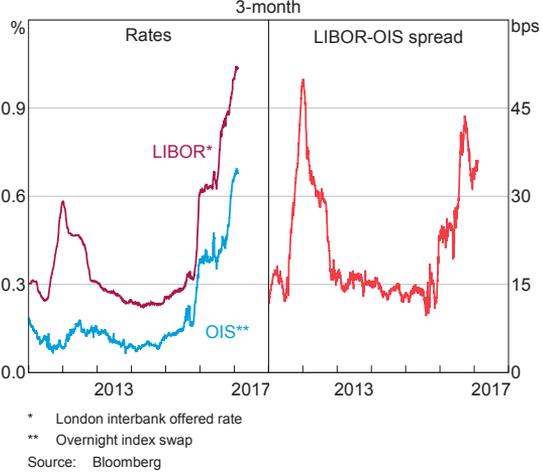
**Graph 2.7**  
**Corporate Bond Issuance**



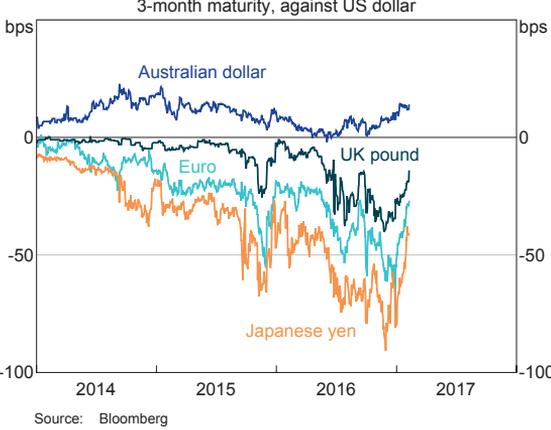
Short-term bank funding costs in US dollar markets have risen over recent months due to an increase in the US Federal Reserve’s policy rate (Graph 2.8). In addition, the spread to overnight index swaps remains elevated, having widened ahead of the implementation of reforms to US money market funds in mid October. As a result of these reforms, the value of assets under management (AuM) of prime money market funds (those that lend to banks) has fallen by more than US\$1 trillion since October 2015, while the AuM of government-only funds has risen by a similar amount. The costs for holders of both yen and euro to borrow US dollars in the foreign exchange swap market – the cross-currency basis – remains high (Graph 2.9). However, abstracting from volatility around year end, the basis has narrowed over the past few months, partly because Japanese residents have reduced their purchases of US fixed-income securities amid the sharp rise in bond market yields. European repo rates fell sharply around year end due to a decline in the supply of high-quality collateral, which reflects: banks’ increased holdings of high-quality liquid assets; increased ECB holdings of securities due to its purchase program; and the increased demand for collateral by central counterparties.

Investor sentiment towards the Chinese corporate bond market has deteriorated over recent months, resulting in a widening of spreads (Graph 2.10). A number of factors have contributed to this deterioration, including: tighter liquidity conditions; new regulations, which may increase capital requirements for banks’ wealth management products (which invest a significant portion of their funds in corporate bonds); a rise in corporate bond defaults, albeit from a low level; and a technical default by a securities company following internal fraud. The combination of higher corporate bond spreads and higher sovereign

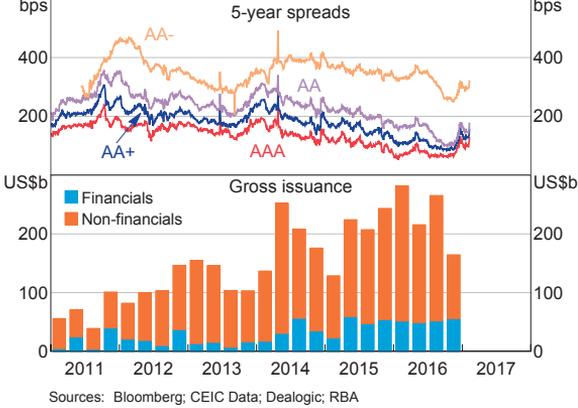
**Graph 2.8**  
**US Money Markets**



**Graph 2.9**  
**Cross-currency Basis**



**Graph 2.10**  
**Chinese Corporate Bonds**



yields has resulted in a sharp increase in corporate borrowing costs. As a result, a number of planned corporate bond issues have been cancelled or delayed, and gross and net bond issuance by Chinese corporations decreased in the December quarter.

## Equities

Global equity markets rallied strongly over the final weeks of 2016 as the US election result generated considerable investor optimism around the outlook for corporate earnings (Graph 2.11). Market participants have focused on three potential areas of change under the new US administration: a reduction in the US corporate tax rate; deregulation; and a fiscal boost from higher infrastructure spending.

**Graph 2.11**  
**Major Share Price Indices**

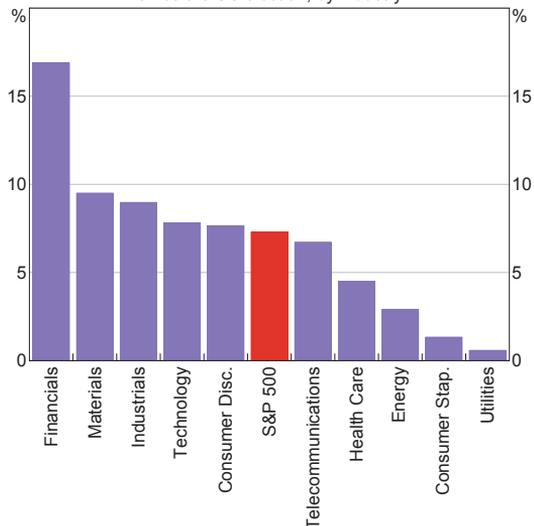
1 January 2015 = 100



Source: Bloomberg

In the United States, the financial sector has experienced the largest increase in share prices, supported by the prospect of less regulation and higher net interest income from rising bond yields (Graph 2.12). Bank earnings for the December quarter were also boosted by a rise in financial market trading revenue due to an increase in client activity around the US election, lower loss provisions for real estate and energy

**Graph 2.12**  
**Change in US Share Prices**  
Since the US election, by industry



Source: Bloomberg

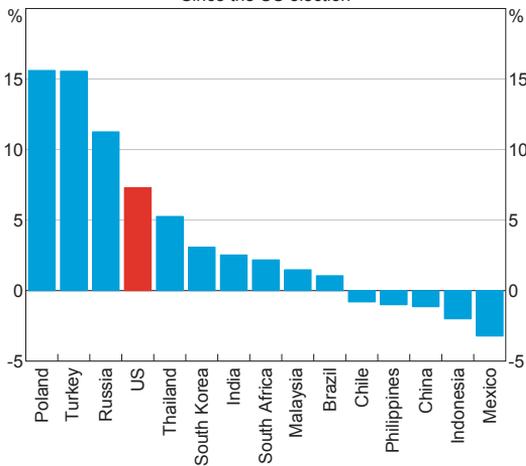
sector loans, and lower legal expenses. The prospect of reduced regulation and increased infrastructure spending has supported a number of other sectors. This rise in share prices has resulted in valuation measures returning to their post-financial crisis highs.

European and Japanese share prices have also risen sharply following the US election result, recovering to their early 2016 levels. In Japan, the rise in share prices has been underpinned by a depreciation of the yen and a corresponding rise in corporate earnings. The recovery in Europe has been, in part, supported by better-than-expected economic data. As in the United States, bank share prices in Europe and Japan have outperformed the broader market indices, largely reversing their significant underperformance of the first half of 2016, in part due to the favourable market conditions outlined above, and in part due to an easing of concerns around the capital positions of some European banks.

Emerging market share prices initially declined following the US election on concerns that

protectionist trade policies and higher US dollar-denominated borrowing costs would adversely affect earnings, and many markets experienced a short period of sizeable capital outflows (Graph 2.13). However, the price declines in most markets have subsequently reversed and these capital outflows have ceased, in part aided by the ongoing recovery in commodity prices.

**Graph 2.13**  
Change in Emerging Market Share Prices  
Since the US election



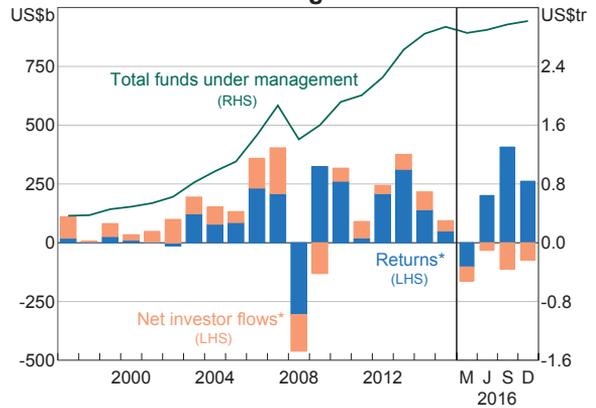
Source: Bloomberg

Chinese share prices have declined over the past few months, partly reflecting concerns that US trade policy may become more protectionist. Nonetheless, share prices are around 20 per cent higher since their trough in late January 2016, owing to better-than-expected economic data and an improving corporate earnings outlook. Equity trading links between mainland China and Hong Kong were strengthened in December with the opening of the Shenzhen-Hong Kong Stock Connect scheme, which largely replicates the existing Shanghai-Hong Kong Stock Connect scheme.

## Hedge Funds

Global hedge funds recorded an asset-weighted return on investment of 2.4 per cent over the December quarter, outperforming a balanced portfolio of sovereign bonds and global equities (Graph 2.14). Investors continued to make net withdrawals from hedge funds for the fifth consecutive quarter; net redemptions for 2016 totalled US\$70 billion. However, combined with positive investment returns, AuM rose by 1.6 per cent over the December quarter to US\$3.0 trillion.

**Graph 2.14**  
Global Hedge Funds



\* Annualised for 2016 data  
Sources: Hedge Fund Research, Inc.; RBA

## Foreign Exchange

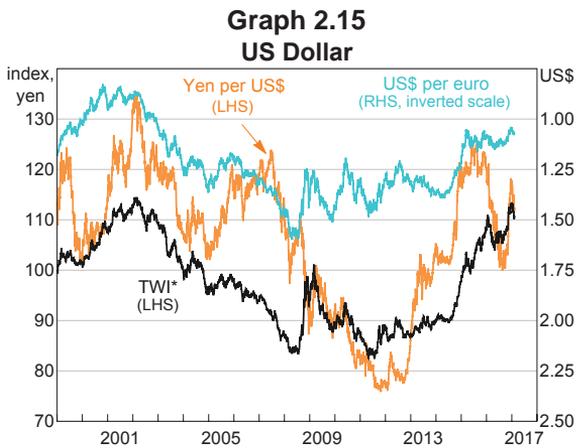
The potential policy implications of the US election result and evolving expectations about monetary policy in the major economies have also been the key drivers of foreign exchange markets over recent months. Despite significant moves in some currency pairs as investors assessed the implications of the US election for US fiscal policy and international trade, foreign exchange markets have generally functioned in an orderly manner. Observed and forward-looking measures of volatility in most developed market currency pairs remain around their long-run averages.

The US dollar appreciated against most currencies following the US election in November 2016, although it has since retraced some of that appreciation, reflecting uncertainty about actual US fiscal and trade policy implementation. The US dollar's (net) appreciation since the election has been part of a more general upward trend observed in recent years and largely reverses the depreciation of the currency in early 2016 (Table 2.2). On a trade-weighted (TWI) basis, the currency is around its highest level since 2002 (Graph 2.15). Taking into account relative price differentials between trading partners, the US dollar is also at a high level on a real trade-weighted basis (Graph 2.16).

**Table 2.2: Changes in the US Dollar against Selected Currencies**  
Per cent

	Over 2016	2017 to date
Philippine peso	6	1
Malaysian ringgit	5	-1
Indonesian rupiah	-2	-1
Chinese renminbi	7	-1
Mexican peso	21	-1
UK pound sterling	19	-1
Indian rupee	3	-1
European euro	3	-2
Singapore dollar	2	-2
Canadian dollar	-3	-2
Thai baht	-1	-2
Swiss franc	2	-2
Swedish krona	8	-3
Russian rouble	-14	-4
New Taiwan dollar	-1	-4
Japanese yen	-3	-4
Brazilian real	-18	-4
New Zealand dollar	-1	-5
South Korean won	3	-5
Australian dollar	1	-6
<b>Trade-weighted index</b>	<b>4</b>	<b>-2</b>

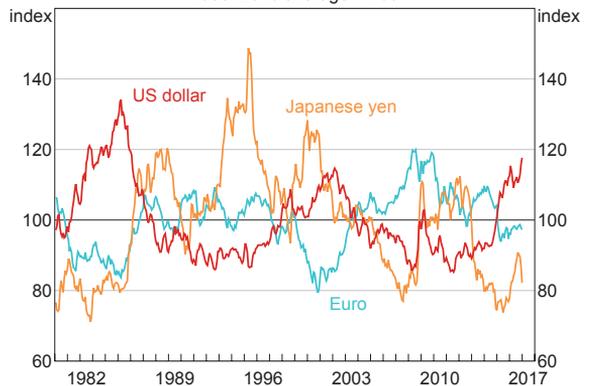
Sources: Bloomberg; Board of Governors of the Federal Reserve System



\* 1 January 1999 = 100  
Sources: Bloomberg; Board of Governors of the Federal Reserve System

The Japanese yen depreciated markedly after the US election result, in part because of a widening of the yield differential between US and Japanese bonds (see Sovereign Debt Markets). However, since the beginning of last year, the yen has appreciated against the US dollar and on a trade-weighted basis. In contrast, the euro only depreciated slightly against the US dollar following the US election and has been little changed on a trade-weighted basis since the beginning of 2016. The euro remains around its average level on a real trade-weighted basis since the introduction of the single currency in 1999.

**Graph 2.16**  
**Real Trade-weighted Indices\***  
1980–2016 average = 100



\* BIS narrow real exchange rate indices  
Sources: BIS; RBA

Evolving market expectations regarding the nature of the exit of the United Kingdom from the European Union have continued to be the main driver of the UK pound. The currency has fluctuated in a wide range against the US dollar in recent months, although it remains around its lowest level against the US dollar since 1985.

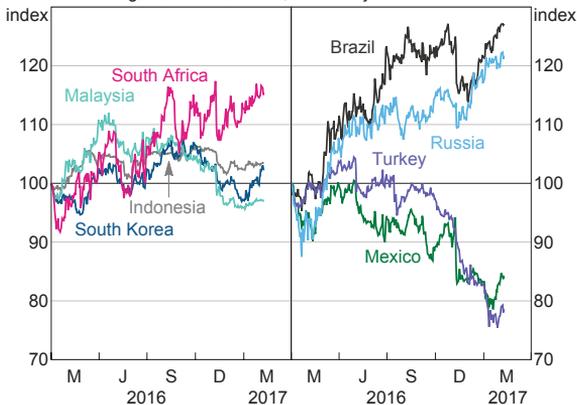
Most emerging market currencies depreciated significantly against the US dollar following the outcome of the US election (Graph 2.17). The depreciation of the Mexican peso was particularly pronounced, reflecting the country's vulnerability to potential changes in US trade policy. A number of emerging market central banks, including those of Indonesia and Malaysia, intervened in foreign exchange markets to moderate volatility and provide liquidity following the US election. The Bank of Mexico also intervened in early January, the first such intervention since February 2016. The central bank of Turkey has undertaken measures to increase US dollar liquidity in the market in recent months. This followed sustained depreciation pressure on the Turkish lira – partly due to domestic political developments – and the currency reached a historic low. The foreign currency reserves of most emerging market

economies have declined a little since the end of September 2016 (Table 2.3).

Notwithstanding the downward pressure on a range of emerging market currencies following the US election, the currencies of commodity exporters have been supported by an increase in commodity prices (oil prices in particular) since late November 2016. Notably, the Russian rouble and Brazilian real have appreciated against the US dollar over the past few months, to be around 20–25 per cent higher since the beginning of 2016.

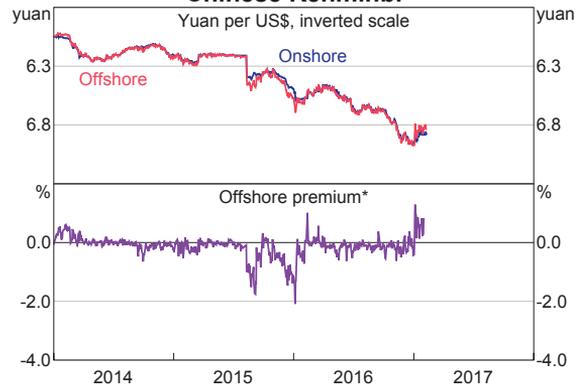
The Chinese renminbi (RMB) has depreciated by 6 per cent against the US dollar since its recent peak in early 2016 (Graph 2.18). This reflects the broad-based US dollar appreciation over that period and has occurred alongside continued net private capital outflows from China. These outflows appear to be associated with market expectations for further RMB depreciation against the US dollar. Notwithstanding this, the RMB has appreciated in 2017 to date. A larger appreciation has occurred in the smaller offshore market than the onshore market, following reported intervention by the PBC that had the effect of increasing offshore interbank borrowing costs. There have been periodic short-term spikes in

**Graph 2.17**  
Asian and Emerging Market Currencies  
Against the US dollar, 1 January 2016 = 100



Source: Bloomberg

**Graph 2.18**  
Chinese Renminbi



\* Negative spread indicates that one US dollar buys more yuan in the offshore market than the onshore market

Sources: Bloomberg; RBA

**Table 2.3: Gross Foreign Currency Reserves<sup>(a)</sup>**

	Percentage change:		Level US\$ equivalent (billions)
	End December 2015 to latest	End September 2016 to latest	
China	-10	-5	2 998
Saudi Arabia	-13	-3	527
Taiwan <sup>(b)</sup>	2	0	437
Hong Kong	9	7	379
South Korea	1	-1	364
Brazil	2	-1	355
India	3	-2	339
Russia	3	-1	318
Singapore	2	0	250
Mexico	0	-2	168
Thailand	10	-4	164
Indonesia	11	2	111
Turkey	0	-7	91
Malaysia	1	-2	88

(a) Data to end December for Mexico, Saudi Arabia, and Thailand; to 27 January for India and Turkey; and to end January for Brazil, China, Hong Kong, Indonesia, Malaysia, Russia, Singapore, South Korea and Taiwan

(b) Foreign exchange reserves (includes foreign currency and other reserve assets)

Sources: Bloomberg; CEIC Data; central banks; IMF; RBA

such costs since early 2015 that appear to reflect intervention by the PBC to support the currency. This intervention and expectations for longer-term RMB depreciation have led to the value of RMB deposits in Hong Kong falling by around 35 per cent over the year to December 2016.

In contrast to the depreciation against the US dollar, the RMB has been broadly flat on a trade-weighted basis since mid 2016, consistent with the Chinese authorities' commitment to keep the RMB relatively stable on a trade-weighted basis. The basket of currencies that make up the China Foreign Exchange Trade System (CFETS) trade-weighted index for 2017 has 11 more currencies than the basket for 2016. The new CFETS trade-weighted index would have closely tracked last year's index, but is more representative of China's trade shares

and accounts for 70 per cent of its merchandise trade. The additional currencies – which include the South Korean won (with a weight of 11 per cent) – have a combined weight of 21 per cent of the index, and the new weights of the euro (16 per cent) and US dollar (22 per cent) are each around 5 percentage points lower than in the previous year.

The value of the PBC's foreign currency reserves has fallen by around US\$200 billion since mid 2016, to around US\$3 trillion, following a period of relative stability over much of the first half of 2016. The decline partly reflects an increase in net private capital outflows over the second half of 2016 as well as valuation effects. The Chinese authorities have recently introduced a number of measures to allow them to

scrutinise capital outflows more closely with the aim of enforcing capital controls more effectively.

## Australian Dollar

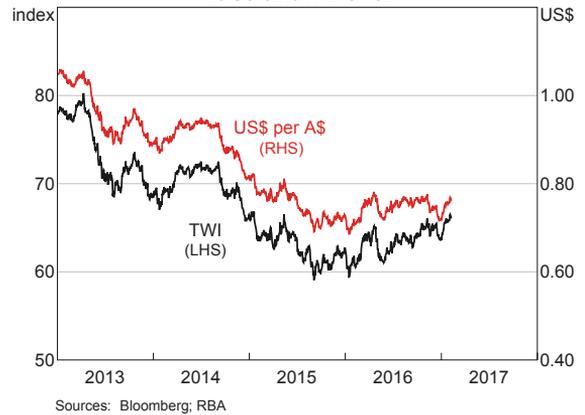
The Australian dollar has been broadly unchanged since the US election, with the downward pressure associated with the narrowing in the interest rate differential between Australian and US sovereign bonds offset by support from the increase in commodity prices over this period. Since its trough in January 2016, the Australian dollar has appreciated by more than 10 per cent against the US dollar and on a trade-weighted basis, alongside a significant increase in commodity prices (Table 2.4; Graph 2.19). The real trade-weighted index has tracked the nominal index closely and is also noticeably higher over that period.

**Table 2.4: Changes in the Australian Dollar against Selected Currencies**  
Per cent

	Over 2016	2017 to date
US dollar	-1	6
Malaysian ringgit	3	5
Indonesian rupiah	-3	5
Chinese renminbi	6	5
UK pound sterling	18	5
Indian rupee	1	5
European euro	2	4
Singapore dollar	1	4
Canadian dollar	-4	4
South African rand	-12	4
Thai baht	-2	4
Swiss franc	1	3
Japanese yen	-4	2
New Zealand dollar	-3	1
South Korean won	1	1
<b>Trade-weighted index</b>	<b>2</b>	<b>4</b>

Sources: Bloomberg; RBA

**Graph 2.19**  
**Australian Dollar**

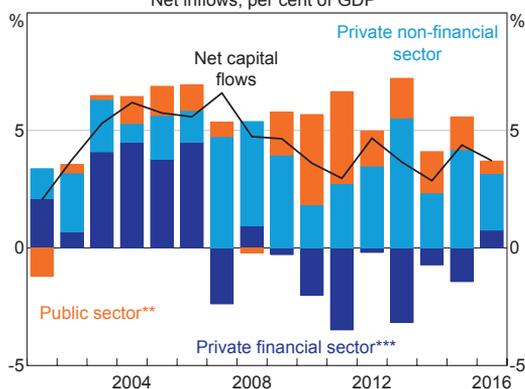


## Capital Flows

Net capital inflows to the Australian economy were equivalent to around 4 per cent of GDP over the first three quarters of 2016, slightly lower than the average of net capital inflows over the past 15 years (Graph 2.20). Consistent with the pattern of capital flows observed since 2007, recent net capital inflows have largely reflected flows to the private non-financial sector, most of which were directed to the mining sector. Initially, net inflows to the mining sector – the majority of which is foreign owned – largely reflected inflows from retained earnings during a period when profitability in the mining sector was especially strong.<sup>1</sup> However, since 2011–12, inflows appear to have mostly reflected transfers from offshore affiliates. This is consistent with liquefied natural gas projects comprising a larger share of resource investment during this period than previously. These projects have typically involved new joint ventures where the majority of participants are foreign entities, and are likely to have limited existing domestic operations with which to fund investment through retained

<sup>1</sup> For a discussion of net capital inflows to the mining sector in the preceding period, see RBA (2011), 'Box B: The Mining Sector and External Account', *Statement of Monetary Policy*, November, pp 42–44.

**Graph 2.20**  
**Australian Capital Flows**  
Net inflows, per cent of GDP\*

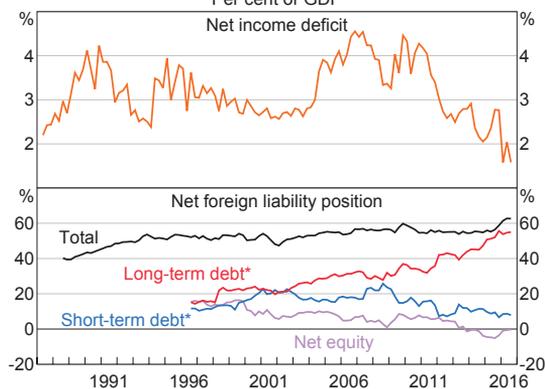


\* 2016 excludes December quarter  
 \*\* Excludes official reserves and other RBA flows  
 \*\*\* Adjusted for US dollar swap facility in 2008 and 2009  
 Sources: ABS; RBA

earnings. Net capital flows associated with the financial sector remain modest.

Consistent with below-average capital inflows, Australia's current account deficit has also been smaller than average in recent years. This has partly reflected a longer-term decline in the net income deficit – which largely comprises payments made on Australia's net foreign liabilities – to historically low levels (Graph 2.21).

**Graph 2.21**  
**Net Foreign Payments and Position**  
Per cent of GDP



\* Short-term includes debt with a residual maturity of one year or less; long-term includes all other debt  
 Sources: ABS; RBA

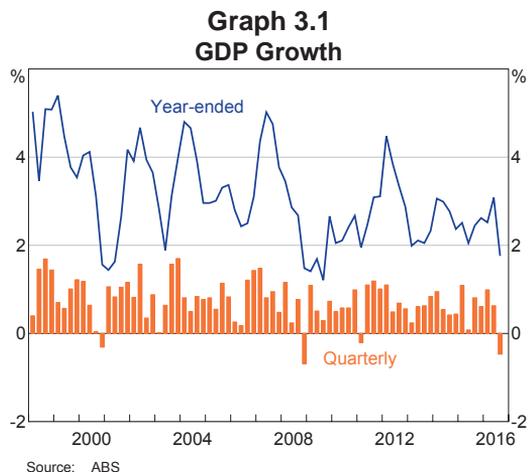
In the past few years, the decline in the net income deficit was mainly the result of higher receipts from foreign equity assets owned by Australian entities. Australia's net foreign liability position increased to a little over 63 per cent of GDP at the end of the September quarter, with recent fluctuations driven by asset price and foreign exchange valuation effects. Notwithstanding this increase, Australia still maintains a net foreign currency asset position. ✎



# 3. Domestic Economic Conditions

Year-ended growth in the Australian economy has slowed (Graph 3.1; Table 3.1). GDP fell in the September quarter, reflecting some temporary factors. Consumption growth was subdued in mid 2016; it is expected to recover but remain below its historical average. This is consistent with relatively weak growth in household income and a gradual improvement in labour market conditions.

Overall, GDP growth has slowed to be below the economy's potential growth rate. This is consistent with developments in the labour market including moderate employment growth



**Table 3.1: Demand and Output Growth**  
Per cent

	September quarter 2016	June quarter 2016	Year to September quarter 2016
GDP	-0.5	0.6	1.8
Domestic final demand	-0.5	0.8	1.5
– Consumption	0.4	0.5	2.5
– Dwelling investment	-1.4	2.6	7.2
– Mining investment	-10.6	-15.0	-32.9
– Non-mining investment	-0.2	5.3	5.1
– Public demand	-0.7	2.9	4.8
Change in inventories <sup>(a)</sup>	0.1	0.2	0.3
Exports	0.3	2.1	6.0
Imports	1.3	2.9	2.3
Mining activity <sup>(b)</sup>	-2.3	-0.2	-3.3
Non-mining activity <sup>(b)</sup>	-0.2	0.8	2.5
Nominal GDP	0.5	1.4	3.0
Real gross domestic income	0.4	1.0	2.0
Terms of trade	4.4	2.3	1.4

(a) Contribution to GDP growth

(b) RBA estimates

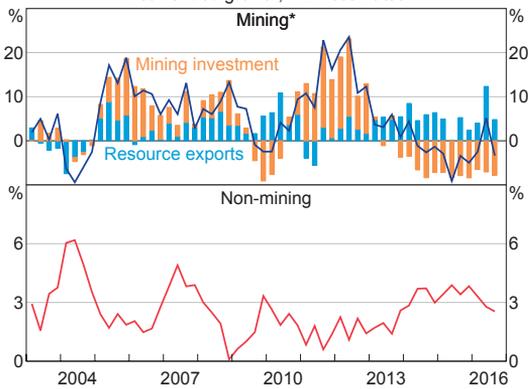
Sources: ABS; RBA

and low wage growth. The transition from the mining investment boom is still in progress, but is now well advanced; the drag on growth from falling mining investment should wane. Low interest rates and the depreciation of the Australian dollar over recent years also remain supportive of growth. The recent increase in the terms of trade should boost nominal income, but is expected to have less flow-on to real activity than it did during the earlier terms of trade boom.

Mining activity has subtracted from growth in recent years, but is expected to contribute to growth in coming quarters as the drag from mining investment dissipates and exports of liquefied natural gas (LNG) continue to ramp up (Graph 3.2). Non-mining activity eased in mid 2016, partly reflecting the moderation in household consumption growth. Both public demand and dwelling investment grew strongly over the year to September and are expected to continue to support growth in non-mining activity in coming quarters. Non-mining business investment has remained subdued.

**Graph 3.2**  
**Mining and Non-mining Activity**

Year-ended growth, RBA estimates



\* Net of mining-related imports; components are contributions to year-ended mining activity growth; contribution from changes in inventories not shown

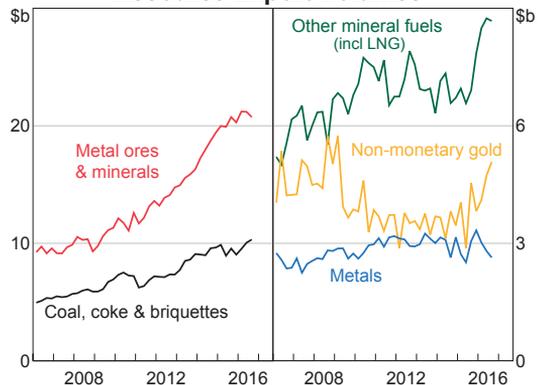
Sources: ABS; RBA

## Mining Activity

Mining activity (net of mining-related imports) declined in the September quarter as resource exports were little changed, while mining investment continued to fall. Mining investment has declined sharply from its peak in 2012/13. Recent falls have corresponded with the completion of a number of major projects and further falls are expected as work on LNG facilities reaches completion and few new projects are expected to commence. However, the largest subtraction of net mining investment from GDP growth looks to have already occurred; the Australian Bureau of Statistics (ABS) capital expenditure (Capex) survey of investment intentions and Bank liaison point to a smaller subtraction in 2016/17. The recent increases in commodity prices are expected to boost the profitability of mining firms, but are unlikely to lead to much new mining investment over the next few years.

Resource export volumes have increased strongly over the past year (Graph 3.3). The ramp-up in LNG production has been underway for the past year or so and LNG exports are expected to continue to grow strongly over the next few years. Looking ahead, iron ore export volumes

**Graph 3.3**  
**Resource Export Volumes\***



\* Reference year is 2014/15

Source: ABS

should be supported by increased production from Australia's low-cost producers, while coal production is also expected to increase in the coming quarters as recent supply disruptions have been largely resolved.

Despite the recent pick-up in commodity prices, economic conditions still remain relatively weak in the resource-rich states – Western Australia and Queensland – that have been most directly affected by declining mining investment and the earlier falls in the terms of trade.

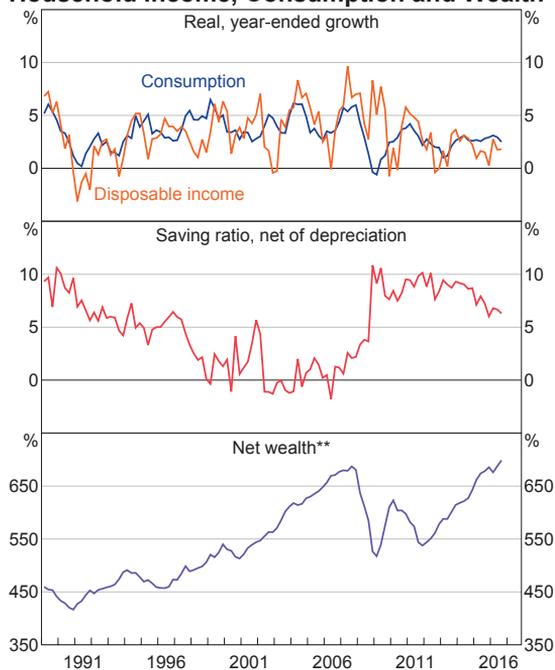
## Household Sector

Household consumption growth moderated over the year to September 2016 (Graph 3.4). Goods consumption recorded a decline for the second consecutive quarter, while services consumption grew at around its average pace. The modest pace of real household disposable income growth over the past year has weighed on consumption growth, although low interest rates and rising household wealth have generally supported household spending. The saving ratio has broadly moved sideways over the past year, having declined from its post-crisis peak.

More timely indicators suggest that goods consumption strengthened somewhat in late 2016, following the weak September quarter outcome; growth in retail sales volumes picked up in the December quarter (Graph 3.5). Households' perceptions of their personal finances are around average and their unemployment expectations are at low levels relative to recent years.

Private dwelling investment continued to grow at an above-average rate over the year, but fell unexpectedly in the September quarter, largely because poor weather disrupted construction. Residential building approvals, especially higher-density dwelling approvals, have fallen in recent months (Graph 3.6). Nevertheless, the large amount of work in the pipeline should continue

**Graph 3.4**  
**Household Income, Consumption and Wealth\***

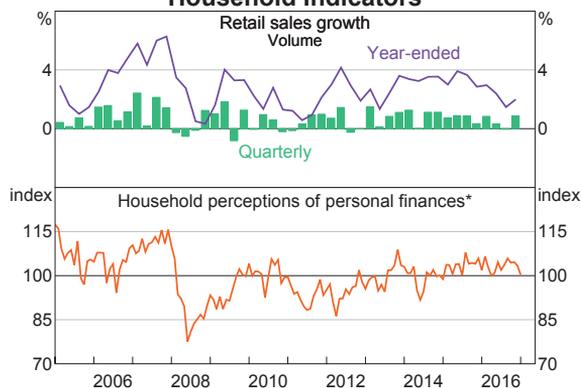


\* Household sector includes unincorporated enterprises; disposable income is after tax and interest payments, and has been smoothed between March quarter 2000 and March quarter 2002

\*\* Per cent of annual household disposable income, before the deduction of interest payments

Sources: ABS; RBA

**Graph 3.5**  
**Household Indicators**



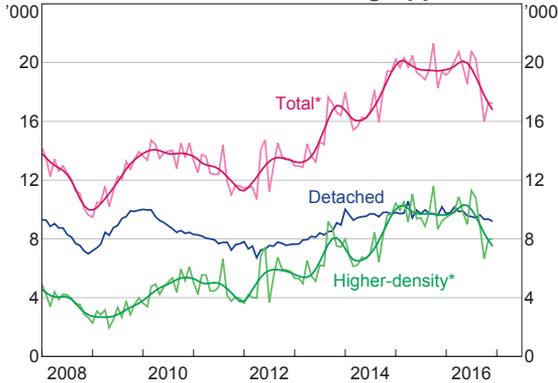
\* Average of the ANZ-Roy Morgan and Westpac-Melbourne Institute consumer sentiment measures of respondents' perceptions of their personal finances relative to the previous year; average since 1980 = 100

Sources: ABS; ANZ-Roy Morgan; RBA; Westpac and Melbourne Institute

to support a high level of dwelling investment for the foreseeable future (See 'Box A: The Pipeline of Residential Dwelling Work').

**Graph 3.6**

**Private Residential Building Approvals**



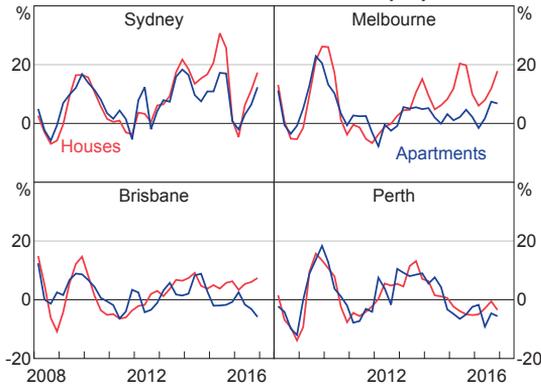
\* Smoothed lines are 13-period Henderson trends  
Sources: ABS; RBA

Conditions in the established housing market differ significantly across the country (Graph 3.7; Graph 3.8). Conditions in the housing market in Sydney and Melbourne strengthened over the second half of 2016, but they have remained relatively subdued elsewhere. In the private treaty market, the average discount on vendor asking prices has decreased, but the average number of days that a property is on the market has increased from the lows of 2015, mainly reflecting developments outside Sydney and Melbourne.

**Graph 3.7**

**Housing Price Growth by Dwelling Type**

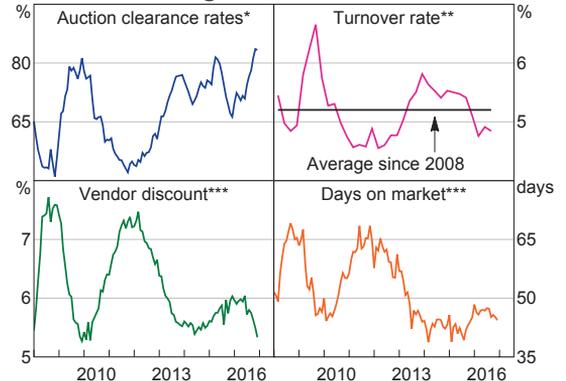
Six-month-ended annualised, seasonally adjusted



Sources: APM; RBA

**Graph 3.8**

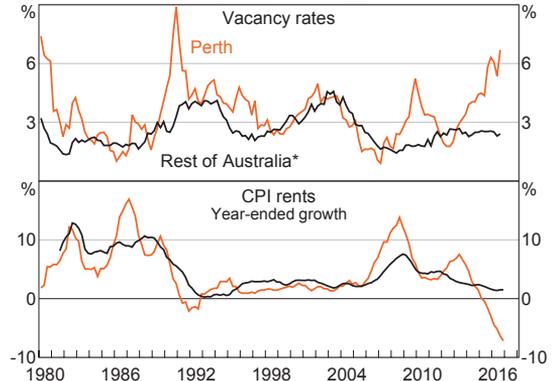
**Housing Market Indicators**



\* Average of Melbourne and Sydney  
\*\* Share of dwelling stock, annualised  
\*\*\* Capital city dwelling stock weighted median for private treaty sales only  
Sources: ABS; APM; CoreLogic; RBA; Real Estate Institute of Victoria

In general, price growth for detached houses has been stronger than for apartments, particularly in the capital cities where the supply of new apartments has increased the most. For example, in the second half of 2016, apartment prices declined noticeably in Brisbane while growth in prices for detached houses increased. Conditions in Perth remain particularly weak; prices and rents have continued to decline and the vacancy rate has increased further (Graph 3.9). Rental growth in the rest of the country remains subdued and vacancy rates have been steady near their long-run average for some time.

**Graph 3.9**  
**Rental Market**



\* Capital cities only; excludes Adelaide from March quarter 2015  
Sources: ABS; RBA; REIA

Low interest rates are providing ongoing support to housing demand. Over recent months, loan approvals have picked up, largely reflecting stronger demand from investors (see 'Domestic Financial Markets' chapter for further details on the developments in housing finance). Bank lending standards have been tightened over the past couple of years, which is a positive development given the already high levels of debt.

## Non-mining Business Sector

The level of non-mining business investment has been subdued for some time, although it increased by around 5 per cent over the past year. Recent state-level data published by the ABS indicate that non-mining investment has grown in New South Wales and Victoria over the past few years, led by the household and business services sectors (Graph 3.10). In contrast, non-mining investment has been declining in the resource-rich states of Western Australia and Queensland where the effects of the falling terms of trade have been most pronounced.

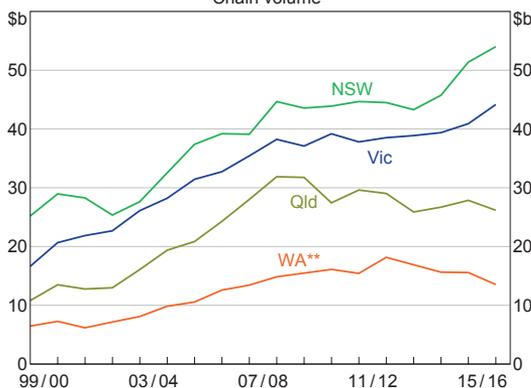
The share of non-mining business investment relative to GDP remains low relative to history. Indicators such as the Capex survey suggest that

non-mining business investment is likely to remain subdued in 2016/17. However, the Capex survey only covers about half of the non-mining business investment captured by the more comprehensive national accounts measure; it does not cover certain industries, such as some service industries that have seen relatively strong investment over recent years. Non-residential building approvals increased over 2016, partly reflecting some very large projects in the retail, entertainment and short-term accommodation sectors.

Survey measures of business conditions have been above average for some time, although they have eased over the past six months or so (Graph 3.11). Business credit growth has picked up in the past three months; however, this is partly due to a number of large privatisations being financed by business credit. Survey measures of profitability have been at above-average levels, while non-mining company profits have been little changed as a share of nominal GDP for some time.

The depreciation of the exchange rate over the past couple of years has supported non-mining exports (Graph 3.12). Net service exports, including tourism, education and business services, have made a significant contribution to GDP growth

**Graph 3.10**  
Non-mining Business Investment  
Chain volume\*

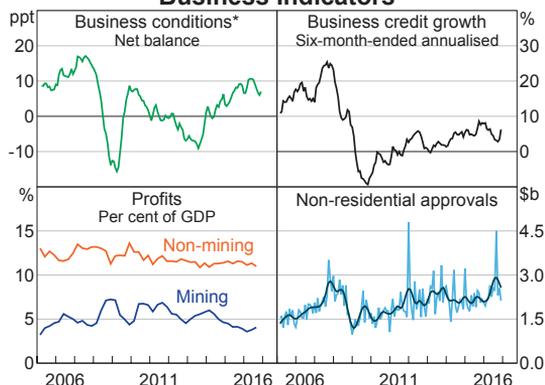


\* Reference year is 2014/15

\*\* From 2011/12, includes second-hand asset transfers of buildings and structures

Sources: ABS; RBA

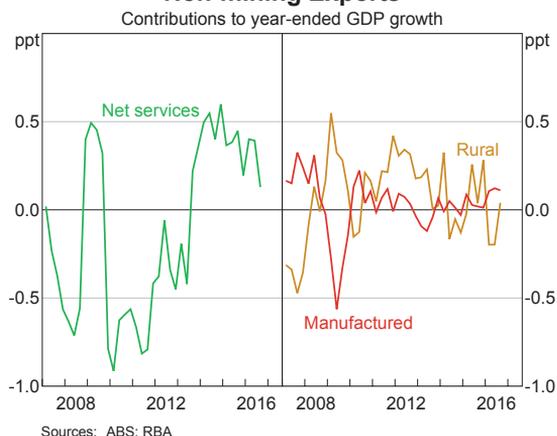
**Graph 3.11**  
Business Indicators



\* Deviation from long-run average; three-month moving average

Sources: ABS; APRA; NAB; RBA

**Graph 3.12**  
**Non-mining Exports**

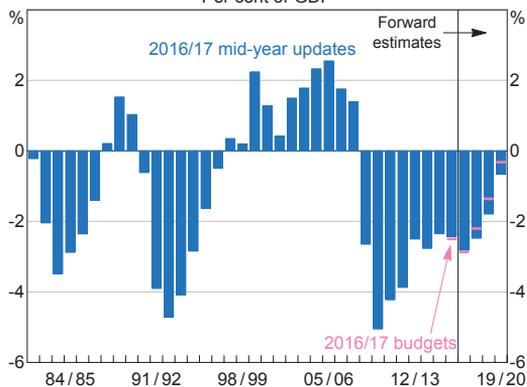


over this period. Manufactured exports have increased over the year to the September quarter, following several years of little change. Rural exports have been largely unchanged over the past year as increased grain and other rural exports have offset declining meat exports as farmers have opted to rebuild their herds.

### Government Sector

Public demand contributed strongly to economic growth over the year, despite a weak outcome in the September quarter. Federal and state budget

**Graph 3.13**  
**Consolidated Budget Balance\***  
Per cent of GDP



\* Federal, state and territory governments based on 2016/17 budgets and mid-year updates; excludes effect of the federal grant to the RBA in 2013/14

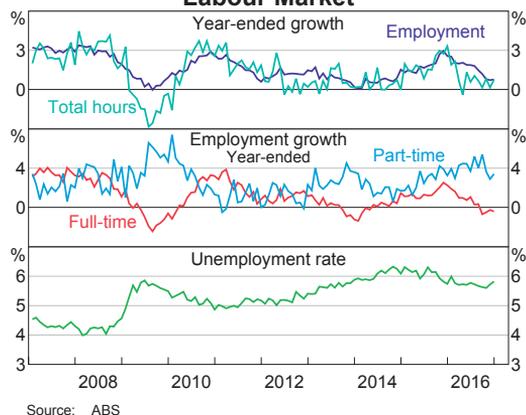
Sources: ABS; Australian Treasury; RBA; State and Territory Treasuries

updates resulted in little change to the forecasts of the consolidated deficit in 2016/17 of around 3 per cent of GDP and implies a modest stimulus to growth (Graph 3.13). Lower expected revenues and higher state infrastructure spending in the budget updates imply slightly larger deficits in subsequent years than previously forecast, although the projections continue to expect the consolidated deficit to decline gradually over time.

### Labour Market

Following strong growth in 2015, employment growth moderated over 2016, consistent with the slowing in domestic activity (Graph 3.14). The net increase in employment in 2016 was entirely in part-time employment, although full-time employment increased in the December quarter. The composition of employment growth over the year reflects a strong contribution to growth from the household services sector, which has a high share of part-time workers. It may also reflect firms being hesitant to hire full-time workers until they see further evidence that demand for their output is likely to be sustained.<sup>1</sup> Average hours worked declined over the year in line with the shift towards part-time

**Graph 3.14**  
**Labour Market**



<sup>1</sup> See RBA (2016), 'Box B: Trends in Part-time and Full-time Employment', *Statement on Monetary Policy*, November, pp 36–38 for a discussion of this issue.

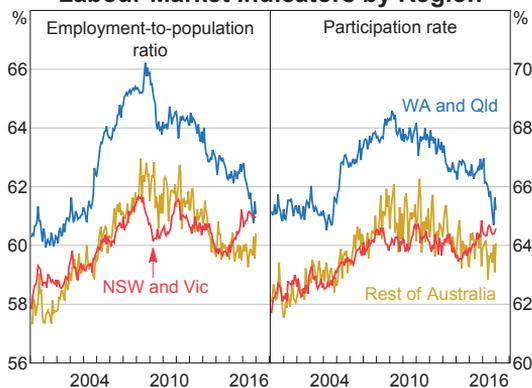
employment, and growth in total hours worked has been subdued.

The unemployment rate in December was 5.8 per cent, around its level a year earlier. However, the participation rate declined by around ½ percentage point over the year, led by a decline in the participation rate of 15–24 year olds. Furthermore, the youth unemployment rate rose over 2016, although it remains lower than its peak in 2014. The unemployment rate for workers aged 25–64 years fell slightly over the past year and their participation rate was little changed.

There has been a large divergence in labour market conditions across states, reflecting variation in activity. In the resource-rich states of Western Australia and Queensland, employment has declined over 2016 and the participation rate is now back to around where it was prior to the mining investment boom (Graph 3.15). Labour market outcomes have been strongest in Victoria, which has experienced solid growth in employment and a rising participation rate; this may partly reflect strong growth in labour supply from both interstate and overseas migration. The unemployment rate remains lowest in trend terms in New South Wales, though employment growth recorded a noticeable slowing over the second half of 2016.

**Graph 3.15**

**Labour Market Indicators by Region**



Sources: ABS; RBA

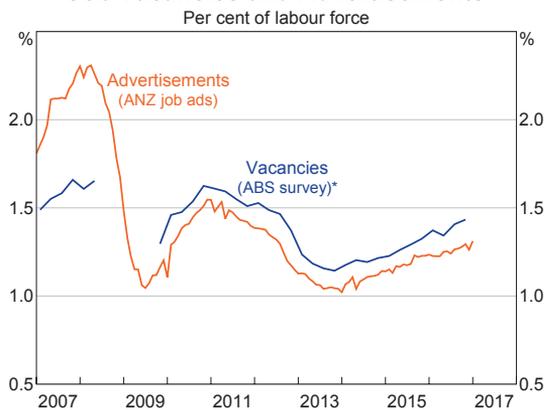
By sector, employment growth in trend terms remains strongest in household service industries, where the share of part-time employment has been increasing, with the exception of education. In the December quarter, tertiary education employment continued to make a noticeable contribution to growth, consistent with forecasts of further growth in international student arrivals by the Department of Immigration and Border Protection.

Mining industry employment appears to have stabilised and construction employment remains elevated. Estimates suggest that residential construction accounts for around three-quarters of total construction industry employment and should be supported by the pipeline of residential construction activity. Employment in the retail, agricultural and finance & insurance industries declined in trend terms over the year.

ABS job vacancies and ANZ job advertisements increased further in the December quarter, suggesting that there could be some pick-up in employment growth over the next six months (Graph 3.16). However, employment growth over the past year has been weaker than suggested by its historical relationship with these leading indicators of labour demand.

There are various ways to measure the degree of spare capacity in the labour market. The Bank estimates that the unemployment rate is roughly half a percentage point above the level consistent with stable inflation (often referred to as the non-accelerating inflation rate of unemployment or NAIRU). Another way to gauge the degree of slack is to assess broader measures of underutilisation in the labour force. The number of people in work desiring additional hours (the underemployed) remains elevated, and has diverged from the unemployment rate over the past two years. However, the nature of underemployment suggests that developments

**Graph 3.16**  
**Job Vacancies and Advertisements**



\* This survey was suspended between May 2008 and November 2009  
Sources: ABS; ANZ

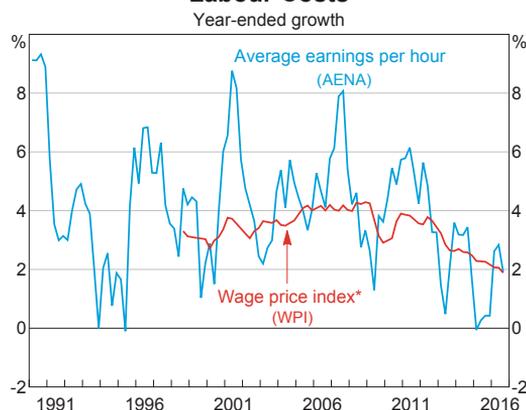
in the unemployment rate have been a generally reliable indicator of changes in labour market spare capacity. (See 'Box B: Underemployment and Labour Market Spare Capacity').

## Labour Costs

Wage growth was slightly slower than expected in the September quarter. Growth in the wage price index (WPI) over the year was 1.9 per cent, which is the lowest growth in the index since the series began in the late 1990s (Graph 3.17). Part of the decline in the quarter can be attributed to the Fair Work Commission's annual minimum award wage increase, which was slightly smaller than the corresponding increase in 2015, taking effect. Growth in average earnings in the national accounts (AENA) also remains subdued.

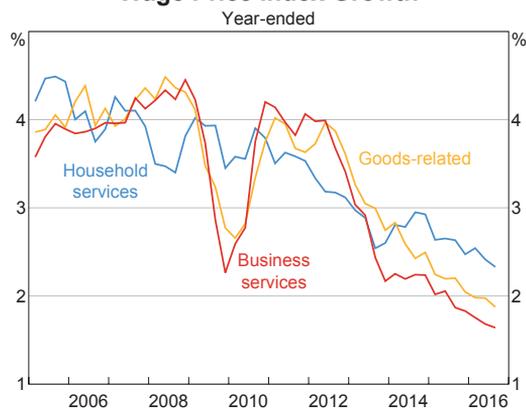
The decline in wage growth since 2012 has been broad based across industry and states (Graph 3.18). Wage growth in business service industries has been relatively weak over the past two years, in part the result of slower wage growth for jobs in mining-related business services. Wage growth in household service industries recorded a faster pace than in other industries, which is likely to be because of the

**Graph 3.17**  
**Labour Costs**



\* Total pay excluding bonuses  
Sources: ABS; RBA

**Graph 3.18**  
**Wage Price Index Growth**



Sources: ABS; RBA

stronger employment outcomes during this time and may also reflect the importance of wage-setting methods that link to the minimum wage (which has seen higher wage increases than average WPI outcomes in recent years). Wage growth in goods-related industries has also slowed in recent years and in the September quarter. Construction wage growth picked up in the latest quarter, due to an increase in Victorian construction wages. This is consistent with liaison information pointing to high labour demand in residential construction and

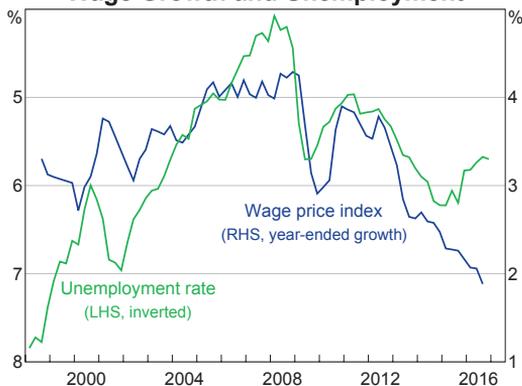
micro-level WPI data that show that 20 per cent of construction jobs experienced a wage increase larger than 4 per cent over the past year. It is likely that construction wage growth will continue to pick up, given that new construction enterprise bargaining agreements reached in the September quarter contained annualised wage increases averaging 6 per cent.

The slowing in wage growth in recent years has occurred alongside the decline in the unemployment rate (Graph 3.19). This could suggest that there are other structural or cyclical factors weighing on wage growth. One possibility is that the lower wage growth could be part of businesses' responses to increased competitive pressure arising from globalisation and technological progress. This may have resulted in workers feeling their bargaining power has been reduced and/or firms being less willing to offer larger wage increases. Another possibility is that the significant increase in underemployment over the past year has had a

dampening effect on wage growth (see 'Box B: Underemployment and Labour Market Spare Capacity' for a discussion of these issues). How long these factors persist could affect the pace of wage growth as labour market conditions improve.

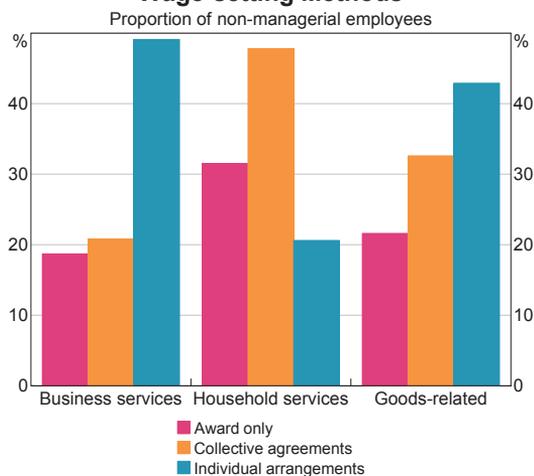
A recently released ABS survey of firms provides information on wage-setting methods, which vary significantly across industries. In May 2016, a little over 20 per cent of employees had their pay based on awards, which are mostly determined by the Fair Work Commission. The highest share of award-based jobs was in household service industries, which also had the highest share of part-time and casual jobs (Graph 3.20). Awards also indirectly affect a significant proportion of employees covered by collective or enterprise agreements and individual agreements; these agreements each cover over 35 per cent of employees. ↗

**Graph 3.19**  
**Wage Growth and Unemployment**



Sources: ABS; RBA

**Graph 3.20**  
**Wage-setting Methods**



Sources: ABS; RBA

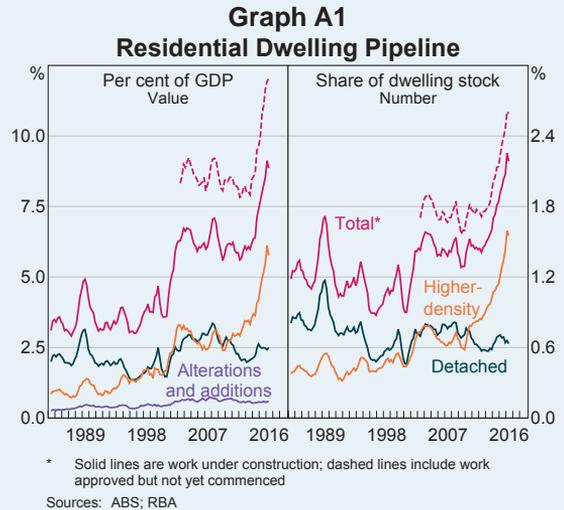
## Box A

# The Pipeline of Residential Dwelling Work

Dwelling investment has supported growth in output and employment over recent years, as the Australian economy continues to adjust to the large decline in mining investment. The pipeline of work to be done on residential dwellings has increased rapidly since 2013 to historically high levels, and this should continue to support dwelling investment over the next couple of years.

In late 2016, the estimated value of work to be done on residential dwellings was equivalent to 12 per cent of GDP and the number of dwellings to be completed increased to more than 2½ per cent of the dwelling stock (Graph A1).<sup>1</sup> This large pipeline of work primarily reflects strong growth in building approvals for higher-density dwellings (such as apartments).<sup>2</sup>

Residential building approvals have been almost 50 per cent higher than their long-term average over the past two years. The rise has been supported by low interest rates, population growth and strong growth in housing prices, particularly in the eastern states.<sup>3</sup> Compared with previous housing cycles, a much larger proportion



of recent activity has been in higher-density building rather than detached houses. Higher-density building approvals have accounted for around half of all residential building approvals in recent years, compared with a long-run average of less than one-third (Graph A2). Furthermore, within the higher-density segment, there has been a shift in approvals towards higher-rise apartments; the number of apartment blocks with four or more storeys now contributes around one-third of total approvals, up from around 10 per cent in 2010.<sup>4</sup>

Apartments take longer to build than detached houses, which has contributed to the increase in the pipeline of work to be done. The average completion time for an apartment in 2016 was around six quarters, almost three times longer than for detached dwellings and twice as long as

1 The Australian Bureau of Statistics (ABS) publishes two measures of the pipeline of work: one based on the estimated nominal value of work to be done and the other on the number of dwellings to be completed. A key difference is that the nominal value of the pipeline subtracts the value of work already completed on a given building job (which can contain multiple dwellings), while the number of dwellings in the pipeline only declines upon full completion of a building job. The ABS also distinguishes between work yet to be done and work approved but yet to be commenced.

2 The ABS defines a 'building approval' as a permit to begin construction and should not be confused with a development application, which is granted at an earlier stage of a project's development. Residential building approvals add to the pipeline of work to be done in both value and volume terms, regardless of whether work has commenced or not.

3 For more details on these developments by state, see RBA (2016), 'Box B: The Housing Market', *Statement on Monetary Policy*, August, pp 42–44.

4 There has also been an increase in the number of dwellings approved but not commenced in recent years, but this has remained at slightly more than 15 per cent of the total pipeline during this period.

**Graph A2**  
**Residential Building Activity**  
Twelve-month rolling sum



\* Includes semi-detached dwellings and apartment buildings  
Sources: ABS; RBA

for townhouses. While average completion times for each dwelling type have been broadly steady over the past decade, the shift towards more apartment building has seen the overall average completion time for dwellings increase.

There are a number of possible factors driving the shift towards higher-density housing. Supply-side factors include changes in planning policies and increased availability of former industrial (or ‘brownfields’) sites, which tend to support higher-density dwellings, relative to urban fringe (or ‘greenfields’) sites, which are mostly used for detached housing. Factors supporting the demand for higher-density dwellings include the lower cost of apartments relative to detached houses and rising demand for inner-city dwellings, partly because of demographic change and foreign purchases. The shift towards higher-density housing is more in line with international norms, as Australia’s existing housing stock is heavily concentrated in detached houses and its cities have unusually low density compared with those in other industrialised economies.<sup>5</sup>

5 For more details, see Shoory M (2016), ‘The Growth in Apartment Construction in Australia’, *RBA Bulletin*, June, pp 19–26 and RBA (2014), ‘Submission to the Inquiry into Housing Affordability’, Senate Economics References Committee, February.

While the large pipeline of residential building work is expected to support dwelling investment and employment over the next couple of years, there are risks associated with the high level of activity and the shift to higher-density buildings. Much of the apartment construction is geographically concentrated, particularly in inner-city Melbourne and Brisbane.<sup>6</sup> This increases the chance that (localised) oversupply could develop, and would exacerbate the effect on local area prices if that were to occur. In addition, because both approval lags and completion times are longer for apartments, developers might not be able to respond in time to price or other signals of waning demand, so a general oversupply is more likely to build up. If these risks materialise, there could be an increase in the proportion of newly completed apartments that fail to settle and a rise in the share of work yet to be commenced that is not undertaken.

The shift to higher-density construction has affected the interpretation of the pipeline as a leading indicator of future dwelling investment. An approved apartment takes around three times as long to complete as a detached house, which means that the pipeline of work to be done provides information on dwelling investment further into the future. However, the longer lag between the decision to build a higher-density dwelling and its completion means that the impact on the supply of housing, including prices and vacancy rates, may be less predictable than in the past. ❖

6 For more details see RBA (2016), ‘Box B: Banks’ Exposures to Inner-city Apartment Markets’, *Financial Stability Review*, October, pp 25–28 and Kent C (2016), ‘Australia’s Economic Transition – State By State’, Address to the Australian Business Economists Conference Dinner, Sydney, 22 November.

## Box B

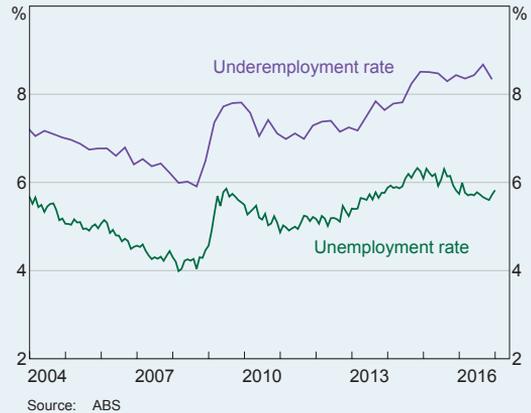
# Underemployment and Labour Market Spare Capacity

The unemployment rate is the most commonly used measure of spare capacity in the labour market. A complementary measure is the underemployment rate, which measures the number of employed people who would like and are available to work additional hours, expressed as a share of the labour force. Since the mid 2000s the two rates have generally moved similarly (Graph B1). However, over the past two years they have diverged somewhat, with the unemployment rate moving lower and the underemployment rate remaining elevated.

There are two categories of underemployed workers, as defined by the Australian Bureau of Statistics (ABS). The first is part-time workers preferring and available to work additional hours; by this definition, around one-quarter of all part-time workers are underemployed, accounting for around 8 per cent of the total labour force.<sup>1</sup> The second category is people who usually work full time but are currently on part-time hours for economic reasons; these workers account for less than 1 per cent of the labour force.

The upward trend in the underemployment rate since the early 1980s is consistent with the rise in the share of part-time employment. Underemployment rates are higher among groups that have a higher share of part-time employment, such as females, younger workers

**Graph B1**  
**Labour Market**  
Per cent of labour force



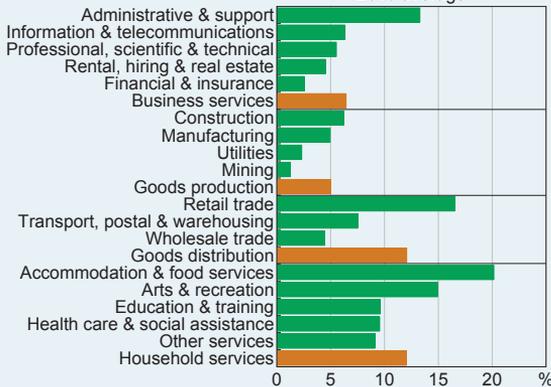
and older workers.<sup>2</sup> For example, the share of female workers who are employed part-time is a little more than twice as large as the share of male workers who are employed part-time, and female workers have a higher incidence of underemployment than male workers. Underemployment is also more prevalent in industries with a higher share of part-time workers. The accommodation & food service industry has a part-time employment share of 60 per cent and the highest rate of underemployment, while almost all mining jobs are full time and underemployment is minimal (Graph B2).

Over the past two years the increase in employment was associated with a decline in the unemployment rate. However, growth in part-time employment was relatively strong over

<sup>1</sup> Workers are defined as part-time if they usually work less than 35 hours per week. People currently working full-time hours who desire additional hours are not counted as underemployed.

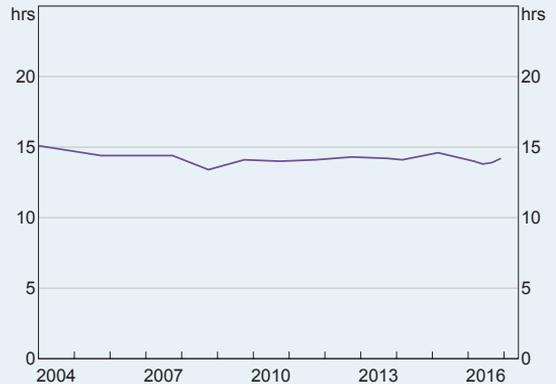
<sup>2</sup> Over the past two years the underemployment rate and part-time employment share have increased across most age and gender groups.

**Graph B2**  
**Underemployment Ratio\***  
2016 average



\* Underemployment as a share of industry employment  
Sources: ABS; RBA

**Graph B3**  
**Desired Additional Hours**  
of Underemployed Workers  
Per week



Source: ABS

this period, and some of these workers desired additional hours. This helps to explain why the unemployment rate has declined while the underemployment rate has remained elevated. Accordingly, the underutilisation rate – the sum of the unemployment and underemployment rates – has declined only a little.

The number of additional hours of work desired by underemployed workers has been stable at around two days per week since the mid 2000s (Graph B3). Around half of part-time underemployed workers desire enough additional hours to become full time; this is around 15 per cent of part-time employment. The share of people who usually work full-time but who are working part-time hours for economic reasons has been little changed over the past couple of years, at a low level.

There are various ways to combine information about unemployed and underemployed workers to measure overall labour market spare capacity. The underutilisation rate is simple but has two limitations. First, it does not take into account that, on average, each unemployed person represents more potential (additional) hours of work than each underemployed worker.

On average, unemployed people seek 33 hours of work per week compared with 14 additional hours per week for underemployed people. Around one-third of unemployed people have a preference for part-time work, and the number of hours of work desired by the unemployed has been stable over time. An implication is that the recent strength in part-time employment growth cannot be attributed to a stronger preference for part-time work among recently employed people.

Second, people are only counted as unemployed if they take active steps to find a job, such as responding to a job advertisement; in contrast, there is no requirement to be searching for additional hours of work to be classified as underemployed. Only around half of all underemployed workers reported that they were actively searching for additional hours in 2016, and a similar share reported that they would prefer not to change their employer to find additional hours.<sup>3</sup> This might help to explain

3 The most common active steps taken when searching for additional hours include: 'Wrote, phoned or applied in person to an employer for work' (80%), 'Answered an advertisement for a job in a newspaper/Internet/noticeboard' (70%) and 'Contacted friends or relatives' (55%).

why the average duration of underemployment (currently 94 weeks) is around double that of unemployment (currently 46 weeks).

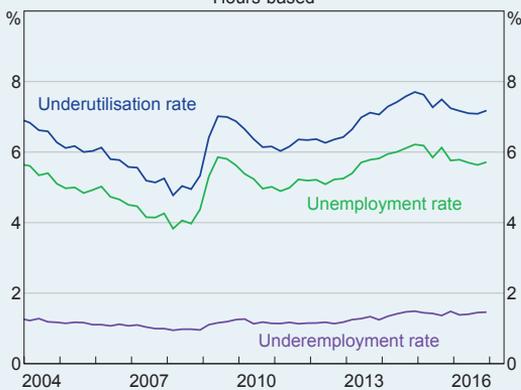
Given these two limitations, it is possible to construct a measure of labour market spare capacity that takes into account how many (additional) hours each unemployed and underemployed person would like to work, as well as excluding those underemployed people not actively searching for additional work. That is, an hours-based measure of underutilisation can be constructed as the sum of hours of work sought by unemployed people and additional hours of work *actively* sought by underemployed workers, as a share of total hours worked and actively sought.

The unemployment rate has driven most of the movements in the hours-based underutilisation rate (Graph B4). This is largely because underemployed workers contribute less to the hours-based measure than the heads-based

measure of underutilisation. As a result, even though the heads-based underemployment rate has diverged from the unemployment rate over the past couple of years, the unemployment rate remains a broadly reliable guide to changes in labour market spare capacity.

Nonetheless, changes in underemployment could become a relatively more important driver of changes in labour underutilisation over time or in specific episodes. This could have implications for labour market dynamics. For example, if the downward pressure on wage growth exerted by unemployed and underemployed workers differs, the effect of rising labour demand on wage pressures could depend on how much of it is met by increasing hours for existing employees rather than increasing employment. This suggests that it is prudent to monitor all dimensions of underutilisation when assessing spare capacity in the labour market. ↗

**Graph B4**  
**Labour Underutilisation**  
Hours-based



Sources: ABS; RBA

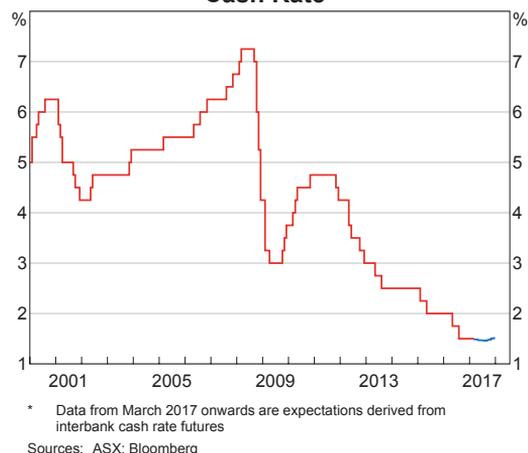
# 4. Domestic Financial Markets

Conditions in domestic financial markets have been relatively stable over recent months. The cash rate target has remained at 1.5 per cent since the August Board meeting and financial market prices do not imply a change over the period ahead. In line with global developments, Australian government bond yields have risen significantly since August, although they have only returned to the levels that prevailed in early 2016. The increase in bond yields has put a little upward pressure on banks' funding costs and, partly in response to this, banks have increased some lending rates. Nevertheless, conditions for obtaining funding remain favourable, with the Australian Government and the major banks having issued significant volumes of bonds over recent months. After slowing in the first half of last year, credit growth has picked up, although it remains below the pace that prevailed in 2015. The increase in credit growth has been driven by lending to larger businesses. Housing credit growth has also risen a little, with lending to investors picking up strongly in recent months. At the same time, some banks have raised their lending rates for housing investors. Equity prices have increased over recent months, with resource sector share prices having risen in response to higher prices for many commodities.

## Money Markets and Bond Yields

The Reserve Bank has maintained the cash rate target at 1.5 per cent since August last year. Rates on overnight indexed swaps (OIS) imply that markets expect the cash rate to remain unchanged over the course of this year (Graph 4.1).

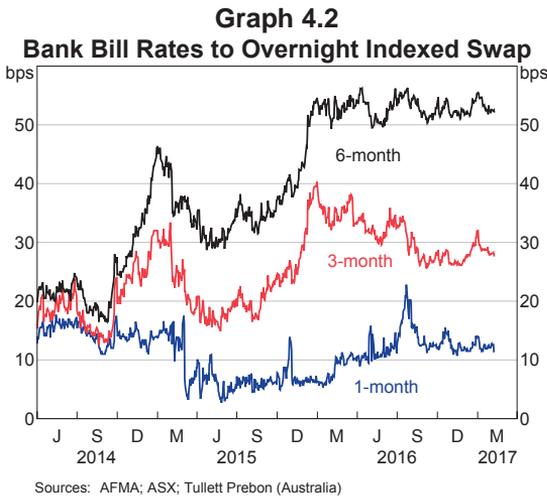
**Graph 4.1**  
**Cash Rate\***



Short-term interest rates in the repurchase agreement (repo) market have risen relative to OIS rates, though these spreads have retreated from their highs recently. Since June 2015, the repo rates at which the Reserve Bank conducts its open market operations have risen from spreads to OIS of around 2 basis points to around 30 basis points. The wider spreads on repo rates reflect heightened demand for secured funding from market participants, particularly non-residents, and appears to be related to developments in the foreign exchange swap and the bond futures markets.<sup>1</sup> In particular, in the foreign exchange swap market, Australian dollars can be lent against yen at a relatively high implied Australian dollar interest rate; as a result, some investors have been borrowing Australian dollars under repo to use them for such foreign exchange swap transactions.

<sup>1</sup> For more information, see Becker C, A Fang and JC Wang (2016), 'Developments in the Australian Repo Market', RBA *Bulletin*, September, pp 41–46.

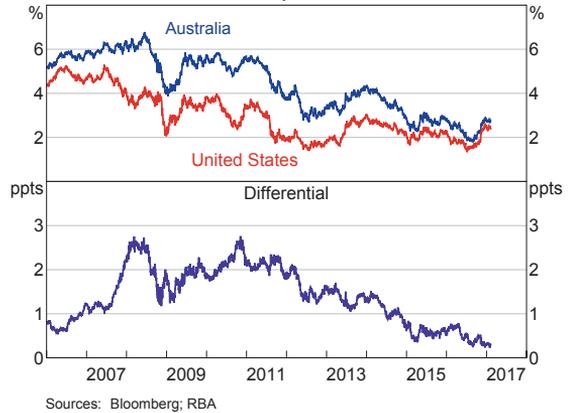
Despite the higher repo rates, short-term interest rates that are more closely related to bank funding costs have remained low. The unsecured interbank overnight interest rate – the cash rate – has continued to trade at the Reserve Bank’s target, while spreads on bank bill rates have remained broadly steady (Graph 4.2).



Yields on 10-year Australian Government Securities (AGS) have increased by around 1 percentage point since the record lows reached in August last year (Graph 4.3). They are currently around the levels that prevailed about a year ago. The increase in Australian yields has been in line with international developments, with the spread between AGS and US Treasury yields remaining around 35 basis points. Long-term measures of inflation compensation have risen in conjunction with nominal bond yields.

The Australian Office of Financial Management (AOFM) revised its planned issuance of AGS in the 2016/17 financial year in response to updated economic and budget forecasts in the Mid-Year Economic and Fiscal Outlook. Net issuance during 2016/17 is now expected to be around \$74 billion, \$5 billion higher than at the time of the 2016/17 budget. Demand for AGS remains strong, with the AOFM recently issuing \$9.3 billion of a new

**Graph 4.3**  
**Government Bond Yields**  
10-year



5-year bond via syndication at a yield to maturity of 2.24 per cent. This follows the issuance of \$7.6 billion of a 30-year bond in October 2016.

The level of outstanding semi-government bonds has been relatively stable since 2014, at around \$240 billion. In the December quarter, state and territory governments raised a total of \$6.6 billion, reflecting issuance from Queensland, South Australia and Western Australia, which was largely offset by maturing bonds.

There has been a decline in bond issuance by non-residents in the domestic market (‘Kangaroo’ issuance) over the past few years, with a total of \$25 billion raised in 2016. This is despite further issuance by US corporations, with large deals by Apple and Coca-Cola earlier in the year. By converting the Australian dollars they raise into foreign currency, Kangaroo issuers act as indirect counterparties for Australian corporations looking to convert funds raised offshore back into Australian dollars. Spreads of AAA-rated Kangaroo bonds to AGS were little changed over 2016.

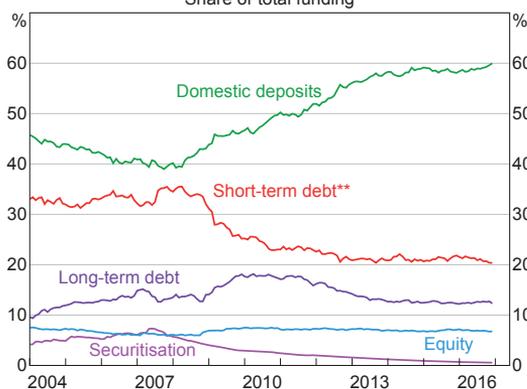
### Financial Intermediaries

Deposits have increased to 60 per cent of bank funding, in part reflecting slower growth in short-term wholesale debt and equity funding

(Graph 4.4). The growth in deposits has been driven by term deposits, while growth in savings and transaction deposits has eased (Graph 4.5).

One of the factors influencing the composition of banks' balance sheets is the introduction of the Net Stable Funding Ratio (NSFR) in January 2018. The NSFR forms part of the Basel III liquidity reforms overseen by the Australian Prudential Regulatory Authority (APRA). It provides an incentive for banks to fund their assets and off-balance sheet activities

**Graph 4.4**  
**Funding Composition of Banks in Australia\***  
Share of total funding

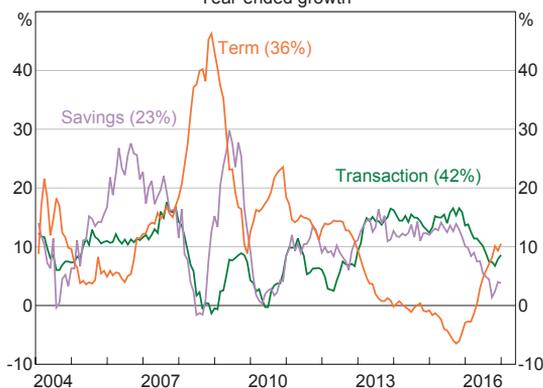


\* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis

\*\* Includes deposits and intragroup funding from non-residents

Sources: APRA; RBA; Standard & Poor's

**Graph 4.5**  
**Deposits by Product Type\***  
Year-ended growth



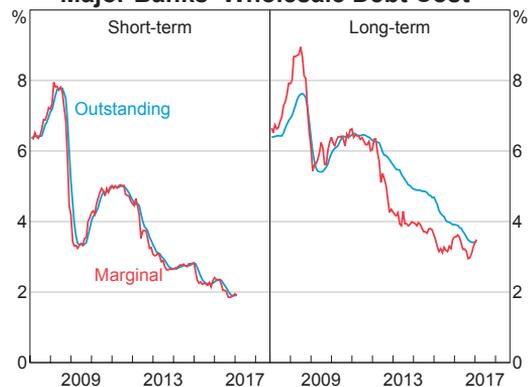
\* Break-adjusted; not seasonally adjusted; excludes foreign currency, intra-group deposits and certificates of deposit; values in brackets represent share of AUD deposits

Sources: APRA; RBA

with more stable sources of funding such as retail deposits, term deposits, long-term debt and equity. It also encourages less reliance on short-term wholesale liabilities.

Estimates of the average cost of the major banks' debt funding declined over 2016 but by a little less than the cash rate, mainly reflecting incomplete pass-through of the cash rate reductions to term deposit rates. More recently, overall debt funding costs are estimated to have been stable, despite a little upward pressure from the increasing share and cost of long-term debt and deposit funding (Graph 4.6).

**Graph 4.6**  
**Major Banks' Wholesale Debt Cost\***



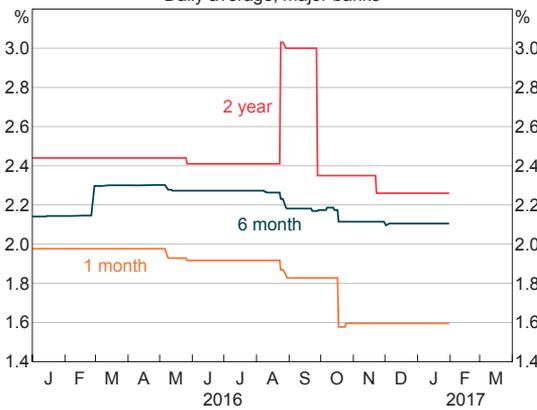
\* RBA estimates; rates do not include interest rate hedges

Sources: Bloomberg; RBA

Overall, deposit funding costs are estimated to have been stable in recent months, although there have been some offsetting effects. An increase in the share of term deposit funding is adding to funding costs, along with relatively higher interest rates on some of these products (Graph 4.7). These effects have been partly offset by lower interest rates on some at-call savings accounts and shorter-maturity deposits (Graph 4.8).

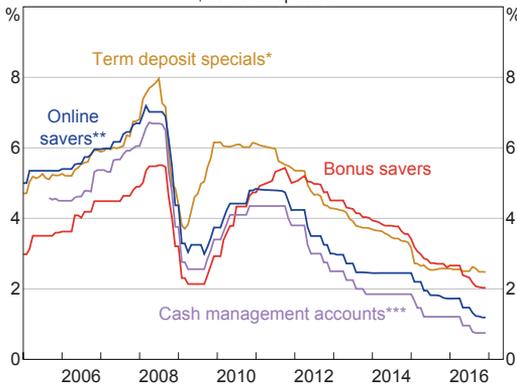
The pick-up in term deposit funding follows several years of little growth, during which interest rates on term deposits were relatively low compared to interest rates on other funding

**Graph 4.7**  
**Advertised Term Deposit Rates**  
Daily average; major banks



Sources: Canstar; RBA

**Graph 4.8**  
**Major Banks' Deposit Rates**  
\$10 000 deposits



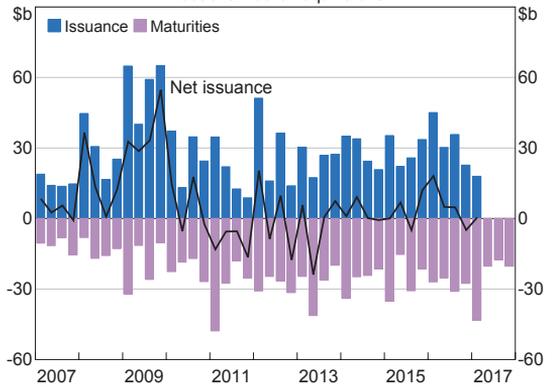
\* Average of 1-12, 24-, 36- and 60-month terms  
\*\* Excludes temporary bonus rates  
\*\*\* Deposits over \$250 000  
Sources: Canstar; RBA

sources such as wholesale funding and bonus saver accounts. Through 2016, banks increased the relative interest rates on term deposits; in particular some longer-maturity term deposit interest rates were raised in August. Some of these increases to term deposit rates have been subsequently reversed.

Bond issuance by Australian banks in 2016 reached its highest level since 2010. After accounting for maturities, the stock of bank bonds increased by \$23 billion over 2016 to

\$517 billion (Graph 4.9). Banks continued to issue bonds predominately in offshore markets and the average tenor of new issuance increased to 5½ years over 2016. There has also been substantial issuance in early 2017, as a number of the major banks issued sizeable deals ahead of relatively large maturities this quarter.

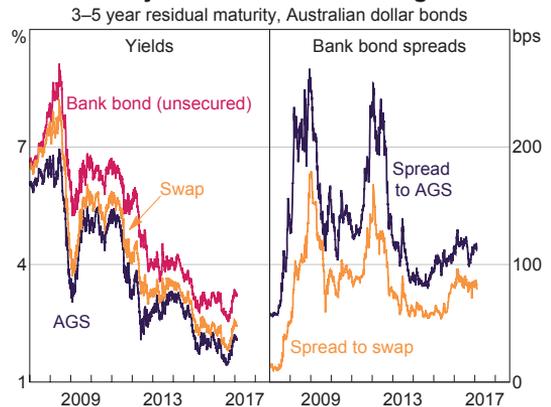
**Graph 4.9**  
**Australian Banks' Bond Issuance\***  
Australian dollar equivalent



\* Latest quarter issuance to date  
Source: RBA

Secondary market yields on major banks' bonds have increased over recent months, alongside the rise in bond yields globally (Graph 4.10). Bank bond spreads to benchmark rates have increased a little, but remain around the levels experienced in 2016.

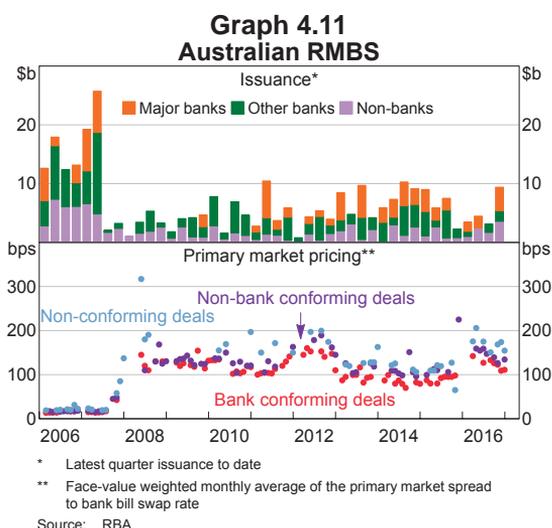
**Graph 4.10**  
**Major Banks' Bond Pricing**  
3–5 year residual maturity, Australian dollar bonds



Sources: Bloomberg; UBS AG, Australia Branch

Australian banks issued a record volume of hybrid securities in 2016 with a total of \$17 billion raised, ahead of large maturities. Issuance was split evenly between domestic and offshore markets, and included the first offshore Tier 1 issuance by a major bank since 2009. Primary issuance spreads on hybrid securities narrowed over 2016 after widening earlier in the year.

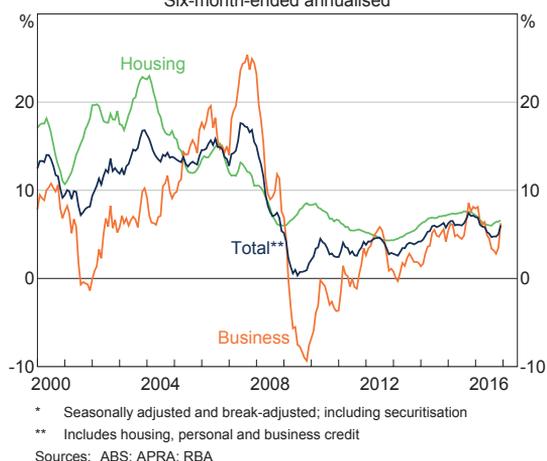
Australian asset-backed issuance was around average in 2016 at \$28 billion. As in previous years, this was dominated by issuance of residential mortgage-backed securities (RMBS) (Graph 4.11). The pace of RMBS issuance increased strongly in the December quarter, with \$9 billion raised.



## Financial Aggregates

Total credit growth has picked up in recent months after slowing in the first half of 2016, but remains slower than the pace seen in 2015 (Graph 4.12). The slowdown and recovery in credit growth has been mainly driven by business credit (Table 4.1). Broad money has grown a little faster than total credit over the past year.

**Graph 4.12  
Credit Growth by Sector\***  
Six-month-ended annualised



**Table 4.1: Financial Aggregates**  
Percentage change<sup>(a)</sup>

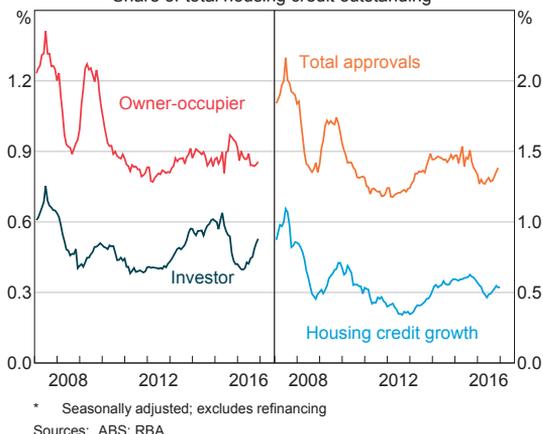
	Three-month ended		Year-ended
	Sep 2016	Dec 2016	Dec 2016
Total credit	1.2	1.7	5.6
– Housing	1.6	1.6	6.3
– Owner-occupier	1.6	1.3	6.4
– Investor	1.6	2.2	6.2
– Personal	–0.4	–0.2	–1.3
– Business	0.8	2.3	5.6
Broad money	1.3	2.2	6.8

(a) Growth rates are break-adjusted and seasonally adjusted  
Sources: APRA; RBA

## Household Financing

Housing credit growth increased a little in recent months to an annualised rate of around 6½ per cent, but remains below the pace seen in 2015. The pick-up in housing credit growth reflected faster growth in credit extended to investors more than offsetting slower growth in owner-occupier credit, and has been consistent with trends in housing loan approvals (Graph 4.13).

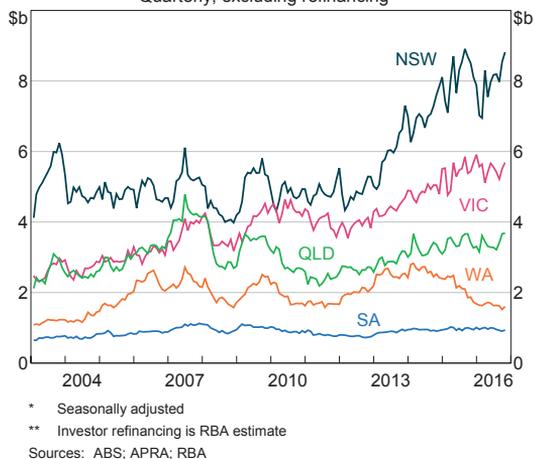
**Graph 4.13**  
Housing Loan Approvals and Credit\*  
Share of total housing credit outstanding



The recent strength in housing loan approvals was concentrated in New South Wales and Victoria, while conditions remain weak in Western Australia (Graph 4.14). The recent increase in overall housing loan approvals is consistent with a pick-up in housing price growth and turnover. Average loan-to-valuation ratios are continuing to decline, reflecting the effects of tighter lending standards that were in part prompted by the measures introduced earlier by APRA.

A significant portion of the increase in investor credit growth is also likely to reflect the extension of credit to investors settling the payment of newly completed apartments that were purchased off the plan at an earlier time. The

**Graph 4.14**  
Housing Loan Approvals by State\*  
Quarterly, excluding refinancing\*\*



pick-up in investor credit growth also follows reductions in interest rates through the middle of 2016.

Since November, most lenders have increased fixed and some variable housing interest rates, especially for investors or borrowers with interest-only loans. Three of the four major banks have increased their standard variable rates for investor loans by 7–15 basis points but have left owner-occupier rates unchanged. Two major banks also announced increases in interest rates for interest-only loans. Other lenders have increased variable lending rates to both owner-occupiers and investors by 10–15 basis points. Some lenders have indicated that they have implemented these changes in response to higher funding costs and to meet regulatory requirements, such as APRA's guidance for a maximum growth rate on investor credit of 10 per cent. Overall, these interest rate increases are estimated to have boosted the average outstanding housing interest rate by less than 5 basis points (see Table 4.2).

In addition to increasing the differential between advertised interest rates for new owner-occupier and investor loans, many lenders appear to have

**Table 4.2: Intermediaries' Fixed and Variable Lending Rates**

	Interest rate Per cent	Change since November 2016 Basis points	Change since April 2016 Basis points
<b>Housing loans</b>			
– Standard variable rate <sup>(a)(d)</sup>			
– Owner-occupier	5.26	0	–36
– Investor	5.56	6	–30
– Package variable rate <sup>(b)(d)</sup>			
– Owner-occupier	4.51	0	–31
– Investor	4.81	6	–25
– Fixed rate <sup>(c)(d)</sup>			
– Owner-occupier	4.26	15	–17
– Investor	4.46	21	–20
– Average outstanding rate <sup>(d)</sup>	4.52	2	–31
<b>Personal loans</b>			
– Variable rate <sup>(e)</sup>	11.56	17	20
<b>Small business</b>			
– Term loans variable rate <sup>(f)</sup>	6.39	0	–36
– Overdraft variable rate <sup>(f)</sup>	7.27	0	–36
– Fixed rate <sup>(c)(f)</sup>	5.34	4	–8
– Average outstanding rate <sup>(d)</sup>	5.34	0	–35
<b>Large business</b>			
Average outstanding rate <sup>(d)</sup>	3.50	1	–41

(a) Average of the major banks' standard variable rates

(b) Average of the major banks' discounted package rates on new \$250 000 full-doc loans

(c) Average of the major banks' 3-year fixed rates

(d) RBA estimates

(e) Weighted average of variable rate products

(f) Residentially secured, average of the major banks' advertised rates

Sources: ABS; APRA; Canstar; RBA

reduced the discretionary discounts available to new borrowers.

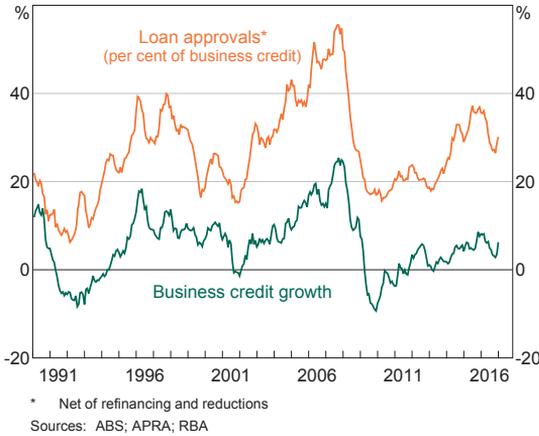
## Business Financing

Business credit growth has picked up recently after slowing over the first half of 2016. This is consistent with business loan approvals, which have grown strongly in recent months, partly due to the financing of some large infrastructure privatisations (Graph 4.15). Consistent with this, the recovery in business credit growth has been

driven by credit extended to large businesses, while credit extended to smaller businesses has continued to grow at a moderate pace.

Across industries, business credit growth to the transport and storage and utilities industries has picked up, consistent with those few large infrastructure privatisation deals. Lending for residential property development also remains strong. Outside of this, lending remains mixed, partly reflecting decisions by some lenders to reduce credit exposures to businesses in selected

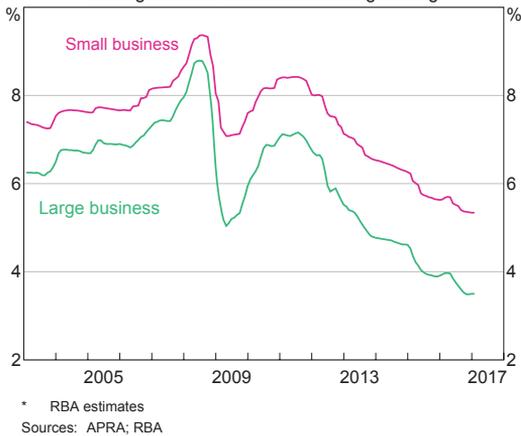
**Graph 4.15**  
**Business Loan Approvals and Credit**  
 Six-month annualised



industries, such as mining and manufacturing. Consistent with the announced intentions of some major banks to improve the profitability of their business lending, the implied spread on major banks' business lending stabilised in 2016, having fallen over the previous few years.

The interest rates on outstanding small and large business borrowing are estimated to have been little changed over the past few months (Graph 4.16). For large business, interest rates on new fixed-rate loans have increased recently,

**Graph 4.16**  
**Business Lending Rates\***  
 Average interest rate on outstanding lending



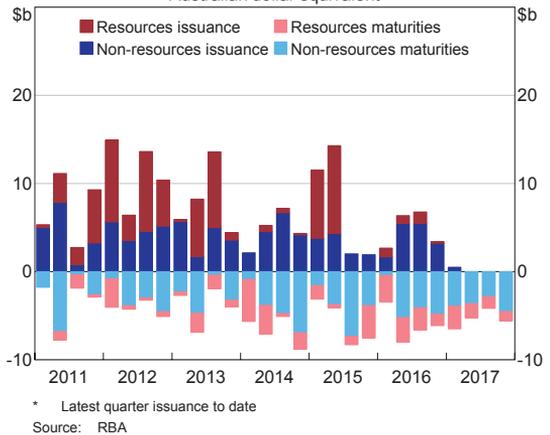
although rates on new loans continue to be lower than average outstanding rates.

In contrast to the stronger growth in business credit, wholesale debt issuance and cross-border syndicated lending have been relatively subdued. Bond issuance by Australian non-financial corporations in 2016 totalled \$20 billion, well below 2015 levels (Graph 4.17). The stock of non-financial corporate bonds declined, reflecting limited issuance by resource-related corporations and also sizeable maturities for non-resource corporations. Secondary market pricing of Australian corporate bonds has increased in recent months alongside higher global bond yields, although yields and spreads to AGS remain relatively low (Graph 4.18).

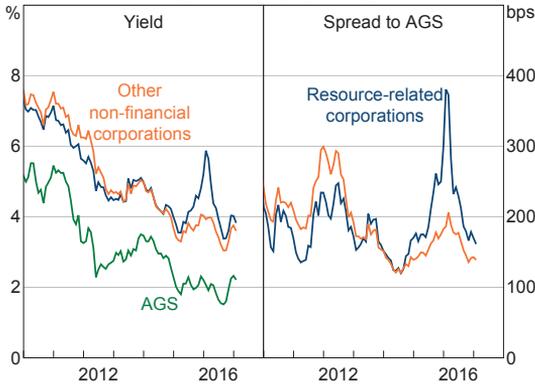
Non-financial corporations raised \$23 billion in net equity in 2016, which was broadly in line with recent years. Activity picked up in the second half of the year following a few sizeable transactions to fund acquisitions.

Listed companies announced \$62 billion of merger and acquisitions (M&A) in 2016. Activity was concentrated in the consumer discretionary, utilities and industrials sectors. There was a large

**Graph 4.17**  
**Australian Corporate Bond Issuance\***  
 Australian dollar equivalent



**Graph 4.18**  
**Australian Corporate Bond Pricing**  
Investment grade bonds, 5-year target tenor



Sources: Bloomberg; RBA; S&P Capital IQ

pick-up in M&A activity in the December quarter including the \$7 billion acquisition of DUET Group by Cheung Kong Infrastructure and the \$6 billion merger of Tatts Group and Tabcorp.

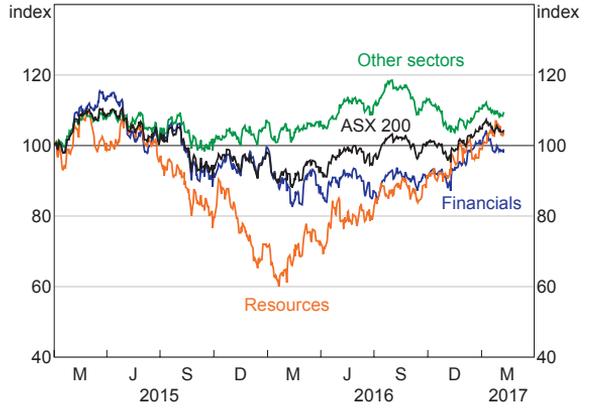
## Equity Markets

The Australian equity market largely followed the swings in global investor sentiment over 2016 and is little changed since the start of the year (Graph 4.19). Resources sector prices increased by around 40 per cent over 2016, largely in response to higher commodity prices. As a result, the Australian market generally outperformed other developed equity markets globally.

The rise in resource share prices was driven by the materials sector, following an 80 per cent increase in the iron ore price (Graph 4.20). Also supporting the sector was continued cost cutting and a reduction in capital expenditure, particularly by the major diversified miners. Increases in energy sector share prices were more modest. Resource share prices have increased further in early 2017.

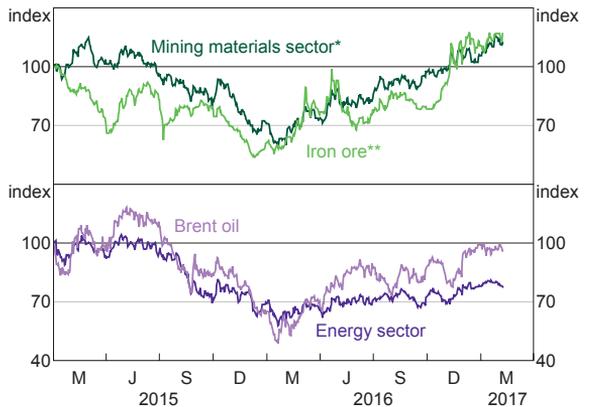
Financial sector share prices underperformed the broader market throughout 2016 and traded in a wide range. Banking share prices declined throughout most of the year alongside a slowing

**Graph 4.19**  
**Australian Share Prices**



Source: Bloomberg

**Graph 4.20**  
**Resources Share Prices and Commodity Prices**



\* Derived from resources sector share prices

\*\* Qingdao import iron ore spot price

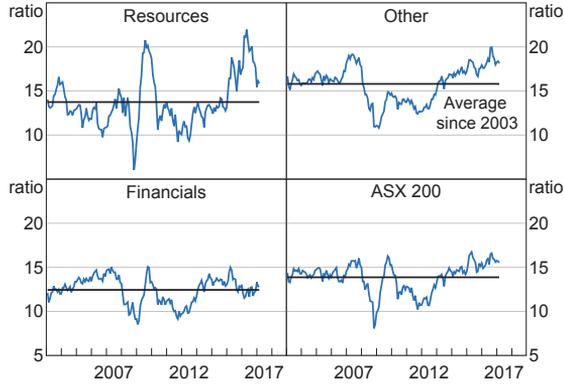
Sources: Bloomberg; RBA

in profit growth and falls in global banking stocks. Bank share prices rebounded towards the end of 2016 following global developments (see 'International and Foreign Exchange Markets' chapter).

Equity prices for companies outside the financial and resources sectors rose slightly over 2016. The utilities, real estate and industrials sectors outperformed while the telecommunications and healthcare sectors underperformed the market.

Analysts' earnings expectations for coming years were revised higher in the December quarter. Resources sector earnings expectations increased sharply from low levels, alongside the recovery in commodity prices. At the same time, resources sector valuations (measured by forward price-earnings ratios) have converged back towards their long-term average (Graph 4.21). ↘

**Graph 4.21**  
**ASX 200 Price-earnings Ratios**  
 12-month-ahead earnings forecasts



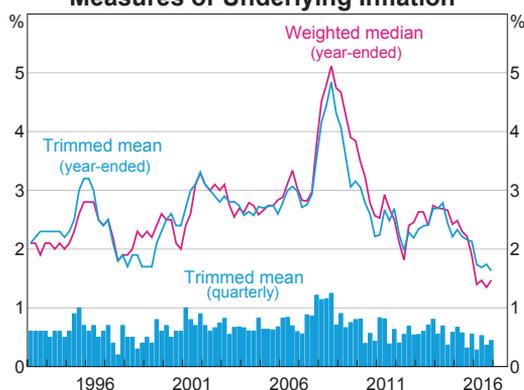
Source: Thomson Reuters

# 5. Inflation

Inflation was low in the December quarter but shows signs of having stabilised. The low inflation outcomes over the past year reflect weak labour cost growth, low inflation expectations, heightened competitive pressures in some product markets and low rent inflation due to the increases in the stock of housing. The earlier large depreciation of the exchange rate is no longer estimated to be putting upward pressure on tradable prices.

Measures of underlying inflation were around ½ per cent in the December quarter and around 1½ per cent over the year, in line with the forecasts in the November *Statement* (Graph 5.1; Table 5.1). Headline inflation was 1.5 per cent over the year (Graph 5.2). Higher tobacco prices contributed 0.4 percentage points to headline inflation over the year; scheduled further increases in the tobacco excise are expected to contribute significantly to headline inflation over the next four years. After subtracting from

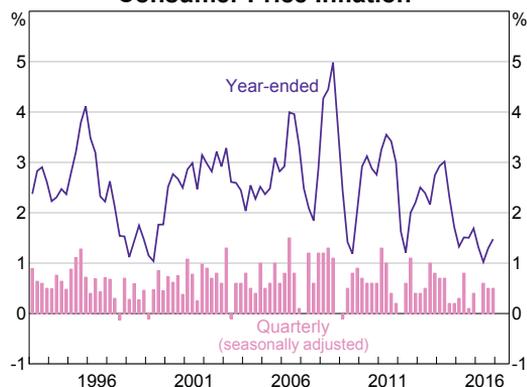
**Graph 5.1**  
**Measures of Underlying Inflation\***



\* Excludes interest charges prior to the September quarter 1998; adjusted for the tax changes of 1999–2000

Sources: ABS; RBA

**Graph 5.2**  
**Consumer Price Inflation\***



\* Excludes interest charges prior to the September quarter 1998; adjusted for the tax changes of 1999–2000

Sources: ABS; RBA

headline inflation over much of the previous few years, fuel prices rose in the quarter.

Prices for tradable items (excluding volatiles) declined in the quarter and over the year (Graph 5.3). Prices have declined for consumer durables over most of the past seven years, reflecting discounting in response to competitive pressures as established firms and new entrants (including international retailers) look to gain market share. The effect of heightened competitive pressures on inflation is expected to wane over time, although the point at which this will occur is uncertain.

Non-tradable inflation (excluding tobacco) increased a little in the December quarter, but remains below 2 per cent over the year.<sup>1</sup> It

<sup>1</sup> Following an ABS review of the international trade exposure of CPI components, the December quarter 2016 CPI release contained a reclassification of a number of expenditure classes between tradables and non-tradables. The most notable was the reclassification of tobacco from tradable to non-tradable.

**Table 5.1: Measures of Consumer Price Inflation**  
Per cent

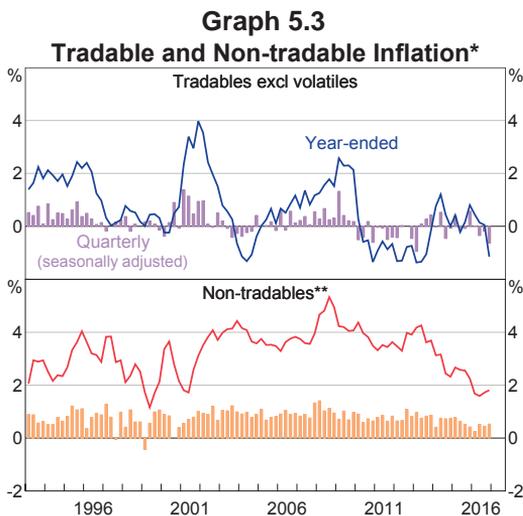
	Quarterly <sup>(a)</sup>		Year-ended <sup>(b)</sup>	
	December quarter 2016	September quarter 2016	December quarter 2016	September quarter 2016
Consumer Price Index	0.5	0.7	1.5	1.3
Seasonally adjusted CPI	0.5	0.5		
– Tradables	0.0	0.5	0.1	0.7
– Tradables (excl volatile items) <sup>(c)</sup>	-0.6	0.2	-0.5	1.4
– Non-tradables	0.8	0.4	2.1	1.7
<i>Selected underlying measures</i>				
Trimmed mean	0.4	0.4	1.6	1.7
Weighted median	0.4	0.4	1.5	1.3
CPI excl volatile items <sup>(c)</sup>	0.3	0.3	1.3	1.7

(a) Except for the headline CPI, quarterly changes are based on seasonally adjusted data; those not published by the ABS are calculated by the RBA using seasonal factors published by the ABS

(b) Year-ended changes are based on non-seasonally adjusted data, except for the trimmed mean and weighted median

(c) Volatile items are fruit, vegetables and automotive fuel

Sources: ABS; RBA



\* Excludes tobacco; adjusted for the tax changes of 1999–2000

\*\* Excludes interest charges and deposit & loan facilities

Sources: ABS; RBA

continues to be weighed down by low domestic cost pressures and downward pressure on rent growth from the increase in housing stock.

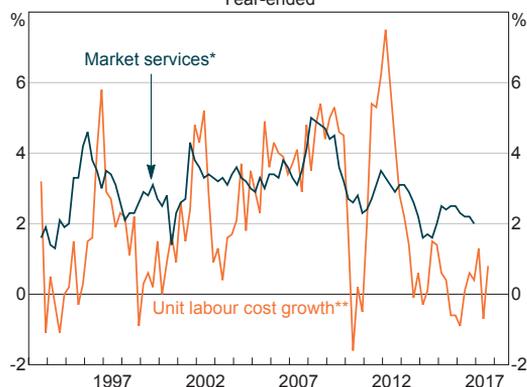
Labour costs are an important determinant of non-tradable inflation. Wage growth is low and slowed a little further in the September quarter

(see ‘Domestic Economic Conditions’ chapter).

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. Because labour costs account for around half of total costs in market services, inflation in this component has also declined. Since 2014, technology-driven price declines for telecommunications equipment & services have also subtracted noticeably from market services inflation. Even excluding telecommunications equipment & services, market services inflation is low compared with its history (Graph 5.4).

Rent inflation declined a little further in the quarter, and in year-ended terms is around levels last seen in the mid 1990s. The increase in supply of new housing is putting downward pressure on rents. In Perth rents have declined by more than 7 per cent over the year; the significant slowing in population growth in Western Australia is

**Graph 5.4**  
**Market Services Inflation**  
Year-ended



\* Excludes telecommunications equipment & services, domestic travel, housing services, interest charges and deposit & loan facilities; adjusted for the tax changes of 1999–2000

\*\* Non-farm; moved forward by four quarters

Sources: ABS; RBA

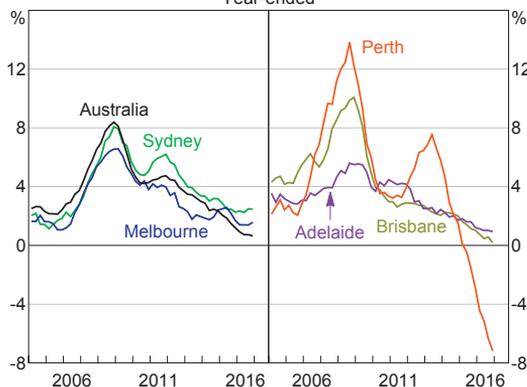
likely to be adding to this dynamic (Graph 5.5). In contrast, rental growth in Sydney and Melbourne remains subdued but positive and vacancy rates have been steady around their long-run averages for some time. Further increases in housing supply across the country over coming years are expected to result in a protracted period of low rent inflation, though areas where population growth is stronger are likely to be less affected.

New dwelling cost inflation – currently measured by the cost of construction for a new detached

house – has stabilised although there is considerable variation across cities (Graph 5.6). Over 2016 it was above 3 per cent in Sydney and Melbourne, where construction activity of detached houses has been relatively solid, while new dwelling costs continue to decline in Perth, where economic conditions are weak. The Australian Bureau of Statistics (ABS) announced that it will include costs for apartments and semi-detached dwellings in the new dwelling cost series from the March quarter 2017. In recent years, the cost of building these dwellings has grown more slowly than for detached houses. This could reflect a range of factors including larger productivity improvements and spare capacity in the commercial real estate market, which uses similar materials and labour inputs to apartments.<sup>2</sup> The large pipeline of construction of apartments relative to detached houses may result in different price dynamics in the future.

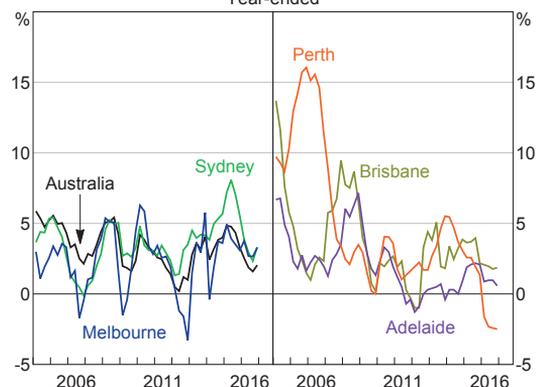
Few regulatory decisions are made in the December quarter, and accordingly non-seasonally adjusted prices for most administered items were unchanged. An exception was urban transport fares, which

**Graph 5.5**  
**Rent Inflation**  
Year-ended



Sources: ABS; RBA

**Graph 5.6**  
**New Dwelling Cost Inflation**  
Year-ended



Sources: ABS; RBA

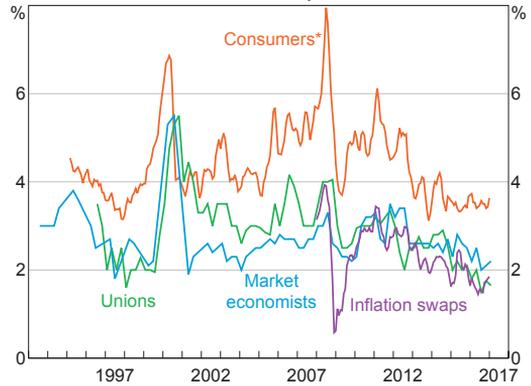
<sup>2</sup> See Shoory, M (2016): 'The Growth of Apartment Construction in Australia', *RBA Bulletin*, June, pp 19–26.

rose noticeably in Sydney. In year-ended terms, inflation in administered items excluding utilities stabilised. Utilities inflation has picked up over the past year but remains well below the high levels seen a few years ago.

Measures of inflation expectations remain low, consistent with recent outcomes for CPI inflation. The recent trend in short-term inflation expectations is mixed across the different measures (Graph 5.7). Consumers' and market economists' short-term inflation expectations have been little changed over the past year. Unions' expectations are lower than one year ago, while one-year inflation swaps have risen to their highest level in a year.

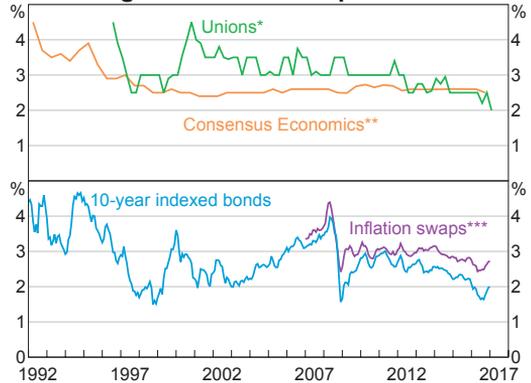
Long-term survey-based measures of inflation expectations remain around the inflation target (Graph 5.8). As is the case in a number of other advanced economies, measures of financial market inflation expectations have recently increased. The 10-year indexed bond measure and the five-to-ten year inflation swap measure are around levels from a year ago. These measures can be affected by factors other than changes in investors' perceptions of expected future inflation, such as changes in the premium that investors demand to bear inflation risk.<sup>3</sup> ❖

**Graph 5.7**  
**Short-term Inflation Expectations**  
Over the next year



\* Three-month moving average; trimmed mean of survey responses  
Sources: Australian Council of Trade Unions; Bloomberg; Melbourne Institute of Applied Economic and Social Research; RBA; Workplace Research Centre

**Graph 5.8**  
**Long-term Inflation Expectations**



\* Average over the next five to ten years  
\*\* Average over six to ten years in the future  
\*\*\* Five-to-ten-year forward

Sources: Australian Council of Trade Unions; Bloomberg; Consensus Economics; RBA; Workplace Research Centre; Yieldbroker

<sup>3</sup> For more detail, see Moore A (2016): 'Measures of Inflation Expectations in Australia', RBA *Bulletin*, December, pp 23–31.

# 6. Economic Outlook

## The International Economy

Growth of Australia's major trading partners in 2016 was higher than forecast. Growth forecasts for 2017 and 2018 have been revised a little higher (Graph 6.1). These upward revisions reflect the recent better data and incorporate the prospect of more stimulatory fiscal policy in the United States. Major trading partner growth is now forecast to be little changed in 2017 and to ease only slightly in 2018. Near-term growth in China is expected to be supported by the authorities' actions in the lead-up to the 19th National Congress of the Chinese Communist Party in the second half of 2017. Further out in the forecast period, growth in China is expected to slow and more than offset stronger growth in the advanced economies. Growth in the east Asian economies (other than China and Japan) is expected to pick up to be around potential as external demand conditions

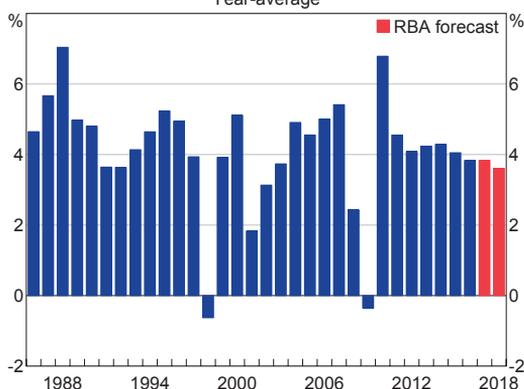
recover and accommodative monetary and fiscal policies provide support.

GDP growth in the major advanced economies is likely to remain above potential over the next couple of years because monetary policies are expected to remain accommodative and US fiscal policy is expected to become expansionary. Potential growth rates in these economies are lower than their long-term average growth rates due to lower growth in the working-age population, capital stock and productivity. In some cases, lower growth in the capital stock and productivity reflect the lingering effects of the global financial crisis on investment.

While considerable uncertainty remains about the economic policies of the new US administration, reductions in personal and corporate taxes are likely. These fiscal policy changes could be expected to boost growth in the United States at a time when there is limited spare capacity in the US labour market. This is expected to increase inflationary pressures and could have spillovers to higher growth and inflation in other economies. However, there is a rising risk that more restrictive and protectionist trade and immigration policies under the new administration could harm global growth prospects.

The increase in the prices of oil and other commodities in 2016 has contributed to a pick-up in global headline inflation. Although wage pressures have generally remained subdued so far, they are expected to pick up as spare capacity in labour and product markets continues to decline in the major advanced economies. The amount of spare capacity in

**Graph 6.1**  
**Australia's Trading Partner Growth\***  
Year-average



\* Aggregated using total export shares

Sources: ABS; CEIC Data; RBA; Thomson Reuters

these economies is a source of uncertainty. For example, inflation could rise more quickly than currently forecast and could lead to tighter monetary policy in some advanced economies and a depreciation of the Australian dollar.

Higher commodity prices also boosted Australia's terms of trade in the December quarter (Graph 6.2). Higher prices for bulk commodities and base metals have reflected a range of factors including domestic supply disruptions, higher-than-expected Chinese steel production and cuts to the production of bulk commodities in China. More recently, spot prices of coking and thermal coal have declined. The terms of trade are expected to decline gradually over 2017, but are expected to remain above their recent trough and be higher than previously forecast.

**Graph 6.2**  
**Terms of Trade**

2014/15 average = 100, log scale



Sources: ABS; RBA

## Domestic Activity

The domestic forecasts are conditioned on a number of technical assumptions. The cash rate is assumed to move broadly in line with market pricing. This assumption does not represent a commitment by the Reserve Bank Board to any particular path for policy. The exchange rate is assumed to remain at its current level over the

forecast period (trade-weighted index (TWI) at 66 and A\$1=US\$0.76). The TWI is 2 per cent higher than the assumption underlying the forecasts in the November *Statement*.

The forecasts are also based on the price of Brent crude oil being US\$56 per barrel over the forecast period, which is 13 per cent higher than the assumption used in November and in line with futures pricing in the near term. The population aged over 15 years is still assumed to grow by 1.5 per cent over 2016/17 and by 1.6 per cent over 2017/18 and 2018/19, drawing on forecasts from the Department of Immigration and Border Protection.

As a starting point for the forecasts, GDP fell in the September quarter, which led to a marked decline in year-ended growth of the Australian economy. Some of the factors weighing on reported GDP growth in the September quarter were temporary and have not materially affected the outlook for growth. In contrast, non-mining business investment has been fairly subdued for some time and household consumption lost some momentum in mid 2016, consistent with low growth in household income.

Overall, the forecasts for year-ended GDP growth are lower over the next three quarters than those presented in the November *Statement*, almost entirely due to the base effect of the weak September quarter (Table 6.1). The profile for consumption growth has been revised a little lower over the forecast period reflecting a view that consumption growth is unlikely to run materially ahead of household income growth over this period. This implies that the saving ratio will be relatively stable, rather than continuing to decline, as previously assumed. The effect of the adjustment of the consumption growth profile on aggregate GDP growth is partly mitigated by an offsetting, and related, downward adjustment to the forecasts for import growth. Overall,

**Table 6.1: Output Growth and Inflation Forecasts<sup>(a)</sup>**  
Per cent

	Year-ended					
	Dec 2016	Jun 2017	Dec 2017	Jun 2018	Dec 2018	Jun 2019
GDP growth	2	1½–2½	2½–3½	2½–3½	2¾–3¾	2¾–3¾
Unemployment rate <sup>(b)</sup>	5.8	5¾	5–6	5–6	5–6	5–6
CPI inflation	1.5	2	1½–2½	1½–2½	1½–2½	2–3
Underlying inflation	1.6	1¾	1½–2½	1½–2½	1½–2½	2–3
	Year-average					
	2016	2016/17	2017	2017/18	2018	2018/19
GDP growth	2¼	1½–2½	2–3	2½–3½	2½–3½	2¾–3¾

(a) Technical assumptions include A\$ at US\$0.76, TWI at 66 and Brent crude oil price at US\$56 per barrel; shaded regions are historical data

(b) Rate at end of period

Sources: ABS; RBA

year-ended GDP growth is forecast to pick up as the drag from mining investment and effects from the earlier fall in the terms of trade dissipate. GDP growth is forecast to increase to 2½–3½ per cent in late 2017, and to be above potential for most of the forecast period.

Some of the factors that led to the slowing of non-mining activity over the year to September were temporary. For instance, the fall in residential construction activity in the September quarter reflected bad weather. The large pipeline of work yet to be done, particularly in apartment building, is still expected to support further growth in dwelling investment over 2017. Public demand also declined in the September quarter, but this series is volatile. Public demand is expected to grow solidly over the forecast period, consistent with state and federal government budgets, which together imply ongoing growth in public investment.

Household consumption growth lost some momentum in mid 2016. This slowdown brings year-ended growth more into line with the subdued growth in household disposable income and suggests that households have become less willing to reduce their rate of saving to support consumption, despite low

interest rates and increases in household wealth. Given the stronger tone of more recent indicators, consumption growth is expected to be a little stronger than in mid 2016 over the forecast period.

Non-mining business investment has been weak for some time, despite the support provided by low interest rates and the earlier depreciation of the exchange rate. The outlook for non-mining business investment is relatively subdued in the near term, consistent with the Australian Bureau of Statistics (ABS) capital expenditure survey of firms' investment intentions and the recent downturn in non-residential building work yet to be done. Non-mining business investment is still expected to pick up later in the forecast period and there are a number of positive indicators that support this projection. Non-residential building approvals increased over 2016 and non-mining business investment has been growing in New South Wales and Victoria, which have been less affected by the end of the mining investment boom. Moreover, survey measures of capacity utilisation have been increasing over the past couple of years and are currently above their long-term averages.

Much of the weakness in mining activity in the September quarter was the result of temporary factors and mining activity is expected to contribute to growth over the forecast period. The fall in resource exports in the September quarter was partly the result of temporary disruptions to coking coal production. In the medium term, the assessment of the production capacity of the resource sector is little changed and therefore the forecasts for the volume of exports are also little changed. Liquefied natural gas (LNG) exports are expected to continue growing strongly for some time. More broadly, exports of Australian goods and services in aggregate are forecast to continue growing at a solid pace.

Recent high prices for bulk commodities are not expected to lead to a material increase in production capacity, partly because prices are expected to decline over the forecast period. Mining investment is still expected to fall further over the forecast period, as large resource-related projects are completed and few new projects are expected to commence. However, the largest subtraction of mining investment (net of imports) from GDP growth has already occurred. Lower GDP growth in mid 2016 is consistent with the loss in momentum in the labour market outcomes observed over 2016. Leading indicators such as job advertisements and job vacancies point to some pick-up in employment growth over the first half of 2017. Employment growth is then expected to remain broadly steady over the next couple of years, which is slightly lower than forecast at the time of the November *Statement*. This forecast takes into account the expectation that LNG production, which is less labour intensive than the investment phase of the mining boom, will make a contribution of around ½ percentage point to year-ended GDP growth over each of the next few years. The unemployment rate is expected to

edge lower over the forecast period, suggesting only a modest reduction in the degree of spare capacity in the labour market from current levels. The participation rate, which is influenced by both structural and cyclical factors, is assumed to remain around its current level.

There has been a small downward revision to the forecasts for various measures of wage and household income growth over the next few quarters following the slightly weaker-than-expected outcomes for wage growth in the September quarter. As a result, the pick-up in wage growth has been pushed out a little and is consistent with information from liaison that firms expect little change in wage growth over the next year. The forecast gradual recovery in wage growth from late 2017 assumes that some of the factors that have been weighing on wages will gradually dissipate. For example, the significant decline in wage growth in resource-rich states and mining-related industries is expected to fade as the economy rebalances towards other activities. Firms' and employees' near-term inflation expectations are not expected to fall any further. However, ongoing spare capacity in the labour market is expected to limit the recovery in wage growth.

## Inflation

The December quarter underlying inflation outcome was broadly in line with expectations. As a result, there has been very little change to the outlook for inflation since the November *Statement*. Measures of underlying inflation are forecast to pick up gradually, to be around 1½–2½ per cent by the end of 2017 and 2–3 per cent by the end of the forecast period. Headline inflation is expected to increase to around 2 per cent in early 2017, reflecting higher oil and tobacco prices. Headline inflation is then expected to be 2–3 per cent by the end of the forecast period.

As noted above, measures of labour costs are expected to pick up gradually over the next few years. Productivity is expected to grow more slowly than average earnings, although there is uncertainty around this, and unit labour costs are expected to rise gradually, having been flat for a number of years. This is expected to feed through to non-tradables inflation, which appears to have stabilised recently. Excess capacity in the economy is expected to diminish somewhat as low interest rates continue to support activity in the non-mining sector. However, it is likely that spare capacity in the labour market will continue to weigh on wage and inflationary pressures over the coming years.

At the component level, there are a number of competing influences. Higher commodity prices, in particular for oil, are expected to contribute to inflationary pressures in the period ahead, and the legislated rise in the tobacco excise is expected to add to headline inflation in 2017 and 2018. The disinflationary effects on final retail prices from heightened retail competition and low wage pressures are expected to dissipate slowly, although there is uncertainty about the size and timing of these effects. Large additions to housing supply are expected to keep rent inflation low over the next few years.

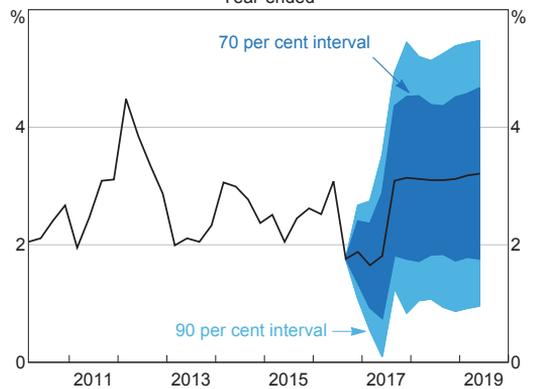
### Key Uncertainties

The forecasts are based on a range of assumptions about the evolution of some variables, such as the exchange rate and the cash rate, and judgements about how developments in one part of the economy will affect others. One way of demonstrating the uncertainty surrounding the central forecasts is to present confidence intervals based on historical forecast errors (Graph 6.3; Graph 6.4; Graph 6.5).

It is also worth considering the consequences that different assumptions and judgements

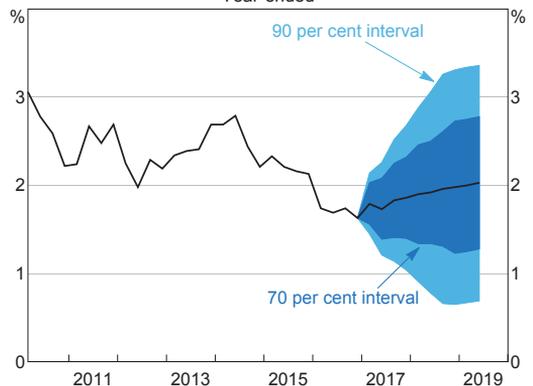
might have for the forecasts and the possibility of events occurring that are not part of the central forecast. As has been the case for some time, a range of geopolitical and global financial stability risks could affect global growth and financial market prices, should they materialise. Recent policy announcements by the new US administration illustrate some of the uncertainties that have not been incorporated into the central forecasts for global growth. The outlook for the Chinese economy also remains a key source of uncertainty for the

**Graph 6.3**  
**GDP Growth Forecast\***  
Year-ended



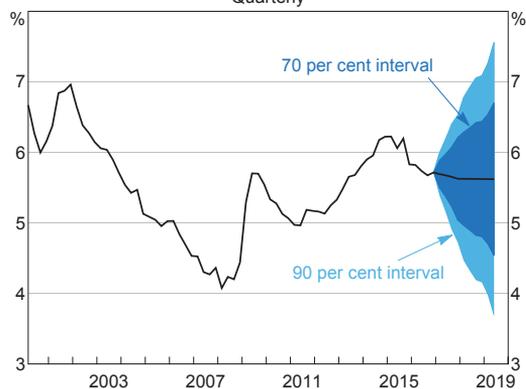
\* Confidence intervals reflect RBA forecast errors since 1993  
Sources: ABS; RBA

**Graph 6.4**  
**Trimmed Mean Inflation Forecast\***  
Year-ended



\* Confidence intervals reflect RBA forecast errors since 1993  
Sources: ABS; RBA

**Graph 6.5**  
**Unemployment Rate Forecast\***  
 Quarterly



\* Confidence intervals reflect RBA forecast errors since 1993  
 Sources: ABS; RBA

outlook for global growth and commodity prices. Domestically, there are various sources of uncertainty that present risks to the outlook for activity and inflation. There is uncertainty about the current momentum in the labour market and how this will translate into growth in wages, household income and consumption. There is also uncertainty about how quickly domestic cost pressures might build and feed into higher inflation.

### The Chinese economy

Recent data indicate that Chinese growth has been supported by significant policy stimulus and this has led to a stronger outlook for the Chinese economy in the near term. One sector of the economy where policy has had a particularly noticeable impact is the housing market. Stronger-than-expected activity in the housing market has supported demand for steel, and the near-term forecasts for iron ore and coking coal prices are predicated on a profile for Chinese steel production that is higher than previously anticipated. Steel production is still forecast to decline gradually because the Chinese authorities have introduced a range of measures that are expected to dampen residential

investment; there are already signs that these measures are having an effect on housing market activity in some cities.

There are a number of other downside risks to the outlook for Chinese growth and commodity demand. The recent policy stimulus has added to already high levels of debt. Combined with significant excess capacity in some sectors, this increases the potential for financial dislocation and economic disruption in the future. The authorities' desire to contain capital outflows and stabilise the renminbi exchange rate could require tempering the degree of monetary accommodation, which could also lead to lower growth in the future.

### Commodity prices, Australia's terms of trade and global inflation

The recent strength in commodity prices has contributed to some increase in global inflationary pressures and raised the outlook for Australia's terms of trade. There is considerable uncertainty about how demand- and supply-side factors will affect commodity prices over the forecast period. On the demand side, there is uncertainty about the impact housing market policies in China will have on the demand for steel. On the supply side of commodity markets, it is not clear whether the Chinese authorities will continue to enforce policies that have contributed to lower Chinese production of iron ore and coal, particularly given the elevated levels of bulk commodity prices.

Higher commodity prices, particularly for oil, the prospect of expansionary US fiscal policy and above-average growth in unit labour costs in some major advanced economies are likely to contribute further to global inflation pressures, with potential flow-on effects to Australian prices. Higher global inflation could also affect the path of foreign central bank monetary

policies. This, in turn, could affect financial market prices, particularly exchange rates, which are assumed to be constant in the forecasts. Higher commodity prices and a tightening of monetary policy in major advanced economies have an uncertain net effect on the Australian dollar exchange rate.

The effects of the higher terms of trade on the domestic economy and inflation are uncertain and will depend on how long commodity prices remain elevated and how the revenue from higher export sales is distributed. The forecasts assume the current strength in commodity prices will be largely unwound. As such, the higher terms of trade are not expected to lead to a material change in mining investment, wages or household consumption. However, the current strength in the terms of trade has already been larger and more persistent than had been anticipated and is expected to provide a significant boost to national income over the forecast period. Although it is difficult to pinpoint how this will flow through, it constitutes an upside risk to domestic demand growth and inflation.

### Momentum in the labour market

Domestic activity is forecast to grow at a pace that implies only a modest reduction in the unemployment rate over the next few years, particularly after taking into account the low labour intensity of LNG production. In the near term, leading labour market indicators point to a small increase in the pace of labour demand growth. Further reductions in the unemployment rate could occur if upside risks to growth in the Australian economy are realised, particularly if the recent increase in the terms of trade has a greater flow-on effect to economic activity than currently expected or if LNG-related activity is more labour intensive than expected. However, it is possible that some of the expected increase in labour demand could be accommodated

by providing part-time workers with additional hours rather than hiring new workers (that is, increasing total hours without a reduction in the unemployment rate).

The forecasts for employment and unemployment over the next few years also imply a fairly steady participation rate, but there is uncertainty around the cyclical and structural factors driving this. The downward trend in the participation rate over the past year or so has been driven by lower participation in resource-rich states and by younger people. It is possible that as the adjustment to the end of the mining investment boom is completed, the expected improvement in labour demand could be met by people rejoining the labour force, in which case the unemployment rate could rise. The usual uncertainty around the projections for net migration to Australia continue to have important implications for labour supply and hence potential output estimates, as well as the outlook for consumption growth, residential construction and rents.

### Consumption, saving and housing

Household consumption growth has been supported by low interest rates and gains in household wealth. Income growth has been more subdued, however, and the household saving ratio has declined over recent years. Although it seems unlikely that wage (and thus household income) growth will slow further, there has yet to be clear evidence that wage pressures are increasing. The forecast for consumption growth has been adjusted lower and implies a stable saving ratio over the forecast period, rather than declining, as previously assumed. The risks around the forecasts are now more balanced but there is significant uncertainty about households' consumption and saving decisions.

Households' views about the outlook for the growth of their income and wealth are relevant for the consumption growth forecast, as are any liquidity or credit constraints that households might face and their expectations about interest rates. If households believe that their prospects for future income growth have weakened, particularly for those households servicing sizeable debts, then they could choose to save more in the near term and consumption growth could be lower than forecast. However, if households become more confident about their future employment, income or wealth, they could choose to save less in the near term to support higher consumption growth. Similarly, if actual income or wealth grows faster than forecast, this could also flow through to higher growth in consumption.

Housing prices have picked up over the second half of 2016, most notably in Sydney and Melbourne. This could see more spending and renovation activity than is currently envisaged. On the other hand, a widespread downturn in the housing market could mean that a more significant share of projects currently in the residential construction pipeline is not completed than is currently assumed. While this is a low-probability downside risk, it could be triggered by a range of different factors. Low rental yields and slow growth in rents could refocus property investors' attention on the possibility of oversupply in some regions. Although investor activity is currently quite strong, at least in Sydney and Melbourne, history shows that sentiment can turn quickly, especially if prices start to fall. Softer underlying demand for housing, for example because of a slowing in population growth or heightened concerns about household indebtedness, could also possibly prompt such a reassessment.

## Domestic cost pressures

There is uncertainty around the timing and extent of the forecast pick-up in inflation over the next couple of years. The recent labour cost growth outcomes were slightly weaker than expected and could suggest that structural forces, such as global competitive pressures and technological advances, are putting downward pressure on wage growth. The forecasts assume that some of these factors gradually dissipate, but these factors may be more persistent. On the other hand, wage growth may pick up more quickly than currently forecast in response to an improvement in labour market conditions, particularly if employees demand wage increases to compensate for the period of low wage growth over recent years. It may also be the case that some of the more recent pick-up in the terms of trade and nominal income could result in higher wage growth in mining-related industries. Rising global inflationary pressures may also have more significant flow-on effects to domestic inflation than has been factored into the forecasts. The path of inflation over the next few years will also depend on whether heightened competitive pressures in the retail sector persist and on the path of the exchange rate, noting that the forecasts assume that the exchange rate is unchanged at current levels. ✎



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