Statement on Monetary Policy

NOVEMBER 2016

Contents

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Overview

Growth in Australia's major trading partners remains a bit below average and is expected to decline a little over the forecast period, reflecting a further moderate easing in growth in China. While longer-term risks associated with high and rising debt in China remain, the downside risks to Chinese growth in the near term appear to have diminished, in large part due to strong growth of government-funded infrastructure projects and buoyant conditions in the property market. These developments have led to an increase in the demand for bulk commodities at the same time as the Chinese authorities have restricted domestic production of commodities to reduce overcapacity. This has contributed to a pick-up in bulk commodity prices and has been associated with a broad-based increase in producer prices in China.

The rise in commodity prices this year has resulted in an increase in Australia's terms of trade. This represents a marked change from the pattern of recent years, whereby the terms of trade had fallen significantly and by more than expected. Although the recent increase in the terms of trade has been associated with an appreciation of the Australian dollar, it is expected to provide some support to income growth, in contrast to the period since the peak in the terms of trade in 2011. The forecasts assume that the terms of trade will remain above the low point reached earlier this year. In part, this reflects the expectation that Chinese demand for steel will remain resilient in the near term and that Chinese production of bulk commodities will not increase substantially. However, the Chinese authorities may relax efforts to reduce overcapacity in their mining industry, in response to recent sharp increases in bulk commodity prices, and there is uncertainty about the extent to which the recovery in the Chinese property market will be sustained. Either of these factors, among other things, could affect the outlook for Australia's terms of trade.

In the major advanced economies, growth in economic activity continues to be supported by accommodative monetary policy and further improvements in labour market conditions. Output is forecast to grow at above-trend rates and a further reduction in spare capacity is expected over the forecast period. That, combined with the rise in the prices of oil and other commodities, is expected to put upward pressure on global inflation over the forecast period. While there is still a risk that low inflation expectations could become entrenched, the risks to global inflation appear to be more balanced than they have been for some time. In the United States, inflation has increased a bit since last year and is only a little below the Federal Reserve's target. Financial market pricing implies that an increase in the federal funds rate by the end of 2016 is more likely than it was at the time of the August *Statement on Monetary Policy*. While inflation remains below the European Central Bank's target, long-run inflation expectations appear to be relatively well anchored at close to 2 per cent. In contrast, inflation and inflation expectations in Japan have declined over the past year.

Any changes to the current stance of monetary policy or in the expected path of policy rates in the major advanced economies are likely to affect a range of financial market prices, including exchange rates. The depreciation of the Australian dollar since 2013 has contributed to the ongoing adjustment of the economy to the end of the resources boom; an appreciating currency could complicate that process.

As expected, the pace of growth in the Australian economy appears to have moderated around the middle of the year following strong growth in the March quarter. There has been little change to the aggregate growth forecasts. GDP growth is expected to be around potential in 2016/17 and gradually pick up thereafter to be between 3 and 4 per cent by the end of the forecast period. Resource exports are likely to make a further significant contribution to GDP growth, as exports of liquefied natural gas (LNG) continue to ramp up. Mining investment is still expected to subtract from growth for a time, albeit by less than was the case over the past year. Non-mining activity is projected to continue to grow at around its average pace over the forecast period. Low interest rates and the depreciation of the exchange rate over the past couple of years will help support household consumption, dwelling investment and exports. Ongoing growth in these areas of the economy is expected to underpin a further increase in non-mining business investment in the period ahead.

Consumption growth was below average in the June quarter, but has been above the growth in household disposable income in year-ended terms for some time – supported by low interest rates and rising household wealth, and consistent with measures of consumer sentiment remaining above average. Consumption growth has been accommodated by a gradual decline in the household saving ratio, which is expected to continue over the forecast period. Households' expectations about the likely growth in their incomes will have an important bearing on their consumption, saving and borrowing decisions. These factors, as well as future developments in the housing market, are all risks to future consumption growth.

As expected, private dwelling investment was strong over the year to the June quarter. The value of residential building approvals has reached record levels as a share of GDP and the amount of work in the pipeline has edged higher. Accordingly, dwelling investment is likely to contribute to growth for some time yet. However, the large amount of work in the pipeline raises concerns that some locations could become oversupplied, particularly in inner-city areas where a lot of high-density housing is planned. This could lead to settlement failures by off-the-plan purchasers and a general reduction in rents and prices.

Conditions in the established housing market have eased relative to a year ago, although some indicators suggest that conditions may have strengthened over recent months. In particular, housing price growth has picked up noticeably in Sydney and Melbourne, where auction clearance rates have also increased to high levels. However, the number of auctions and housing market turnover more generally are lower than they were last year and properties are, on average, taking longer to sell. While housing credit growth has also declined over the past year, loan approvals data suggest that lending to investors has increased a little over recent months. Housing market conditions remain weak in Perth, where prices of both apartments and detached dwellings have declined further over the past year.

The unemployment rate has declined over the course of this year, but so too has employment growth. Moreover, the growth in employment has been accounted for by part-time employment. Forward-looking indicators are consistent with moderate employment growth in the months ahead. The unemployment rate is expected to edge just a little lower over the next couple of years. This forecast is largely unchanged from that presented in the August *Statement* and implies that a degree of spare capacity remains in the labour market. However, there is uncertainty about how much spare capacity there is and the extent to which it will ultimately feed into inflation. One aspect of this uncertainty is that the underemployment rate remains elevated and implies more spare capacity than indicated by the unemployment rate alone. At the same time, however, there is evidence that wage growth has stabilised, in part because it appears that the drag on aggregate wage growth from the movement of workers from mining-related activities to lower-paying jobs in the non-mining sector has diminished. The growth in labour costs is expected to rise over the forecast period as labour market conditions improve and the effects of the large decline in the terms of trade and mining investment on demand wane. Even so, growth in labour costs is likely to remain low.

The September quarter inflation data were in line with expectations. Underlying inflation has been around 1½ per cent in year-ended terms over recent quarters, while headline inflation was around 1¼ per cent. Petrol prices have subtracted from year-ended headline inflation over recent years.

Domestic cost pressures remain subdued as the economy continues to rebalance following the end of the resources boom. Low growth of labour costs is clearly evident in very low inflation in prices of market services. Also, rent inflation remains very low, while growth in the cost of constructing a house has declined, which is somewhat at odds with the strength in dwelling investment across much of the country. The prices of tradable items (excluding volatile items and tobacco) fell slightly in the September quarter and were unchanged over the year. Inflation in those parts of the retail sector subject to heightened competitive pressures over recent years also remains low, but stabilised in the September quarter.

There has been no material change to the forecast for underlying inflation, which is expected to remain around current rates in the near term, before gradually picking up to around 2 per cent by the end of the forecast period. The disinflationary effects from heightened retail competition are expected to dissipate over time and gradually rising labour cost growth is forecast to add to inflation over the forecast period. Higher prices for oil over recent months and increases in the tobacco excise tax are also expected to add to headline inflation. On the other hand, low rent inflation is expected to persist, while the boost to the prices of tradable items from the earlier depreciation of the exchange rate appears to have largely run its course.

The Reserve Bank Board reduced the cash rate by 25 basis points in May, following weaker-than-expected inflationary pressures, and by the same amount again in August, when the data confirmed that inflationary pressures remained low. Those reductions in the cash rate will provide some additional support to demand and enhance the prospects of inflation returning to target over time. In August, the Board also noted that, compared with 2015, conditions in the housing market had eased and housing credit growth was lower, partly as a result of earlier actions to tighten lending standards.

The flow of data over the past few months has been consistent with the earlier forecasts. Inflation is expected to remain low for some time, before gradually returning to more normal levels. While there is uncertainty about the outlook for employment growth, it is likely that there will still be some spare capacity in the labour market over the forecast period. At the same time, housing prices are rising at a brisk rate in some locations, although overall housing credit growth and housing turnover remain lower than they were last year.

Taking all these considerations into account, at its recent meetings the Board judged that there were reasonable prospects for achieving sustainable growth in the economy with inflation returning to the medium-term target over time and, hence, it was appropriate to leave the cash rate at 1.50 per cent.

1. International Economic Developments

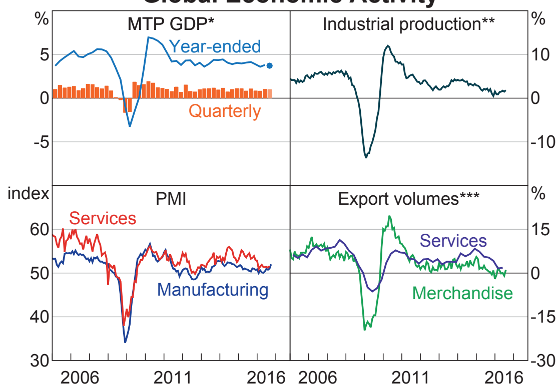
Global economic growth is lower than average but appears to have stabilised over recent months (Graph 1.1). Economic conditions in China have steadied over the past six months. Growth in a number of the higher-income economies of east Asia remains below average, having been adversely affected by the slowdown in global trade in recent years and, in particular, slowing demand from China. Growth in New Zealand and India has been relatively strong over the past year.

Growth in the major advanced economies has eased over the past year but is expected to pick up over the second half of 2016. The economic recovery in these economies is expected to continue, supported by accommodative monetary policy. Growth is likely to exceed potential in the coming quarters, leading to a further reduction in excess capacity. However, potential growth appears to have declined over the course of the past decade or so as a result of lower growth in investment and productivity and the effect of population ageing.

Growth in global industrial production, manufacturing activity and trade remains subdued. Growth in these indicators has been below average for much of the period since the global financial crisis, reflecting heightened uncertainty and weak investment. It is possible that industrial activity and trade will continue to lag behind aggregate global growth, given the relative resilience of consumption and service-industry growth globally.

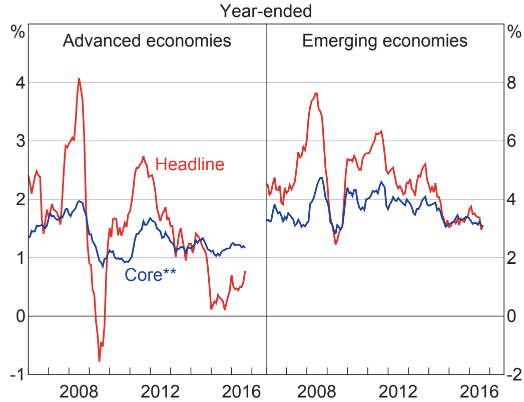
Inflation has remained below most central bank targets since 2010, despite substantial reductions in unemployment rates in a number of economies (Graph 1.2). Low wage growth, particularly in the

Graph 1.1
Global Economic Activity



* Major trading partners' (MTP) GDP, weighted using Australia's export shares; RBA estimate for September quarter 2016
** Industrial production is weighted by world industrial production shares at market exchange rates; year-ended growth
*** Services exports are for select MTPs and Australia; year-ended growth
Sources: ABS; Bloomberg; CEIC Data; CPB; IMF; Markit Economics; OECD; RBA; Thomson Reuters

Graph 1.2
Global Inflation*
Year-ended



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

major advanced economies, suggests that there remains some spare capacity in labour markets. However, in the United States and Japan, unit labour cost growth is noticeably higher than it has been for some time and this has put pressure on business margins. Further gradual reductions in spare capacity are expected to place upward pressure on inflation in advanced economies, while the recent increases in oil prices, and commodity prices more generally, are also likely to contribute to global inflation. The recent turnaround in oil prices has already been evident in headline inflation measures picking up in advanced economies over the past year. In contrast, headline measures in emerging economies have fallen in response to easing food price inflation.

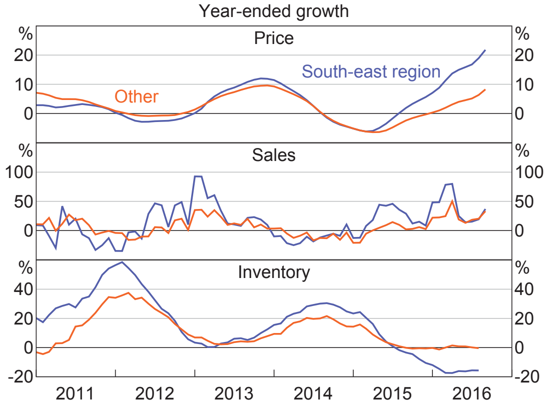
China and East Asia

Chinese economic growth has steadied over the course of the past six months or so. Growth has been supported by a pick-up in the property sector and continued strong infrastructure investment, underpinned by ongoing financial accommodation and fiscal expansion. While these developments have had positive flow-on effects to upstream industries, excess capacity problems in the industrial sector have persisted and private sector investment has slowed noticeably over the past year or more.

Residential property prices have increased sharply over the course of this year, partly reflecting speculative buying in larger cities (Graph 1.3). Buoyant conditions have supported overall growth of housing investment. Sales have grown strongly over the year to date and inventories of unsold housing have fallen. The fall in inventories has been concentrated in larger cities on the eastern seaboard, while a large overhang of housing inventory has persisted in smaller cities.

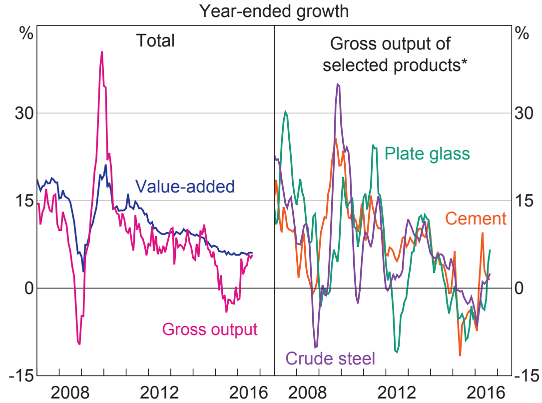
The pick-up in growth of residential and non-residential property construction has been associated with a recovery of manufacturing production in related industries, such as cement, plate glass and steel (Graph 1.4). In recent months,

Graph 1.3
China – Residential Property Market Indicators
Year-ended growth



Sources: CEIC Data; CRIC; RBA

Graph 1.4
China – Industrial Production
Year-ended growth

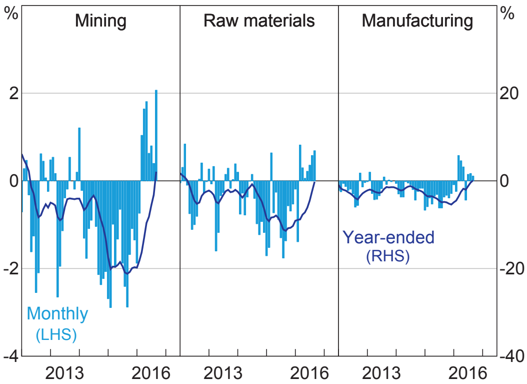


* Three-month moving average
Sources: CEIC Data; RBA

the authorities have increased public spending on infrastructure, including transport-related projects. This has also helped to support the demand for steel.

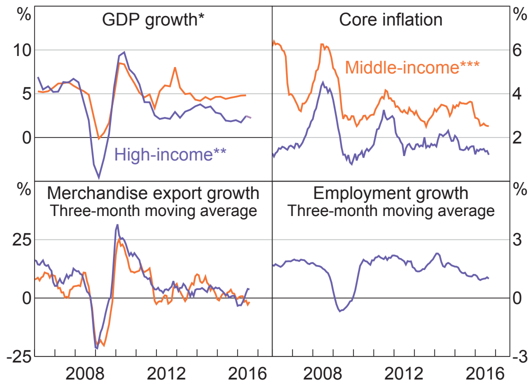
The rise in the demand for steel, combined with some reductions in the domestic supply of coal and iron ore in China, has contributed to higher bulk commodity prices globally (see 'Box A: Production of Iron Ore and Coal in China'). In part driven by stronger commodity prices, Chinese producer prices have been rising recently, a marked turnaround from the earlier deflationary trend (Graph 1.5). These upstream price pressures are yet to translate into higher consumer price inflation, which remains subdued in China and across east Asia.

Graph 1.5
China – Growth of Producer Prices



Sources: CEIC Data; RBA

Graph 1.6
East Asia – Economic Indicators
Year-ended



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

It is uncertain how long the current strength in the Chinese property sector and associated demand for upstream manufactured items will be sustained. Local government authorities have responded to rising property prices by introducing a range of measures, including increases in minimum downpayments in numerous cities and direct restrictions on house purchases in some locations. To date these initiatives have not been enough to stop prices from rising further; instead, price rises have become more widely dispersed across the country. But it is likely that continued efforts to restrict price growth will eventually result in slower residential investment and dampen demand for related industrial products and commodities.

Developments in China will continue to influence outcomes in other Asian economies, which as a group account for a significant share of Australia's trade. Weakness in global trade, including weaker trade with China, has contributed to lower growth in the high-income economies in east Asia, which are all quite reliant on trade (Graph 1.6). Business investment growth in these economies has declined over the past two years and, more recently, consumption and employment growth has also slowed. Fiscal stimulus has supported domestic demand since 2015 but the prospect of further fiscal support is diminishing as the authorities adjust to self-imposed fiscal discipline rules. The middle-income east Asian economies are also facing subdued external demand but, because they are less reliant on trade, the impact on their growth has been more limited. A number of central banks in the east Asian region have eased monetary policy in the past year.

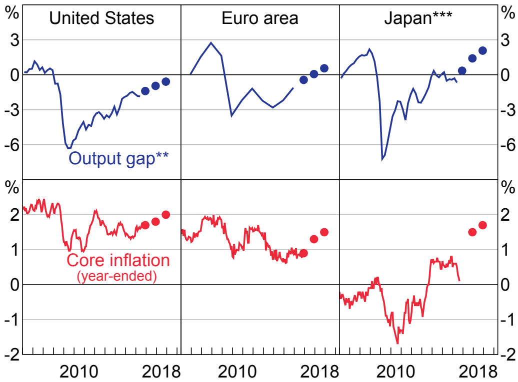
Major Advanced Economies

The economic recovery in the major advanced economies has continued. Over the past year, growth in demand has been driven by consumption, while business investment has remained weak. GDP growth is now around, or a little above, estimates of potential. Growth is expected to be supported over the period ahead by accommodative monetary policies and further improvements in labour market conditions. At the same time, the effect of population ageing has weighed on potential growth, especially in Japan. The weak investment and productivity growth of recent years, if maintained, will also exert a drag on potential growth.

Growth in output is expected to lead to further reductions in spare capacity over the next two to three years, leading to an increase in inflation. Policymakers in the United States expect to reach the Federal Reserve's inflation goal by 2018 (Graph 1.7). Inflation in the euro area and Japan is

Graph 1.7
Major Advanced Economies – Output Gaps and Inflation

Central bank forecasts*



* ECB and FOMC forecasts as at September 2016; BoJ forecasts as at November 2016

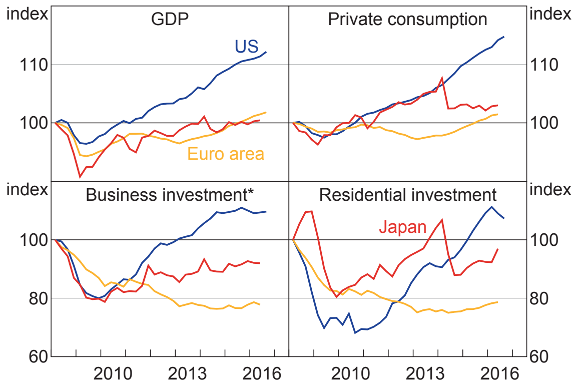
** Output gap projections based on central banks' forecasts for GDP growth and potential GDP growth estimates from the BoJ, Congressional Budget Office and European Commission

*** BoJ forecasts are for fiscal years; inflation forecasts are for CPI excluding fresh food in 2017 and 2018; inflation data exclude the effects of the consumption tax increase in April 2014

Sources: Bank of Japan; ECB; FOMC; RBA; Thomson Reuters

Graph 1.8
Major Advanced Economies – GDP and Components

March 2008 = 100



* Non-residential public and private investment shown for euro area

Sources: RBA; Thomson Reuters

likely to remain below the respective central banks' targets until at least 2018.

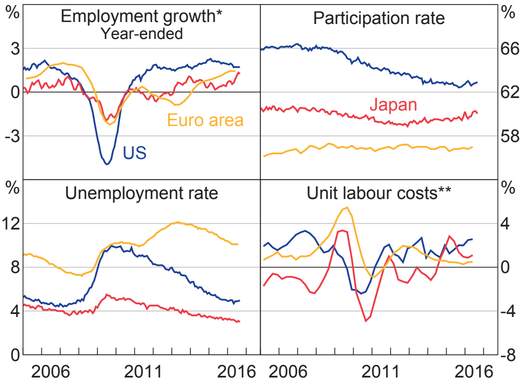
Growth in the United States picked up in the September quarter and continued at the modest pace of recent quarters in the euro area, while GDP in Japan has been little changed over the past year or so (Graph 1.8). Private consumption has been a key driver of growth in the United States and the euro area over the past two years. In contrast, consumption in Japan has remained subdued following the consumption tax increase in early 2014. Conditions in the major advanced economies remain supportive of household consumption, with low borrowing costs, a recovery in housing prices, relatively strong employment growth and above-average consumer confidence.

However, investment growth in advanced economies has been weak in recent years. The United States has experienced a broad-based slowing in business investment for over a year. The weakness has been most acute in the oil & gas and manufacturing sectors. Residential investment eased recently, but residential construction activity is at a high level. In the euro area and Japan, residential and business investment remain well below pre-crisis levels, although, in the euro area, machinery and equipment investment has grown at an above-average pace since early 2015. The large appreciation of the yen since late 2015 has weighed on Japanese corporate profits and business investment.

Labour markets have improved considerably in recent years across the major advanced economies (Graph 1.9). Employment growth has been robust, encouraging an increase in workforce participation that has offset, at least temporarily, some of the effects of population ageing on labour supply. Unemployment rates in the United States and Japan have declined to be at or below their long-run average levels. The unemployment rate in the euro area has also declined and is now only a little above levels seen in the mid 2000s.

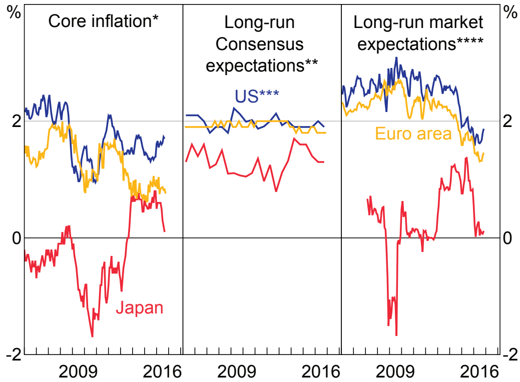
Tightening labour markets have been accompanied by stronger growth in some measures of labour compensation in the United States and Japan over the past 2½ years. Of particular note, given its relevance to inflation pressures, unit labour costs in the US and Japanese economies have been growing at above-average rates, putting pressure on business margins.

Graph 1.9
Major Advanced Economies – Labour Market



* Three-month moving average for Japan
** Three-month moving average year-ended growth
Sources: Eurostat; RBA; Thomson Reuters

Graph 1.10
Major Advanced Economies – Inflation



* 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
** Euro area series is from the Survey of Professional Forecasters
*** US expectations adjusted for the average difference between CPI and PCE
**** Inflation expectations from 5 and 10-year inflation swaps; latest month is an average in the month-to-date
Sources: Bloomberg; Consensus Economics; ECB; RBA; Thomson Reuters

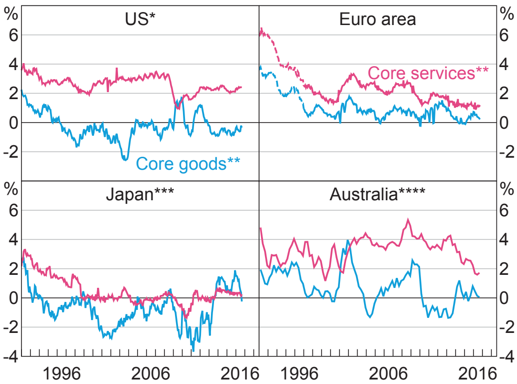
Headline inflation in the major advanced economies remains below central banks' targets. In the United States and the euro area, core inflation is above its recent trough and, in the United States, core inflation is not far below the Federal Reserve's inflation objective (Graph 1.10). Short-term measures of inflation expectations have declined in recent years to historically low levels, coinciding with the fall in oil prices and lower headline inflation. Economists' longer-term expectations have declined only marginally and remain close to these central banks' inflation targets, suggesting that expectations remain relatively well anchored. Longer-term market-based measures of inflation expectations have moderated since early 2016, but are likely to have been influenced by other financial market developments, such as declining risk premia, and there are signs that these measures may have picked up recently.

In contrast, in Japan, core inflation has fallen in recent months. Longer-term market and consumer inflation expectations have fallen sharply since late 2015, returning to where they were before the Bank of Japan (BoJ) adopted its inflation target and started its quantitative easing program in early 2013. The BoJ recently committed itself to 'overshooting' its 2 per cent inflation target, with the intention of raising inflation expectations; however, measures of inflation expectations have been little changed since this announcement.

In the advanced economies, lower inflation in the prices of services has been an important driver of subdued core inflation in the post-crisis period (Graph 1.11). As services are more likely to be non-tradable, this is likely to reflect the weak domestic price pressures arising from spare capacity – in labour and product markets – that followed the global financial crisis. In Australia's case, the increase in spare capacity in the labour market followed the end of the resources boom. On the other hand, goods inflation across advanced economies, which on the whole contains more tradable items, has remained low but has not generally contributed to inflation being lower in the post-crisis period. In Australia, the depreciation in the exchange rate since 2013 has supported inflation of tradable items, although heightened competition recently in the retail sector means that inflation of these items has been lower than otherwise.

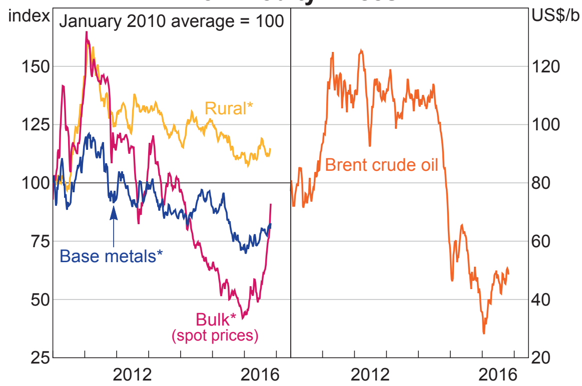
Graph 1.11
Advanced Economies – Core Inflation

Year-ended



* Personal Consumption Expenditures (PCE) inflation
** Core measures exclude volatile items: food, energy and for some economies alcohol and tobacco; euro area dashed lines are estimates
*** Excludes the effects of the 1997 and 2014 consumption tax increases
**** For Australia, non-tradables and tradables inflation (excluding volatile items) are shown instead of core services and core goods, respectively; adjusted for the tax changes of 1999–2000 and excludes interest charges and deposit & loan facilities, where relevant
Sources: ABS; ECB; RBA; Statistics Japan; Thomson Reuters

Graph 1.12
Commodity Prices



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

Commodity Prices

Commodity prices have been driven higher, since early 2016, by the sharp rise in bulk commodity prices (Graph 1.12; Table 1.1). This rise in commodity prices has been reflected in the first increase in Australia's terms of trade in 2½ years. As discussed in the 'Outlook' chapter, the outlook for the terms of trade is now more positive than previously thought, and it is expected that the trough is now past.

The spot price of iron ore remains well above its recent low of December 2015, reflecting both higher Chinese demand and lower iron ore production in China. However, the global supply of low cost iron ore is expected to increase further, as capacity expansions come on line in Australia and Brazil. This is likely to exert some downward pressure on prices in the period ahead.

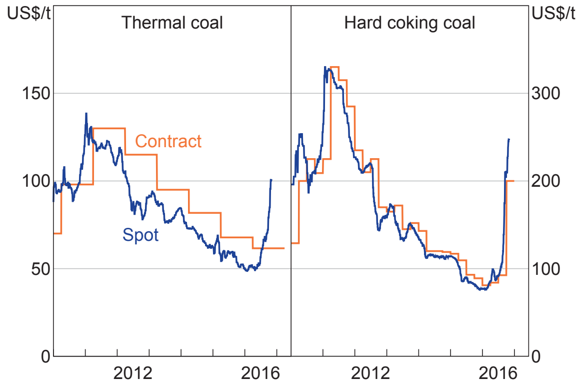
The spot prices of both hard-coking and thermal coal have increased sharply since the previous *Statement*, to levels not reached in several years (Graph 1.13). Coal prices have been supported by cuts to Chinese production and temporary

Table 1.1: Commodity Price Growth[(a)]
SDR, three-month-average prices, per cent

	Since previous *Statement*	Over the past year
Bulk commodities	37	42
– Iron ore	7	9
– Coking coal	95	120
– Thermal coal	40	41
Rural	–1	1
Base metals	5	5
Gold	2	16
Brent crude oil[(b)]	2	0
RBA ICP	9	7
– using spot prices for bulk commodities	20	21

(a) Prices from the RBA Index of Commodity Prices (ICP); bulk commodity prices are spot prices
(b) In US dollars
Sources: Bloomberg; IHS; RBA

Graph 1.13
Coal Prices
Free on board basis



Sources: Department of Industry, Innovation and Science; IHS; RBA

disruptions to global supply. However, most of Australia's coal exports are still sold under contract, at prices that are currently lower than those in the spot markets. Contracts for the December quarter have settled at US$200 per tonne, representing an increase of 116 per cent from the September quarter benchmark price of US$92.5 per tonne. So while the profitability of Australian coal miners has improved, the immediate gains are a bit less than implied by the very sharp rise in spot prices. The Bank's liaison suggests that prices would need to remain elevated for some time to induce any noticeable increase in Australian production. Recent price increases are expected to partly unwind as temporary disruptions to supply ease.

Oil prices have risen since early 2016, although they have been relatively stable over the past few months (Graph 1.12). In late September, OPEC members agreed in principle to cap production at between 32.5 and 33 million barrels per day, which is below current production levels. Government officials in Russia have indicated that they might join OPEC in capping oil production. The oil price increases since the beginning of the year have started to be reflected in higher regional liquefied natural gas (LNG) prices.

Box A

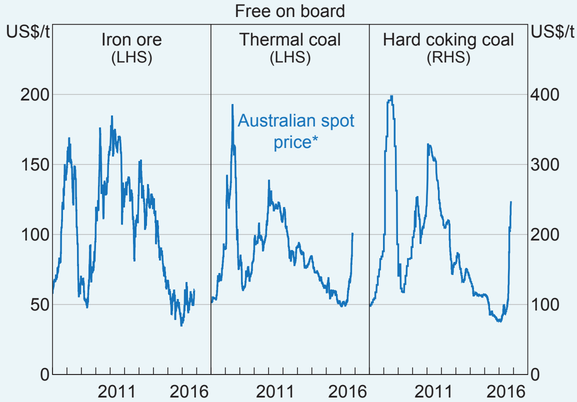
Production of Iron Ore and Coal in China

The global prices of bulk commodities (iron ore and coal) have risen noticeably since early 2016 following significant declines over the previous few years. In China, a recovery in the demand for these commodities over the course of this year, including for use in the production of steel, has been accompanied by a decline in their domestic production. In addition, there have been some temporary disruptions affecting the distribution of coal both within China and elsewhere that have contributed to sharp increases in prices, particularly for coking coal.

Bulk commodities account for around one-quarter of the value of Australia's total exports. Since late 2015, iron ore prices have increased by 77 per cent (Graph A1). The rise in coal prices from around that time has been even more pronounced. Thermal coal prices have risen by 111 per cent since the low point in early 2016 and coking coal prices by more than 200 per cent over a similar period.

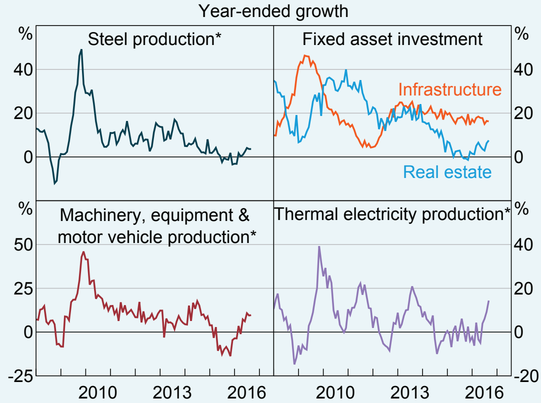
In China, demand for both steel (which uses iron ore and coking coal) and electricity generated by thermal coal has picked up recently (Graph A2). For steel, this improvement reflects a rebound in Chinese property investment in the first half of 2016 combined with strong growth in infrastructure investment, which have underpinned demand for construction- and transport-related steel products. There has also been a pick-up in the production of machinery & equipment and motor vehicles, which all use steel intensively. The noticeable pick-up in coal-fired power generation in recent months is consistent with a rise in demand for electricity from the range of manufacturing industries experiencing stronger conditions of late.

Graph A1
Bulk Commodity Prices
Free on board



* Iron ore fines; Newcastle thermal coal; prime hard coking coal
Sources: Bloomberg; IHS; RBA

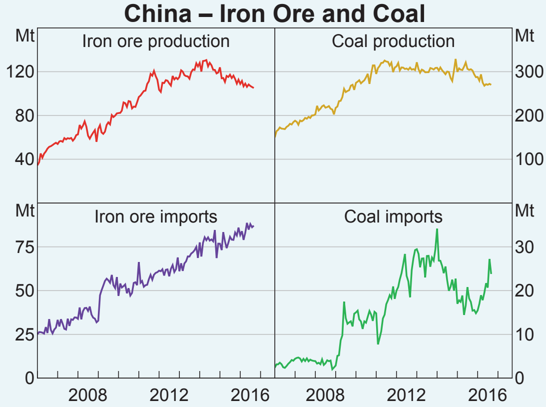
Graph A2
China – Demand for Iron Ore and Coal
Year-ended growth



* Gross output indicators
Sources: CEIC Data; RBA

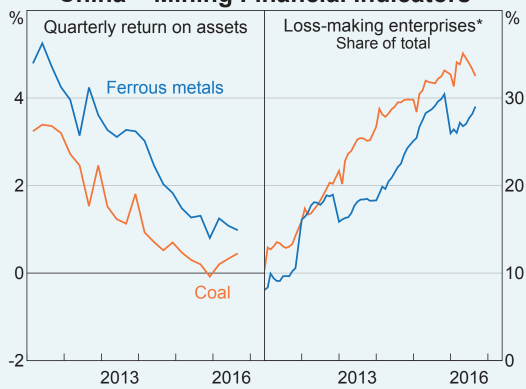
At the same time, there has been a further noticeable decline in Chinese production of iron ore and coal (Graph A3). The decline in part reflects a response to earlier large falls in their prices and the high cost of much of China's production

Graph A3
China – Iron Ore and Coal



Sources: CEIC Data; RBA

Graph A4
China – Mining Financial Indicators



* December observations removed

Sources: CEIC Data; RBA

(compared with production in other parts of the world, including Australia). The net result of lower domestic supply of bulk commodities and stronger demand has been an increase in imports.

Despite these reductions in domestic supply, some mines in China have operated longer than would have been expected given their falling profitability (Graph A4). The proportion of firms producing iron ore and coal that are loss-making has risen noticeably.

Government policy changes have also affected the domestic output of bulk commodities in 2016, particularly with respect to coal production. The Chinese Government has long sought to close down inefficient, unsafe and polluting mining facilities. In February, the State Council (China's premier legislative body) issued plans to reduce coal production capacity by around 1 billion tonnes over the next 3–5 years.[1] Government officials have indicated that most of the capacity reductions targeted for 2016 have already been completed. The State Council also issued a direction that the number of working days for coal mines be reduced from 330 days to 276 days per year. However, following the sharp rise in coal prices, the National Development and Reform Commission signalled that the 276 working day policy would be amended for selected coal producers to allow them to increase their days of operation temporarily as a means of relieving supply shortages.

Although Chinese domestic demand and supply trends have had a significant effect on bulk commodity prices, reductions in supply from coal-exporting countries have also played a role. In August and September, the Australian coal industry experienced a number of temporary disruptions related to a train derailment in Queensland, roof collapses at some mines and industrial action at a Queensland mine. However, the overall effect on global supply is likely to have been minor. Weather-related disruptions and production cuts in Indonesia (the world's largest supplier of seaborne thermal coal) have also delayed deliveries in recent months, and coking coal exports from the United States have continued their trend decline. A consequence of disrupted supply and resilient demand is that inventories of both thermal and coking coal at ports (and inventories of coking coal at steel mills) fell to relatively low levels in August. Major buyers of thermal coal have started to rebuild stocks, but coking coal inventories remain low. ✠

1 Consistent with this, the National Development and Reform Commission is targeting capacity reductions of 250 million tonnes of coal by the end of 2016 alone.

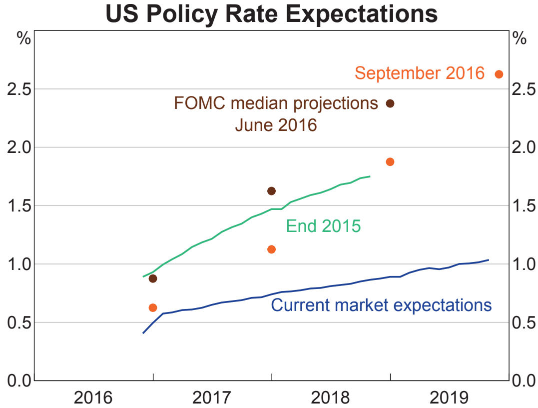
2. International and Foreign Exchange Markets

Global financial markets continue to be influenced by evolving expectations for monetary policy in the major economies. In recent months, sovereign yields have risen following a scaling back of expectations for further monetary stimulus in most of the larger developed economies; market-based measures of expected inflation have also increased, which may reflect a more balanced outlook for the risks around global inflation. Yields in the United Kingdom have increased particularly sharply, and the UK pound has depreciated, as concerns have risen that the United Kingdom may lose access to the European Single Market as a consequence of its exit from the European Union. Movements in other major currencies have been modest. Major market equity prices have generally traded in narrow ranges following a relatively quick recovery from the declines recorded in the wake of the UK referendum. Emerging market share prices have seen strong increases over recent months.

Central Bank Policy

The US Federal Open Market Committee's (FOMC's) target range for the federal funds rate remains at 0.25–0.50 per cent. However, the FOMC has indicated that the case for a rate increase has continued to strengthen in recent months and minutes from the September meeting noted that the decision not to increase the target range at that meeting was a close call. Recent FOMC discussions have centred on the degree of unutilised capacity in the labour market and the risk that delaying tightening might lead to a need for a faster rate of increases in the future. FOMC members now anticipate a 25 basis point increase in the policy range in December 2016, broadly in line with market pricing, which currently implies around a four-in-five chance of such an increase. Forecasts for increases in the policy rate in 2017 have been scaled back by FOMC members. However, members still expect 50 basis points of increases during 2017, in contrast to market expectations for at most 25 basis points of tightening (Graph 2.1).

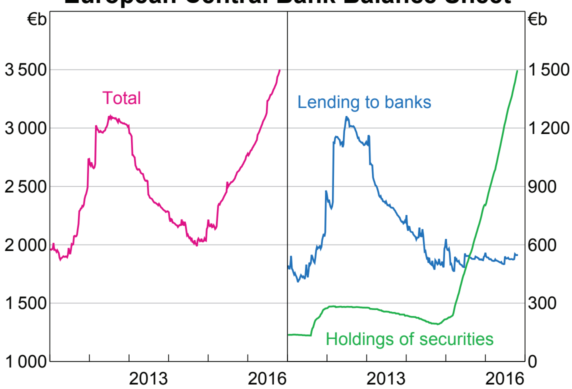
Graph 2.1
US Policy Rate Expectations



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

The European Central Bank (ECB) has left policy unchanged since it announced additional stimulus measures at its March meeting, though in September it tasked committees with evaluating options to ensure the continued smooth implementation of its asset purchase program. The evaluation could result in the modification of some of the existing constraints to asset purchases (such as minimum yield requirements, holding limits and the requirement for purchases to be proportional to members' contributions to the ECB's capital), which seem likely to become increasingly binding in the months ahead. The ECB's current asset purchase program is scheduled to run until at least March 2017; market observers expect an extension, either at the current pace of €80 billion per month or with a gradual tapering of purchases. At the same time, the take-up of ECB term funding by euro area banks continues to be modest; allotments at the second targeted long-term refinancing operation in September were €34 billion (net of repayments), similar to the €31 billion of net borrowing at the June quarter allotment, compared with a total capacity of €1.6 trillion (Graph 2.2).

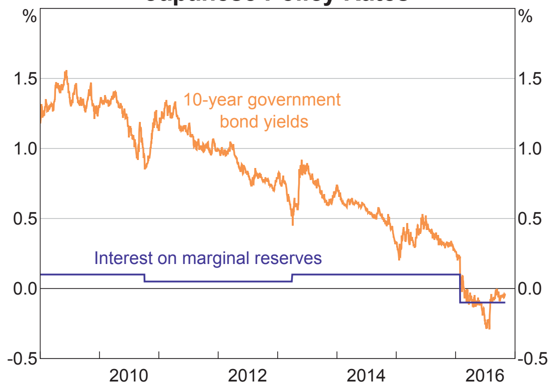
Graph 2.2
European Central Bank Balance Sheet



Sources: European Central Bank; Thomson Reuters

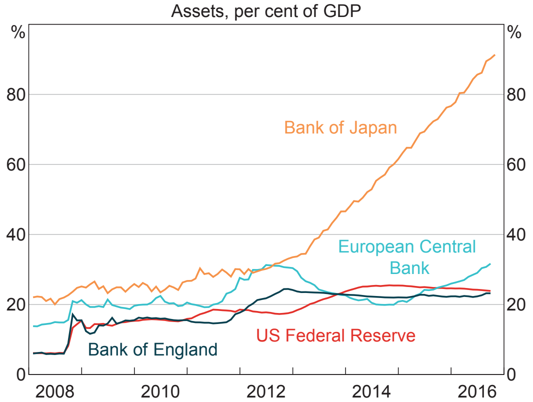
The Bank of Japan (BoJ) announced the results of its comprehensive review of monetary policy and changes to its monetary policy framework at its September meeting. The BoJ committed itself to exceeding the 2 per cent inflation target for some period of time to increase inflation expectations. To achieve this, the BoJ announced that the targeted expansion of the monetary base has been replaced with a new framework: Quantitative and Qualitative Monetary Easing with Yield Curve Control. To exert control over the yield curve, the BoJ will use the interest rate on marginal reserves held at the central bank (which it left unchanged at –0.1 per cent) to control short-term interest rates and the purchase of Japanese government bonds (JGBs) to control long-term interest rates. In particular, it will target a 10-year JGB yield of around zero per cent, which is consistent with its current level (Graph 2.3). The BoJ has announced that it expects purchases of JGBs to continue at around the current rate of ¥80 trillion per year (Graph 2.4).

Graph 2.3
Japanese Policy Rates



Sources: Bank of Japan; Bloomberg

Graph 2.4
Central Bank Balance Sheets
Assets, per cent of GDP



Sources: Central banks; Thomson Reuters

The Bank of England (BoE) lowered its policy rate by 25 basis points to 0.25 per cent at its August meeting, noting downside risks to economic activity owing to uncertainty generated by the result of the UK referendum, and suggested that this is close to the effective lower bound, which it believes is slightly above zero. It also announced several additional monetary stimulus programs. It will purchase £60 billion of UK government bonds over the 6 months beginning August 2016 and £10 billion of sterling-denominated corporate bonds over the 18 months beginning September 2016. Eligible corporate bonds are those issued by companies the BoE considers to be making a 'material contribution' to the UK economy and include a number of foreign companies with a UK presence. The BoE also announced a Term Funding Scheme, which provides funding to banks at the BoE's policy rate to help reinforce the transmission of monetary policy to the real economy; banks have borrowed £1.3 billion under this scheme so far. The BoE anticipates that the total take-up of the scheme will be around £100 billion.

In China, the volatility and level of interbank interest rates increased a little in recent months in part because of unexpected changes to the maturity of the People's Bank of China's (PBC's) open market operations. The PBC has left system-wide reserve requirement ratios unchanged since a 50 basis point reduction in February and has held benchmark interest rates steady so far this year.

A number of other central banks have also eased policy in recent months, largely in response to ongoing low inflation (Table 2.1). The Reserve Bank of New Zealand reduced its policy rate by 25 basis points to 2.0 per cent, noting a persistently high exchange rate. The Central Bank of Russia, the Reserve Bank of India and the Central Bank of Brazil all lowered policy rates in response to declines in inflation. Bank Indonesia also lowered its target rate by 25 basis points, noting weaker-than-expected growth and low inflation. In contrast, the Bank of Mexico raised its policy rate by 50 basis points, its fourth increase this year, to counter inflationary pressures stemming from a depreciation of the exchange rate.

Table 2.1: Monetary Policy

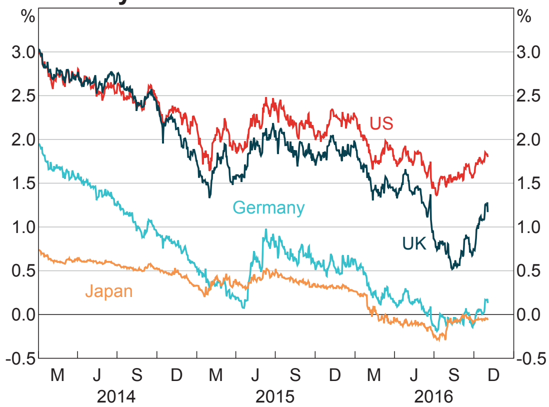
	Policy rate Per cent		Most recent change
Euro area[(a)]	–0.40	↓	Mar 16
Japan[(a)]	–0.10	↓	Jan 16
United States[(b)]	0.375	↑	Dec 15
Australia	1.50	↓	Aug 16
Brazil	14.00	↓	Oct 16
Canada	0.50	↓	Jul 15
Chile	3.50	↑	Dec 15
India	6.25	↓	Oct 16
Indonesia	4.75	↓	Oct 16
Israel	0.10	↓	Feb 15
Malaysia	3.00	↓	Jul 16
Mexico	4.75	↑	Sep 16
New Zealand	2.00	↓	Aug 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[(b)]	–0.75	↓	Jan 15
Thailand	1.50	↓	Apr 15
Turkey	7.50	↓	Feb 15
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

Sovereign Debt Markets

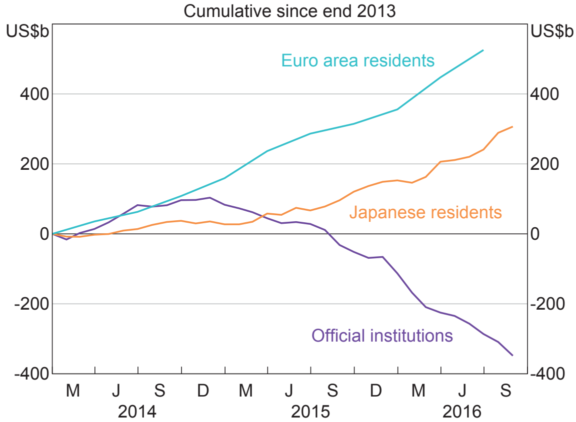
After declining sharply over the first six months of the year, yields on 10-year sovereign bonds in major developed markets have increased over the past few months (Graph 2.5). The recent rises partly reflect an unwinding of the risk aversion that affected markets in the wake of the UK referendum result in late June, as well as a scaling back of expectations for further monetary stimulus in the euro area, Japan and the United Kingdom. Better economic data, higher commodity prices and, relatedly, rising market-based measures of inflation expectations have also contributed. The rise in major market yields has seen the share of government bonds trading with a negative yield decline from around 30 per cent in early July to around 20 per cent currently.

Graph 2.5
10-year Government Bond Yields



Source: Bloomberg

Graph 2.6
Foreign Purchases of US Bonds
Cumulative since end 2013



Sources: Bloomberg; European Central Bank; Ministry of Finance Japan; RBA; Thomson Reuters

Yields in the United Kingdom have seen the largest moves among the major government bond markets this year. After falling sharply in the wake of the UK referendum result, yields rose as market-based inflation expectations increased following a significant depreciation of the UK pound and comments by Prime Minister May that suggested that fiscal policy will be eased.

In the United States, better economic data and rising expectations of an increase in interest rates by the US Federal Reserve in December have been reflected in higher US Treasury yields.

Following the BoJ's announcement of its yield curve control policy in September, yields on 10-year JGBs have remained close to the BoJ's new target of around zero per cent for these yields.

Japanese and euro area residents have continued to make sizeable purchases of foreign bonds over 2016, particularly of US securities, although purchases by Japanese residents have slowed of late (Graph 2.6). These purchases have occurred in response to the ongoing influence of BoJ and ECB purchases in their domestic sovereign bond markets. However, total foreign resident holdings of US bonds have been broadly unchanged, reflecting an offsetting reduction in foreign official institution holdings over that period, consistent with a reduction in reserves held by several oil-exporting nations and China.

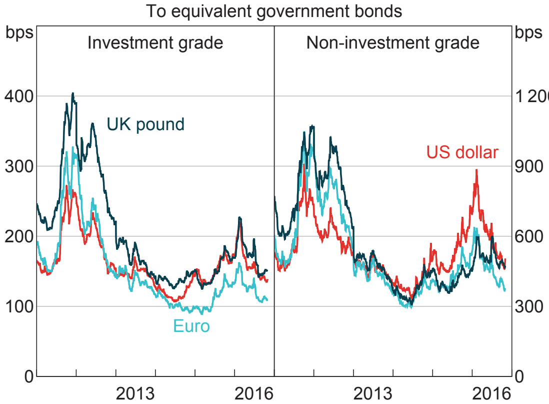
Spreads on bonds issued by governments in the European periphery over German Bunds were generally little changed in recent months. Spreads on Italian government bonds have widened relative to those on Spanish government bonds over 2016, reflecting the possibility of a 'no' vote at the December constitutional referendum in Italy, which could lead to a repudiation of the reform agenda of Prime Minister Renzi. Spreads on Portuguese government bonds have widened over the year, reflecting concerns surrounding the country's fiscal position and weak growth prospects.

Movements in yields on local currency-denominated emerging market sovereign bonds have been mixed in recent months, but yields are generally lower over 2016. Brazilian government bond yields have declined by around 45 basis points since the previous *Statement*, reflecting the official appointment of a new president in late August, a lower inflation outlook, the announcement of economic reforms and a reduction in the Central Bank of Brazil's policy rate. In contrast, local currency-denominated Philippine government bond yields have risen by around 85 basis points over the period, largely reversing the sharp decline in yields that followed the country's presidential election in May.

Credit Markets

Borrowing costs for investment grade corporations in major bond markets have generally risen over the past few months, but by less than the increase in sovereign bond yields, and spreads remain around historically low levels (Graph 2.7). Borrowing costs for non-investment grade corporations in these markets have fallen, partly reflecting the prevalence of resource-related issuers that benefit from higher commodity prices. In the United States, forecasts of higher earnings have supported debt serviceability expectations and contributed to flows into corporate bond funds. In the euro area, continued corporate bond purchases by the ECB have supported the market; having purchased around €8 billion per month since June, the ECB now holds €38 billion of corporate bonds, which is a small share of the investment grade market.

Graph 2.7
Corporate Bond Spreads
To equivalent government bonds

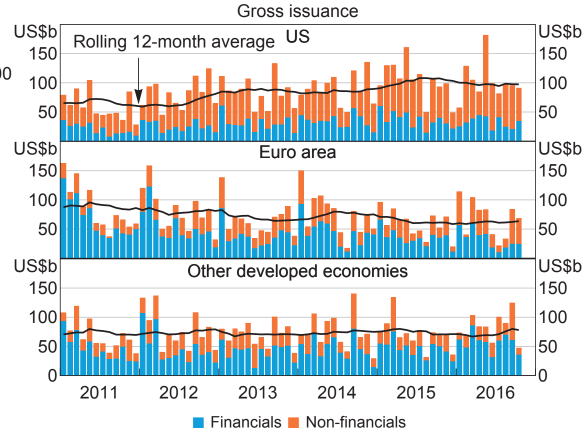


Sources: Bank of America Merrill Lynch; RBA; Thomson Reuters

In the United Kingdom, the sharp rise in sovereign yields has resulted in overall borrowing costs rising for UK firms, despite spreads on UK corporate bonds narrowing following the BoE's announcement of its Corporate Bond Purchase Scheme. The program started on 27 September and to date the BoE has purchased around £2 billion of corporate bonds. The pace of these purchases has so far been faster than implied by the BoE's policy of buying £10 billion over 18 months.

Gross corporate bond issuance has remained strong, particularly in the US, with firms borrowing in part to roll over existing debt at lower interest rates, and to finance share buybacks and acquisitions (Graph 2.8). Corporate bond issuance in the euro area and the United Kingdom picked up following the announcement of corporate bond purchase programs by the respective central banks. The first two euro-denominated non-financial sector corporate bonds with negative yields to maturity were issued in August. Issuance by corporations in other developed economies has also been robust. Issuance by financial firms in US dollars has been particularly strong, partly due to the lower cost of issuing in US dollars and swapping the proceeds into local currencies. Yen-denominated issuance by Japanese firms, though a small segment of the global corporate bond market, has also increased over the past few months.

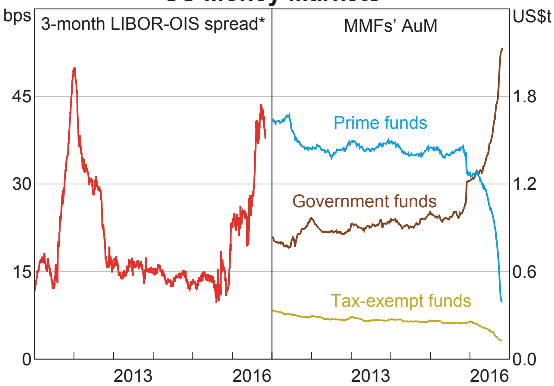
Graph 2.8
Corporate Bond Issuance
Gross issuance



Sources: Dealogic; RBA

In recent months, short-term bank funding rates in US dollar markets rose to their highest levels since 2012 due to the implementation of US money market fund (MMF) reforms (Graph 2.9). As a result of these reforms, the value of assets under management (AuM) of prime MMFs (those that lend to banks) has declined by more than US$1 trillion, or around 70 per cent, over the past year as some prime funds have switched their classification

Graph 2.9
US Money Markets



* Difference between the London Interbank Offered Rate and the Overnight Index Swap rate

Sources: Bloomberg; Investment Company Institute

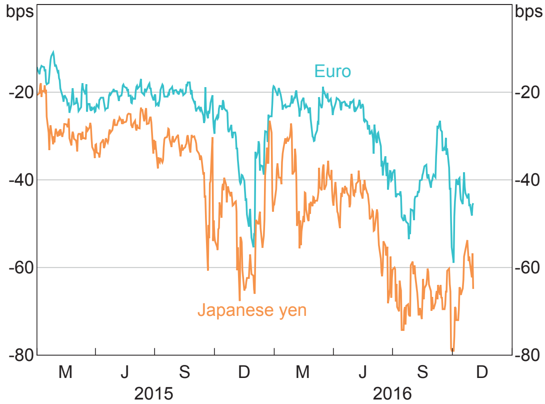
to government-only funds and investors have reallocated away from prime funds. Since the reforms came into effect, spreads on short-term bank funding have narrowed slightly and the weighted-average maturity of prime funds' assets has increased modestly.

The premium for borrowing US dollars in exchange for yen in short-term foreign exchange swap markets fell to its lowest level since June alongside the slowing in the pace of foreign bond purchases by Japanese residents in recent weeks (Graph 2.10). The cost of borrowing in exchange for euros has increased and rose sharply around the end of the September quarter, in part as concerns rose about the capital position of European banks.

Gross and net bond issuance by Chinese corporations increased in the September quarter, following slower issuance in the June quarter (Graph 2.11). Investor sentiment towards the corporate bond market in China has improved, despite the first liquidation of a company that had issued bonds in the interbank market. A number of factors have contributed to the improved sentiment, including: a lower frequency of missed bond payments over recent months; reports of increased government support for a number of state-owned companies; the release of draft regulations that would restrict the ability of banks' wealth management products to invest funds in

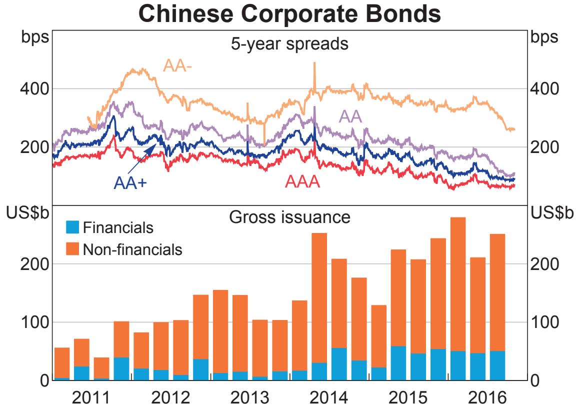
Graph 2.10
Cross-currency Basis

3-month maturity, against the US dollar



Source: Bloomberg

Graph 2.11
Chinese Corporate Bonds



Sources: Bloomberg; CEIC Data; Dealogic; RBA

asset classes considered riskier than corporate bonds; and a recovery in commodity prices, which has supported firms in a number of industries. Correspondingly, spreads on lower-rated corporate bonds over Chinese government bonds have narrowed significantly over recent months and spreads on highly rated bonds have been stable around historical lows, although corporate leverage in China remains at a high level.

In late September, Chinese authorities approved the first deal (for Sinosteel, a central government-owned enterprise) under a new debt-for-equity swap program, which aims to reduce the debt burden of companies in overcapacity industries. In

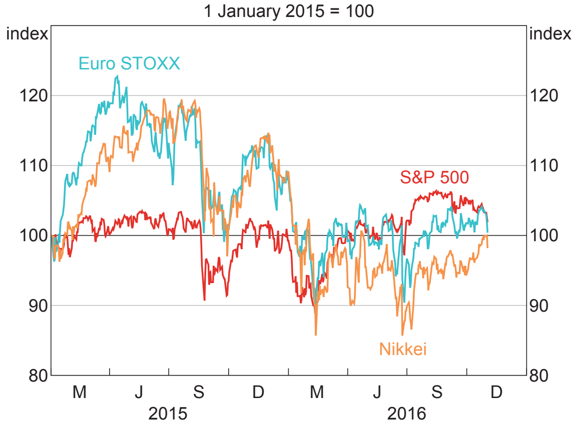
October, the State Council released guidelines for reducing corporate leverage, including encouraging the use of a number of measures that have been implemented recently, such as debt-for-equity swaps, mergers and acquisitions, bankruptcies and the securitisation of non-performing loans. The guidelines for debt-for-equity swaps specify that companies that have little prospect of returning to profitability are prohibited from participating and that the process is to be market oriented.

Spreads on US dollar-denominated bonds issued by other emerging market corporations over US Treasuries have mostly continued to narrow in recent months, in line with changes in sovereign bond spreads. Bond issuance by emerging market corporations has increased recently, but remains low over the year.

Equities

Global equity prices recovered quickly from the declines recorded in the wake of the UK referendum and have subsequently mostly traded in narrow ranges (Graph 2.12). Periods of volatility stemming from changes in the outlook for monetary policy have been brief. In the United States, share prices have been supported by expectations that aggregate corporate earnings in the September quarter will increase for the first time since mid 2015, although uncertainty around the outcome of the US presidential election has weighed on share prices more recently. European and Japanese share prices have benefited from the continued highly accommodative monetary policy of their respective central banks. Purchases of exchange-traded funds by the BoJ have provided additional support in Japan. However, equity prices in both markets remain below their levels at the start of the year (Table 2.2). In the United Kingdom, share prices have more than recovered from their sharp falls following the UK referendum result, despite concerns around the ramifications of a possible exit by the United Kingdom from the European Single Market, and have outperformed most other developed markets over the year. Internationally focused firms in particular have outperformed, reflecting the sharp depreciation of the UK pound.

Graph 2.12
Major Share Price Indices
1 January 2015 = 100



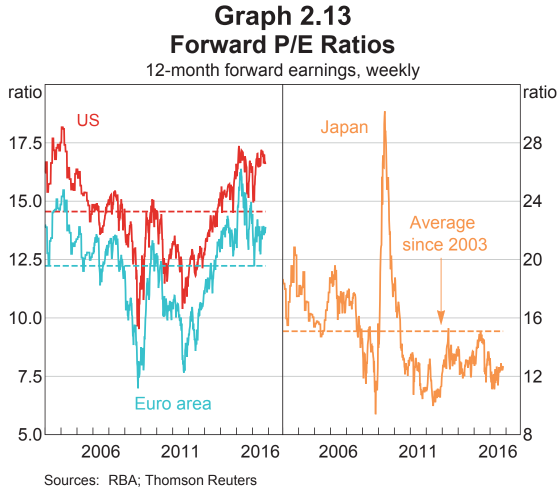
Source: Bloomberg

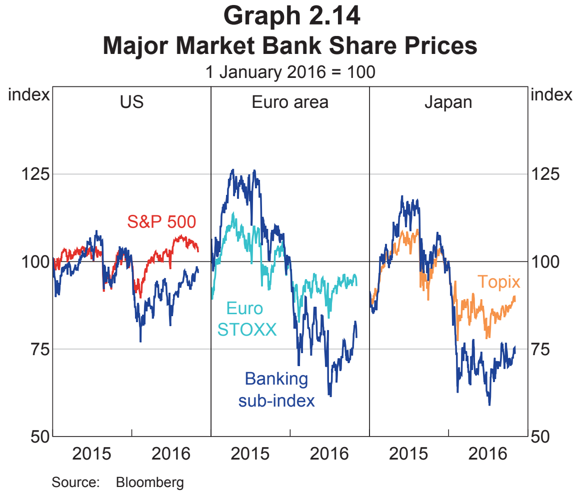
Table 2.2: Changes in International Share Prices
Per cent

	2016 to date
United States – S&P 500	3
Euro area – STOXX	–7
United Kingdom – FTSE	10
Japan – Nikkei	–10
Canada – TSE 300	12
Australia – ASX 200	–1
China – MSCI All China	–7
MSCI indices	
– Emerging Asia	8
– Latin America	27
– Emerging Europe	7
– World	**2**

Source: Bloomberg

In the United States, and to a lesser extent in the euro area, valuation measures such as forward price-to-earnings ratios remain relatively high, though levels are within historical ranges (Graph 2.13). The elevated valuations in part reflect historically low interest rates, as well as expectations of an extended recovery in corporate earnings.

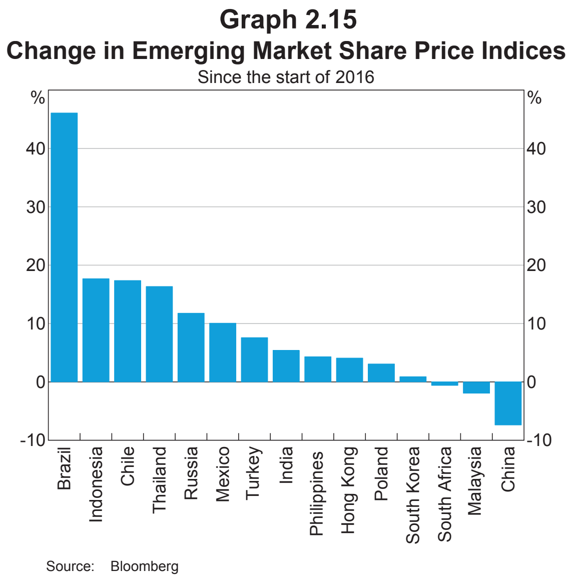




Japanese valuation measures remain below their long-run average.

Bank share prices in the United States and euro area have outperformed their respective broader indices since recovering from their lows that followed the UK referendum result, but remain below their levels at the start of the year (Graph 2.14). This outperformance occurred despite a period of concern around the size of potential fines that may be imposed on Deutsche Bank by the US Department of Justice. September quarter profits for the major US and European banks were generally higher than in the same period last year and were higher than analysts' forecasts, because of an increase in client fixed income and currency trading activity, which rose due to volatility following the UK referendum and ahead of the implementation of US money market fund reforms.

Share prices in emerging markets have risen slightly over recent months and have outperformed most developed markets since the beginning of the year (Graph 2.15). Chinese equity prices have risen recently, but are still below their levels at the beginning of the year following sharp declines in early 2016. Hong Kong share prices have benefited from a significant increase in southbound investment via the Shanghai-Hong Kong Stock Connect scheme; differences between share prices

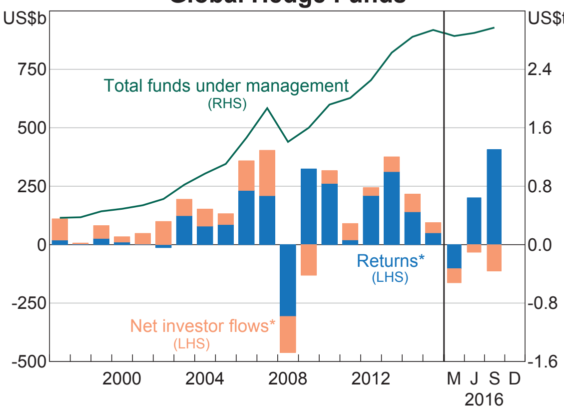


in Hong Kong and on the mainland A-share market of Chinese companies with a dual listing (the AH Premium) have narrowed to their lowest level since December 2014. Share prices in Brazil have risen by around 45 per cent since the beginning of the year, outperforming other developed and emerging equity markets owing to a rise in commodity prices, reduced political uncertainty and a more favourable economic outlook. Over 2016, emerging market equity indices have increased by about 10 per cent, driven by Latin America and, to a lesser extent, emerging Asia.

Hedge Funds

Global hedge funds recorded an asset-weighted return on investment of 2.1 per cent over the September quarter, underperforming a balanced portfolio of global bonds and equities (Graph 2.16). Equity-focused funds posted the strongest returns, particularly those that invest in the technology, healthcare and energy sectors. Funds focused on emerging markets also experienced strong returns, led by funds targeting emerging Asia. Investors made net withdrawals from hedge funds for the fourth consecutive quarter, but positive investment returns resulted in funds under management increasing by more than US$70 billion over the September quarter to US$3 trillion.

Graph 2.16
Global Hedge Funds



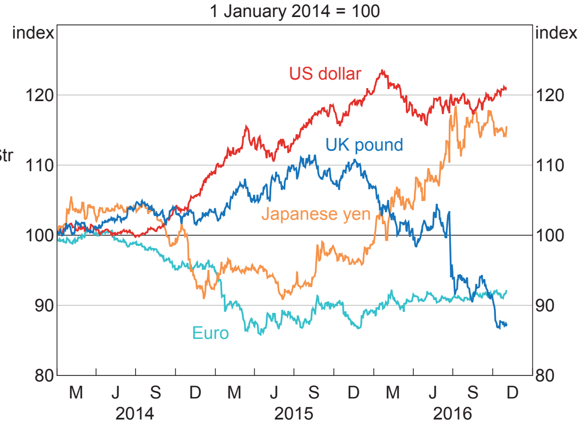
* Annualised for 2016 data
Sources: Hedge Fund Research, Inc.; RBA

Foreign Exchange

The current and expected policies of the major central banks continue to be an important driver of foreign exchange markets. In addition, the UK pound, which depreciated significantly after the June referendum result to leave the European Union, has depreciated further over the past month in response to developments around the timing and nature of the United Kingdom's exit. Despite a pick-up in volatility in the UK pound, observed and forward-looking measures of volatility in other developed market currency pairs remain around their long-run averages.

The US dollar is little changed on a trade-weighted basis (TWI) since the start of the year, but in the intervening period has moved in line with changing expectations about the timing and extent of policy rate increases by the FOMC (Graph 2.17). The euro has appreciated against the US dollar and on a trade-weighted basis since the beginning of 2016, alongside a scaling back of expectations for further monetary stimulus by the ECB (Table 2.3).

Graph 2.17
Nominal Trade-weighted Indices
1 January 2014 = 100



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

The UK pound has continued to depreciate over the past few months despite economic data releases having been stronger than expected. In particular, the currency has depreciated since early October, prompted by a speech by Prime Minister May that set out a broad timetable for the exit and intimated that it was likely to involve the United Kingdom leaving the European Single Market. The UK pound has depreciated by 16 per cent against the US dollar and by 15 per cent on a trade-weighted basis from its level immediately prior to the UK referendum in late June, and is now around its lowest level on a trade-weighted basis in over 100 years (Graph 2.18). Realised volatility also increased very notably on 7 October when the UK pound depreciated sharply early in the Asian trading session; the currency

Table 2.3: Changes in the US Dollar against Selected Currencies
Per cent

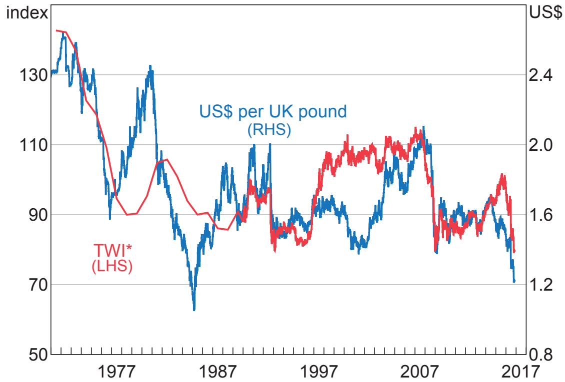
	Over 2015	2016 to date
UK pound sterling	6	20
Mexican peso	17	13
Swedish krona	8	6
Chinese renminbi	5	4
Philippine peso	5	3
Indian rupee	5	1
European euro	11	–2
South Korean won	8	–2
Singapore dollar	7	–2
Malaysian ringgit	22	–3
Swiss franc	1	–3
Thai baht	10	–3
Canadian dollar	19	–3
New Taiwan dollar	4	–4
Australian dollar	12	–5
Indonesian rupiah	11	–5
New Zealand dollar	14	–6
Russian rouble	24	–12
Japanese yen	0	–14
Brazilian real	50	–18
Trade-weighted index	**10**	**0**

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

quickly retraced some of the decline to finish the day only around 1 per cent lower against the US dollar. While the trigger for the initial decline remains unclear, the depreciation occurred when liquidity was low.

The Japanese yen rose significantly over the first half of 2016, and in July reached its highest level in almost three years against the US dollar and on a trade-weighted basis. Thereafter, the yen has tended to move sideways, with the appreciation being arrested by expectations that a further easing of monetary policy would be announced following the BoJ's comprehensive review of monetary policy in late September. In the event, the easing was less than expected but the yen has continued to move

Graph 2.18
UK Pound



* 1971–2016 average = 100, data prior to 1990 are annual averages
Sources: Bank of England; Bloomberg; RBA

broadly sideways, in part because of the widening in the differential between yields on Japanese bonds and those of other major sovereigns.

The Chinese renminbi (RMB) has been little changed on a trade-weighted basis over recent months. This partly reflects some easing of concerns about the near-term economic outlook in China, which had weighed on the RMB over much of the previous year; the RMB remains 7 per cent lower on a trade-weighted basis since the start of the year and 10 per cent lower since its August 2015 peak (Graph 2.19). Against the US dollar, the RMB has depreciated by 4 per cent since the start of the year, to trade at its lowest level since 2010. Realised volatility in the RMB against the US dollar has declined since March, reflecting the gradual nature of the RMB's recent depreciation.

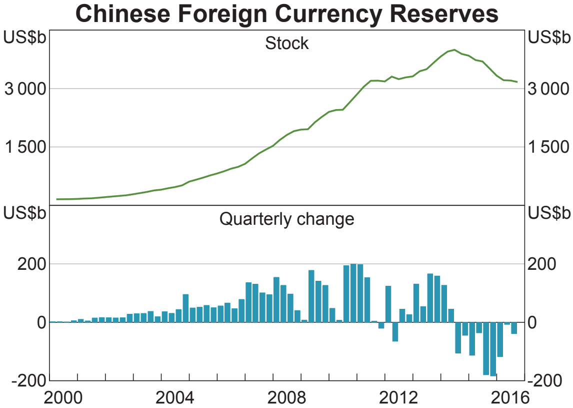
The value of the PBC's foreign currency reserves has been broadly stable since February, at around US$3.2 trillion (29 per cent of GDP) following sharp declines in the year to the March quarter 2016 (Graph 2.20). On 1 October the RMB entered the basket of currencies that determine the value of the IMF's Special Drawing Right (SDR) following the IMF Executive Board's decision in November 2015. The RMB has a weight of around 11 per cent in the basket, the third largest weight after the US dollar and the euro. In September, the World Bank issued the first tranche of bonds denominated in SDRs (but

Graph 2.19
Chinese Exchange Rates

* 2007 average = 100

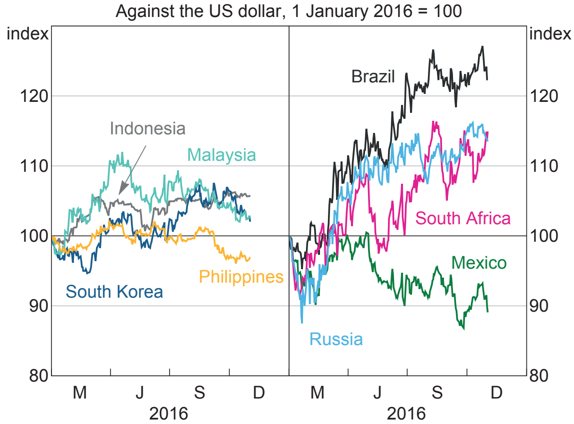
Sources: BIS; Bloomberg; RBA

Graph 2.20
Chinese Foreign Currency Reserves



Source: CEIC Data

Graph 2.21
Asian and Emerging Market Currencies
Against the US dollar, 1 January 2016 = 100



Source: Bloomberg

settled in RMB) in the onshore Chinese market, after becoming the first entity to receive approval from the PBC to issue such bonds.

Over the past few months, most emerging market currencies have been little changed or have depreciated against the US dollar (Graph 2.21). Increased expectations of further monetary policy tightening in the United States have weighed on emerging market currencies, and depreciations have generally been more pronounced in countries experiencing domestic political uncertainty. One exception has been the Russian rouble, which has appreciated by 5 per cent against the US dollar alongside stronger oil prices, to be around 30 per cent higher than its trough in mid January. Over the past few months, volatility in emerging market currencies declined to be around its average level since 2010.

The Mexican peso has depreciated a little against the US dollar since the previous *Statement* but has experienced large swings in its value over the period, reflecting developments in the US presidential election campaigns (Graph 2.22). From a longer-run perspective, the peso has depreciated by around 25 per cent against the US dollar since the end of 2014, consistent with the currency's use as a hedging and speculative instrument for risk in emerging market economies, uncertainty around US monetary policy and lower oil prices over this period.

The gross foreign currency reserves of most emerging market economies have been little changed or have increased slightly since the end of June (Table 2.4). The increase in Indonesia's gross foreign currency reserves since the end of June has partly reflected Bank Indonesia intervening to stem appreciation pressure in the rupiah following increased capital inflows, including as a result of the implementation of a tax amnesty program.

Australian Dollar

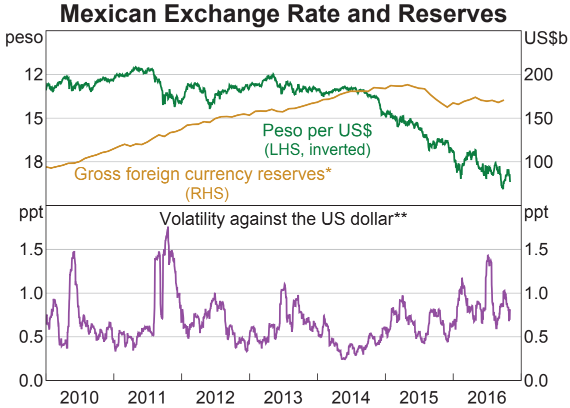
Since its most recent trough in late May, the Australian dollar has gradually appreciated and is now 7 per cent higher against the US dollar and on

Table 2.4: Gross Foreign Currency Reserves[(a)]

	Percentage change since:		Level
	End September 2015	End June 2016	US$ equivalent (billions)
China	–10	–1	3 166
Saudi Arabia	–15	–3	545
Taiwan[(b)]	2	1	437
South Korea	2	2	368
Brazil	1	1	354
Hong Kong	7	1	354
India	5	1	342
Russia	2	0	316
Singapore	1	2	251
Thailand	16	1	171
Mexico	–1	1	171
Indonesia	14	6	109
Turkey	0	0	100
Malaysia	5	1	90

(a) Data to end August for Mexico and Saudi Arabia; to end September for China, Hong Kong, Indonesia, Singapore, South Korea, Taiwan and Thailand; to 14 October for India, Malaysia, Russia and Turkey; and to 21 October for Brazil
(b) Foreign exchange reserves (includes foreign currency and other reserve assets)
Sources: Bloomberg; CEIC Data; Central Banks; IMF; RBA

Graph 2.22
Mexican Exchange Rate and Reserves



* Data to end September 2016
** Rolling 22-day standard deviation of daily percentage changes
Sources: Bank of Mexico; Bloomberg; IMF; RBA

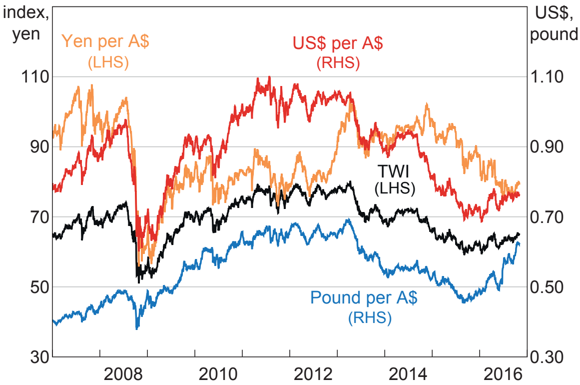
a trade-weighted basis (Table 2.5; Graph 2.23). The appreciation over this period has occurred alongside a rise in the terms of trade, and largely reflects appreciations against the RMB and, to a lesser extent, the UK pound. However, the Australian dollar remains around 30 per cent lower against the

Table 2.5: Changes in the Australian Dollar against Selected Currencies
Per cent

	Over 2015	2016 to date
UK pound sterling	–6	26
Chinese renminbi	–7	9
Indian rupee	–7	6
US dollar	–11	5
European euro	–1	3
South Korean won	–4	3
Singapore dollar	–5	3
Malaysian ringgit	9	2
Swiss franc	–10	2
Thai baht	–2	2
Canadian dollar	6	2
Indonesian rupiah	–1	–1
New Zealand dollar	2	–1
South African rand	19	–9
Japanese yen	–11	–9
Trade-weighted index	**–6**	**4**

Sources: Bloomberg; RBA

Graph 2.23
Australian Dollar



Sources: Bloomberg; RBA

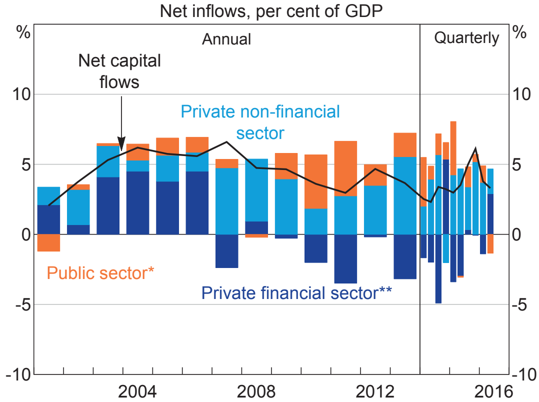
US dollar and around 20 per cent lower on a trade-weighted basis than its peak in the first half of 2013.

Capital Flows

Net capital inflows to the Australian economy were equivalent to 3½ per cent of GDP in the June quarter, around 1 percentage point lower than the average of net capital inflows over the past 15 years (Graph 2.24). 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 these net inflows were directed to the mining sector (which is majority foreign owned). Net inflows to the general government sector have continued at a moderate pace over recent years. Notwithstanding this, the foreign ownership share of Australian Government Securities declined by around 4½ percentage points (to around 60 per cent) over the first half of 2016, as net issuance was larger than foreign purchases; the foreign ownership share of state government debt increased slightly.

Australia's lower-than-average current account deficit, corresponding to the below-average capital inflows, has partly reflected a longer-term decline in the net income deficit. The net income

Graph 2.24
Australian Capital Flows
Net inflows, per cent of GDP



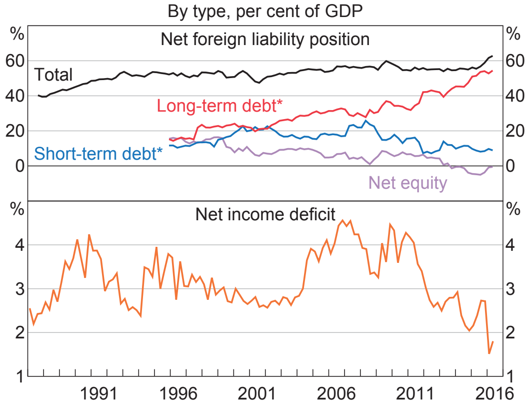
* Excludes official reserves and other RBA flows

** Adjusted for US dollar swap facility in 2008 and 2009

Sources: ABS; RBA

deficit, which largely comprises payments made on Australia's net foreign liabilities, has fallen to historically low levels. In the past few years, the decline has reflected higher receipts from foreign equity assets owned by Australian entities. Australia's net foreign liability position increased to a little over 60 per cent of GDP at the end of the June quarter, with recent increases mostly reflecting valuation effects (Graph 2.25). ✤

Graph 2.25
Net Foreign Liabilities
By type, per cent of GDP



* Short-term includes debt with an original maturity of one year or less; long-term includes all other debt

Sources: ABS; RBA

3. Domestic Economic Conditions

In 2015/16, output in Australia grew at around central estimates of the economy's potential rate of growth (Table 3.1; Graph 3.1).[1] Growth was supported by a significant increase in resource exports, consistent with new capacity coming online. At the same time, there were further large falls in mining investment. The transition of economic activity towards the non-mining sector has continued, as reflected in strong growth in dwelling investment and public demand and further growth in household consumption. Nominal income rose at a modest pace in 2015/16, mainly owing to the decline in commodity prices and low wage growth. However, commodity prices have risen over the course of 2016 and the terms of trade have increased of late following four years of significant declines.

The unemployment rate has declined a little further over recent months. While this suggests that labour market conditions have continued to improve,

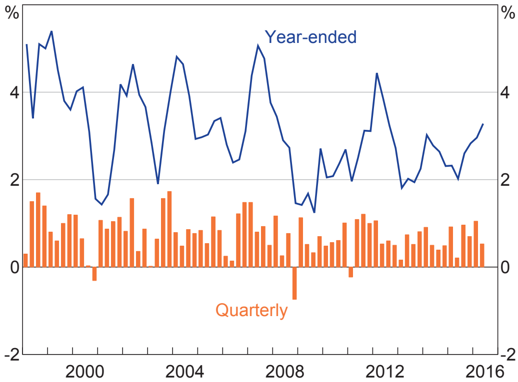
Table 3.1: Demand and Output Growth
Year average, per cent

	2015/16	2014/15
GDP	2.8	2.4
Domestic final demand	1.2	1.1
– Private demand[a]	0.6	1.2
– Consumption	2.9	2.6
– Dwelling investment	9.8	7.8
– Mining investment	–27.5	–20.1
– Non-mining investment[a]	1.0	6.9
– Public demand[a]	3.5	0.6
Change in inventories[b]	–0.1	0.3
Exports	6.7	6.7
Imports	–0.3	1.2
Mining activity	–2.0	–3.4
Non-mining activity	3.5	3.4
Nominal GDP	2.3	1.7
Real gross domestic income	0.6	0.1

(a) RBA estimates
(b) Contribution to GDP growth
Sources: ABS; RBA

1 Although the 2015/16 annual national accounts (shown in Table 3.1) contain the most recent data on GDP, the June quarter 2016 national accounts, which were released prior to the annual national accounts, contain the most recent data on quarterly movements in GDP.

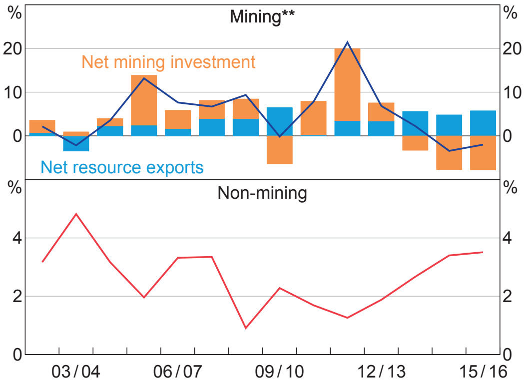
Graph 3.1
GDP Growth



Source: ABS

Graph 3.2
Mining and Non-mining Activity*

Year-average growth

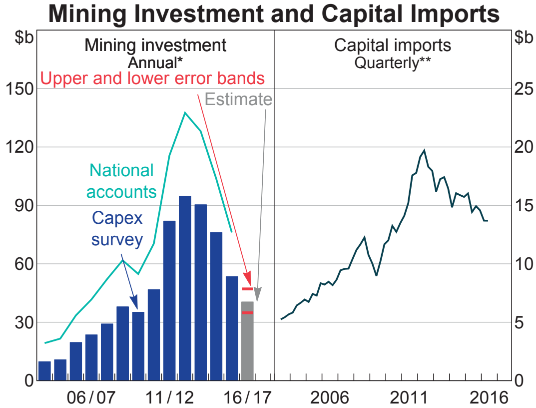


* Mining and non-mining activity estimated by the RBA

** Components are contributions to year-average mining activity growth; contribution from mining inventories omitted

Sources: ABS; RBA

Graph 3.3
Mining Investment and Capital Imports



* Current prices

** Chain volume; reference year 2013/14

Sources: ABS; RBA

some other labour market indicators have been less positive. Employment growth has moderated from its strong pace last year and full-time employment has declined over the course of this year. In line with that, the underemployment rate has remained elevated over the past year or so. Together with low wage growth, this suggests that there is more spare capacity in the labour market than implied by the unemployment rate.

Mining Activity

Activity in the mining sector declined in 2015/16, as the fall in mining investment was only partly offset by strong increases in resource exports (Graph 3.2). Mining activity is expected to expand as the drag from mining investment wanes over the next year or so and exports of liquefied natural gas (LNG) continue to ramp up. Further growth in iron ore export volumes is also likely, supported by increased production from Australia's large low-cost producers.

Mining investment has fallen significantly since its peak in 2012/13, from 9 per cent of GDP to about 4½ per cent in 2015/16 (Graph 3.3). Further declines are expected as work on LNG facilities continues to decline and few new projects are expected to commence. However, the largest subtraction of mining investment (net of imports) from GDP growth looks to have already occurred; the ABS capital expenditure (Capex) survey of investment intentions and Bank liaison point to a smaller subtraction in 2016/17.

Overall economic conditions remain relatively weak in Western Australia and, to a lesser extent, Queensland. The earlier large falls in commodity prices from their peak in 2011 exerted a significant drag on growth in output and income in those states. The increase in commodity prices over 2016 to date represents a marked change from previous years. If sustained, higher commodity prices will provide some support to growth in nominal income, but are not expected to lead to much additional mining investment over the next couple of years.

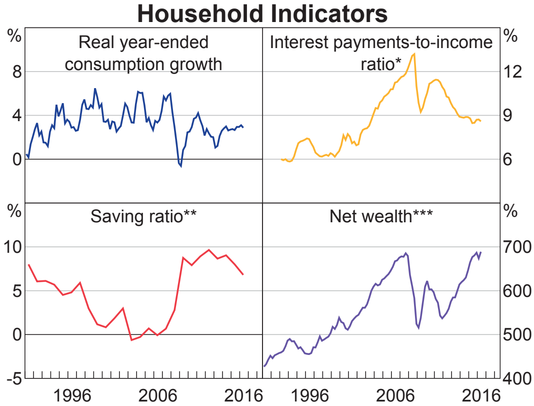
Non-mining Activity

Growth in non-mining activity has picked up over recent years, supported by low interest rates and the depreciation of the exchange rate since early 2013 (Graph 3.2). In 2015/16, non-mining activity increased by a little more than its average rate.

Household sector

Consumption growth has continued to be supported by low interest rates, rising household wealth and further increases in employment, although wage growth has been subdued. The household saving ratio has declined gradually, but remains at a relatively high level compared with outcomes over recent decades (Graph 3.4).

Graph 3.4
Household Indicators



* Excludes unincorporated enterprises
** Net of depreciation
*** Per cent of annual household disposable income before the deduction of interest payments

Sources: ABS; RBA

In 2015/16, growth in household consumption was close to its decade-average rate. However, growth was more moderate in the June quarter, owing to a decline in the consumption of goods; consumption of services grew at a similar pace to recent quarters. The weakness in goods consumption was consistent with subdued growth of retail sales in the June quarter. Growth in the value of retail sales remained modest early in the September quarter, potentially signalling further weakness in goods consumption. On the other hand, households' perceptions of their own finances have been above average for some time and increased in the September quarter.

There is some uncertainty about the likely strength of consumption growth over the period ahead. If weak growth in household income persists, households may restrain growth in future consumption, which would imply a more modest decline in the household saving ratio than has been observed in the past few years.

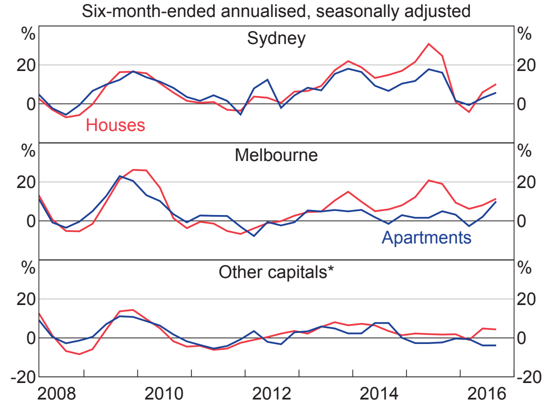
Housing price growth and auction clearance rates have risen in Sydney and Melbourne recently, although the number of auctions held remains lower than a year ago (Graph 3.5; Graph 3.6). In the private treaty market, the average discount on vendor asking prices has decreased slightly, but the average number of days that a property is on the market has increased from the lows of last year, mainly reflecting developments outside Sydney and Melbourne. Housing loan approvals have edged higher over recent months, driven by investor lending, and growth in lending to investors for housing has picked up to be close to that for owner-occupiers (see 'Domestic Financial Markets' chapter for further details on housing finance).

Notwithstanding the recent strengthening in housing market conditions in Sydney and Melbourne, overall conditions in the established housing market have eased relative to mid last year. Housing price inflation remains below the peaks in 2015. Housing credit growth is lower than a year ago, consistent with the tightening in lending standards since then and lower turnover. Tighter lending standards have been reflected in the declining share of interest-only loans over the past year and a decrease in new lending with loan-to-valuation ratios greater than 90 per cent.[2] Moreover, much of the increase in credit is being used to finance new housing construction rather

2 See RBA (2016), *Financial Stability Review*, October, pp 18–19.

Graph 3.5
Housing Price Growth by Dwelling Type

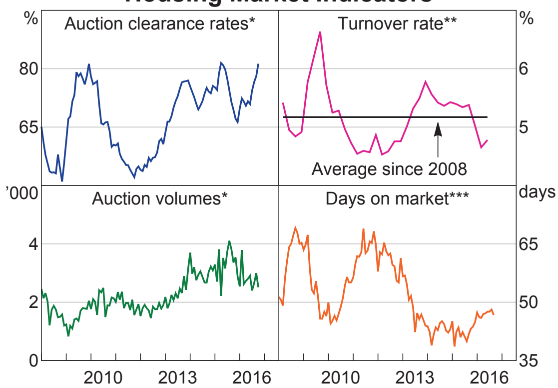
Six-month-ended annualised, seasonally adjusted



* Dwelling stock weighted average of Adelaide, Brisbane and Perth

Sources: APM; RBA

Graph 3.6
Housing Market Indicators



* Average of Melbourne and Sydney

** Share of dwelling stock; annualised

*** Capital city dwelling stock weighted median for private treaty sales only

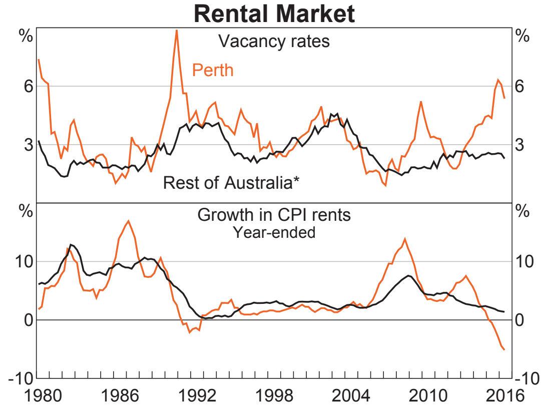
Sources: ABS; APM; CoreLogic; RBA; Real Estate Institute of Victoria

than consumption (in contrast to the experience of the early 2000s).

Private dwelling investment continued to grow at an above-average rate in 2015/16. Residential building approvals remain well above their long-run average, driven by higher-density approvals, and there is a significant amount of work in the pipeline. That work is expected to support a high level of dwelling investment for some time, although the rate of growth in dwelling investment is expected to decline over the forecast period.

In some residential markets, such as apartment markets in inner-city areas of Melbourne and Brisbane, there are concerns that the significant new supply of dwellings in the pipeline will outpace growth in demand for housing and place downward pressure on rents and prices. This in turn could increase the risk of off-the-plan purchases failing to settle.[3] While there are reports of some settlement delays and settlement failures, liaison suggests that so far the incidence of these is not higher than usual (although there looks to have been a slight rise in settlement delays for some foreign buyers). In Western Australia, over recent years population growth has declined, the unemployment rate has increased, household income growth has moderated and yet dwelling completions have been high. This has led to a sharp rise in rental vacancy rates and a noticeable decline in rents and prices in Perth (Graph 3.7). Rent growth in the rest of the country has declined to low levels, but vacancy rates have been generally steady and relatively low.

Graph 3.7
Rental Market



* Capital cities only; excludes Adelaide from March quarter 2015

Sources: ABS; RBA; REIA

3 If the buyer is unwilling or unable to settle the purchase of the property, the deposit is forfeited and the property developer can resell the property. See RBA (2016), 'Box B: The Housing Market', *Statement on Monetary Policy*, August, pp 42–44; RBA (2016), *Financial Stability Review*, October p 17.

Non-mining business sector

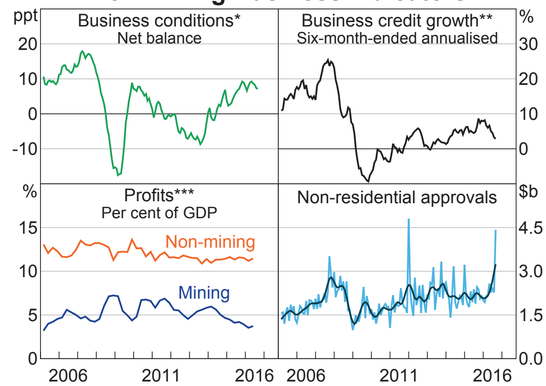
Revised data in the annual national accounts suggest that non-mining business investment has been on an upward trend for the past few years, after declining in 2012/13, although growth was modest in 2015/16. The rise in non-mining investment is consistent with the pick-up in non-mining activity over recent years, which has been supported by low interest rates and the earlier depreciation of the exchange rate.

Indicators such as the ABS Capex survey suggest that non-mining business investment is likely to be 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 had relatively strong investment outcomes over recent years, nor does it measure investment in intangible capital such as software, which has also grown relatively strongly. Private non-residential building approvals have picked up of late, reflecting increases in New South Wales and Victoria, although work yet to be done (as a share of GDP) has been on a downward trend for the past two years or so.

By state, the Capex survey suggests that the weakness in non-mining investment has been most evident in Western Australia and Queensland, where the downturn in the terms of trade and mining investment have had a large, direct effect on demand. In contrast, non-mining business investment appears to have increased somewhat in New South Wales and Victoria, which are less exposed to the mining sector and where economic conditions have improved over the past couple of years.

Survey measures of business conditions in the non-mining sectors have been above average for some time (Graph 3.8). Survey measures of profitability are at above-average levels, although the ABS measure of non-mining company profits has been little changed as a share of nominal GDP. Business credit growth has moderated recently, although this partly reflects a reduction in the growth of credit extended to mining-related firms.

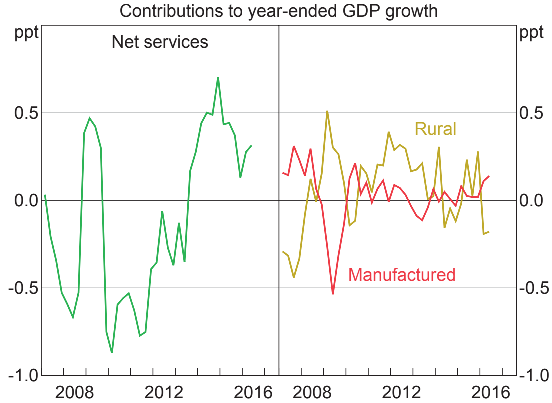
Graph 3.8
Non-mining Business Indicators



* Deviation from long-run average; gross value added weighted; three-month moving average
** Business credit includes mining and non-mining industries
*** Inventory valuation adjusted gross operating profits
Sources: ABS; APRA; NAB; RBA

The depreciation of the exchange rate since early 2013 has supported growth in non-mining exports. Net service exports have made a significant contribution to GDP growth over this period, with tourism, education and business services exports all expanding (Graph 3.9). Manufactured exports have picked up since the beginning of 2016, following several years of little change. Rural exports, most notably wheat and beef, have declined in the year

Graph 3.9
Non-mining Exports
Contributions to year-ended GDP growth



Sources: ABS; RBA

to date. The global stock of wheat is at a historically high level resulting in low wheat prices, while Australian beef supply has been tightening as farmers rebuild their herds.

Government sector

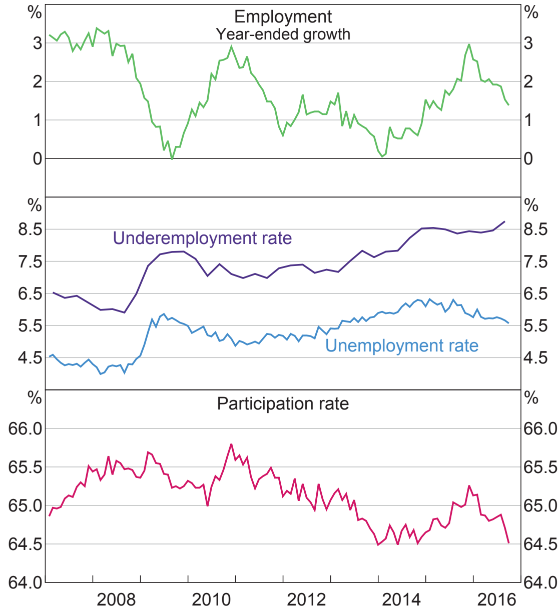
Public demand has contributed strongly to growth over the past year, in part reflecting an increase in infrastructure investment in New South Wales and Victoria. Federal and state budgets suggest that the consolidated deficit will widen a little in 2016/17 to around 3 per cent of GDP. Deficits are expected to be progressively lower over subsequent years and the consolidated deficit is forecast to return to a balanced position by around 2019/20.

Labour market

The unemployment rate continued to decline in the September quarter and is a bit more than half a percentage point below its peak in mid 2015 (Graph 3.10). While the unemployment rate has declined more quickly than had been expected a year ago, other indicators paint a more mixed picture and are consistent with some moderation in labour market conditions over the course of this year.

In particular, following strong growth in late 2015, employment growth has slowed to a more modest pace and the increase in employment since then has been in part-time jobs (See 'Box B: Trends in Part-time and Full-time Employment'). Also, the underemployment rate – which captures employees who are available and would like to work more hours – has picked up a little over the past year and remains elevated. The pick-up in underemployment has been driven by males, while underemployment has been little changed for females. This difference may reflect the loss of full-time jobs in industries that tend to hire a larger share of males, such as mining, manufacturing and utilities. Moreover, the participation rate has declined a little of late, mostly because of a decline in male participation.

Graph 3.10
Labour Market

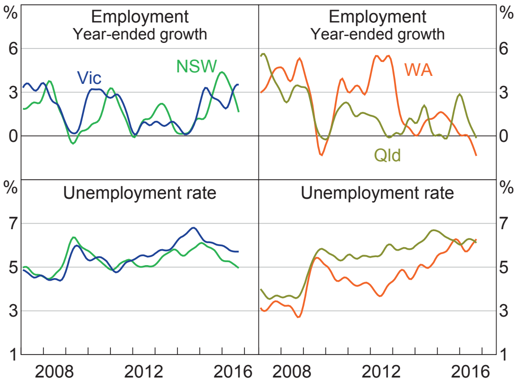


Source: ABS

Differences in the labour market across states are consistent with the rebalancing of economic activity from mining to the non-mining sectors. Although most new jobs created this year have been part-time, total employment has grown in New South Wales and Victoria, been subdued in Queensland and declined in Western Australia (Graph 3.11). Over the past two years, the unemployment rate has declined in all states except Western Australia, where it has increased noticeably. A sharp slowing in net interstate and overseas immigration to the resource-rich states has assisted adjustment to slowing growth in labour demand and helped to limit the rise in unemployment rates in Queensland and Western Australia.

By sector, household services has been the most important contributor to employment growth over the past couple of years. Within that sector, there have been further increases in employment in the health and education industries and, more recently, employment growth in the accommodation & food industry has increased, possibly reflecting a

Graph 3.11
Labour Market by State
Trend

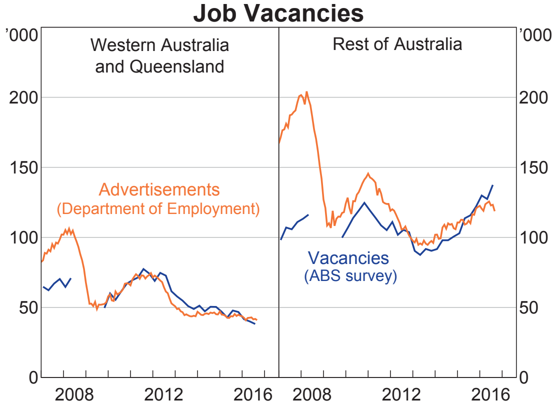


Sources: ABS; RBA

boost in demand owing to the earlier depreciation of the exchange rate. Within the goods sector, construction employment has grown strongly for several years, owing to the pick-up in residential construction activity, which has offset the decrease in employment associated with the decline in mining-related construction work. Mining employment is now back to around 2011 levels.

Overall, forward-looking indicators of labour demand point to continued moderate growth in total employment in the near term. Job vacancies have increased steadily in the non-resource states, but remain subdued in the resource-rich states, indicating that the divergence in employment outcomes between the states is likely to continue for a time (Graph 3.12). Although reductions in mining-related employment associated with falls in mining investment appear to be largely complete, there are likely to be some further job losses over the next couple of years associated with the completion of LNG projects. The degree of excess capacity in the construction industry in Western Australia is unlikely to abate over the next year or so.

Graph 3.12
Job Vacancies

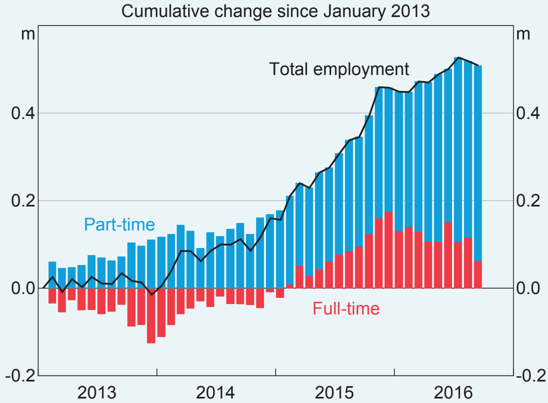


Sources: ABS; Department of Employment; RBA

Box B
Trends in Part-time and Full-time Employment

Part-time work has accounted for all of the increase in employment since the beginning of the year and more than two-thirds of the increase since 2013 (Graph B1).[1] Over the longer run, the share of part-time employment has increased steadily to be around one-third of total employment, compared with 10 per cent in the mid 1960s (Graph B2).

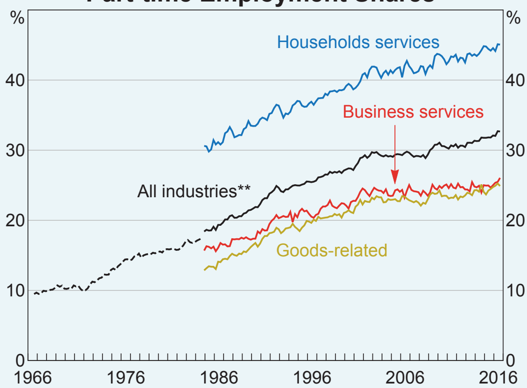
Graph B1
Composition of Employment
Cumulative change since January 2013



Source: ABS

The secular rise in the share of part-time employment reflects developments in both labour supply and demand.[2] On the supply side, more flexible employment arrangements have made it easier for people to combine employment with other activities such as education and caring for family members (although factors such as greater access to childcare have also contributed). On the labour demand side,

Graph B2
Part-time Employment Shares*



* Seasonally adjusted by RBA
** Series break in 1984 due to change in Labour Force Survey; post-1984 series excludes agriculture, forestry & fishing, and public administration & safety
Sources: ABS; RBA

firms have used part-time employment to respond to fluctuations in demand for their output and to increase organisational flexibility.

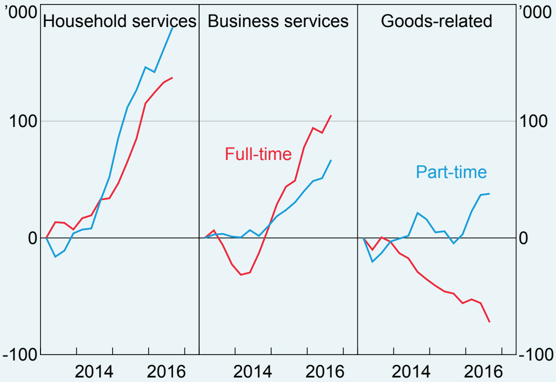
Over recent years, the relative strength in part-time employment has also reflected changes in the sectoral composition of employment growth. Since 2013, employment growth has been strongest in the household services sector, where the share of part-time employment is relatively high at about 45 per cent (Graph B3).[3] The strength in household services employment is consistent with the pick-up in the growth of non-mining activity as the economy rebalances away from mining investment. Over this period, the share of

1 The Labour Force Survey classifies people as full-time if they worked more than 35 hours across all jobs in the survey reference week or if they worked less than 35 hours but usually work more than 35 hours. Part-time employment consists of those who usually, and in the survey reference week, work less than 35 hours.

2 For further information on longer-run trends in part-time employment see Abhayaratna J, L Andrews, H Nuch and T Podbury (2008) 'Part Time Employment: the Australian Experience', Productivity Commission Staff Working Paper, June.

3 The household services sector includes the accommodation & food, arts & recreation, education and health & social assistance industries. The business services sector includes the administration & support, financial & insurance, media & telecommunications, professional, scientific & technical, and rental, hiring & real-estate industries. The goods-related sector includes the construction, manufacturing, mining, retail trade, transport, postal & warehousing, utilities, and wholesale trade industries.

Graph B3
Employment by Sector*
Change since February 2013



* Seasonally adjusted by RBA; does not remove the effects of changes in the timing of ABS supplementary surveys; four-quarter moving average

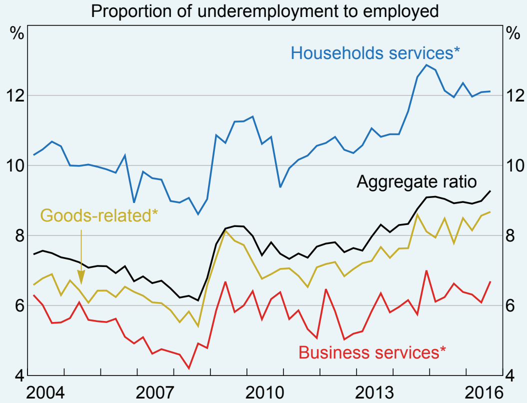
Sources: ABS; RBA

part-time employment in the business services and goods-related sectors has also increased, but remains much lower than for household services at around 25 per cent. Employment growth has been weakest in the goods-related sector, in part reflecting the fall in employment related to mining activity since 2013 and the ongoing decline in manufacturing employment.

Since 2013, the shift towards part-time employment *within* each sector has also become more pronounced. This is most obvious in the household services and goods-related sectors, where part-time employment has risen by more than full-time. The shift towards part-time employment within sectors is consistent with liaison reports that firms have been hesitant to employ full-time workers until they see evidence that increased demand for their output is likely to be sustained. Firms can more easily adjust the hours of part-time workers than those of full-time workers. As such, part-time employees provide firms with greater flexibility than full-time employees to adjust hours of work in response to fluctuations in demand for their output.[4] Adjusting hours for full-time employees (including via changes to overtime) typically provides a more limited margin of adjustment. Casual employees provide firms with greater flexibility than permanent part-time employees (although they are typically compensated for this flexibility with a higher wage). However, there has been relatively little change to the share of part-time employees who are casual over the past few years.

While the unemployment rate has declined over the past year, the underemployment rate – which captures the share of employed people who want and are available to work additional hours – has remained elevated (Graph B4).[5] This suggests that the recent strength in part-time employment is more likely to have been driven by weakness in labour demand than changes in employee preferences. The underemployment rate has risen noticeably for males, in part because of the relatively

Graph B4
Underemployment Ratio by Sector
Proportion of underemployment to employed



* Seasonally adjusted by RBA

Sources: ABS; RBA

4 More generally, there is evidence that a larger share of cyclical labour market adjustment since the late 1990s has come about via changes in average hours worked per employee, as opposed to changes in employment. See Bishop J, L Gustafsson and M Plumb (2016), 'Jobs or Hours? Cyclical Labour Market Adjustment in Australia', RBA Research Discussion Paper, No 2016-06.

5 It is not uncommon for the underemployment rate to remain elevated for a period of time following a peak in the unemployment rate.

high proportion of male employment in goods-related industries where full-time employment has declined. In contrast, employment growth has been strong in the household services sector and the underemployment ratio in this sector has stabilised. The elevated level of underemployment implies that there is more spare capacity in the labour market than indicated by the unemployment rate alone.

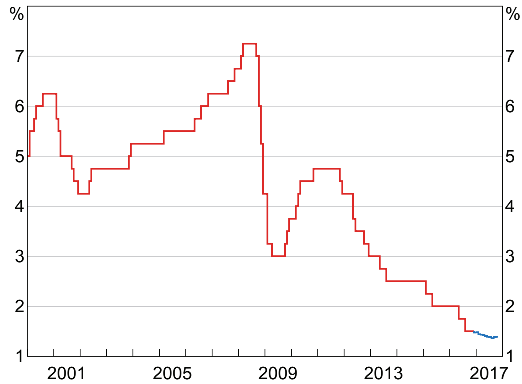
4. Domestic Financial Markets

Australian financial markets have been relatively quiet over recent months. Housing and business lending rates are at historic lows following the cash rate reduction in August. Bond yields are also at very low levels. The Australian Government and the major banks have been able to issue significant volumes of bonds at longer-than-usual maturities. Notwithstanding historically low interest rates, credit growth has continued to ease. Credit extended to businesses has slowed since earlier in the year and non-financial corporate bond issuance has remained low, particularly in the resources sector. Housing credit growth has also slowed a little, consistent with a reduction in turnover in the housing market. Equity prices have declined in recent months after having risen earlier in the year.

Money Markets and Bond Yields

After lowering the cash rate target in two 25 basis point steps in May and August, the Reserve Bank has maintained the cash rate target at 1.5 per cent. Rates on overnight indexed swaps (OIS) imply some chance of a further reduction in the cash rate over the year ahead (Graph 4.1).

Graph 4.1
Cash Rate*



* Data from December 2016 onwards are expectations derived from interbank cash rate futures

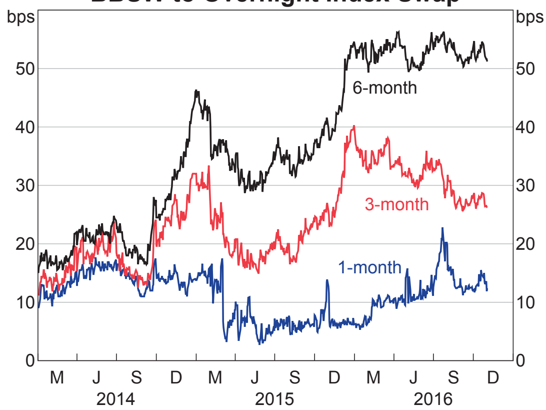
Sources: ASX; Bloomberg

Short-term secured interest rates in the repurchase agreement (repo) market have risen relative to OIS rates, though these spreads have retreated from their highs in recent weeks. The wider repo spreads reflect heightened demand for secured funding from market participants, particularly non-residents, and appears to be related to developments in the foreign exchange swap market and the bond futures market.[1] 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 do this. Bond futures have also been trading at higher implied prices than the basket of bonds that underlie the futures and, in response, some investors have sold the futures and bought the bonds using repo funding.

Short-term interest rates 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. Since the start of the year, 3-month bank bill rates (BBSW) have declined relative to OIS rates, while spreads for 6-month bank bill rates have remained broadly steady (Graph 4.2).

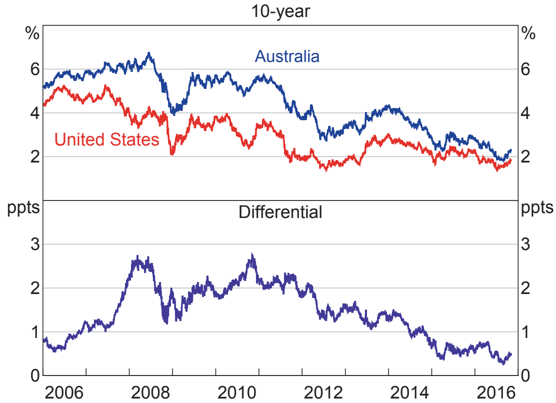
1 For more information, see Becker C, A Fang and J C Wang (2016), 'Developments in the Australian Repo Market', RBA *Bulletin*, September, pp 41–46.

Graph 4.2
BBSW to Overnight Index Swap



Sources: AFMA; Tullett Prebon (Australia)

Graph 4.3
Government Bond Yields



Sources: Bloomberg; RBA

After reaching an historic low of 1.8 per cent in August, yields on 10-year Australian Government Securities (AGS) have subsequently increased by around 50 basis points, primarily reflecting global developments (Graph 4.3). The spread between AGS and US Treasury yields, after narrowing earlier this year, is currently around 50 basis points. Of note, the Australian Office of Financial Management (AOFM) issued a 30-year bond for the first time in October, raising $7.6 billion via syndication at a yield to maturity of 3.27 per cent. The bond had greater international participation than seen at prior syndications, particularly from fund managers in Europe and North America.

State and territory governments have raised $33 billion in bonds ('semis') in the year to date. After taking into account maturities, the total stock of bonds outstanding has been little changed at around $242 billion. Funding requirements for the 2016/17 financial year are expected to be modest compared to recent years, reflecting asset sales such as the Port of Melbourne and Ausgrid.

Bond issuance by non-residents in the domestic market ('Kangaroo' issuance) over the past year has been below the average of recent years. Several US corporations issued large volumes of bonds earlier in the year, but issuance by supranational institutions, foreign sovereigns and agencies has been slightly below average in recent months.

Secondary market spreads to AGS for AAA rated issuers have tightened in recent months and are back around levels seen in late 2015.

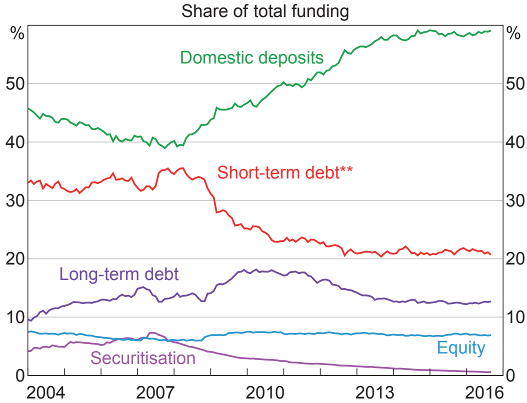
Financial Intermediaries

Growth in banks' balance sheets has continued to be a little slower than in 2015. The composition of banks' funding has remained fairly steady (Graph 4.4). Recent growth in liabilities has been driven by term deposits and long-term wholesale debt.

The introduction of the Net Stable Funding Ratio (NSFR) in January 2018 is influencing the composition of banks' balance sheets. The NSFR forms part of the Basel III liquidity reforms and provides an incentive for banks to fund their assets and off-balance sheet activities with more stable sources of funding such as retail deposits, term deposits, long-term debt and equity, while encouraging less reliance on short-term wholesale liabilities.

Following the May and August cash rate reductions, estimates of the major banks' debt funding costs have come down. Since the beginning of the year, these costs have declined by a little less than the cash rate, mainly reflecting less than complete pass-through of the cash rate reductions to term deposit rates (see below). Estimated funding costs are expected to fall further as the cost of new wholesale debt remains below the cost of outstanding debt (Graph 4.5).

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

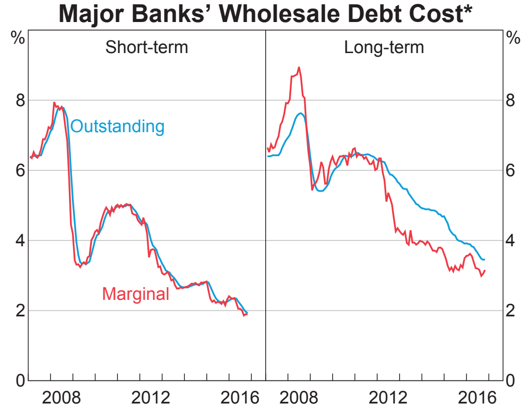


* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis

** Includes deposits and intragroup funding from non-residents

Sources: APRA; RBA; Standard & Poor's

Graph 4.5
Major Banks' Wholesale Debt Cost*

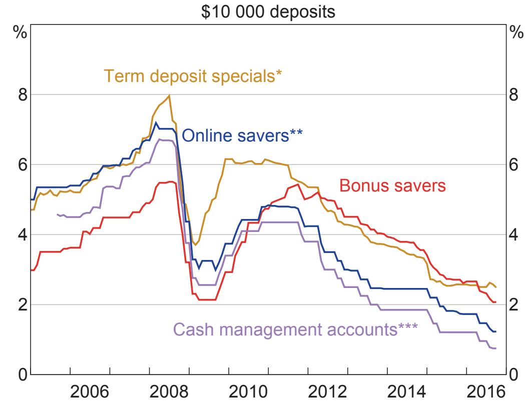


* RBA estimates; rates do not include interest rate hedges

Sources: Bloomberg; RBA

Competition for retail deposits, particularly term deposits, has increased over 2016 and banks expect this to continue over the next year, ahead of the introduction of the NSFR. The May and August cash rate reductions have been largely reflected in lower advertised rates for at-call deposits, while the major banks have only partially reduced term-deposit rates (Graph 4.6). In fact, following the August cash rate reduction the major banks increased rates on longer-dated term deposits, which comprise less than 2 per cent of total funding, although some of these increases have subsequently been reversed.

Graph 4.6
Major Banks' Deposit Rates
$10 000 deposits



* Average of 1–12, 24-, 36- and 60-month terms

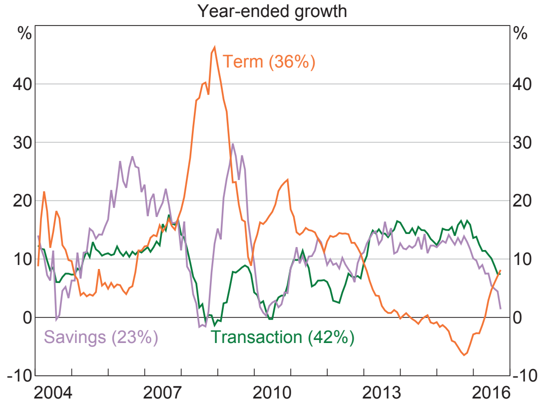
** Excludes temporary bonus rates

*** Deposits over $250 000

Sources: Canstar Cannex; RBA

The recent widening in the spread between term deposit rates and the cash rate follows a period of several years when term deposit rates were relatively low compared to interest rates on other funding sources, such as short-term wholesale funding and bonus saver accounts. Consistent with interest rates on term deposits becoming more attractive than other deposit types, stronger growth in term deposits has been observed more recently (Graph 4.7).

Graph 4.7
Deposits by Product Type*
Year-ended growth

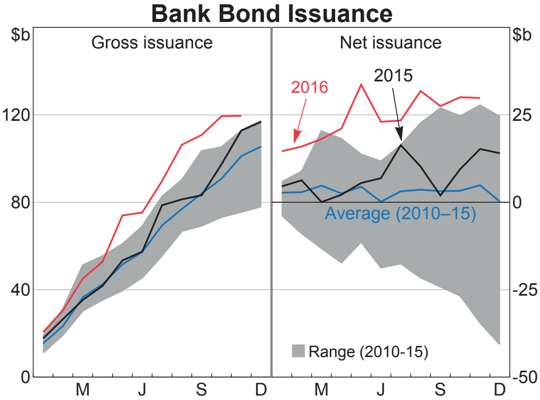


* Break-adjusted; not seasonally adjusted; excludes foreign currency, intra-group deposits and certificates of deposit; values in brackets represent share of AUD deposits

Sources: APRA; RBA

Australian banks have issued a large volume of bonds this year, with net bond issuance well above the average over the past few years (Graph 4.8). Some of this issuance is in advance of some large maturities over coming quarters. Banks are also responding to strong demand for longer-term paper by issuing more bonds at the 10-year tenor. This continues the trend seen over the past couple of years, and the average tenor of new bank bond issuance has increased from four years in 2014 to around five years now. Secondary market yields on major banks' bonds remain very low, while spreads to benchmark rates have narrowed since earlier in the year.

Graph 4.8
Bank Bond Issuance

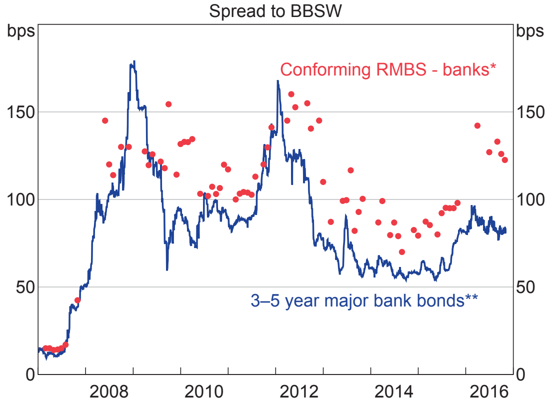


Source: RBA

Activity in the asset-backed securities (ABS) market has been below average in the year to October, owing mainly to a reduction in residential mortgage-backed securities (RMBS) issuance by the major banks. Other issuers, including non-bank originators and issuers of securities backed by automotive loans and leases, recorded low issuance early in the year, although their issuance has picked up in recent months. Primary market spreads to bank bills remain elevated, particularly relative to spreads on unsecured bank debt, although they have narrowed since their peak earlier in the year (Graph 4.9).

Hybrid issuance by Australian financial institutions has continued at a pace above that of recent years, with $17 billion issued so far this year. Recent deals have included a Basel III-compliant Additional Tier 1 (AT1) hybrid by a major bank and Tier 2 issuance by a range of banks and insurance companies.

Graph 4.9
Bond Spreads
Spread to BBSW

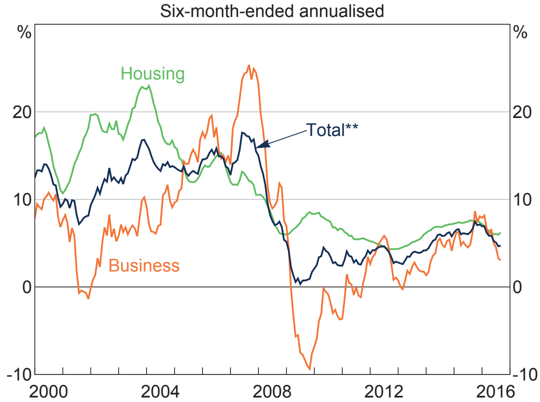


* Primary market pricing of AAA rated tranches
** Secondary market prices
Source: RBA

Financial Aggregates

Total credit growth has continued to slow in recent months (Graph 4.10). Growth in housing credit has eased relative to the pace seen in 2015, while business credit growth has softened further. Total credit has been growing at around the same pace as broad money (Table 4.1).

Graph 4.10
Credit Growth by Sector*
Six-month-ended annualised



* Seasonally adjusted and break-adjusted; including securitisation
** Includes housing, personal and business credit
Sources: ABS; APRA; RBA

Table 4.1: Financial Aggregates
Percentage change[(a)]

	Three-month ended		Year-ended
	June 2016	Sep 2016	Sep 2016
Total credit	1.1	1.2	5.4
– Housing	1.5	1.6	6.4
– Owner-occupier	1.6	1.6	7.3
– Investor	1.1	1.6	4.8
– Personal	–0.3	–0.5	–1.3
– Business	0.8	0.6	4.7
Broad money	1.1	1.3	5.8

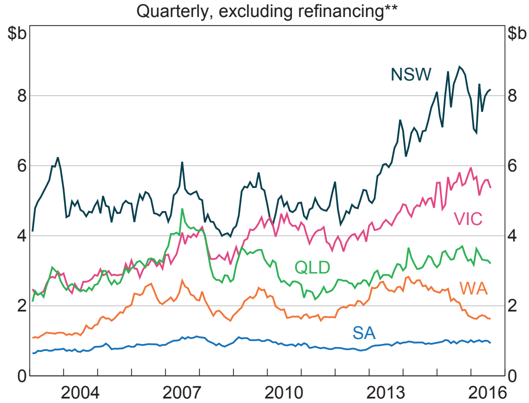
(a) Growth rates are break adjusted and seasonally adjusted
Sources: APRA; RBA

Household Financing

Housing credit growth has eased to an annualised pace of around 6 per cent. Growth in net housing debt is about 1 percentage point below growth in housing credit due to ongoing strong growth in deposits in mortgage offset accounts.

While the slowing in housing credit growth and loan approvals has been reasonably broad based, there remains some divergence in the pace of growth across states (Graph 4.11). The slowing in loan approvals has been particularly pronounced in Western Australia; while loan approvals in NSW have also eased over the past year, they continue at a pace noticeably above the national average.

Graph 4.11
Housing Loan Approvals by State*
Quarterly, excluding refinancing**



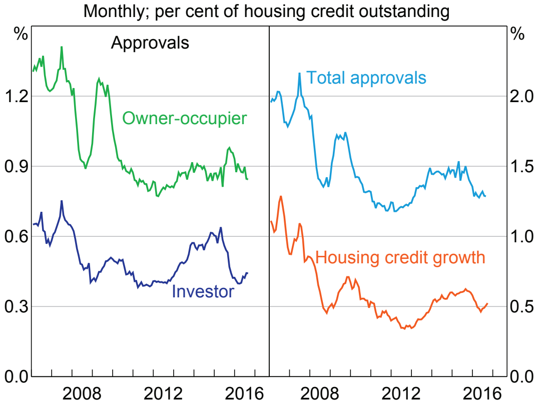
* Seasonally adjusted
** Investor refinancing is RBA estimate
Sources: ABS; APRA; RBA

Growth in credit advanced to investors has increased a little in recent months, consistent with a pick-up in investor housing loan approvals. In contrast, growth in credit advanced to owner-occupiers has eased a little recently. The current level of approvals is consistent with housing credit growth continuing at around its current pace (Graph 4.12).

The slowing in housing loan approvals over the past year is consistent with the decline in turnover in the housing market. It also reflects slower growth in average dwelling prices and a decrease in the average loan-to-valuation ratio. The latter follows the introduction of measures by the Australian Prudential Regulation Authority (APRA) to strengthen lending standards. Another factor that may be contributing to the easing in housing credit growth over the past year is an increase in the share of off-the-plan purchases, which are yet to flow through to the demand for credit. These transactions do not involve a mortgage at the time the dwelling is purchased off the plan, but add to the stock of housing credit when a mortgage is provided to the purchaser upon completion of the dwelling.

Around half of the August cash rate reduction was passed through to most advertised housing lending rates. The average outstanding housing interest rate has fallen by around 35 basis points this year and is likely to decline a little further as maturing loans are replaced with loans on lower

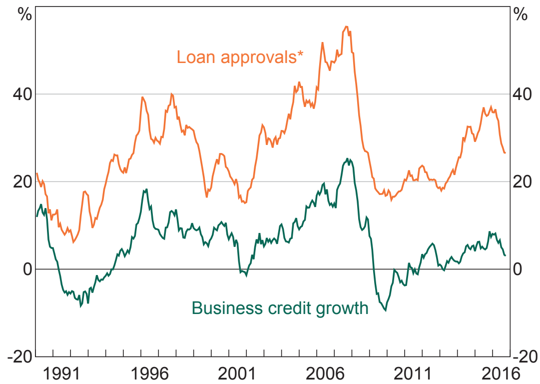
Graph 4.12
Housing Loans*
Monthly; per cent of housing credit outstanding



* Seasonally and break-adjusted; as share of housing credit; net of refinancing (investor refinancing is RBA estimate)

Sources: ABS; APRA; RBA

Graph 4.14
Business Loan Approvals and Credit
Six-month annualised

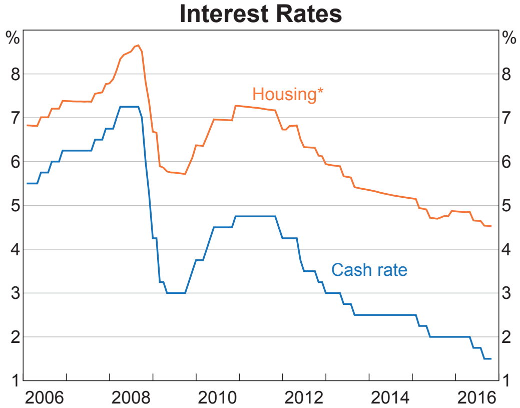


* Net of refinancing and reductions; as a share of business credit

Sources: ABS; APRA; RBA

interest rates (Table 4.2; Graph 4.13). The lowest available variable interest rates are more than 50 basis points below the average outstanding interest rate and, reflecting the lower rates on offer, the level of refinancing activity remains relatively high. One bank has recently introduced a loan product with the interest rate margin fixed at 249 basis points above the cash rate.

Graph 4.13
Interest Rates



* Estimated outstanding rate

Sources: ABS; APRA; Perpetual; RBA

Business Financing

Business credit growth has slowed over the past six months, consistent with the fall in business loan approvals (Graph 4.14). The decline in credit growth has been largely driven by a slowdown in lending to larger businesses. Some banks have been reducing exposures to businesses in selected industries, such as mining and resources, and to sectors with higher non-performing loans. Business credit continues to grow at a stronger pace than a broader measure of business debt, reflecting very modest wholesale debt issuance and slow growth in cross-border syndicated lending.

The slowdown in business loan approvals has been reasonably broad based outside the residential property sector. This reflects some easing in loan approvals to sectors such as finance and insurance, manufacturing, mining and property, business and other services (Table 4.3). Business loan approvals for residential property development have remained at a high level, while loan approvals for commercial property have declined.

Business lending rates have declined by less than the cash rate this year. Major banks passed through a little over half of the August cash rate reduction to their business lending rates. Banks have tightened underwriting standards and increased their margins on some lending to large businesses over the past year (Graph 4.15).

Bond and hybrid issuance by Australian corporations remains relatively low this year (Graph 4.16). This

Table 4.2: Intermediaries' Lending Rates

	Interest rate Per cent	Change since July 2016 Basis points	Change since December 2015 Basis points
Housing loans			
– Standard variable rate[a][d]			
– Owner-occupier	5.26	–13	–36
– Investor	5.50	–13	–39
– Package variable rate[b][d]			
– Owner-occupier	4.51	–8	–31
– Investor	4.75	–8	–36
– Fixed rate[c][d]			
– Owner-occupier	4.02	–26	–41
– Investor	4.13	–35	–57
– Average outstanding rate[d]	4.53	–12	–33
Personal loans			
– Variable rate[e]	11.27	–10	1
Small business			
– Term loans variable rate[f]	6.39	–11	–21
– Overdraft variable rate[f]	7.27	–11	–21
– Fixed rate[c][f]	5.22	–4	–21
– Average outstanding rate[d]	5.34	–15	–29
Large business			
Average outstanding rate[d]	3.51	–20	–40

(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 Cannex; RBA

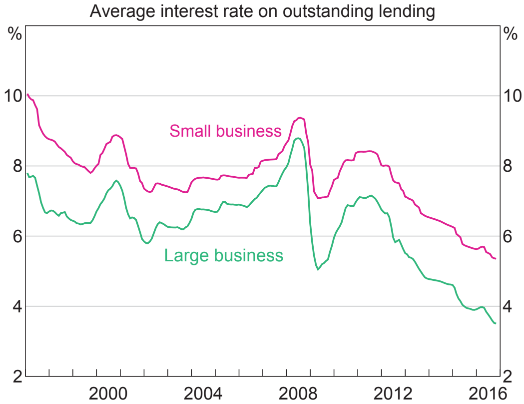
Table 4.3: Business Loan Approvals by Industry[a]

Percentage change

	Year-ended September quarter 2016	Industry share of credit June 2016
Property, business and other services	–10	48
Finance and Insurance	–6	19
Wholesale and retail trade and transport	8	13
Agriculture, forestry and fishing	1	7
Manufacturing	–27	5
Mining	–60	4
Construction	10	4
Total	**–8**	**100**

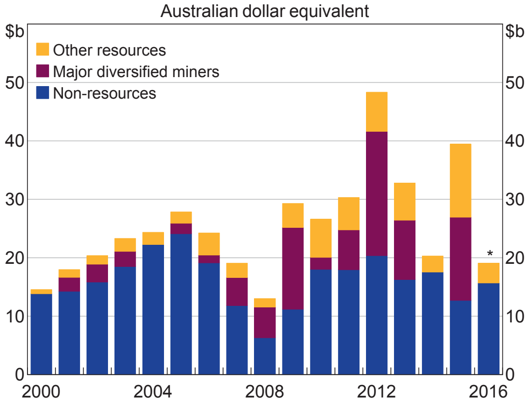
(a) Loan approvals by industry are gross of refinancing and reductions
Sources: APRA; RBA

Graph 4.15
Business Lending Rates*
Average interest rate on outstanding lending



* RBA estimates
Sources: APRA; RBA

Graph 4.16
Corporate Bond and Hybrid Issuance
Australian dollar equivalent

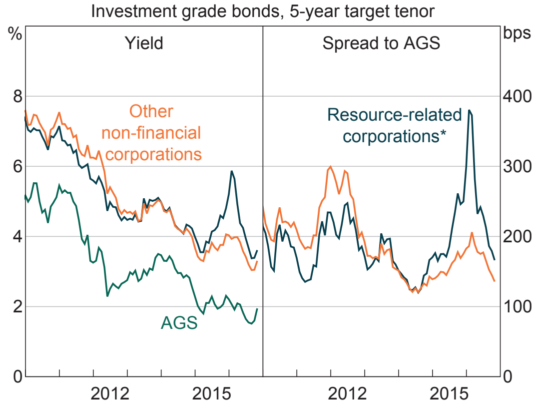


* Issuance is year to date
Source: RBA

mostly reflects the continued absence of issuance by the major diversified miners. However, in recent months there has been an increase in issuance by other non-financial corporations, with a range of deals issued in the domestic bond market and offshore. Yields for both resource-related and other non-financial corporations' bonds are around historic lows; spreads to AGS have continued to tighten in recent months and have reversed the widening that occurred over the second half of 2015 (Graph 4.17).

Net equity raisings by non-financial corporations totalled around $9 billion in the September

Graph 4.17
Australian Corporate Bond Pricing
Investment grade bonds, 5-year target tenor



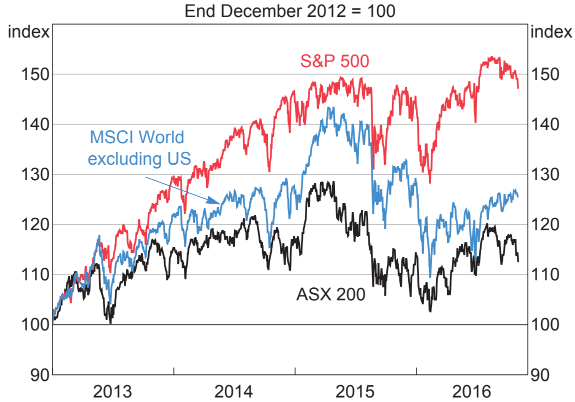
* Includes Origin Energy
Sources: Bloomberg; RBA; S&P Capital IQ

quarter. This includes a few large transactions by listed corporations to fund acquisitions, as well as initial public offerings by two real estate investment companies. Merger and acquisition activity by listed companies has totalled $41 billion this year, with activity concentrated in the industrials and consumer discretionary sectors.

Equity Markets

Australian equity prices have declined in recent months, after having risen earlier in the year (Graph 4.18).

Graph 4.18
Share Price Indices
End December 2012 = 100

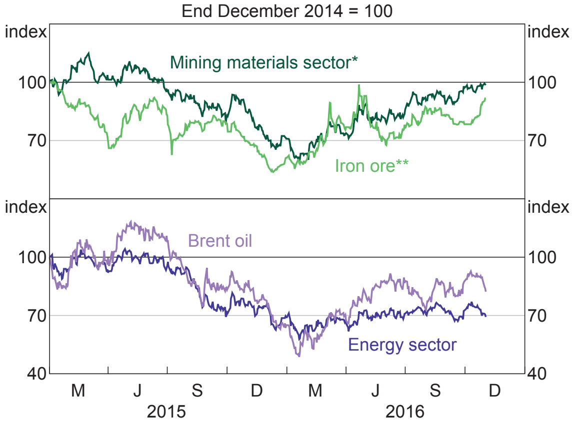


Source: Bloomberg

Resources share prices have risen notably since their trough at the beginning of 2016, with a particularly sharp recovery in the mining materials sector, reflecting an increase in a number of commodity prices (Graph 4.19).

Graph 4.19
Resources Share Prices and Commodity Prices

End December 2014 = 100



* Derived from resources sector share prices

** Qingdao import iron ore spot price

Sources: Bloomberg; RBA

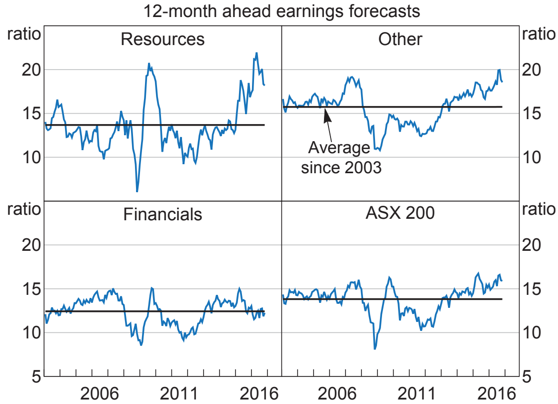
Financial sector share prices have declined in recent months, and remain lower than at the beginning of the year. Share prices for companies outside the resources and financial sectors have declined more recently, with falls in healthcare, real estate, telecommunication and utilities stocks.

The valuations of Australian equities, as measured by forward price-earnings ratios, remain at or above their long-term averages (Graph 4.20). The high valuations in the resources sector partly reflect low earnings expectations, although analysts have revised up their earnings expectations since the beginning of the year alongside the increase in commodity prices.

ASX 200 companies reported their results for the first half of 2016 in August. Aggregate headline profits rose by 5 per cent from the same period in 2015 (Graph 4.21). This was driven by the resources sector, as there were fewer sizeable asset write-downs by mining companies.

Graph 4.20
ASX 200 Forward Price-earnings Ratios

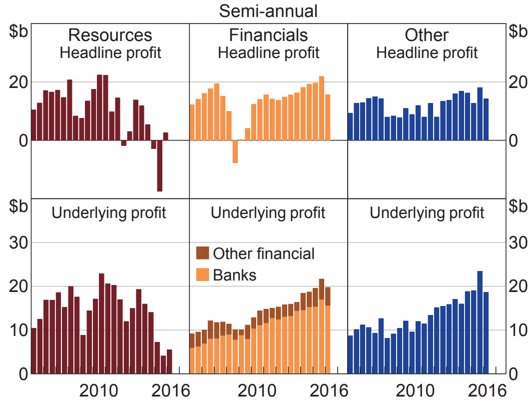
12-month ahead earnings forecasts



Source: Thomson Reuters

Graph 4.21
ASX 200 Profits

Semi-annual



Sources: Bloomberg; Morningstar; RBA

Abstracting from the effect of these one-off items, aggregate underlying profits declined by 5 per cent in the first half of 2016 from the same period a year earlier. This decline was primarily due to a 16 per cent fall in resources sector profits over the year. Resources sector revenues declined substantially due to lower commodity prices than in the first half of 2015, and this more than offset the effects of cost cutting and reduced capital expenditure. However, resources sector profits increased relative to the second half of 2015, owing to the recovery in commodity prices.

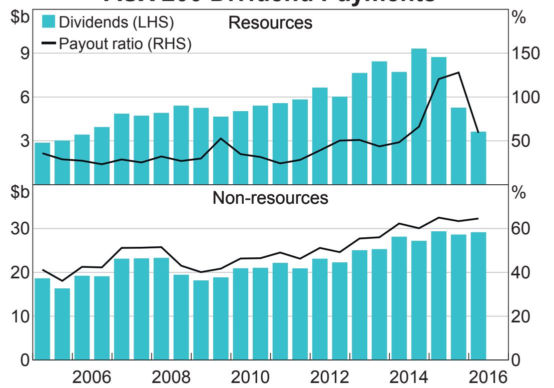
The underlying profits of financial companies were little changed in the first half of 2016 compared with the same period a year earlier. However, headline profits declined reflecting losses incurred by NAB associated with the divestment of its UK subsidiary Clydesdale. The major banks reported slightly higher underlying profits, with a modest increase in net interest income, reflecting continued growth in mortgage lending, only partly offset by higher funding costs. Net interest margins were broadly unchanged, though bad and doubtful debt charges increased for most banks. However, insurers' profits declined, largely reflecting weaker underwriting profits.

Underlying profits for the other sectors declined over the year. Heightened competition and further price deflation resulted in sizeable profit declines for the major supermarket chains. Both major supermarket chains also recognised sizeable asset impairments. In contrast, companies with exposure to residential housing construction, healthcare and tourism generally recorded higher profits.

Alongside a decline in aggregate underlying profits, distributions to shareholders fell over the year. This was largely due to significantly lower dividends paid by resource companies (Graph 4.22). The resources sector's payout ratio, as measured by the ratio of dividends to underlying profit, fell sharply to around 60 per cent, as the major diversified miners ended their 'progressive dividend policies' under which they had committed to maintain or increase dividend payments per share. The payout ratio in the non-resources sector was little changed.

In aggregate, listed corporations' balance sheets were little changed in the first half of 2016 compared to the second half of 2015. The value of resources sector assets fell due to write-downs (albeit fewer than there had been in the second half of 2015) and insufficient capital investment to offset depreciation.

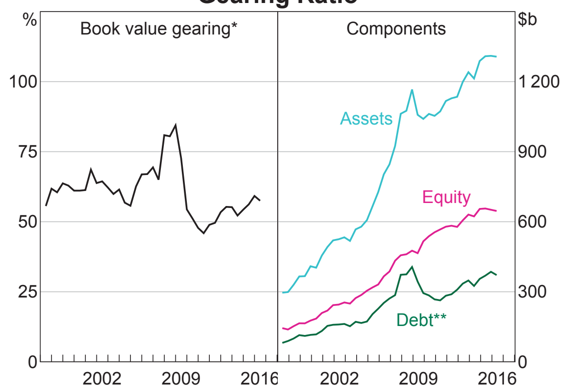
Graph 4.22
ASX 200 Dividend Payments



Sources: ASX; Morningstar; RBA

Working in the other direction, the value of assets grew in the healthcare, telecommunications and real estate sectors because of acquisitions and asset revaluations. The resources sector repaid debt during the first half of 2016, which contributed to a 4 per cent reduction in aggregate debt and a slight decline in the overall gearing ratio (the ratio of debt to equity; Graph 4.23). Nevertheless, the aggregate gearing ratio has been on an upward trend over recent years.

Graph 4.23
Listed Non-financial Corporations' Gearing Ratio



* Ratio of gross debt to equity; excludes foreign-domiciled companies
** Debt only includes short-term and long-term loans and bonds payable; not equivalent to total liabilities

Sources: Morningstar; RBA

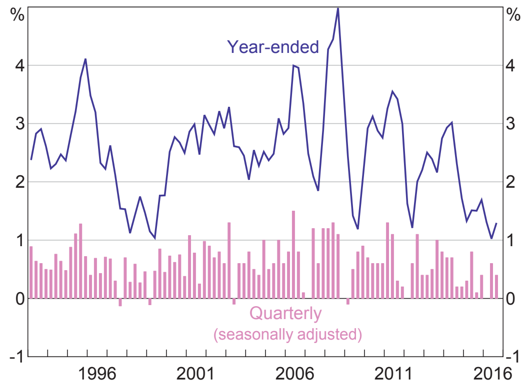
5. Price and Wage Developments

Inflation

A number of factors have contributed to continued low inflation. Spare capacity in the labour market is restraining wage growth. Heightened competition in a number of product markets is also contributing to low inflation outcomes. Furthermore, measures of inflation expectations have declined over the past year, which may be influencing price and wage-setting behaviour. Lower inflation expectations may, in part, reflect the effect of the large fall in oil prices and commodity prices more generally, over recent years. The adjustment to the decline in the terms of trade over recent years has also weighed on nominal growth – including via wages and margins – and the effect of the decline in the terms of trade is evident in the particularly low inflation outcomes in Perth. The depreciation of the exchange rate since 2013 has put upward pressure on tradable prices in recent years.

The September quarter inflation data were broadly in line with forecasts made at the time of the August *Statement*. Headline consumer price inflation increased a little in year-ended terms to 1.3 per cent (Graph 5.1; Table 5.1). Volatile items added to headline inflation in the quarter; higher fruit and vegetable prices caused by supply disruptions more than offset a decline in fuel prices. In year-ended terms, measures of underlying inflation have been around 1½ per cent over the past few quarters (Graph 5.2). Non-tradable inflation was little changed in the September quarter (Graph 5.3). It continues to be weighed down by low price growth of market services and rents.

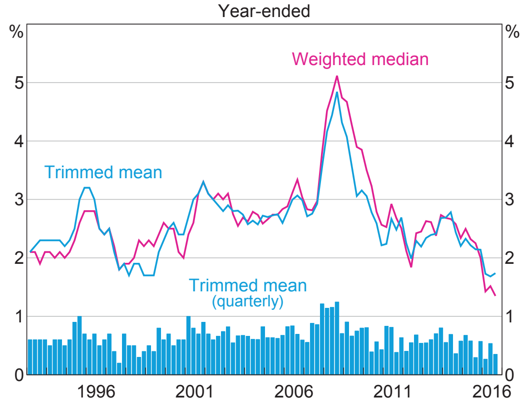
Graph 5.1
Consumer Price Inflation*



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

Sources: ABS; RBA

Graph 5.2
Measures of Underlying Inflation*
Year-ended



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

Sources: ABS; RBA

Prices for tradable items (excluding volatile items and tobacco) declined a little in the quarter and were unchanged over the year.

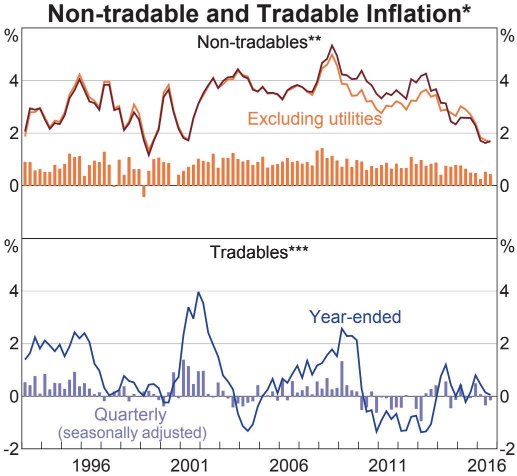
Table 5.1: Measures of Consumer Price Inflation

Per cent

	Quarterly[a]		Year-ended[b]	
	September quarter 2016	June quarter 2016	September quarter 2016	June quarter 2016
Consumer Price Index	0.7	0.4	1.3	1.0
Seasonally adjusted CPI	0.4	0.6	–	–
– Tradables	0.4	0.7	0.7	0.0
– Tradables (excl. volatile items and tobacco)[c]	–0.2	-0.3	0.0	0.1
– Non-tradables	0.4	0.5	1.7	1.6
Selected underlying measures				
Trimmed mean	0.4	0.5	1.7	1.7
Weighted median	0.3	0.5	1.3	1.5
CPI excl. volatile items[c]	0.3	0.4	1.7	1.6

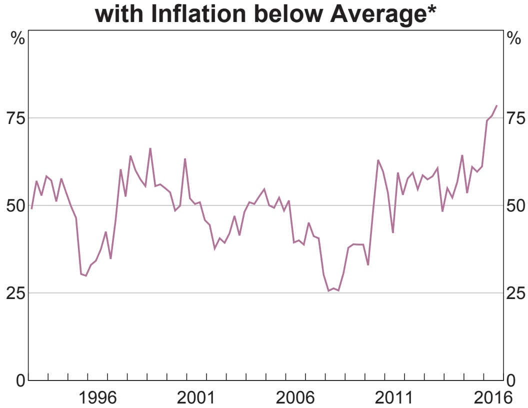
(a) Except for the headline CPI, quarterly changes are based on seasonally adjusted data; those not published by the ABS are calculated by the RBA using seasonal factors published by the ABS
(b) Year-ended changes are based on non-seasonally adjusted data, except for the trimmed mean and weighted median
(c) Volatile items are fruit, vegetables and automotive fuel
Sources: ABS; RBA

Graph 5.3
Non-tradable and Tradable Inflation*



* Adjusted for the tax changes of 1999–2000
** Excludes interest charges prior to the September quarter 1998 and deposit & loan facilities to June quarter 2011
*** Excludes volatile items (fruit, vegetables and automotive fuel) and tobacco
Sources: ABS; RBA

Graph 5.4
Share of CPI Items with Inflation below Average*

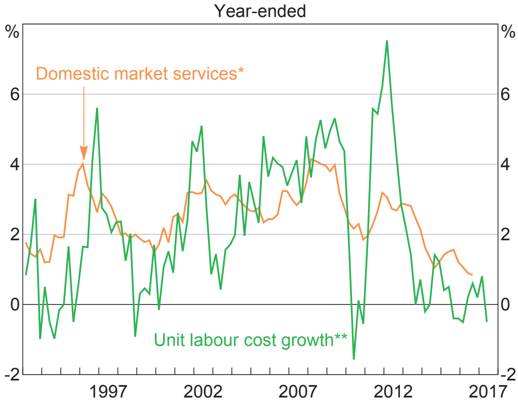


* Share of all CPI expenditure classes (by weight) with year-ended inflation below the item's average inflation rate (in most cases from 1993)
Sources: ABS; RBA

Low inflation has been broad based across the CPI components. Less than one-quarter of the components of the CPI basket have price growth above their long-run average (Graph 5.4). This includes tobacco, childcare and insurance. Tobacco has contributed around ⅓ percentage point to CPI inflation over the past year, largely due to increased excise taxes. Offsetting this, lower automotive fuel prices have subtracted around ⅓ percentage point from CPI inflation over the year. More recently, fuel prices have increased as global oil prices have moved higher, which if sustained will add a little to headline inflation.

Labour costs are an important determinant of inflation and there has been broad-based weakness in measures of labour cost growth (see below). The implications for inflation depend on how labour costs evolve relative to productivity. Unit labour costs have now been little changed for around five years, as low wage growth has been offset by productivity gains (Graph 5.5). Labour costs account for around one-half of final prices for market services; consistent with this, market services inflation is around its lowest level over the inflation-targeting period. In particular, prices for telecommunication equipment & services have fallen sharply over the past two years, reflecting increased competition and technological change in the industry.

Graph 5.5
Market Services Inflation
Year-ended



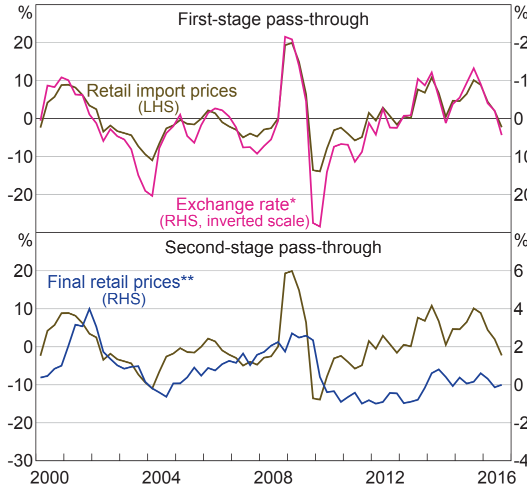
* Excludes interest charges prior to the September quarter 1998, deposit & loan facilities prior to the June quarter 2011, housing services and domestic travel; adjusted for the tax changes of 1999–2000

** Non-farm; moved forward by four quarters

Sources: ABS; RBA

In the retail sector, heightened competition has largely offset the effect of the higher cost of imported goods owing to the earlier depreciation of the exchange rate (Graph 5.6). These competitive pressures largely reflect the entry of overseas retailers.[1] In response to competitive pressures, firms have made efforts to reduce cost pressures along the supply chain, which is reflected in a pick-up over recent years in multifactor productivity growth in the wholesale and retail trade industries. Low wage growth has also contributed to low retail sector inflation. The effect of heightened competitive pressures on inflation is expected to wane over time, although the point at which this occurs is uncertain.

Graph 5.6
Retail Prices and the Exchange Rate
Year-ended percentage change



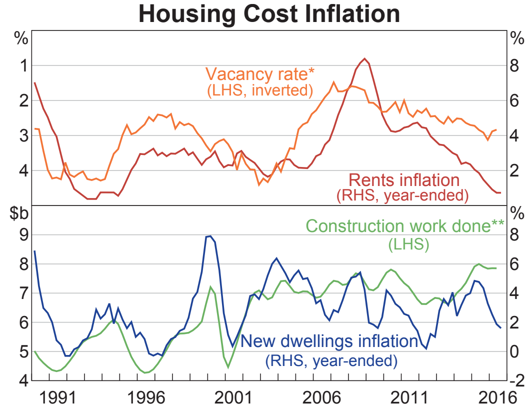
* Import-weighted index; quarter average

** Adjusted for the tax changes of 1999–2000

Sources: ABS; RBA

Rent inflation is well below its inflation-targeting average (Graph 5.7). Rents have continued to fall in Perth, in line with weak economic activity and a marked slowdown in population growth. In other capital cities, an increase in the supply of housing, particularly apartments, has contributed to low rent

Graph 5.7
Housing Cost Inflation



* Excludes Adelaide from March quarter 2015

** Private new detached housing; chain volume reference year is 2013/14; quarterly

Sources: ABS; RBA; REIA

1 For a more detailed discussion, see Ballantyne A and S Langcake (2016), 'Why Has Retail Inflation Been So Low?', RBA *Bulletin*, June, pp 9–17.

inflation. Further increases in housing supply over coming years is expected to result in a protracted period of low rent inflation.

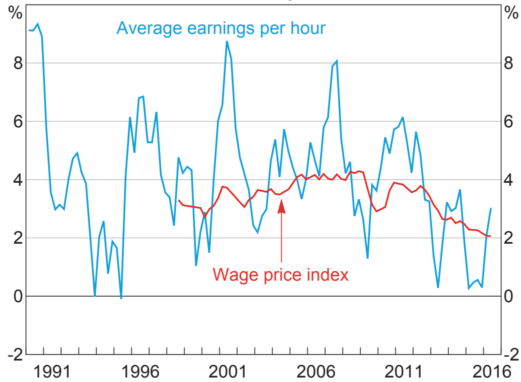
New dwelling price inflation has declined in year-ended terms since mid 2015. This slowing has been fairly broad based across all cities, which appears somewhat at odds with the continued solid level of activity in detached housing construction in Sydney and Melbourne. New dwelling costs are currently measured as the cost of constructing a new detached house and, as such, do not capture the cost of building an apartment where a lot of the activity has been concentrated. Material and labour cost growth remains subdued, although liaison has suggested that there are some pockets of wage pressures, such as for bricklayers, in the eastern states.[2] One potential explanation for subdued price pressures in the detached housing market is that heightened competition has meant builders have been focusing on reducing costs.

Utilities inflation is low relative to its inflation-targeting average. This largely reflects regulatory decisions, which have approved much smaller price rises than those that were granted in the late 2000s. Gas and water & sewerage inflation over the year is low relative to the inflation targeting period, and there were large price falls in the September quarter for a number of cities. In contrast, there were large increases in electricity prices in Sydney and Adelaide in the September quarter, driven in part by higher wholesale electricity costs; these wholesale cost pressures are expected to flow through to Melbourne retail electricity prices in the March quarter. Excluding utilities, administered price inflation is only a little below average levels.

Labour Costs

Wage growth appears to have stabilised, albeit at a low level (Graph 5.8). Growth in the private

Graph 5.8
Labour Costs
Year-ended growth



Source: ABS

sector wage price index (WPI) has been stable for six quarters at an annualised pace of around 2 per cent. Year-ended growth in the public sector WPI also appears to have stabilised around 2½ per cent since early 2015. Wage growth is lower than average across all industries and states and the dispersion in wage growth across industries is at its lowest level since the series began in the late 1990s. Broader measures of labour costs also appear to have stabilised or even picked up. Growth in average earnings per hour from the national accounts (AENA) – which also captures non-wage costs as well as the effect of promotions and changes in the composition of employment – has picked up in recent quarters. There has been little change to unit labour costs over recent years as growth in labour costs have been matched by productivity gains.

The weakness in wage growth over recent years reflects a number of factors, some specific to Australia and others also evident in other countries. First, there has been some spare capacity in the labour market putting downward pressure on wage growth. While it is difficult to be precise, it is estimated that the current unemployment rate is a bit over ½ percentage point higher than full employment. Furthermore, as has been the case in other advanced economies in recent years, it appears that there has been some change in the historical relationship between wage growth and

2 The wage price index (WPI) shows low wage inflation for the construction industry, however this measure also includes wages for workers in non-residential and engineering construction where activity has been weaker. The WPI also does not measure income growth for subcontractors, who make up a high share of workers in the detached housing industry. There is some tentative evidence that the income growth of these subcontractors has picked up.

measures of spare capacity. There are a range of plausible structural and cyclical explanations for this: increased labour market flexibility may have provided firms with greater scope to adjust wages in response to changes in nominal revenue growth; workers may be putting more emphasis on job security than higher wage claims as a result of the global financial crisis or structural change; and/or reduced workers' pricing power as a result of increased competitive pressure from globalisation and technology.[3] The extent to which these factors persist will determine how quickly wage growth picks up as labour market conditions improve.

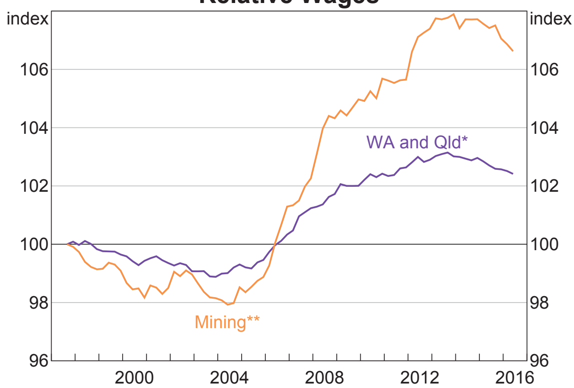
A second influence on wage setting has been low outcomes for headline inflation over the past couple of years and the associated decline in inflation expectations (at least over the short to medium term). Workers may have agreed to smaller wage increases given low actual and expected inflation.

A third factor weighing on wages growth has been increased efforts by firms to contain growth in labour costs. Over recent years, the sharp fall in the terms of trade, heightened competition (such as in the retail market) and spare productive capacity in product markets has weighed on firms' output prices.

Low wage growth in recent years has helped the economy adjust to the lower terms of trade. Combined with the depreciation of the nominal exchange rate since 2013, low growth in labour costs has improved Australia's international competitiveness. This is in contrast to the earlier period of sharply rising commodity prices and mining investment, during which Australia's unit labour cost growth outpaced that in many comparable countries, contributing to a decline in Australia's international competitiveness.

As the economy continues the transition away from mining-led activity, there are likely to be further adjustments to relative wages. Following a period of being above average, wage growth is currently lowest in industries and states that are more exposed to the end of the terms of trade and mining investment boom, and relative wages in these industries and states have started to turn lower (Graph 5.9). Liaison suggests that the movement of workers from higher-paying mining-related jobs to lower-paying jobs elsewhere in the economy is well advanced.

Graph 5.9
Relative Wages



* Wage Price Index in Western Australia and Queensland relative to the rest of Australia
** Wage Price Index in mining relative to all industries
Sources: ABS; RBA

Analysis of micro-level WPI data from the Australian Bureau of Statistics indicates there has been both a decline in the frequency of wage increases and in the average size of the increases in recent years.[4] In particular, the share of jobs that experienced wage growth in excess of 4 per cent has fallen sharply, largely reflecting a decline in large wage rises in mining-related jobs (Graph 5.10). Workers in around half of all jobs have received a wage increase of between 2–3 per cent. Only a small share of jobs has experienced a decline in wages, indicating downward nominal wage rigidity.

Inflation Expectations

Measures of inflation expectations have declined over the past year, consistent with low outcomes for CPI inflation, although consumers' short-term inflation expectations have been little changed

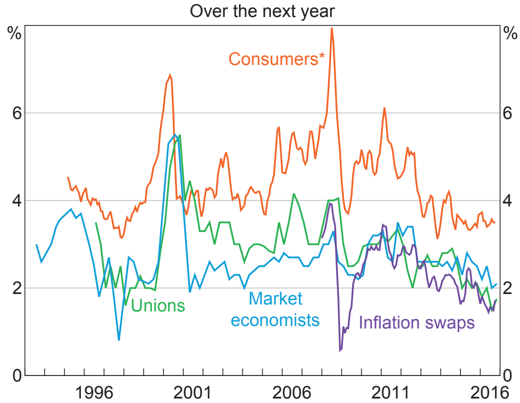
3 See Lowe, P (2016), 'Inflation and Monetary Policy', Address to Citi's 8th Annual Australian & New Zealand Investment Conference, Sydney, 18 October.

4 Further analysis of these data will be available in the September quarter 2016 Wage Price Index release (released 16 November 2016).

Graph 5.10
Wage Changes of Different Sizes
Share of jobs that experience a wage change

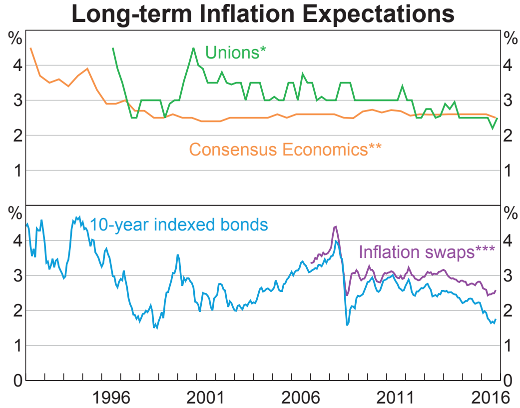
* Smoothed using a four-quarter trailing average
Sources: ABS; RBA

Graph 5.11
Short-term Inflation Expectations
Over the next year



* Three-month moving average of the 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 5.12
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

over the past year. More recently, one-year ahead inflation swaps have increased a little (Graph 5.11).

Survey-based measures of long-term inflation expectations remain around the mid-point of the inflation target (Graph 5.12). After falling sharply earlier in the year, financial market measures of inflation expectations have been more stable of late. Five-to-ten year inflation swaps, which capture expected average inflation over the period five-to-ten years ahead, have picked up modestly over the past few months, while inflation expectations based on 10-year bonds have been little changed since June at low levels. The 10-year indexed bond measure has declined over the past year by more than the five-to-ten year inflation swap measure. This is in part because it is an expected average inflation rate over the next 10 years and so is affected by expected low inflation in the near term.

The financial market measures of inflation expectations 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. Changes in this premium affect both the inflation swaps and bond-based measure of inflation expectations. The bond-based measure is also affected by changes in the liquidity of inflation-indexed bonds relative to nominal bonds. Regulatory changes since 2008 may have led to a relative deterioration in liquidity of inflation-indexed bonds; this would tend to raise the yield on indexed bonds and depress the implied inflation rate. Bank estimates suggest that much of the decline in the bond-based measure over the past 12 months is due to changes in the liquidity and inflation risk premia rather than long-term expectations of inflation, which have been relatively little changed.

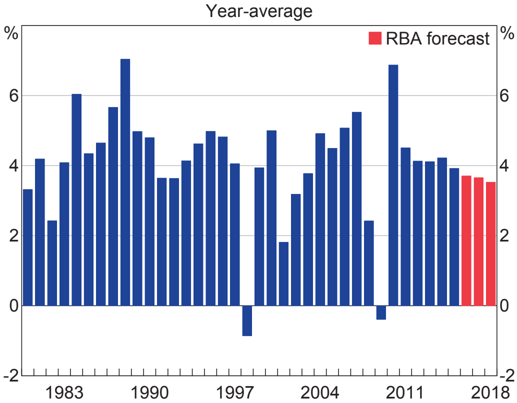
6. Economic Outlook

The International Economy

The assessment of the global economy is largely unchanged from the August *Statement*. GDP in Australia's major trading partners has grown at a little below its decade-average rate over the past year. Growth is expected to decline gradually over the next few years, driven by further easing of growth in China, in part because the strength in the Chinese property market is not expected to be sustained (Graph 6.1). Growth in east Asian economies (other than China and Japan) is expected to remain below average in the near term, before picking up gradually towards potential by mid 2018 as external demand conditions recover and accommodative monetary and fiscal policies continue to provide support.

GDP growth in the major advanced economies is expected to be a little above potential over the next couple of years, partly because monetary policy is expected to remain accommodative. However, potential growth rates in these economies are generally lower than their long-term average growth rates because of slower growth in the working-age population, productivity and investment, and, in some cases, the lingering effects of the global financial crisis.

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



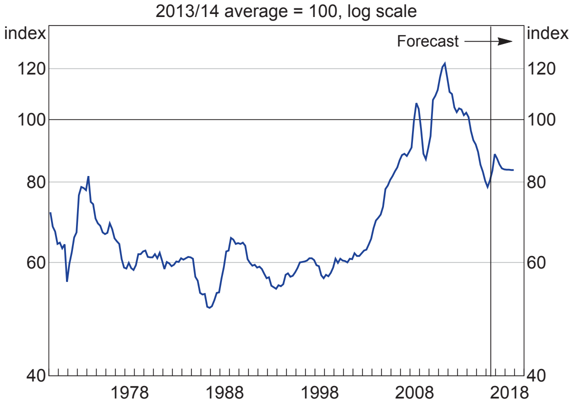
* Aggregated using total export shares
Sources: ABS; CEIC Data; RBA; Thomson Reuters

The United Kingdom's referendum vote to leave the European Union had little immediate impact on economic outcomes. Longer term, however, there are still risks to the UK economy depending on the nature of the UK's exit. The ongoing weakness of the European banking system also continues to pose downside risks. More broadly, political developments could have implications for global economic activity.

Global price and wage pressures have remained largely muted, but are expected to pick up as spare capacity in labour and product markets gradually declines. Labour productivity growth has been weak, which has contributed to above-average growth in unit labour costs in the United States and Japan. If weak productivity growth continues, there may be less spare capacity than indicated by current estimates and potentially a sharper pick-up in inflationary pressures, all else being equal. Furthermore, the increases in the prices of oil and other commodities since around the turn of the year have contributed to global inflation, following a period where commodity prices fell markedly. A sharper pick-up in global inflationary pressures than has been anticipated could lead to tighter-than-expected monetary policy in other economies and a depreciation of the Australian dollar. However, if inflation remains at low rates and below central bank targets for an extended period in some economies, this may lead to lower inflation expectations and therefore lower inflation than would be implied by the degree of spare capacity.

Australia's terms of trade increased in the June quarter for the first time in 2½ years, and look to have risen again in the September quarter, led by higher bulk commodity prices. The terms of trade are forecast to remain above the levels reached in early 2016 (Graph 6.2). The outlook for commodity prices, particularly coal prices, is more positive than previously thought, reflecting an improved outlook for Chinese steel production in the near term and cuts to the production of bulk commodities in China, although current levels of spot prices are not expected to be sustained.

Graph 6.2
Terms of Trade
2013/14 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 as at the time of writing. 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 65 and A$1=US$0.77). The TWI is a little higher than the assumption underlying the forecasts in the August *Statement*. The forecasts are also based on the price of Brent crude oil being US$50 per barrel over the forecast period, which is 10 per cent higher than the assumption used in August 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 and by 1.6 per cent over 2017 and 2018, drawing on forecasts from the Department of Immigration and Border Protection.

The starting point for the forecasts is that the Australian economy grew at around central estimates of potential growth in 2015/16. Growth in the June quarter was moderate and much as expected, although stronger-than-expected public demand growth offset weaker consumption growth. Recent indicators are consistent with moderate growth in the September quarter.

In 2015/16, non-mining activity grew at a pace that was a little above average, supported by low interest rates and the ongoing effects of the earlier exchange rate depreciation. Growth was reasonably broad based. Growth in dwelling investment and public demand was strong and the contribution from household consumption for the year as a whole was around the decade average. Non-mining business investment grew modestly. Meanwhile, mining activity subtracted from GDP growth in 2015/16, as stronger-than-expected growth in resource exports was more than offset by a substantial decline in mining investment.

Overall, the forecasts for GDP growth are similar to those presented in the August *Statement*. Growth is expected to be around 2½–3½ per cent over the year to June 2017, and then increase to around 3–4 per cent over the year to December 2018 (Table 6.1).

Low interest rates and gains to employment and wealth are expected to continue to support household demand. Consumption growth is projected to increase gradually over the forecast period. Expectations for longer-term growth in household consumption have been lowered slightly relative to the period prior to the global financial

Table 6.1: Output Growth and Inflation Forecasts[a]
Per cent

	Year-ended					
	Jun 2016	Dec 2016	Jun 2017	Dec 2017	Jun 2018	Dec 2018
GDP growth	3.3	2½–3½	2½–3½	2½–3½	2½–3½	3–4
CPI inflation	1.0	1½	1½–2½	1½–2½	1½–2½	1½–2½
Underlying inflation	1½	1½	1½–2½	1½–2½	1½–2½	1½–2½
	Year-average					
	2015/16	2016	2016/17	2017	2017/18	2018
GDP growth	2.8	2½–3½	2½–3½	2½–3½	2½–3½	2½–3½

(a) Technical assumptions include A$=US$0.77, TWI at 65 and Brent crude oil price at US$50 per barrel; shaded regions are historical data
Sources: ABS; RBA

crisis, when growth was boosted by strong growth in income, rising labour force participation and rising debt and housing equity withdrawal. The effect on GDP of the downward revision to the forecasts for consumption growth has been offset by a downward revision to import growth. The forecasts for growth in consumption and disposable income now imply a slightly more gradual decline in the household saving ratio than had been projected in the August *Statement*. How households decide to consume and save out of their income in the future remains a key source of uncertainty in the forecasts.

The already substantial amount of residential construction work in the pipeline increased in the June quarter and building approvals in the September quarter are consistent with further increases. Accordingly, the forecast for dwelling investment has been revised up slightly. Dwelling investment is expected to grow for the next year or so, although at a gradually diminishing rate.

The forecasts for growth in public demand are little changed. Solid growth in public demand is expected over the forecast period, consistent with state and federal government budgets, which together imply ongoing growth in public investment.

The outlook for the level of resource exports is lower than previously expected. The liquefied natural gas (LNG) export profile has been revised lower, reflecting more conservative assumptions about the production capacity of the LNG sector, although Australia's LNG exports are expected to continue growing strongly for some time. Coking coal exports are expected to be slightly higher, supported by the improvement in coking coal prices, while thermal coal export volumes are forecast to remain broadly unchanged. The scope for substantial growth in coal exports appears to be limited, as a large number of producers are already operating at close to capacity and are unlikely to undertake new investment given the widely held expectation that prices will decline somewhat in the period ahead.

More generally, the depreciation of the Australian dollar over the past few years is assisting domestic producers of tradable items and service exports are forecast to continue growing at a robust pace for a time.

Mining investment is still expected to continue to fall 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 from GDP growth looks to have already occurred. The outlook for non-mining business investment is subdued in the near term, consistent with the ABS capital expenditure survey of firms' investment intentions and the downward trend in non-residential building work yet to be done. However, non-residential building approvals have picked up of late. Non-mining business investment appears to be growing in New South Wales and Victoria, aided by low interest rates and the depreciation of the Australian dollar over the past few years. Moreover, survey measures of capacity utilisation have been increasing over the past couple of years and are currently above their long-term averages.

Labour market outcomes over recent months have prompted a downward revision to the forecasts for employment growth. Leading indicators such as job advertisements and job vacancies also point to more modest growth in employment over the next six months than earlier envisaged. The participation rate is expected to remain around current levels, which is somewhat lower than the profile underlying the forecasts in August.

The combination of these changes means that there has been little change to the forecast for the unemployment rate, which is expected to edge lower over the forecast period. This implies that there is likely to be a degree of spare capacity in the labour market for some time.

Inflation

The September quarter underlying inflation outcome was broadly in line with expectations at the time of the August *Statement*. As a result, there has been little change to the forecast for underlying inflation; it is expected to remain at around 1½ per cent over 2016 and to pick up to around 1½–2½ per cent by the end of the forecast period. There has been some upward revision to the forecast for headline inflation given the legislated rise in the tobacco excise, which is expected to add about 0.4 percentage points to headline inflation in 2017 and 0.3 percentage points in 2018. Headline inflation is expected to pick up to around 1½–2½ per cent by early 2017 and to remain in that range over the rest of the forecast period.

Wage growth appears to have stabilised, although at low levels. Liaison suggests that private sector wage growth is likely to remain broadly stable in the year ahead and that the risks of further declines in growth have diminished somewhat. Growth in the wage price index (WPI) is expected to pick up gradually as labour market conditions improve and the effect of the large decline in the terms of trade on firms' output prices wanes. However, growth in the WPI is expected to remain low as it is anticipated that there will continue to be spare capacity in the labour market over the next few years. Indeed, liaison suggests that there is not strong 'pent-up' demand for larger wage increases, following below-average increases in recent years.

Broader measures of labour costs, such as average earnings per hour from the national accounts (AENA) – which include both non-wage costs (such as allowances) and any effect on labour costs from changes in the composition of employment – are also expected to pick up. Growth in AENA has increased in recent quarters but had been generally weaker than growth in the WPI over recent years, reflecting cyclical weakness in non-wage costs arising from spare capacity in the labour market and workers moving from high-paying mining jobs to similar types of work at lower levels of pay. Both of these factors are expected to wane over the next few years, so AENA is expected to grow at a faster pace than the WPI towards the end of the forecast period.

The effect of these wage developments on firms' costs and, hence, inflation will depend on how labour costs evolve relative to labour productivity. Unit labour costs have been low for a number of years because wage growth has been matched by growth in productivity. Productivity growth has picked up over the past couple of quarters, but it is projected to settle at a bit below its average rate over the inflation-targeting period. Growth in unit labour costs is expected to rise gradually. As labour costs constitute a sizeable share of the inputs to non-tradables components of the CPI, such as market services, the pick-up in unit labour costs is expected to lead to an increase in non-tradables inflation.

The decline in spare capacity in various product markets is also expected to lead to a gradual pick-up in inflationary pressures. For example, the effects of heightened retail competition on food and consumer durable prices are expected to diminish, although only gradually. However, some product markets are likely to experience surplus capacity for some time. In particular, large additions to housing supply are expected to keep rent inflation low over the next few years.

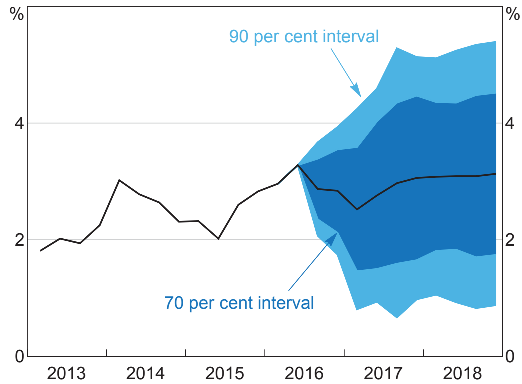
While estimates of the timing and degree of the pass-through of the exchange rate depreciation to final prices are imprecise, it is likely that the boost to the prices of tradables items from the large depreciation since 2013 has largely run its course. The recent increase in prices of commodities, in particular oil, is expected to contribute to inflationary pressures in the period ahead, following a period where fuel prices have subtracted from headline inflation.

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).

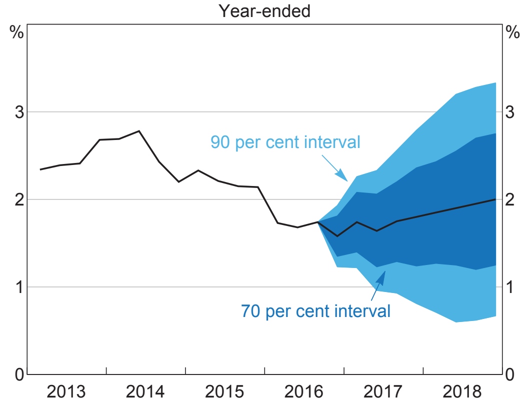
It is also worth considering the consequences that different assumptions and judgements might have on the forecasts and the possibility of events occurring that are not part of the central forecast. A key source of uncertainty for the forecasts continues to be the outlook for growth in the Chinese economy and its implications for commodity prices, Australia's exports and the terms of trade. Higher commodity prices, particularly for oil, are likely to contribute to global inflationary pressures, which could affect the path of monetary policies over the forecast period. This, in turn, could affect financial market prices, particularly exchange rates, which are assumed to be constant in the forecasts. As has been the case for some time, geopolitical risks

Graph 6.3
GDP Growth Forecast*
Year-ended



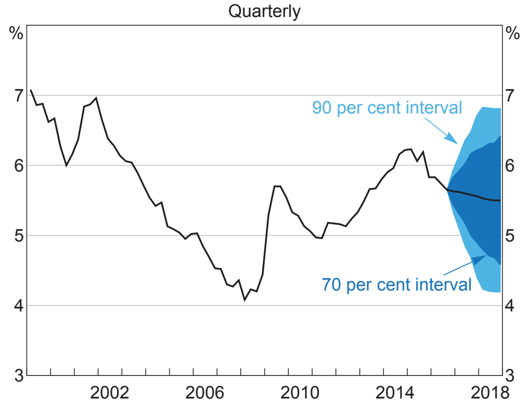
* Confidence intervals reflect RBA forecast errors since 1993
Sources: ABS; RBA

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

and global financial stability risks could also affect global growth and financial market prices, should they materialise. Domestically, there is considerable uncertainty about the momentum in the labour market, the extent to which household income and consumption growth will pick up over the next few years and the outlook for the housing market. All these sources of domestic uncertainty present risks to the outlook for activity and inflation.

The Chinese economy, commodity prices and Australia's terms of trade

The outlook for the Chinese economy remains a key source of uncertainty for the outlook for commodity prices, Australia's exports and the terms of trade. One aspect of that uncertainty is the high and rising level of debt, particularly within the corporate sector. Also, the longevity of the current strength in the property sector and the associated demand for upstream manufactured items is hard to predict. A number of local government authorities have responded to sharp rises in property prices by introducing a range of measures, including higher minimum downpayments and direct restrictions on house purchases in some locations. Although to date these initiatives have not stopped the upward trend in housing price growth, it is likely that continued efforts will eventually dampen residential investment and, hence, the demand for steel. The forecasts for iron ore and coking coal demand are predicated on a profile for Chinese steel production that increases a little further from current levels before gradually declining. Furthermore, 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, given the sharp run-up in prices of bulk commodities, particularly for coal.

There is also uncertainty about how the change in the profile for the terms of trade will affect the domestic economy. The increases in commodity prices are not expected to lead to a material change in mining investment over the forecast period, partly because some of the larger price increases are expected to be temporary. However, with the terms of trade no longer falling and expected to be relatively stable over the forecast period, and the drag on GDP growth from falling mining investment likely to wane, it is possible that nominal income growth, domestic demand growth and inflationary pressures will pick up more quickly than currently forecast.

Global inflationary pressures

Overall, the risks to global inflation appear to have become more balanced. The pick-up in oil and other commodity prices from their troughs around the beginning of 2016 is expected to contribute to global inflationary pressures. These effects have already contributed to a pick-up in producer price inflation, including in China and the United States. At the same time, growth in the major advanced economies is expected to reduce the extent of spare capacity in labour and product markets over the forecast period. Indeed, over the past month, at least some of the increase in US, German and UK sovereign 10-year bond yields can be attributed to an increase in longer-term inflation expectations. Financial market measures of long-term inflation expectations in Australia have also stabilised in recent months, after falling earlier in the year. However, there is uncertainty about the extent to which inflationary pressures will build, given the length of time that inflation has been below central banks' targets.

Momentum in the labour market

Indicators of Australian labour market conditions have been mixed. The decline in the unemployment rate over the past year has been larger than expected. However, the participation rate has retraced its earlier increases and the ABS measure of underemployment has remained relatively high, consistent with employment growth having been driven by part-time work. It is possible that the anticipated growth in the demand for labour will be accommodated by providing part-time workers with additional hours. This could see total hours of employment increase without a reduction in the unemployment rate. Furthermore, while the forecasts make some allowance for the fact that a sizeable contribution to GDP growth comes from LNG production over the next few years, it is possible that there will be less employment generated from GDP growth than envisaged. There is also considerable uncertainty around the projection for the participation rate. The expected improvement in demand could encourage people to enter the labour force. However, it is possible that the participation rate could decline further owing to the ageing of the population, in which case the unemployment rate – and the extent of spare labour market capacity – could fall further than forecast.

Household consumption and saving

Household consumption growth has been supported by low interest rates, rising employment and gains to household income and wealth. The household saving ratio has declined, continuing the trend of recent years. The forecasts assume that households will sustain consumption growth in a period of moderate income growth by reducing their rate of saving gradually over the coming year. However, there is uncertainty about households' consumption and savings decisions.

Households' views about the outlook for the growth of their income and wealth are relevant to those decisions, as are any liquidity or credit constraints that households might face and their expectations about interest rates. In the 1990s and early 2000s, household income growth was relatively strong and this was expected to continue. Additionally, households experienced increased access to credit as a result of financial deregulation and the decline in nominal interest rates as a result of disinflation. These factors allowed households to reduce their saving and increase their leverage over a lengthy period of time. Over the second half of the 2000s, the saving ratio increased significantly, partly in response to the uncertainty created by the global financial crisis as well as strong household income growth associated with the mining investment boom, and has declined only gradually over recent years.

If households become more confident about their future employment, income or wealth, then the saving ratio could fall by more than currently forecast and consumption growth would be stronger. However, the saving ratio may not decline if households come to believe that future income growth will be weak, particularly for those households servicing sizeable debts; if that occurs, consumption would be lower than forecast.

The housing market

Recent strength in dwelling investment, particularly the construction of higher-density dwellings, has played a role in supporting the rebalancing of economic activity away from the resources sector. Low interest rates and increases in housing prices have encouraged a substantial increase in the supply of apartments and the pipeline of residential work yet to be done has increased to historically high levels. While this pipeline should support growth in dwelling investment over the next year or so, the outlook for dwelling investment beyond this period is uncertain.

There is concern about the risk of an oversupply of apartments in specific geographical areas, such as inner-city areas of Melbourne and Brisbane. Outside Western Australia, the supply of housing has to date largely been absorbed by population growth. However, if growth in housing demand does not continue to keep pace with the scheduled large increases in supply, it would place downward pressure on housing prices and rents and increase the risk of off-the-plan apartment purchases failing to settle. If the broader housing market was to weaken substantially, consumption growth may be lower than currently expected in response to wealth and income effects. Consumer price inflation would also be affected as housing costs comprise a significant share of household expenditure.