Statement on Monetary Policy

NOVEMBER 2015

Contents

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The graphs in this publication were generated using Mathematica.

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Overview

Over the course of this year, the recoveries in the United States and euro area economies have continued but growth has slowed in the Asian region. The slowdown in the Asian region has been associated with lower growth of global trade volumes and industrial production and has contributed to a decline in the prices of Australia's resource exports. Core inflation has generally been steady in both the advanced and emerging economies, but at rates below central banks' targets. Globally, monetary policy remains very accommodative and finance remains readily available to creditworthy borrowers.

Chinese economic growth has eased over 2015, with weakness in construction contributing to a slowdown in the industrial sector. Although residential property prices have risen a little in recent months, sales have retraced some of the rise seen earlier in the year and real estate investment remains weak. In contrast, the pace of growth in consumption and in the output of the services sector has been maintained over 2015. Growth in infrastructure investment has moderated but remains high, supported by a pick-up in project approvals. The authorities have adjusted a number of policies to support demand, including a further easing of monetary policy in recent months.

The economic recovery in Japan lost momentum around the middle of this year. Both domestic and external demand have slowed. Despite this, the labour market in Japan remains tight and nominal wages have been growing moderately. Core inflation has increased over the past couple of years, but remains below the Bank of Japan's (BoJ) 2 per cent target. In the rest of east Asia, softening external demand has led to a slowing in GDP growth over the year to date, and there are more recent signs that domestic demand has eased in most economies in the region. In India, in contrast, domestic demand remains strong and has been provided some support by the easing in monetary policy by the Reserve Bank of India this year.

In the United States, the recovery in domestic final demand has been sustained and there has been ongoing improvement in labour market conditions, notwithstanding a slight moderation in GDP growth in the September quarter. The euro area economy has been growing above trend and the unemployment rate has declined further, but remains high. Core inflation has picked up this year but remains below the European Central Bank's (ECB) target.

Growth in Australia's major trading partners is expected to be slightly below its decade average over the next two years. This reflects an expectation that growth of the Chinese economy will continue to slow gradually and an assessment that the slowdown in growth in the rest of the Asian region will be more persistent than previously anticipated. The outlook for growth in the Asian region is a key source of uncertainty for the forecasts. The Chinese authorities have taken steps to support growth, and have scope to ease policies further. It is possible, however, that the slowing in the industrial sector will broaden to other parts of the economy that have been relatively resilient to date. Changes in the outlook for Chinese economic activity could have a noticeable effect on its trading partners in the region and on commodity prices.

The outlook for Australia's terms of trade is little changed since August. Key commodity prices are much lower than a year ago, reflecting both increased supply, including from Australia, and weaker demand. The Australian dollar is adjusting to the lower commodity prices. The forecasts for commodity prices assume that there will be only a limited reduction in supply from high-cost producers, many of which are in China. However, it is possible that high-cost producers globally will cut their production further in response to the long period of lower commodity prices. This represents an upside risk to the forecasts for Australia's terms of trade.

Globally, monetary policy is expected to be more accommodative in the near term than had been anticipated in August. The path for the US policy rate implied by market pricing is now lower than it was a few months ago and many observers expect that the ECB and BoJ will announce further monetary policy easing. Also, the Peoples' Bank of China cut benchmark interest rates and reduced banks' reserve requirement ratios in October.

The Australian economy has continued to grow at a moderate pace and the rebalancing of activity away from the resources sector is continuing. Overall, growth appears to have picked up in the September quarter, as resource exports and dwelling investment returned to growth following temporary weakness in the June quarter.

Indicators of consumption, including retail sales, motor vehicle sales and surveys of consumers' perceptions of their own finances, suggest that consumption grew at a moderate pace in the September quarter, supported by the low level of interest rates and improvements in the labour market. Consumption growth is forecast to increase, notwithstanding the expectation that income growth will be modest over the forecast period given that wage growth is likely to remain subdued. Hence, the forecasts imply a further gradual decline in the household saving ratio. Households' decisions regarding their saving and borrowing will depend, among other things, on their response to changes in wealth, and are an important source of uncertainty for the forecasts given the significance of consumption growth to domestic demand.

The low level of interest rates is expected to continue to support housing market activity. Forward-looking indicators of housing activity, though somewhat mixed, generally point to further growth in dwelling investment, albeit at a moderating rate. Auction clearance rates and housing price growth in Sydney and Melbourne have declined over recent months. Lending standards have been tightened in response to changes in APRA's supervisory measures and, more recently, many lenders have announced increases in mortgage rates for both investors and owner-occupiers. Housing credit growth has increased a little over recent months, with growth in lending to investors easing slightly while that for owner-occupiers appears to be picking up. Supervisory measures are helping to contain risks that may arise from the housing market.

Survey measures of business conditions in the non-mining sector are clearly above their long-run average levels, most notably for services. The support to economic activity from the depreciation of the exchange rate has been particularly apparent in the sizeable contribution to growth from net service exports. The strength of business conditions in the services sector has translated into employment growth but has had little effect on investment to date, given that firms in many parts of this sector tend to be less intensive in their use of capital. Indications of investment intentions and a decline in the stock of non-residential building work yet to be done continue to suggest that a pick-up in non-mining investment is not in prospect in the near term. However, some of the conditions for a recovery in non-mining business investment are in place. Rates on business borrowing continue to edge down and business credit growth has picked up. Also, surveys of conditions in goods-related industries have improved over recent months. The strength and timing of the anticipated recovery in non-mining business investment is uncertain and remains one of the key risks to the domestic forecasts.

Conditions in the labour market have continued to improve. Employment growth has been stronger than had been expected and there has been a noticeable pick-up in the participation rate. Measures of job vacancies and advertisements have continued to increase and point to further growth in employment in the months ahead. It appears that the increase in demand for labour has been roughly matched by the increase in the supply of labour. The unemployment rate has been steady at around 6–6¼ per cent for over a year now. The relatively high level of the unemployment rate and low growth of wages indicate that spare capacity exists.

Inflation in the September quarter was lower than had been forecast across a broad range of goods and services. Various measures suggest that underlying inflation declined to a bit above ¼ per cent in the September quarter, and to between 2 and 2¼ per cent in year-ended terms. The outcome for headline CPI inflation was lower still, in part owing to the temporary effects of the earlier decline in fuel prices, which remain around 10 per cent lower than a year earlier. Domestic inflationary pressures are well contained, consistent with low growth in labour costs and spare capacity. The prices of tradable items (excluding volatile items and tobacco) were little changed both in the September quarter and over the past year. This suggests that the upward pressure on the prices of many tradable items from the earlier exchange rate depreciation has been tempered by heightened competitive pressures domestically, which is consistent with messages from liaison. Nevertheless, gradual pass-through of the exchange rate depreciation is expected to place some upward pressure on the prices of tradable items over the next few years.

The forecast for growth in economic activity over the next two years is not materially different from what was presented in the previous *Statement*. GDP growth is expected to be between 2 and 3 per cent over the year to June 2016, rising to 2¾–3¾ per cent over the year to June 2017, which is around its long-run average. Resource exports will remain a key driver of growth over the period ahead. Household consumption, supported by low interest rates and growing employment, is forecast to make an important contribution to growth in aggregate expenditure over the next couple of years. Low interest rates have also been supporting growth in dwelling investment, although some slowing in the pace of growth is expected. The improvement in domestic demand and the increased support to demand for domestic production afforded by the lower exchange rate are expected, in time, to lead to a rise in non-mining business investment. In contrast, and as before, further large falls in mining investment are anticipated, although the largest subtraction from GDP growth from this source is expected to occur during the current financial year. Also, growth in public demand is forecast to be a bit below average over the next couple of years.

Employment growth is forecast to remain relatively strong and the participation rate is expected to increase a little further. Accordingly, the unemployment rate is projected to remain around current levels before declining gradually as economic growth picks up. This suggests that the economy will be operating with a degree of spare capacity and domestic cost pressures are likely to remain subdued over the forecast period. How much spare capacity there is, and the extent to which it will affect wage and inflation pressures, is a source of uncertainty. One issue is the effectiveness with which the skills of available workers can be matched to vacant jobs, particularly given the sectoral shift in activity towards the services sector and away from the mining sector. Another consideration is the extent of competitive pressures across different markets, which is always difficult to assess.

The profile of inflation has been revised down in light of the low outcome in the September quarter. While quarterly CPI data are always subject to a degree of volatility and measurement error, the broad-based nature of the low inflation outcome in the September quarter suggests that inflationary pressures are a bit more subdued than had earlier been anticipated. As a result, underlying inflation is now forecast to be close to 2 per cent in year-ended terms over the course of most of the next year, before picking up to around 2½ per cent. Underpinning this, domestic inflation pressures are likely to remain well contained and the depreciation of the exchange rate is expected to place gradual upward pressure on tradable prices.

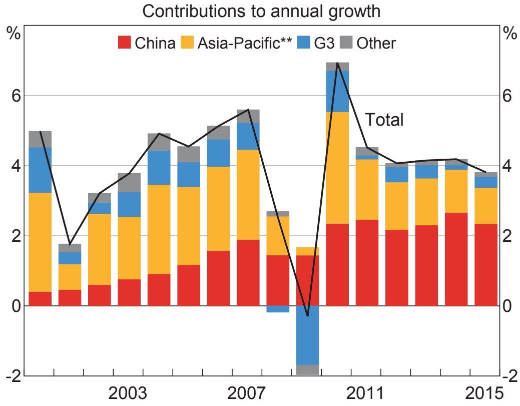
The Reserve Bank Board reduced the cash rate by 25 basis points at its February meeting and then again at its May meeting. These and earlier reductions, and the depreciation of the exchange rate since 2013, are working to support economic growth. This is evident in a range of indicators, including employment growth, job vacancies, surveys of business conditions and trade data. At the November meeting, the Board judged that the prospects for an improvement in economic conditions had firmed a little over recent months and that it was appropriate to leave the cash rate unchanged. At the same time, the Board recognised that the economy is likely to be operating with a degree of spare capacity for some time yet and noted that the outlook for inflation may afford scope for further easing of policy, should that be appropriate to lend support to demand.

The Board will continue to assess the outlook, and hence whether the current stance of policy will most effectively foster sustainable growth and inflation consistent with the target.

1. International Economic Developments

Over 2015, growth in the Asian region has slowed, while the recoveries in the United States and euro area economies have continued (Graph 1.1). Overall growth of Australia's major trading partners (MTPs) has been slightly below its decade average over the year to the June quarter, and is likely to have remained so in the September quarter.

Graph 1.1
Australia's Trading Partner GDP*
Contributions to annual growth

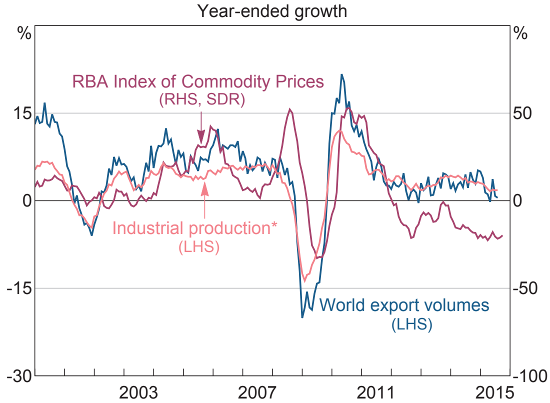


* Aggregated using Australia's export shares; RBA estimate for 2015
** Includes India, New Zealand and selected economies in east Asia other than China and Japan
Sources: CEIC Data; RBA; Thomson Reuters

Growth in global industrial production and trade volumes has slowed over 2015, reflecting the slowdown in the Asian region (Graph 1.2). Commodity prices have fallen substantially since 2014 in response to this softening in demand as well as ongoing increases in the supply of commodities.

Oil prices have fallen by around 60 per cent since mid 2014. Given that much of the decline in oil prices reflects strong supply, this is likely to support growth in most of Australia's MTPs, which are generally net energy importers. Growth is also being supported by very accommodative monetary policies in many economies. Year-ended global headline inflation has been little changed over 2015, and remains low, reflecting the decline in oil prices to a large extent. Core inflation has been generally steady in both advanced and emerging economies, and remains below central banks' targets in most economies.

Graph 1.2
Global Activity and Commodity Prices
Year-ended growth

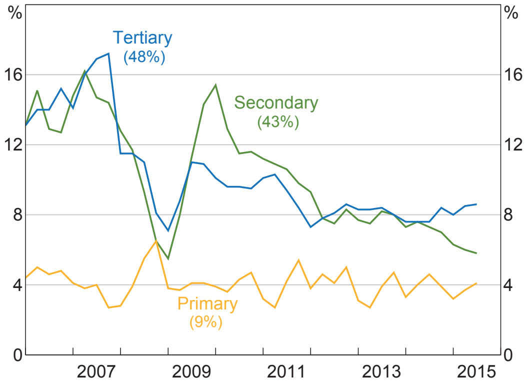


* Weighted by share of world industrial production at market exchange rates
Sources: CEIC Data; CPB Netherlands Bureau for Economic Policy Analysis; RBA; Thomson Reuters

Asia-Pacific

A range of activity indicators suggest that growth in China has continued to ease over 2015, as strong growth in the tertiary (or services) sector has been outweighed by a slowdown in the secondary (or industrial) sector (Graph 1.3). The strength in the services sector appears to have been driven by financial services in recent quarters. Conditions

Graph 1.3
China – GDP Growth by Sector*
Year-ended

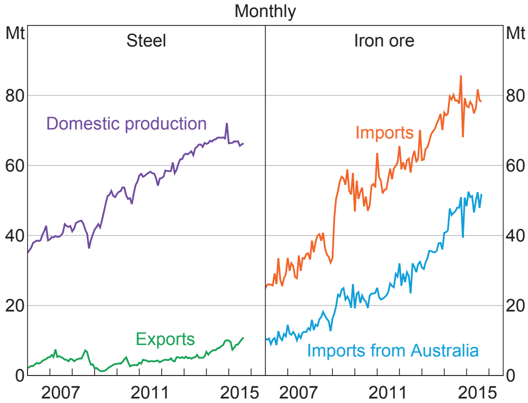


* Numbers in parentheses show 2014 shares of GDP
Sources: CEIC Data; RBA

in the industrial sector, which accounts for about 40 per cent of economic activity, have weakened noticeably over the year to date (see 'Box A: China's Industrial Sector').

Weakness in the industrial sector partly reflects subdued conditions in residential construction, which have curtailed demand for a range of construction-related manufactured items, including steel products. Domestic crude steel consumption has declined over 2015, but levels of production have stabilised in recent quarters, supported by increases in steel exports (Graph 1.4). Production of

Graph 1.4
China – Steel and Iron Ore
Monthly

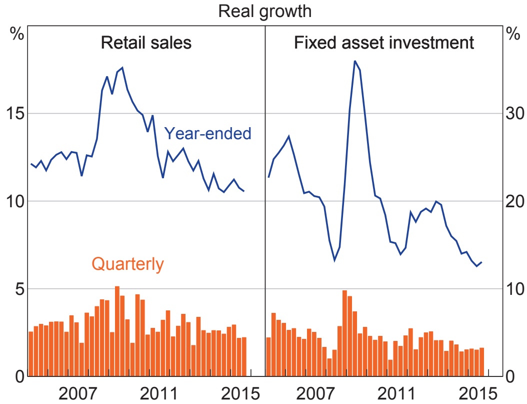


Sources: CEIC Data; RBA

iron ore in China has picked up somewhat in recent months but is still lower than it was in the first half of 2014. Imports of iron ore, including from Australia, have been broadly flat over the past year or so.

Growth in household consumption has been fairly stable in recent quarters. Real retail sales growth has been little changed in the past few months and automobile sales have retraced the decline seen over the first half of the year. Consumer spending appears to have been supported by steady growth of household income, which in turn has been aided by a rise in new jobs; the Government's 2015 target of 10 million new urban jobs was exceeded in the first three quarters of the year. Growth of fixed asset investment remains subdued by the standards of recent years (Graph 1.5). Growth in spending on infrastructure remains high, supported by a pick-up in project approvals this year, but has been offset by continued weakness in the growth of manufacturing and real estate investment (Graph 1.6).

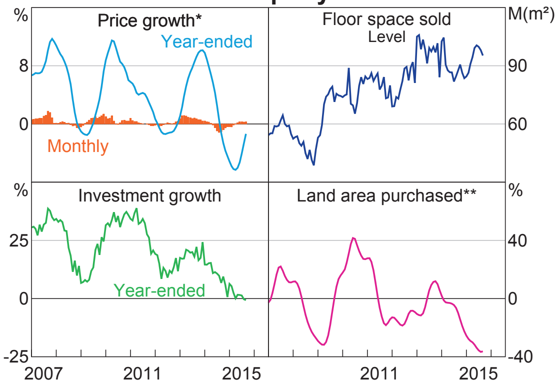
Graph 1.5
China – Activity Indicators
Real growth



Sources: CEIC Data; RBA

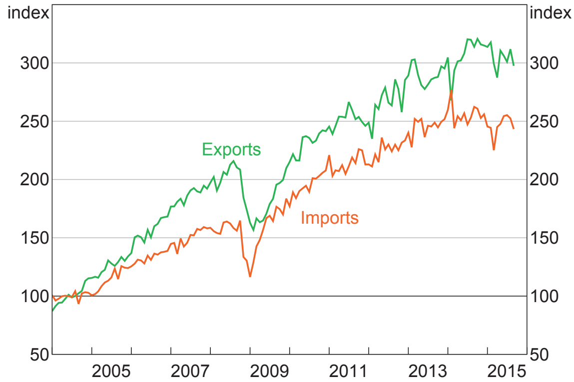
Conditions in the Chinese residential property market have been mixed. Overall, Chinese residential property prices have been rising in recent months, driven by strong increases in the larger cities, but they remain below levels observed a year ago. The volume of floor space sold has fallen a little since June but is still higher than last year. The stock of unsold housing remains substantial in many cities

Graph 1.6
China – Residential Property Market Indicators



* Newly constructed property in 69 large and medium-sized cities
** Year-ended growth of trend series, includes non-residential land
Sources: CEIC Data; RBA; WIND Information

Graph 1.7
China – Merchandise Trade Volumes*
2004 average = 100



* Seasonally adjusted by the RBA
Sources: CEIC Data; RBA

and hence real estate investment remains weak. Land area purchased by developers has trended lower over the year to date. The authorities have continued to introduce measures to support the residential property market, most recently by reducing the minimum mortgage down-payment requirement for first homes in most cities.

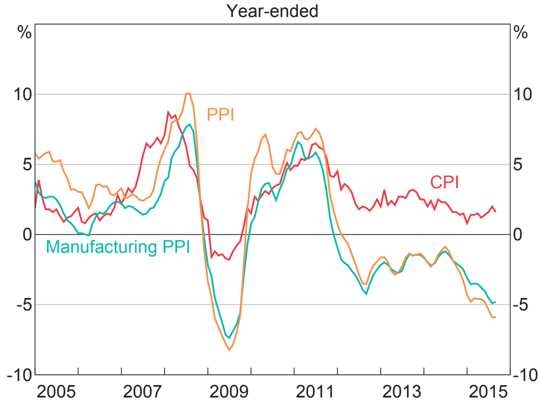
More generally, the Chinese authorities have continued to undertake a range of measures to support growth. These include reducing official benchmark interest rates, cutting banks' reserve requirement ratios, announcing further approvals for infrastructure investment and halving tax rates that apply to certain types of automobile purchases. It has been reported that the large 'policy' banks will issue CNY1 trillion in bonds to fund infrastructure projects between 2015 and 2017.

China's merchandise imports from all regions of the world remain weak, and are around their levels of two years ago in volume terms, consistent with the slowing in domestic demand (Graph 1.7). Exports to most destinations have also fallen, to be around the levels seen two years ago. Weakness in exports may, in part, reflect the effect of the sizeable real exchange rate appreciation over the past year or so.

Disinflationary pressures in China have increased. Producer prices have continued to decline, due in part to lower commodity prices, but also reflecting the ongoing effects of spare capacity in the manufacturing sector (Graph 1.8). The implied GDP deflator fell in the September quarter, reflecting falls in prices of industrial goods. CPI inflation has risen over 2015, but remains well below the authorities' full-year target of 3 per cent.

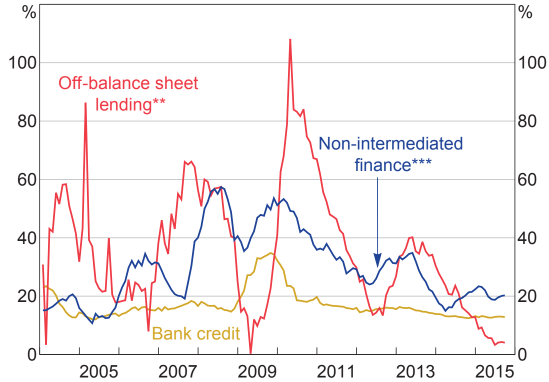
Financing conditions have improved a little in recent months. The growth of total social financing (TSF) has increased, largely reflecting a pick-up in non-intermediated finance and continued strength in bank credit (Graph 1.9). Recent data on TSF may understate the growth of economy-wide financing,

Graph 1.8
China – Inflation
Year-ended



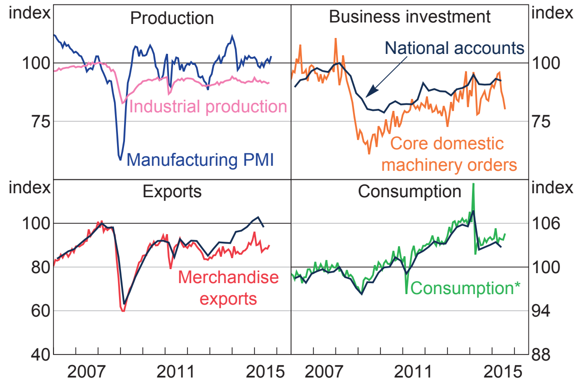
Sources: CEIC Data; RBA

Graph 1.9
China – Total Social Financing*
Year-ended growth in stock



* Non-seasonally adjusted
** Entrusted loans, trust loans and undiscounted bank acceptance bill issuance
*** Corporate bond and non-financial corporate equity issuance
Sources: CEIC Data; People's Bank of China; RBA

Graph 1.10
Japan – Economic Indicators
March 2008 = 100



* The Cabinet Office's monthly measure of private consumption
Sources: CEIC Data; Markit Economics; RBA; Thomson Reuters

as they exclude local government debt, which has been progressively issued since early this year to replace loan types that are included in TSF. While CNY2.5 trillion of local government debt had been issued by September, the process of restructuring is likely to take many years.

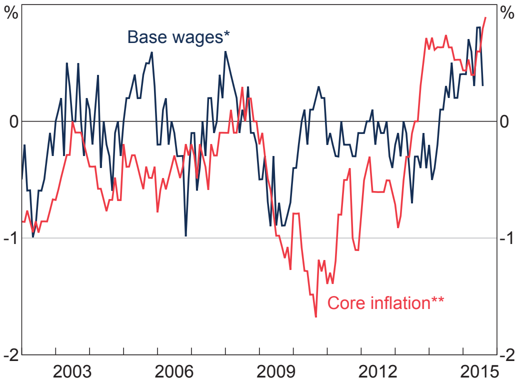
The economic recovery in Japan appears to have stalled in mid 2015. GDP declined in the June quarter, due to broad-based weakness across consumption, business investment and exports (Graph 1.10). On balance, recent indicators point to little, if any, growth in the September quarter. Exports are likely to remain weak in the near term, due to a slowdown in Japan's major trading partners in Asia, which account for nearly 60 per cent of its exports. In line with this, leading indicators of business investment have also declined in recent months. While some business surveys point to healthy investment plans, some of that may reflect offshore investment by Japanese corporations; sales by foreign subsidiaries of Japanese companies have been growing much faster than exports from Japan since 2012.

Nevertheless, labour market conditions remain tight in Japan, reflecting increased demand for labour (associated with the rise in output over the past few years) and reduced labour supply as the population ages. The unemployment rate has declined further this year and is low by historical standards, while the ratio of job offers to applicants has been rising steadily. These conditions have been placing upward pressure on labour compensation over the past few years, although wage growth in real terms has remained low in recent years as inflation has also picked up. This may be contributing to the slow recovery in consumption following the increase in the consumption tax in 2014.

Following a sustained period of deflation after the financial crisis, core consumer prices have been rising for two years. However, the rate of core inflation remains below the Bank of Japan's (BoJ) target of 2 per cent (Graph 1.11). Headline inflation is positive, but at a lower level, reflecting the ongoing effects of the decline in the oil price since last year. Market-implied measures of inflation expectations also remain below the BoJ's target. Nonetheless, the BoJ expects inflation to reach its target by early 2017, conditional on oil prices rising moderately from their recent levels.

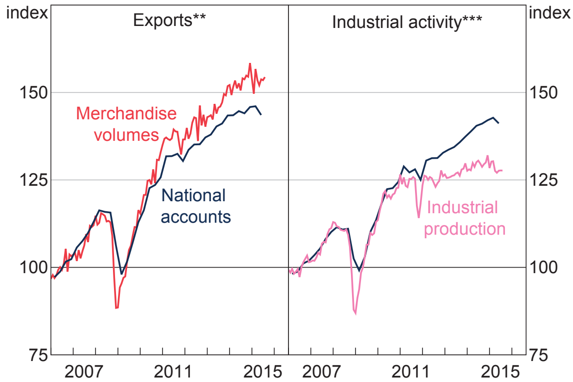
In the rest of east Asia, economic activity has grown at a below-average pace this year. The key driver has been weakness in external demand, especially for the higher-income economies in the region. A sharp fall in exports from Taiwan and Singapore led to a decline in GDP in those economies in the

Graph 1.11
Japan – Wage Growth and Inflation
Year-ended



* Full-time workers only
** Excluding the effects of the consumption tax increase in April 2014
Sources: Bank of Japan; CEIC Data; RBA; Thomson Reuters

Graph 1.12
East Asia* – Exports and Industrial Activity
2006 average = 100



* Selected economies in east Asia excluding China and Japan
** Merchandise volumes are non-oil domestic exports for Singapore; non-oil and gas exports for Indonesia; excludes re-exports through Hong Kong, national accounts includes re-exports and services exports
*** Excludes Hong Kong and Indonesia
Sources: CEIC Data; IMF; RBA

June quarter. Recent indicators, and September quarter GDP data to hand for a number of east Asian economies, point to further below-average growth, including a continuation of subdued export growth (Graph 1.12).

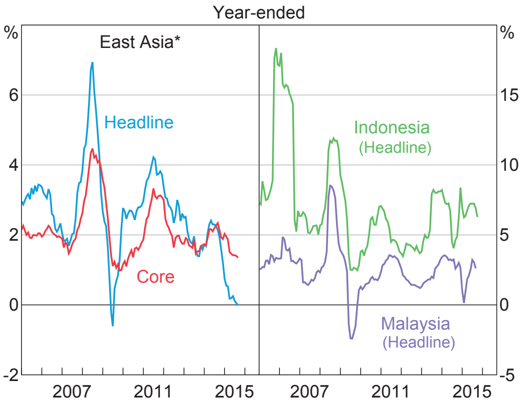
Trade between the economies in the east Asian region has accounted for a significant part of the slowdown in trade in the region since mid 2014. This region is also exposed to slowing demand growth elsewhere, including China, which is a significant source of intermediate and final demand for the region's exports. However, trade should be assisted to some extent by recovery in the United States and euro area, which account for around one-third of the final demand for the region's exports. Real exchange rate depreciations over 2015 for many economies in the region will also help to support external demand. In value terms, the weakness in exports from the region has been even more pronounced in 2015 due to the declines in oil prices.

There are tentative signs that the external sector weakness facing the east Asian region is beginning to affect domestic activity. Growth in domestic demand slowed to a below-average rate in the June quarter. This was driven by a decline in investment growth, especially in the middle-income economies, while consumption growth was a bit below average. A range of indicators, such as below-average retail sales growth, lower levels of industrial production over the past year, and below-average manufacturing PMIs, point to a continuation of recent trends in consumption and investment.

Headline and core inflation in the region remain subdued in most economies, other than Malaysia and Indonesia where reductions in fuel subsidies in 2014 and, in the case of Malaysia, the introduction of a goods and services tax in April this year have put some upward pressure on inflation (Graph 1.13). In response to slowing inflation and economic activity, monetary policy has been eased this year in economies including Korea, Singapore, Taiwan and Thailand. Despite the moderation in growth and inflation, unemployment in the region remains low and stable.

In India, growth remained strong in the June quarter, although deficient monsoon rains are likely to lead to lower agricultural output over the remainder of the year (Graph 1.14). Growth in the manufacturing sector has been relatively strong in recent months, but private investment has slowed. External demand has remained subdued, and the current account deficit widened over the June quarter.

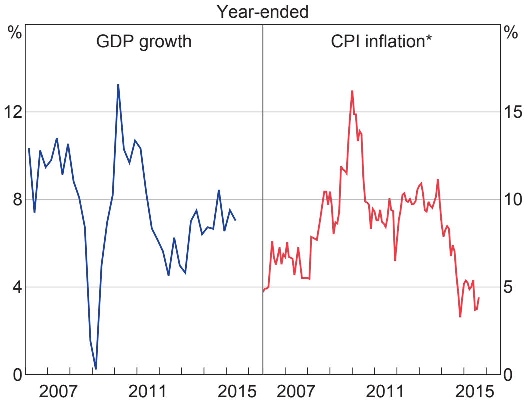
Graph 1.13
East Asia – Inflation



* Selected economies in east Asia excluding China, Indonesia, Japan and Malaysia

Sources: CEIC Data; IMF; RBA; Thomson Reuters

Graph 1.14
India – GDP Growth and Inflation



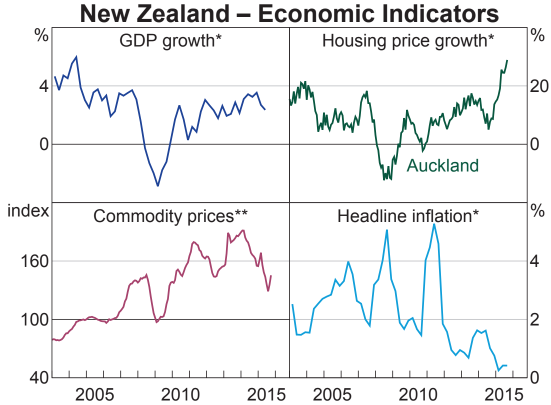
* Reserve Bank of India estimates prior to January 2012

Sources: CEIC Data; RBA; Reserve Bank of India

Consumer price inflation remains well below the Reserve Bank of India's (RBI) interim target of 6 per cent by January 2016. The RBI cut the policy rate by an additional 50 basis points in late September, following a cut in June, citing a range of factors including weaker global conditions and contained food price inflation. Together with lower oil prices and increases in government capital expenditure, this should continue to support growth of the Indian economy.

In New Zealand, GDP growth moderated over the first half of 2015, driven partly by weak external demand and a further decline in commodity prices (Graph 1.15). With inflation remaining low, the Reserve Bank of New Zealand has cut its policy rate by a cumulative 75 basis points since June. This, along with the recent rebound in dairy prices and the exchange rate depreciation over 2015, is likely to support growth and contribute to inflation in the medium term. Strong net immigration continues to underpin growth in the labour force and put upward pressure on housing prices, especially in Auckland.

Graph 1.15
New Zealand – Economic Indicators



* Year-ended

** January 2005 = 100

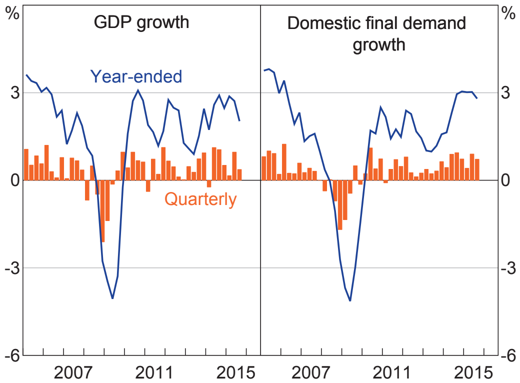
Sources: ANZ; RBA; RBNZ; REINZ; Thompson Reuters

United States

The recovery in the United States economy has continued this year (Graph 1.16). Consumption growth has been strong, supported by further improvement in the labour market, the boost to real household incomes from lower fuel prices and rising household wealth. These factors, along with recent consumption activity indicators, suggest further consumption-led growth in the period ahead.

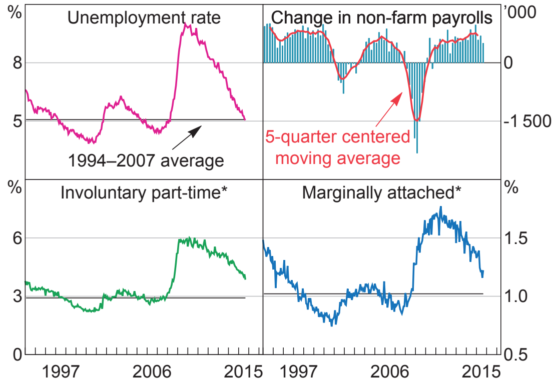
Modest growth in business investment, and the continuing recovery in residential investment, have also provided some support to growth in the US economy in 2015. At the same time, however, exports have been weak and investment in the energy sector has declined due to the sharp fall in

Graph 1.16
United States – GDP and Demand



Source: Thomson Reuters

Graph 1.17
United States – Labour Market

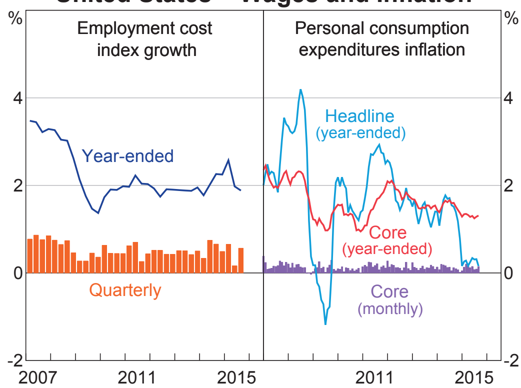


* Per cent of labour force
Sources: RBA; Thomson Reuters

oil prices. Recent business activity indicators point to a further modest increase in business investment in the near term. Survey measures of conditions in the services and construction sectors, which account for more than two-thirds of economic output in the United States, remain above or around average levels of recent years. In contrast, conditions in the manufacturing sector, which accounts for only about 10 per cent of economic activity, have been more subdued. In particular, industrial production, core capital goods orders and survey measures of manufacturing business conditions have been mostly unchanged over recent months and remain below their late 2014 levels.

Labour market conditions have continued to improve in line with the economic recovery. While employment growth has slowed somewhat in recent months, it has been sufficient to absorb the growth of the working-age population and contribute to a further gradual decline in labour market spare capacity (Graph 1.17). Specifically, the unemployment rate and other measures of labour market underutilisation have continued to decline gradually, and are at, or are closing in on, their pre-crisis long-run averages. This has put upward pressure on labour incomes; growth in the employment cost index picked up in the September quarter to be around the post-crisis average over the year (Graph 1.18).

Graph 1.18
United States – Wages and Inflation



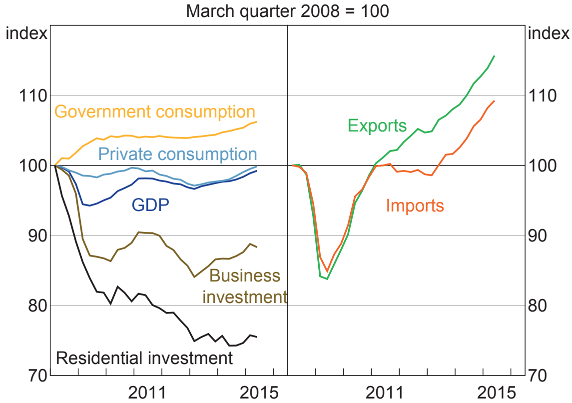
Source: Thomson Reuters

Headline inflation has remained low since late 2014, reflecting the effects of lower oil prices. Core inflation has been broadly stable this year at around 1¼ per cent in year-ended terms.

Europe

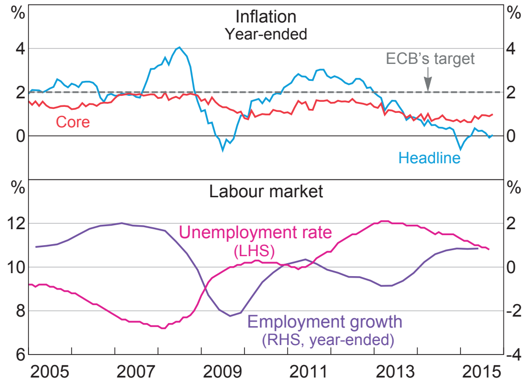
The recovery in the euro area economy has continued into the second half of 2015. GDP has been rising since the beginning of 2013, and more recently has been growing at an above-trend pace (Graph 1.19). Growth has been supported by household and government consumption; household consumption has now recovered to its pre-crisis levels. In contrast, investment remains

Graph 1.19
Euro Area – GDP
March quarter 2008 = 100



Source: Thomson Reuters

Graph 1.20
Euro Area – Inflation and Labour Market



Sources: Eurostat; RBA; Thomson Reuters

subdued, and residential construction investment has remained particularly weak. Exports have continued to grow at roughly the same pace as imports.

More timely indicators point to economic activity in the September quarter having grown at a similar rate as in recent quarters. Consumer and business confidence remain above their average levels. The euro area PMIs, in both the services and manufacturing sectors, have remained high relative to their recent history. Industrial production has been little changed in recent months, but is above its level of a year ago. Household credit has continued to grow, albeit at low rates, reflecting improved supply of and demand for credit. After declining consistently for some time, business credit is little changed over the past year.

The labour market in the euro area continues to improve gradually (Graph 1.20). Employment in the June quarter grew at its fastest pace in seven years, although the level of employment is yet to reach its pre-crisis peak. The region's unemployment rate has been declining but remains high, and is still only around 1¼ percentage points below its mid 2013 peak. The improvement in labour market conditions has been broad based across countries, but has been greatest in Ireland, Portugal and Spain, where GDP growth has been relatively strong recently.

Headline inflation remains low, reflecting the lower oil prices to a large extent. Core inflation increased over 2015 but remains well below the European Central Bank's target. Longer-term market-implied inflation expectations have declined in recent months after rising in early 2015; they remain at historically low levels.

Commodity Prices

The RBA Index of Commodity Prices (ICP) has declined further in recent months, led by lower prices of bulk commodities, oil and base metals (Table 1.1; Graph 1.21). Overall, commodity prices are now around 50 per cent below their peak in 2011 but are still around 80 per cent above levels seen in the early 2000s. The fall in commodity prices since 2011 has occurred in response to substantial increases in supply, particularly for oil and bulk commodities, as new resource projects have started production. More recently, weakness in demand, especially from Asia, has also contributed to falls in commodity prices.

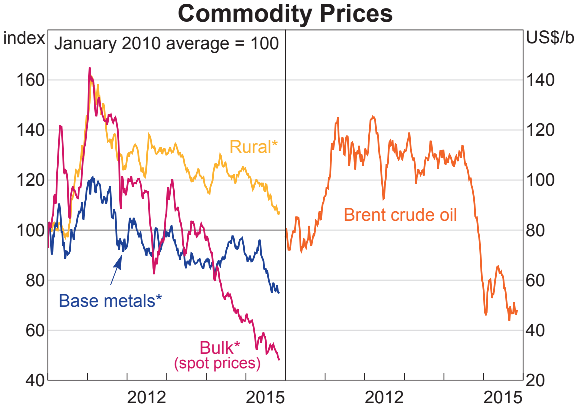
The Brent crude oil price remains around 60 per cent lower than in mid 2014 (Graph 1.21). The decline in oil prices since mid 2014 continues to be reflected in weakness in liquefied natural gas (LNG) prices, particularly in the Asian region.

Table 1.1: Commodity Price Growth[(a)]

SDR, 3-month-average prices, per cent

	Since previous *Statement*	Over the past year
Bulk commodities	–6	–24
– Iron ore	–6	–30
– Coking coal	–5	–22
– Thermal coal	–6	–10
Rural	–6	–10
Base metals	–11	–19
Gold	–3	–2
Brent oil[(b)]	–21	–50
RBA ICP	–6	–21
– using spot prices for bulk commodities	–6	–21

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



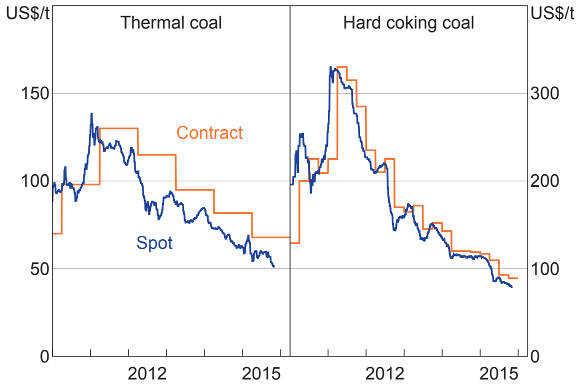
* RBA Index of Commodity Prices sub-indices, SDR
Sources: Bloomberg; RBA

* Average of hot rolled steel sheet and steel rebar prices
** Free on board basis
Sources: Bloomberg; RBA

The spot price of iron ore has declined in recent months, driven largely by concerns about the strength of the Chinese economy and the associated demand for iron ore (Graph 1.22). Notwithstanding these concerns, the volume of global low-cost iron ore production, including from Australia, is expected to increase further. In the absence of a pick-up in the growth of global demand, this will place further downward pressure on the iron ore price for some time. However, reductions in production costs over recent years, together with the depreciation of the Australian dollar, mean that most Australian production of iron ore appears to be profitable. Nevertheless, some smaller, higher-cost producers remain under pressure and scope for further cost reductions is becoming more limited.

Prices of thermal and coking coal have fallen in recent months, in part reflecting weaker demand from China for steel production, particularly in the case of coking coal (Graph 1.23). At current prices, a substantial share of global coal production, including in Australia, is estimated to be unprofitable. Recently, weak demand associated with slower growth of global industrial production has also led to declines in the prices of base metals. In response, global production of some base metals, notably zinc and aluminium, has been reduced. ✠

Graph 1.23
Coal Prices
Free on board basis



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

Box A

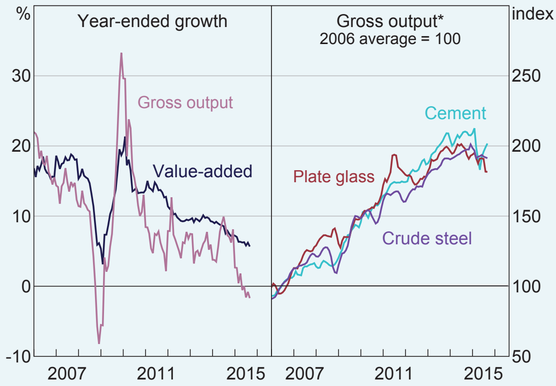
China's Industrial Sector

In China, the industrial sector accounts for around 40 per cent of GDP, and represents a key source of demand for Australian resource commodities. A range of indicators suggest that growth in Chinese industrial activity has weakened noticeably since late 2014, although it remains above the lows observed during the global financial crisis. This box examines these indicators to gain a better understanding of developments in this sector and thus the outlook for both the Chinese and Australian economies.

Data published by China's National Bureau of Statistics (NBS) indicate that year-ended growth in the value-added measure of industrial production declined from around 7¼ per cent in December 2014 to around 5¾ per cent in September 2015 (Graph A1). The measurement of value-added industrial production is conceptually appealing as it aims to remove the problem of 'double counting' that can occur when simply adding up gross outputs of the various industrial products. This is because the value-added measure subtracts the value of intermediate inputs from the value of total output of the industrial sector. However, the value added of the industrial sector can be difficult to measure with precision at a monthly frequency, especially for a rapidly growing emerging economy like China. So it is also useful to examine other indicators of activity in the industrial sector.[1]

The NBS also publishes disaggregated data on the gross output of specific industries measured in physical units, such as the tonnes of crude steel, the number of automobiles, and so on. The information from these more granular data can be

Graph A1
China – Industrial Production



* Three-month moving average

Sources: CEIC Data; RBA

combined to calculate growth in the gross output of industrial products, as shown on the left panel of Graph A1.[2] Similar to the value-added measure, the gross output index of industrial production points to a sharp fall in growth and subsequent rebound during the period of the global financial crisis and China's subsequent macroeconomic stimulus, and lower rates of growth since 2010. However, the series vary from each other, which is to be expected given the conceptual differences underpinning their construction. Since 2011, growth in gross output has been lower on average and more variable than growth in industrial value added. This has become particularly pronounced since late 2014. A part of this difference can be explained by the fact that a gross output measure may accentuate the effects of

1 It can be difficult to measure value-added industrial production because detailed information on the value and prices of inputs and outputs for individual industries is often not available on a monthly basis.

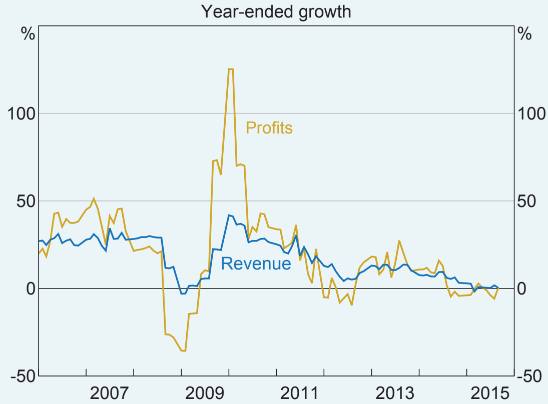
2 The gross output index presented here is a geometric weighted average of changes in gross output of around 160 industrial products, measured in their original units. The index uses weights based on available industrial revenue data; unweighted geometric averages are used at lower levels of aggregation for which revenue data are not available. The results are relatively robust to the selection of products included and to the use of weights based on the value of gross output.

a business cycle because it double counts changes in intermediate goods. For example, a decline in iron ore production is also likely to be reflected in declining steel output.

Nevertheless, the disaggregated nature of the gross output data provides insights into the drivers of weakness in the industrial sector. The data suggest that falls in the output of machinery, equipment and some construction-related products, including crude steel, cement and plate glass, have been particularly pronounced (Graph A1). These trends are consistent with the recent weakness in investment in Chinese real estate and manufacturing. Output of coal and iron ore mines has also been relatively subdued. In contrast, the production of oil, chemicals and non-ferrous metals, such as copper and aluminium, have made significant positive contributions to the growth of industrial output in 2015.

The weakness observed in industrial output is also evident in a range of other data, including financial measures such as industrial revenue and profits (Graph A2). Although they are generally more volatile, financial indicators have historically followed similar patterns to measures of industrial sector activity and have weakened noticeably over the past year.[3] It is worth noting that both revenue and profits were growing strongly prior to the downturn that coincided with the global financial crisis. In contrast, the recent slowdown in the industrial sector has followed a number of years of declining growth in revenue and profits. This may have consequences for the ability of firms to continue operations and service debt if the weakness persists. In the first half of 2015, there was a sharp increase in the ratio of non-performing loans (NPL) to total loans for the manufacturing and wholesale and retail trade sectors

Graph A2
China – Financial Indicators of Industrial Firms*



* December observations removed

Sources: CEIC Data; RBA

at the four largest Chinese state-owned commercial banks. The reported overall NPL ratio for Chinese banks also increased moderately but remained low.

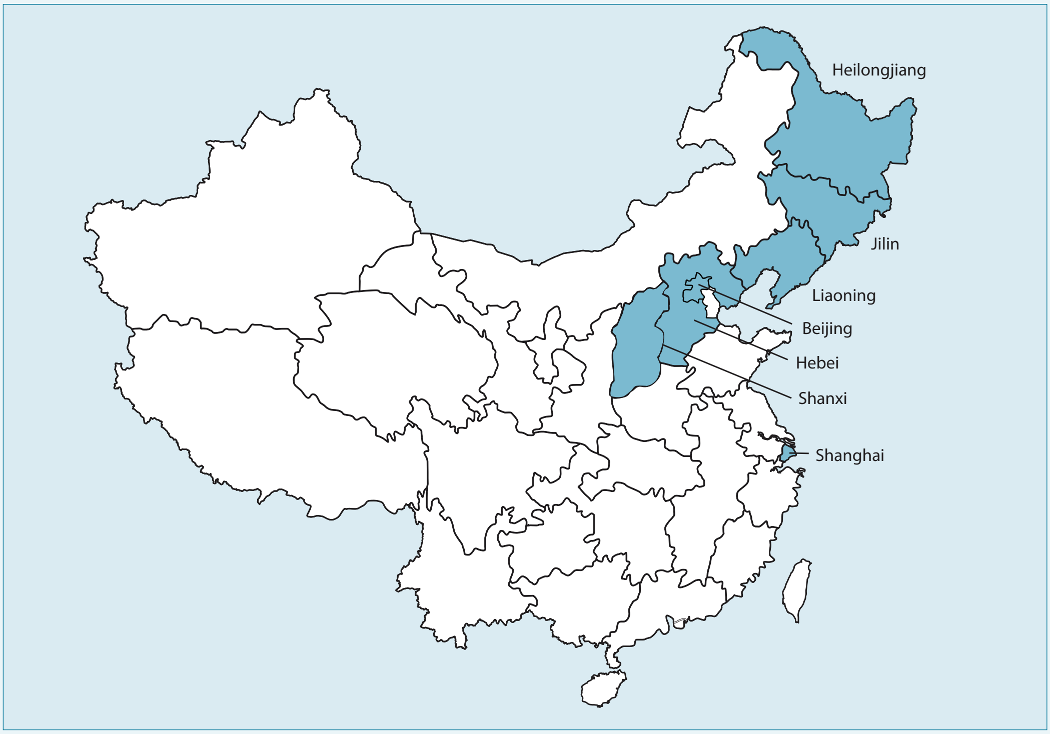
Regional variation in industrial sector conditions could also have implications for Chinese financial stability and government policy. While the large Chinese banks operate nationwide, regional exposures can be significant for individual institutions and some smaller financial institutions are likely to have more geographically concentrated exposures. If conditions in one part of the country were to deteriorate significantly, financial institutions with sizeable on- and off-balance sheet exposures to that region may come under pressure, potentially requiring policy responses to mitigate the spread of risks to the broader financial system.

Since 2014, growth of value-added industrial production has slowed but remains relatively high in Guangdong, Jiangsu and Shandong. These three provinces accounted for almost 30 per cent of total industrial GDP in 2014, and produce a diverse range of items, including a number that have made positive contributions to growth in industrial output in 2015 to date. In contrast, growth in industrial activity has been especially weak in the north-east, where there is significant production of motor vehicles, machinery

3 The higher volatility observed in the growth of the financial measures partly reflects the fact that these are nominal indicators, while value-added industrial production and the gross output index are measured in real terms. In addition, the profits series includes a range of income sources other than sales (such as subsidies and investment earnings), and costs other than the value of inputs (such as merger and acquisition activity).

and equipment (Figure A1). Growth is also weak in the resource-intensive provinces of Shanxi (which produces around a quarter of Chinese coal) and Hebei (which produces more than a third of China's iron ore and around a quarter of domestic crude steel).[4] Together with Liaoning, Jilin and Heilongjiang, these provinces account for roughly 15 per cent of GDP. If the industrial downturn in the north-east persists, it is expected to weigh on the growth of aggregate economic activity in coming quarters.

Figure A1: Chinese Provinces with Weak Growth of Industrial Production



4 Value-added industrial production has contracted in the major cities of Beijing and Shanghai, but these provinces account for a modest (and declining) share of industrial sector GDP.

2. International and Foreign Exchange Markets

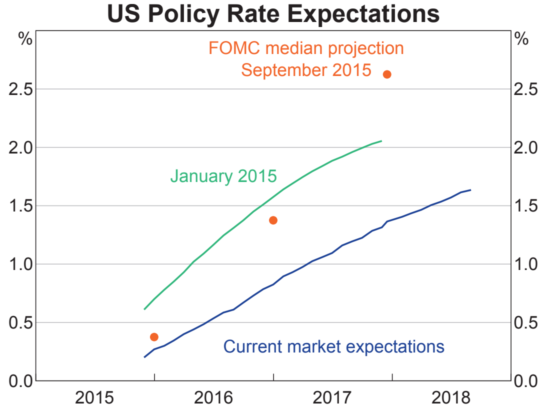
Concerns about slowing growth in emerging market economies, particularly China, along with uncertainty about changes in monetary policy in the major economies have been the main influences on global financial markets in recent months. As concerns about China intensified in August, global equity prices fell, albeit from relatively high levels, there were further declines in commodity prices and the currencies of commodity-exporting nations, and spreads on corporate bonds widened. Subsequently, some of these price movements were reversed as expectations of further stimulus by some of the major central banks increased. Another factor having influenced global markets was sizable portfolio adjustments by large sovereign asset managers.

Central Bank Policy

The US Federal Open Market Committee (FOMC) maintained its target for the federal funds rate at both its September and October meetings. These decisions reflected its assessment that, while the FOMC's employment objective would soon be met, it could not be sufficiently confident that its inflation objective would be achieved. However, some FOMC members emphasised that the decision at the September meeting was a 'close call' and all but four projected at that time that the federal funds rate target should be increased this year, assuming economic data evolve as expected. Many members have reiterated this assessment subsequently, and the FOMC indicated in the statement accompanying its October meeting that it may well raise the federal funds rate target in December.

The market-implied expected path of the federal funds rate continues to be well below the projection of the median FOMC member (Graph 2.1). Market pricing implies a 60 per cent chance of an increase in the federal funds rate target this year, with the first increase fully priced in for the first quarter of 2016. The implied path for interest rates has flattened considerably since the start of the year, when markets had expected two increases in 2015 and a total of 75 basis points more tightening by mid 2017 than they now project.

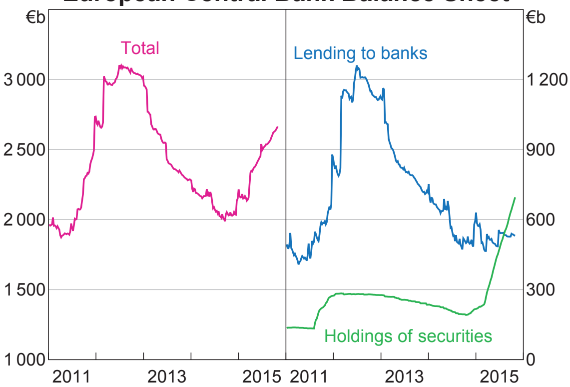
Graph 2.1
US Policy Rate Expectations



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

The European Central Bank (ECB) signalled at its October meeting that there is a high probability it will increase the extent of stimulus it provides following its early December meeting, by increasing its asset purchases and/or lowering its policy rate. This announcement reflected concerns that the return of inflation to its target could be delayed by the impact of slowing growth prospects in emerging markets on oil prices and inflation expectations, and the appreciation of the euro. Under current policy, the ECB's balance sheet is likely to reach around €3.5 trillion by September 2016, the earliest date that its asset purchase programs will end, well above its earlier peak of €3.1 trillion (Graph 2.2).

Graph 2.2
European Central Bank Balance Sheet

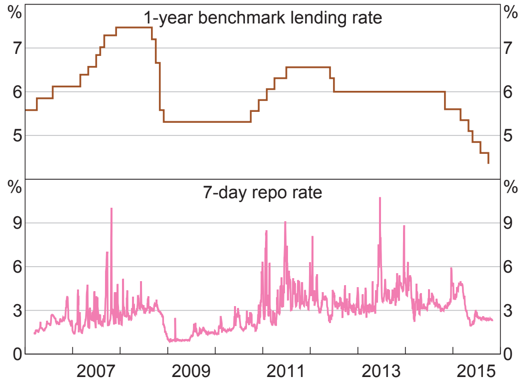


Source: ECB

The Bank of Japan's (BoJ) balance sheet has expanded by ¥75 trillion since the start of the year due to purchases of Japanese government bonds (JGBs). The BoJ continues to judge that both underlying inflation and inflation expectations are rising. However, it pushed back the date by which it expects to achieve its 2 per cent inflation target by 6 months to early 2017, due to further declines in oil prices over recent months. A number of observers expect it to expand its stimulus program further.

The People's Bank of China (PBC) eased monetary policy further in August and October in response to low inflation and slowing economic growth. In both instances this included a 25 basis point reduction in benchmark term deposit and lending rates, which are now 150–165 basis points lower than a year ago and at their lowest level on record (Graph 2.3). The PBC accompanied each easing with a system-wide 50 basis point reduction in reserve requirement ratios, which are now 250 basis points lower than a year ago. Much of the additional liquidity injected by these reductions offsets the contractionary effect of the PBC's foreign exchange reserve sales.

Graph 2.3
China – Interest Rates

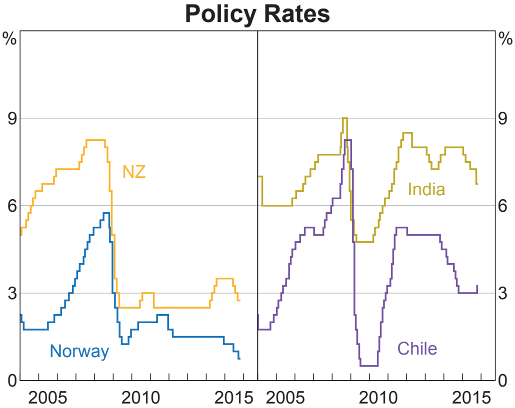


Source: CEIC Data

The lowering of Chinese benchmark interest rates in October was accompanied by the removal of the ceilings on permissible deposit rates, completing the formal deregulation of interest rates in China. However, banks do not appear to have used the additional flexibility so far, with most maintaining only a 25 basis point premium to the benchmark 1-year deposit rate (and pricing a little below the benchmark for at-call deposits).

The Reserve Bank of New Zealand eased policy further in September and signalled that further interest rate reductions may still be required (Graph 2.4; Table 2.1). The decision reflected the fact that the decline in dairy prices since March had dampened economic activity and that underlying inflation was expected to remain low for some time.

Graph 2.4
Policy Rates



Source: Thomson Reuters

Table 2.1: Monetary Policy

	Policy rate Per cent		Most recent change
Euro area	0.05	↓	Sep 14
Japan[a]	na		na
United States[b]	0.125	↓	Dec 08
Australia	2.00	↓	May 15
Brazil	14.25	↑	Jul 15
Canada	0.50	↓	Jul 15
Chile	3.25	↑	Oct 15
China[a]	na		na
India	7.00	↓	Sep 15
Indonesia	7.50	↓	Feb 15
Israel	0.10	↓	Feb 15
Malaysia	3.25	↑	Jul 14
Mexico	3.00	↓	Jun 14
New Zealand	2.75	↓	Sep 15
Norway	0.75	↓	Sep 15
Russia	11.00	↓	Jul 15
South Africa	6.00	↑	Jul 15
South Korea	1.50	↓	Jun 15
Sweden	–0.35	↓	Jul 15
Switzerland[b]	–0.75	↓	Jan 15
Thailand	1.50	↓	Apr 15
Turkey	7.50	↓	Feb 15
United Kingdom	0.50	↓	Mar 09

(a) The Bank of Japan's main operating target is currently the money base; China does not have an official policy rate
(b) Midpoint of target range
Sources: Central banks; RBA; Thomson Reuters

The central bank of Norway also eased policy further in September in response to the impact of declining oil prices on domestic activity and signalled that further stimulus may be required. In Sweden, the Riksbank left its policy rate unchanged but expanded its government bond purchase program by 50 per cent in response to concerns that easier global monetary policy could cause the krona to appreciate and delay the return of inflation to target. The additional purchases will see the Riksbank own around one third of Swedish government bonds by mid next year.

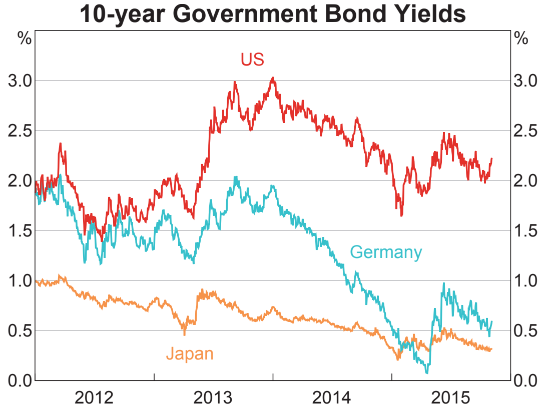
The Reserve Bank of India continued to lower interest rates in response to a decline in inflationary pressure and weakness in external demand. The Monetary Authority of Singapore also eased policy by slightly lowering the rate at which it will allow the nominal exchange rate to appreciate. In contrast, the central bank of Chile unwound 25 basis points of last year's monetary easing in October. This decision came despite continued economic weakness due to lower copper prices, with the central bank citing concerns about the impact of persistent exchange rate-induced inflation on inflation expectations.

Sovereign Debt Markets

Yields on 10-year US Treasuries have declined since mid year, reversing their rise over the first half of the year (Graph 2.5). The decline reflects a fall in inflation compensation for both medium- and long-term horizons as concerns about the disinflationary impact of slowing growth in China increased and oil prices fell. Yields on 10-year German Bunds and JGBs have moved in line with those on US Treasuries over recent months. Movements in shorter-term yields have been more divergent; 2-year US Treasury yields have drifted up this year, including a significant increase over the past two weeks, while 2-year German Bund yields fell further below the rate paid on deposits at the ECB following the ECB's indication that this rate could be lowered in December.

In the United States, yields at the very short end rose temporarily because of concerns that the Federal

Graph 2.5
10-year Government Bond Yields

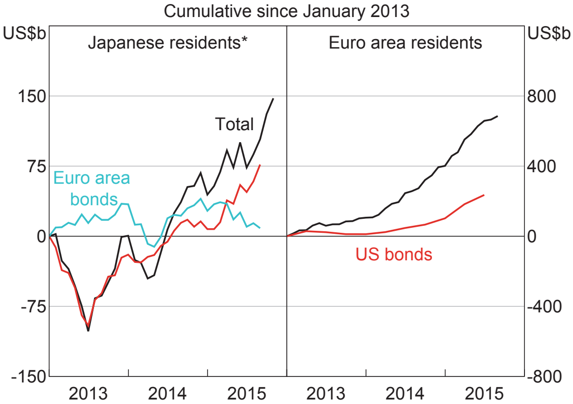


Source: Bloomberg

Government would breach its 'debt ceiling'. Concerns were alleviated when Congress passed a two-year budget and a bill to suspend the debt ceiling.

Foreign holdings of US Treasuries have declined since the start of the year, with much of this seemingly due to sales of foreign exchange reserves by China (see 'Box B: Chinese Capital Outflows'). This has more than offset sizeable purchases of US Treasuries by Japanese residents due to both renewed foreign bond accumulation in recent months and an ongoing reallocation away from euro area bonds (Graph 2.6). Euro area residents' purchases of US bonds were sizeable in the first half of 2015, but their foreign bond purchases moderated somewhat in July and August.

Graph 2.6
Net Purchases of Foreign Bonds
Cumulative since January 2013

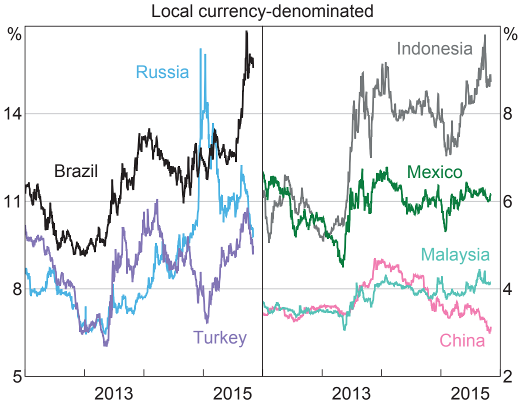


* Preliminary data after August 2015
Sources: ECB; Ministry of Finance Japan; Thomson Reuters

Spreads between euro area periphery bonds and German Bunds have been broadly stable since European leaders reached an in-principle deal on additional financing for Greece in mid July. The Greek Parliament has since agreed to much of the legislation it was required to pass under the agreement, and there remains a commitment from Greece's official sector creditors to discuss possible debt relief in coming months. Strict controls on bank withdrawals have not been materially relaxed.

Foreign investor demand for emerging market bonds has diminished since mid year, resulting in outflows from emerging market bond funds in late August and September. However, sovereign borrowing costs have risen materially for only a few countries since mid year and these increases were partially retraced over October. The largest rise in yields has been for Brazilian sovereign bonds, owing to concerns about a deteriorating fiscal position (in part due to lower commodity prices) that resulted in S&P downgrading the country's credit rating to below investment grade in September (Graph 2.7). Yields also rose in Turkey, owing to concerns about a fragile military and political environment, and in Indonesia, as commodity prices fell and the currency depreciated. Yields on sovereign bonds issued by other commodity exporters have generally been little changed since mid year while yields on bonds issued by commodity importing nations have fallen in line with those on US Treasuries.

Graph 2.7
10-year Government Bond Yields
Local currency-denominated

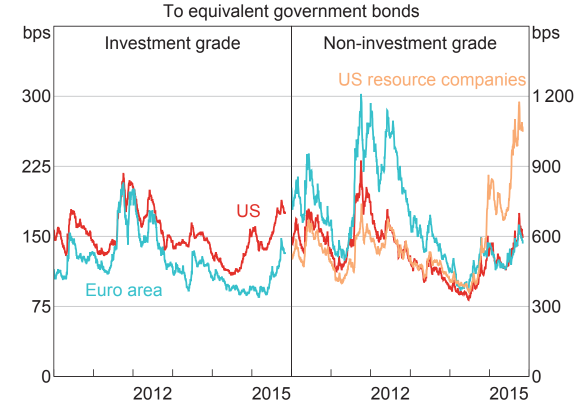


Sources: Bloomberg; Thomson Reuters

Credit Markets

Spreads on bonds issued by corporations in the United States and euro area have risen since mid year, alongside a decline in these countries' sovereign bond yields (Graph 2.8). For investment grade borrowers, borrowing costs have increased only moderately as the rise in credit spreads (to around their historical average) has been largely offset by the decline in sovereign bond yields. Borrowing costs for non-investment grade borrowers outside of the

Graph 2.8
Corporate Bond Spreads
To equivalent government bonds

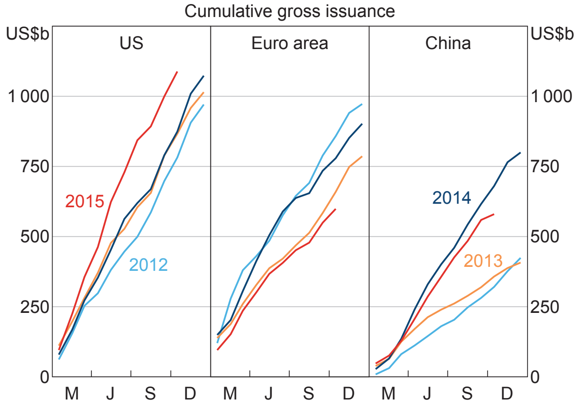


Sources: Bank of America Merrill Lynch; RBA; Thomson Reuters

resource sector have also risen only modestly over that time, with credit spreads for such firms still lower than historical norms. However, borrowing costs for non-investment grade resource-sector corporations have risen substantially since mid 2014, with spreads having increased by 700 basis points since mid 2014 (of which 400 basis points occurred over the past few months).

Bond issuance by US corporations remained well ahead of the pace recorded in previous years (Graph 2.9). Issuance by investment grade borrowers was particularly robust, while that by non-investment grade borrowers declined a little. Nonetheless, non-investment grade issuers still appear to be able to raise sizeable sums, as indicated by Dell's planned raising of up to US$15 billion to fund an acquisition. Bond issuance by European financial and non-financial corporations remained subdued, in part reflecting the fact that the ECB's asset purchases and term funding programs have increased banks' other sources of funding.

Graph 2.9
Corporate Bond Issuance
Cumulative gross issuance

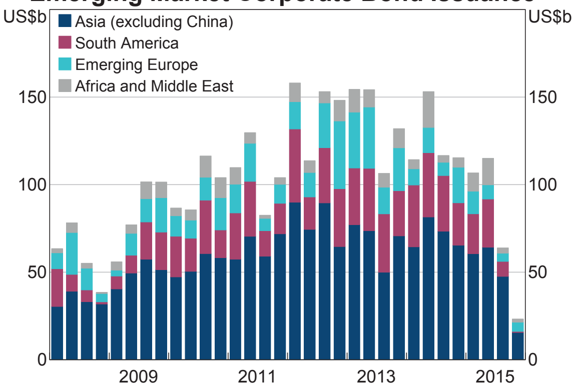


Sources: Dealogic; RBA

Bond issuance by Chinese corporations has remained very strong. This is despite reduced offerings by local government financing vehicles (which count as corporate bond issuance) as local government borrowing moves away from these financing vehicles onto public sector balance sheets via the local government debt swap program. Local government bond issuance in 2015 to date amounts to CNY2.8 trillion, compared with only CNY0.4 trillion in 2014; the ceiling on the debt swap program was raised to CNY3.2 trillion in September. Sinosteel, a steel producer owned by the central government, delayed an interest payment on a CNY2 billion bond and extended the date when investors can call in these debts by one month. This constitutes the first ever missed bond payment by a central-government owned enterprise. Despite this, there has been no impact on the broader credit market where spreads continued to trend down.

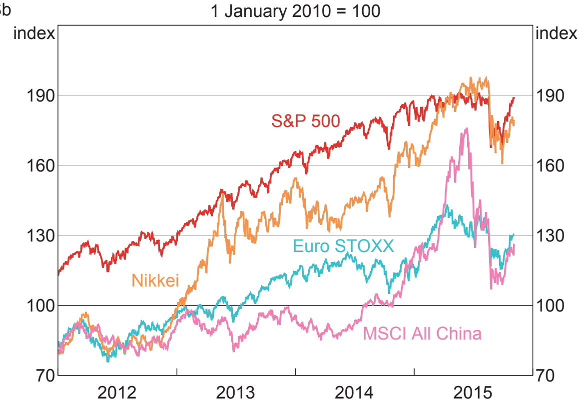
In contrast, bond issuance by corporations in other emerging markets slowed notably in the September quarter and has yet to show clear signs of recovery (Graph 2.10). The decline in such issuance has been broad based across countries and industries, but more pronounced for US dollar-denominated bonds than for local currency-denominated ones. It occurred alongside a broad-based widening in spreads on US-dollar bonds, though this widening has been similar to that for non-investment grade borrowers in advanced economies and has been offset somewhat by a decline in US Treasury yields (Graph 2.11). There are few data on how the overall cost of borrowing in local currency (which accounts for over half of such corporations' bond issuance) has changed.

Graph 2.10
Emerging Market Corporate Bond Issuance*



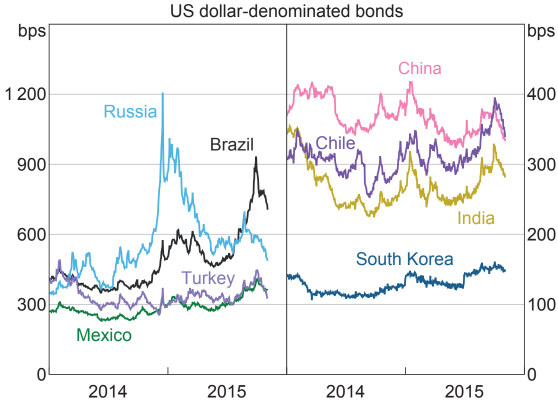
* Latest observation is quarter-to-date
Sources: Dealogic; RBA

Graph 2.12
Major Share Price Indices
1 January 2010 = 100



Source: Bloomberg

Graph 2.11
Emerging Market Corporate Bond Spreads
US dollar-denominated bonds



Source: J.P. Morgan

Table 2.2: Changes in International Share Prices
Per cent

	Over 2014	2015 to date
United States – S&P 500	11	2
Euro area – STOXX	2	12
United Kingdom – FTSE	–3	–2
Japan – Nikkei	7	8
Canada – TSE 300	7	–7
Australia – ASX 200	1	–3
China – MSCI All China	28	3
MSCI indices		
– Emerging Asia	5	–2
– Latin America	–4	–4
– Emerging Europe	–8	4
– World	**7**	**2**

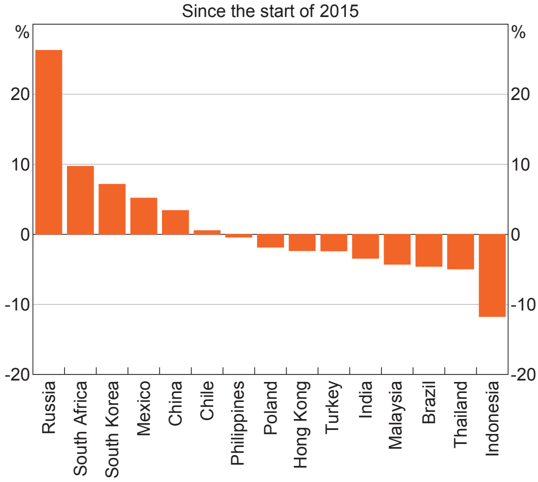
Source: Bloomberg

Equities

Global share prices fell by around 10 per cent in mid August and remained volatile during September, but have since recovered most of that fall as sentiment improved and expectations of additional central bank stimulus rose (Graph 2.12; Table 2.2). The fall over August was larger for European and Japanese shares that had outperformed other developed markets over the first half of the year, and their subsequent recovery has also been less pronounced than in the United States. The correction was triggered by increased concerns about the outlook for the Chinese economy following the Chinese authorities' decision to allow the renminbi (RMB) to depreciate against the US dollar (see section on 'Foreign Exchange') and renewed falls in Chinese share prices, with relatively high valuations in global share markets probably a contributing factor. The decline also occurred alongside a rise in expected volatility (which has since eased). Movements in advanced economy and Chinese share prices have been unusually correlated since mid August, though the movements in China have continued to be more pronounced: Chinese share prices fell by a further 20 per cent in mid August and while they have recovered almost two thirds of that decline they are only slightly higher than at the start of the year. There has been little clear evidence of direct purchases of shares by the authorities over this time, in contrast to the June-July period. Outstanding borrowing against Chinese shares has fallen further over that time to be 55 per cent lower than in mid June.

Equity prices in many other emerging markets have been little changed since the start of the year, though in most cases are still a little lower than prior to the global sell-off in equity markets in mid August (Graph 2.13). Emerging equity markets have tended to move broadly in line with the performance of US equities since the start of the year, despite modest capital outflows from many of these economies; however, some Asian markets underperformed. Equity prices have been resilient in a number of countries whose exchange rates have fallen notably this year, possibly reflecting the stimulatory effect of a lower exchange rate on export earnings.

Graph 2.13
Change in Emerging Market Share Price Indices
Since the start of 2015



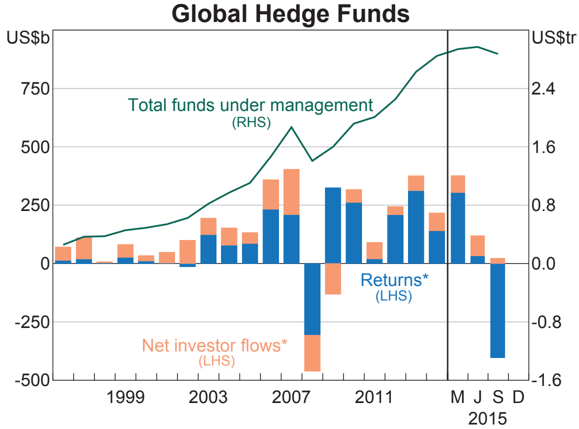
Source: Bloomberg

Major US banks reported much higher profits for the September quarter than a year earlier, though this was more than accounted for by a decline in litigation expenses. In underlying terms, bank profits fell compared with a year earlier due to lower revenue from fixed income trading. European banks that have reported September quarter profits to date have also mostly reported lower earnings than a year earlier, largely due to writedowns of goodwill but also as a result of lower income from investment banking activities.

Hedge Funds

Global hedge funds recorded an asset-weighted loss on investments of 3½ per cent over the September quarter 2015, broadly in line with a balanced portfolio of global bonds and equities, resulting in a loss of almost 2 per cent over the past year. The losses were largest among funds that invest in emerging markets, consistent with sharp falls in Chinese equities in particular over that time. Hedge funds continued to receive modest net inflows, but these were more than offset by losses on investments such that funds under management declined by 3 per cent over the quarter to US$2.9 trillion (Graph 2.14).

Graph 2.14
Global Hedge Funds

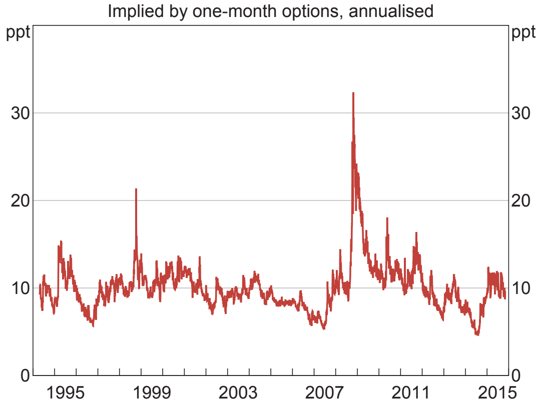


* Annualised for 2015 data
Sources: Hedge Fund Research, Inc.; RBA

Foreign Exchange

In recent months, foreign exchange markets have primarily been influenced by concerns about the outlook for global growth and uncertainty around the path of monetary policy in the major economies. Notwithstanding this, volatility in the main developed market currency pairs has been little changed over the year to date, at around its long-term average (Graph 2.15).

Graph 2.15
Volatility in Developed Market Currencies*
Implied by one-month options, annualised

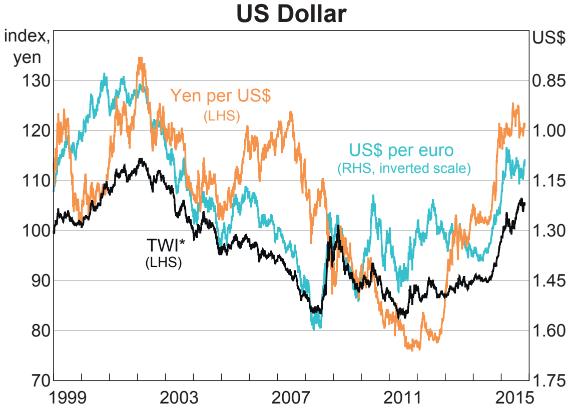


* EUR/USD, USD/JPY, GBP/USD, AUD/USD, USD/CAD, USD/CHF, EUR/JPY, EUR/GBP, EUR/CHF weighted by turnover

Source: Bloomberg

The US dollar appreciated by 7 per cent on a trade-weighted basis between mid May and late September, with the appreciation generally more pronounced against the currencies of commodity exporters (Graph 2.16; Table 2.3). However since then the pace of appreciation has stalled. Between late September and mid October the US dollar depreciated as market participants pushed back their expectations for the timing of the first interest rate increase by the US Federal Reserve, but the US dollar subsequently appreciated after the ECB signalled that it could announce further stimulus measures and the FOMC indicated that it may well raise the federal funds rate target in December. The US dollar is 18 per cent higher than in mid 2014.

Graph 2.16
US Dollar



* 1 January 1999 = 100

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

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

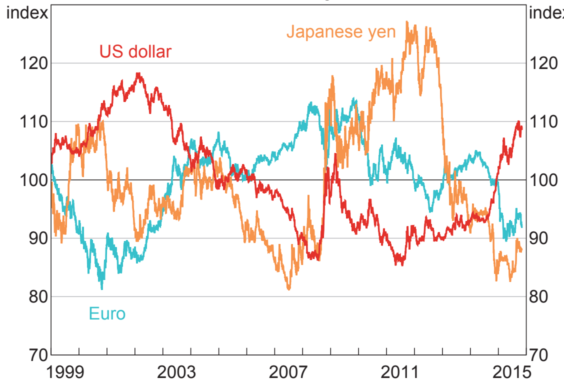
	Over 2014	2015 to date
Brazilian real	12	44
Malaysian ringgit	7	23
South African rand	10	21
New Zealand dollar	5	18
Australian dollar	9	14
Canadian dollar	9	13
Mexican peso	13	12
European euro	14	11
Swedish krona	21	11
Indonesian rupiah	2	9
Thai baht	1	8
Singapore dollar	5	6
Philippine peso	1	5
Indian rupee	2	4
South Korean won	4	4
New Taiwan dollar	6	3
Chinese renminbi	2	2
Japanese yen	14	2
UK pound sterling	6	1
Swiss franc	11	0
TWI	**9**	**8**

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

In contrast to most other currencies, the euro appreciated by 5 per cent on a trade-weighted basis and by 7 per cent against the US dollar between mid July and late August, in part due to market participants unwinding carry trades that had been funded in euro (Graph 2.17). However, the euro has since depreciated by 4 per cent on a trade-weighted basis and by 7 per cent against the US dollar alongside market participants increasing their expectations of additional monetary policy stimulus and the ECB signalling this at its October meeting.

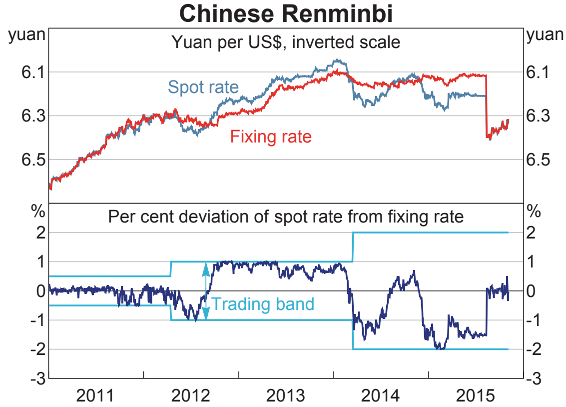
Graph 2.17
Nominal Trade-weighted Indices

1999–2015 average = 100



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

Graph 2.18
Chinese Renminbi



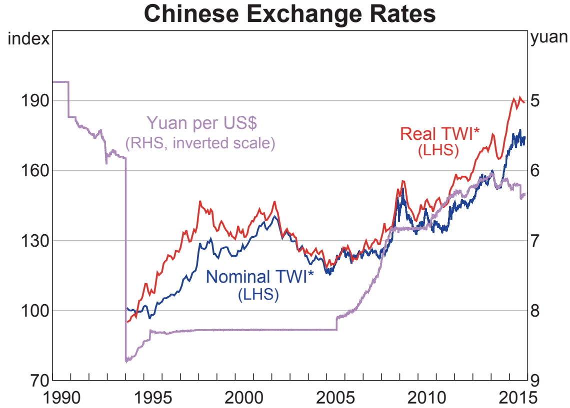
Sources: Bloomberg; China Foreign Exchange Trade System

Similarly, the Japanese yen appreciated by around 5 per cent against the US dollar and on a trade-weighted basis in the second half of August, but has since been relatively stable at around 120 yen per US dollar (a level it has been around for a large part of 2015). The yen has depreciated by 2 per cent on a trade-weighted basis since early September as market participants increased their expectations that the BoJ will also announce additional stimulus measures in coming months.

On 11 August the PBC announced changes to the way it sets the daily fixing rate for the RMB against the US dollar to make it more market-determined. The fixing rate now takes into account: the previous day's spot market closing price; developments since the close (i.e. in the offshore RMB market and other foreign exchange markets); and market makers' quotes. Over a three-day period following the announcement, the RMB fixing rate against the US dollar depreciated by 4½ per cent and the spot RMB exchange rate against the US dollar depreciated by 3 per cent, before stabilising on reported intervention and comments by PBC officials that there was no basis for further depreciation of the RMB (Graph 2.18). While the resulting depreciation of the RMB was the largest experienced in over two decades, it was small by the standards of most currencies and relative to the depreciation of the RMB that occurred in 1994 following the unification of the official and market exchange rates (Graph 2.19). Since then, the spot RMB exchange rate against the US dollar has appreciated by 1 per cent. On a trade-weighted basis, the RMB has depreciated by 1 per cent since the change to the fixing rate, but is still 14 per cent higher since mid 2014.

Following the reforms to the fixing rate, the offshore RMB spot exchange rate against the US dollar has at times depreciated to be noticeably lower than the onshore rate, reflecting market expectations of further depreciation. The discount between the value of the onshore RMB and offshore RMB reversed in early September and late October on

Graph 2.19
Chinese Exchange Rates



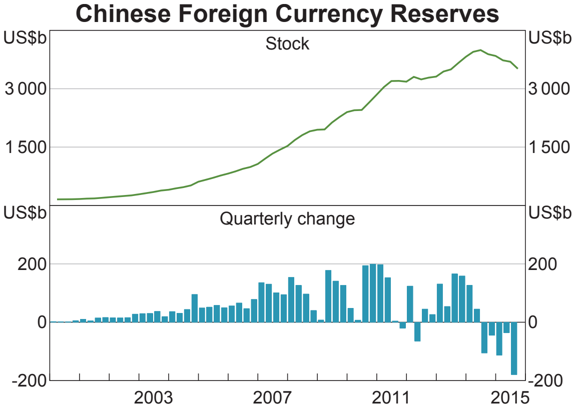
* 1994 average = 100

Sources: BIS; Bloomberg; RBA

reported intervention in the offshore market. The PBC was reported to have intervened in the onshore forwards market in late August, and announced that banks trading currency derivatives on behalf of clients would be required to hold foreign exchange reserves at the PBC against these positions.

The stock of Chinese foreign currency reserves fell by US$180 billion (5 per cent) over the September quarter, with around half of this decline occurring in August (Graph 2.20). This decline in reserves occurred alongside an acceleration of net private capital outflows from China following the reforms to the fixing rate (see 'Box B: Chinese Capital Outflows'). Chinese foreign currency reserves have fallen by US$480 billion (12 per cent) since the peak in June 2014.

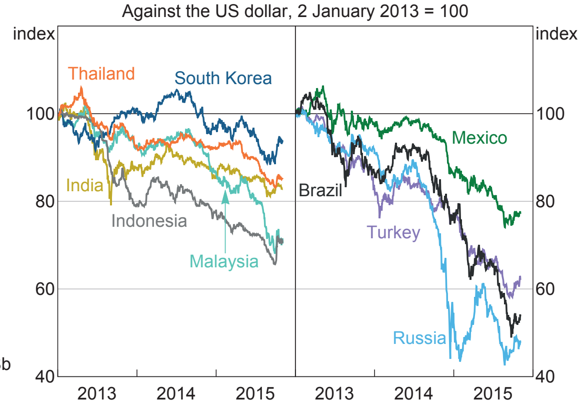
Graph 2.20
Chinese Foreign Currency Reserves



Source: CEIC Data

Up until late September, most Asian and Latin American currencies continued to depreciate against the US dollar, alongside declining commodity prices, expectations of an increase in the federal funds rate, and uncertainty around the outlook for China. Currency depreciations were generally more pronounced for commodity exporters and those economies that have been facing persistent political uncertainty. However, since late September, most of these currencies have appreciated against the US dollar, some markedly so, alongside an improvement in global sentiment. Emerging market currencies in Europe have tended to move in line with the euro, with the exception of the Russian rouble and Turkish lira (Graph 2.21). Consistent with these movements, and in contrast to developed market currencies, volatility in emerging market currencies has increased over recent months to be well above its average since 2009.

Graph 2.21
Asian and Emerging Market Currencies
Against the US dollar, 2 January 2013 = 100



Source: Bloomberg

The Indonesian rupiah has been little changed over recent months, although movements since mid July have been relatively pronounced. The rupiah depreciated by 9 per cent against the US dollar between mid July and late September, but has subsequently appreciated by 8 per cent. In addition to external factors, Bank Indonesia attributed the depreciation to strong demand for US dollars for debt servicing, and the subsequent appreciation to an increase in capital inflows amid an improved outlook for the domestic economy following a series of policy packages announced by the Indonesian government. Bank Indonesia also enacted a series of measures in September to stabilise the rupiah. Elsewhere in Asia, the Malaysian ringgit has depreciated further against the US dollar over recent months to be 19 per cent lower over 2015 to date, with Bank Negara Malaysia attributing the depreciation to both external and domestic factors.

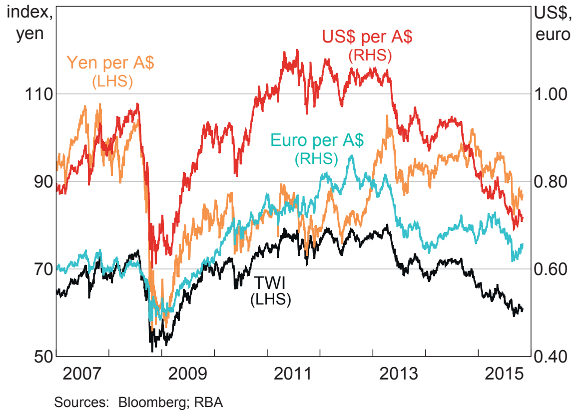
In Latin America, the Brazilian real has depreciated further against the US dollar over recent months and is now 30 per cent lower over 2015 to date. Lower commodity prices and concerns about the outlook for the country's fiscal position and economic growth have contributed to the sustained depreciation. The Brazilian central bank has, in periods of heightened volatility, intervened via the currency swap market and provided US dollar liquidity via repo operations.

The gross foreign currency reserves of most emerging market economies have declined since the end of June, most notably in Malaysia, Mexico and Indonesia (Table 2.4). In contrast, Hong Kong's gross foreign currency reserves have increased slightly, as the Hong Kong Monetary Authority purchased US dollars during September and October when the Hong Kong dollar appreciated close to the upper limit of its trading band.

Australian Dollar

Since the previous *Statement*, the Australian dollar has depreciated by 3 per cent against the US dollar and by 2 per cent on a trade-weighted basis, to be around its lowest level since 2009 (Graph 2.22; Table 2.5). Over this period, changes in the Australian dollar have reflected fluctuations in global sentiment and commodity prices, which have occurred alongside increased uncertainty about the outlook for China and market participants' ongoing assessment of the likely timing of the first rate increase by the US Federal Reserve. The Australian dollar is 16 per cent lower on a trade-weighted basis and 25 per cent lower against the US dollar than its mid 2014 level.

Graph 2.22
Australian Dollar



Sources: Bloomberg; RBA

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

	Percentage change since: End December 2014	End June 2015	Level US$ equivalent (billions)
China	–9	–5	3 514
Taiwan[(b)]	2	1	426
South Korea	1	–2	360
Brazil	–1	–2	352
Hong Kong	5	1	331
India	11	–1	328
Russia	–5	3	312
Singapore	–2	–1	249
Mexico	–7	–7	172
Thailand	–1	–3	147
Turkey	–6	0	99
Indonesia	–9	–6	96
Malaysia	–19	–11	86

(a) Data to end September for China, Taiwan, South Korea, Hong Kong, Singapore, Mexico, Thailand and Indonesia; to 15 October for Malaysia; to 23 October for India, Russia and Turkey; to end October for Brazil
(b) Foreign exchange reserves (includes foreign currency and other reserve assets)
Sources: Bloomberg; CEIC Data; IMF; RBA

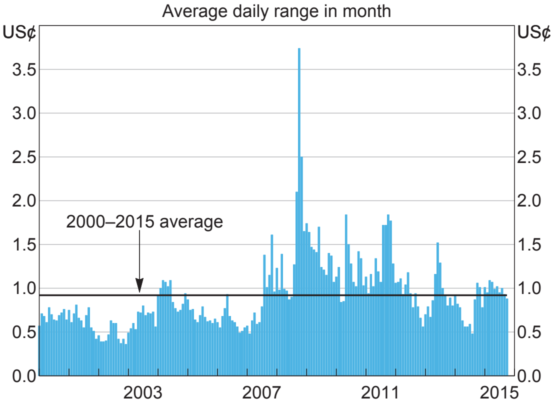
Table 2.5: Changes in the Australian Dollar against Selected Currencies
Per cent

	Over 2014	2015 to date
Malaysian ringgit	–2	8
South African rand	1	6
New Zealand dollar	–4	4
Canadian dollar	0	–1
European euro	4	–3
Indonesian rupiah	–7	–4
Thai baht	–8	–5
Singapore dollar	–4	–7
Indian rupee	–6	–9
South Korean won	–5	–9
Chinese renminbi	–6	–11
Japanese yen	4	–11
UK pound sterling	–3	–11
US dollar	–8	–12
Swiss franc	2	–13
TWI	**–3**	**–9**

Sources: Bloomberg; RBA

Volatility in the Australian dollar has fallen slightly since the previous *Statement*, with the average intraday trading range for the AUD/USD exchange rate around its post 2000 average (Graph 2.23).

Graph 2.23
Intraday Range in AUD/USD
Average daily range in month

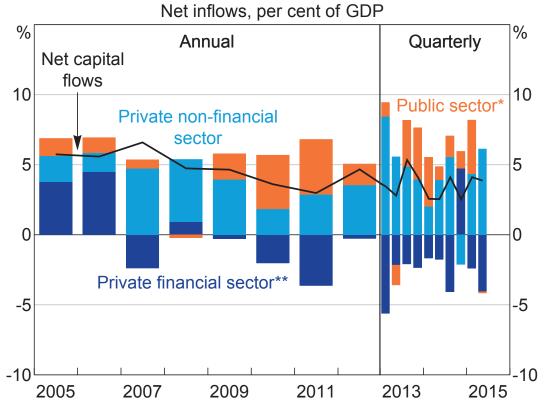


Sources: Bloomberg; RBA

Capital Flows

Net capital inflows to the Australian economy were equivalent to 3.9 per cent of GDP in the June quarter, and were directed towards the private non-financial sector (Graph 2.24). In contrast to recent quarters, there was a small net outflow from the public sector (excluding the RBA) in the June quarter as a result of net inflows to the general government sector declining sharply. This is likely to have reflected the marked reduction in net issuance of Australian Government securities (AGS) in the quarter, as the foreign ownership share of AGS declined only slightly to 65 per cent. In contrast there was a modest net outflow from the state and local government sector, although the foreign ownership share of state and local government debt was little changed at 25 per cent, consistent with maturities in the quarter.

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

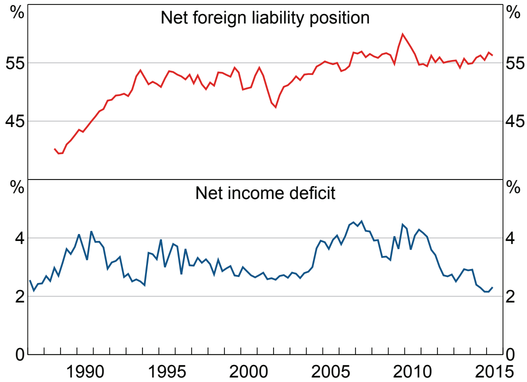


* Excludes official reserves and other RBA flows
** Adjusted for US dollar swap facility in 2008 and 2009
Sources: ABS; RBA

The net inflow to the private sector reflected net inflows to non-financial corporations, which more than offset net outflows from the financial sector. The net inflows to the non-financial sector were mostly directed to non-financial investment funds (which include funds that invest in non-financial assets, e.g. real estate). The net outflows from the private financial sector largely consisted of purchases of foreign equity by the banking sector and purchases of foreign debt by 'other financials' (which includes superannuation funds and other investment funds).

In the June quarter Balance of Payments and International Investment Position data release, the ABS reported revisions to the data from September 2011 to March 2015. Aggregate net capital inflows to Australia were revised up by around 0.3 percentage points of GDP per quarter on average over this period, primarily due to an increase in net debt inflows. Consistent with these revisions, Australia's net foreign liability position was revised a little higher over recent quarters but has been broadly stable at around at 56 per cent (Graph 2.25). The net income deficit was also revised higher and was 2.3 per cent of GDP in the June quarter; this was a slight increase from the March quarter and was due to an increase in the value of payments on Australia's debt and equity liabilities. ✠

Graph 2.25
Australia's External Position
Per cent of GDP



Sources: ABS; RBA

Box B

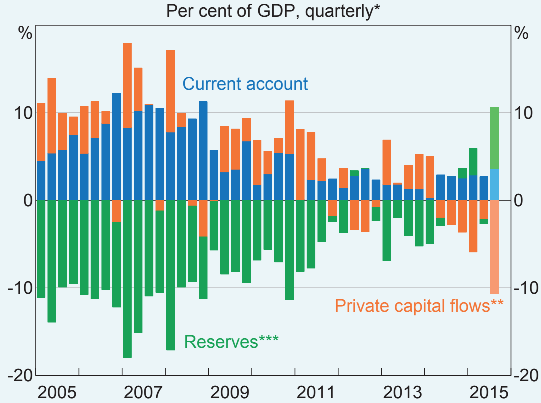
Chinese Capital Outflows

China has been a net recipient of large amounts of foreign private capital over the past two decades (Graph B1). These private capital inflows have accompanied persistent current account surpluses, leading the Chinese authorities to accumulate substantial foreign exchange reserves to mitigate upward pressure on the RMB exchange rate. At its peak in mid 2014, China's reserve portfolio amounted to US$4 trillion, compared with less than US$500 billion a decade prior.

These trends in capital flows reversed last year. Between early 2014 and mid 2015, around US$450 billion of private capital flowed out of China in net terms and the PBC reported selling or letting mature US$75 billion of its foreign exchange reserves as private capital outflows began to exceed the country's current account surplus. The move towards private capital outflows and reserve sales accelerated sharply in August following the PBC's decision to allow the US dollar-RMB fixing rate to become more market determined. While official data are not yet available, partial data suggest that private capital outflows increased to around US$300 billion in the September quarter (10 per cent of GDP) and that the PBC sold or let mature a further US$200 billion of its reserves.

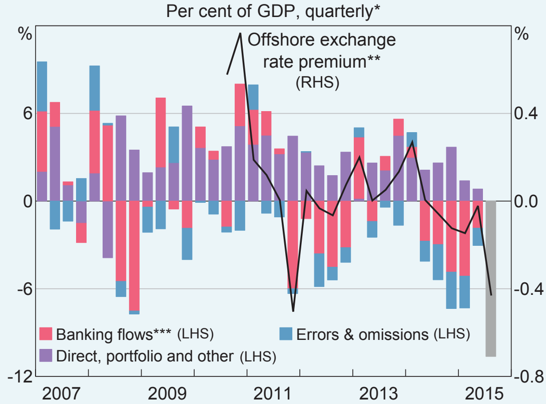
China's capital account is still relatively restricted. This results in the composition of private capital flows typically being different from that in other countries, with the most notable differences being that portfolio flows are small and that banking sector flows tend to drive much of the cyclical variation. This has remained true over the recent period of capital outflow, during which banking flows have accounted for the bulk of net private outflows (Graph B2). However, these banking outflows appear to be largely driven by non-financial firms' decisions, rather than the investment decisions of banks themselves. In particular, there appears to

Graph B1
China's Balance of Payments
Per cent of GDP, quarterly*



* RBA estimates for September quarter 2015
** Includes net errors & omissions
*** Negative numbers indicate net purchases, which are a capital outflow
Sources: CEIC Data; RBA

Graph B2
China's Net Private Capital Flows
Per cent of GDP, quarterly*



* RBA estimate for net private capital flows for September quarter 2015 (in grey)
** Average premium of offshore USD-renminbi exchange rate over onshore rate
*** Includes currency & deposits, loans and trade credit & advances
Sources: Bloomberg; CEIC Data; RBA

have been a notable increase over the past year in Chinese exporters' desire to keep their US-dollar export receipts in US dollars and a reduction in the willingness of China's foreign suppliers to receive payment in RMB, while the corporate sector as a whole has also been repaying loans denominated in foreign currency.[1] This looks to have been motivated by expectations that the US dollar will appreciate against the RMB, as illustrated by the historically positive correlation between banking sector capital flows and the offshore RMB premium.[2]

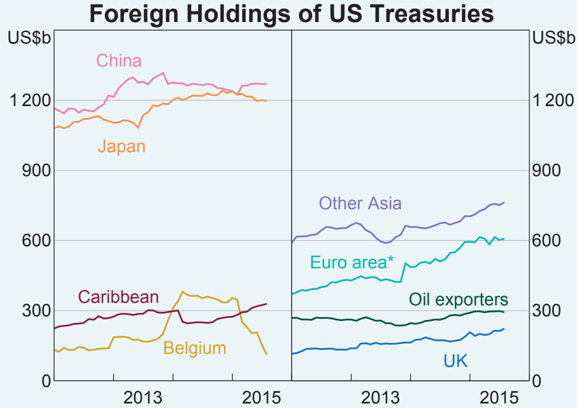
Exporters and importers also appear to account for most of the trends in 'net errors & omissions' (that is, the unaccounted difference between the current account surplus and net capital outflows), which are larger in China than in many other countries and account for most of the remaining recent net capital outflows. This component appears to stem primarily from unallocated net capital flows rather than any misreporting of (or illicit) trade. In particular, when firms choose to prepay for imports it is only recorded as an import at a later date (when invoiced) and so the flow of money associated with that transaction is recorded as a capital outflow (and similarly when they defer receipt of export earnings); moreover, there is evidence that this is not fully captured in the 'trade credit & advances' component. Trends in the net errors & omissions component are also positively correlated with the offshore RMB premium, reflecting the fact that a higher US dollar makes imports more expensive and export receipts more valuable such that an expected US dollar appreciation encourages firms to prepay for imports while deferring US-dollar export receipts.

1 This is explored in more detail in a forthcoming *Bulletin* article.

2 The offshore RMB premium measures the difference in value between RMB traded in Hong Kong (the 'offshore' market) and RMB traded in mainland China (the 'onshore' market). Positive values arise when the RMB is worth more in Hong Kong than in mainland China. A positive premium typically arises when investors expect the RMB to appreciate, since this is more likely to be reflected in the (more flexible) offshore market rate than in the onshore market. Such differences are possible because capital controls prohibit investors from fully arbitraging differences between the two rates.

The PBC sold large quantities of foreign exchange reserves in response to this private capital outflow in the September quarter. The available evidence suggests that China invests a sizeable share of its reserve portfolio in US bonds. Accordingly, the PBC probably reduced its holdings of US bonds significantly (particularly Treasuries) during the September quarter, in addition to reducing its holdings of other advanced economy sovereign bonds. Indeed, US capital flows data provide some indication of this if a sizeable portion of the decline in Belgian residents' holdings primarily reflects a decline in China's bonds held in Euroclear (which is domiciled in Belgium; Graph B3). Given that private Chinese residents appear to have directed their recent capital outflows towards accumulating bank deposits, trade credits and repaying foreign currency loans, rather than buying sovereign bonds, these PBC sales appear to have shifted the composition of China's overall foreign asset position away from sovereign bonds and are likely to have affected global bond yields.

Graph B3
Foreign Holdings of US Treasuries



* Excluding Belgium
Source: Thomson Reuters

In aggregate, Chinese entities have around US$900 billion of foreign currency liabilities (9 per cent of annual GDP, of which two-thirds are in US dollars), mostly owed by non-financial corporations. However, Chinese private and public entities' foreign currency-denominated foreign asset positions are substantially larger (around US$6.5 trillion in total), so the depreciation of the RMB in August would have on net resulted in valuation gains on China's net foreign asset position. Much of this net long position in foreign currency is due to China's public sector balance sheet, but private entities also hold a net long position in foreign currency that has risen this year as firms have built foreign currency deposits and some of the foreign currency-denominated debt has been repaid. ✠

3. Domestic Economic Conditions

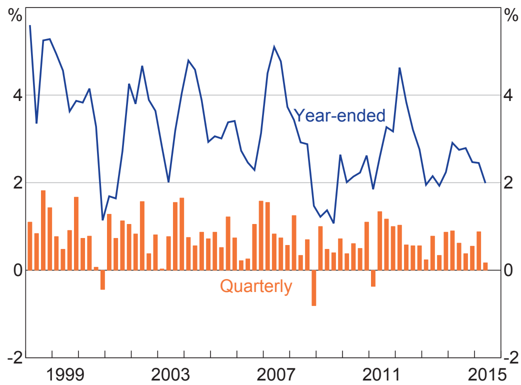
As expected, growth of the Australian economy eased in the June quarter, following strong growth in the previous quarter (Graph 3.1).[1] The weakness in the June quarter partly reflected temporary weather-related disruptions to resource exports. Indications are that growth picked up in the September quarter, aided by a rebound in resource exports.

National accounts data suggest that the Australian economy has expanded at a below-average rate in recent years (Table 3.1). Commodity prices and the terms of trade have fallen over this period, partly unwinding the earlier large increases. This has been accompanied by a depreciation of the exchange rate from historically high levels. Much of the expansion in production capacity for iron ore and coal has now occurred, and resource exports have risen significantly. Further large rises are in prospect as exports of liquefied natural gas (LNG) ramp up. Public demand has been little changed.

Income per capita has declined somewhat in recent years, as the decline in the terms of trade has been only partly offset by improvements in productivity (see the 'Price and Wage Developments' chapter). Population growth has also slowed. These factors have restrained growth in consumption and dwelling investment.

At the same time, however, there is further evidence that activity is rebalancing away from the resources sector toward non-resources sectors, particularly services (Graph 3.2; also see 'Box C: Developments by

Graph 3.1
GDP Growth



Source: ABS

Sector'). Very low interest rates continue to support growth in dwelling investment and consumption. The depreciation of the exchange rate has supported exports, especially in the services sector, and imports of capital goods and services have declined further. Non-mining investment, however, has been weak for some time. Overall, GDP growth in 2014/15 was at the lower end of the Bank's forecast range from a year ago, but the forecast error was small in the context of the usual wide range of forecast uncertainty.

Although GDP growth has been below average, employment growth has strengthened to be a little above average over much of the past year. This partly reflects an improvement in the demand for labour in the services sector. The protracted period of low wage growth may also have encouraged firms to employ more people than otherwise. At the same time, growth in labour supply has increased, despite lower population growth, through an increase in

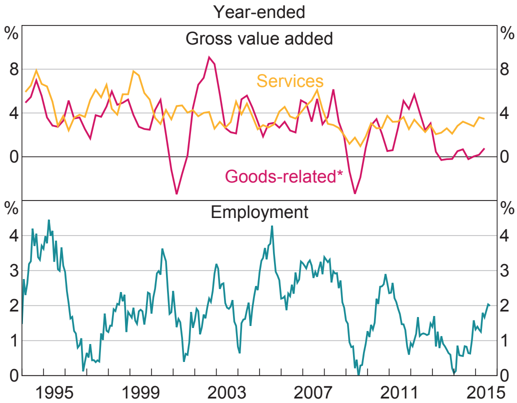
1 Although the 2014/15 annual national accounts (shown in Table 3.1) contain the most recent data on GDP, the June quarter 2015 national accounts, which were released prior to the annual national accounts, contain the most recent data on quarterly movements in GDP.

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

	2014/15	2013/14
GDP	2.3	2.5
Domestic final demand	0.7	1.3
– Private demand[(a)]	0.8	1.6
– Consumption	2.5	2.6
– Dwelling investment	8.3	5.1
– Mining investment[(a)]	–17.3	–8.5
– Non-mining investment[(a)]	1.1	–0.1
– Public demand[(a)]	0.0	0.4
Change in inventories[(b)]	0.2	–0.2
Exports	6.5	5.8
Imports	–0.1	–1.8
Nominal GDP	1.6	3.9
Real gross domestic income	0.0	1.7

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

Graph 3.2
Output and Employment Growth



* Excluding mining
Sources: ABS; RBA

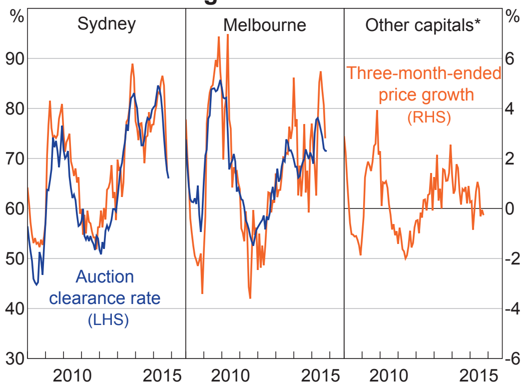
the participation rate. The recent increases in labour demand and supply have been broadly offsetting, and so the unemployment rate has been little changed at relatively high levels, consistent with a degree of spare capacity in the labour market.

Household Sector

Low interest rates continue to support prices and activity in the housing market, although conditions vary widely across market segments. Household consumption growth remains below average, but has picked up relative to a couple of years ago.

Housing price growth has remained elevated for some time now. This has been driven by developments in Sydney and Melbourne, although auction clearance rates and price growth in these cities have declined over the past few months (Graph 3.3). There has been little evidence of price pressures in other regions. Lending data suggest that the level of investor demand remains strong, although there have also been signs of moderation in this market segment of late, as loan approvals appear to have declined. The slight easing in housing market conditions is consistent with lenders taking steps to strengthen their lending standards in response to supervisory actions undertaken by the Australian Prudential Regulation Authority (APRA) and the Australian Securities and Investments

Graph 3.3
Housing Price Indicators



* Weighted average of Adelaide, Brisbane, Canberra, Darwin, Hobart and Perth

Sources: Australian Property Monitors; CoreLogic RP Data; RBA; Real Estate Institute of Victoria

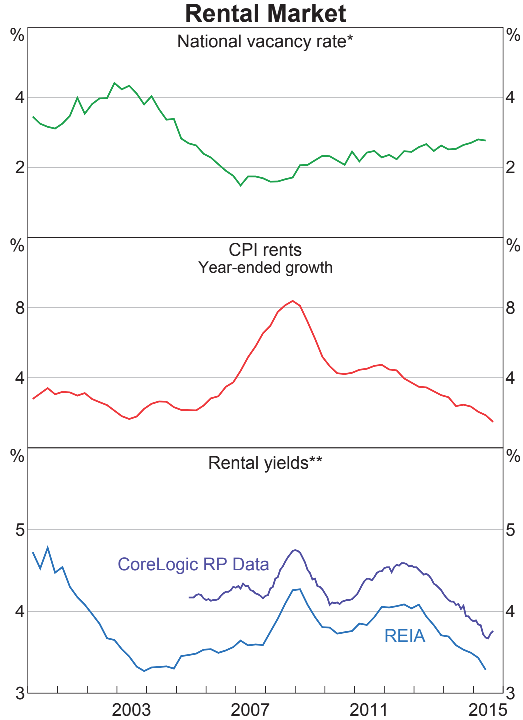
Commission (ASIC).[2] More recently, many lenders have announced further increases to their interest rates on mortgages.

Prices of detached houses have been growing more rapidly than apartment prices, consistent with large increases in higher-density supply in recent years. An increase in supply in the rental market has been associated with a gradual increase in the nationwide vacancy rate and a decline in rent inflation and rental yields (Graph 3.4).

Dwelling investment grew strongly over the year to the June quarter, consistent with low interest rates and the associated strength in housing prices. While dwelling investment is expected to continue to grow over the period ahead, forward-looking indicators provide mixed signals about the strength of that growth. For example, building approvals remain at high levels, particularly in regions where housing price growth has been most rapid (Graph 3.5). However, residential land sales have moderated and liaison suggests that there are land supply constraints for detached housing in some parts of the country. To the extent that land supply constrains the growth of detached housing, this could encourage more renovation activity, which has been at relatively low levels over the past couple of years.

2 For further details on supervisory actions undertaken by APRA and ASIC, see RBA (2015), 'Box B: Responses to Risks in the Housing and Mortgage Markets', *Financial Stability Review*, March.

Graph 3.4
Rental Market

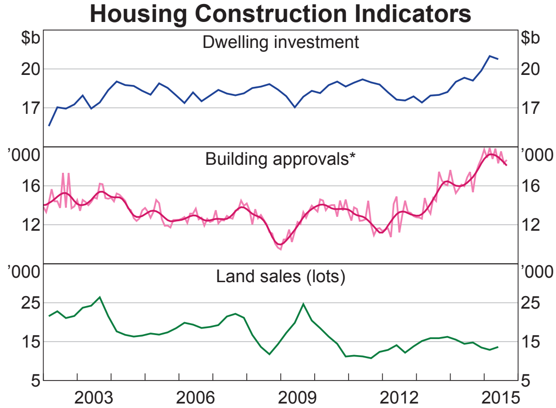


* Excludes Adelaide from March quarter 2015

** REIA series uses an unmatched sample of rents and prices; CoreLogic RP Data series uses a matched sample and has been seasonally adjusted by the RBA

Sources: ABS; CoreLogic RP Data; RBA; REIA

Graph 3.5
Housing Construction Indicators



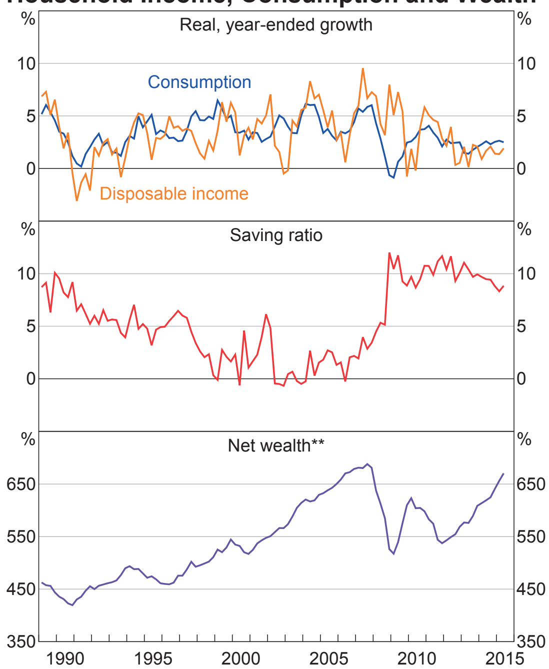
* Smoothed line is the ABS trend measure

Sources: ABS; Housing Industry Association

Household consumption growth remains below average, but has picked up relative to a couple of years ago, aided by very low interest rates and rising wealth (Graph 3.6).[3] Consumption growth has outpaced growth in household disposable income – which has been low by historical standards – and the saving ratio has declined gradually from relatively high levels.

Timely indicators of consumption have been generally positive, although they typically have had only a modest correlation with aggregate consumption growth. Retail sales volumes increased by 0.6 per cent in the September quarter (Graph 3.7).

Graph 3.6
Household Income, Consumption and Wealth*

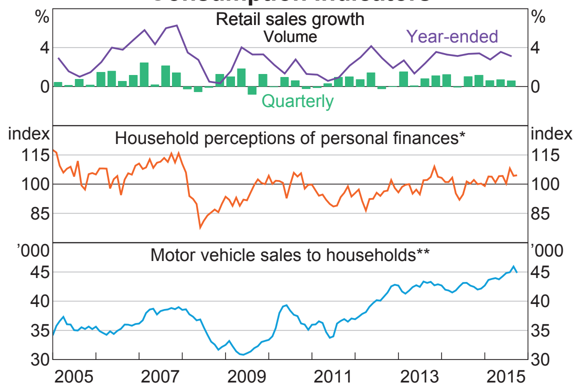


* Household sector includes unincorporated enterprises; disposable income is after tax and interest payments; income level smoothed with a two-quarter moving average between March quarter 2000 and March quarter 2002; saving ratio is net of depreciation

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

Sources: ABS; RBA

Graph 3.7
Consumption Indicators



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

** Three-month moving average

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

Measures of consumer sentiment are around their long-run averages and sentiment regarding households' own finances has been more positive.[4] Motor vehicle sales to households have been on an upward trend over the past year, although they have been volatile of late.

Business Sector

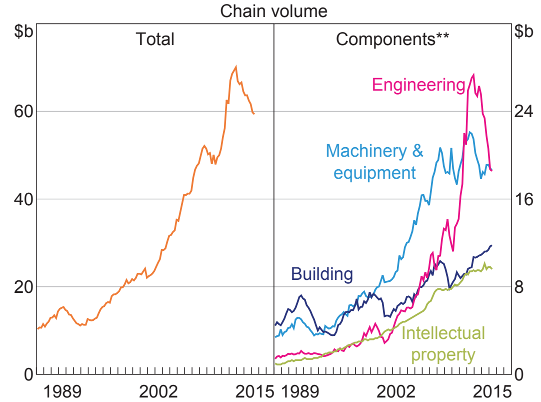
Private business investment declined slightly in the June quarter, to be around 6 per cent lower in 2014/15 (Graph 3.8).

Mining investment peaked in mid 2012 at around 8 per cent of nominal GDP. It has since fallen to around 5 per cent of GDP, reflecting the completion of large-scale projects and a lack of new projects as the decline in commodity prices over recent years has reduced the incentive for new investment. The ABS capital expenditure (Capex) survey and the Bank's liaison point to further substantial declines in mining investment (Graph 3.9). The expectation is that it will fall to below 3 per cent of GDP by the end of 2017 (see the 'Economic Outlook' chapter). Mining sector profits fell by 27 per cent over the

3 Recent estimates suggest that the direct effect of housing price growth on consumption is quite small, although indirect effects – for example, via expectations of future income growth – could be important. See Gillitzer C and JC Wang (2015), 'Housing Wealth Effects: Evidence from New Vehicle Registrations', RBA *Bulletin*, September, pp 13–20.

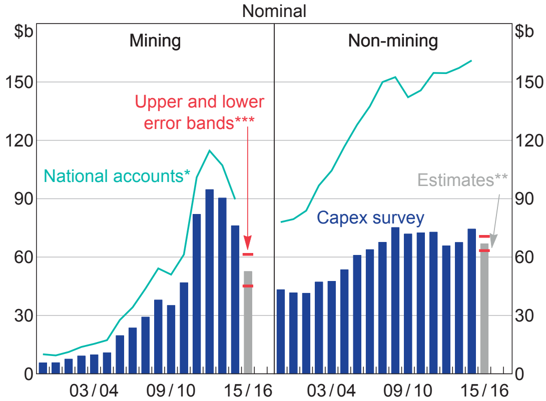
4 For more information on the relationship between measures of consumer sentiment and aggregate consumption growth, see Wang JC and L Berger-Thomson (forthcoming), 'Consumer Sentiment Surveys', RBA *Bulletin*, December.

Graph 3.8
Private Business Investment*
Chain volume



* Adjusted for second-hand asset transfers between the private and other sectors; reference year is 2012/13
** Excluding cultivated biological resources
Sources: ABS; RBA

Graph 3.9
Measures of Private Business Investment
Nominal

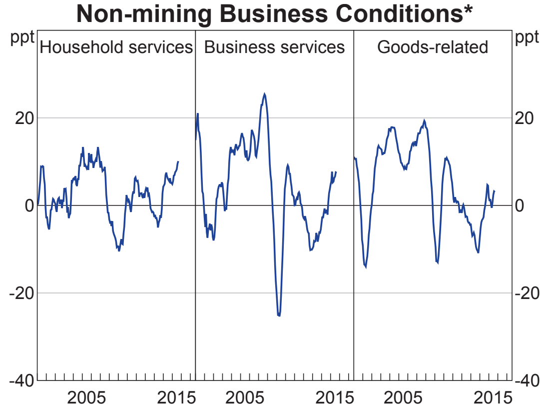


* Adjusted for second-hand asset transfers between the private and other sectors; excluding cultivated biological resources
** Estimates are firms' expected capital expenditure, adjusted for the past average difference between expected and realised spending
*** Error bands are based on the root mean square error of each adjusted estimate compared with the final outcome for investment in each year
Sources: ABS; RBA

year to the June quarter, consistent with lower commodity prices.

Non-mining investment has been weak for some time in real terms and indicators of investment intentions suggest that it will remain subdued over the next few quarters. The latest Capex survey continues to imply that non-mining investment will fall in 2015/16. However, the Capex survey does not cover a large share of non-mining business investment that is included in the national accounts, such as investment in agriculture, education and healthcare. Nor does it capture investment in intangible items (which tends to grow at a steady pace). Non-residential building approvals remain at relatively low levels, consistent with weak underlying conditions in the commercial property market. At the same time, very low interest rates and the depreciation of the exchange rate over the past year or so have supported demand, and survey measures of business conditions in the non-mining sectors are clearly above average levels, particularly in the services sector (Graph 3.10). However, parts of the services sector tend to be less intensive in their use of capital, so the improvement in conditions there has been reflected in higher employment growth more than investment at this stage. Non-mining company profits have increased in line with nominal GDP.

Graph 3.10
Non-mining Business Conditions*

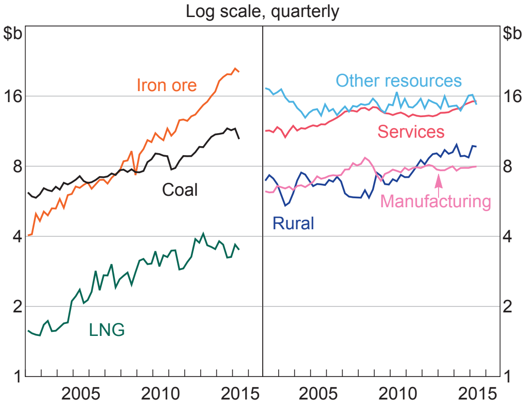


* Gross value added weighted; deviation from average since 1989; six-month moving average
Sources: ABS; NAB; RBA

External Sector

Export volumes rose by around 6 per cent in 2014/15, despite a sharp contraction in the June quarter as unfavourable weather conditions affected resource exports (Graph 3.11). In that quarter, coal exports were impaired by the floods in the Hunter Valley, while exports of LNG were affected by temporary shutdowns of some plants, owing to planned maintenance and some unplanned power

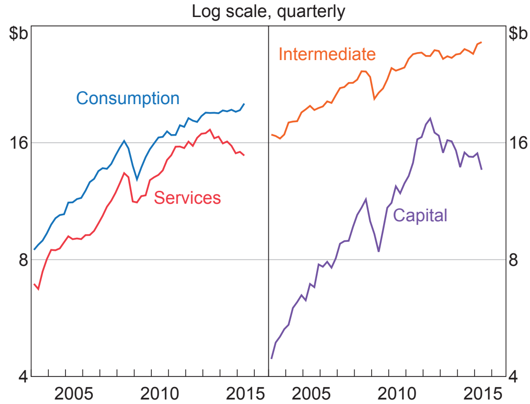
Graph 3.11
Export Volumes*
Log scale, quarterly



* Reference year is 2012/13

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

Graph 3.12
Import Volumes*
Log scale, quarterly



* Reference year is 2012/13

Source: ABS

outages. Exports of bulk commodities are expected to continue to grow over the next couple of years, although the pace of growth is likely to slow. LNG exports are expected to increase substantially over the next couple of years as a number of LNG projects commence production, but some large LNG projects will start production a bit later than previously thought.

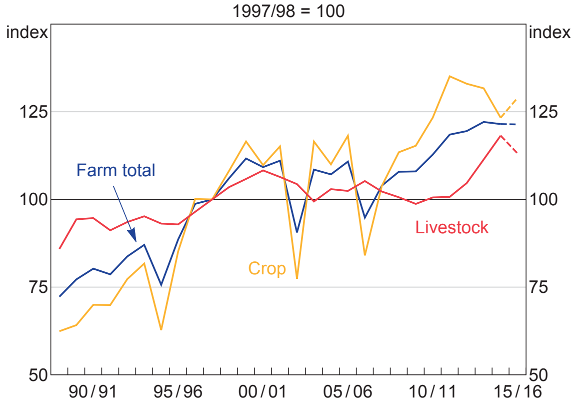
The depreciation of the Australian dollar has provided support to exports. Service exports have grown particularly strongly over the past couple of years, with strong growth in tourism, education and business service exports. Over 2014/15, net service exports contributed more to GDP growth than iron ore exports, the first time this has happened in six years. In contrast, manufactured exports have been little changed for some years.

Import volumes were little changed in 2014/15. Consistent with the depreciation of the exchange rate, service imports declined as expenditure appears to have been switched to domestically produced services, particularly for travel (Graph 3.12). Capital imports have also fallen, as construction of many of the import-intensive, large-scale mining projects approaches completion. Consumption and intermediate imports, which tend to be less sensitive to the exchange rate than service imports, have increased over the past year.

Farm Sector

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) expects the overall volume of farm production to be little changed in 2015/16, as an increase in crop production is expected to offset a decline in livestock production (Graph 3.13). The Bureau of Meteorology expects an El Niño event to continue until early 2016. El Niño is typically associated with below-average rainfall over eastern Australia, although there is substantial variation in El Niño events and their impact on crop production.

Graph 3.13
Farm Production Volumes*
1997/98 = 100

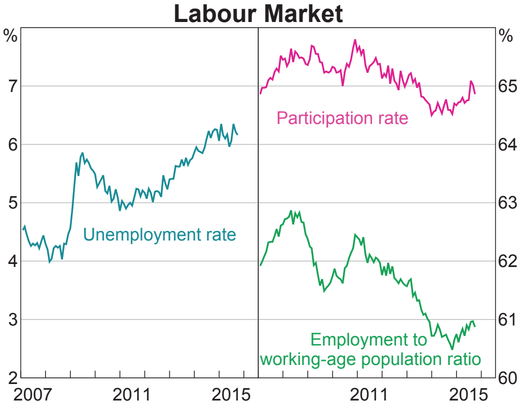


* Dashed lines represent 2015/16 forecasts; 2014/15 data are estimates

Source: ABARES

Labour Market

Employment growth has increased over the past year and outpaced growth in the population (Graph 3.14). The improvement has partly reflected a shift in the composition of activity toward more labour-intensive services sectors (see 'Box C: Developments by Sector'). In addition, wage growth has declined by more than expected based on its historical relationship with the unemployment rate. This flexibility may have encouraged firms to employ more people than would otherwise have been the case (see the 'Price and Wage Developments' chapter).



Source: ABS

At the same time, labour supply growth has also increased, despite lower population growth, as the participation rate has trended higher. The increase in participation could be a response to higher labour demand if individuals have commenced work, or searching for work, in response to perceived improvements in employment prospects (this is known as an 'encouraged worker' effect). The Australian Government's new employment services model, 'jobactive', introduced on 1 July, may have also boosted the participation rate by requiring more unemployment benefit recipients to search actively for work than in the past.[5]

The increases in labour demand and supply over the past year or so appear to have been largely offsetting, such that the unemployment rate has been broadly stable in the range of 6–6¼ per cent over that period. This level of the unemployment rate and the low growth in wages suggest that there is still spare capacity in the labour market. The unemployment rate remains around its highest level since the early 2000s and the participation rate is still below its peak in late 2010. The more cyclically sensitive components of the unemployment rate, such as medium-term unemployment, remain elevated.[6] The longer-term unemployment rate has also increased over time, which is likely to be a response to the prolonged period of weak labour market conditions. The extent of geographic or skills mismatches between workers and available jobs does not appear to have changed over recent years, since the relationship between the unemployment rate and the job vacancy rate has not shifted from its historical pattern. Similarly, measures of underemployment are elevated but broadly in line with what would be expected based on their relationship with the unemployment rate over the past decade.

The increase in employment growth this year has been broad based across services industries (Graph 3.15). In the household services sector, employment in health care & social assistance has risen substantially across all states. The Bank's business liaison suggests that this is being driven by a range of factors, including increased demand for aged and home-based care services owing to demographic factors. Employment in accommodation & food services has also increased

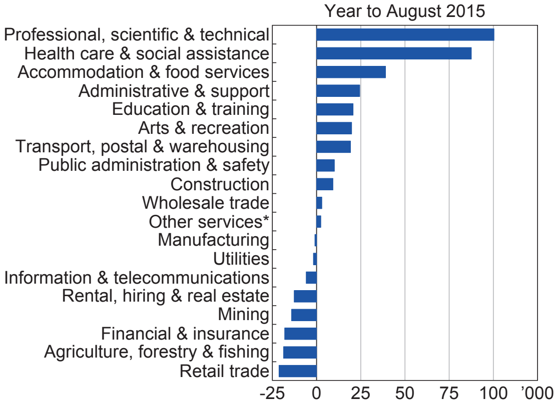
5 For a detailed explanation of the overlap between unemployment benefit recipients and the unemployment and participation rates, see ABS (2014) 'The Unemployed and Recipients of Government Unemployment Benefits – Differences Explained', Australian Labour Market Statistics feature article, July.

6 See Ballantyne A, D De Voss and D Jacobs (2014) 'Unemployment and Spare Capacity in the Labour Market', RBA *Bulletin*, September pp 7–20.

Graph 3.15

Employment Growth

Year to August 2015



* Includes personal services; religious, civic, professional and other interest group services; repair and maintenance activities; and private households employing staff

Source: ABS

substantially, supported by the recovery in the domestic tourism industry following the exchange rate depreciation.

The increase in business services employment growth has been concentrated in professional, scientific & technical services in New South Wales and Victoria. This has been underpinned by architectural, engineering and technical services employment, which is likely to be associated with a wide range of activities including government infrastructure projects and residential construction projects. Employment in legal & accounting and computer system design has also increased, possibly reflecting broader demand from firms elsewhere to cut costs and improve productivity through IT-related investment. Some of this increase in business services employment may also be related to the improvement in business service exports following the exchange rate depreciation.

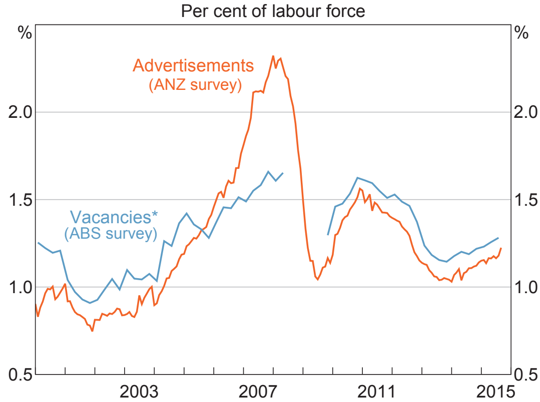
Employment in goods-related industries remains weak. Mining employment has declined since late 2013. Construction employment has been little changed over the past year as the decrease in labour demand associated with the decline in mining construction activity appears to have been roughly offset by the increase associated with residential building activity.

In line with the pick-up in employment growth, leading indicators of labour demand, such as the ANZ measure of job advertisements and the ABS survey of job vacancies, have been on an upward trend over the past couple of years (Graph 3.16). Employment intentions in the NAB survey suggest that firms’ hiring intentions have picked up and are now around average. Recent outcomes for a range of forward-looking indicators suggest that employment is likely to continue to grow.

Graph 3.16

Job Vacancies and Advertisements

Per cent of labour force



* This survey was suspended between May 2008 and November 2009

Sources: ABS; ANZ

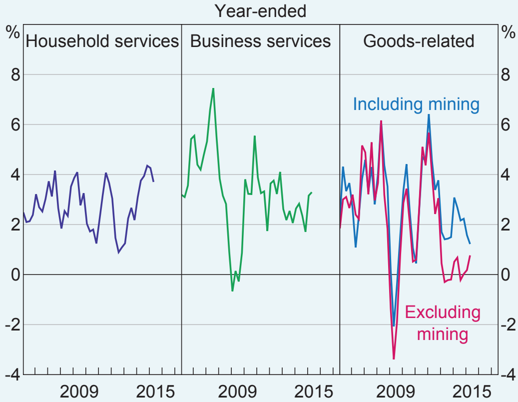
Box C

Developments by Sector

The composition of economic activity has been changing over recent years in response to a range of different forces (see the 'Domestic Economic Conditions' chapter). Recent sectoral trends can help to explain some of the features in the aggregate economic data, such as above-average growth in employment despite below-average GDP growth. These differences across sectors also underpin differences in economic conditions across the states.

Economic activity in the service sectors of the economy has picked up over the past few years (Graph C1).[1] In particular, output growth for household services has increased considerably, to be well above its average pace over the past decade. Business services output growth has also picked up a bit, to be around average. In contrast, output growth remains weak in the goods-related sector. Excluding the mining industry, goods-related output has been little changed for more than two years.

Graph C1
Output Growth by Sector
Year-ended



Sources: ABS; RBA

The rebalancing of economic activity across sectors has been mirrored in a wide range of other variables (Graph C2). In the household services sector, survey measures of business conditions have improved since late 2013, to be well above their long-run average, and employment growth and the number of job vacancies have increased over the past year or so.[2] Conditions in the business services sector have also improved over the past couple of years, and this has been accompanied by a recovery in job vacancies and employment in that sector. This follows a period of weak conditions, driven in part by the decline in mining investment, which had required the use of a number of business services.[3] Meanwhile, overall conditions remain weak in the goods-related sector, and vacancies and employment have been little changed for nearly three years.

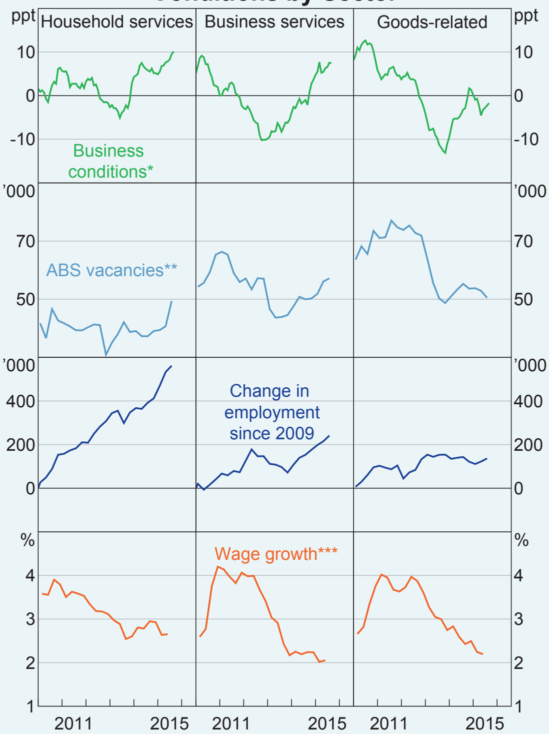
Declines in wage growth have been broad based across industries over the past few years (see the 'Price

1 Household services include: accommodation & food; education & training; health care & social assistance; arts & recreation; and other services. Business services include: professional, scientific & technical; financial & insurance; administration & support; rental, hiring & real estate; and information, media & telecommunications. Many of these services are used by households as well as businesses. The goods-related sector includes: mining; construction; manufacturing; electricity, gas, water & waste; transport, postal & warehousing; wholesale trade; and retail trade.

2 The household services sector appears to generate more employment from a given level of vacancies than other sectors. If vacancies are filled relatively quickly in the household services sector, they are less likely to be captured in the ABS Job Vacancies survey, as it measures the stock of vacancies on a particular day in the quarter. Further, some firms may have positions to fill that do not meet the ABS criteria for a vacancy to exist – for example, if recruitment action has not commenced or the job is not available to be filled on the survey date. This may be more prevalent among household services firms, particularly if they are more inclined to hire workers through personal recommendations or centralised systems that allocate new staff to commence as soon as positions become available, such as new graduates beginning work at hospitals or schools. For further information about the relationship between the job vacancies series and employment growth, see Edwards K and L Gustafsson (2013), 'Indicators of Labour Demand', RBA *Bulletin*, September pp 1–12.

3 Rayner V and J Bishop (2013), 'Industry Dimensions of the Resource Boom: An Input-Output Analysis', RBA Research Discussion Paper No 2013-02.

Graph C2
Conditions by Sector



* Gross value added weighted; deviation from average since 1989; six-month moving average
** Job vacancies seasonally adjusted by the RBA
*** Year-ended growth in wage price index
Sources: ABS; NAB; RBA

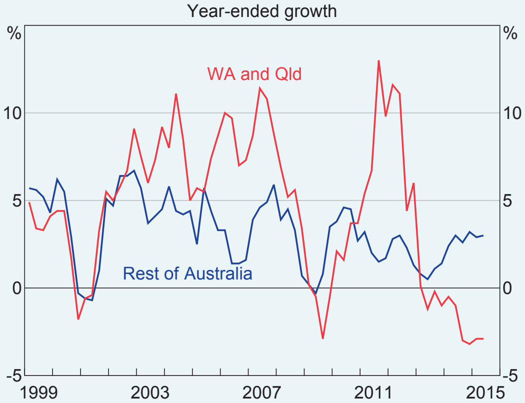
and Wage Developments' chapter). More recently, in the household and business services sectors wage growth has been little changed, while employment growth has increased. In contrast, wage growth has continued to decline in the goods-related sector, where employment has not increased. The apparent stabilisation of wage growth in the services sectors may reflect an improvement in demand for labour, although it is also possible that wage growth has been stable for other reasons. For example, the Bank's liaison suggests that firms are reluctant to give annual wage increases below inflation unless there are exceptional circumstances.

These compositional changes across industries help to explain the pattern of output growth and labour market developments across the states. Western Australia and Queensland have been more directly exposed to the upswing and downswing associated with the cycle in commodity prices and mining investment. These mining states had stronger growth in state final demand, employment and wages than the rest of Australia for much of the past decade, but this has recently been reversed. State final demand has fallen in Western Australia and Queensland over the past year or so, while it has picked up elsewhere (Graph C3). In the labour market, while employment in household services has risen in most states, the recovery in business services has been uneven. Business services employment has remained little changed in Western Australia and Queensland over recent years, partly reflecting lower mining investment-related demand, while it has risen notably in New South Wales and Victoria. Similarly, goods-related employment has declined in Western Australia and Queensland as mining and mining-related construction employment has fallen, but has been little changed in New South Wales and Victoria. Overall, the recent recovery in employment, job vacancies and job advertisements has been more pronounced in New South Wales and Victoria than in the mining states (Graph C4).

Nevertheless, these different trends in employment growth across states have not led to significant deviations in state unemployment rates as the supply of labour has also adjusted. In particular, the decline in population growth since 2012 has been most pronounced in the mining states, reflecting both lower net immigration and an adjustment in interstate flows.[4] All states have seen declines in wage growth, although the mining states have seen larger declines, just as they experienced larger increases during the upswing (Graph C5).

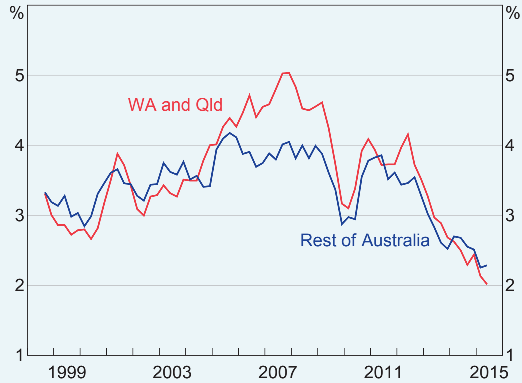
4 See RBA (2015), 'Box D: Implications of Lower Population Growth for the Australian Economy', *Statement on Monetary Policy*, August pp 44–46.

Graph C3
State Final Demand
Year-ended growth



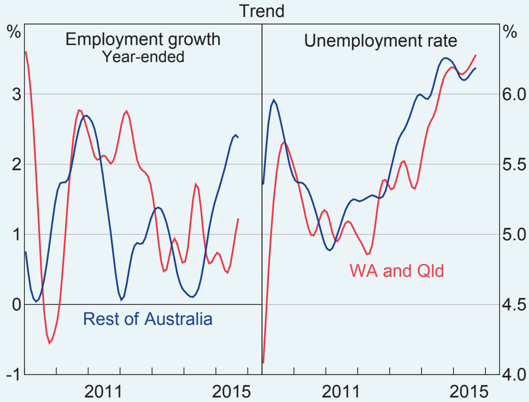
Sources: ABS; RBA

Graph C5
Wage Growth*
Year-ended



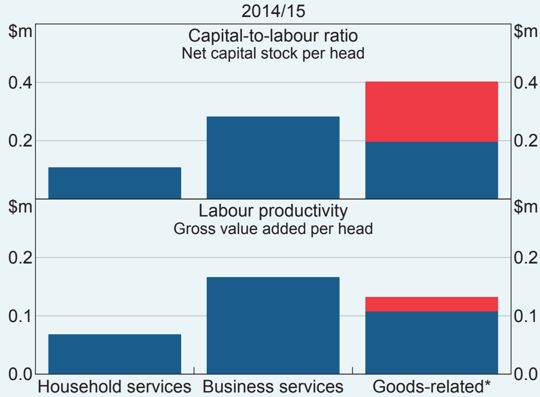
* Wage price index
Sources: ABS; RBA

Graph C4
Labour Market by State
Trend



Sources: ABS; RBA

Graph C6
Capital and Productivity
2014/15

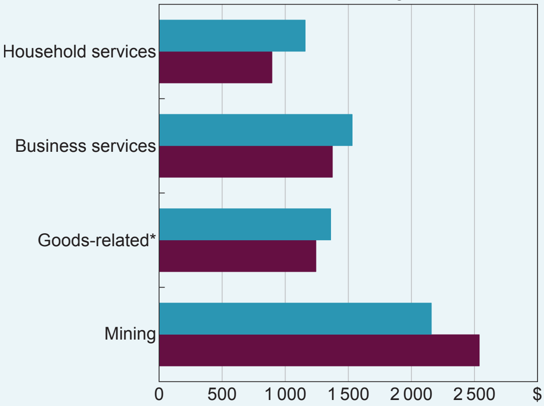


* Red bars show the contribution of mining and utilities
Sources: ABS; RBA

For the economy as a whole, the change in the composition of economic activity can partly help to explain why aggregate employment growth has picked up notably despite below-average GDP growth and weak investment. Output produced by the household and business service sectors is more labour intensive than in mining; that is, to produce an additional unit of output, services firms tend to add extra workers but not undertake as much investment (Graph C6). Moreover, measured output per hour worked (i.e. labour productivity) is lowest in the household services sector. This may be because the output of the household services sector is particularly difficult to measure. Nevertheless, a shift in demand towards household services would be expected to produce a larger pick-up in employment growth for a given level of measured output growth.

Compositional change in the labour market can also help to explain some of the weakness observed in aggregate labour income growth. The mining industry has the highest level of earnings of all industries and, on average, the household services sector has the lowest earnings (Graph C7).

Graph C7
Average Weekly Earnings
2014/15 average



* Includes mining
** Average hourly wage multiplied by 39, which is approximately average full-time hours
Sources: ABS; RBA

The difference in earnings is partly explained by differences in average hours worked; a higher proportion of household service employees work part-time and mining workers tend to work more than the average full-time working hours. However, even adjusting for hours worked, differences remain. The absorption of more workers into the household services sector and further declines in mining employment will tend to lower the growth of aggregate labour income. Indeed, the effect of compositional change is evident in average weekly earnings (AWE) growth, which fell to just 1.2 per cent over the past year, well below growth of 2.3 per cent in the wage price index (WPI), which is adjusted to remove the effects of compositional change. The difference between growth in AWE and the WPI is also likely to capture changes in the composition of jobs within industries and firms; for example, workers moving from high-paying mining-related construction jobs to lower-paying positions elsewhere in the construction industry.[5] ✠

5 For a discussion of the decline in wage growth unrelated to composition, see Jacobs J and A Rush (2015), 'Why is wage growth so low?', RBA *Bulletin* pp 9–18. For a discussion of the conceptual differences between AWE and the WPI see Australian Bureau of Statistics (2014), 'Feature Article: Average Weekly Earnings and Wage Price Index – What do they measure?', *Average Weekly Earnings*, May.

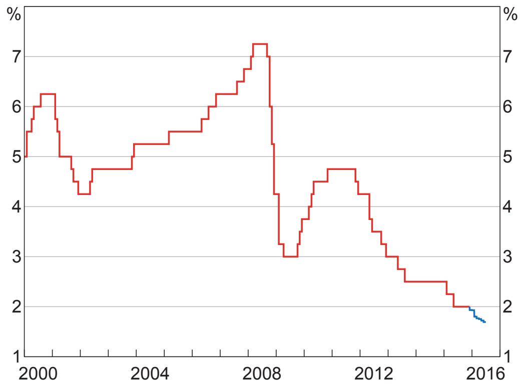
4. Domestic Financial Markets

In recent months, Australian financial markets have, at times, experienced increased volatility in line with international developments. Nevertheless, conditions continue to support the financing of domestic activity. Yields on bonds issued by governments, banks and non-financial corporations remain close to historic lows, despite spreads to benchmark rates drifting up over recent months from low levels. Interest rates on the stock of housing and business loans also remain very low, even after lenders raised housing interest rates particularly for investors. Partly in response to this, growth in lending to housing investors has slowed, while growth in lending to owner-occupiers has increased. Bank margins on housing lending have increased, while margins on business lending have fallen. Business lending has picked up in recent months, although there has been relatively little corporate bond issuance. Australian equity prices fell in August, but have partially retraced these falls more recently.

Money Markets and Bond Yields

The Reserve Bank Board has maintained the cash rate target at 2 per cent since May. Rates on overnight indexed swaps (OIS) indicate that a reduction in the cash rate target is expected sometime in the first half of 2016 (Graph 4.1). Rates on bank bills and certificates of deposit (CDs) have remained at historically low levels and, while spreads between bank bill and OIS rates have increased in recent months, they are below the levels of late last year. Rates in secured funding markets also increased relative to OIS for a time before falling back to more normal levels.

Graph 4.1
Cash Rate*



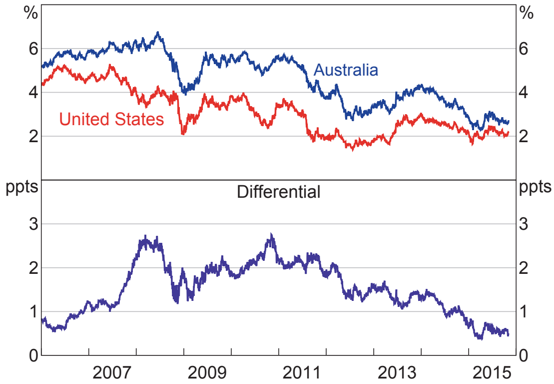
* Data from December 2015 onwards are expectations derived from interbank cash rate futures

Sources: ASX; Bloomberg

Yields on long-term Australian Government securities (AGS) have been more volatile in recent months, in line with trends in offshore bond markets. Overall, yields on AGS have declined since August, while the spread between AGS and US Treasuries has been little changed (Graph 4.2).

Demand for newly issued AGS has remained firm, with most bond tenders by the Australian Office of Financial Management (AOFM) pricing at or below secondary market yields. Coverage ratios for tenders of longer bonds have declined since the start of the financial year, coinciding with an increase in the average size of such auctions. In mid October, the AOFM issued a new June 2039 bond via syndication, which is now the longest term-to-maturity nominal AGS. After receiving around $8 billion in orders, the AOFM issued $4 billion of the new bond at a yield of 3.35 per cent. Offshore investors purchased around

Graph 4.2
Government Bond Yields
10-year



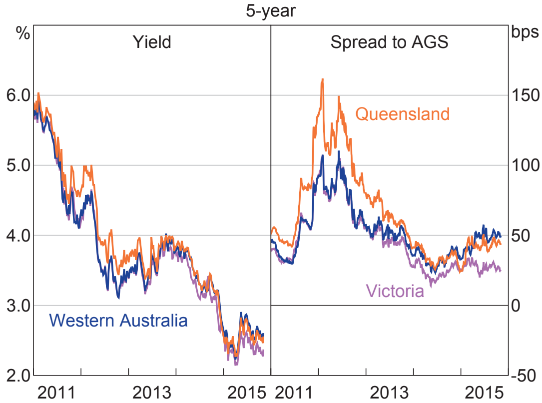
Sources: Bloomberg; RBA

a third of the new issue, similar to the previous nominal bond syndication in March.

Gross issuance of bonds by the state and territory governments ('semis') has totalled around $13 billion since the end of June. Issuance outpaced maturities by around $2 billion over this period, increasing the total stock of bonds outstanding to around $243 billion. Yields on semis remain at very low levels (Graph 4.3).

Bond issuance by non-residents into the domestic market ('Kangaroo' issuance) has continued at a moderate pace, with around $10 billion issued since the end of June. Kangaroo issuance over this period

Graph 4.3
State Government Debt
5-year



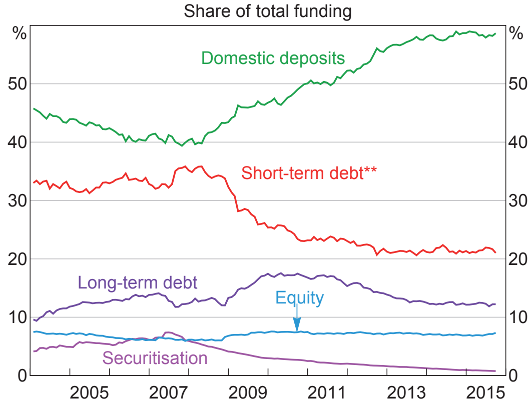
Sources: RBA; Yieldbroker

was dominated by a $2.25 billion bond issued by Apple in August – the largest corporate bond to be issued in the domestic market. Secondary market spreads to AGS on AAA rated Kangaroo bonds have been little changed since the end of June.

Financial Intermediaries

The funding composition of bank balance sheets has changed only marginally over the past year with deposits comprising close to 60 per cent of total funding (Graph 4.4). Within the mix of deposit funding, households and businesses have generally continued to place more in 'at-call' deposit products, such as bonus saver and offset accounts, than in term deposits, which offer lower interest rates (Graph 4.5).

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



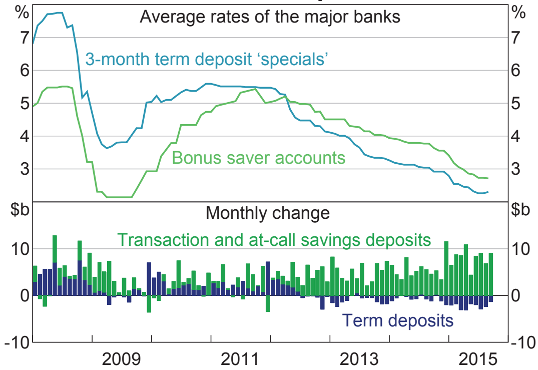
* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis

** Includes deposits and intragroup funding from non-residents

Sources: APRA; RBA; Standard & Poor's

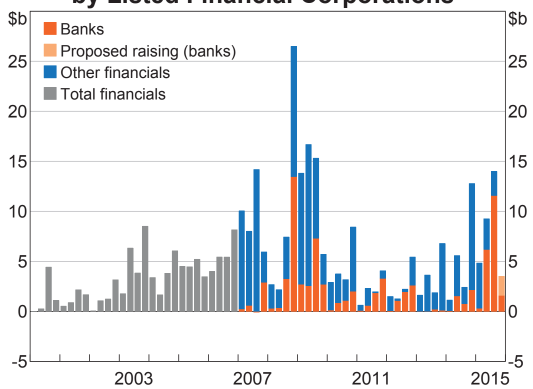
Over the past year, there have been sizeable equity raisings by listed financial corporations (Graph 4.6). The major banks have been raising common equity to meet upcoming changes to prudential regulation. ANZ and Commonwealth Bank undertook substantial capital raisings in the September quarter. This followed National Australia Bank's capital raising of $5.5 billion in the June quarter. More recently, Westpac has announced a $3.5 billion capital raising.

Graph 4.5
Household Deposits



Sources: APRA; Canstar Cannex; RBA

Graph 4.6
Net Equity Raisings by Listed Financial Corporations*

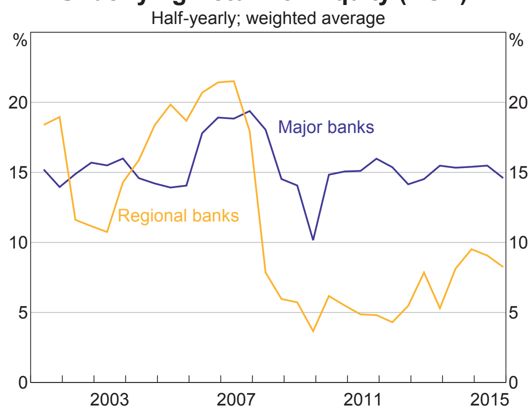


* Latest observation is quarter to date

Sources: ASX; RBA

The additional capital increases the cost base of banks as equity is a more expensive form of funding than debt (although as a share of total funding the additional capital only amounts to around ½ percentage point). Banks can adjust to this cost in three ways, which are not mutually exclusive. First, they may absorb the cost, resulting in a lower return on equity (ROE); it is estimated that if the full cost of capital raised in 2015 was absorbed, major bank ROE would decline by around 1½ percentage points. That said, higher capital levels boost the resilience of the banks and hence decrease the riskiness of equity investment in them. Second, banks can reprice assets. To maintain a 15 per cent ROE, the current average for the major banks, it is estimated that the banks would need to increase their return on assets by around 10 basis points (Graph 4.7). Third, higher equity may lower debt funding costs since creditors face less risk when equity buffers are larger, thereby offsetting some of the effect of the higher cost of the equity funding.

Graph 4.7
Underlying Return on Equity (ROE)*



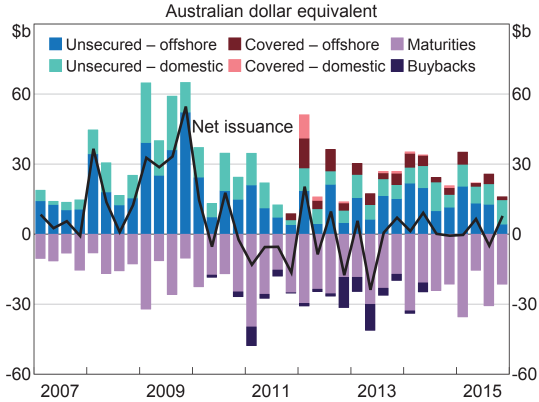
* From 2006 data are on an IFRS basis; prior years are on an AASB basis

Sources: banks' financial reports; RBA

Banks' debt funding costs have edged lower in the past few months. Since the beginning of the year, funding costs have fallen by around 15 basis points more than the cash rate, with deposit costs down by around 60 basis points and wholesale costs falling by more. Notwithstanding increases in bank bond spreads in the past few months, the costs of the banks' outstanding wholesale funding have continued to decline as the cost of new issuance has remained below the cost of outstanding issuance.

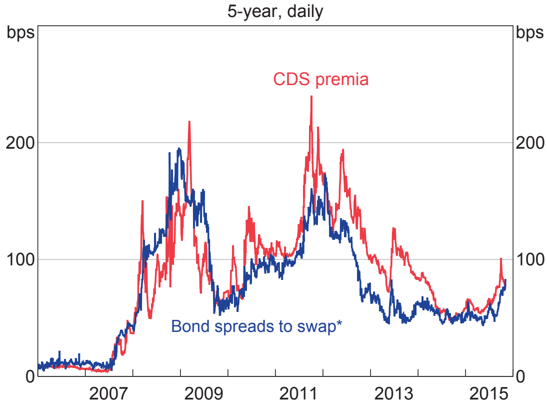
Australian banks have issued around $42 billion in bonds since June (Graph 4.8). After accounting for maturities, the stock of bonds outstanding has increased by around $3 billion over this period. A slightly higher proportion of this issuance was in the domestic market than has been the case in recent years. Secondary market spreads on the major banks' bonds have continued to widen over the past couple of months, alongside an increase in the major banks' credit default swap (CDS) premia (Graph 4.9).

Graph 4.8
Australian Banks' Bond Issuance*
Australian dollar equivalent



* Latest quarter gross issuance and net issuance are quarter to date
Source: RBA

Graph 4.9
Major Banks' Bond Spreads and CDS Premia
5-year, daily



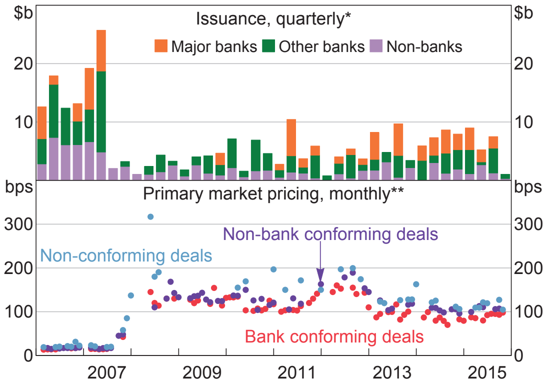
* Domestic secondary market spreads converted into US dollar spreads
Sources: Bloomberg; RBA; Thomson Reuters; UBS AG, Australia Branch

While the CDS premia tend to be somewhat more volatile than bond spreads, both indicators remain well below their peaks in 2011 and 2012.

Australian banks have issued around $1.7 billion in Basel III-compliant hybrids since June, representing a slower pace of issuance than earlier in the year. Primary market spreads on recent hybrid issuance have generally been wider than those seen in late 2014.

The pace of issuance of Australian asset-backed securities (ABS) has been robust in recent months, underpinned by issuance of residential mortgage-backed securities (RMBS) (Graph 4.10). Three securities

Graph 4.10
Australian RMBS



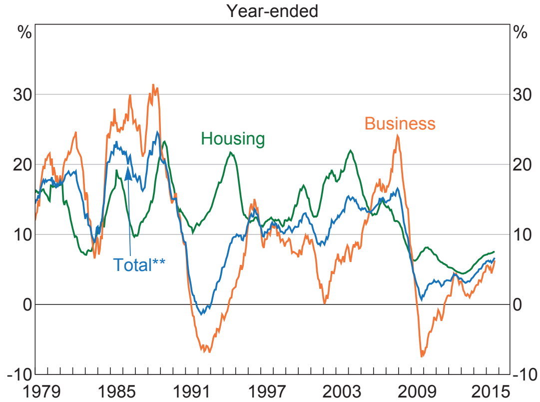
* Latest observation is quarter to date
** Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes
Source: RBA

backed by assets other than residential mortgages have also been issued, raising around $2 billion. Primary issuance spreads on senior RMBS tranches have widened slightly since the start of the year, but remain at low levels relative to the period since 2008.

Financial Aggregates

Total credit has grown by around 6½ per cent over the past year, with housing credit continuing to grow at a faster pace than business credit (Graph 4.11). Broad money has grown at a similar pace to credit over the year (Table 4.1).

Graph 4.11
Credit Growth by Sector*
Year-ended



* Seasonally adjusted and break adjusted; includes 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 2015	September 2015	September 2015
Total credit	1.3	2.0	6.7
– Housing	1.8	1.9	7.5
– Owner-occupier	1.2	1.8	5.8
– Investor	2.7	2.0	10.4
– Personal	0.1	0.2	0.5
– Business	0.6	2.5	6.3
Broad money	1.5	1.5	6.4

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

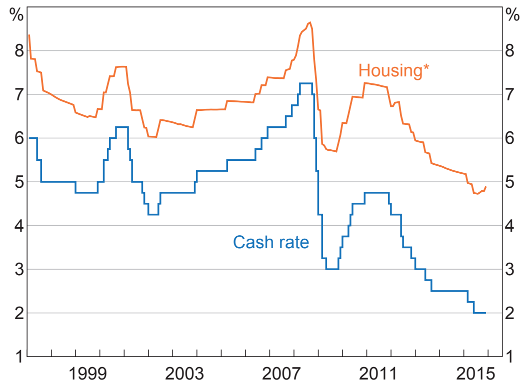
Household Financing

Over recent months, financial institutions have adjusted the interest rates they charge on housing loans. In July and August, a number of banks introduced differential pricing for owner-occupier and investor loans, increasing the standard variable rate for investor-related housing loans for new and existing borrowers by at least 20 basis points. In October, the major banks announced increases to variable rate mortgage interest rates of 15–20 basis points, attributing this to the additional cost of capital raised to meet upcoming changes to prudential regulation. Several other lenders have announced similar rate changes. Overall, these adjustments will add around 20 basis points to the outstanding housing lending rate; this followed a decline of around 50 basis points in this rate in the first half of the year (Graph 4.12; Table 4.2). These increases in housing rates contribute to a widening in bank margins on housing lending, along with the decline in funding costs.

Competition for housing lending appears to have shifted towards lending to owner-occupiers rather than investors. Interest rates on basic loan products to owner-occupiers have declined relative to standard variable rates across all lender categories over the year, in some cases by an additional 25 basis points.

Annual growth in housing credit has remained around 7 per cent over the past year. Net

Graph 4.12
Interest Rates



* Estimated outstanding rate; to November 2015
Sources: ABS; APRA; Perpetual; RBA

housing debt has continued to grow around 1½ percentage points slower than housing credit owing to rapid growth in offset account balances (Graph 4.13). Housing loan approvals have been volatile in recent months, but are consistent with the current pace of housing credit growth continuing.

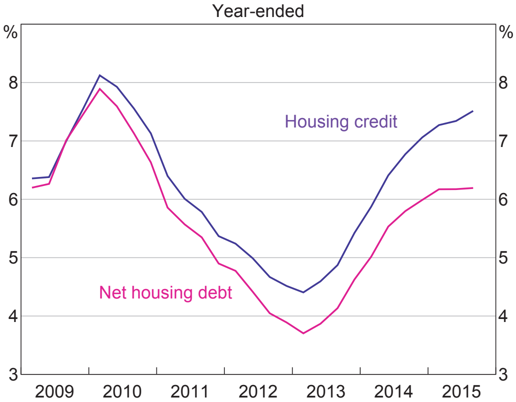
Over 2015, a number of financial institutions have made substantial revisions to the data that the RBA uses to compile housing, business and personal credit. While small revisions to historical data are not unusual, recent revisions have been large, especially in terms of the classification of investor and owner-occupier housing credit. Overall, the share of housing credit extended to investors has been revised from 35 per cent of the total to 40 per cent. As the

Table 4.2: Intermediaries' Fixed and Variable Lending Rates

	Interest rate Per cent	Change since end January 2015 Basis points
Housing loans		
– Standard variable rate[(a)(d)(e)]		
– Owner-occupier	5.63	–30
– Investor	5.90	–3
– Package variable rate[(b)(d)(e)]		
– Owner-occupier	4.83	–25
– Investor	5.11	3
– Fixed rate[(c)(d)]		
– Owner-occupier	4.50	–58
– Investor	4.82	–27
– Average outstanding rate[(d)(e)]	4.89	–28
Personal loans		
– Variable rate[(f)]	11.57	11
Small business		
– Term loans variable rate[(g)]	6.60	–50
– Overdraft variable rate[(g)]	7.47	–50
– Fixed rate[(c)(g)]	5.38	–36
– Average outstanding rate[(d)]	5.66	–57
Large business		
Average outstanding rate[(d)]	3.87	–66

(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) Reflects announced pricing changes effective in November
(f) Weighted average of variable rate products
(g) Residentially secured, average of the major banks' advertised rates
Sources: ABS; APRA; Canstar Cannex; Perpetual; RBA

Graph 4.13
Housing Credit Growth*
Year-ended

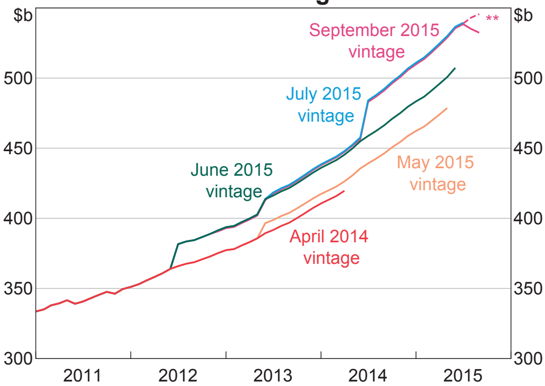


* Seasonally and break adjusted
Sources: ABS; APRA; RBA

financial institutions making the revisions have been unable to provide a full history of when many of the incorrectly classified loans were originated, the revisions have resulted in sharp breaks in the level of investor housing credit (Graph 4.14). The RBA adjusts for these breaks when measuring investor credit growth. The effect of this is that the growth rate for investor housing has only been revised up by around 1 percentage point.

The introduction of differential pricing for owner-occupier and investor housing loans has also resulted in lenders changing the reported purpose of a large number of loans from investor to owner-occupier; these changes have been initiated by

Graph 4.14
Investor Housing Credit*



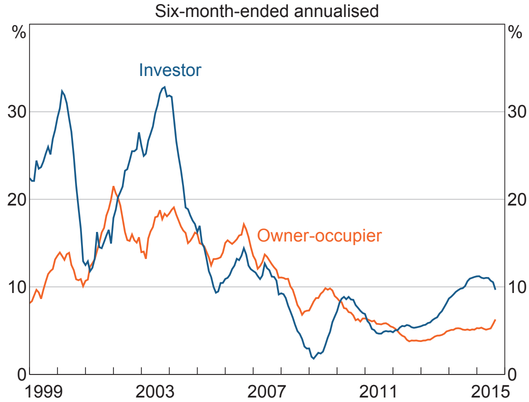
* Non-break and non-seasonally adjusted

** Adjusted for loan purpose switching

Sources: APRA; RBA

borrowers updating their personal details and by lenders reviewing the owner-occupier status of loans. This is boosting the level of owner-occupier housing credit and lowering investor credit. The net value of loan purpose switching is estimated to be $13.3 billion over the September quarter. The effect of loan purpose switching has been removed from the RBA's measures of owner-occupier and investor credit growth so that these measures better reflect growth in net new lending. Putting the measurement issues aside, the differential pricing appears to be contributing to a pick-up in owner-occupier credit growth, while investor credit growth has eased (Graph 4.15).

Graph 4.15
Housing Credit Growth*
Six-month-ended annualised



* Seasonally and break adjusted

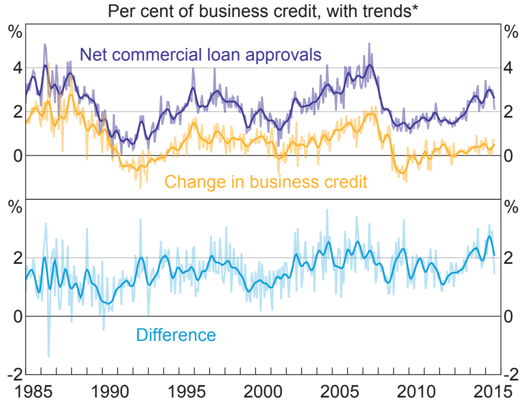
Sources: ABS; APRA; RBA

Business Financing

External funding for businesses has grown at a moderate pace over recent months; the pace of growth in business credit has picked up, while non-intermediated debt issuance has slowed after being relatively strong in the first half of the year.

Business credit growth has accelerated over recent months. By lender, the major banks have continued to drive business credit growth, with Asian banks also making a notable contribution. Part of the growth has reflected the depreciation of the Australian dollar, which raises the Australian dollar value of existing foreign-currency denominated debt. Business loan approvals have declined a little since their peak in April 2015, but remain at a high level. While this may indicate even further strength in business credit, the conversion of business loan approvals to credit has been relatively low for some time (Graph 4.16). This divergence can be explained by a range of factors that raise loan approvals without also lifting credit growth. The most important factor recently has been vigorous competition for business lending, which is reflected in banks' willingness to extend credit lines at historically low margins and generous loans terms. At the same time, however, firms have tended to maintain more conservative gearing levels.

Graph 4.16
Commercial Loan Approvals and Credit
Per cent of business credit, with trends*



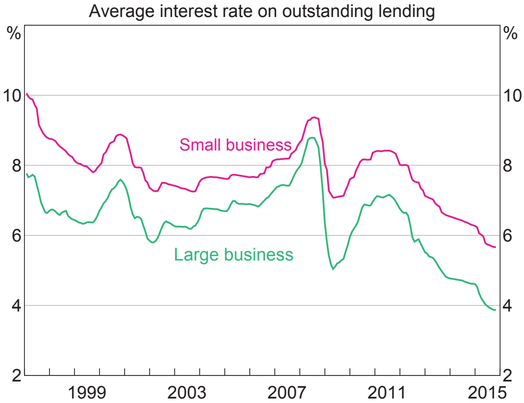
* 13-term Henderson trend

Sources: ABS; APRA; RBA

In the past few years lenders are reported to have increased the size of their offered commitments to secure business. Lenders also report that the share of loan applications being approved has been rising. Some new entrants to the business lending market have been particularly active. For example, the value of approvals from Asian banks operating in Australia increased by around 300 per cent between late 2013 and early 2015. The effect of borrowers receiving multiple approvals from competing lenders, many of which are not drawn upon, is to boost approvals relative to credit growth.

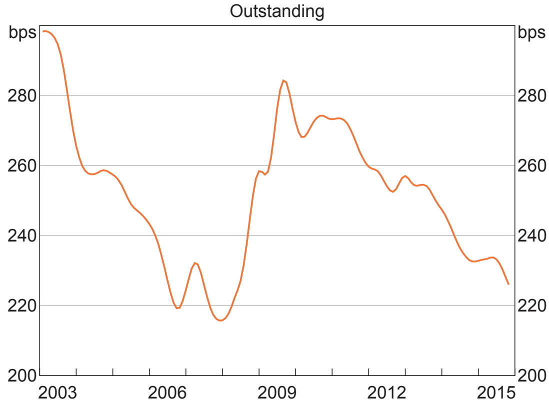
The average outstanding interest rate on intermediated business borrowing has continued to decline over recent months (Graph 4.17; Table 4.2). This has been evident for both large and small businesses, with average rates on outstanding loans having fallen by around 65 basis points since the end of January. Consistent with strong competition, bank margins in business lending have fallen to levels last seen in the mid 2000s (Graph 4.18). The increase in competition appears to be driven by the foreign banks; the average interest rate on large loans provided by the Australian operations of North American and Asian banks is significantly lower than the rate offered by other banks.

Graph 4.17
Australian Business Lending Rates*
Average interest rate on outstanding lending



* RBA estimates
Sources: APRA; RBA

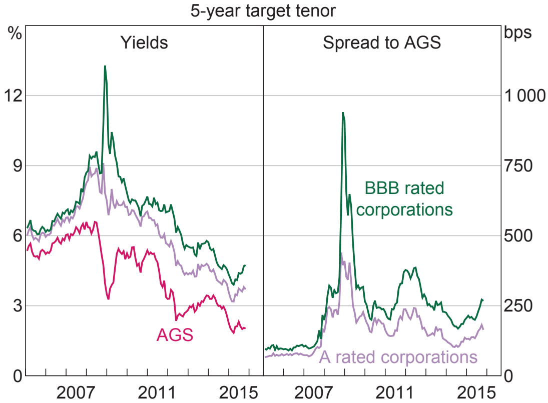
Graph 4.18
Implied Spread on Business Lending*
Outstanding



* Weighted-average interest rates on lending less funding costs; 13-term Henderson trend
Sources: APRA; Bloomberg; Financial Reports; RBA; UBS AG, Australian Branch

Bond issuance by Australian non-financial corporations has been relatively limited since June. In particular, issuance into offshore markets has been lower, coinciding with the absence of the larger resource-related issuers from bond markets. Over recent months, secondary market yields on corporate bonds have increased somewhat and spreads to AGS have widened, particularly for BBB rated corporations (Graph 4.19).

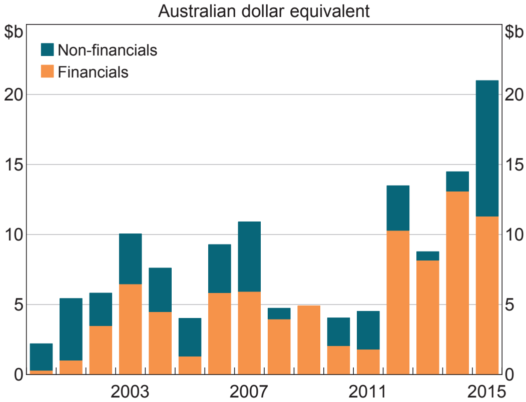
Graph 4.19
Australian Corporate Bond Pricing
5-year target tenor



Sources: Bloomberg; RBA; S&P Capital IQ

Although Australian resources companies have been largely absent from bond markets since the middle of the year, there has been some notable activity in hybrid debt markets (Graph 4.20). Hybrid debt contains both equity- and debt-like features, with Australian companies typically using such instruments to raise long-term funding and boost their equity holdings (rating agencies give recognition to some portion of hybrid debt in their measures of company equity). While issuance of these instruments by Australian non-financial companies is typically around $2.5 billion per year, BHP recently raised almost $9 billion through hybrid debt issuance, which is the largest by an Australian company.

Graph 4.20
Australian Hybrid Issuance*
Australian dollar equivalent



* Latest observation is year to date
Source: RBA

Listed equity raisings by non-financial corporations increased moderately in the September quarter. Net equity raisings by already listed companies have been broadly steady over the past year at around $3–4 billion per quarter. Initial public offering (IPO) activity increased slightly in the quarter, but remains below the levels recorded in 2014.

In the past few months, around $22 billion in mergers and acquisitions (M&A) deals have been announced by listed companies. Completed M&A activity has been concentrated in the financial and consumer discretionary sectors.

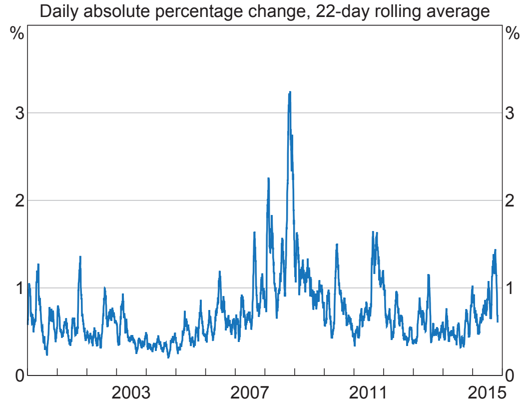
Equity Markets

The Australian equity market has largely followed movements in global share markets in recent months, falling in August in response to concerns about Chinese growth, before partially retracing these falls in early October (Graph 4.21). Continued speculation about the likely date of the first rise in the US federal funds rate has also contributed to increased volatility (Graph 4.22). Australian share prices are unchanged on a total returns basis since end 2014, underperforming US and European markets.

Graph 4.21
Total Return Share Price Indices
End December 2012 = 100

Sources: Bloomberg; MSCI; Thomson Reuters

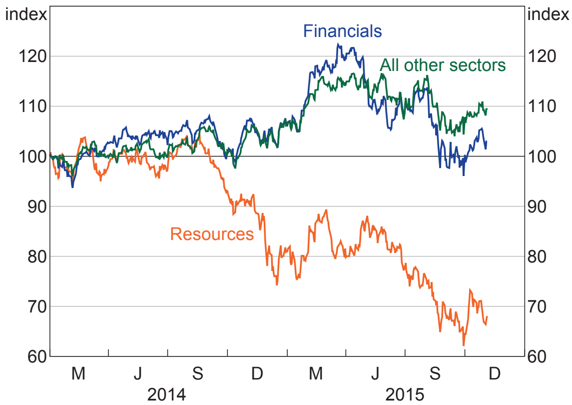
Graph 4.22
Australian Share Market Volatility
Daily absolute percentage change, 22-day rolling average



Sources: Bloomberg; RBA

Resource sector share prices have exhibited significant volatility in recent months (Graph 4.23). Energy sector share prices fell through the September quarter, but partially retraced these falls in early October alongside a recovery in the oil price; energy sector share prices remain around 23 per cent lower than at the start of the year. The share prices of materials companies have also partially recovered from their falls in the September quarter, but remain around 10 per cent lower since the start of the year.

Graph 4.23
Australian Share Price Indices
End December 2013 = 100

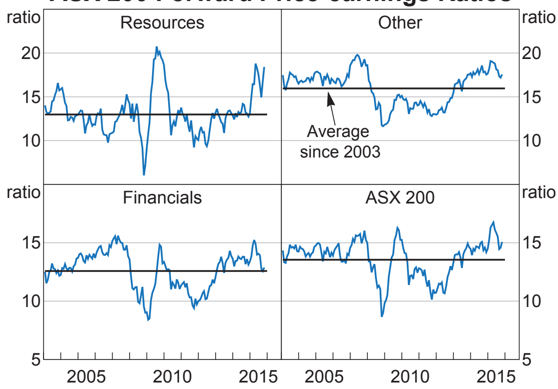


Sources: Bloomberg; RBA; Thomson Reuters

Financial sector equity prices fell in August, alongside the announcement of a number of large capital raisings by the major banks. Subsequently, financial sector equity prices have moved sideways. Equity prices for companies outside the financial and resources sectors have followed a similar pattern in aggregate. One exception was the industrials sector, which has been supported by increased M&A activity.

The valuation of Australian equities, as measured by the forward price-earnings ratio, remains a little above the average since 2003 (Graph 4.24). Valuations in the resources sector remain somewhat above average, as earnings expectations for the year ahead have fallen along with equity prices.

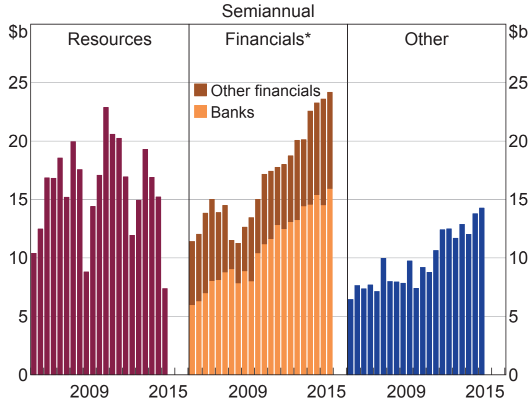
Graph 4.24
ASX 200 Forward Price-earnings Ratios



Source: Thomson Reuters

ASX 200 companies reported their June half 2015 results in August. Aggregate underlying profits (which exclude the effect of non-recurring items) declined by 13 per cent from the same period in 2014, driven by a sharp fall in resource company profits (Graph 4.25). In aggregate, profits were broadly in line with consensus analysts' expectations, although resources companies generally reported weaker-than-expected results.

Graph 4.25
ASX 200 Underlying Profits
Semiannual



* The December 2015 half observation for financial companies is based on reported results during the half and consensus expectations for companies that have not yet reported

Sources: Bloomberg; Morningstar; RBA

Resource sector profits were 56 per cent lower, driven by substantial falls in commodity prices. The fall in profits was broad based across both the larger diversified miners and smaller companies. Higher production volumes and lower costs partially offset the fall in commodity prices.

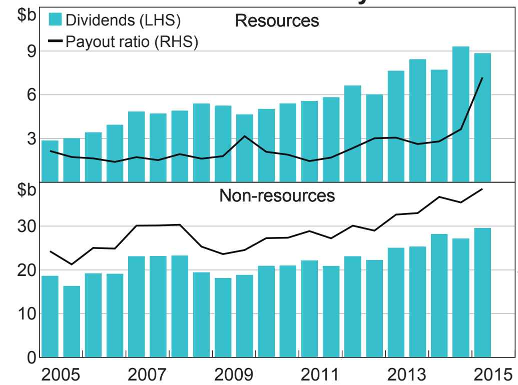
Underlying profits of financial companies rose by 5 per cent, driven by a substantial increase in profits at real estate and diversified financial companies. Real estate company profits were supported by property valuation gains, as well as strong activity in the residential housing market. The major banks reported increases in full-year profits, although growth slowed due to lower growth in non-interest income. The banks reported modest increases in net interest income over the year, driven by growth in average interest earning assets. Net interest margins contracted a little partly due to heightened competition in business lending. Bad and doubtful debt charges remained at low levels.

Underlying profits for companies outside the resources and financial sectors increased by 18 per cent. Companies in cyclical sectors, including the consumer discretionary and industrials sectors, generally reported higher profits. Profits in the industrials sector increased substantially, with lower oil prices supporting the earnings of transportation companies.

Company shareholder distributions grew strongly across most sectors compared to the same period in 2014. The aggregate payout ratio – measured as the ratio of dividends to underlying profit – rose substantially as the major miners increased dividends despite lower earnings (Graph 4.26).

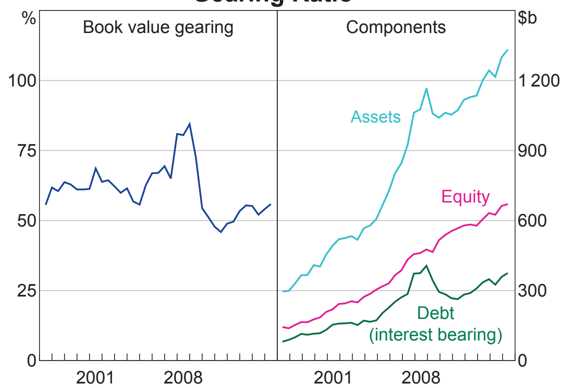
Listed corporations' balance sheets expanded by 3 per cent over the June half 2015, largely driven by an increase in the Australian dollar value of offshore assets, following the depreciation of the currency (Graph 4.27). Debt rose by 5 per cent over the half, reflecting both the use of debt to fund a number of sizeable acquisitions in the utilities and energy sectors, and an increase in the Australian dollar value of foreign-currency-denominated debt. Many Australian corporations mitigate their foreign currency exposures by generating foreign currency income that matches debt repayments, or through the use of hedges. Equity also rose, albeit at a slower rate than debt. Overall, the book value gearing ratio – the ratio of debt to equity – rose by 2 percentage points to 56 per cent, which remains below the average over the past 20 years. ✠

Graph 4.26
ASX 200 Dividend Payments



Sources: ASX; Morningstar; RBA

Graph 4.27
Listed Non-financial Corporations' Gearing Ratio*



* The gross gearing ratio is defined as the ratio of the book value of gross debt to the book value of equity; excludes foreign-domiciled companies, includes real estate companies

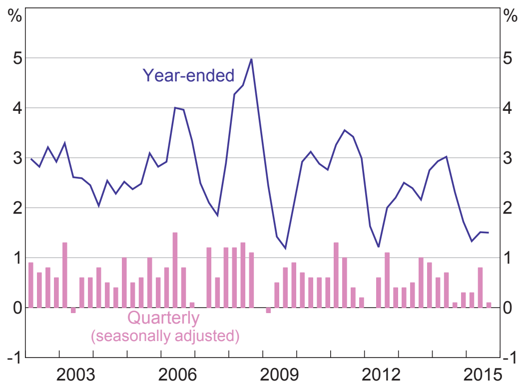
Sources: Morningstar; RBA; Statex

5. Price and Wage Developments

Recent Developments in Inflation

Inflation declined in the September quarter (Graph 5.1; Table 5.1). Indicators of underlying inflation decreased to be a bit above ¼ per cent in the quarter (Graph 5.2). Over the year, various measures suggest that underlying inflation was between 2 and 2¼ per cent. The outcome was lower than forecast in the August *Statement* and reflects weaker-than-expected outcomes across a range of goods and services. Domestic inflationary pressures are subdued, a key exception being the cost of new dwellings. The prices of tradable items were little changed in the September quarter. Import prices

Graph 5.1
Consumer Price Inflation



Source: ABS

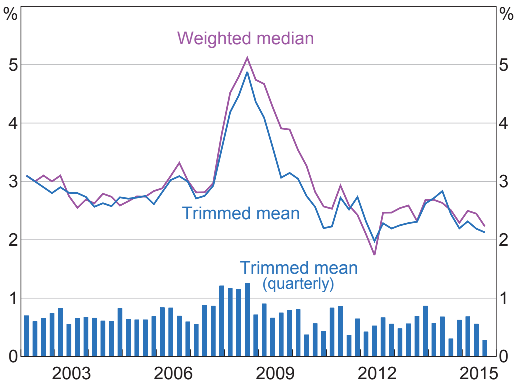
Table 5.1: Measures of Consumer Price Inflation
Per cent

	Quarterly[(a)]		Year-ended[(b)]	
	September quarter 2015	June quarter 2015	September quarter 2015	June quarter 2015
Consumer Price Index	0.5	0.7	1.5	1.5
Seasonally adjusted CPI	0.1	0.8	–	–
– Tradables	–0.2	1.1	–0.3	–0.3
– Tradables (excl volatile items and tobacco)[(c)]	–0.1	–0.2	0.2	–0.2
– Non-tradables	0.4	0.7	2.6	2.6
– Non-tradables (excl utilities)	0.5	0.7	2.7	2.9
Selected underlying measures				
Trimmed mean	0.3	0.6	2.1	2.2
Weighted median	0.3	0.5	2.2	2.4
CPI excl volatile items[(c)]	0.2	0.5	2.1	2.0

(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 5.2
Measures of Underlying Inflation

Year-ended



Source: ABS

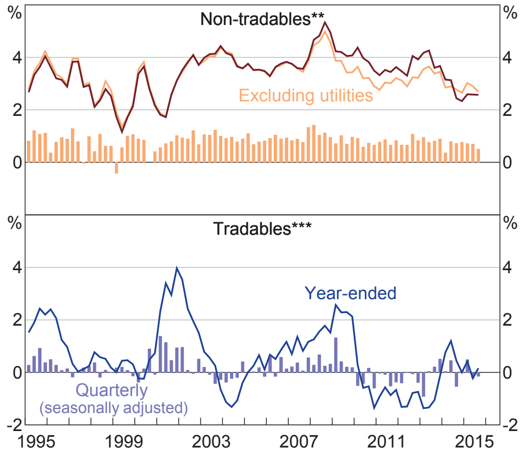
have risen over the year, despite low global inflation, due to upward pressure from the depreciation of the Australian dollar. However, the effect of this on final prices for tradable items appears to have been offset to some extent by competitive pressures and improvements in efficiency along the supply chain.

Headline inflation declined in the September quarter to 0.1 per cent (in seasonally adjusted terms) and was low at 1.5 per cent over the past year. This is partly due to temporary factors, including the fall in fuel prices earlier in the year and a large decline in utility prices in the September quarter.

Spare capacity in the labour market and declines in the cost of business inputs, such as fuel and utilities, have kept domestic inflationary pressures well contained. Non-tradables inflation declined in the September quarter (Graph 5.3). While the decline was relatively broad based, falls in regulated utility prices in some states made a large contribution. Over the year, non-tradables inflation remained at 2.6 per cent, below its average over the inflation targeting period. Excluding utility prices, year-ended non-tradables inflation declined and also remains below its historical average.

Market services inflation (excluding domestic travel & accommodation) remains low (Graph 5.4). The prices of these services are continuing to respond to low growth in labour costs as they

Graph 5.3
Non-tradables and Tradables Inflation*



* Adjusted for the tax changes of 1999–2000

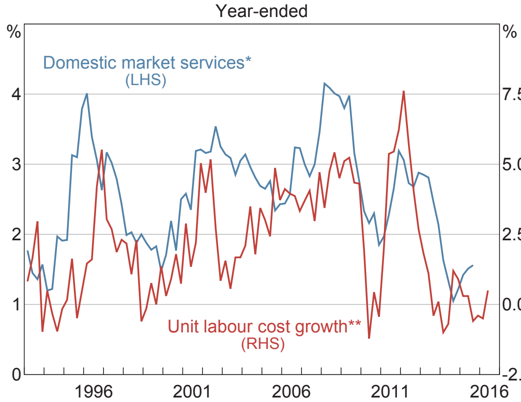
** Excluding interest charges prior to the September quarter 1998 and deposit & loan facilities to June quarter 2011

*** Excluding volatile items (fruit, vegetables and automotive fuel) and tobacco

Sources: ABS; RBA

Graph 5.4
Market Services Inflation

Year-ended



* Excludes deposit & loan facilities to June quarter 2011, housing services and domestic travel

** Moved forward by four quarters, non-farm

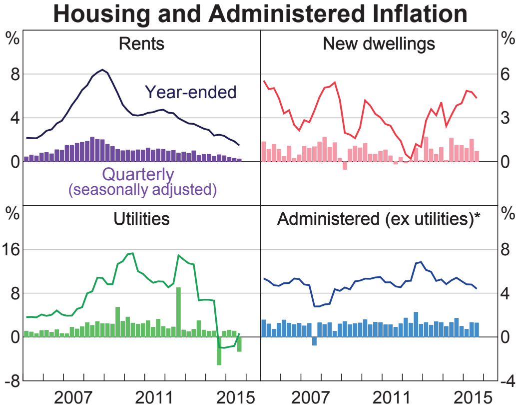
Sources: ABS; RBA

contain a relatively high labour content and have few administered components. Year-ended rent inflation was around its lowest pace in two decades, and is a little lower than would be expected given the current level of the vacancy rate. The recent low headline inflation outcomes, the decline in population growth and an increase in supply may be contributing to the broad weakness in rents inflation across capital cities; rents in Perth have declined in response to weak economic conditions in Western Australia. In contrast, inflation in new dwelling costs continues to support non-tradables inflation, remaining relatively high at 4.3 per cent over the year, consistent with the ongoing high level of activity in the residential construction sector.

The prices of administered items are less affected by labour market conditions than other non-tradable items. Declines in electricity and gas prices dampened administered price inflation in the September quarter (Graph 5.5). These declines are principally the result of regulatory and policy decisions (beginning 1 July 2015). The Australian Energy Regulator lowered network charges, placing downward pressure on retail prices in New South Wales, the Australian Capital Territory and South Australia. At the same time, the New South Wales government introduced a gas rebate for a range of eligible households. Excluding utilities, inflation for administered prices remains around its inflation-targeting average.

The prices of tradable items (excluding volatile items and tobacco) were little changed both in the September quarter and over the past year. The prices of tradable items such as consumer durables tend to be heavily influenced by movements in the exchange rate, as they are either imported or more exposed to international competition than prices for non-tradable items. For much of the past few years, the outcomes for consumer durables inflation have been lower than implied by movements in the exchange rate (Graph 5.6).[1] The prices of consumer durables declined again in the September quarter. A strong inflation outcome for motor vehicles was more than offset by weakness in a range of other items such as clothing and footwear. The relatively low outcomes for inflation of tradable items may suggest that exchange rate pass-through has been tempered by heightened competitive pressures associated with spare capacity in many product markets. This spare capacity is likely to reflect a combination of increases in supply, particularly in some parts of the retail sector, and subdued growth of demand in a number of markets. Even so, tradables inflation remains higher than it was between 2010 and 2013 and the lower exchange rate is expected to continue to place gradual upward pressure on the prices of tradable items over the next few years.

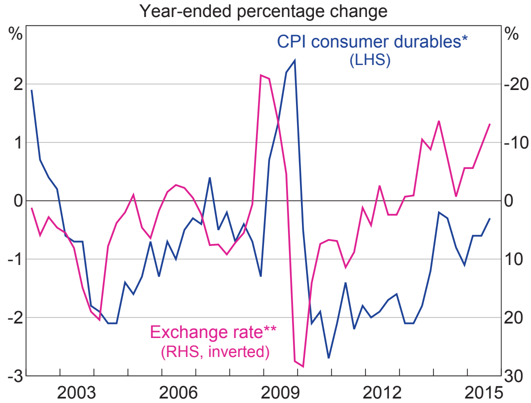
Graph 5.5
Housing and Administered Inflation



* Includes education, child care, health services, property rates, urban transport fares, postal services, some motor vehicle services and pharmaceutical products

Sources: ABS; RBA

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



* Retail items (excluding food and alcohol) and motor vehicles and parts

** Import-weighted index, quarter average

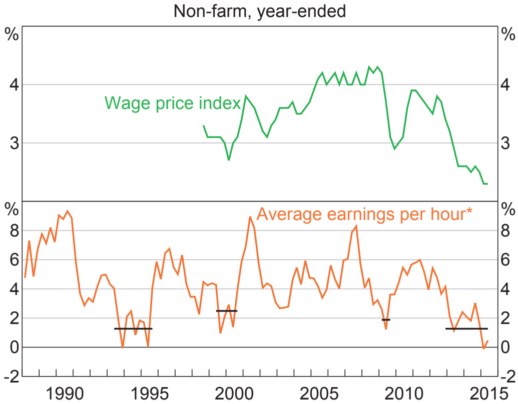
Sources: ABS; RBA

1 See RBA (2013), 'Box B: The Recent Deflation in Consumer Durables Prices', *Statement on Monetary Policy*, May, pp 57–59.

Labour Costs

Labour cost pressures remain weak (Graph 5.7). The wage price index (WPI) increased by 0.6 per cent in the June quarter and by 2.3 per cent over the year – the lowest annual outcome since the index was first published in the late 1990s. Average earnings per hour, which incorporates a wider range of labour income payments and captures changes in the composition of employment, have been little changed over the year. The recent period has been the most protracted episode of low earnings growth since the early 1990s.

Graph 5.7
Wage Growth
Non-farm, year-ended

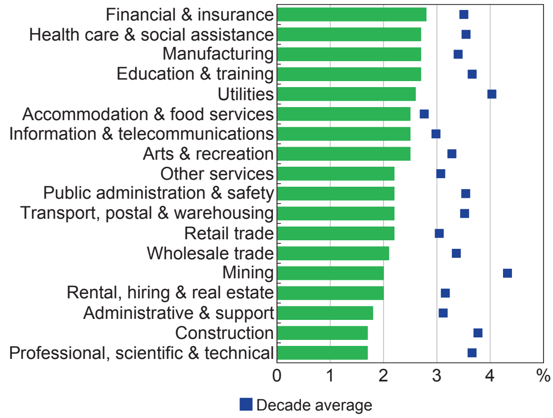


* The black lines represent the average over the period
Sources: ABS; RBA

Low wage growth has been broad based across public and private sectors, industries and states. All industries have experienced wage growth below their decade averages (Graph 5.8). Over the past year, wage growth has generally declined further in industries where employment outcomes have been weaker and has been little changed in industries where employment has increased (see 'Box C: Developments by Sector'). Dispersion in year-ended wage growth across the states remains low. Unions and firms expect wage growth to remain low for some time (Graph 5.9).

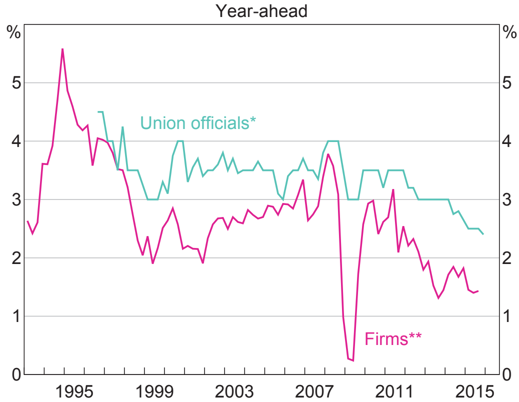
The weakness in wage growth is consistent with spare capacity in the labour market. However, the decline has been more pronounced than historical experience would suggest based on the unemployment rate. Several factors can help to reconcile the difference, including the decline in inflation expectations, the lower terms of trade and the need for the real exchange rate to adjust to improve international competitiveness.[2] Further, increased labour market flexibility is likely to have provided firms with greater scope to adjust wages

Graph 5.8
Wage Growth by Industry*
Year-ended June 2015



* Wage price index
Sources: ABS; RBA

Graph 5.9
Wage Growth Expectations
Year-ahead



* RBA survey; median expectation
** NAB survey; next three months; annualised
Sources: Australian Council of Trade Unions; NAB; RBA; Workplace Research Centre

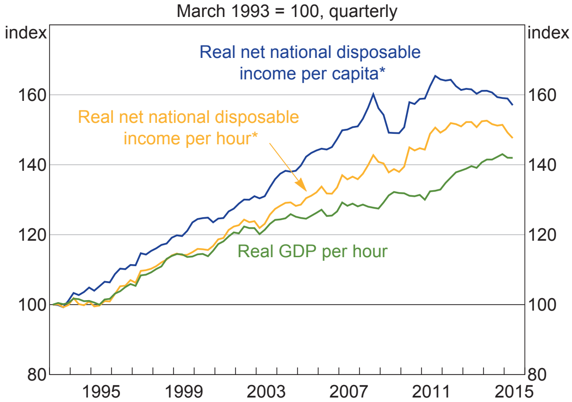
2 For a more detailed discussion see Jacobs D and A Rush (2015), 'Why is Wage Growth So Low?', RBA *Bulletin*, June Quarter, pp 9–18.

in response to a given change in demand for their goods and services. This low wage growth may have encouraged firms to employ more people than would otherwise have been the case.

Labour productivity (GDP per hour worked) has been little changed over the past year. However, measures of productivity growth are volatile and subject to revision. Unit labour costs have been little changed for around four years, because labour productivity has grown at broadly the same pace as average earnings. Together with the depreciation of the exchange rate over recent years, this is helping to restore the competiveness of Australia's labour compared with other countries, following a period of relatively strong growth in unit labour costs.

However, labour productivity does not capture all the factors that influence changes in living standards. A broader measure is net national disposable income (NNDI) per hour worked, which adjusts GDP per hour worked for the purchasing power effects of changes in the terms of trade, the depreciation of the capital stock and net income transfers to the rest of the world (Graph 5.10). Growth of NNDI per hour worked was high through the mid 2000s, even though labour productivity growth was low, due to the boost in incomes from the rapid rise in the terms of trade. During this period, growth of income was even higher on a per capita basis as employment rose by more than the population. More recently, the terms of trade have declined and the labour force participation rate remains below its peak of a few years ago. This has more than offset the slight improvement in productivity growth and so NNDI per capita has declined somewhat.

Graph 5.10
Productivity and Income
March 1993 = 100, quarterly



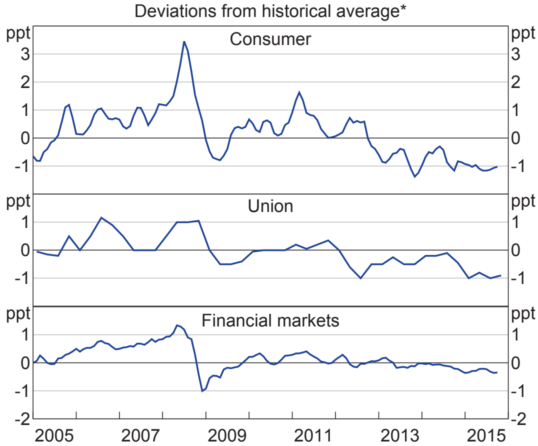
* Real net national disposable income adjusts real GDP for the purchasing power effects of changes to the terms of trade, depreciation of the capital stock and net income transfers to the rest of the world

Sources: ABS; RBA

Inflation Expectations

Measures of inflation expectations – for market economists, union officials, consumers and financial markets – have been little changed in recent quarters and remain below average (Graph 5.11).[3] Longer-run expectations remain well anchored. ✠

Graph 5.11
Measures of Inflation Expectations
Deviations from historical average*



* Since July 1996; see footnote 3 for details

Sources: Australian Council of Trade Unions; Melbourne Institute of Applied Economic and Social Research; RBA; Workplace Research Centre; Yieldbroker

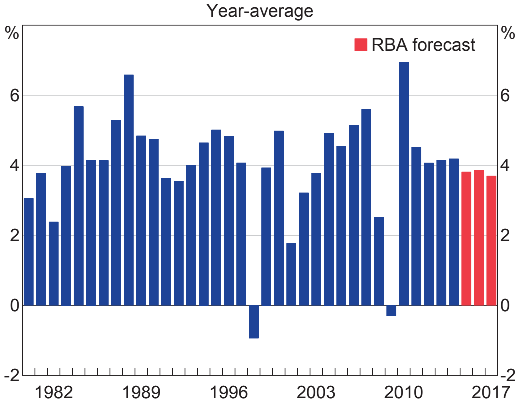
3 The series for consumer expectations is the three-month moving average of the trimmed mean of inflation expectations over the next year; union expectations are the median of union officials' expectations of inflation over the next year; financial market expectations are the break-even 10-year inflation rate between indexed and nominal bonds (with interpolation used to match exact maturity).

6. Economic Outlook

The International Economy

Growth in Australia's major trading partners is expected to be slightly below its decade average over the next two years or so (Graph 6.1). This reflects an unchanged expectation for a gradual easing in the growth of the Chinese economy and a more persistent slowdown in growth in the rest of the Asian region than was expected at the time of the August *Statement*. Globally, core inflation is generally stable at rates below central bank targets. In combination with the effects of the earlier decline in oil prices, this suggests that headline inflation rates will remain low for some time yet.

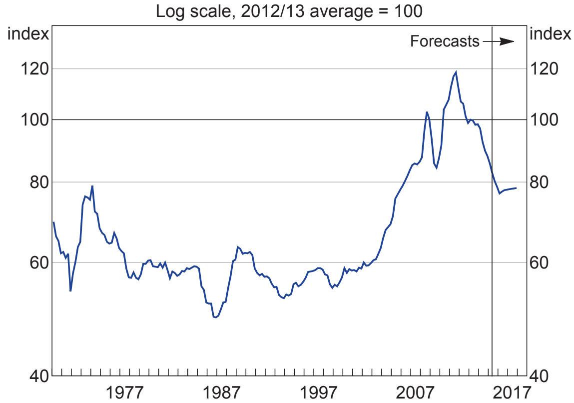
Graph 6.1
Australia's Trading Partner Growth*
Year-average



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

A further decline in commodity prices has contributed to downward revisions to the outlook for Australia's terms of trade of around 2 per cent since the previous *Statement* (Graph 6.2). The forecast for iron ore prices has been lowered slightly, reflecting a weaker outlook for Chinese steel demand and an expectation that there will be only a limited reduction in supply from high-cost producers of iron ore, particularly those in China.

Graph 6.2
Terms of Trade
Log scale, 2012/13 average = 100



Sources: ABS; RBA

Growth in China is expected to moderate gradually over the forecast period, largely as forecast previously. Weaker growth in investment and manufacturing production is expected to be offset, in part, by the effects of accommodative monetary and fiscal policy settings.

Subdued external conditions, combined with a decline in investment, have led to downward revisions to growth in Japan in 2015. Japanese growth is likely to experience some volatility in early 2017 when the consumption tax is scheduled to increase again. In other east Asian economies, a spillover of weakness in external demand conditions to domestic demand has also resulted in lower forecasts for economic growth in 2015. GDP growth in these economies is now expected to return to trend more gradually over 2016, and to remain around trend in 2017. Lower exchange rates in the east Asian region, together with growth in advanced economies, will provide some support to the region's exports over the period ahead. More generally, accommodative monetary policy and low oil prices are also likely to support growth in the region.

The outlook for economic growth in the United States and the euro area is little changed. Both economies are expected to grow at above-trend rates throughout the forecast period. In the United States, accommodative monetary policy and ongoing improvement in labour market conditions are expected to support strong consumption growth and above-trend growth more generally, despite the appreciation of the US dollar adversely affecting the outlook for the manufacturing sector. In the euro area, growth is expected to remain above trend, supported by accommodative monetary policy, lower oil prices, a gradually improving labour market and above-average confidence.

Domestic Activity

In preparing the domestic forecasts, a number of technical assumptions have been made. The forecasts are conditioned on the assumption that the cash rate moves broadly in line with market pricing at the time of writing. This assumption does not represent a commitment by the Board to any particular path for policy. The forecasts also take account of the fact that many banks have announced that they will increase interest rates on variable-rate mortgages by up to 20 basis points, following regulatory changes that will increase capital requirements for a number of banks. This follows earlier increases in the standard variable interest rates for investor-related housing loans of at least 20 basis points.

The exchange rate is assumed to remain at its current level over the forecast period (TWI at 61 and A$ at US$0.72). The TWI is around 2 per cent lower than the assumption underlying the forecasts in the August *Statement*. The price of Brent oil is assumed to be around US$52 per barrel, which is consistent with near-term futures pricing and close to the assumption used in August. Similar to the previous *Statement*, the working-age population is assumed to grow by 1.6 per cent over 2016 and 2017, based on updated forecasts from the Department of Immigration and Border Protection.

The starting point for the forecasts is that the Australian economy grew, as expected, at a moderate rate in 2014/15. Mining investment continued to decline sharply, although this was partly offset by the contribution from resource exports. Non-mining business investment increased a little and public demand was unchanged. Dwelling investment continued to grow strongly and while consumption growth was below average, it had picked up a little from its lows of 2013. Net service exports made a noticeable contribution to GDP growth, aided by the earlier exchange rate depreciation.

Overall, the forecasts for GDP are little changed from the August *Statement*. GDP growth has been revised down slightly towards the end of the forecast period to reflect updated forecasts for resource exports, which are still expected to make a substantial contribution to growth. Year-ended GDP growth is forecast to be 2–3 per cent in June 2016, and to pick up to 2¾–3¾ per cent by June 2017, which is around its long-run average (Table 6.1).

The changes to the outlook for resource exports reflect an assessment that some large liquefied natural gas (LNG) projects will start production a bit later than previously thought, although the anticipated magnitude of the eventual ramp-up in production has not changed. As a result of this minor delay, the expected contribution of LNG exports to GDP growth in 2017 is lower by ¼ percentage point. At the same time, despite lower commodity prices, expansions to supply by the low-cost producers of bulk commodities are likely to continue. Meanwhile, the lower exchange rate is assisting domestic producers of tradable items. The strong growth of net service exports is likely to continue.

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

	Year-ended					
	June 2015	Dec 2015	June 2016	Dec 2016	June 2017	Dec 2017
GDP growth	2.0	2¼	2–3	2½–3½	2¾–3¾	3–4
CPI inflation	1.5	1¾	1½–2½	2–3	2–3	2–3
Underlying inflation	2¼	2	1½–2½	2–3	2–3	2–3
	Year-average					
	2014/15	**2015**	**2015/16**	**2016**	**2016/17**	**2017**
GDP growth	2.3	2¼	2¼	2–3	2½–3½	2¾–3¾

(a) Technical assumptions include A$ at US$0.72, TWI at 61 and Brent crude oil price at US$52 per barrel
Sources: ABS; RBA

Mining investment is expected to continue to fall over the next two and a half years, as large iron ore, coal and LNG projects are completed, and few new projects commence. The lack of a pipeline of new projects has been factored into the outlook for some time and, given this, the recent declines in commodity prices are unlikely to result in a significant further reduction in planned mining investment.

Growth in household consumption is projected to increase to be a bit above average from 2016, consistent with the forecasts from the August *Statement*. Low interest rates and further growth in employment are expected to continue to support a pick-up in household demand, and the household saving ratio is expected to decline gradually. The high level of residential building approvals since the start of the year is likely to translate into further increases in dwelling investment, albeit at a gradually moderating rate.

The near-term outlook is for non-mining business investment to remain subdued, consistent with the ABS capital expenditure survey of firms' investment intentions and the low level of non-residential building approvals. However, some of the preconditions for a pick-up in investment are in place and survey measures of business conditions have increased over the past year to be clearly above average. The depreciation of the Australian dollar has added support to demand and investment in the services sector, although the labour-intensive nature of parts of this sector means that it makes up a modest share of non-mining investment.

Employment growth is expected to be a bit stronger than had been forecast earlier. The labour force survey indicates that employment growth has been stronger than expected over the past year. This is partly because the sectoral composition of economic activity has provided more support to aggregate labour demand. In addition, the labour market has been more flexible than anticipated. In particular, wage growth has declined by more than had been expected and this appears to have helped employment to grow faster than otherwise. Leading indicators of labour demand, such as job advertisements and vacancies, have been on an upward trend and point to further employment growth over coming months.

Labour supply appears to have grown by more than previously expected, as the increase in the participation rate has more than offset lower population growth. This is expected to continue as individuals are encouraged to enter the labour market in response to the improvement in employment growth.

The net effect of the anticipated increase in labour demand and supply is that the unemployment rate forecast is little changed from the previous *Statement*. The unemployment rate is projected to remain within its recent range of 6 to 6¼ per cent over the next year and to decline only gradually toward the end of the forecast period.

Inflation

Wage growth has been broadly in line with expectations at the time of the August *Statement*. Wage growth is not expected to increase much over the next couple of years, given continued spare capacity in the labour market and liaison reports that employers remain under pressure to contain costs. Unit labour costs are expected to increase only gradually, having been little changed for around four years. This low growth of labour costs is helping to improve the competitiveness of Australian producers.

The September quarter inflation outcome was lower than expected. While quarterly inflation outcomes can be volatile, the broad-based nature of the weakness in the September quarter suggests that inflationary pressures are a bit more subdued than earlier anticipated. As a result, the inflation forecasts are lower in the near term. Underlying inflation is now expected to be around 2 per cent over most of next year before picking up to be around 2½ per cent. Inflation expectations remain a little below average.

Domestic inflationary pressures are expected to remain subdued, and inflation in the prices of non-tradable items is forecast to continue to be below its inflation-targeting average. This is consistent with the expectation that there will be spare capacity throughout the forecast period and growth of labour costs will remain low. Also, competitive pressures and below-average demand conditions in the near term are likely to constrain the ability of many firms to expand their margins, with the notable exception of residential construction where strong demand is likely to see inflation in new dwelling costs remain elevated.

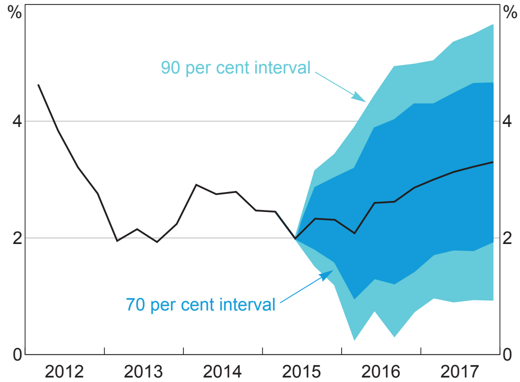
The prices of tradable items are expected to rise over the next few years, as the exchange rate depreciation since early 2013 has led to increases in import prices, which will be gradually passed on to the prices paid by consumers. Based on historical relationships, the direct effects of the exchange rate depreciation since early 2013 are expected to add around ½ percentage point to underlying inflation over each year of the forecast period. However, it is always difficult to identify the effects and timing of exchange rate pass-through given other influences. In particular, heightened competition and improvements in supply-chain efficiency may continue to temper the effects of exchange rate pass-through to final consumer prices.

Headline inflation has been weak over the past year or so as a result of factors that are likely to have a temporary effect, most notably lower fuel prices and changes to utility prices stemming from regulatory and policy decisions. As the direct effects of these factors pass, headline inflation is expected to pick up. Lower fuel and utility prices have reduced input costs for a range of businesses, and these lower costs may gradually be passed on to the prices these businesses charge for their goods and services. The magnitude and timing of this indirect effect is difficult to gauge. A further increase in the tobacco excise in 2016 is expected to contribute around ¼ percentage point to headline inflation, but to have little effect on underlying inflation. Overall, headline inflation is expected to remain subdued over most of the next year before picking up to be around the middle of the inflation target in the second half of the forecast period.

Uncertainties

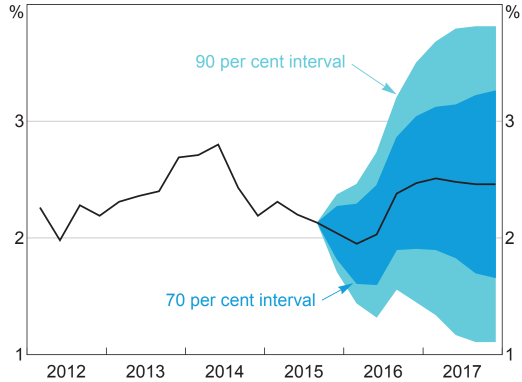
The forecasts are subject to a considerable degree of uncertainty. This is evident in the width of confidence intervals around the forecasts based on historical forecast errors (Graph 6.3, Graph 6.4 and Graph 6.5). In part, this uncertainty relates to the assumptions that underlie the forecasts. For example, the forecasts are conditioned on a range of assumptions about the evolution of key variables, such as the exchange rate. Judgements are also made about how developments in one part of the economy will affect others. Accordingly, it is worth considering the consequences that different assumptions might have on the forecasts, as well as the possibility of events occurring that are not part of the central forecast.

Graph 6.3
GDP Growth Forecast*
Year-ended



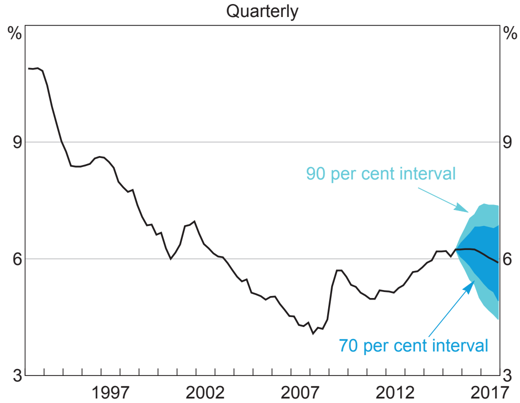
* Confidence intervals reflect RBA forecast errors since 1993
Sources: ABS; RBA

Graph 6.5
Trimmed Mean Inflation Forecast*
Year-ended



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

Graph 6.4
Unemployment Rate Forecast*
Quarterly



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

The outlook for growth and trade in the Asian region, particularly China, is a key source of uncertainty that has important implications for commodity prices, particularly prices for iron ore and coal, and the forecast for the terms of trade. Another key source of uncertainty for the forecasts, particularly the assumption that the exchange rate will be unchanged, is the evolution of monetary policy in major economies. Domestically, key sources of uncertainty continue to be the outlook for business investment, the response of households to the combined effects of low growth in incomes and wealth effects from the housing market, and the degree of spare capacity in the economy.

Growth in China, trade and commodity prices

As has been the case for some time, there is considerable uncertainty regarding the outlook for growth in China. This has contributed to uncertainty surrounding the outlook for economic growth and trade in the Asian region more generally, and has implications for commodity demand and commodity prices.

Ongoing weakness in Chinese residential and non-residential construction activity has contributed to a deterioration of conditions in the Chinese industrial sector since late 2014. This has been particularly acute in the north-eastern provinces and in the mining and manufacturing industries. Persistent weakness in these parts of the economy could increase the vulnerability of financial institutions with concentrated exposures. Policymakers have responded to concerns about lower growth in economic activity by easing monetary policy and approving additional infrastructure investment projects, and they have scope to provide further support. Even so, given the relatively muted response of investment growth so far to the range of initiatives undertaken since late 2014, there is uncertainty about how effective current policies will be in supporting growth in the next few quarters.

Slowing Chinese domestic demand has contributed to subdued export growth in a number of Asian economies. In addition, after being flat for several years, Chinese assembly and processing trade declined in 2015, pointing to less activity in regional supply chains. As a result of these strong trade linkages, risks around Chinese growth also represent risks to growth in the rest of east Asia.

Uncertainty surrounding China's growth and the outlook for steel demand remains a key risk for commodity prices, particularly prices for iron ore and coal. The forecasts assume that there will only be a limited response of global commodity supply to the sustained period of lower commodity prices. Most Australian iron ore producers remain profitable at current prices, while many higher-cost domestic bulk commodity producers have been able to lower their production costs, although the scope for further cost reduction appears to be more modest than in the past. To date, there has also been a limited supply response to lower prices by bulk commodity producers in China, despite their higher cost base. The possibility of significant cuts to production represents an upside risk to commodity prices. The possibility of unexpected cuts to Australian production represents a downside risk to the forecast for export growth.

Central banks' policies

There are always uncertainties about how events offshore will unfold, and how policymakers and financial markets will respond. For some time there has been uncertainty around the path for monetary policy in major economies and their net effect on financial markets, particularly exchange rates. Many observers expect the European Central Bank and the Bank of Japan to announce further steps to make their monetary policy more accommodative and there is considerable uncertainty about when the US Federal Reserve will start to normalise its policy rates. Many Federal Open Markets Committee members have indicated that they believe it will be appropriate to raise rates this year, but other members have expressed somewhat different views, and financial markets have not fully priced in a rate rise until the first quarter of 2016. Although it is hard to say how financial markets will react when policy normalisation begins in the United States, it is likely that the Australian dollar could depreciate.

Business investment

Total business investment is expected to fall over the next two years as mining investment continues to decline sharply and non-mining investment is forecast to recover only gradually and with some delay. Given the size of the falls in mining investment already factored into the forecasts, the most recent decline in commodity prices is not expected to lead to a significant additional fall in mining investment. However, there continues to be uncertainty around the size of the fall and the impact of the declines in commodity prices.

The strength and timing of the recovery in non-mining business investment remains uncertain. Indicators of investment intentions provide little, if any, evidence of a material pick-up in the near term. Indeed, the ABS capital expenditure survey implies that non-mining investment could be lower than forecast in 2015/16. However, some of the preconditions for a stronger recovery in non-mining business investment are in place: borrowing rates for businesses are currently low and have tended to fall; survey measures of business conditions are at an above-average level; and the Australian dollar has depreciated significantly over the past couple of years. Indeed, demand for domestically produced services is expected to continue to pick up and could accelerate should the Australian dollar depreciate further. The services sector, however, is generally relatively labour-intensive. Hence, the additional capital expenditure required to meet a given increase in demand is likely to be less than if other, more capital-intensive, sectors were to play a larger role in the recovery. Nonetheless, given the significant uncertainty around the expected pick-up in non-mining business investment growth, the risks to these forecasts are assessed to be roughly balanced.

Household sector

There is still considerable uncertainty about the resilience of consumption to a period of below-average income growth. Consumption is forecast to grow at a rate that is slightly above average from 2016, consistent with a further gradual decline in the household saving ratio.

Whether this materialises will depend, in part, on the extent to which households perceive the low income growth to be temporary. This would be consistent with households judging the low wage growth of late to be associated with the rebalancing of the economy in response to the unwinding of the terms of trade and mining investment boom. If, however, households come to view lower income growth as being more persistent, consumption growth could be somewhat lower, and the saving ratio higher, than forecast.

The extent of the pick-up in consumption growth will also depend on the strength of housing price growth and its associated wealth effects. Supply constraints, particularly in Sydney, may limit the extent to which new dwelling investment can satisfy growing demand. This raises the possibility that housing prices grow more quickly than forecast. At the same time, some market segments, particularly apartments in the inner-city areas of Melbourne and Brisbane, appear to be reaching a point of oversupply. It is also unclear how households will respond to changes in housing prices. In recent years, fewer households appear to have been using the increase in the value of their dwellings to trade up or increase their leverage for the purposes of consumption or alterations and additions to housing, which may have muted the effect of wealth increases on consumption.

Spare capacity in the economy

The elevated rate of unemployment, together with the low growth in wages and broader domestic cost pressures, suggests that the economy is currently operating with spare capacity. However, there remains considerable uncertainty about the degree of spare capacity in the economy and how it is likely to evolve over time.

Recent changes in the sectoral composition of activity are one source of uncertainty around the productive capacity of the economy and the degree of spare capacity. The change in the sectoral composition of employment has involved a shift away from mining-related jobs that have very high output per hour worked (high labour productivity), towards jobs in the services sector that tend to have lower measured output per hour worked. This switch to activity in the services sector may reduce the economy's measured potential output growth, unless it is offset by productivity improvements within industries. Compositional change could also produce a mismatch between jobs and the skills of available workers, reducing the effective amount of spare capacity in the labour market. However, there is little evidence of this to date. In particular, the relationship between the unemployment and job vacancy rates does not appear to have shifted from its historical pattern.