

# Statement on Monetary Policy

MAY 2018



RESERVE BANK OF AUSTRALIA

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MAY 2018

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The May 2018 issue of the *Statement* includes a number of changes to the structure and format of the document to make it easier to read. The new chapter 'The International Environment' combines content previously found in the 'International Economic Developments' and 'International and Foreign Exchange Markets' chapters. This new chapter also includes the outlook for global growth. Section headings within chapters are more narrative in style to provide a guide to content.

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# Overview

Conditions in the global and domestic economies remain positive and are broadly continuing on the track they have been on for the past year or so. Output growth in most of Australia's major trading partners is at or above trend and labour markets are tightening. Inflation has picked up a little in a number of these economies and is likely to increase further, after a long period at low levels. Domestically, a further gradual reduction in the unemployment rate and a rise in inflation are expected over the next couple of years. The Bank's forecasts are little changed from three months ago, as are the considerations for monetary policy.

The global economy has been expanding at a solid pace. Data available so far imply that this continued into the March quarter, including in parts of east Asia where some indicators had suggested that growth slowed late last year. In the major advanced economies, employment growth remains strong, wages growth has picked up and the outlook for investment is positive. Both the euro area and Japan are likely to expand at or above the rate of growth of productive capacity in the period ahead, as has been the case for several years. In the United States growth is likely to be boosted by a considerable fiscal stimulus in 2018 and 2019.

Capacity constraints are starting to show up in the major advanced economies. Business surveys in some economies are reporting increasing difficulty in finding suitable labour and other signs of binding capacity constraints such as production delays. Unemployment rates have reached very low levels. After a long period of

slow growth in wages, a pick-up is now occurring in some economies.

Inflationary pressures globally are expected to increase further. As well as wages growth rising in response to tight labour markets, upstream price pressures are also evident. Oil prices are up by around 10 per cent since the start of the year. More recently, the prices of some base metals have been boosted by commodity-specific supply factors. Producer price inflation is generally higher than it has been for several years, although it has turned down in recent months.

In China, the authorities continue to balance their policy priorities of supporting growth, reducing financial leverage and improving environmental outcomes. The authorities' target for growth in 2018, at 6.5 per cent, is a step down from last year's outcome for GDP growth and provides scope to address their other policy priorities. Some measures of activity have eased in recent months, although the housing sector has remained resilient. This easing could prompt renewed policy stimulus to support growth at target. Any additional spending on housing or infrastructure would tend to boost demand for Australia's coal and iron ore exports, at least in the short term.

Australia's terms of trade have been a bit higher than was expected a year ago, partly because of the boost to prices from disruptions to coal supply. The prices of bulk commodities have declined over recent months as these supply disruptions have eased and concerns about future Chinese steel demand have continued.

These prices, and thus Australia's terms of trade, are expected to decline somewhat over coming years, because Chinese demand for these commodities is likely to moderate and further low-cost supply will come on line. The terms of trade are nonetheless expected to remain significantly higher than the averages of past decades.

As always, there are a number of risks to the outlook for global growth. Recent announcements of trade protectionist measures by the US and Chinese authorities involve only a small share of their total trade and are therefore unlikely to affect growth noticeably. A significant escalation in trade protectionism would, however, derail the global economic expansion.

There are also scenarios in which global demand and inflation are stronger than expected. If that occurred, it could prompt a faster tightening of monetary policy and financial conditions in the major advanced economies than many observers expect. Financial market pricing currently implies that solid global growth can continue without sparking much of an increase in inflation. A significant reappraisal of the inflation outlook could result in higher yields and affect financial market pricing.

Any increase in yields arising from increased inflation expectations would occur on top of the effects of the recent moderate tightening in money market conditions in the United States and some other markets, which has occurred for several reasons unrelated to expectations about monetary policy. This has increased the cost of funding for a range of financial institutions in Australia as well as the borrowing costs for some businesses.

More broadly, global financial conditions remain accommodative, even though credit spreads have widened a little. Financial market volatility has increased since last year but remains fairly

low. The US dollar has appreciated against most currencies, including the Australian dollar. On a trade-weighted basis, the Australian dollar has depreciated a little lately but remains in the range it has been in for the past couple of years. A significant appreciation of the Australian dollar would tend to dampen future output growth and inflation.

Growth in the domestic economy is expected to have picked up in the March quarter, as coal exports recovered from disruptions to supply and liquefied natural gas (LNG) exports increased further. Recent data, including revisions to prior quarters, imply that there was a bit more momentum in domestic demand in the second half of 2017 than previously reported. Beyond that, the forecasts for GDP growth are little changed. Growth is still expected to be a bit above 3 per cent from late 2018. Growth at these rates would typically imply that spare capacity will continue to be absorbed.

Business conditions are very positive. Survey-based measures of conditions are above average in all industries, including mining and retail, which had previously been reporting much weaker conditions. Profits for both listed companies and the corporate sector generally increased over 2017. Non-mining business investment increased by 12½ per cent over the year and ongoing investment in new public infrastructure is boosting activity for some businesses.

The outlook for non-mining business investment is for continued expansion. An increasing number of firms are reporting that they face capacity constraints, and survey measures of investment intentions also suggest that further solid growth in investment is likely. Currently, investment growth is being led by construction, particularly office buildings. Growth in other types of investment, such as machinery and equipment, is expected to pick up in the period ahead.

Mining investment held up a little more over the past year than earlier expected, but is still likely to decline further in the period ahead as large LNG projects are completed. The trough in mining investment is now expected to be in late 2018 or early 2019, which is a bit later than the Bank's previous forecasts implied. Further out, a pick-up in sustaining mining investment is likely, but this will contribute much less to overall growth than the earlier boom in investment in production capacity.

Dwelling investment is expected to remain at a high level but have little effect on overall economic growth. Residential building approvals have stepped down from their peak levels in mid 2016 but remain high. Building activity has been supported by the large pipeline of work yet to be done, which has increased to reach historically high levels. Renovation activity has been lower than historical relationships with new home building would suggest.

Conditions in the Sydney and Melbourne established housing markets have eased. Nationwide measures of housing prices were little changed over the past six months, and price falls were recorded in some areas. The flow of new borrowing has slowed, especially for investors, as has housing credit growth. Credit standards have tightened a bit further recently and it is possible that they will be tightened again in the context of the current high level of public scrutiny.

Growth in household consumption has picked up since early 2017; recent data revisions imply that household consumption growth was more resilient to weak income growth than earlier reported. Indications are that consumption growth remained solid in the March quarter. Consumer sentiment also remains above average. Household income growth has been weak despite rapid growth in employment;

wages growth has been low and compositional change in the labour force has weighed on average earnings per hour. This weakness in income growth has presented a risk to the consumption forecast for some time. The high level of household debt also carries certain risks, including that households' spending decisions might become more sensitive to unexpected weakness in income or wealth.

Employment growth has been very strong over the past year, although it has slowed in recent months. Labour force participation increased significantly over the past year or so, especially for females and older workers. The unemployment rate is lower than in early 2017, but has been around 5½ per cent for some months. Forward indicators point to above-average growth in employment in coming months, and a resumption of the gradual decline in the unemployment rate is expected. The unemployment rate is forecast to reach 5¼ per cent by mid 2019.

As the labour market tightens, wages growth is expected to pick up gradually. The wage price index measure of wages growth, which abstracts from compositional change, has increased a little but remains low. Broader measures of labour income growth have, as noted above, been subdued. The Bank's liaison suggests that a higher share of firms are now expecting a pick-up in wages growth over the year ahead, although most still expect little change. Also, business surveys suggest that a higher share of firms are finding it more difficult to find suitable workers.

Inflation remains low but has troughed and is expected to increase gradually over the next few years. Inflation in the March quarter was broadly in line with earlier expectations. Headline inflation was 0.5 per cent in the quarter and unchanged at 1.9 per cent over the year. Underlying inflation was about ½ per

cent in the quarter and close to 2 per cent over the year. Subdued growth in labour costs and ongoing competition in retailing are weighing on inflation. Prices of durable goods and many other consumer staples have accordingly been little changed or have fallen over recent quarters. Some of this downward pressure should ease as the labour market tightens and wages growth picks up. The Bank's forecasts are for CPI inflation to be a bit above 2 per cent in both 2018 and 2019. Underlying inflation is also expected to increase from close to 2 per cent currently, to be above 2 per cent by the end of the forecast period.

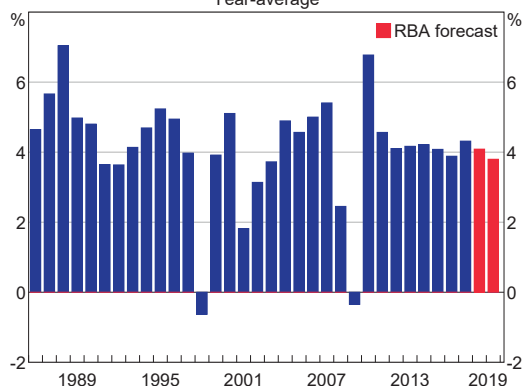
Overall, the Australian economy is progressing broadly on the track the Bank has been expecting for a while. The unemployment rate is a little lower than a year ago and inflation has risen slightly. The current accommodative stance of monetary policy has assisted this outcome.

Further progress on both inflation and unemployment is expected over the period ahead, although this progress is expected to be only gradual. For some time the Reserve Bank Board's view has been that holding the cash rate steady at 1½ per cent would assist that progress, with steady monetary policy promoting stability and confidence. If the economy continues to perform as expected, higher interest rates are, however, likely to be appropriate at some point. Notwithstanding this, the Board does not see a strong case for a near-term adjustment in the cash rate. ✎

# 1. The International Environment

Global economic conditions were relatively strong in early 2018 and the drivers of growth have become more broad based. The higher rates of growth for the major trading partners are expected to continue over the next couple of years; growth in the major advanced economies is expected to continue to exceed estimates of potential over this period (Graph 1.1). While global inflation remains low at present, these stronger economic conditions should see a further reduction in spare capacity and a gradual upward trend in inflation. In response, several advanced economy central banks are in the process of gradually reducing very accommodative monetary policies. More broadly, financial conditions have tightened modestly in recent months, most notably in US dollar money markets. Nonetheless, financial conditions remain accommodative and continue to support global economic growth. In the United States, growth will also be boosted by a substantial fiscal stimulus.

**Graph 1.1**  
**Australia's Trading Partner Growth\***  
Year-average



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

Growth in China has eased a little recently. Over the medium term, growth is expected to moderate gradually for structural reasons, including the declining working-age population and the authorities' objective of achieving a more sustainable mix of growth. Although Chinese steel demand has held up a bit better in the short term than many observers expected, over time it is still likely to decline. Together with increased supply from low-cost producers, this is likely to weigh on bulk commodity prices, and thus Australia's terms of trade, over coming years.

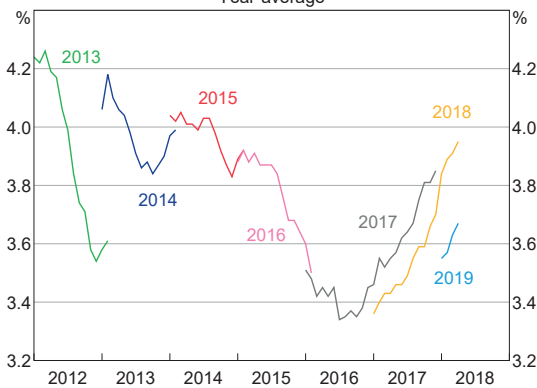
## Global growth has strengthened and the outlook is more positive

Global economic conditions have improved over the past two years and growth forecasts for the major economies have been revised higher (Graph 1.2). Growth has also shifted from being driven primarily by consumption to being more broadly based. In particular, business investment has recovered, especially in some of the major advanced economies, and stronger global demand has supported growth in trade. While some activity indicators have eased a bit recently, they remain around multi-year highs (Graph 1.3).

The forecast for growth in Australia's major trading partners is largely unchanged from the February *Statement*. Growth is expected to remain strong in 2018, although slightly below its 2017 pace, and to slow a little further in 2019. Growth in China and the rest of east Asia (excluding Japan) is expected to moderate from its strong 2017 rate. Growth in the euro area and Japan is also expected to ease from current strong rates, but to remain above

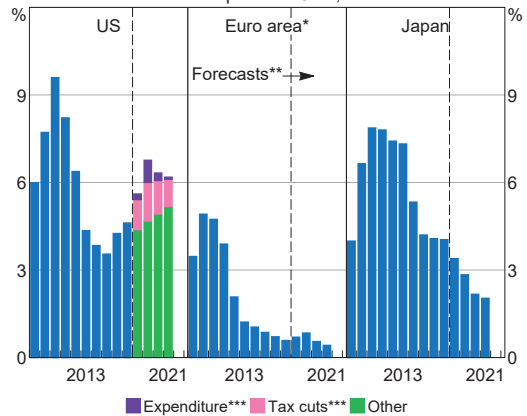


**Graph 1.2**  
**Consensus GDP Growth**  
**Forecasts for Major Economies\***  
 Year-average



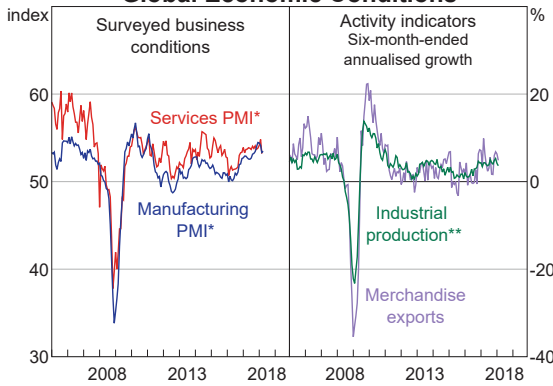
\* 2016 GDP PPP weighted US, Japan, euro area and China  
 Sources: Consensus Economics; IMF; RBA

**Graph 1.4**  
**Major Advanced Economies –**  
**Structural Fiscal Deficits**  
 Per cent of potential GDP, annual



\* RBA estimate from 2020  
 \*\* IMF forecasts from April 2018 WEO  
 \*\*\* CBO estimate of increase in deficit from the Tax Cuts and Jobs Act (2017) and Bipartisan Budget Act (2018); fiscal year estimates  
 Sources: CBO; IMF; RBA; Thomson Reuters

**Graph 1.3**  
**Global Economic Conditions**



\* Purchasing Managers' Index  
 \*\* Weighted by world industrial production shares at market exchange rates  
 Sources: CEIC Data; CPB; IMF; Markit Economics; RBA; Thomson Reuters; United Nations

trend growth. In contrast, US growth is expected to be boosted by fiscal policy.

In the major advanced economies, monetary policies remain accommodative, although some of this stimulus is likely to be withdrawn in some economies. In the United States, tax cuts and increased government spending are expected to significantly boost private and public expenditure over the next couple of years (Graph 1.4). In Japan, the scheduled consumption tax increase will tighten fiscal policy noticeably in 2019.

Growth in China is likely to moderate slightly in line with the recently announced growth target for 2018; the Chinese authorities have also signalled some tolerance for a gradual slowing in growth in order to give more weight to other policy objectives, such as reducing pollution and managing financial stability risks.

In east Asia (excluding China and Japan), recent indicators suggest that the slowing in growth at the end of 2017 was temporary; indicators of business conditions remain elevated, new export orders point to export growth remaining relatively high at least in the short term, consumer confidence is high and retail sales growth has strengthened. Growth is therefore expected to be around trend for the next couple of years. In India, the authorities' efforts to address high levels of non-performing loans in the banking system, including the revised recapitalisation plan for state-owned banks over the next two years, are expected to provide support to private investment by increasing credit supply. However, high corporate indebtedness and excess capacity in parts of the industrial sector may start to weigh on credit demand.

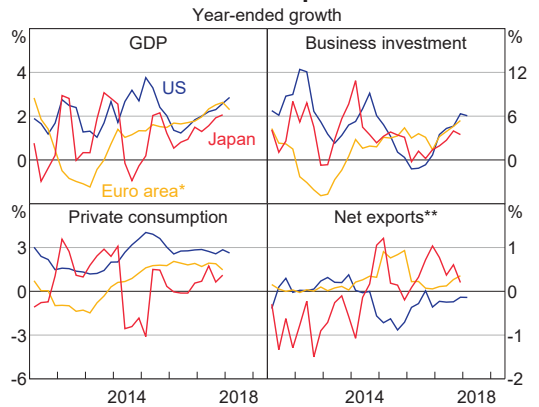
A number of uncertainties surround the outlook for the global economy. There is a risk that an escalation in protectionist measures or geopolitical events could harm global growth (see 'Box A: Recent Trade Protectionism Measures'). In China, the pace of growth in financing has declined, but debt levels remain high and continue to pose downside risks to growth over the medium term. It is also possible that further strong growth in the major advanced economies could lead to a larger increase in inflation than expected, and result in a sharp tightening in global financial conditions. These risks are discussed in more detail in the 'Economic Outlook' chapter.

### There is limited spare capacity in the major advanced economies

GDP in the major advanced economies has grown faster than estimates of potential growth over the past few years. The US economy has been expanding for nearly a decade and Japan has recorded a long sequence of consecutive quarters of positive growth (Graph 1.5). Growth in the euro area has picked up to its highest rate on a sustained basis since the global financial crisis and, over the past year, it has broadened across the member countries.

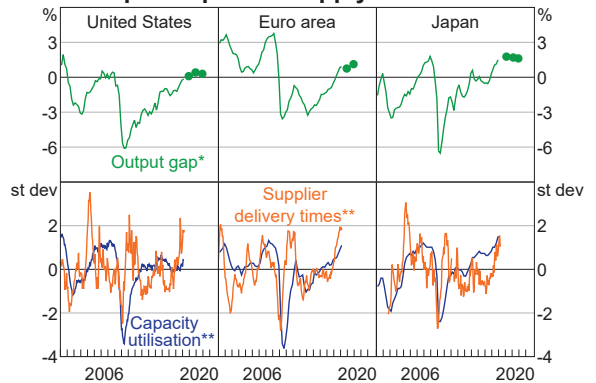
As the recovery has continued, spare capacity in the major advanced economies has been absorbed: output gaps are now estimated to have closed or turned positive (Graph 1.6). Together with other measures, such as capacity utilisation and supplier delivery times, this suggests that capacity constraints are increasing. Business confidence has improved markedly since mid 2016, and business investment growth has picked up strongly. Investment intentions in the United States are especially elevated, in part due to the recent corporate tax cuts (Graph 1.7). Japanese investment intentions are high and point to further strong investment growth, while surveyed business conditions in the euro area

**Graph 1.5**  
**Major Advanced Economies – GDP and Components**



\* Business investment is public and private non-residential investment; excludes Ireland due to data measurement issues  
\*\* Contribution to year-ended growth  
Sources: RBA; Thomson Reuters

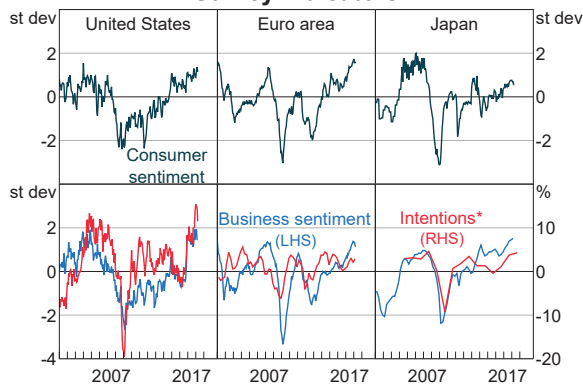
**Graph 1.6**  
**Major Advanced Economies – Output Gaps and Supply Constraints**



\* Actual GDP relative to estimated potential GDP from CBO, EC and BoJ; output gap projections based on central banks' forecasts for GDP growth and potential GDP growth estimates  
\*\* Deviations from post-2000 average; a higher number refers to a higher capacity utilisation rate and longer delivery times; March to May 2011 Japanese delivery times data excluded due to earthquake  
Sources: BoJ; ECB; FOMC; Markit Economics; RBA; Thomson Reuters

are around multi-year highs, although they have declined recently. Although some indicators suggest that consumption growth slowed temporarily early this year, consumption growth continues to underpin domestic demand in the major advanced economies, supported by strong employment growth, above-average consumer confidence and rising asset prices.

**Graph 1.7**  
Major Advanced Economies –  
Survey Indicators

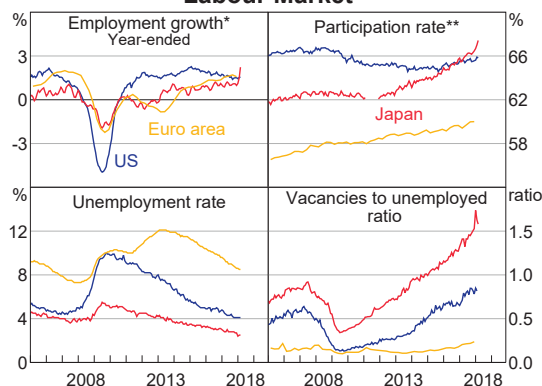


\* Investment intentions mapped to annualised national accounts investment growth

Sources: Bank of Japan; RBA; Thomson Reuters

Labour markets have tightened further in the major advanced economies. Employment has grown strongly and unemployment rates have declined to be below estimates consistent with full employment; unemployment rates are at multi-decade lows in a number of advanced economies (Graph 1.8). Measures of underemployment have also been declining and job vacancies have increased strongly in the United States and Japan (where they are around record highs). Firms are reporting that

**Graph 1.8**  
Major Advanced Economies –  
Labour Market



\* Three-month moving average for Japan

\*\* Age-adjusted: population age distribution held constant from 2000; March to November 2011 Japan data not reported

Sources: CEIC Data; Eurostat; MHLW; RBA; Thomson Reuters

they are finding it more difficult to fill jobs. There are also growing reports of companies offering better employment conditions to attract workers. For example, some Japanese companies are switching employees from temporary or short-term contracts to full-time contracts, which provide more job security and employee benefits. In some advanced economies, the effects of stronger demand for labour on wages have been somewhat mitigated by an increase in labour force participation, which has occurred despite the drag from population ageing. The increase in age-adjusted participation rates has been very strong in Japan since 2012, driven by higher female participation.

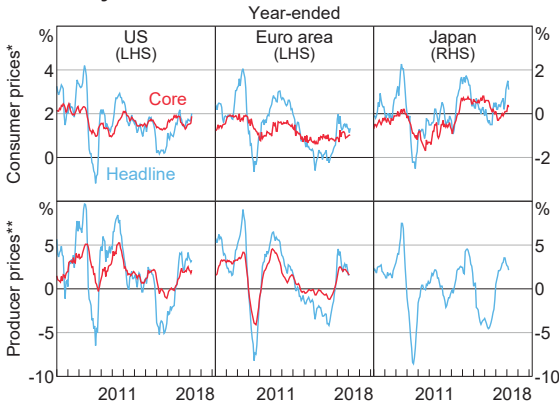
## Inflation remains low, but is expected to rise

Although inflation generally remains low, increasing capacity pressures in product and labour markets are expected to add to inflationary pressures. There has been some increase in consumer price inflation in the United States and Japan in recent months but core inflation has been little changed in the euro area (Graph 1.9). Producer price inflation has picked up over the past year or so and is running around its highest rate since 2012.

Nominal wages growth has also increased a little in the major advanced economies (Graph 1.10). This has been most apparent in the United States. In Japan, hourly wages growth for part-time jobs has increased steadily since 2010 and there have been signs of full-time wages growth picking up in recent months. Wages growth in the euro area has increased over the past year, and the pick-up has been broad based across the member economies.

The upward trend in wages growth is expected to continue. US consumers expect their income growth to increase and more US firms expect

**Graph 1.9**  
**Major Advanced Economies – Inflation**

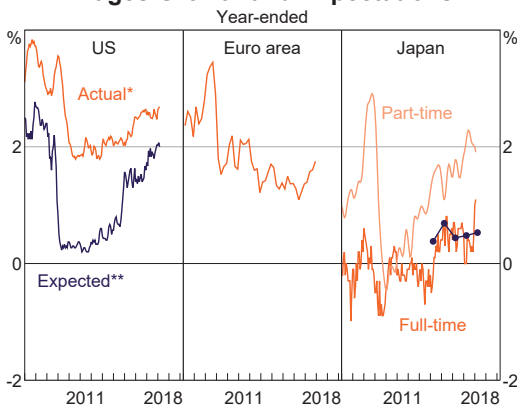


\* US PCE inflation; Japan CPI data exclude effect of the consumption tax increase in April 2014

\*\* Core excludes energy for US, and energy and construction for euro area

Sources: Eurostat; RBA; Thomson Reuters

**Graph 1.10**  
**Wages Growth and Expectations**



\* Smoothed average hourly earnings for US; compensation of employees for euro area; full-time base wages and smoothed part-time hourly wages for Japan

\*\* US – expected median change in income over next year, three-month moving average; Japan – labour unions-employers negotiated base pay increase for full-time employees

Sources: CEIC Data; ECB; Japanese Trade Union Confederation; Nomura; RBA; Thomson Reuters; University of Michigan

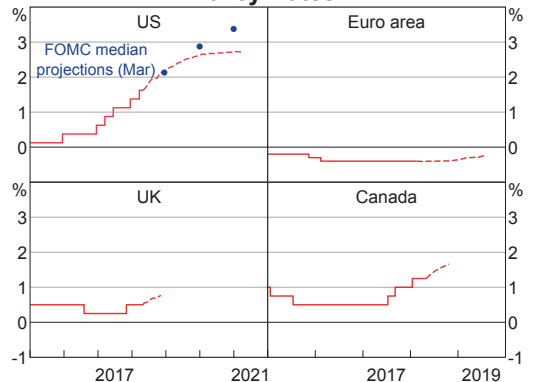
to raise wages. In Japan, the results from the annual negotiations between labour unions and employers point to a pick-up in full-time wages growth to above the rate of the past couple of years. Some recent German wage negotiations have also resulted in stronger outcomes. Inflation expectations from both financial markets and consumers have increased since mid 2017 in all three economies.

## Some monetary policy stimulus is being withdrawn as a result

Several advanced economy central banks are in the process of gradually withdrawing monetary stimulus in response to strong economic conditions, declining spare capacity and expectations that inflation will rise.

The US Federal Reserve has been proceeding along a path of removing policy accommodation for a time (Graph 1.11). It has been gradually raising its policy rate, most recently in March, when it increased its policy range by a further 25 basis points to 1.50–1.75 per cent. The Federal Open Market Committee (FOMC) anticipates that it will continue to raise its policy rate gradually over the coming years to a level that implies some contractionary pressures on growth and inflation. Market participants expect a somewhat slower pace of tightening than that projected by the FOMC. Elsewhere, the Bank of Canada and Bank of England (BoE) have both raised their policy rates in recent months, and flagged that further increases are likely to be needed.

**Graph 1.11**  
**Policy Rates\***

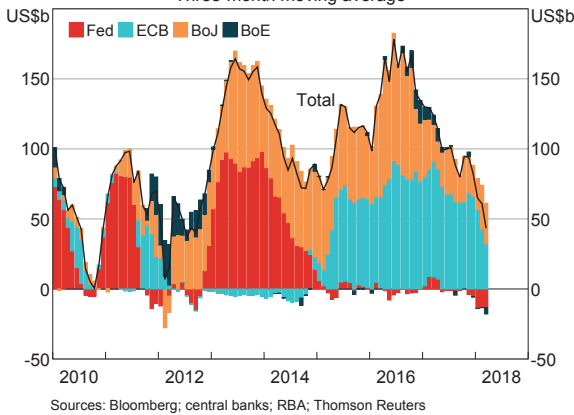


\* Dashed lines indicate market expectations

Sources: Bloomberg; Board of Governors of the Federal Reserve System; RBA; Thomson Reuters

A number of advanced economy central banks have adjusted their asset purchase programs (Graph 1.12). In total, net asset purchases by these central banks are now substantially below their levels of a year ago and appear likely to decline further this year on the basis of central bank guidance and market estimates. The US Federal Reserve has already begun to reduce its holdings of US Treasuries and mortgage-backed securities. The European Central Bank (ECB) halved its pace of purchases in January and market analysts generally expect it to make further reductions later this year. The Bank of Japan (BoJ) continues to purchase government bonds to maintain the yield on the 10-year bond at around zero per cent under its policy of 'yield curve control'. However, since that policy was introduced in late 2016, the volume of purchases needed to achieve this target has declined noticeably.

**Graph 1.12**  
**Central Bank Net Asset Purchases**  
 Three-month moving average



Elsewhere, central bank policy remains broadly accommodative, and recent policy moves have been mixed. In several large emerging market countries, including Russia, Brazil and South Africa, central banks have continued to reduce policy rates in response to low growth and an easing of inflation pressures. Conversely, a number of other central banks, particularly in Asia, have indicated

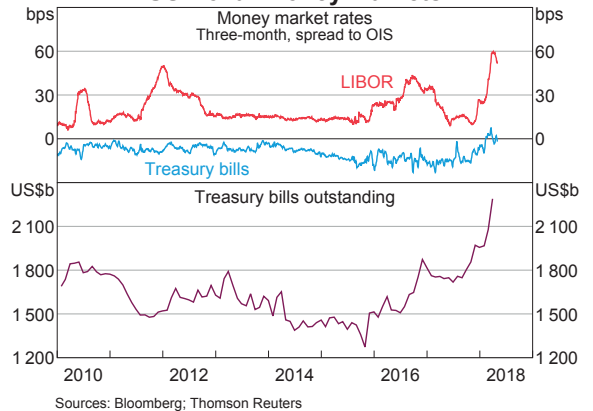
that they are at or near the end of their easing cycles. A few central banks, such as those of Mexico, South Korea and Malaysia, have recently raised their policy rates in response to inflation pressures and the recovery in global growth.

**Financial conditions have tightened a little, but still remain accommodative**

Financial conditions have tightened modestly along a few dimensions in recent months. In particular, interest rates in US dollar money markets have increased, equity prices have declined and spreads on corporate and emerging market bonds have risen a little. Volatility in equity markets has increased to more normal levels from the very low levels that prevailed in recent years. Nonetheless, financial conditions remain accommodative and continue to support global economic growth.

In recent months, there has been a noticeable increase in the cost of borrowing US dollars at short terms (Graph 1.13). Interest rates have risen for US Treasury bills, unsecured borrowing between banks (LIBOR), commercial paper issued by banks and corporations, and borrowings secured by high-quality collateral.

**Graph 1.13**  
**US Dollar Money Markets**



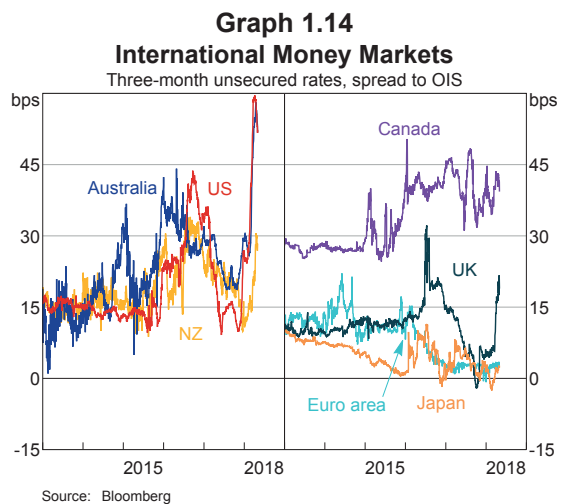
These increases have been greater than the rises in money market rates that have resulted from increases in the US monetary policy rate. The rises in money market rates (relative to the overnight indexed swaps (OIS) rate) appear to reflect a number of factors:

- Borrowing by the US Treasury, in the form of Treasury bills, increased significantly in the early part of this year as it rebuilt its cash balance following the suspension of the debt ceiling in February.
- Demand for money market instruments from a few very large US corporations with substantial offshore cash surpluses appears to have declined. This follows the removal of the repatriation tax (and the levying of a one-off tax on all earnings held offshore), which has led corporations to begin employing these funds for other purposes, including corporate financing activities and investment.
- Tax measures in the United States that seek to discourage profit shifting appear to have encouraged the US subsidiaries and branches of foreign banks to borrow in onshore US money markets, rather than directly from their parents.

More generally, prices in these markets have become more sensitive to changes in supply and demand in recent years, reflecting greater market segmentation. This is, in part, related to enhanced regulation, bank balance sheet constraints and a greater focus on risk management by market participants. As a result, the ability of investors to quickly take advantage of pricing dislocations across different financial markets has become more restricted.

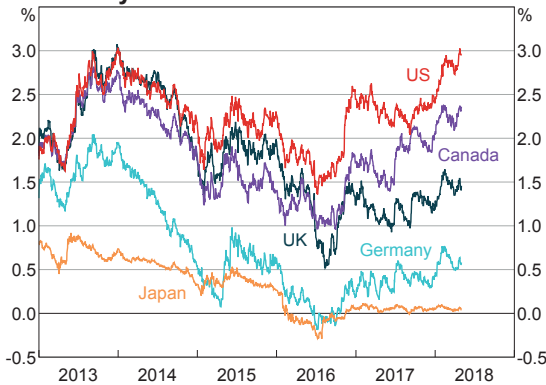
There is uncertainty about how long these pressures in money markets are likely to persist and to what extent. Some aspects of these influences are likely to be temporary, while others reflect more enduring changes in money markets.

The developments in US dollar money markets have had a noticeable knock-on effect on Australian money market rates (Graph 1.14). In part, this is because Australian banks raise a portion of their funding in US markets to finance their domestic assets. So they have responded to higher US rates by seeking to borrow more in domestic markets, which has placed upward pressure on rates in Australia (see ‘Domestic Financial Conditions’ chapter). Similar effects, although less pronounced, can be seen on rates in the United Kingdom and New Zealand. By contrast, banks in the euro area and Japan tend to raise funds in US dollar markets in order to fund US dollar assets, and so have less scope to substitute into domestic funding sources.



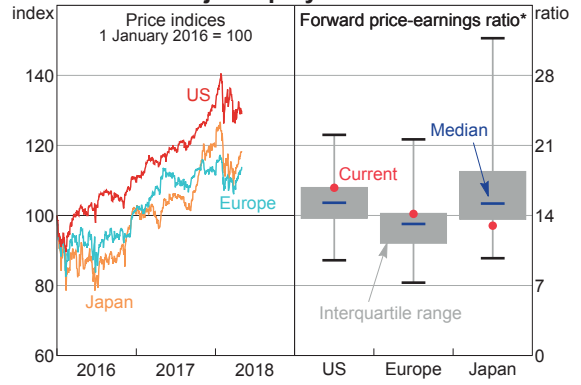
Long-term government bond yields in advanced economies are near their highest levels for several years, although these are still low historically (Graph 1.15). The increases follow a period in which global growth picked up and market participants’ expectations for inflation, and correspondingly for central bank policy rates, increased. Expectations of higher government bond issuance in the United States following recent fiscal measures has also contributed to the rise in yields this year.

**Graph 1.15**  
**10-year Government Bond Yields**



Source: Bloomberg

**Graph 1.16**  
**Major Equity Markets**

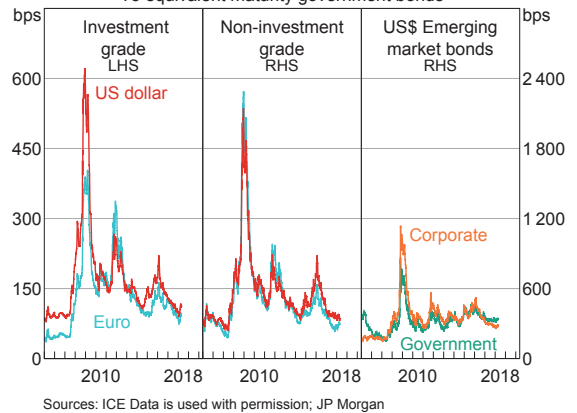


\* Distribution of outcomes since 2001  
Sources: Bloomberg; RBA; Thomson Reuters

Equity prices in advanced economies have declined from their peaks reached in late January (Graph 1.16). In early February, stronger-than-expected inflation data led to concerns that the withdrawal of monetary policy accommodation may accelerate; this precipitated a considerable decline in many equity markets. More recently, developments in global trade policy have been associated with swings in sentiment in equity markets, reflecting their sensitivity to the outlook for global trade and growth. Despite these developments, equity prices remain above the levels of a year ago, partly because recent earnings results have been positive. Forward-looking valuation metrics in most markets remain around their long-term averages.

Credit spreads on advanced economy and emerging market corporate bonds have widened over recent months, although they remain close to their narrowest levels since the financial crisis (Graph 1.17). As well as growing concerns around global trade policy, a decline in demand for shorter-dated corporate bonds by other cash-rich corporations has put some upward pressure on spreads. Consistent with this, the widening has been most pronounced for shorter-dated corporate bonds.

**Graph 1.17**  
**Corporate and Emerging Market Bond Spreads**  
To equivalent maturity government bonds

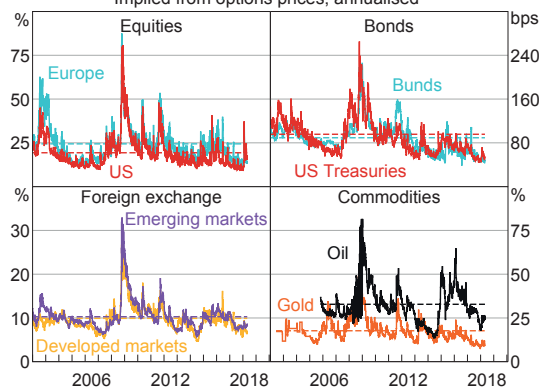


Sources: ICE Data is used with permission; JP Morgan

## Volatility has increased in equity markets, but less so in other asset classes

The decline in equity prices has been accompanied by a rise in equity market volatility to historically normal levels, after a prolonged period during which volatility was unusually low (Graph 1.18). In contrast, volatility of other financial market prices remains relatively muted compared with history. This may reflect perceptions that trade tensions will more directly affect equity markets, rather than other asset markets.

**Graph 1.18**  
**Financial Market Volatility**  
 Implied from options prices, annualised\*



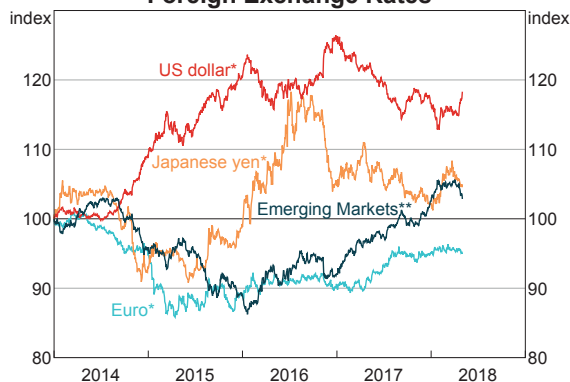
\* Based off three-month options for commodities, one-month options for all other series

Sources: Bloomberg; RBA; Thomson Reuters

There have been moderate movements in foreign exchange markets over recent months (Graph 1.19). The US dollar has appreciated against most currencies, alongside a widening of the differential between the yields on US government bonds and those in other advanced economies.

The currencies of commodity-exporting countries and of those that are highly integrated in global trade networks, including many emerging economies, were little changed following the increase in trade tensions.

**Graph 1.19**  
**Foreign Exchange Rates**

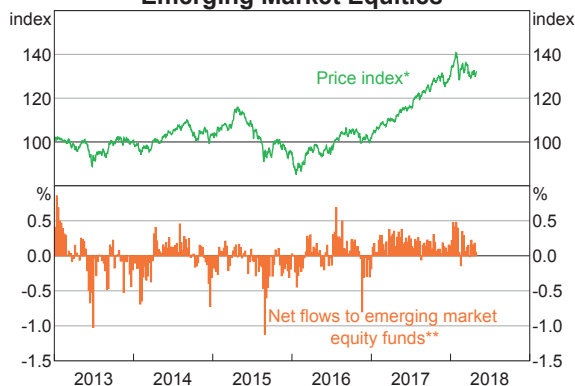


\* Nominal trade-weighted index  
 \*\* MSCI composite index

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

Along with emerging market bonds, emerging market equity prices have, to date, generally been resilient to the modest tightening in global financial conditions and the rise in equity market volatility in advanced economies (Graph 1.20). This appears to reflect improved growth prospects for emerging markets and a reduction in the perceived vulnerability of these economies to financial market shocks. As a result, demand for emerging market equities has generally remained robust, as evidenced by emerging market equity funds continuing to experience consistent inflows.

**Graph 1.20**  
**Emerging Market Equities**



\* 1 January 2013 = 100

\*\* Per cent of assets under management

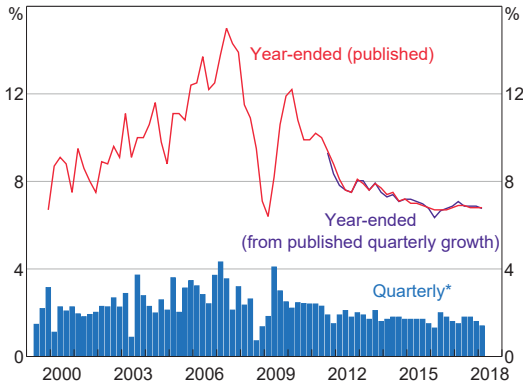
Sources: Bloomberg; EPFR Global; RBA

## Chinese growth has eased

Growth in China was strong through 2017, although it has eased a little in recent quarters, consistent with the authorities' objective of more sustainable growth (Graph 1.21). In March, the Chinese Government announced a GDP growth target of 'around 6.5 per cent' for 2018. The new target suggests some tolerance for a gradual slowing in growth from the published rate of growth in 2017 of 6.9 per cent and should give the authorities some scope to increase the weight given to other policy objectives, including their top priorities for 2018 of reducing risks in the

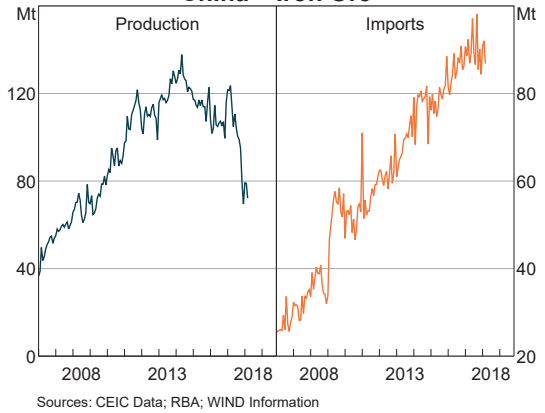


**Graph 1.21**  
**China – GDP Growth**



\* RBA estimates (seasonally adjusted) prior to December quarter 2010  
Sources: CEIC Data; RBA

**Graph 1.22**  
**China – Iron Ore**



Sources: CEIC Data; RBA; WIND Information

financial system, alleviating poverty and dealing with pollution.

Growth has been supported by strong activity in the services sector. While growth in the industrial sector has been broadly stable over the past year, production of a range of industrial products has fallen sharply more recently. Investment in infrastructure and residential property remains strong overall, and demand from these sectors has underpinned modest growth in crude steel production, which in turn has supported demand for iron ore and coking coal. Anti-pollution measures have spurred a shift in demand to higher-grade ore, which is mainly imported, at the expense of (lower-grade) domestic Chinese production of iron ore, which has fallen noticeably over the past six months (Graph 1.22).

Activity in Chinese property markets has been resilient (Graph 1.23). Investment growth has been relatively strong, following a substantial decline in the inventory of unsold housing in many parts of China. Housing price inflation has remained firm at the national level, but prices have fallen in the largest Chinese cities. Residential floor space sold remains at a high level, although it has fallen in cities that have controls on housing purchases. Recent government announcements suggest that

**Graph 1.23**

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

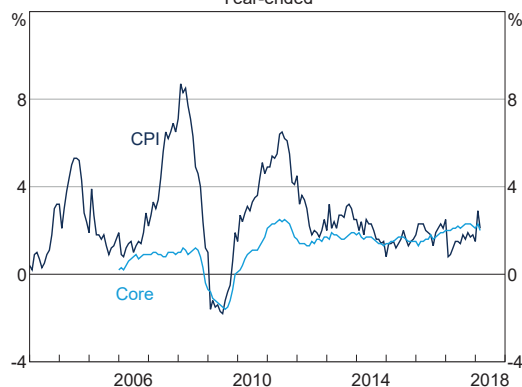


Sources: CEIC Data; RBA

housing market controls aimed at limiting speculative activity and moderating housing price inflation will remain in place in 2018 and that local authorities will continue to calibrate regulations to local conditions. A number of cities have announced new controls on property purchases in recent months.

Chinese producer price inflation has weakened in recent months, reflecting the moderation in bulk commodity prices and subdued demand in the manufacturing sector (Graph 1.24). Underlying consumer price inflation measures have, however, continued to edge higher, driven by healthcare, household services and rental prices.

**Graph 1.24**  
**China – Inflation\***  
Year-ended



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

## Chinese authorities are addressing financial stability concerns, but risks remain

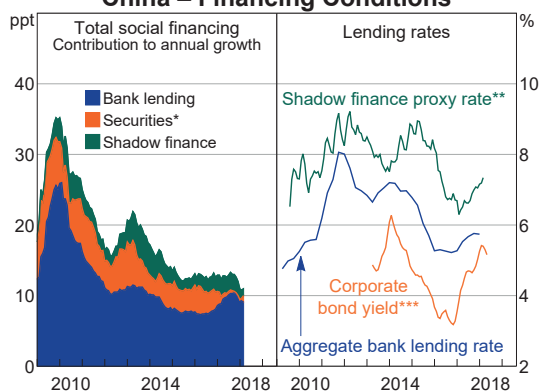
The Chinese authorities have continued to enact measures to contain the build-up of financial risks and have signalled an ongoing commitment to putting the financial system on a more sustainable footing. The growth of bank claims on non-bank financial institutions continues to slow, with stronger enforcement of existing regulations curtailing growth in lending between financial institutions. Interbank funding costs remain elevated. However, they have declined of late as the People’s Bank of China (PBC) has eased liquidity conditions, including by reducing the required reserve ratio for banks.

The authorities recently merged the banking and insurance regulators, as part of a broader push to enhance policy coordination across the regulators. Regulators also finalised new regulations for the asset management sector, and enacted measures to encourage banks to correctly classify and dispose of non-performing loans, which are of particular concern for smaller banks. Growth in total social financing has eased, driven by slower growth in non-bank and

off-balance sheet financing (Graph 1.25). Bank lending to businesses and households, which together constitute around two-thirds of total credit, both remain relatively strong.

Despite these changes, financial stability risks are likely to remain elevated in China for some time, reflecting high corporate leverage and a financial system that has become very large, and increasingly interconnected and opaque, over the past decade. In particular, the stock of broader ‘shadow’ finance remains large relative to the financial system.

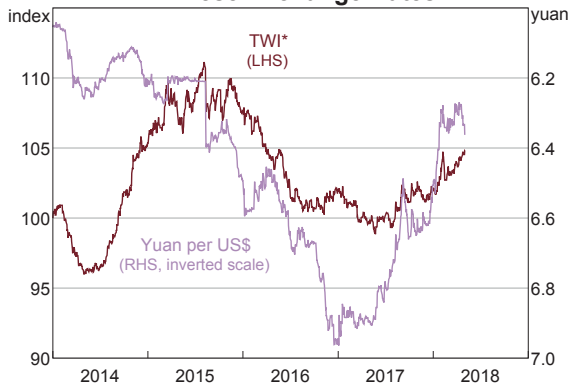
**Graph 1.25**  
**China – Financing Conditions**



\* Sum of corporate bond financing, equity financing and bank-accepted bills  
\*\* Yield on <1 year trust loan product  
\*\*\* Corporate 5-year AAA  
Sources: Bloomberg; CEIC Data; RBA; WIND Information

Even though trade frictions between the United States and China have escalated, the Chinese renminbi (RMB) has been little changed against the US dollar and has appreciated slightly on a trade-weighted (TWI) basis over the past few months (Graph 1.26). Capital outflows from China have remained modest, amid continued controls on outbound capital by the Chinese authorities and expectations for only a small depreciation of the RMB. The value of the PBC’s foreign currency reserves has been little changed at just above US\$3 trillion.

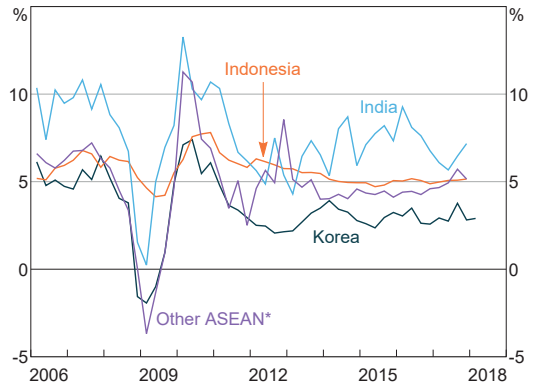
**Graph 1.26**  
**Chinese Exchange Rates**



\* Indexed to 1 January 2014 = 100

Sources: Bloomberg; China Foreign Exchange Trade System; RBA

**Graph 1.27**  
**Asia – GDP Growth**  
Year-ended



\* Singapore, Thailand, Malaysia, Philippines, Vietnam

Sources: CEIC Data; IMF; RBA

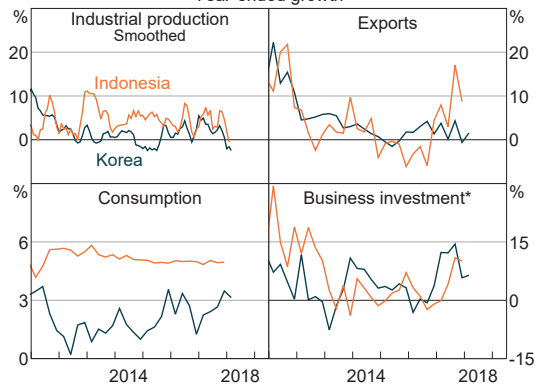
## Elsewhere in Asia, growth remains strong

Across the region, growth has been supported by the global upswing in trade and investment over the past two years and is expected to be around estimates of potential over 2018 (Graph 1.27). GDP growth slowed in the December quarter, but data available so far for the March quarter suggest that this was temporary. Domestic demand has picked up in a number of economies in the region, as stronger global conditions have supported stronger investment and consumption.

In Korea, GDP increased by nearly 3 per cent over the year to the March quarter. The outlook for Korean investment and consumption growth remains strong: capital goods imports continue to grow briskly and surveyed business conditions and consumer confidence remain elevated (Graph 1.28).

In India, year-ended GDP growth strengthened noticeably in the second half of 2017, to a little more than 7 per cent, driven by a strong recovery in investment growth. GDP growth in Indonesia has been steady at around 5 per cent over the past few years; domestic demand was a little weaker over 2017, despite strong investment

**Graph 1.28**  
**Korea and Indonesia – Economic Indicators**  
Year-ended growth



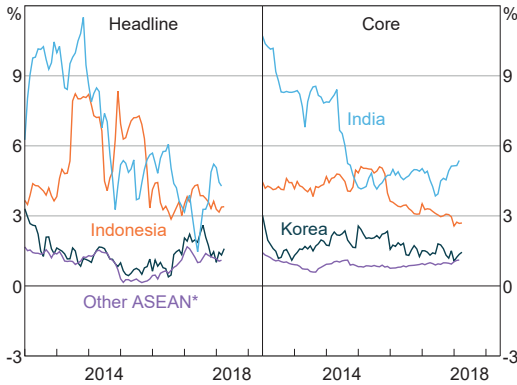
\* March quarter estimate for Korea; total investment minus construction investment for Indonesia

Sources: CEIC Data; RBA

growth, but this was offset by fairly broad-based strength in exports. In other economies in the Association of Southeast Asian Nations (ASEAN), growth has picked up a little over the past couple of years and is expected to remain around its current pace in 2018.

Headline and core inflation generally remain subdued across the region (Graph 1.29). The main exception is India, where headline inflation has picked up in recent quarters, underpinned by food price inflation, and remains above the Reserve Bank of India's medium-term inflation

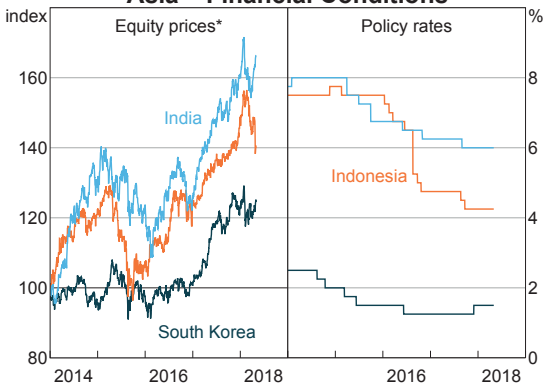
**Graph 1.29**  
**Asia – Inflation**  
Year-ended



\* Singapore, Thailand, Malaysia, Philippines, Vietnam; core inflation excludes Vietnam until 2015  
Sources: CEIC Data; IMF; RBA

target of 4 per cent. Financial conditions remain accommodative across the region. Central banks' policy settings have been stable at a low level, which generally reflects subdued inflation (Graph 1.30). Asset markets have received net inflows for some time, which has supported equity and bond prices. This in part reflects strong global growth and perceptions that these markets are more resilient to financial shocks than in the past. Fiscal policies in the region have generally been little changed over the past year and also remain accommodative. In India, the bank recapitalisation plan is projected to have a

**Graph 1.30**  
**Asia – Financial Conditions**



\* 1 January 2014 = 100  
Sources: Bloomberg; Thomson Reuters

limited impact on the budget deficit; the budget deficit projection for 2018/19 was revised slightly higher, but budget consolidation is projected to continue.

## Bulk commodity prices declined in early 2018, while oil prices have risen

Global commodity prices have been mixed since the previous *Statement* (Table 1.1; Graph 1.31). Bulk commodity spot prices have declined sharply, owing to concerns about Chinese demand and the potential escalation of global trade protectionist measures. In contrast, oil prices have risen to the highest level since late 2014 but still remain well below the level earlier in the decade. The pick-up in global demand in recent years has been an important contributor to higher oil prices. More recent price rises reflect an increase in geopolitical tension between major producers and comments from several Organization of the Petroleum Exporting Countries (OPEC) members that the current agreement with non-OPEC countries to reduce production could be extended into 2019. Meanwhile, the spot prices of rural commodities, gold and base metals are around the same levels as at the time of the previous *Statement*.

The declines in iron ore and coking coal spot prices occurred alongside a large build-up in Chinese steel inventories prior to the Chinese New Year holiday; this led to uncertainty about whether near-term Chinese steel demand would be sufficient to clear the build-up. The price declines partly reflected concerns about the impact of trade protectionist measures on global growth and were also influenced by the continued recovery of Australian seaborne coking coal supply. Although the coking coal spot price has declined sharply over this period, the March quarter contract price was reportedly set at

**Table 1.1: Commodity Price Changes<sup>(a)</sup>**

SDR, per cent

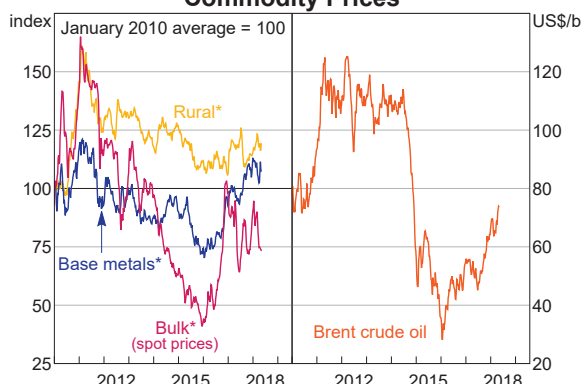
	Since previous <i>Statement</i>	Over the past year
Bulk commodities	-16	-14
– Iron ore	-17	-12
– Coking coal	-20	-29
– Thermal coal	-8	15
Rural	0	0
Base metals	-1	9
Gold	0	-1
Brent crude oil <sup>(b)</sup>	12	44
RBA ICP	-3	3
– Using spot prices for bulk commodities	-8	-4

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

(b) In US dollars

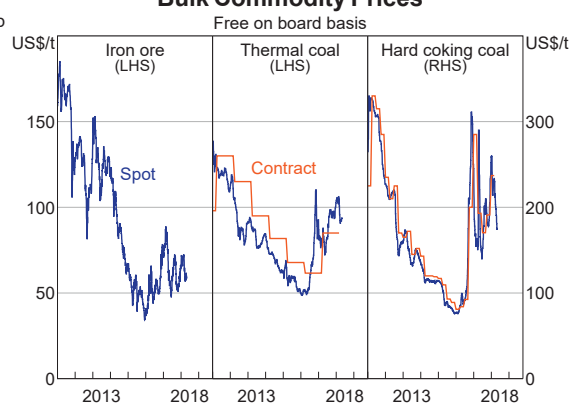
Sources: Bloomberg; IHS; RBA

**Graph 1.31  
Commodity Prices**



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

**Graph 1.32  
Bulk Commodity Prices**



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

almost 25 per cent above the December quarter benchmark price, reflecting prevailing spot prices over December–February (Graph 1.32).

The spot price of thermal coal has also declined since the previous *Statement*, alongside a reported easing in Chinese demand, following a period of higher demand due to domestic gas shortages earlier in the year. While the benchmark price for the 2018 Japanese fiscal year contract is yet to be agreed, the majority of Australia’s thermal coal exports are estimated to be sold on the spot market.

Australian export prices are expected to decline over the coming years as Chinese demand for bulk commodities moderates and further increases in low-cost global supply comes on line.<sup>1</sup> Consequently the terms of trade are expected to decline, but remain above their trough in early 2016 (as discussed in the ‘Economic Outlook’ chapter). ✖

<sup>1</sup> RBA (2017), ‘Box A The Chinese Steel Market and Demand for Bulk Commodities’, *Statement on Monetary Policy*, November, pp 15–18.

## Box A

# Recent Trade Protectionism Measures

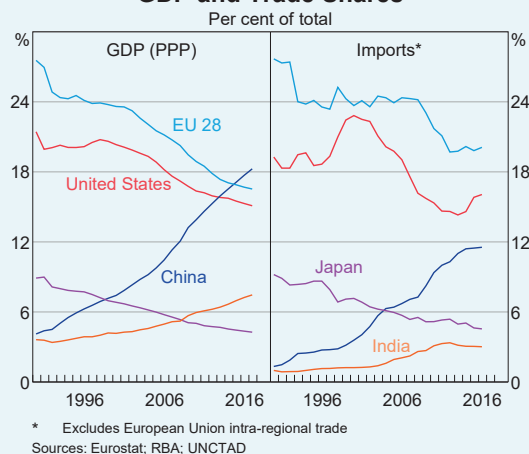
Trade relations have been a key policy focus for the current US administration. It has begun renegotiating a number of trade agreements and more recently has increased import tariffs on certain items (including steel and aluminium). The effect of the recent increase in US tariffs on steel and aluminium imports on other economies is expected to be small, partly because temporary exemptions have been given to many countries (including Australia). China will also be little affected, as steel and aluminium exports to the United States are only a small share of Chinese production. In response to the US tariffs on steel and aluminium, the Chinese authorities imposed tariffs on US\$3 billion of US goods (mainly food).

After concluding an investigation into China's policies and practices around technology transfer by US firms in China, the US administration has also announced plans to increase tariffs on 'high tech' manufactured imports from China. These tariffs could affect up to 12 per cent of annual US imports from China. The US administration is also considering restrictions on Chinese investment in 'industries or technologies deemed important to the United States' and bringing a case in the World Trade Organisation on certain Chinese trade practices. In response, the Chinese authorities have released a list of other US goods that could face tariffs if the United States introduces these measures. Both countries have subsequently foreshadowed further tariffs.

While the direct effects on economic activity of the recent tariff increases are manageable, a further escalation in protectionist measures

could harm global growth significantly, given the importance of China and the United States in the global economy, both in terms of GDP and trade (Graph A1).

**Graph A1**  
**GDP and Trade Shares**



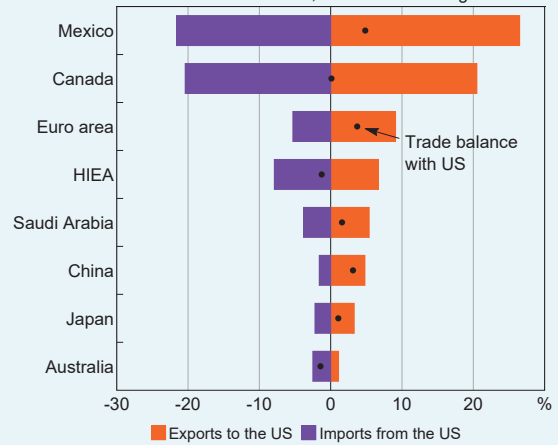
If protectionist measures did escalate significantly, economies would substitute domestic production for imports as import prices rose. Global trade would therefore decline over time. An adverse reaction in financial markets could also be expected. Business confidence and investment could also decline in response to the increased uncertainty. Both the substitution towards more expensive domestically produced goods and higher import prices would be expected to contribute to higher inflation, especially for economies that are near full employment, such as the United States; this could lead to tighter monetary policy and more downward pressure on growth. In contrast, countries that lose key export markets could see

deflationary pressure as lost production leaves them with some spare capacity for a time.

The relative size of these effects would depend on the tariffs' final rates and scope, how exposed economies are to trade, and how prices adjust; for example, exporters may absorb some of the tariff increase by lowering profit margins. The direct effects of any further US measures would be likely to be felt most by economies with larger trade exposures to the United States. These include China, the euro area, Japan, Canada and Mexico (Graph A2). The indirect effects on the global economy could, however, be larger and more broad reaching, particularly for the east Asian region (excluding China and Japan) which is highly reliant on trade and has closely integrated production chains.

Over the longer term, it is likely that productivity growth would be lower than otherwise, as global economic activity shifts to less productive domestically focussed sectors and reduced competition across borders weakens incentives to innovate and invest. Financial market prices, such as long-term interest rates and exchange rates, are also likely to be affected. A scenario published by the International Monetary Fund (IMF) (2016) found that if all countries raise tariff and non-tariff barriers such that world import prices increase by 10 per cent, over the long run, global imports and exports would be 16 per cent lower, output would be 2 per cent lower and investment would be 3½ per cent lower.<sup>1</sup>

**Graph A2**  
Trade with the United States  
Per cent of GDP, 2011–2017 average



Sources: ABS; BEA; RBA; Thomson Reuters

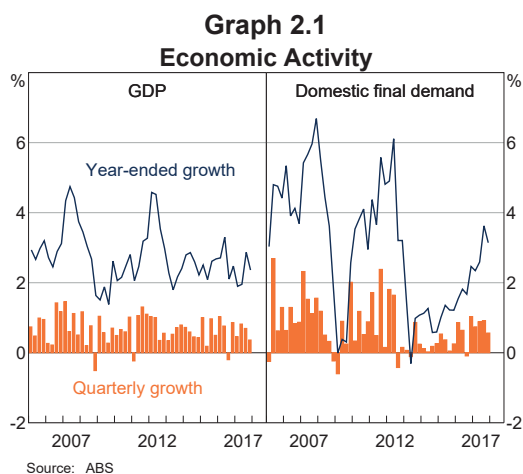
<sup>1</sup> See International Monetary Fund (2016), 'Scenario Box 1. Tariff Scenarios', *World Economic Outlook*, October, pp. 37–39.

## 2. Domestic Economic Conditions

Overall conditions in the domestic economy are positive, supported by low interest rates and continued strength in the global economy. There is now more momentum in domestic demand than has been the case for some time. This had been associated with strong growth in labour demand and labour supply, although both have moderated recently. The unemployment rate has been little changed since mid last year.

The latest GDP data suggest that growth in domestic final demand picked up further over 2017, driven by stronger growth in business investment and resilient growth in household consumption and public spending (Graph 2.1). This was associated with stronger growth in imports. Growth in exports was subdued over the year, partly because of temporary supply disruptions, and dwelling investment declined

from high levels. Real GDP increased by 0.4 per cent in the December quarter to be 2.4 per cent higher over 2017, which is a bit below estimates of potential growth (Table 2.1).



**Table 2.1: Demand and Output Growth**  
Per cent

	December quarter 2017	September quarter 2017	Year to December quarter 2017
GDP	0.4	0.7	2.4
Domestic final demand	0.6	0.9	3.1
– Consumption	1.0	0.5	2.9
– Dwelling investment	–1.3	–1.7	–5.8
– Mining investment	–10.2	–1.8	–12.0
– Non-mining investment	2.1	5.0	12.4
– Public consumption	1.7	0.2	4.9
– Public investment	–0.9	5.3	4.9
Change in inventories <sup>(a)</sup>	0.0	0.1	–0.1
Exports	–1.8	1.2	0.8
Imports	0.5	2.2	6.6
Nominal GDP	0.8	0.7	3.5
Terms of trade	0.1	–0.2	–1.0

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



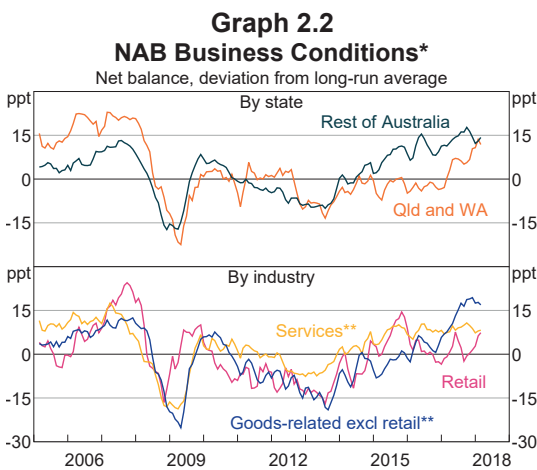
More recently, growth in economic activity appears to have strengthened further in the first quarter of 2018, and year-ended GDP growth is expected to be at or above estimates of potential over the next couple of years. This should continue to support employment growth. As spare capacity in the economy is reduced further, there should be some upward pressure on wages growth and inflation.

## Business conditions remain favourable and private investment growth has picked up

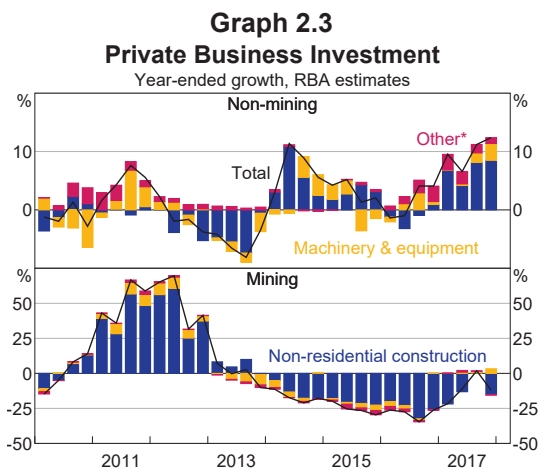
Survey measures of overall business conditions are around their highest levels since before the global financial crisis (Graph 2.2). Conditions are above their long-run average in all states, and have improved noticeably in Queensland and Western Australia since late 2016. By sector, conditions have strengthened for firms in goods-related industries and remain above average in the services sector. Growth in profits has picked up in most non-mining industries since late 2016, following subdued growth for much of the period after the financial crisis; growth in profits (excluding mining and

financial firms) was around 10 per cent in 2017. Survey measures of business conditions in the retail industry have improved of late to be above average; this follows a period in which conditions for retail firms tended to be weaker than in most other industries, partly reflecting robust retail competition and slower growth in retail spending.

Private business investment increased over 2017, as continued strength in non-mining investment more than offset a decline in mining investment (Graph 2.3). Non-mining investment rose by 12½ per cent over the year, and growth was broad based across asset types. The main driver of growth was non-residential construction activity, particularly office building work. This reflects strong demand for office space in both Sydney and Melbourne, against a backdrop of relatively little new supply being added in recent years. Construction of hotels also contributed to growth in non-residential construction. In the mining sector, investment declined by 12 per cent over 2017 as work on some large liquefied natural gas (LNG) projects approached completion.



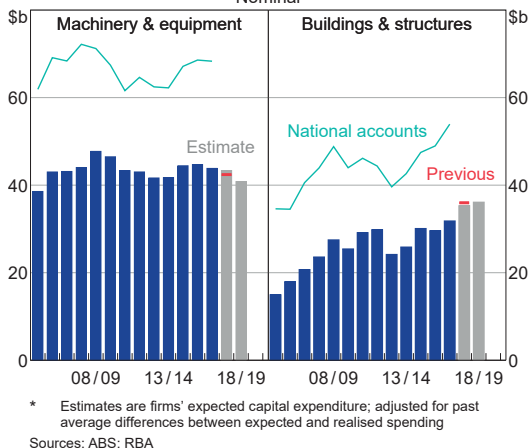
\* Three-month moving average  
\*\* Goods-related includes manufacturing, construction, wholesale and transport; services includes business and personal services  
Sources: NAB; RBA



\* Includes cultivated biological resources (mainly livestock, vineyards and orchards), computer software, research development, mineral exploration and artistic originals  
Sources: ABS; RBA

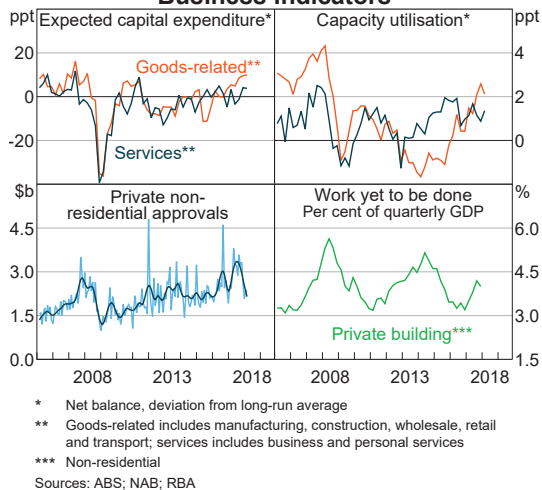
Business investment is expected to continue growing over the next few years, as non-mining investment continues to expand and the drag from mining investment diminishes. Investment intentions for 2017/18 and 2018/19 reported by non-mining firms in the Australian Bureau of Statistics' (ABS) capital expenditure (Capex) survey point to solid growth in buildings & structures investment, while expectations for growth in machinery & equipment expenditure are more moderate (Graph 2.4).<sup>1</sup> The positive outlook for investment in buildings & structures is consistent with the increase in building approvals during 2017 and the pick-up in the stock of work yet to be done over the past year (both of which have been led by office buildings; Graph 2.5). Information from the Bank's liaison program suggests that tenant demand for new office space is expected to remain strong, while hotel construction is also expected to pick up in coming years, reflecting improved conditions for the tourism sector. Survey measures of expected capital expenditure and capacity utilisation also point to continued growth in non-mining business investment.

**Graph 2.4**  
**Non-mining Capital Expenditure\***  
Nominal



1 The Capex survey does not cover certain industries, including agriculture, health and education, and it doesn't cover certain types of investment, such as in software and research & development.

**Graph 2.5**  
**Business Indicators**

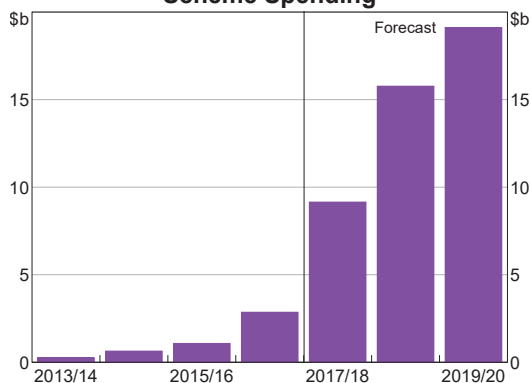


Mining investment is expected to decline a bit further, as the final phase of construction for large LNG projects concludes. The expected size of this decline – and therefore the overall drag on GDP growth – is little changed from a few months ago, but it now looks like it will take longer: both the Capex survey and information from the Bank's liaison program suggest that the trough in mining investment may now be later than mid 2018.

## Public spending is also supporting economic activity

Public demand continued to support GDP growth in the December quarter and increased by around 5 per cent over 2017. Public consumption, which accounts for around 80 per cent of public demand, grew strongly in the quarter, supported in part by spending associated with the National Disability Insurance Scheme (NDIS) (Graph 2.6). The NDIS provides support to individuals (currently aged under 65 years) with significant and permanent disabilities, and spending on this initiative is expected to increase over the next couple of years as the program expands. While some

**Graph 2.6**  
National Disability Insurance Scheme Spending



Source: National Disability Insurance Agency

NDIS spending replaces support from previous programs, a significant proportion of NDIS spending is new.

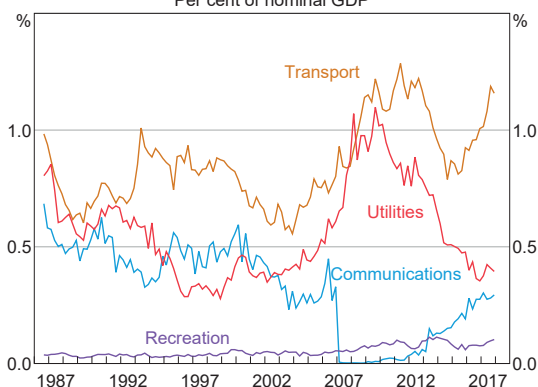
Public investment grew by 5 per cent over 2017, despite declining a little in the December quarter, and is expected to continue to support growth for some time. The strength in public investment has been driven by an increase in infrastructure construction, particularly in communications and transport (Graph 2.7). Liaison with private sector firms indicates that demand for business services from the public sector remains positive, driven

by major infrastructure projects in New South Wales and Victoria, as well as defence contracts in South Australia.

## Household spending has picked up, but remains a source of uncertainty for the growth outlook

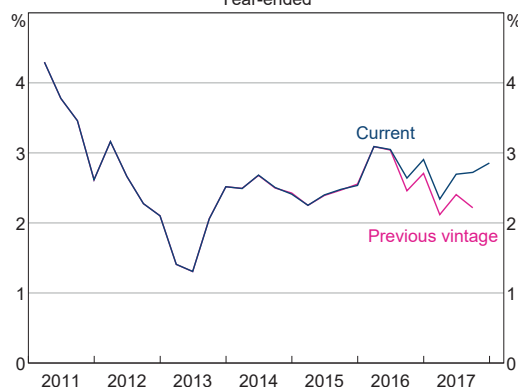
Household consumption grew strongly in the December quarter and revisions to previous data show that consumption growth held up better than previously thought in the second half of 2017 (Graph 2.8). Over the year, consumption grew by almost 3 per cent. Upward revisions to household consumption were particularly large for discretionary categories of expenditure, which tend to be more sensitive to household finances. Spending on overseas travel by Australian residents (which is classified as imports) was a major source of these revisions, while upward revisions to food and health expenditure also lifted essential expenditure (Graph 2.9). More recent indicators suggest that household consumption growth was steady in early 2018: growth in retail sales held up in the first two months of the year. Measures of households' sentiment towards their personal finances remain above their long-run averages, after increasing since the middle of 2017.

**Graph 2.7**  
Public Infrastructure Engineering Work Done  
Per cent of nominal GDP



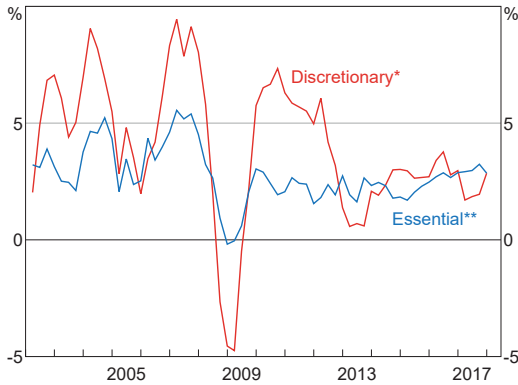
Sources: ABS; RBA

**Graph 2.8**  
Household Consumption Growth  
Year-ended



Sources: ABS; RBA

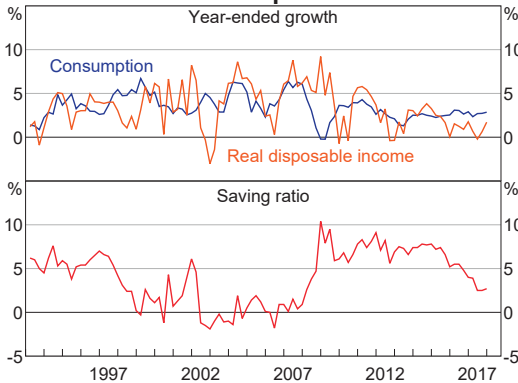
**Graph 2.9**  
**Household Consumption Growth**  
Year-ended



\* Includes categories such as recreation and culture, hotels, cafes and restaurants, and air transport  
 \*\* Includes categories such as food, housing, utilities and health  
 Sources: ABS; RBA

Household consumption grew at a faster rate than household disposable income over 2017; the household saving ratio is reported to have declined, although it stabilised towards the end of the year as income growth picked up (Graph 2.10). Growth in real household disposable income was below average over 2017 at 1.7 per cent, largely because of low wages growth (see 'Inflation' chapter). The prospect of continued low growth in household income remains a key risk to the outlook for household consumption, especially given high levels of household debt.

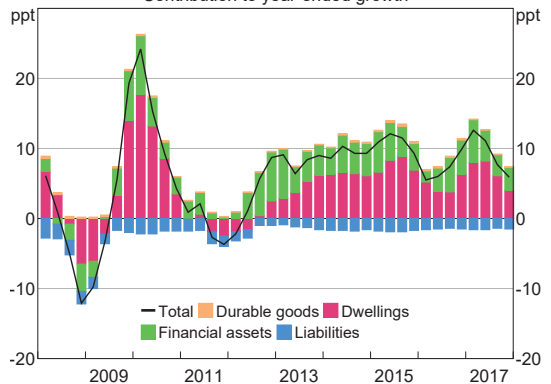
**Graph 2.10**  
**Household Consumption and Income\***  
Year-ended growth



\* Disposable income is after tax and interest payments; saving ratio is net of depreciation  
 Sources: ABS; RBA

Slower growth in household net wealth, particularly in an environment of below-average income growth, adds to uncertainty about the outlook for consumption. Households' nominal net wealth increased by nearly 6 per cent over 2017, which is below the rate of previous years (Graph 2.11). This slowing was largely driven by slower growth in housing prices, which is also expected to have weighed on households' net wealth in 2018 to date. Increases in financial asset prices contributed to growth in household net wealth in 2017, but financial asset price growth has also been lower in early 2018. Growth in household debt has moderated over the past year, but debt remains at a high level as a share of household income.

**Graph 2.11**  
**Household Net Wealth**  
Contribution to year-ended growth



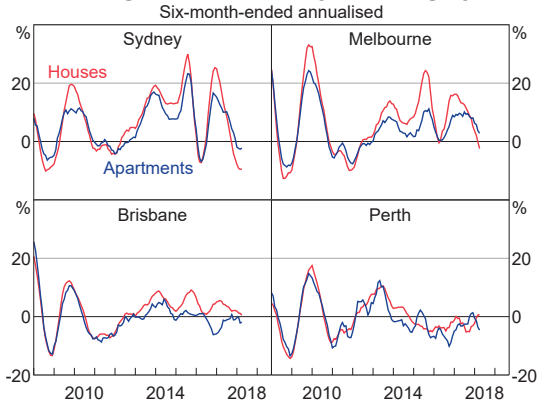
Sources: ABS; RBA

## Conditions in the housing market have eased

Housing market conditions in Sydney and Melbourne have continued to ease in 2018, particularly for more expensive properties. Housing prices have declined further in Sydney, while the various data sources suggest that housing prices in Melbourne have been relatively flat or falling over recent months (Graph 2.12). While the number of properties sold at auction

**Graph 2.12**

**Housing Price Growth by Dwelling Type**



Sources: CoreLogic; RBA

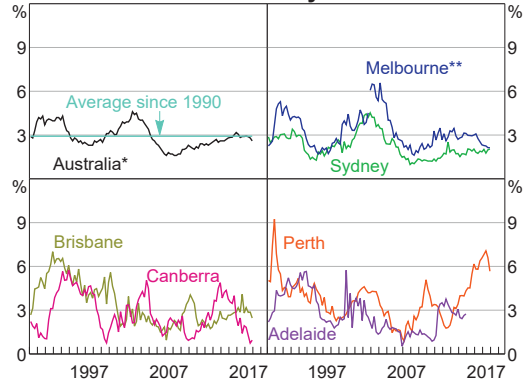
has increased in Sydney and Melbourne over 2018 to date, the number of auctions held has increased by a little more; auction clearance rates have declined to 62 per cent in Sydney and 63 per cent in Melbourne, which is a little below their decade averages. Housing prices in most other capital cities have been little changed, though Hobart housing prices have continued to grow strongly.

Conditions in the rental market remain around average in most capital cities. The pick-up in advertised rent inflation in recent months is mainly due to developments in Perth, where rents are now falling at a much slower rate and the rental vacancy rate has declined a bit from a high level (Graph 2.13). In addition, advertised rents are growing rapidly in Canberra, where the rental vacancy rate is low. In other capital cities, vacancy rates are broadly steady or have declined slightly and advertised rent inflation is little changed.

New dwelling construction declined by 5 per cent over 2017. This follows a few years in which new dwelling construction increased to high levels, supported by low interest rates, strong population growth and higher housing prices in the eastern states. The recent

**Graph 2.13**

**Rental Vacancy Rates**



\* Excludes Adelaide from March 2015 onwards

\*\* Series break December quarter 2002

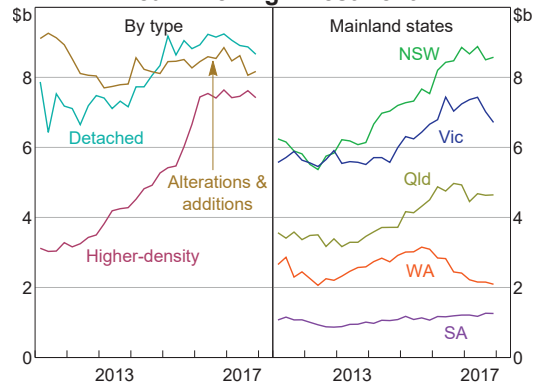
Sources: RBA; REIA; REIV

decline in residential construction activity has been concentrated in detached housing, while higher-density construction activity has remained at high levels (Graph 2.14). Alterations and additions appear to have been less responsive to the cycle in new dwelling construction than in previous episodes.

Liaison with developers indicates that off-the-plan apartment sales in the major east coast cities slowed considerably over the past 12 months, although contacts report differing views on whether demand has now

**Graph 2.14**

**Real Dwelling Investment\***



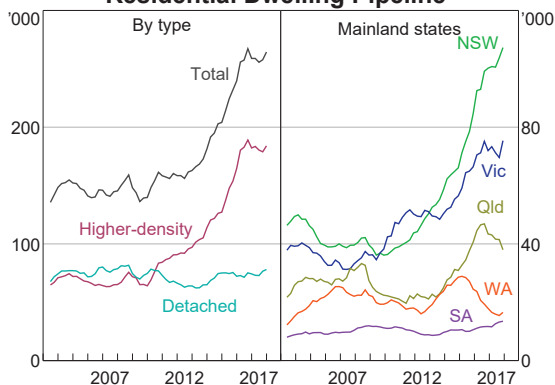
\* Reference year is 2015/16

Source: ABS

stabilised or continues to fall. Despite this, the number of residential building approvals edged higher in 2017 – supported by strong higher-density approvals, particularly in Victoria and New South Wales – and have been broadly stable at this high level in 2018 so far.

With building approvals at higher levels than completions, the pipeline of higher-density dwelling projects approved or are underway has remained close to historically high levels, driven by New South Wales and Victoria (Graph 2.15). Liaison with developers indicates that the high-density residential construction sector remains close to capacity in New South Wales. The dwelling investment pipeline should continue to support a high level of dwelling investment for some time yet.

**Graph 2.15**  
**Residential Dwelling Pipeline\***



\* Includes dwellings approved but not yet commenced and private dwellings under construction

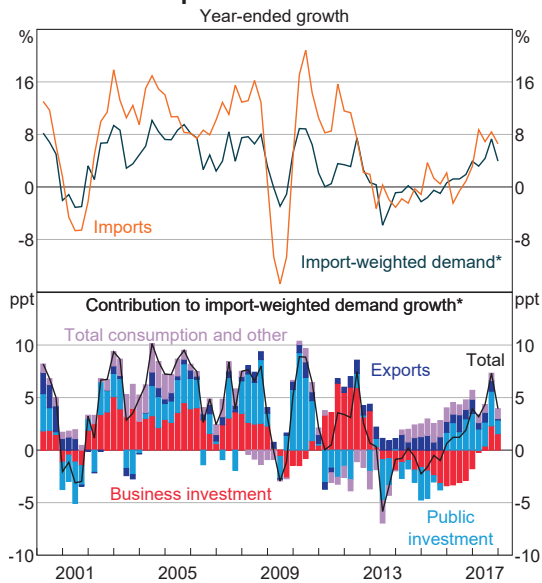
Sources: ABS; RBA

## Solid growth in domestic final demand has boosted imports

Consistent with improved domestic economic conditions, imports grew by around 7 per cent over 2017. Growth in imports has been broad based, with consumption, capital, intermediate and service imports all increasing. In particular, strong growth in business and public investment, which are more

import intensive than other components of expenditure, contributed to higher imports over the past year (Graph 2.16).

**Graph 2.16**  
**Imports and Demand**



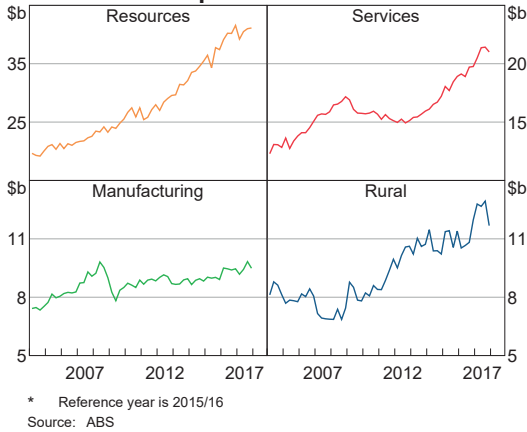
\* Import-weighted demand measure constructed by weighting each component of demand by its relative import-intensity, as derived from ABS input-output tables

Sources: ABS; RBA

## Exports are rising, but fell in the December quarter

Exports contracted in the December quarter, but increased by around 1 per cent over 2017 (Graph 2.17). Rural exports were particularly weak in the quarter as unfavourable weather conditions resulted in lower output of grains and other crops; this followed the record harvest in 2016/17. Coal export volumes also fell in the December quarter owing to temporary factors, including maintenance at key ports in Queensland and industrial action in New South Wales. While coal exports are expected to recover in the near term, further rail and port maintenance disruptions and weather events could slow this recovery.

**Graph 2.17**  
**Export Volumes\***



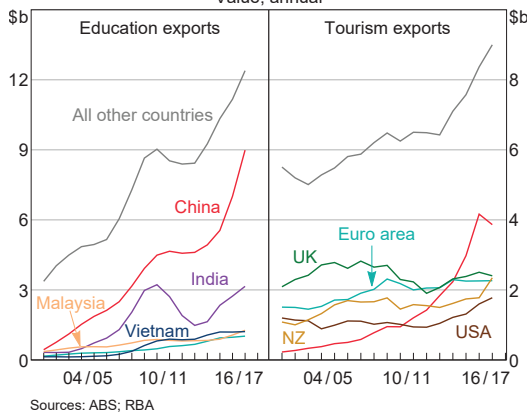
Non-resource export growth over 2017 was driven by service exports, which increased by around 6 per cent. Education and tourism exports continued to grow strongly and have been key drivers of growth in service exports over the past five years or so. The increase in education exports over recent years has reflected strong growth in student numbers from a range of countries including China and India. The increase in tourism exports over recent years has been fairly broad based, with a notable contribution from Chinese tourists (Graph 2.18). The momentum in service exports is expected to

continue, supported by a favourable outlook for growth in Australia’s major trading partners.

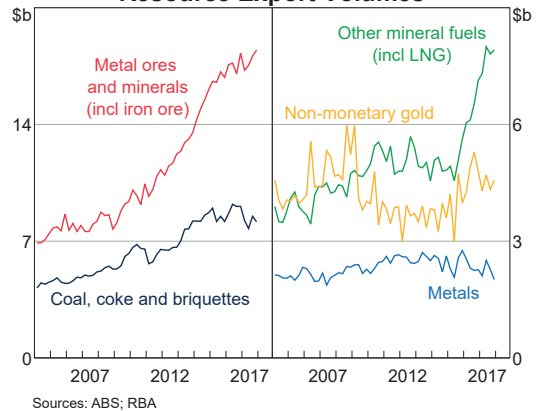
Resource exports remained at a high level over 2017; LNG exports continued to grow (rising by 20 per cent over the year) and iron ore exports increased a little, while coal exports declined (Graph 2.19). Resource exports have grown strongly over recent years as additional productive capacity has come online. Further increases are expected over the next couple of years as existing LNG projects ramp up and other projects are completed. Iron ore export volumes are expected to increase only slightly over the next couple of years because incremental productivity improvements by the major miners are likely to be partially offset by lower volumes of lower-grade iron ore from smaller-scale producers. By 2020, most of Australia’s major resource projects are expected to have reached their steady-state production levels. While resource export volumes will be at historically high levels, from that time they are not expected to make further material contributions to GDP growth.

Higher resource export revenues over recent years contributed to the trade balance moving into surplus and the current account deficit narrowing (Graph 2.20). More recently, however,

**Graph 2.18**  
**Travel Service Exports by Destination**  
Value, annual

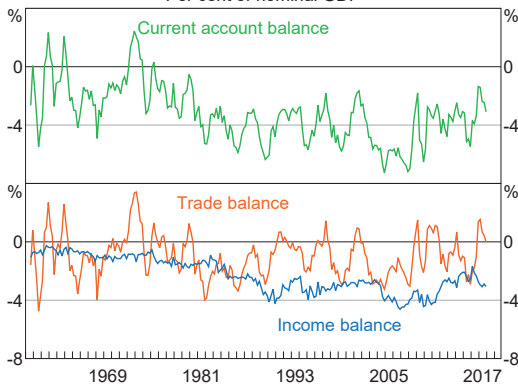


**Graph 2.19**  
**Resource Export Volumes**



the trade surplus has moderated because import volumes increased and growth in overall export volumes eased. Australia's ongoing net foreign liability position with the rest of the world (and the income flows associated with this position) means that the net income balance has remained in deficit.

**Graph 2.20**  
**Current Account Balance**  
Per cent of nominal GDP



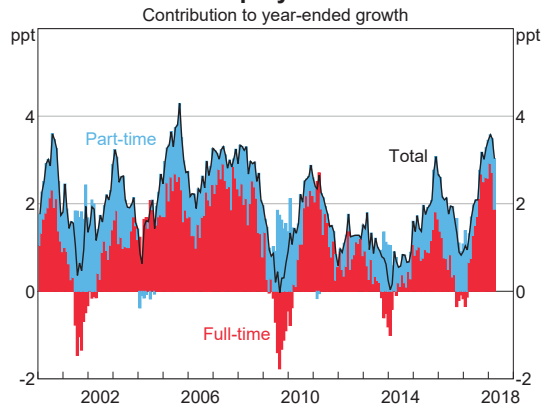
Sources: ABS; RBA

## Employment growth has been considerably above population growth

Employment grew by 3½ per cent over the past year. This is the strongest rate of growth since 2008 and full-time employment contributed the bulk of that growth (Graph 2.21). Employment growth has moderated in recent months, though it remains higher than working-age population growth. Leading indicators of labour demand, such as job vacancies and hiring intentions, continue to point to above-average growth in employment over the next six months, though it is not expected to be as strong as seen over the past year.

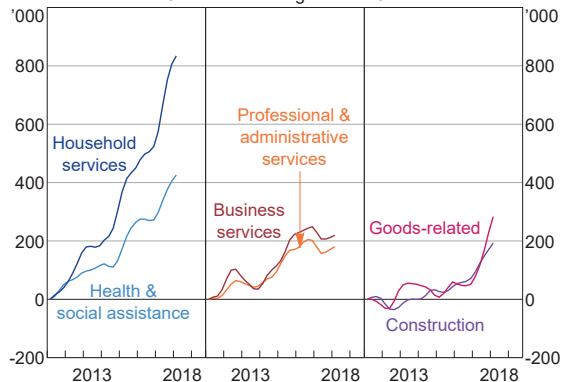
There has been strong employment growth in the health care & social assistance, education and construction industries over the year (Graph 2.22). Employment in the health care & social

**Graph 2.21**  
**Employment**



Source: ABS

**Graph 2.22**  
**Employment by Sector**  
Cumulative change since 2011



Source: ABS

assistance industry has increased by around 130 000 over this period and now represents 14 per cent of total employment. In particular, there has been strong growth in the number of aged and disabled carers and childcare workers (Graph 2.23). The rollout of the NDIS and the gradual ageing of the population are likely to continue to support demand for health-related jobs for some time.

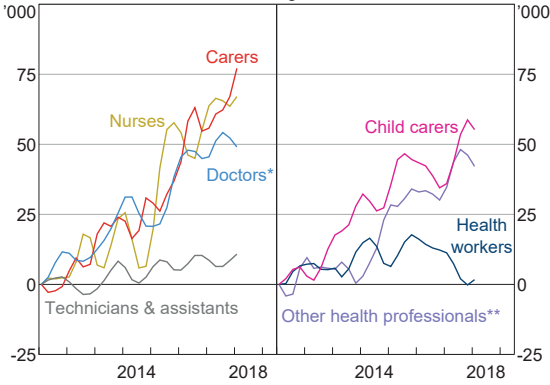
High levels of residential and infrastructure building activity continue to support growth in construction employment. Construction employment is now close to 10 per cent of



**Graph 2.23**

**Health and Social Assistance Employment**

Cumulative change since 2011



\* Includes but not limited to medical practitioners, speech pathologists and dentists

\*\* Includes but not limited to physiotherapists, occupational therapists and pharmacists

Sources: ABS; RBA

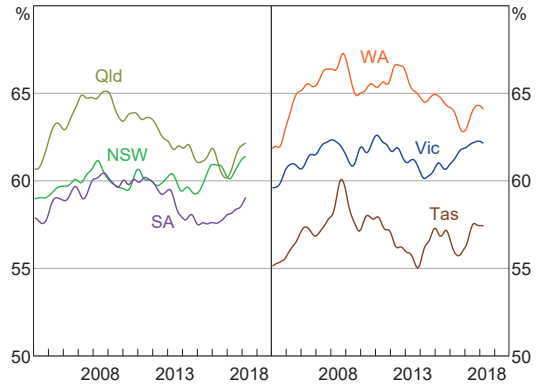
total employment, and this is estimated to be its highest share since the early 1900s. In the business services sector, employment has been little changed for the past two years. However, there are large divergences within the sector. Employment in some parts of the professional, scientific & technical industry has increased; information from the Bank's liaison program has pointed to strength in demand for workers with specialised information technology skills. However, there has been little change in employment within the financial & insurance industry over recent years.

Employment growth has been broad based across all states over the past year (Graph 2.24). Employment growth has outpaced population growth in all states, even in Victoria, where population growth has been fastest at almost 2½ per cent. In Western Australia and Queensland there has been an increase in employment growth and participation over the past year, consistent with the improvement in economic conditions. Part of the labour market adjustment following the end of the mining investment boom has occurred through adjustment in both interstate and overseas migration.

**Graph 2.24**

**Employment-to-Population Ratio by State**

Trend



Source: ABS

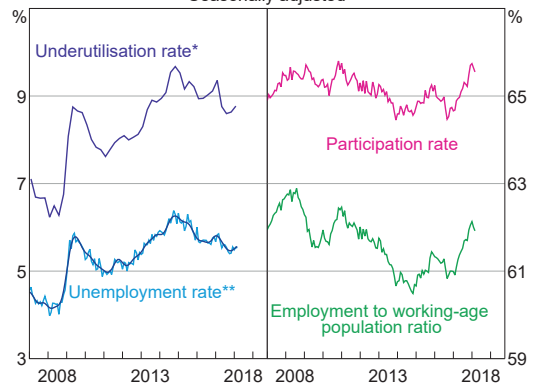
**The supply of labour has also grown strongly and the unemployment rate has been little changed recently**

The participation rate has increased sharply since late 2016, notwithstanding a modest decline over the past couple of months. It is currently at 65½ per cent, which is close to its record high (Graph 2.25). This rise in participation is consistent with strong growth in the demand for labour, but the increase since late 2016 has been relatively large compared with previous episodes of strong

**Graph 2.25**

**Labour Market**

Seasonally adjusted



\* Hours-based measure

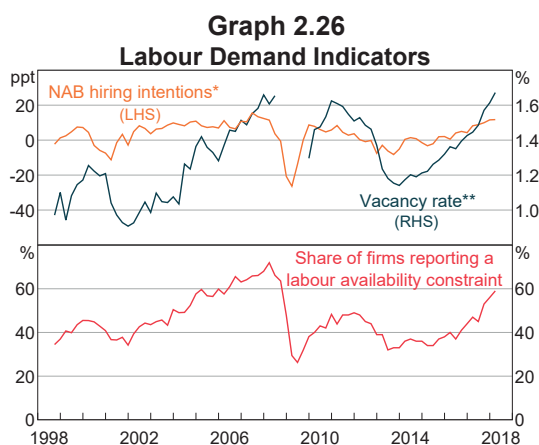
\*\* Trend unemployment in dark blue

Sources: ABS; RBA

employment growth. The increase in labour market participation has been most notable for females, especially those aged 25–44 years, and older males (See ‘Box B: The Recent Increase in Labour Force Participation’).

Overall, the unemployment rate has declined over recent years, but it has been little changed at around 5½ per cent since mid last year. This implies that there is still spare capacity in the labour market: the unemployment rate is around ½ percentage point above conventional estimates of full employment in Australia. A broader measure of labour market underutilisation, which captures the additional hours that underemployed people would like to work as well as hours of work sought by the unemployed, has declined over the past year, but remains elevated.

Even though there is still spare capacity in the labour market overall, information from business surveys and the Bank’s liaison program provide evidence of emerging labour shortages in some parts of the economy. A higher share of firms report that it is more difficult to find suitable workers, while job vacancies continue to increase as a share of the labour force (Graph 2.26).



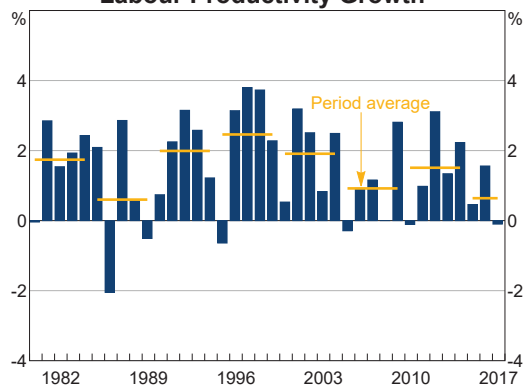
\* Net balance of employment intentions for the following period; deviation from average  
 \*\* Vacancies as a per cent of the labour force; this survey was suspended between May 2008 and November 2009  
 Sources: ABS; NAB; RBA

Information from liaison suggests that the range of skills that are in short supply within the construction and the professional, scientific & technical industries appears to have broadened in recent months.

## Labour productivity growth has been low

Measured labour productivity growth has been low for several years (Graph 2.27). In recent quarters, growth in GDP has been outpaced by both growth in employment and the total number of hours worked. This implies that labour productivity has fallen, although this measure can be quite volatile. Measured multifactor productivity growth – which accounts for capital as well as labour inputs to production – has also been relatively low in recent years.

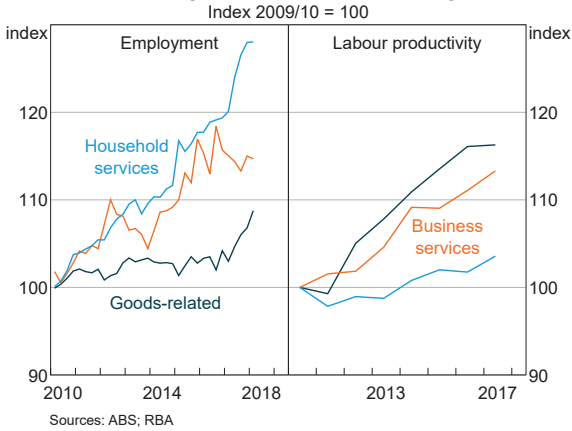
**Graph 2.27**  
**Labour Productivity Growth\***



\* Calendar year growth in GDP per hour worked  
 Source: ABS

The concentration of recent employment growth in household services has contributed to low growth in labour productivity, because measured productivity growth in household services has typically been quite low (Graph 2.28). More generally, labour productivity is particularly difficult to measure in industries such as health and education, where it is relatively challenging to measure output and quality improvements

**Graph 2.28**  
**Employment and Productivity**



can be hard to quantify. In contrast, labour productivity growth in goods-related industries has been relatively high in recent years; this has been related to the increase in mining production. Over the past year, there has been strong growth in construction employment, where the level of labour productivity is around a third of that in the mining industry. ✎

## Box B

# The Recent Increase in Labour Force Participation

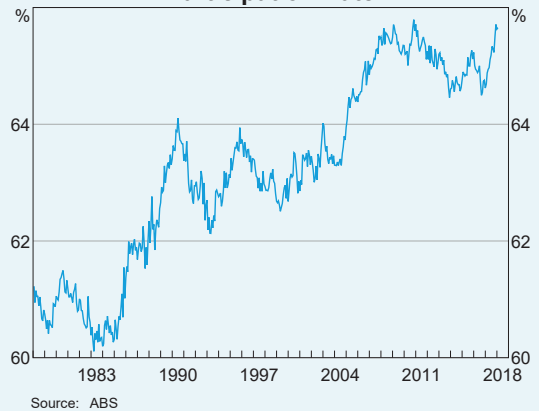
There has been a sharp increase in the labour force participation rate recently (Graph B1).<sup>1</sup> Since September 2016, the participation rate has increased by 1.1 percentage points to 65.5 per cent, which is close to its highest level on record. This increase has been driven by higher participation of females – particularly those aged between 25 and 54 years – and older males (Graph B2). The long-run upward trend in the participation rate of women aged over 25 years has accelerated recently. In contrast, the participation rates of younger people of both sexes are below their levels of a decade ago.

Cyclical factors are likely to have contributed to the increase in labour force participation. The demand for labour has risen strongly since September 2016, with total hours worked increasing at an annualised rate of 2.8 per cent. This is likely to have encouraged some people to commence searching for work. Strong labour market conditions are also likely to have encouraged workers to delay leaving the labour force (such as for retirement). This is consistent with the pattern of increases in participation, in that the groups that have increased their participation the most over the recent period are the groups whose participation tends to rise when labour market conditions are stronger.

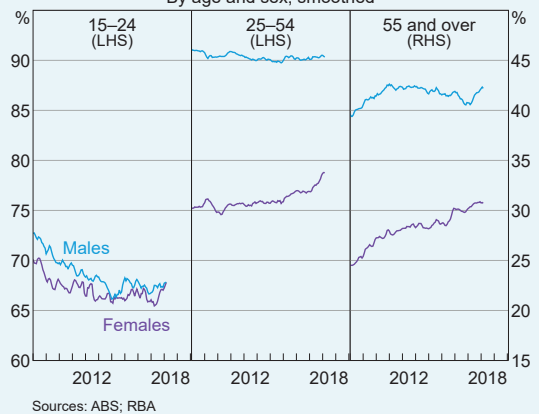
Structural and longer-term factors may also have supported the recent increase in labour force participation of older workers. The age at which people can access the age pension was increased from 65 to 65½ years in July 2017,

<sup>1</sup> The participation rate measures the share of people aged 15 and over that are either working or looking for work.

**Graph B1**  
**Participation Rate**



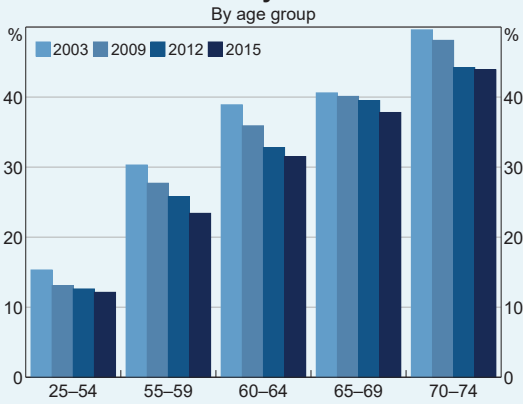
**Graph B2**  
**Participation Rate**  
By age and sex, smoothed



so older workers will tend to remain in the labour force for a bit longer. The increase in the preservation age at which workers can access their superannuation will also be influencing retirement decisions. Looking over a longer period, the health of older people has tended to improve, enabling more of them to remain in the

labour force for longer, and an increasing share of employment is now in occupations that are generally less physically demanding. Data from the HILDA survey indicate that, on average over 2014–16, fewer older people reported themselves as being in poor health compared to 2001–03.<sup>2</sup> Older people who reported themselves as in good health were around twice as likely to participate in the labour force as those in poor health. A similar decline is apparent in disability rates amongst older people (Graph B3).

**Graph B3**  
**Disability Rates\***



\* Disability is defined as a limitation, restriction or impairment that has lasted or is likely to last for more than six months and restricts everyday activities

Sources: ABS; RBA

Previous RBA work has found that the probability of females being in the labour force has increased since the global financial crisis.<sup>3</sup> This reflects a range of factors including changes in work preferences and perceptions of traditional gender roles, as well as increased flexibility of hours worked both through the increased availability of part-time employment and flexibility within full-time jobs. The need to increase household income to manage household debt may also have contributed.

The types of jobs that have been created since mid 2016 are also likely to have encouraged more labour force participation. Employment growth has been very strong in the healthcare and social assistance industry; the number of people employed in this industry increased by more than 150 000 over the year to February 2018, accounting for more than one-third of total employment growth over that period. This may have supported increases in the participation rate because healthcare and social assistance employment is more likely than other industries to draw on workers from outside the labour force. Evidence from the HILDA survey suggests that nearly half of those who join healthcare employment from outside the labour force were women aged between 25 and 44 years.

The rollout of the National Disability Insurance Scheme over the next few years and the gradual ageing of the population are both expected to continue to boost employment in health care and social assistance. This may continue to provide support to labour force participation. The gradual increases in the age at which workers can access the pension or superannuation, rising longevity and changes in the demographic composition of the labour force will also affect the participation rate. However, labour market conditions are likely to remain an important influence on the participation rate over the next few years. ↘

2 This box uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. For more information, see Copyright and Disclaimers Notice.

3 See van der Merwe M (2016), 'Factors Affecting an Individual's Future Labour Market Status', *RBA Bulletin*, December, pp 11–22.

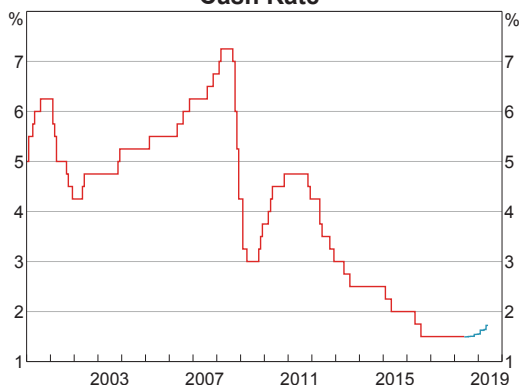
# 3. Domestic Financial Conditions

Domestic financial conditions remain expansionary. There has been some tightening in short-term money markets, which has flowed through to a small increase in funding costs for a range of financial institutions and businesses. However, borrowing rates remain low for households and businesses. Growth in housing credit has eased since mid last year, particularly for credit extended to investors, while growth in business debt has remained moderate. The Australian dollar remains within its narrow range of the past two years. Financial market prices suggest that the cash rate is expected to remain unchanged this year and to increase around mid 2019.

## Investors expect the cash rate to remain unchanged this year

The Reserve Bank has maintained the cash rate target at 1.5 per cent since August 2016. Financial market prices imply that the cash rate is expected to remain unchanged this year and increase to 1.75 per cent around the middle of next year (Graph 3.1).

**Graph 3.1  
Cash Rate\***

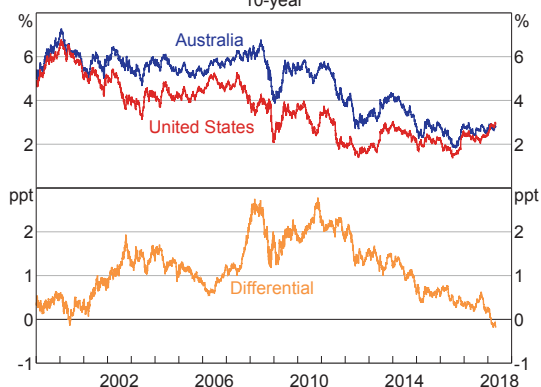


\* Data from June 2018 onwards are expectations derived from interbank cash rate futures  
Sources: ASX; Bloomberg

## Government bond yields have been little changed

Yields on 10-year Australian Government Securities (AGS) have increased so far in 2018 to around 2.8 per cent, reflecting developments in international markets. Recently, the yield on US Treasury securities has risen above the yield of 10-year AGS for the first time since 2000 (Graph 3.2). Issuance from the Australian Office of Financial Management and state borrowing authorities has continued to be well received by the markets.

**Graph 3.2  
Government Bond Yields  
10-year**

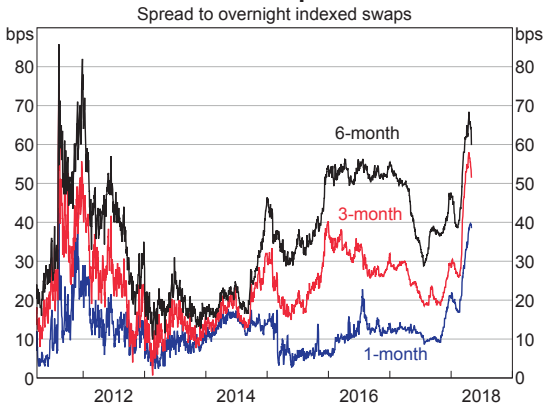


Sources: Bloomberg; RBA

## Conditions in short-term money markets have tightened modestly

Bank bill rates have increased in recent months, with spreads on 3- and 6-month bank bills relative to overnight indexed swaps (OIS) rising by about 30 basis points (Graph 3.3). This is a direct consequence of the increase in short-term bank funding costs in the United States

**Graph 3.3**  
**Bank Bill Spreads**



(see the 'International Environment' chapter). Australian banks use US money markets to raise some of their funding for their Australian dollar assets. The higher cost of US dollar funds has meant that Australian banks have, at the margin, increased their demand for funding in domestic wholesale markets. This has contributed to an increase in the cost of Australian dollar funding for a range of financial institutions.

Short-term interest rates in the repurchase agreement (repo) market have also increased, and remain high at 40–50 basis points above OIS. This reflects, among other factors, heightened demand for secured funding from market participants, and is consistent with the rise in the cost of short-term funding in the bank bill market. However, while the increase in bank bill rates has implications for funding costs of financial institutions, the repo market is not a significant source of funding. Meanwhile, the cash rate has continued to trade at the Board's target.

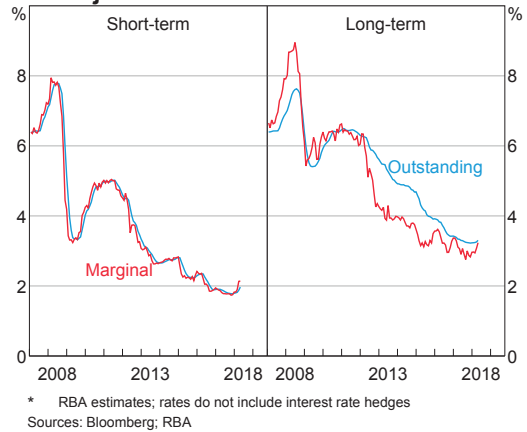
### Banks' funding costs have risen but remain low

The rise in interest rates in short-term money markets has led to an increase in the banks' overall debt funding costs since the beginning

of the year. Funding costs have increased to be around the level that they were at around the end of 2016, which is still low compared with previous years.

Higher bank bill swap (BBSW) rates affect bank funding costs in a number of ways. First, BBSW rates flow through to the rates banks pay on their new short- and long-term wholesale debt (Graph 3.4). In addition to this effect, bank bond yields have increased by around 20 basis points since the start of the year.

**Graph 3.4**  
**Major Banks' Wholesale Debt Cost\***

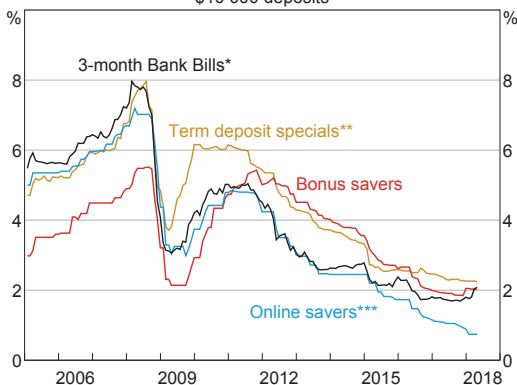


Second, the higher BBSW rates increase some of the costs associated with hedging the risks on banks' debt. Banks tend to issue fixed-rate bonds and then swap a sizeable share of these fixed interest rate exposures into floating rate exposures. This better aligns the interest rate exposure from their funding with their assets (which consist largely of variable interest rate loans). In doing this, the banks typically end up paying BBSW rates on their hedged liabilities, which flow through to the cost of funding.

Third, rates on wholesale deposits tend to be closely linked to BBSW rates, so the cost of these deposits is rising. Wholesale deposits include deposits from large corporations, pension funds and the government, and account for around 30 per cent of banks' debt funding.

The increase in BBSW has had little effect on retail deposit rates (Graph 3.5). While the relative cost of other sources of funding can influence the pricing of retail deposits, so too can other factors. Moreover, the interest rates on retail deposits are adjusted less frequently than rates on wholesale deposits. Over the year to date, retail deposit rates have decreased slightly, mostly reflecting declines in the rates on online saving accounts. Most, but not all, of these decreases occurred before the recent increase in BBSW.

**Graph 3.5**  
**Major Banks' Deposit Rates**  
\$10 000 deposits



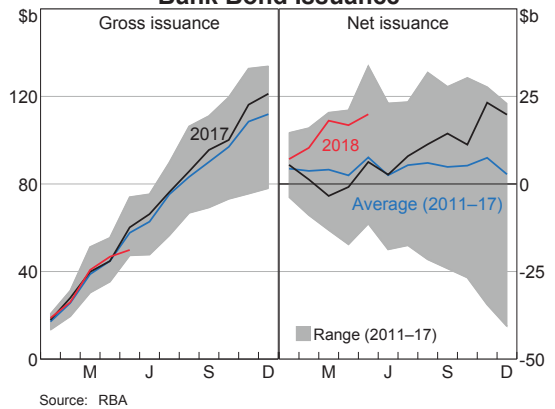
\* Spot rate at the end of the month  
\*\* Average of 1-12, 24-, 36- and 60-month terms  
\*\*\* Excludes temporary bonus rates  
Sources: Canstar; RBA

While some business lending rates are also closely linked to BBSW rates, and increase alongside the higher funding costs, there have been few signs as yet of mortgage rates changing in response to the increase in funding costs (lending rates are discussed further below). Hence the interest rate spread between major banks' lending rates and overall debt funding costs is estimated to have narrowed recently, though it remains higher than a few years ago.

## Banks' issuance in wholesale funding markets has been sustained

Gross bond issuance by Australian banks has continued at a similar pace to previous years, with around \$50 billion raised over the first four months of the year (Graph 3.6). However, net issuance has been above average given that bond maturities have been below average over the year to date.

**Graph 3.6**  
**Bank Bond Issuance**



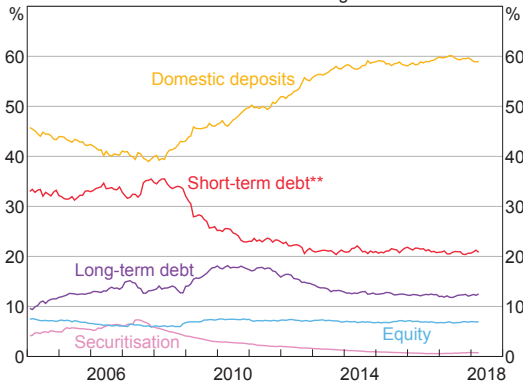
Source: RBA

The overall composition of banks' funding was little changed over the year to March (Graph 3.7). The Net Stable Funding Ratio (NSFR), which requires banks to hold a minimum level of stable funding for their assets, came into effect on 1 January 2018. The banks have reported that they are above the regulatory minimum for the NSFR. Overall growth in banks' funding liabilities has been subdued, consistent with some moderation in credit growth.

Issuance of residential mortgage-backed securities (RMBS) has moderated from the strong pace seen in 2017 (Graph 3.8). Issuance has been driven largely by non-bank entities, with one deal by a major bank. Pricing for new deals has generally remained at lower spreads to BBSW

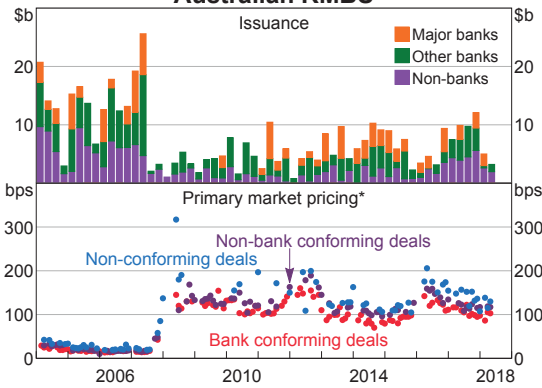


**Graph 3.7**  
**Funding Composition of Banks in Australia\***  
 Share of total funding



\* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis  
 \*\* Includes deposits and intragroup funding from non-residents  
 Sources: APRA; RBA; Standard & Poor's

**Graph 3.8**  
**Australian RMBS**



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

than in recent years, although the increase in BBSW rates means that the absolute cost of issuing RMBS has risen of late.

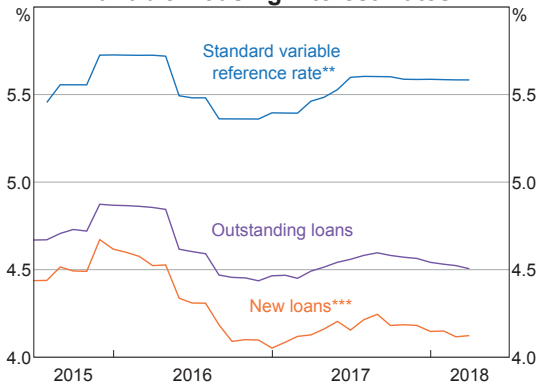
## Some housing interest rates have declined a little

A number of lenders have reduced interest rates on new housing loans in recent months. A couple of lenders have reduced their advertised variable rates, particularly for investor and interest-only (IO) loans. In addition, the major

banks made a number of targeted decreases to advertised rates on fixed-rate housing loans in early March, with the larger rate reductions tending to focus on investor and IO borrowers. Following this, some smaller banks also reduced their advertised fixed rates. These advertised rate decreases have been focused on new borrowers, while standard variable reference rates (which affect new and existing borrowers) have remained unchanged for the major banks. Two smaller lenders have raised their standard variable reference rates in response to the recent increase in funding costs.

Overall, data on securitised mortgages reported to the RBA indicate that the average outstanding rate for variable rate housing loans has declined by about 10 basis points since its recent peak in August 2017 (Graph 3.9; Table 3.1).<sup>1</sup> These data

**Graph 3.9**  
**Variable Housing Interest Rates\***



\* Outstanding and new loans series include variable interest rate loans; data to March 2018  
 \*\* Average across major banks' rates  
 \*\*\* Variable loans originated over the past three months  
 Sources: RBA; Securitisation database

1 The Reserve Bank collects detailed information on asset-backed securities it accepts as collateral in its domestic market operations. Most of these securities in the Securitisation Database are underpinned by residential mortgages, covering around \$400 billion of mortgages or about one-quarter of the total value of housing loans in Australia. Loans in the database may have different characteristics from those not covered by the database. See Kent C (2017), 'Some Innovative Mortgage Data', Speech at Moody's Analytics Australia Conference 2017, Sydney, 14 August. See also Kohler M (2017), 'Mortgage Insights from Securitisation Data', Speech at Australian Securitisation Forum, Sydney, 20 November.

**Table 3.1 Intermediaries' Fixed and Variable Lending Rates**

	Interest rate Per cent	Change since August 2017 Basis points	Change since November 2016 Basis points
Housing loans <sup>(a)</sup>			
– Variable principal-and-interest rate			
– Owner-occupier	4.27	–8	–14
– Investor	4.71	–7	12
– Variable interest-only rate			
– Owner-occupier	4.73	–3	41
– Investor	5.07	–4	58
– Fixed rate			
– Owner-occupier	4.21	–11	–32
– Investor	4.34	–7	–26
– Average outstanding rate	4.48	–9	3
Personal loans			
– Variable rate <sup>(b)</sup>	11.65	2	16
Small business			
– Term loans variable rate <sup>(e)</sup>	6.43	0	4
– Overdraft variable rate <sup>(e)</sup>	7.26	–5	–1
– Fixed rate <sup>(c)(e)</sup>	5.24	–7	–7
– Average outstanding rate <sup>(d)</sup>	5.29	1	–6
Large business			
– Average outstanding rate <sup>(d)</sup>	3.50	11	1

(a) Average rates from Securitisation Dataset, updated for end March 2018

(b) Weighted average of advertised variable rate products

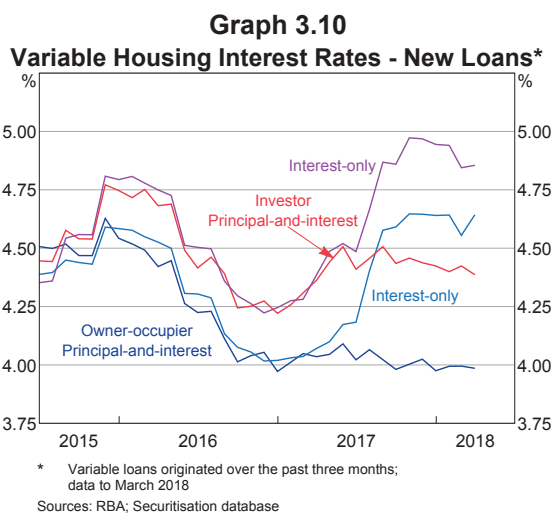
(c) Average of the major banks' 3-year fixed rates

(d) RBA estimates

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

Sources: ABS; APRA; Securitisation System; RBA

also confirm that new loans tend to be at lower variable rates than the average for outstanding loans. Moreover, new IO borrowers continue to pay a premium above the interest rate on new principal-and-interest (P&I) home loans (Graph 3.10).



## Housing credit growth has eased

Growth in housing lending to both investors and owner-occupiers has slowed since mid 2017 to around 2.5 per cent and 8 per cent, respectively (Graph 3.11; Table 3.2). The slower growth in lending to investors has reflected a decrease in IO lending, which is more prevalent among investors. This decrease followed the Australian Prudential Regulation Authority's (APRA's) measures to reinforce sound residential mortgage lending practices, particularly the requirement that authorised deposit-taking institutions (ADIs) such as banks limit new IO

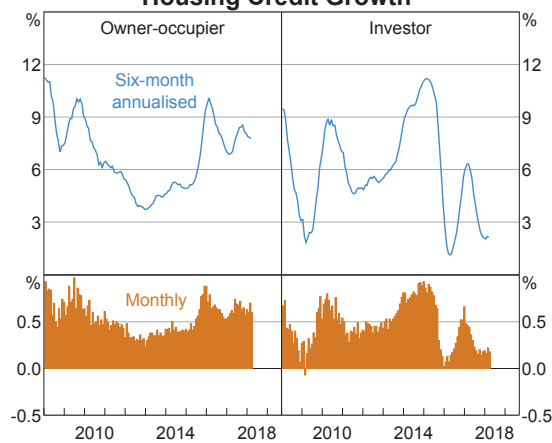
lending to 30 per cent of total new residential mortgage lending.

Recent liaison with banks suggests that some banks intend to modestly increase the growth of their new IO lending to certain lower-risk segments of the market as they are currently well below APRA's 30 per cent benchmark. Indeed, there has been some evidence of increased competition for such lending, with a number of banks having recently reduced the rates on some loans for investors, particularly IO loans.

Nevertheless, IO loans are likely to remain less prevalent than in recent years. Moreover, under the current regulatory and pricing environment, more borrowers are likely to convert to making P&I payments when their scheduled IO period expires compared with previous years. While the subsequent increase in mortgage payments will not be trivial for some households, at the aggregate level the increase in payments is likely to amount to a small proportion of household disposable income and the effect on household consumption growth is expected to be smaller still (see Box C: 'The Expiry of Interest-only Loan Terms').

The growth of housing credit extended by non-ADI lenders exceeds that by ADIs. Recent liaison suggests that non-ADIs have been lending to some borrowers who would typically have

**Graph 3.11**  
**Housing Credit Growth\***



\* Seasonally-adjusted and break-adjusted  
Sources: APRA; RBA

**Table 3.2: Financial Aggregates**  
Percentage change<sup>(a)</sup>

	Three-month ended		Year-ended
	Dec 2017	Mar 2018	Mar 2018
Total credit	1.1	1.2	5.1
– Housing	1.4	1.5	6.1
– Owner-occupier housing	1.9	1.9	8.1
– Investor housing	0.5	0.6	2.5
– Personal	–0.4	–0.2	–1.0
– Business	0.9	0.8	4.2
Broad money	0.1	1.1	3.8

(a) Seasonally-adjusted and break-adjusted  
Sources: ABS; APRA; RBA

borrowed from ADIs in the absence of APRA's measures to tighten lending standards and limit IO mortgages. Nevertheless, lending by these institutions remains small as a share of housing credit, at less than 5 per cent.

The value of housing loan approvals (excluding refinancing) has continued to decline over recent months, to be 8 per cent below the recent peak in August 2017. This has been driven by investors, with owner-occupier approvals remaining relatively steady since mid 2017 (Graph 3.12). The decline in investor approvals has been primarily concentrated in New South Wales. Loan approvals for refinancing (with a different lending institution) have increased since the beginning of the year, consistent with borrowers shopping around for better deals (Graph 3.13).

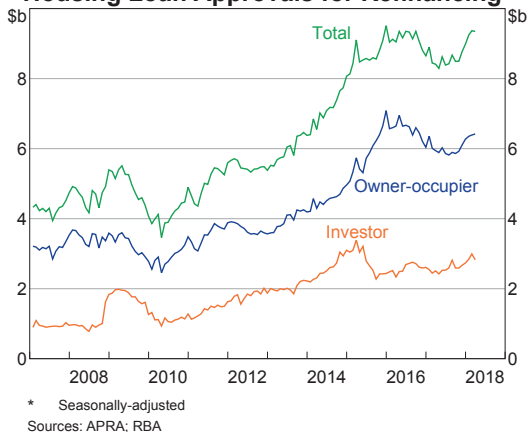
**Graph 3.12**  
**Housing Loan Approvals\***  
Excluding refinancing



In late April, APRA – in consultation with the Council of Financial Regulators – announced plans to remove its 10 per cent investor loan growth benchmark from 1 July 2018 for ADIs that can demonstrate that their lending policies and practices meet APRA's expectations. As part of these measures, APRA will also require ADIs to develop internal limits on the proportion of new lending at very high debt-to-income levels, taking into account each applicant's total borrowings.

**Graph 3.13**

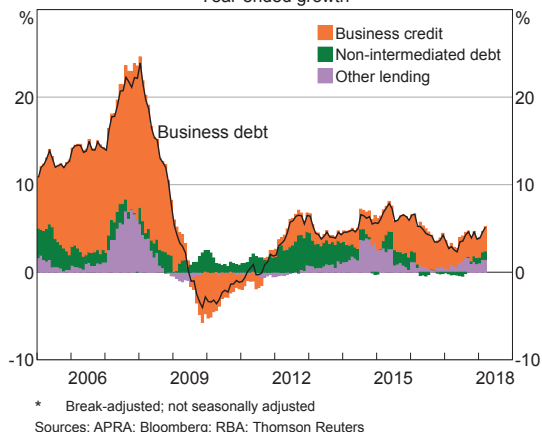
**Housing Loan Approvals for Refinancing\***



## Funding is readily available for most businesses

Growth in a broad measure of business debt has risen a little over recent months (Graph 3.14). This has been driven by increased bond issuance, and a pick-up in syndicated lending by institutions that do not report their lending to APRA (that is the 'other lending' category). Overall, growth in business debt has been moderate in recent years at around 5 per cent in year-ended terms, despite interest rates being at low levels and a pick-up in business investment outside the mining industry. In part,

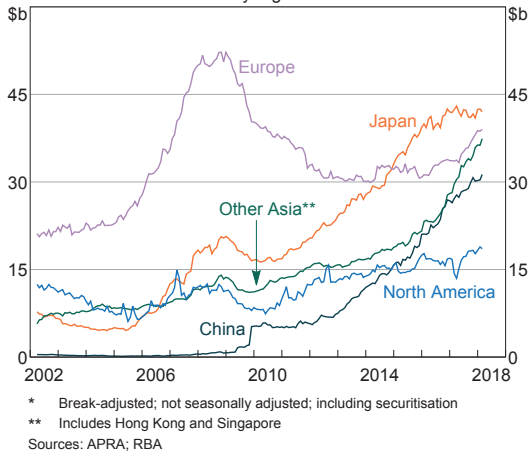
**Graph 3.14**  
**Business Debt\***  
Year-ended growth



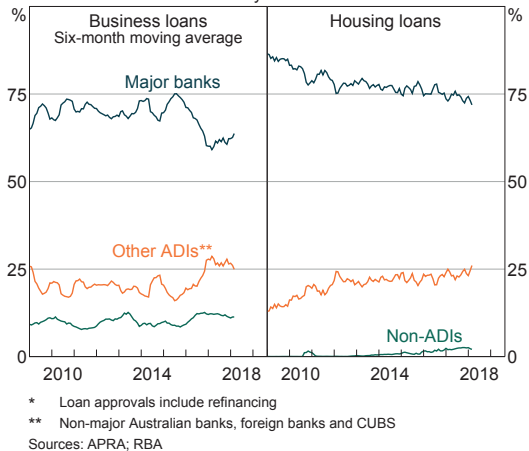
the growth in business debt remains moderate because businesses tend to finance much of their investment from internal funding.

Rapid growth in foreign bank lending to businesses over the past five years saw the Australian banks' share of business credit decline to just under 75 per cent, around its lowest level since the financial crisis (Graph 3.15). However, the major banks' share of business loan approvals has risen over the past year; at the same time, their share of new lending to households for residential property has declined (Graph 3.16).

**Graph 3.15**  
Foreign Bank Business Credit\*  
By region



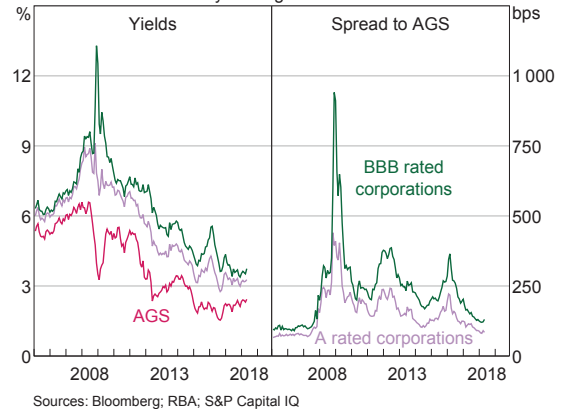
**Graph 3.16**  
Loan Approvals\*  
Share by institution



Interest rates on business loans are close to historically low levels. The interest rates on many large business loans are closely linked to BBSW rates. As a result, the increase in BBSW rates is gradually flowing through to an increase in large business lending rates. In contrast, the link between variable rates on small business loans and BBSW rates is less direct; the interest rates on outstanding variable-rate loans to small businesses have been little changed since mid 2017.

Bond issuance by Australian non-financial corporations has been moderate since the start of the year, although it has exceeded maturities. Issuance continues to be mainly from utilities and infrastructure companies, with relatively little issuance from resource companies. While the cost of issuance has increased by around 15 basis points since the start of the year, spreads to benchmark rates for non-financial corporate bonds remain low (Graph 3.17).

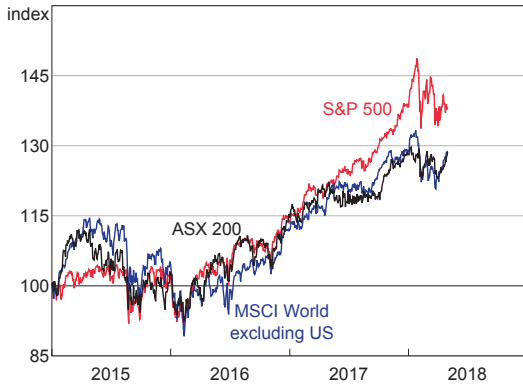
**Graph 3.17**  
Australian Corporate Bond Pricing  
5-year target tenor



## Australian equity prices are little changed

Australian equity prices are around their levels at the end of 2017 (Graph 3.18). Market volatility picked up at the start of the year from the very low levels observed in 2017, but has since eased somewhat.

**Graph 3.18**  
Share Price Accumulation Indices  
End December 2014 = 100

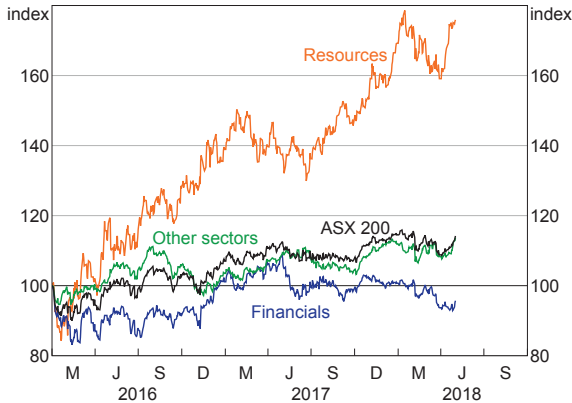


Sources: MSCI; Thomson Reuters

Since the start of the year, banks' share prices have fallen by around 5 per cent, more than the market as a whole. Share prices of the resources sector have risen recently, alongside a pick-up in certain commodity prices (Graph 3.19). Companies' share prices outside the resources and financial sectors have been mixed, with a decline in the telecommunications sector somewhat offset by increases in the healthcare sector.

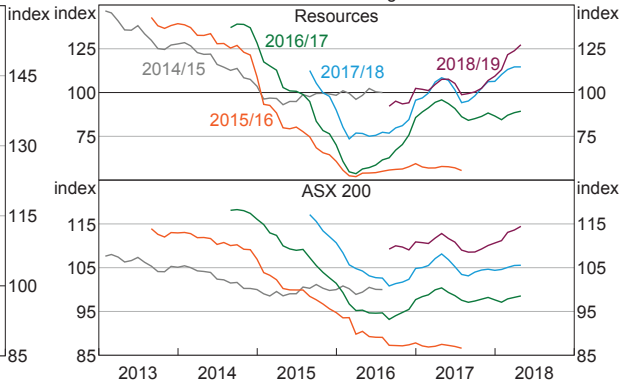
Analysts' earnings expectations have been revised steadily higher this year, particularly for the resources sector (Graph 3.20). Nonetheless,

**Graph 3.19**  
Australian Share Prices  
End December 2015 = 100



Source: Bloomberg

**Graph 3.20**  
ASX 200 Analysts' Forecast Earnings  
2014/15 actual earnings = 100



Sources: RBA; Thomson Reuters

price-to-earnings ratios for most sectors remain slightly above their long-run averages.

## Corporate profits have grown over the past year

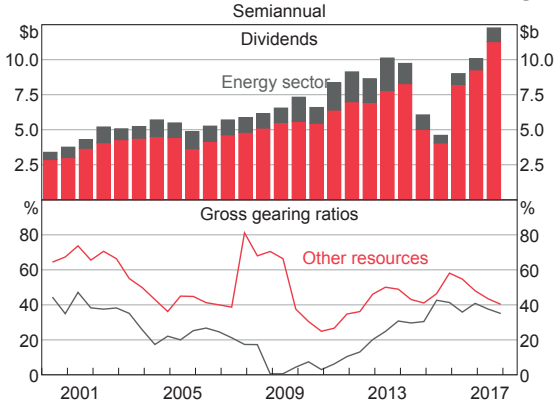
Aggregate underlying profits for ASX 200 companies were 13 per cent higher in the second half of 2017 than the same period in 2016, as increases in commodity prices supported profits in the resources sector. Resource companies continued to use the increase in cash flows to pay down debt and raise shareholder dividends (Graph 3.21).

The underlying profits for the financial sector were mixed, with larger-than-anticipated costs from natural disasters weighing on insurance companies' profits.

Underlying profits for companies outside the resources and financial sectors increased compared with the same period last year. Property revaluation gains supported earnings of real estate companies, while infrastructure companies – supported by increased inbound international travel and higher toll revenues – boosted profits in the broader industrials sector.

**Graph 3.21**

**Resources Sector Distributions and Gearing\***



\* Excludes foreign-domiciled companies listed on the ASX  
Sources: Morningstar; RBA

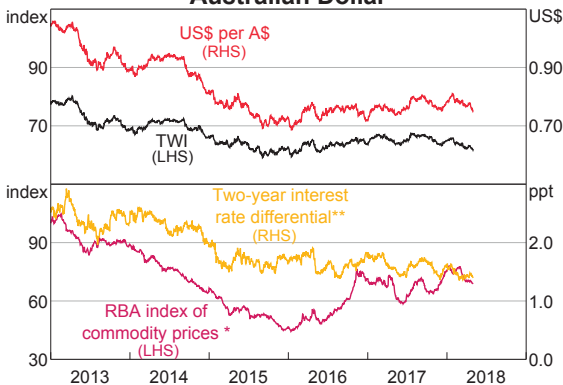
**Net capital inflows are lower than in recent years**

Net capital inflows to Australia remain modest, consistent with the low level of the current account deficit (Graph 3.23). There were small inflows into the financial sector over 2017, following several years of outflows as banks repaid foreign-held debt. There were outflows from the mining sector, as mining investment projects that are largely foreign owned and funded approached completion. Australia's net foreign liability position has declined over the past couple of years. At around 55 per cent of GDP, it is close to its average level since 2000. ↘

**The Australian dollar remains within its narrow range of the past two years**

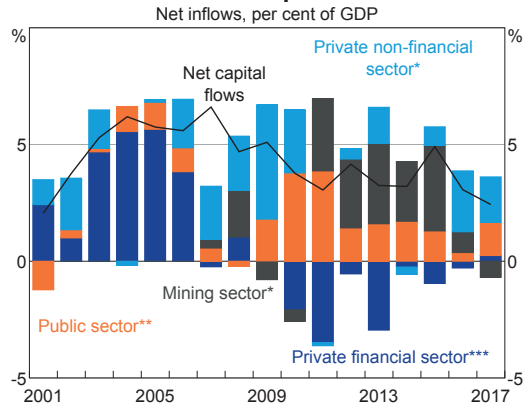
Increases in bulk commodity prices, supported the Australian dollar over the past two years. However, narrowing interest rate differentials between Australia and other economies have worked in the other direction. Since the start of the year, the Australian dollar has depreciated against the US dollar and on a trade-weighted basis (TWI), as bulk commodity prices have declined and interest rate differentials have continued to narrow (Graph 3.22).

**Graph 3.22**  
**Australian Dollar**



\* With spot bulks; 1 January 2013 = 100  
\*\* Spread to equally-weighted nominal yields in Germany, Japan, United Kingdom and United States  
Sources: Bloomberg; RBA

**Graph 3.23**  
**Australian Capital Flows**



\* Prior to 2007 the mining sector is included in the private non-financial sector  
\*\* Excludes official reserves and other RBA flows  
\*\*\* Adjusted for US dollar swap facility in 2008 and 2009  
Sources: ABS; RBA

## Box C

# The Expiry of Interest-only Loan Terms

Many mortgages in Australia are on interest-only (IO) terms. Households take out IO loans for a number of reasons, such as tax incentives and payment flexibility.<sup>1</sup> However, other things equal, IO loans can carry greater risks compared with principal-and-interest (P&I) loans. They allow borrowers to remain more indebted for longer and entail a sizeable step-up in required payments (to include principal) when the loan converts to being a P&I loan.

IO loans had grown rapidly for a number of years in an environment of low mortgage rates and heightened competitive pressures for new loans among lenders (Graph C1).

The share of outstanding housing credit on IO terms increased to almost 40 per cent by 2015. The share on IO terms has always been much higher for investors than owner-occupiers (consistent with the associated tax benefits for investors). But IO loans for owner-occupiers had also grown strongly.

In 2014 and 2015, the Australian Prudential Regulation Authority (APRA) and the Australian Securities and Investments Commission (ASIC) took some measures to reinforce sound housing lending practices, including some that affected IO loans.<sup>2</sup> ASIC also reinforced its position that owner-occupier loans should not have their IO periods extended beyond five years. Then, in March 2017, APRA announced a benchmark that authorised deposit-taking institutions (ADIs)



should limit their new IO lending to 30 per cent of total new residential mortgage lending and, within that, they should tightly manage new IO loans extended at high loan-to-valuation ratios (LVRs).<sup>3</sup> Following the introduction of these measures, most banks decided to raise interest rates on IO loans to be about 40 basis points above interest rates on equivalent P&I loans. This has contributed to a reduction in the demand for new IO loans and provided existing borrowers with an incentive to switch to P&I loans. Many households switched willingly in 2017 in response to pricing differentials. As a result, the stock of IO loans in total housing credit has declined from close to 40 per cent to almost 30 per cent and the share of new IO loans in

1 For more information see RBA (2017) 'Box B: Interest-only mortgage lending', *Financial Stability Review*, April, pp 26–28.

2 For further details, see RBA (2015) 'Box B: Responses to Risks in the Housing and Mortgage Markets', *Financial Stability Review*, March, pp 45–47.

3 APRA (2017), 'APRA announces further measures to reinforce sound residential mortgage lending practices', Media Release No 17.11, 31 March.



total approvals has fallen well below the 30 per cent limit.

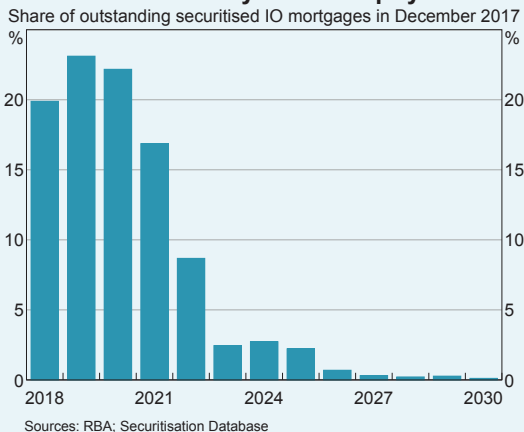
The Reserve Bank's Securitisation Database suggests that the IO period is due to expire by 2020 for around two-thirds of the outstanding stock of securitised IO loans (as at end December) (Graph C2).<sup>4</sup> This is consistent with IO periods typically being around five years. The profile of IO period expiries implies that about \$120 billion of IO loans in aggregate are scheduled to roll over to P&I loans annually over the next three years, or around 7 per cent of the stock of housing credit each year. This volume is not unprecedented. What is different now, however, is that lending standards were tightened further in recent years. This tightening in lending standards, coupled with ASIC reinforcing its position that owner-occupier loans should not have their IO periods extended beyond five years, could affect the ability of some borrowers to extend the IO period or to refinance

to a P&I loan with a longer amortising period so as to reduce required payments on the loan.

The following simple scenario examines the potential effect of the upcoming IO loan expiries on households' cash flows and consumption.<sup>5</sup> By assuming that all of the IO loans revert to P&I as scheduled – which is unlikely – it provides an upper bound estimate of the effect of the transition ahead.

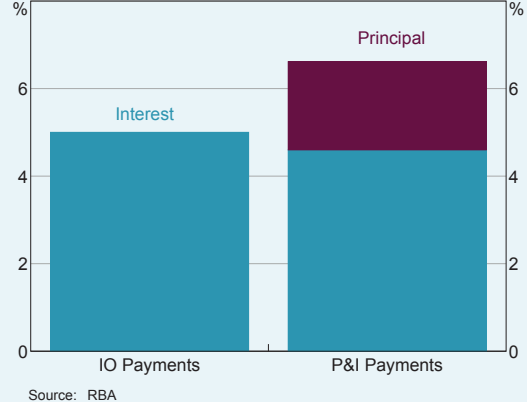
Consider a typical borrower with a 5-year IO period on a 30-year loan and an IO interest rate of 5 per cent. Such a borrower's mortgage payments would increase by around 30–40 per cent when their IO period ends and they begin making P&I payments at a lower interest rate of around 4½ per cent (Graph C3).

**Graph C2**  
**Interest-only Period Expiry**



**Graph C3**

**Loan Payments at Interest-Only Period Expiry**  
Share of loan balance; 30-year mortgage with 5-year interest-only term



The rise in scheduled payments amounts to about \$7 000 per year for the typical IO loan in the Securitisation Database (of around \$400 000). For such households, this is a non-trivial sum. The effect on their consumption though will depend on the extent to which they have

4 Although the Securitisation Database is not necessarily representative of the entire mortgage market across all its dimensions, the aggregate share of IO loans in the Securitisation Database is similar to other measures that cover the broader housing market. For further detail on the Securitisation Database see footnote 1 in the 'Domestic Financial Conditions' chapter.

5 For more detail see Kent C (2018) 'The Limits of Interest-only Lending', Address to the Housing Industry Association Breakfast, Sydney, 24 April.

planned and provisioned for this predictable step-up in payments.

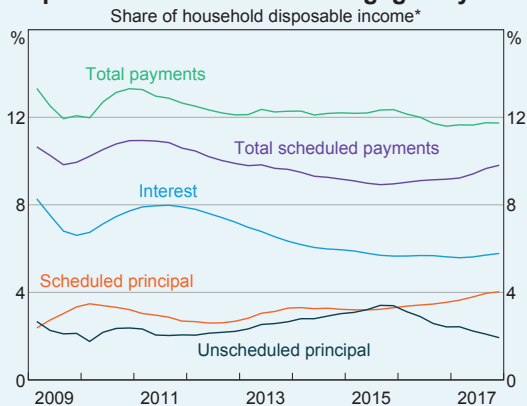
This effect on the typical borrower can be scaled up to get a sense of the size of the aggregate cash flow effect across all households. As a share of total household sector disposable income, the cash flow effect is estimated to be around 0.15 to 0.2 per cent of household income on average per annum over each of the next three years. So for the household sector as a whole, this effect is relatively modest.

The actual cash flow effect is likely to be lower than this for a number of reasons and the effect on household consumption is likely to be lower still.

Firstly, many borrowers make provisions ahead of time for the rise in required repayments. It is common for borrowers to build up savings in offset accounts, redraw balances or in the form of other assets. They can draw upon these to cover the increase in scheduled payments or reduce their debt. Others may not even need to draw down on existing savings. Instead, they can simply redirect their current flow of savings to cover the additional payments. There is evidence that this has been the case for many borrowers that have already switched from IO loans to P&I loans (Graph C4). Scheduled housing loan repayments have increased over the past year as a result of the large number of borrowers switching to P&I loans. Meanwhile, unscheduled payments have declined. With total payments little changed, the rise in scheduled payments has had no obvious implications for household consumption.

Other borrowers could draw upon existing savings to cover the increase in scheduled payments or reduce their debt. About half of owner-occupier loans have prepayment balances of more than 6 months of scheduled payments. Some of the borrowers with more modest balances have relatively new loans; they have

**Graph C4**  
**Components of Household Mortgage Payments**



\* Income is before housing interest costs; rolling four-quarter average; unscheduled principal is the change in the stock of accumulated redraw and offset accounts  
Sources: ABS; APRA; RBA

not had time to accumulate large prepayment balances nor are they likely to be close to the scheduled end of their IO period. Investor loans typically have smaller prepayment balances – offset or redraw – compared with owner-occupier loans, consistent with the associated tax incentives. However, in comparison to households that only hold owner-occupier debt, there is evidence that investors tend to accumulate higher savings in the form of other financial assets (such as prepayment balances on their owner-occupier home loan, equities, bank accounts and other financial instruments).

Secondly, some borrowers will be able to negotiate an extension to their IO period with their current lender or refinance their IO loan with a different lender. Other borrowers may be able to refinance their loan into a new P&I loan, thereby reducing required payments by repaying the principal over a longer term. Based on loans in the Securitisation Database, a large majority of borrowers would be eligible to alter their loans in at least one of these ways. Even for those borrowers unable to roll over to another IO period, most appear to be in a position to service the required P&I repayments.

Thirdly, some borrowers may decide to sell their property to repay their loans, even if this is not their preferred outcome. With significant price appreciation in the housing market in recent years, estimates from the Securitisation Database suggest that many of the households currently facing an IO period expiry will have experienced significant growth in their equity in the property (which may also help them to refinance into a longer P&I term if they desired it). The most vulnerable borrowers would likely be owner-occupiers that still have a high LVR and who might find it more difficult to refinance or resolve their situation by selling the property.

Currently it appears that the share of borrowers who will not be able to afford higher P&I repayments and are not eligible to alleviate their situation by refinancing is small. Liaison with the banks suggests that there are a few borrowers needing assistance to manage the transition. Over the past year, some banks have reported in liaison that there has been a small deterioration in asset quality. For some borrowers this has tended to be only temporary as they take some time to adjust their financial affairs to cope with the rise in scheduled payments. For a small share of borrowers though, it reflects difficulty making these higher repayments. That share could increase in the event that an adverse shock led to a deterioration in overall economic conditions.

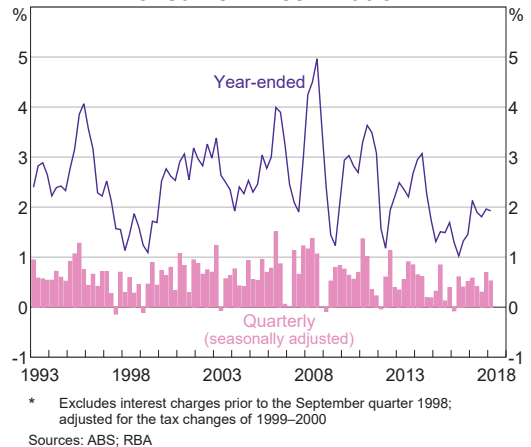
The transition to more limited use of IO loans over the past year has been relatively smooth overall. While that is likely to continue to be the case, this is an area the Bank will continue to monitor closely. ↗

# 4. Inflation

## Inflation remains low and stable

The March quarter inflation outcomes were broadly in line with the forecast in the February *Statement on Monetary Policy* and confirmed that inflation remains low but stable. The low inflation outcomes reflect spare capacity in the economy and the associated low wages growth, as well as the ongoing downward pressure on retail prices due to increased competition in the sector. Headline inflation was 0.5 per cent (seasonally adjusted) in the March quarter and steady at 1.9 per cent over the year (Table 4.1; Graph 4.1). Underlying inflation increased a little to be ½ per cent in the quarter and close to 2 per cent over the year (Graph 4.2).

**Graph 4.1**  
**Consumer Price Inflation\***



**Table 4.1: Measures of Consumer Price Inflation<sup>(a)</sup>**  
Per cent

	Quarterly <sup>(a)</sup>		Year-ended <sup>(b)</sup>	
	March quarter 2018	December quarter 2017	March quarter 2018	December quarter 2017
Consumer Price Index	0.4	0.6	1.9	1.9
Seasonally adjusted CPI	0.5	0.6		
– Tradables	0.2	0.6	–0.5	–0.3
– Tradables (excl volatile items) <sup>(c)</sup>	0.0	–0.6	–0.9	–1.0
– Non-tradables	0.8	0.7	3.1	3.1
<i>Selected underlying measures</i>				
Trimmed mean	0.5	0.4	1.9	1.8
Weighted median	0.5	0.5	2.0	2.0
CPI excl volatile items <sup>(b)</sup>	0.5	0.3	2.0	1.9

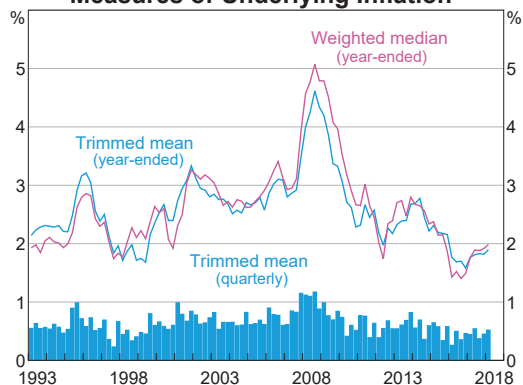
(a) Except for the headline CPI, quarterly changes are based on seasonally adjusted data; those not published by the ABS are calculated by the RBA using seasonal factors published by the ABS

(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 4.2**  
**Measures of Underlying Inflation\***

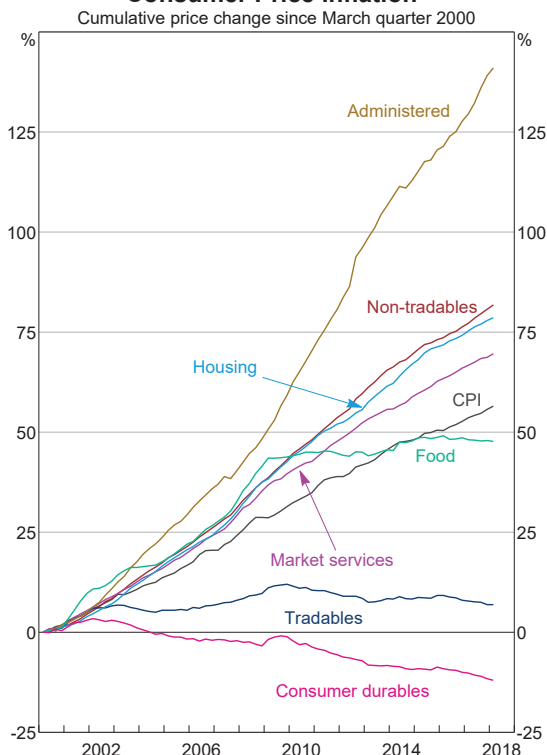


\* Excludes interest charges prior to the September quarter 1998; adjusted for the tax changes of 1999–2000  
Sources: ABS; RBA

Over the inflation-targeting period, inflation in tradable items has tended to be lower and more volatile than inflation in the price of non-tradable items (Graph 4.3). Tradables inflation is heavily influenced by world prices and the exchange rate, whereas inflation in non-tradable items (such as housing, education and household services) is mainly driven by domestic developments. Over the longer run, the different inflation dynamics between the two also reflects productivity growth differences as well as a shift in consumer demand towards services (which tend to be non-tradable).

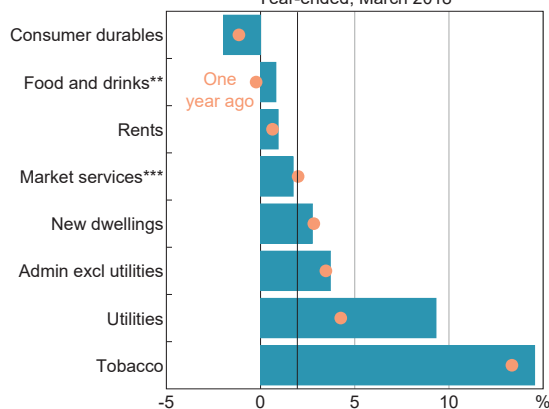
In recent years, the prices of tradable items have declined a little. The prices of grocery food (excluding fruit & vegetables) have been largely unchanged while the prices of consumer durables have declined (Graph 4.4). Non-tradable inflation has been a little lower than its long-run average, largely as a result of spare capacity in the economy and the associated low growth in labour costs (which are the largest component of business costs). However, it has increased over the past two years as a result of higher inflation in such components as tobacco, electricity and new dwelling costs. Over the past year, the share

**Graph 4.3**  
**Consumer Price Inflation\***



\* Adjusted for the tax changes of 1999–2000; administered excludes housing and includes utilities; non-tradables exclude tobacco; housing excludes utilities; tradables exclude tobacco and volatiles; food excludes fruit, vegetables, meals out and take-away; market services exclude domestic travel and telecommunications  
Sources: ABS; RBA

**Graph 4.4**  
**Inflation by Component\***  
Year-ended, March 2018



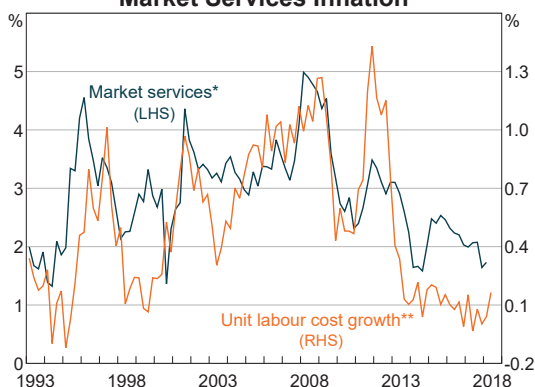
\* Vertical line indicates current rate of headline inflation  
\*\* Excludes fruit, vegetables, meals out and take-away  
\*\*\* Excludes domestic travel and telecommunications  
Sources: ABS; RBA

of items for which inflation has increased has been a little higher than the share of items for which inflation has declined.

## Domestic price pressures remain subdued

An important determinant of non-tradable inflation is growth in labour costs, which has been low in recent years (see below). This has contributed to the slowing in market services inflation (Graph 4.5). A number of one-off factors had also lowered market services inflation in recent quarters, such as the removal of ATM withdrawal fees and reforms to state-based compulsory third-party insurance schemes. Since 2014, there have been technology-driven price declines for telecommunications equipment & services.

**Graph 4.5**  
**Market Services Inflation**



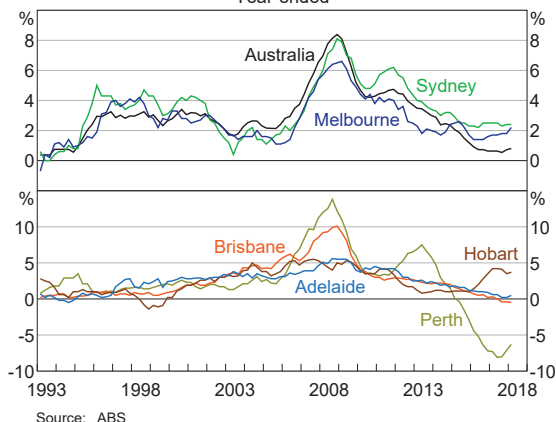
\* Year-ended; includes household services, meals out & take-away and insurance & financial services; adjusted for the tax changes of 1999–2000

\*\* Quarterly; non-farm; eight-quarter moving average; moved forward by two quarters

Sources: ABS; RBA

Other domestic price pressures remain subdued. Rent inflation, which is 7 per cent of the CPI basket, has increased a little over the past six months but remains low (Graph 4.6). Rents have been falling in Perth alongside low population growth and weaker economic conditions than in the other capital cities. However, rent deflation in Perth has slowed over the past year. Meanwhile,

**Graph 4.6**  
**Rent Inflation**  
Year-ended



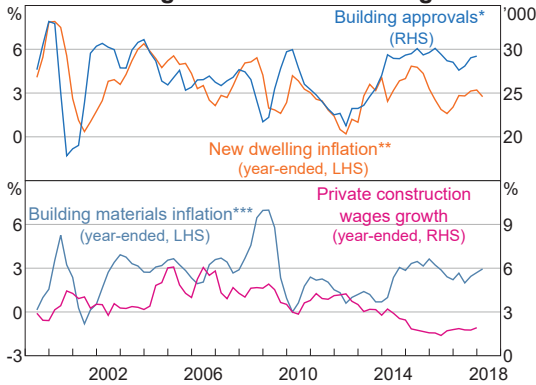
rent inflation remained steady in Sydney and has risen a little in Melbourne, because substantial additions to the dwelling stock have been absorbed by strong population growth.

Price pressures in the costs of building a new dwelling have eased a little since early 2017 (Graph 4.7). Price growth has tended to be strongest in the eastern capital cities, where most of the new residential construction is occurring. The cost of building apartments has grown at a slower pace than the cost of building a house. Overall construction wages growth remains low, although reports from the Bank's liaison program indicate that shortages of specialised labour have translated into stronger price pressures for some firms.

Utilities price inflation has increased over the past year, contributing 0.4 percentage points to year-ended headline inflation (Graph 4.8). The increase in gas and electricity prices reflects the pass-through of an increase in wholesale prices, which rose over the past year in response to a decline in electricity generation capacity. In the March quarter, there were sizeable increases in Victorian electricity and gas prices. There is little evidence that businesses have passed on high utilities prices to consumers. Wholesale electricity

**Graph 4.7**

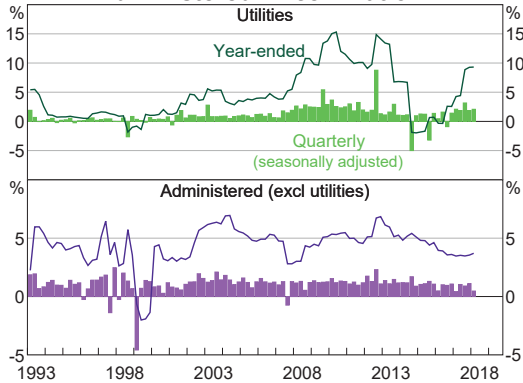
**New Dwelling Inflation and Building Costs**



\* Three-month rolling sum; private non-house building approvals included from 2017 onwards with a weight of 20 per cent to be consistent with weights in new dwelling inflation  
 \*\* Adjusted for the tax changes of 1999–2000  
 \*\*\* For houses  
 Sources: ABS; RBA

**Graph 4.8**

**Administered Price Inflation\***



\* Adjusted for the tax changes of 1999–2000  
 Sources: ABS; RBA

prices have declined from the high levels reached in 2017.

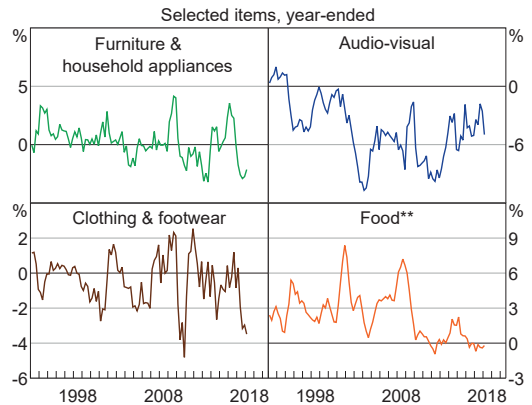
Inflation in other administered prices has been little changed over the past year. Labour costs are about two-thirds of the final price for the items in this group, which includes the price of health, transport, education and childcare services. Tobacco inflation remained elevated in the March quarter due to ongoing increases in the tobacco excise. After 2020, legislated tobacco excise increases will be smaller in size.

**Retail competition continues to put downward pressure on consumer prices**

The prices of tradable items (excluding volatile items) have declined by around 1 per cent over the year. Over the period, there was little change in the prices of grocery food (excluding the volatile fruit & vegetables component), while price falls in consumer durables have accelerated (Graph 4.9).

**Graph 4.9**

**Consumer Durables and Food Inflation\***

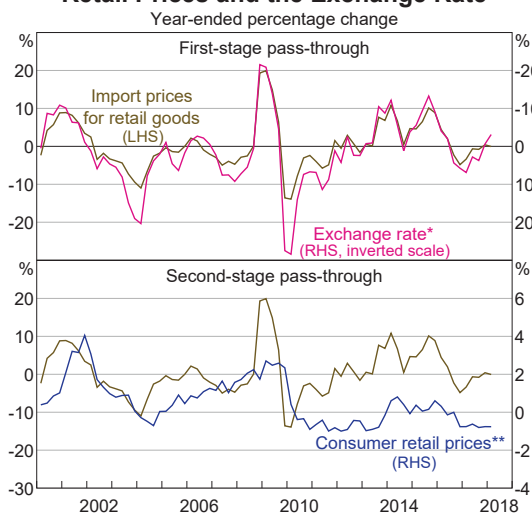


\* Adjusted for the tax changes of 1999–2000  
 \*\* Excludes fruit, vegetables and meals out & take-away  
 Sources: ABS; RBA

A couple of factors are contributing to ongoing retail price deflation. Firstly, firms have continued to adjust their pricing strategies in response to constrained retail spending and intense competitive pressures in the retail industry over recent years. Many retailers report they are transitioning to ‘everyday low price’ strategies, whereby prices are permanently lowered on a range of goods in an attempt to increase sales volumes. In addition, reports from liaison suggest that the frequency of discounting periods has increased and a larger number of products are being discounted than previously. Secondly, with the exception of higher utilities prices, retail input cost pressures have been low. Retail rent growth

remains low, except for moderate rises in retail rents in the CBDs of Sydney and Melbourne. As discussed below, subdued labour cost growth is not contributing to a build-up of price pressures at present. Despite a modest depreciation of the import-weighted exchange rate over the past year, import prices have been little changed (Graph 4.10).

**Graph 4.10**  
**Retail Prices and the Exchange Rate**



\* Import-weighted index; quarter average  
\*\* Adjusted for the tax changes of 1999–2000  
Sources: ABS; RBA

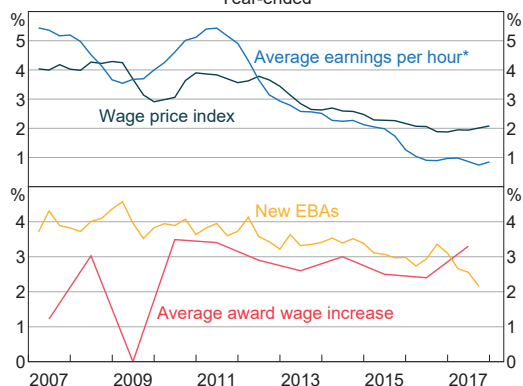
## Wages growth has picked up a little, but remains low

Low wages growth over recent years has contributed to subdued inflation outcomes because wages are the largest component of business costs. There are a number of reasons for low wages growth: spare capacity remains in the labour market; inflation has been low and most parties expect it to remain so; and the economy has been adjusting to the end of the mining investment boom and the earlier terms of trade decline. Broader compositional changes in the labour market have also affected growth in labour costs. The Australian experience

of low wages growth is common with a number of advanced economies, including some with tighter labour markets. This points to similar factors weighing on wages growth across a range of countries, such as changes in relative bargaining power and the effects of technological change and globalisation. Real wages in Australia have been relatively unchanged for a number of years.

Growth in the wage price index (WPI) edged up to 0.6 per cent in the December quarter and 2.1 per cent over the year (Graph 4.11). Aggregate wages growth was boosted by the Fair Work Commission's decision to increase award and minimum wages by 3.3 per cent, effective from 1 July 2017. This flowed directly to around 20 per cent of all employees. However, even in industries with a relatively high share of employees on individual agreements, wages growth also picked up a little over the year. In particular, wages growth in mining-exposed industries stabilised or moved a little higher after a period of very low wages growth (Graph 4.12).

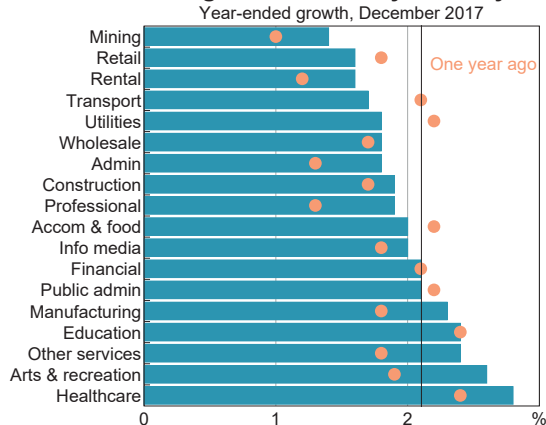
**Graph 4.11**  
**Wages Growth**



\* 9-quarter centred moving average  
Sources: ABS; Department of Jobs and Small Business; FWC; RBA



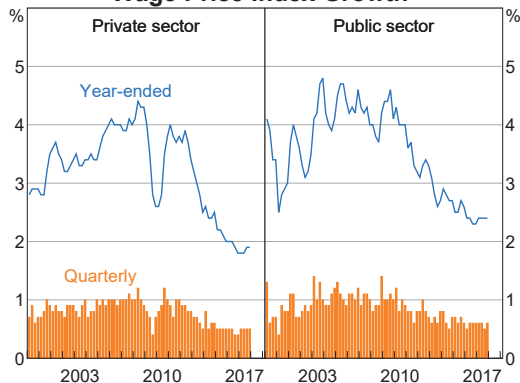
**Graph 4.12**  
**Wage Price Index by Industry\***  
Year-ended growth, December 2017



\* Black vertical line indicates current aggregate year-ended growth  
Sources: ABS; RBA

Public sector wages grew faster than in the private sector over the past year (Graph 4.13). This reflects the higher wages growth in industries such as health and education that have a higher share of public sector employment. The public sector also has a larger share of employees on enterprise bargaining agreements (EBAs). EBAs have an average duration of a little over three years. Average wages growth in new EBAs has declined over the year.

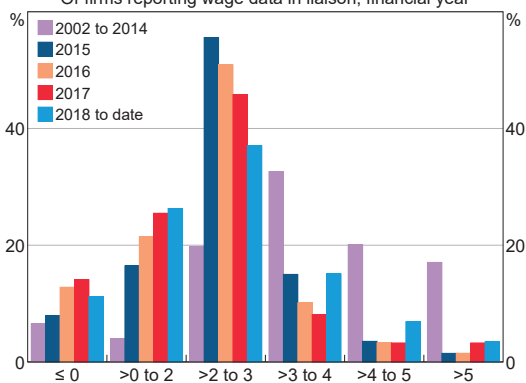
**Graph 4.13**  
**Wage Price Index Growth\***



\* Excluding bonuses  
Source: ABS

The majority of firms surveyed in the Bank's liaison program expect wages growth to remain broadly stable over the year ahead. This is also consistent with a survey of union officials. However, the share of surveyed firms that expect stronger wages growth in the period ahead has slowly trended higher. Around one-third of all firms reported wages growth of less than 2 per cent (including wage cuts) over the past year (Graph 4.14). A large share of reported wages growth outcomes remain around 2–3 per cent, which continues to suggest some anchoring around CPI outcomes and the Bank's inflation target. However over the past year, there has been a pick-up in the share of firms indicating wages growth outcomes in excess of 3 per cent. This reflects the increase to award and minimum wages during the year, as well as the impact of labour shortages in select occupations. Previous Bank research using micro WPI data showed that changes in the share of 'large' wage rises (more than 4 per cent) can have had a significant effect on aggregate wages growth.<sup>1</sup>

**Graph 4.14**  
**Distribution of Wages Growth Outcomes**  
Of firms reporting wage data in liaison, financial year



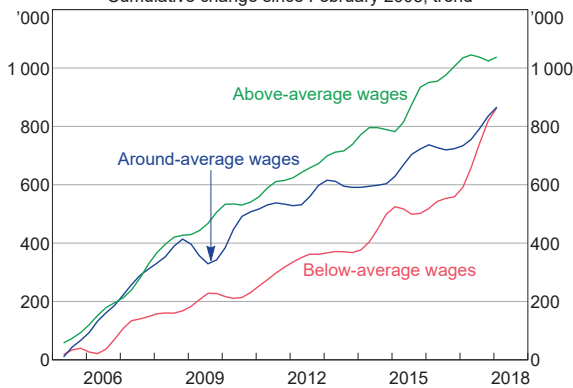
Source: RBA

<sup>1</sup> See Bishop J and N Cassidy (2017), 'Insights into Low Wage Growth in Australia', *RBA Bulletin*, March, pp13–20.

The share of workers changing employers has been at a low level in recent years, and the boost to earnings from changing jobs appears to have declined since the mining boom. However, more recently, there has been a small increase in the share of people who are expecting to voluntarily change or seek another job over the year ahead. There has also been an increase in the share of firms who are finding it difficult to find suitable workers.

A broader measure of labour cost growth is average earnings per hour in the national accounts (AENA). AENA captures a wider range of labour earnings (non-wages costs) than the WPI, including allowance, superannuation and redundancy payments, as well as changes in the composition of employment. Growth in AENA has been weaker than in the WPI over recent years, in both goods-related industries such as construction, as well as in the household services sector. Within construction, this may reflect the slowing demand for construction workers on large-scale mining projects. Broader compositional changes in the labour market appear to also be weighing on AENA. For example, over the past year or so, employment growth has been strongest in those occupations with below-average rates of pay (Graph 4.15).

**Graph 4.15**  
**Employment by Wage Level**  
 Cumulative change since February 2005, trend

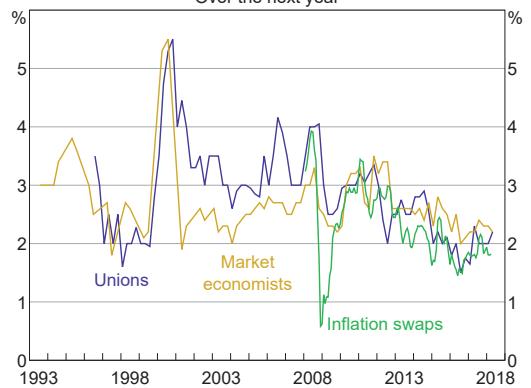


Sources: ABS; RBA

## Inflation expectations are generally consistent with the inflation target

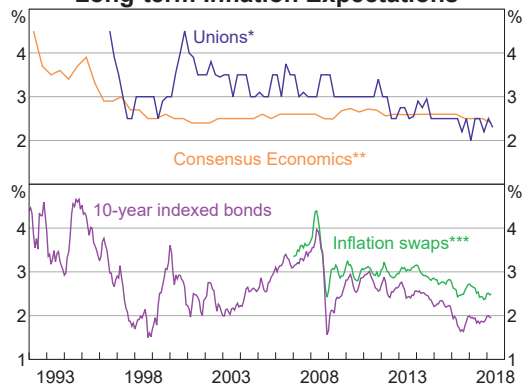
Measures of short-term inflation expectations are low, though they are higher than they were in 2016 (Graph 4.16). Market economists and unions expect inflation to be around 2¼ per cent over the next year. Survey measures of longer-run inflation expectations have edged a little lower but remain around 2½ per cent (Graph 4.17) ↗

**Graph 4.16**  
**Short-term Inflation Expectations**  
 Over the next year



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

**Graph 4.17**  
**Long-term Inflation Expectations**



\* Average over the next five to ten years

\*\* Average over six to ten years in the future

\*\*\* Five-to-ten-year forward

Sources: Australian Council of Trade Unions; Bloomberg; Consensus



# 5. Economic Outlook

Overall, the forecasts are little changed from those presented in the February *Statement on Monetary Policy*. Growth in the global economy has been solid. Global inflation remains low, but is expected to increase as spare capacity diminishes, particularly in some major advanced economies. Indeed, there is a risk that inflation will pick up more quickly than is currently expected, which would have implications for monetary policy decisions and financial markets, as discussed below. Other important uncertainties around the global outlook include the potential for an escalation of trade tensions and the risks around the ability of Chinese authorities to balance the difficult trade-off they face between growth and managing other objectives, such as containing financial stability risks.

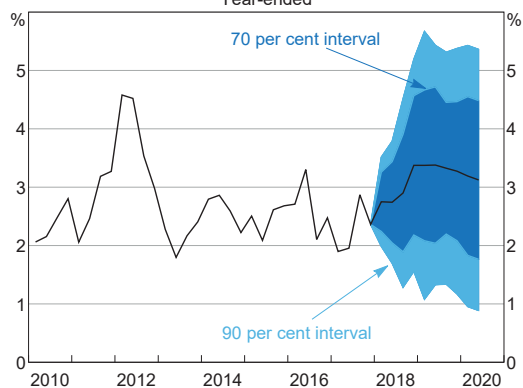
The starting point for domestic final demand growth is somewhat stronger than previously expected because there appears to have been more momentum in household consumption than suggested by initial estimates. Growth in the economy is expected to be around trend in the near term and to increase to be above 3 per cent for the remainder of the forecast period. Consistent with this, employment is expected to grow a little faster than the working-age population and the unemployment rate is expected to decline gradually, to 5¼ per cent. In this environment of diminishing spare capacity, wage pressures are expected to build and underlying inflation is expected to increase gradually from close to 2 per cent currently, to be above 2 per cent by the end of the forecast

period. However, as discussed below, there continues to be considerable uncertainty about how much spare capacity there is in the economy, how quickly it might decline and how this might translate into wage and inflation pressures.

## GDP growth is expected to be stronger in 2018 and 2019 than in 2017

Growth in the domestic economy is expected to strengthen over the forecast period (Graph 5.1; Table 5.1). Upward revisions to household consumption in previous quarters and stronger-than-expected non-mining business investment meant that domestic demand growth over 2017 was stronger than previously thought. Recent indicators point to consumption and non-mining business investment growth maintaining this momentum and exports recovering in the March quarter. Taken together, the available

**Graph 5.1**  
**GDP Growth Forecast\***  
Year-ended



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

**Table 5.1: Output Growth and Inflation Forecasts<sup>(a)</sup>**

Per cent

	Year-ended					
	Dec 2017	Jun 2018	Dec 2018	Jun 2019	Dec 2019	Jun 2020
GDP growth	2.4	2¾	3¼	3½	3¼	3
Unemployment rate <sup>(b)</sup>	5.5	5½	5½	5¼	5¼	5¼
CPI inflation	1.9	2	2¼	2¼	2¼	2¼
Underlying inflation	1¾	2	2	2	2	2¼
	Year-average					
	2017	2017/18	2018	2018/19	2019	2019/20
GDP growth	2.3	2¾	3	3¼	3¼	3¼

(a) Technical assumptions include A\$ at US\$0.75, TWI at 62 and Brent crude oil price at US\$71 per barrel; shaded regions are historical data

(b) Average rate in the quarter

Sources: ABS; RBA

information implies that GDP growth is currently around estimates of potential growth in year-ended terms.

The forecasts for domestic output growth are broadly similar to those presented in the February *Statement*. GDP growth is expected to strengthen a little over the next year or so as the drag from mining investment comes to an end and accommodative monetary policy provides ongoing support for sustained growth in household income and consumption, and non-mining business investment. However, the economy is not expected to encounter broad-based capacity constraints for some time. The implementation of the National Disability Insurance Scheme (NDIS) and public infrastructure investment are expected to continue to boost public demand. Dwelling investment is expected to remain at high levels, supported by a significant pipeline of work still to be done, but it is not expected to contribute to GDP growth over the forecast period.

GDP growth is expected to slow a little towards the end of the forecast period because liquefied natural gas (LNG) production will have reached its steady state. LNG exports are therefore not expected to contribute much to growth after 2019.

These forecasts are based on the technical assumption that the cash rate evolves broadly in line with market expectations, which is for no change until at least the middle of next year. The exchange rate and oil prices are assumed to remain at their current levels. This implies an exchange rate that is about 3 per cent lower on a trade-weighted basis than was assumed in the February *Statement* (and around 7 per cent lower than its mid-2017 peak) and a US dollar price of Brent crude oil that is about 11 per cent higher. The population aged over 15 years is assumed to grow by 1.7 per cent over 2018 and by 1.6 per cent over 2019.

### A further pick-up in investment growth is likely ...

A key development over 2017 was the strong pick-up in non-mining investment, led by strong growth in non-residential construction. The pipeline of non-residential construction work yet to be done and the first read of investment intentions from the Australian Bureau of Statistics (ABS) capital expenditure (Capex) survey for 2018/19 suggest non-mining business investment will remain solid over the coming

year. Further into the forecast period, growth in private sector construction is expected to moderate somewhat, while other forms of business investment, particularly machinery & equipment and computer software, are expected to support growth, consistent with an ongoing economic expansion.

Public demand is also expected to provide impetus to investment growth for some time. As discussed previously, there are positive spillovers from strong growth in public infrastructure investment.<sup>1</sup> Growth in public and non-mining investment is expected to offset some further declines in mining investment as large LNG projects move to completion. The drag from falling mining investment is expected to have disappeared completely towards the end of the forecast period; recent data suggest the trough in mining investment may occur later in 2018 or early 2019 (compared to the Bank's expectation in February that it would be around the middle of this year).

### ... and the current pace of consumption growth is expected to continue

Upward revisions to household consumption over 2017 provide more confidence in the forecasts for consumption growth to remain around its current rate. This forecast is consistent with timely indicators of consumption such as retail sales and consumer sentiment. Further out, the forecast is in line with expected household income growth, which is predicated on ongoing improvement in the labour market and a gradual increase in wages growth. However, the outlook for growth in household income continues to represent a significant uncertainty (see below).

<sup>1</sup> See 'Box C: Spillovers from Public Investment' in the February 2018 *Statement on Monetary Policy*.

### Exports are expected to rise as more LNG production comes on line

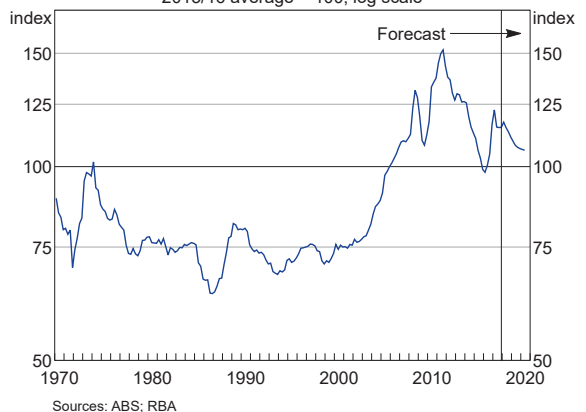
The decline in exports in the December quarter of 2017 appears to have been largely temporary; various supply factors that affected coal exports during 2017 are expected to be resolved in coming quarters, and rural exports fell in the December quarter due to poor weather. Growth in exports over 2018 and 2019 is expected to increase as additional LNG production comes on line and as growth in major trading partners underpins ongoing growth in service and manufactured exports. Imports are expected to remain strong as import-intensive parts of the economy continue to grow.

Chinese demand for bulk commodities, in particular iron ore, is expected to moderate in the period ahead, at the same time as low-cost producers increase supply. This is expected to lead to lower bulk commodity prices over the medium term. Consequently, the terms of trade are expected to decline over the medium term, but to remain above their trough in early 2016 (Graph 5.2).

**Graph 5.2**

#### Terms of Trade

2015/16 average = 100, log scale

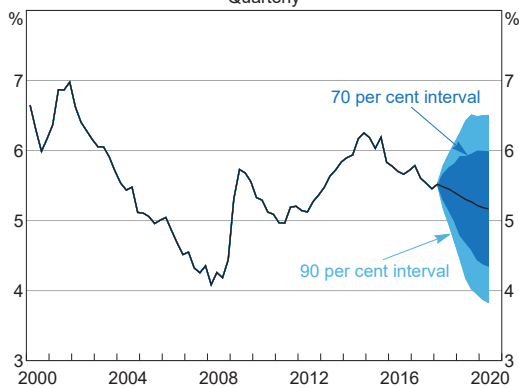


Sources: ABS; RBA

## The unemployment rate is expected to decline gradually

Over the March quarter, employment growth moderated from the very strong pace in 2017, as expected. Higher employment was met by a further increase in participation rather than a decline in the unemployment rate, which has been around 5½ per cent for some months. With GDP expected to grow at or above trend pace, employment growth is expected to be a little above growth in the working-age population over the next couple of years and spare capacity in the labour market is expected to decline. As such, the unemployment rate is still expected to decline gradually over the forecast period to around 5¼ per cent (Graph 5.3). The labour market is expected to still have some spare capacity at that point.

**Graph 5.3**  
**Unemployment Rate Forecast\***  
Quarterly



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

How fast the unemployment rate declines over the next few years will depend on the employment intensity of GDP growth, how many more people in the working-age population will be encouraged to participate in the labour force, and how far wages growth picks up. Importantly, there is uncertainty around the level of the unemployment rate that is consistent with

full employment (that is, spare capacity in the labour market having been fully absorbed). If experience overseas is any guide, this level of the unemployment rate could turn out to be lower than previously assumed.

## Labour cost pressures are expected to increase gradually

There is little change to the outlook for wages growth from the February *Statement*. Wages growth is expected to pick up gradually, as spare capacity in the labour market declines and as any effects of structural factors that are weighing on wages growth start to dissipate. Information from the Bank's liaison program suggests it is not likely that wages growth will decline further. Indeed, although the majority of firms expect wages growth to be largely unchanged over the next year, the share of firms who expect higher wages growth has continued to increase. Furthermore, it is anticipated that the gradual broadening of skill shortages will translate into higher wages growth at some stage. How quickly wages growth picks up will also depend on the award and minimum-wage decisions over the next few years and their influence on wage outcomes in the broader economy, as well as changes to the current caps on public sector wages growth.

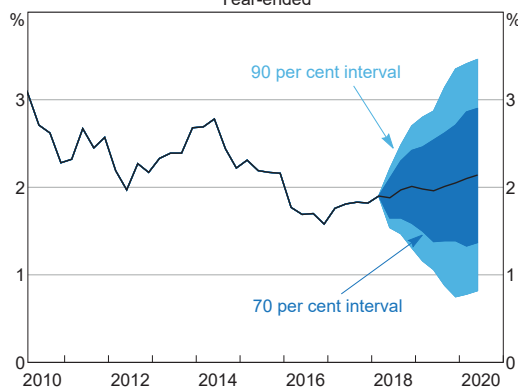
Growth in average earnings per hour from the national accounts (AENA) – a broader measure of labour costs – has been much weaker than WPI growth over recent years, as the economy adjusts to the end of the mining boom. It is expected that AENA growth will pick up faster than WPI growth as the adjustment to the end of the mining boom dissipates and non-wage payments increase as the labour market strengthens. The extent to which a pick-up in wages growth will translate into inflationary pressures will depend on whether there is an accompanying increase in productivity growth. Productivity growth, as

measured, has been relatively weak over the past year or so and is likely to have been affected by some of the compositional factors that have affected AENA growth.

## Inflation is expected to pick up gradually

The March quarter inflation data were largely in line with the forecasts in the February *Statement*. Underlying inflation is expected to gradually increase from close to 2 per cent currently, to be above 2 per cent by the end of the forecast period (Graph 5.4). The forecasts reflect the expected decline in spare capacity in the economy as GDP growth picks up and as the labour market moves towards full employment. Weak retail prices as a result of the structural changes underway in the retail sector are expected to continue to weigh on inflation.

**Graph 5.4**  
**Trimmed Mean Inflation Forecast\***  
Year-ended



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

A key area of uncertainty for the inflation outlook is around how quickly wages growth picks up in response to improving labour market conditions. In terms of components of inflation, the outlook for retail prices also depends on whether consumer discretionary spending will continue to grow at a solid pace and how long the

structural change underway in the retail sector continues to put downward pressure on prices. The outlook for the price of building a new dwelling depends on the residential construction industry's response to competition for labour and material inputs from the non-residential construction underway.

CPI inflation is expected to increase gradually to be a bit above 2 per cent in both 2018 and 2019. CPI inflation is expected to be a little higher than underlying inflation over the next few years. This is a result of the scheduled increases in the tobacco excise.

## Domestically, risks are little changed, while some international risks have risen

A number of key uncertainties surround the forecasts. Domestically, the risks are similar to those discussed in the February *Statement*. There continues to be uncertainty about how much spare capacity is in the labour market and how quickly it might decline, particularly given the recent strength in the participation rate. There is also uncertainty about how much any decline in spare capacity will build into wage pressures and inflation. Wages and employment growth are key components of household income growth, and uncertainty about the outlook for household income growth translates into uncertainty about household consumption and so GDP. Another key source of risk to consumption growth is that high levels of debt are likely to increase the sensitivity of households' consumption decisions to changes in their income or wealth.

For the global economy, an escalation in protectionism measures or geopolitical events could harm global growth. At the same time, there is a risk that global inflation will be higher than expected, prompting a faster tightening of monetary policy and broader financial conditions



in the major advanced economies. In China, while the pace of growth in new financing has declined, debt levels remain high and continue to pose downside risks to growth over the medium term.

### **Domestically, there is uncertainty about the degree of spare capacity in the labour market ...**

Despite very strong employment growth, there has been little change in the unemployment rate since mid 2017. This is because, on net, the increase in demand for labour has been more or less met by an increase in the number of people in the labour force (see 'Box B: The Recent Increase in Labour Force Participation'). The central forecasts assume that the unemployment rate will remain around its current level in the near term before edging lower. However, leading indicators point to the possibility that the unemployment rate could fall faster than expected in the near term; the fact that GDP is expected to grow faster than trend over the forecast period is also consistent with this possibility.

There is always uncertainty around the estimate of the unemployment rate that is consistent with full employment, because it is unobserved and has to be inferred from the data on the unemployment rate and wages growth.<sup>2</sup> For example, the emergence of structural factors, such as a decline in labour's bargaining power or technological change, may be weighing on wages growth. Indeed, in many advanced economies, unemployment rates have fallen below earlier estimates of full employment without a noticeable pick-up in wage pressures. Other considerations for estimating how much spare capacity there will be in the labour market

over the next few years include the level of underemployment in the economy, and how much further the participation rate could rise.

### **... and how this might translate into inflationary pressures**

The outlook for a pick-up in inflation depends on a gradual pick-up in wages growth. If structural factors continue to put downward pressure on wages, it is less likely that there will be a sustained pick-up in underlying inflation. On the other hand, businesses are increasingly reporting skill shortages following a prolonged period of low wages growth, which may suggest that wages growth could pick up a bit faster than is currently forecast.

While labour costs are a key driver of inflationary pressure, competition in the retail sector has had a significant dampening effect on final prices; these effects on margins and final prices are expected to continue over the forecast period. The competition for market share in the retail sector has seen the introduction of new pricing strategies, which are likely to keep retail price inflation weak for some time, but it is difficult to predict when the process of adjusting to lower margins might be completed.

### **The outlook for consumption growth is also affected by uncertainty about the outlook for income growth ...**

Uncertainty about wages growth translates into uncertainty about the growth of household income, which is one of the main determinants of consumption growth. Recent data revisions indicate that household consumption has so far been more resilient to low income growth than suggested by the initially published data; consumption growth has been maintained by households reducing their saving rates.

<sup>2</sup> Cusbert T (2017), 'Estimating the NAIU and the Unemployment Gap', *RBA Bulletin*, June, pp 13–22.

Consumption growth gained momentum over the second half of 2017, coinciding with a period of strong employment growth and increased participation in the labour market, but ongoing weak growth in average wages. This is consistent with the possibility that the propensity to consume rather than save additional income is higher for those who were previously not working than it is for already employed workers increasing their hours. However, if households view lower income growth as highly persistent, consumption growth could be somewhat lower than forecast.

### ... and the high level of household debt

Household indebtedness is high; and debt levels relative to income have edged higher because household credit growth has outpaced weak income growth over recent years. Steps taken by regulators to strengthen household balance sheets have led to a moderation in the growth in the riskier types of lending to households, but risks remain. Even if overall household indebtedness currently appears sustainable, a highly indebted household sector is likely to be more sensitive to changes in income, wealth or interest rates. For example, a highly indebted household facing weaker-than-expected growth in disposable income or wealth is more likely to respond by reducing consumption. Consumption growth may also be weaker for a time if indebted households choose to pay down debt more quickly rather than consume out of additional income.

Housing assets account for around 55 per cent of total household assets, so weaker housing prices could be a factor that leads to weaker consumption growth than is currently forecast. National housing prices have eased following several years of strong price growth. To date, the cooling of conditions in the established housing market does not appear to have dampened

consumption growth. Although the earlier gains in national housing wealth may not have encouraged much additional consumption, it is possible that households' consumption and saving decisions could be more sensitive to an easing in housing price growth.

Tighter lending standards could also affect the outlook for domestic growth. While APRA recently announced plans to remove the investor loan benchmark, the change in dynamics in the housing market and the high level of public scrutiny of lending decisions could see some tightening in the supply of credit. This could affect the outlook for consumption and dwelling investment.

### Risks remain in the global economy that could affect trade

Tensions around global trade have increased over recent months, particularly between the United States and China (see 'Box A: Recent Trade Protectionism Measures' for further discussion of recent measures and their potential effects). The direct effect of the tariff measures announced so far, including on selected steel, aluminium and manufactured 'high tech' products, is expected to be modest because they affect only a small part of the bilateral trade between the United States and China. However, if there is an escalation of protectionist measures in the United States and its trading partners retaliate, it would harm global growth significantly, given the importance of the United States in the global economy. This could in turn lead to a loss of business confidence and lower investment that outweigh any positive effects on US growth arising from a substitution to domestic production. Also, economies at full employment may also see a substantial increase in inflationary pressures and tighter monetary policy. In the longer run, growth is likely to be lower than it would be otherwise because productivity growth is likely to be lower due to less cross-border competition.

Developments in China have some more direct implications for demand for Australian exports and Australia's terms of trade. The authorities are seeking to navigate a difficult trade-off between the near-term imperative to support growth (in line with their targets) and the need to contain financial risks. Financial conditions have tightened over the past year, reflecting measures to restrain leverage and reduce 'shadow banking' related risks through more stringent regulation. At the margin, this has helped ease the build-up of financial stability risks by dampening growth in non-bank financing and facilitating a shift in the composition of funding back towards more traditional bank lending.

However, parts of the Chinese economy have shown signs of softening of late – especially in the industrial sector – which could encourage the authorities to revert to a more accommodative policy stance. The way in which the fiscal and monetary policy mix is calibrated to address this trade-off poses risks in both directions for the forecasts. An easier policy stance could result in Chinese growth being stronger than projected in the near term, at the price of delaying deleveraging. On the other hand, tighter financial regulation in the period ahead could have more of a dampening effect on activity than expected. This could weigh on China's demand for bulk commodities, Australian exports and the terms of trade. Chinese economic policy is further complicated by current rising trade tensions with the United States, which pose downside risks both to Chinese exports and domestic demand if they should escalate

## Global inflation could be higher than expected

Inflation pressures have been slow to emerge in many advanced economies despite ongoing solid growth and spare capacity having now

been largely absorbed. In many advanced economies, growth is expected to remain robust and result in increasing pressure on capacity constraints, which could lead to a much more rapid pick-up in global inflation than currently expected. In the United States, the fiscal stimulus is expected to add to growth and could add more upward pressure on inflation than currently assumed, particularly given that economic conditions are already strong; fiscal stimulus on this scale is unusual in a non-recessionary period.

Wages growth in the United States has picked up only gradually to date but the pace could increase in the future, particularly as labour shortages become more widespread. More generally, wage pressures have not increased by as much as expected in many advanced economies, partly because labour supply has increased in response to strong demand through higher participation rates, especially for females and older people. However, there is limited scope for further sustained increases in participation. The strength of the global economy could also see more widespread inflation pressures emerge through higher global commodity prices than currently assumed.

These conditions could prompt a faster tightening of monetary policy and financial conditions in the major advanced economies than is currently expected. The prices of many financial market assets imply that broad-based global growth is expected to continue without a significant build-up of inflationary pressures. So a sharp rise in inflation, or inflation expectations, and the responses by central banks could prompt a significant adjustment in many asset prices, including by raising risk premia. This could result in losses for investors and less favourable funding conditions for businesses, households and governments, albeit against a backdrop of stronger growth. More broadly, higher interest rates, particularly in the United States, could result in capital outflows from emerging markets. ✎

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## HILDA

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