Statement on Monetary Policy

FEBRUARY 2019

RESERVE BANK OF AUSTRALIA

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Overview

The Australian economy is growing a little above trend, although GDP growth slowed unexpectedly in the September quarter. In contrast, the labour market continues to improve, with the unemployment rate having fallen to 5 per cent. Underlying inflation remains low but is above its trough. The Bank's growth forecasts have been revised down in light of recent data, particularly for consumption. GDP growth is expected to be around 3 per cent over this year and 2¾ per cent over 2020.

With growth expected to be a little above trend and the unemployment rate continuing to decline, underlying inflation is expected to increase gradually, reaching 2¼ per cent by the end of 2020. Lower petrol prices are expected to result in headline inflation falling to about 1¼ per cent in early 2019 before rebounding to be similar to underlying inflation. Forecasts for underlying inflation have been revised slightly lower, reflecting somewhat lower growth and expected near-term weakness in administered and utilities price inflation.

The global economy continues to grow at a solid rate, although global growth moderated in the second half of 2018. Downside risks to the global outlook have increased. Trade tensions are beginning to affect the level and pattern of trade. Growth in most of Australia's major trading partners is nonetheless likely to remain around trend for the next year or so.

GDP growth in China slowed as expected over 2018, following the earlier tightening in financial conditions. However, a range of indicators suggest a more pronounced slowing in momentum. Some of the slowing stems from efforts to rein in shadow financing as well as the effects of recent tariff increases on bilateral trade with the United States. The Chinese authorities have responded with further targeted policy easing, while remaining mindful of the need to limit financial risks and reduce leverage.

Elsewhere in Asia, softer external demand has weighed on growth, including from China. Trade tensions are affecting some economies in the region, particularly those that are part of global supply chains that involve China. But other economies could be expected to benefit if manufacturing firms shift their production out of China to avoid US tariffs and higher Chinese labour costs. Domestic demand in east Asia has generally been resilient.

Growth in the major advanced economies diverged over 2018. In the United States, growth remains strong, partly because fiscal stimulus continues to support consumption spending. Growth in Japan is expected to recover from the effects of natural disasters that occurred in the September quarter. By contrast, growth in the euro area moderated in the second half of 2018. All three major advanced economies have benefited from tight labour markets supporting household spending.

With unemployment rates at multi-decade lows across many major advanced economies, wages growth continues to drift up. Core inflation is around target in the United States and several other advanced economies, but it remains low in the euro area and Japan. The recent decline in oil prices is reducing headline inflation globally.

For most of Australia's trading partners, though, it is also boosting real incomes and spending because these economies are net oil importers.

Financial market conditions in major markets have tightened somewhat over recent months, and volatility in some markets has increased. However, risk premiums generally remain low by historical standards and long-term bond yields have declined as market participants have scaled back their expectations of monetary policy tightening. Lower inflation expectations, driven by the recent decline in oil prices, have also contributed to the decline in nominal yields. The cost of funding for businesses and households therefore remains relatively low. Financial conditions in some emerging markets have eased recently because US bond yields have declined, the US dollar has depreciated and domestic policies have been adjusted in some cases.

Money market rates in Australia remain higher than a year ago. This has increased banks' funding costs a little relative to the average of 2017. In response, banks have increased their standard variable housing interest rates by around 15 basis points. However, banks continue to compete vigorously for lower-risk borrowers, so average interest rates actually paid are little changed and remain low. Competition to lend to larger businesses also remains strong, and growth in credit to these borrowers has picked up in recent months. In contrast, lending conditions for small business are more constrained.

On a trade-weighted basis, the Australian dollar has depreciated a little in recent months, but it remains within the narrow range it has been in for some time. The differential between Australian and major economies' market interest rates has narrowed a little since the end of 2018. This has tended to offset the pressure for the exchange rate to appreciate, stemming from higher commodity prices.

Australia's terms of trade have held up at recent levels, though they are still expected to decline over the next few years. Large movements in the prices of key commodity exports have had opposing effects on the terms of trade of late. Australia has shifted from being a net importer to a net exporter of oil-related products, because liquefied natural gas (LNG) exports have increased significantly over the past couple of years. The sharp decline in oil prices since October, if sustained, will therefore tend to reduce the terms of trade. Following a number of mine closures in Brazil, iron ore prices have increased sharply in recent weeks; the outlook for prices is uncertain, and depends partly on production being restored and whether other sources of supply come on line.

Domestically, GDP growth was weaker than expected in the September quarter. Growth was also revised down for some earlier quarters. Consumption growth was particularly weak, and was revised down for most quarters over recent years. Household income growth was also weaker than expected in the quarter, despite the ongoing solid growth in labour income as the labour market improves.

In light of recent data and revisions to past outcomes, the Bank's forecasts for consumption growth have been lowered. The outlook for consumption growth hinges on household income growth picking up, and by enough to offset households responding to falling housing prices by reining in their spending. Such a pick-up in income growth seems probable given the improving labour market, but is not assured. In the context of high household debt, currently weak income growth and falling housing prices, the resilience of consumption growth is a key uncertainty for the overall outlook.

Dwelling investment has held up at a high level recently. The large pipeline of work to be done has helped sustain this rate of activity and will continue to do so in the near term. But building approvals have fallen and developers report that it is difficult to finance apartment projects and attract sufficient pre-sales to proceed. Dwelling investment could therefore tail off sooner and faster than earlier projected.

The current correction in the housing market is a significant area of uncertainty. Housing prices nationally had increased by almost 50 per cent over the five years to September 2017, and they have fallen by around 8 per cent since then. The decline has been occurring in a benign context of low interest rates, strong population growth and positive labour market conditions, especially in New South Wales and Victoria, where the recent capital-city price falls have been largest. Increased housing supply has contributed to the falls in prices, particularly in Sydney. Rental vacancy rates have increased in Sydney and rental growth has slowed there.

The implications of the housing market correction for the broader economy depend on how households respond, including how they take previous price increases into account in their spending decisions. Households' demand for credit has eased, particularly for investors. Credit supply has also tightened for some borrowers. Meanwhile, growth in credit to owner-occupiers has slowed in recent months but has been around 5½ per cent in annualised terms.

The outlook for business investment remains positive. The remaining LNG projects are close to completion. Once that occurs, mining investment is expected to trend up, bringing to an end an extended period in which it had been a drag on overall economic growth. In non-mining sectors, the pipeline of work in non-residential building and private infrastructure projects remains above averages of recent years, and solid growth in corporate profits is also likely to support investment spending. Recent survey measures of business conditions in the non-mining sector have turned down. If sustained, this would imply a weaker outcome for both investment and employment growth.

Resource exports were affected by supply disruptions in the September and December quarters. As these disruptions are gradually resolved and additional capacity comes on line, resource exports are expected to increase over the next year or so. Drought conditions in key agricultural regions have reduced rural production and exports. Low soil moisture and continued dry weather forecast for some regions imply that a near-term recovery in rural output is unlikely.

Conditions in the labour market have continued to improve. The unemployment rate averaged 5 per cent in the December quarter, and employment recorded another strong increase. Conditions are especially positive in New South Wales and Victoria, where unemployment rates are now in the 4–4½ per cent range. Forward-looking indicators continue to point to above-average employment growth in coming months. If this occurs, it should support a further gradual decline in the unemployment rate.

Consistent with the gradually tightening labour market, wages growth has increased a little in recent quarters. In particular, fewer workers are subject to wage freezes than in recent years. Increases in minimum wage rates have also contributed to the increase. If the labour market continues to improve as expected, wages growth should continue to pick up gradually.

CPI inflation in the December quarter was a little lower than expected three months ago, mostly reflecting the fall in petrol prices in November and December. The recent data did not suggest a major shift in underlying inflationary pressures, which remain low. In addition to the effects of ongoing slow growth in labour costs and rents, decisions around administered prices have helped keep inflation low; this dynamic could continue for a while yet. Deflationary pressures on retail prices eased a little in the December quarter. This partly reflected some pass-through of the modest depreciation in the Australian dollar to retail prices of imported goods.

Lower petrol prices will reduce CPI inflation significantly in the March quarter, but, beyond that, both CPI and underlying inflation are expected to increase gradually as the labour market tightens. Decisions around utilities and other administered prices pose a downside risk to the inflation outlook, but would boost real household incomes.

The Reserve Bank Board has maintained the cash rate at 1½ per cent since August 2016. This expansionary setting of monetary policy has helped support growth and create the conditions for lower unemployment and a gradual increase in inflation. The steady setting of monetary policy has supported stability and confidence in the Australian economy.

At its recent meetings, the Board has paid close attention to developments in the housing market and the implications that lower prices might have for construction activity and households' spending decisions. The Board has also considered how the prospects for consumption growth would be affected if household income growth does not pick up.

The labour market has been strengthening over the past year, but less progress has been seen on the inflation front. The Board continues to judge that further progress in reducing unemployment and bringing inflation into the target range can reasonably be expected. If that scenario should come to pass, higher interest rates would become appropriate at some point. Other scenarios, in which the labour market and consumption growth are weaker than currently expected, are also possible. If there were then to be a sustained increase in unemployment and a lack of progress in returning inflation to target, it might instead be appropriate to lower the cash rate.

In light of the recent data and the inherent uncertainties around the forecasts, the probabilities of these two sets of scenarios have shifted to be more evenly balanced than previously. The Board therefore does not see a strong case to adjust the cash rate in the near term. It will maintain its medium-term focus, aimed at achieving its objectives of full employment, inflation averaging 2–3 per cent and financial stability.

1. The International Environment

Global growth remained above trend in 2018, despite moderating in the second half of the year. The outlook for the global economy has become more uncertain, partly because it is hard to predict how trade policies might evolve and how much support stimulatory policies will provide to domestic demand, especially in China. But after several years of strong growth, labour markets are tight, particularly in the major advanced economies, and this has helped to push up wages growth. Core inflation has picked up in some countries but remains low elsewhere. Headline inflation has declined because oil prices have fallen significantly since their peak in October 2018. Lower oil prices should also support growth, particularly for oil-importing economies, including China, Japan, India, and the euro area.

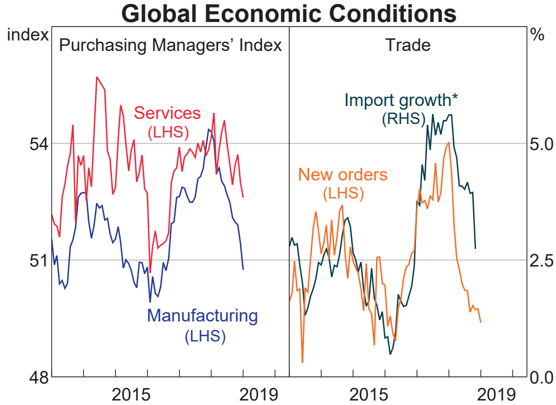
Financial market conditions in most advanced economies tightened somewhat in late 2018, following a lengthy period when conditions were generally very accommodative. The cost of funding for corporations rose, issuance of new debt securities eased, equity prices declined and volatility across global financial markets rose a bit. However, these moves have since been partly reversed, and risk premiums generally remain low by historical standards. In addition, long-term government bond yields have declined, as market participants have scaled back their expectations for central bank policy rates and inflation expectations have declined alongside lower oil prices. As a result, the cost of funding for corporations and sovereigns in major markets remains low by historical standards.

Global growth has moderated

Global growth has been strong for a number of years, but growth moderated in the second half of 2018; in some economies, this easing was partly the intended consequence of tighter financial conditions. In China, the authorities' efforts to prevent an unsustainable build-up in debt and rein in risky 'shadow banking' activities has contributed to slower growth. Monetary policy was also tightened in the United States in 2018 against a setting of strong growth that was boosted by a large fiscal stimulus.

Global trade grew strongly in early 2018, but slowed in the second half of the year (Graph 1.1). Some of the moderation is attributable to the increase in trade frictions, but slower growth in China, unrelated to the trade tensions, also contributed. Trade is closely tied to activity in the manufacturing industry, which reported a decline in conditions throughout 2018 globally.

Graph 1.1
Global Economic Conditions



* Smoothed year-ended growth
Sources: CPB Netherlands; Markit; RBA

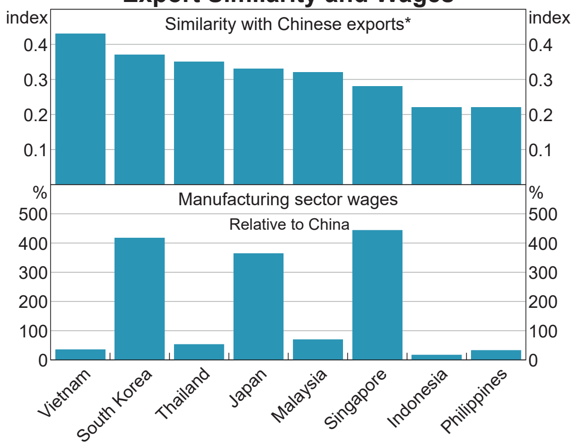
Investment intentions and new export orders declined noticeably in 2018 in a number of economies, reflecting the effects of ongoing trade tensions and increased political uncertainty in some economies in late 2018.

Trade tensions remain high

Trade tensions have been a source of uncertainty over the past year. The United States and China have both increased the tariffs on each other's imports. US exports to China and Chinese exports to the United States fell sharply in late 2018. In late November, the United States and China agreed to delay further tariff rate increases until 1 March 2019 to allow more time for bilateral trade negotiations. Speculation about a possible increase in US automotive tariffs remains a concern for a number of economies, particularly Germany and Japan, because of their large automotive sectors and high exposure to US consumers. The United States is holding trade negotiations with the European Union and has also agreed to enter into bilateral trade talks with Japan.

As discussed further below, there is evidence that the trade tensions are having adverse economic effects and are increasing uncertainty about the outlook for growth in many economies. Some economies are being adversely affected because they are part of cross-border supply chains with China. However, some other economies in the east Asian region may benefit from a restructuring of supply chains aimed at reducing the impact of higher US–China tariffs. Over the past six months, there have been more reports of manufacturing companies shifting production out of China in response to higher US tariffs. Some firms have reportedly shifted the production of automobile parts and electronics to Vietnam, Thailand and Malaysia. These economies produce and export similar products to Chinese exports and have lower labour costs, which was likely to have already been encouraging some production to shift away from China (Graph 1.2). The escalation of US–China trade tensions has accelerated existing plans to shift production to these lower-cost producers in the region.

Graph 1.2
Export Similarity and Wages



* Export Similarity Index; a higher number means that the economy's exports are more similar to China's

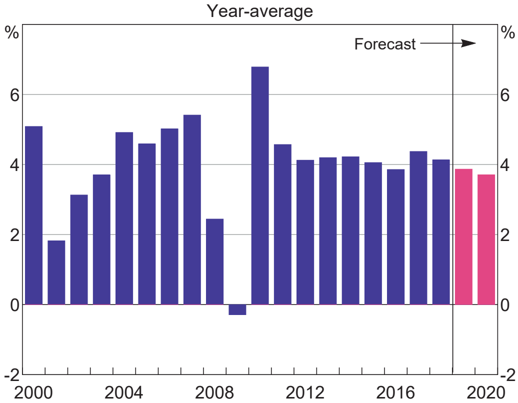
Sources: ILO; Nomura Global Economics; RBA

Trading partner growth is expected to be around trend in 2019 and 2020

Australia's major trading partners are expected to grow by around 3¾ per cent in 2019 and 2020 (Graph 1.3). This should be sufficient to continue to put some upward pressure on global inflation, although headline inflation is expected to decline in the near term because oil prices have fallen. The forecasts for major trading partner growth represent a modest slowing from strong growth in 2017 and early 2018. Reflecting some weaker data at the end of 2018, this slowing is a little more than had been forecast three months ago. The downside risks to global growth have also increased.

In China, GDP growth was 6.6 per cent in 2018, but growth is expected to moderate in 2019, largely because of the previous tightening in financial conditions. In the near term, the pace

Graph 1.3
Australia's Trading Partner Growth*
Year-average



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

of slowing is expected to be tempered by recent targeted fiscal and monetary stimulus, which should also help offset any negative effects arising from trade conflict with the United States. Ongoing trade tensions and the need to manage financial risks mean that there is considerable uncertainty around how these easing measures will affect future growth in China and other economies with strong trade links to China.

Growth in the United States is also expected to moderate from the very strong rates seen in 2018 to be back around trend by 2020. In part, that is because the effects of the recent fiscal stimulus are expected to wane. In addition, monetary policy has become less accommodative over the past year or so. The US Government shutdown during December and January is expected to subtract a little from growth in the first part of 2019. Nonetheless, the US economy is expected to continue operating at full capacity. There are a number of sources of uncertainty for the US outlook, including the effects of trade tensions on domestic firms and an uncertain outlook for fiscal policy in 2020.

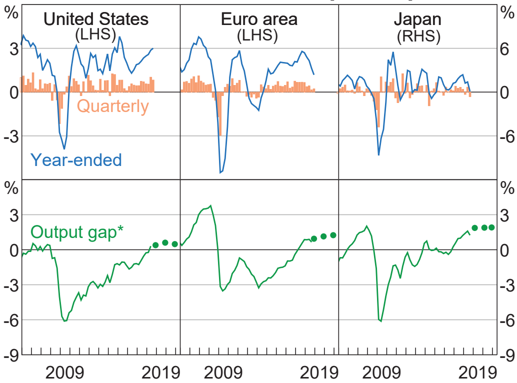
Growth in Japan is expected to be above trend in 2019 as consumption is brought forward ahead of an October 2019 increase in the consumption tax, but to fall below trend in 2020 as fiscal policy tightens. Slower trade growth, particularly with China, has been weighing on growth in the trade-exposed economies of east Asia and the euro area. The outlook for the euro area is also subject to a range of country-specific factors, including uncertainty about the United Kingdom's exit from the European Union, disruptions in the German automotive sector, the repercussions from the recent protests in France and concerns related to sovereign and financial risks in Italy.

Trends in growth across major advanced economies diverged over 2018

Over 2018, growth increased in the United States supported by the large fiscal stimulus (Graph 1.4). Growth in the euro area was around trend, having eased from the strong pace seen in the previous year that had been supported by a large pick-up in growth in exports to China; a number of temporary country-specific factors also contributed to growth easing. Growth in Japan also appears to have moderated over 2018, although the underlying momentum is harder to read given economic disruption from natural disasters in the September quarter.

In the United States, strong employment growth, a further pick-up in wages growth and large personal income tax cuts supported consumption growth in 2018. Business investment, while growing strongly, appears to have been weaker than expected in recent quarters despite the large corporate tax cuts. Investment intentions have eased, but are still at high levels (Graph 1.5). Uncertainty about US trade policies could be part of the explanation. The publication of GDP and

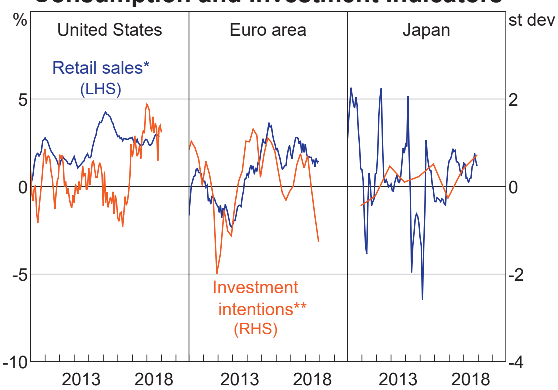
Graph 1.4
Major Advanced Economies – GDP Growth and Output Gaps



* Actual GDP relative to estimated potential GDP from national sources; output gap projections based on central bank forecasts and potential GDP growth estimates; euro area projections are annual averages of quarterly estimates

Sources: Bank of Japan; ECB; FOMC; RBA; Refinitiv

Graph 1.5
Major Advanced Economies – Consumption and Investment Indicators



* Year-ended growth, smoothed; personal consumption expenditure for the United States

** Deviation from post-2000 average for US and euro area and post-2004 average for Japan

Sources: Bank of Japan; RBA; Refinitiv

some other economic data for the December quarter has been delayed because of the US Government shutdown.

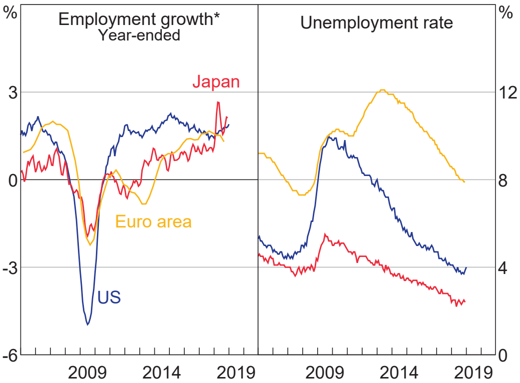
Growth in the euro area eased over 2018, particularly in Germany, France and Italy. Temporary disruptions to German automotive production, as the industry adjusts to new emissions testing standards, the effects of widespread social unrest in France, and sovereign risk and budget uncertainty in Italy had an effect. However, the slowing in growth appears to have been more broadly based, led by a softening in external demand, especially in export growth to China. Investment intentions and business conditions have also declined sharply, although consumption growth has been relatively resilient.

In Japan, natural disasters disrupted economic growth in the September quarter. It appears that domestic demand has since largely recovered but export growth, particularly to China, has eased over the year. Notably, business investment intentions remain high, in part because of investment in labour-saving equipment given a declining labour force as the population ages. Consumption growth has been supported by the strong labour market and, as mentioned above, will be boosted in the near term by activity being brought forward ahead of the consumption tax increase in October.

Labour markets are tight and wages growth is increasing …

Following several years of strong economic growth in the major advanced economies, labour markets have tightened considerably (Graph 1.6). Employment growth has remained high and above growth in working-age populations. As employment prospects have improved, labour force participation rates have risen in the United States and Japan, while the participation rate has been flat in the euro area despite the drag from ageing. Unemployment rates have declined to be below estimates of full employment and are at multi-decade lows in most advanced economies. Firms are reporting widespread difficulties in filling jobs. Vacancy rates have increased strongly in recent years, but increased more slowly late last year in Japan and in the private sector in the United States.

Graph 1.6
Major Advanced Economies – Labour Market

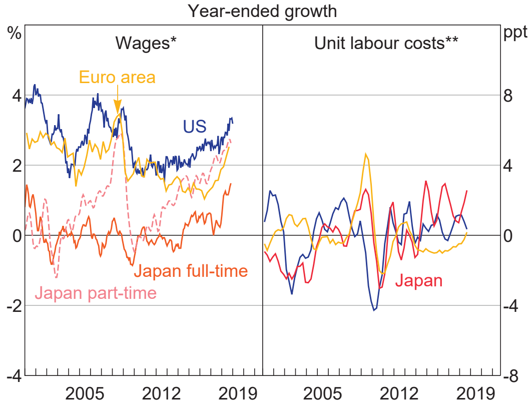


* Three-month moving average for Japan

Sources: Eurostat; RBA; Refinitiv

Graph 1.7
Major Advanced Economies – Wages and Unit Labour Costs

Year-ended growth



* Average hourly earnings for the US; compensation per employee for the euro area; smoothed average full-time scheduled wages and part-time hourly wages for Japan

** Deviations from 20-year average; smoothed

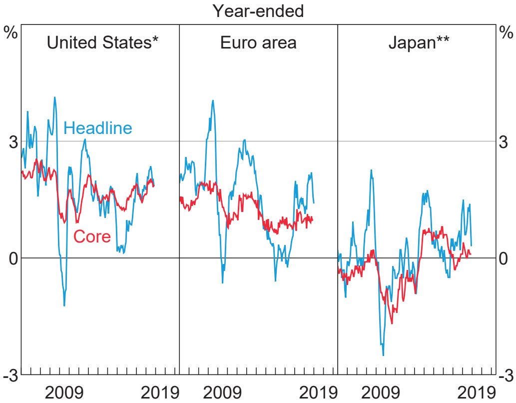
Sources: CEIC Data; ECB; Eurostat; RBA; Refinitiv

The tightening in labour markets has led to further increases in nominal wages growth over the past year (Graph 1.7). But wages growth still appears to be low relative to the tightness in the labour market, especially in the United States. Unit labour cost growth has ticked up in the euro area and Japan, in line with the increase in nominal wages growth and a further slowdown in labour productivity growth. Higher unit labour costs are putting pressure on business margins and could translate into higher inflation in these two economies. In contrast, labour productivity growth has increased a little in the United States (although it is low historically) and, as a result, growth in unit labour costs has slowed despite increases in nominal wages growth. Relatively large increases in minimum wages have been another source of upward wage pressures in some advanced economies (see 'Box A: Minimum Wage Developments in Advanced Economies').

… but core inflation is yet to pick up globally and headline inflation is declining

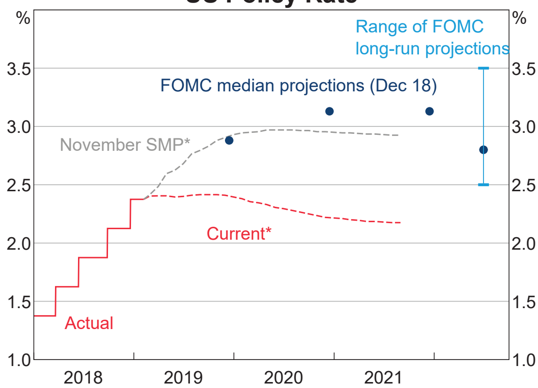
Core inflation is around central bank targets in the United States, Canada, Norway, Sweden and the United Kingdom (Graph 1.8). However, it remains noticeably below target in other advanced economies. Headline inflation has declined recently, and is expected to decline further because of the substantial fall in oil prices since October. Although GDP growth rates are expected to ease towards potential in a number of advanced economies, ongoing capacity constraints are expected to produce steady upward pressure on inflation. In the longer term, after the oil price fall has been fully passed through, inflation is expected to pick up a little in the euro area and Japan, and remain around target in the United States.

Graph 1.8
Major Advanced Economies – Inflation



* PCE inflation
** Excludes effect of the consumption tax increase in April 2014
Sources: RBA; Refinitiv

Graph 1.9
US Policy Rate



* Dashed lines represent expectations implied by market pricing
Sources: Bloomberg; Board of Governors of the Federal Reserve System; Refinitiv

Expected policy rates in the United States and elsewhere have been revised lower …

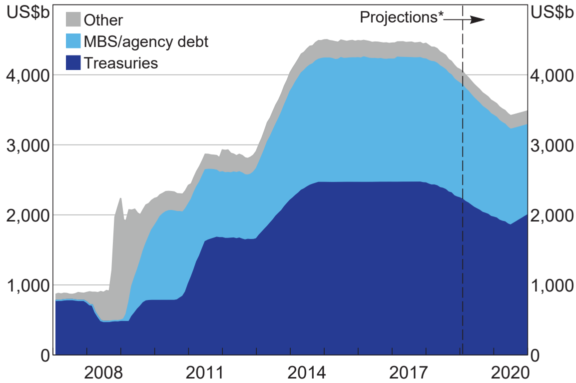
In the United States, financial market pricing now suggests that the Federal Reserve (Fed) has completed its rate increases for the current phase (Graph 1.9). The next move in the federal funds rate is expected to be down, though this is not anticipated to occur until next year. At its January meeting, the Federal Open Market Committee (FOMC) left its policy rate unchanged and removed its forward guidance for further interest rate increases. The FOMC acknowledged increased global economic risks, declines in financial market prices and muted inflation pressures. More generally, in recent communication the Fed has stated that it expects to take a more patient and flexible approach to normalising monetary policy than it had suggested through much of 2018. This approach also reflects the fact that the policy rate is close to the bottom of its range of estimates of the neutral rate.

The Fed expects to continue to reduce its balance sheet gradually as planned (Graph 1.10). However, it has recently signalled a preparedness to be flexible in its approach to normalising the size and composition of its balance sheet in response to any sizeable downward revisions to the economic outlook or dislocations in money markets. Separately, the FOMC has stated that it intends to continue to apply a floor system for implementing monetary policy (i.e. where the Fed maintains an ample supply of reserves and controls short-term interest rates through the rate of interest it pays on these reserves). A formal review of this and its broader monetary policy framework is underway.

Market expectations for policy rates have also been pared back in other advanced economies, albeit to a lesser extent than in the United States (Graph 1.11). Monetary policy settings are expected to remain accommodative and little changed for some time:

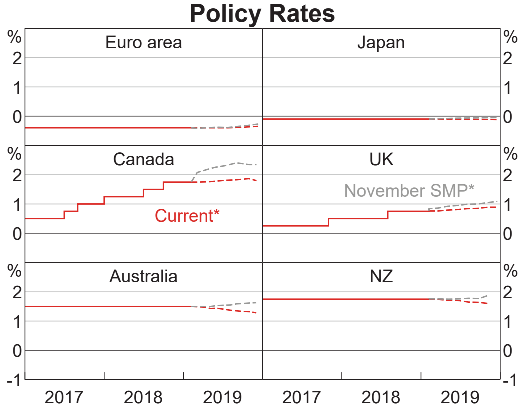
- The European Central Bank (ECB) has noted that the economic outlook for the euro area has moderated and that risks to the downside have increased. However, the ECB has not yet altered its forward guidance, namely, that it expects to leave its policy rates unchanged until at least the latter half of 2019. Market pricing suggests that the ECB is expected to

Graph 1.10
US Federal Reserve Balance Sheet



* Based on the Survey of Primary Dealers and Survey of Market Participants.
Sources: Federal Reserve Bank of New York; RBA; Refinitiv

Graph 1.11
Policy Rates



* Dashed lines represent expectations implied by market pricing
Sources: Bloomberg; RBA; Refinitiv; Tullett Prebon Pty Ltd

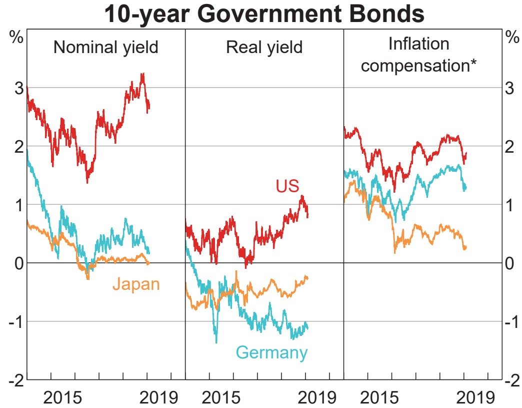
begin raising its policy rates no earlier than 2020, a little later than market pricing had previously indicated. As it had previously signalled, the ECB ceased net asset purchases at the end of 2018. However, it will continue to reinvest the proceeds of maturing securities for some time, maintaining its highly accommodative stance of policy.

- The Bank of Japan (BoJ) continues to provide monetary stimulus by maintaining very low interest rates and expanding its balance sheet. Ten-year Japanese government bond yields have declined to the BoJ's target level of around zero per cent. The BoJ and market participants expect the current policy stance to be maintained for an extended period.
- The Bank of England (BoE) and the Bank of Canada expect to continue to gradually increase their policy rates, with the pace of increases reflecting economic developments. The outcome of Brexit negotiations remains a significant source of uncertainty for the BoE.
- The Reserve Bank of New Zealand has stated that it expects to leave its policy rate unchanged through to 2020.

… prompting declines in government bond yields and a depreciation of the US dollar

Government bond yields in advanced economies fell sharply towards the end of 2018, particularly in North America, although they have since risen a little. The falls primarily reflected a decline in compensation for future inflation across major markets, consistent with the recent declines in oil prices (Graph 1.12). In North America, a decline in real yields has also contributed, consistent with the shift in the expected stance of monetary policy. Term premiums remain low across major markets.

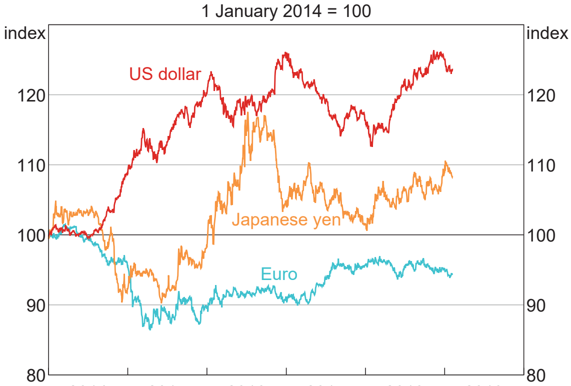
Graph 1.12
10-year Government Bonds



* Difference between nominal yield and real yield
Sources: Bloomberg; RBA

The US dollar has depreciated a little in recent months, consistent with the more pronounced shift in the outlook for monetary policy in the United States than in other major economies. This follows a sustained appreciation for much of the previous year (Graph 1.13). The depreciation has been relatively large against the Japanese yen, as often occurs during periods of increased risk aversion in financial markets. The yen is now around its highest level for the past two years on a trade-weighted basis. In early January, temporary market dislocation led to a very sharp, but short-lived appreciation in the yen, which also affected the Australian dollar (see 'Box B: The Recent Japanese Yen Flash Event').

Graph 1.13
Nominal Trade-weighted Exchange Rates
1 January 2014 = 100

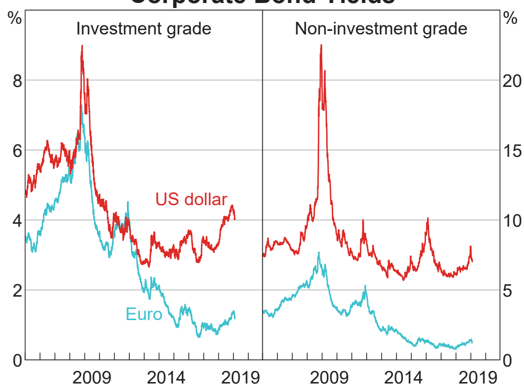


Sources: BIS; Bloomberg; Board of Governors of the Federal Reserve System

But financial market conditions have tightened somewhat, after being accommodative for a prolonged period

In net terms, the cost for corporations of raising funds in long-term debt markets has increased in recent months, particularly for lower-rated borrowers. There has also been a slowing in bond market issuance, although it has picked up of late. These developments appear to reflect some investor concern around the outlook for the corporate sector, against a backdrop of higher corporate leverage and evidence of declining lending standards in recent years. Nonetheless, analysts continue to expect corporate default rates to remain low over the next couple of years. Overall borrowing costs for corporations remain quite low as a result of low government bond yields (Graph 1.14).

Graph 1.14
Corporate Bond Yields

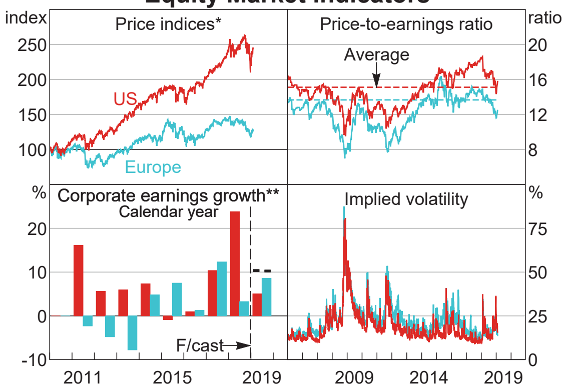


Source: ICE Data is used with permission

Equity markets in advanced economies are around 5–10 per cent below their September peaks, having declined by as much as 20 per cent in late 2018 before rebounding somewhat in 2019. The decline in equity prices reflects slightly lower expectations for corporate earnings growth in the coming years and a rise in the risk premium demanded by equity investors, consistent with an increase in investor uncertainty about the economic outlook (Graph 1.15). However, earnings growth is expected to remain around or above its historical average in major markets. Equity valuations are no longer expensive relative to historical averages.

Spreads in short-term US dollar funding markets (over and above expected policy rates) increased towards the end of 2018 (Graph 1.16). This repeats the pattern of recent years because regulatory factors provide incentives for large banks in the United States and Europe to reduce intermediated lending activity over the year-end

Graph 1.15
Equity Market Indicators



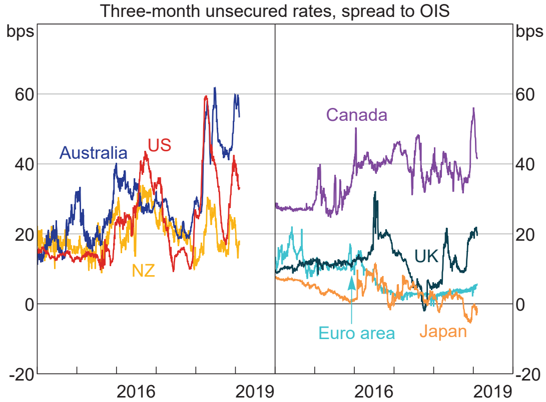
* 1 January 2010 = 100

** Dashes represent analyst estimates for 2019 earnings growth in September, just prior to the beginning of volatility in the equity market. Growth for 2018 is an estimate.

Sources: Bloomberg; Refinitiv

Graph 1.16
International Money Markets

Three-month unsecured rates, spread to OIS



Sources: ASX; Bloomberg; Tullet Prebon (Australia) Pty Ltd

period. Conditions in short-term money markets have eased a little in the new year but spreads remain elevated in a number of countries.

In China, growth has slowed further …

In China, real GDP growth eased to 6.6 per cent in 2018, down from 6.8 per cent in 2017. However, a range of more disaggregated official indicators, such as fixed asset investment and retail sales, suggest a more pronounced slowing over the past year (Graph 1.17). The impact of

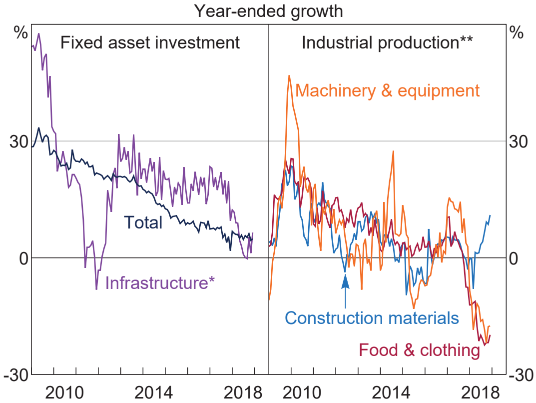
Graph 1.17
China – Activity Indicators

Sources: CEIC Data; RBA

trade tensions on exports was initially cushioned as export orders were brought forward in expectation of higher future tariff rates, but in recent months, exports have declined noticeably. Merchandise imports fell in the second half of the year as the effects of weaker domestic demand began to be felt. In a speech to provincial leaders in January, President Xi Jinping signalled heightened concern about economic risks and instructed officials to increase their sense of urgency, plan ahead and take effective measures to mitigate major threats to economic stability.

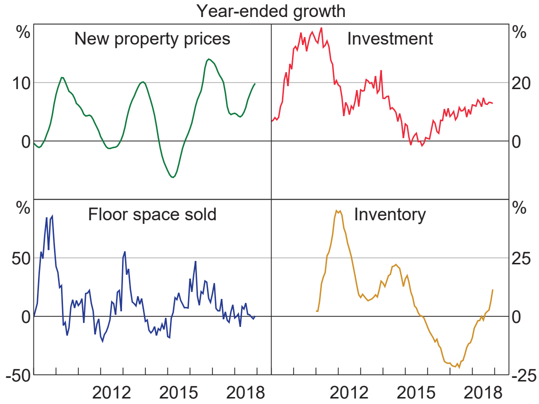
The investment slowdown through most of 2018 was driven largely by lower spending on infrastructure (Graph 1.18). Partly as a result of subdued investment growth, output of a wide range of industrial products fell over the year, and survey measures of Chinese manufacturing conditions declined. However, policies to boost investment, including a series of new approvals for transport projects, have underpinned a rebound in public infrastructure investment in recent months. Stronger spending on infrastructure has, in turn, supported production of construction materials, such as steel, despite localised efforts to cut winter production for environmental reasons.

Graph 1.18
China – Activity Indicators
Year-ended growth



* RBA estimates prior to May 2014
** Gross output measure
Sources: CEIC Data; RBA

Graph 1.19
China – Residential Property Indicators
Year-ended growth

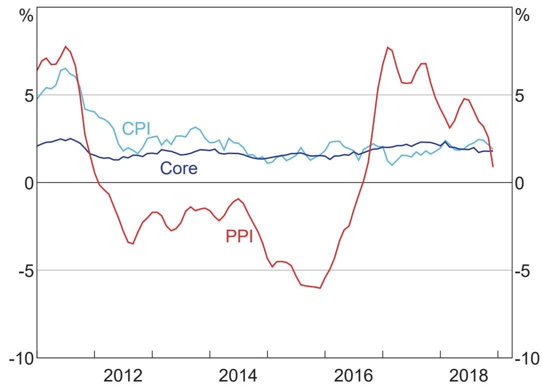


Sources: CEIC Data; RBA

Conditions in Chinese property markets have remained mixed (Graph 1.19). Housing prices have increased further in most cities. Growth in real estate investment has remained strong, but apartment sales have slowed and inventories have begun to accumulate again. Measured growth of real estate investment continues to be mostly driven by growth in spending on land purchases, but spending on construction and fittings has increased a little in recent months. Although some commentators have speculated that the government may loosen property purchase restrictions and loan-to-value ratios in 2019 to help offset weakness in other parts of the economy, the government has not signalled any material relaxation of property regulations.

As a result of sluggish demand in the industrial sector and falling global oil prices, producer price index (PPI) inflation has fallen further in recent months (Graph 1.20). The weakness in producer prices has been broad-based; PPI inflation has eased noticeably in the manufacturing, mining and raw material sectors. Core consumer price inflation has been stable but headline inflation has eased, reflecting falling retail fuel prices and the unwinding of weather-related increases in

Graph 1.20
China – Inflation*
Year-ended



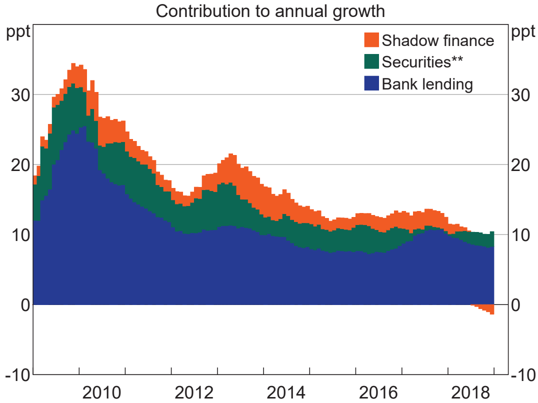
* Seasonally adjusted by RBA
Sources: CEIC Data; RBA

vegetable prices earlier in the year. Food prices may experience some upward pressure in coming months as a result of expected increases in pork prices, reflecting the ongoing spread of the African swine flu.

… partly because availability of finance has tightened

Availability of finance has been tightened in China over recent years as the government has sought to strengthen oversight of risky financial practices and prevent an unsustainable build-up in economy-wide leverage. Together with the structural factors weighing on growth, this has been an important driver of slowing momentum in the Chinese economy. In particular, 'shadow finance' has continued to contract, following a tightening of regulatory scrutiny over the past year (Graph 1.21). While bank lending has been solid overall, driven by lending to households, growth in lending to businesses has fallen, mainly due to a sharp deceleration in lending to micro and small-sized enterprises (MSEs). The slowing in lending to MSEs has reflected banks' more general reluctance to lend to higher-risk borrowers, especially in the private sector, following authorities' efforts to reduce risks in the financial system. According to the People's Bank of China's (PBC) banking climate index, MSEs' demand for credit has increased over the past year, while loan demand from medium and large enterprises has declined (Graph 1.22).

Graph 1.21
China – Total Social Financing*

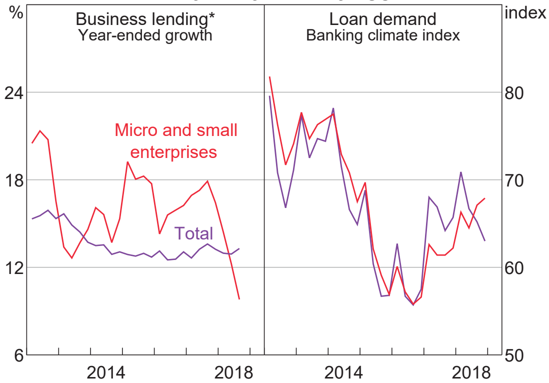


* Seasonally adjusted
** Sum of corporate bond financing, equity financing and bank-accepted bills
Sources: CEIC Data; RBA

Policy is responding with targeted easing measures

Chinese policymakers have introduced further targeted measures to support weaker areas of the economy. In recent months, the central

Graph 1.22
China – Bank Finance



* Seasonally adjusted
Sources: CEIC Data; People's Bank of China; RBA

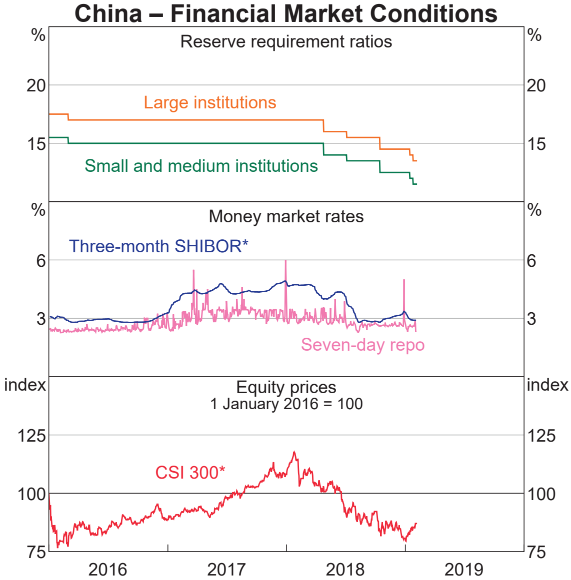
government has approved a series of rail expansions and other transport infrastructure projects. The authorities have also foreshadowed a substantial increase in the issuance of local government special bonds to finance infrastructure investment. The State Council approved a partial quota for local government bond issuance in 2019, which has allowed local governments to bring forward their bond issuance by several months. In addition to boosting fiscal spending, in recent months the government has increasingly focused on tax cuts as a means of supporting growth. In January, the State Council announced a package of new measures to reduce the income tax and value-added tax burden on smaller and private firms.

A number of policies have focused on improving financing conditions for the private sector and, in particular, MSEs. The authorities have called for at least half of all new bank loans to businesses to be allocated to private enterprises within three years (double the current share of outstanding business loans to private firms). They have also instructed banks to lower interest rates for MSEs. The PBC has established a new targeted medium-term lending facility, which provides access to funding on attractive terms for banks that lend to MSEs.

More generally, the PBC has sought to ensure that there is ample liquidity in the financial system. In January, it announced two unconditional 50 basis point reductions in banks' reserve requirement ratios (Graph 1.23). Money market rates have remained at low levels. Bond yields on government and higher-quality corporate debt have declined, in part reflecting the authorities' easing measures and amid continued slowing in domestic growth and inflation. Meanwhile, Chinese equity prices have been little changed on balance since early December, following large declines earlier in 2018.

The Chinese renminbi has appreciated a little since the beginning of the year alongside signs of some progress on US–China trade negotiations and a modest but broad-based depreciation of the US dollar (Graph 1.24). The renminbi depreciated last year amid concerns about economic growth and trade tensions, as well as a narrowing of differentials between Chinese

Graph 1.23
China – Financial Market Conditions

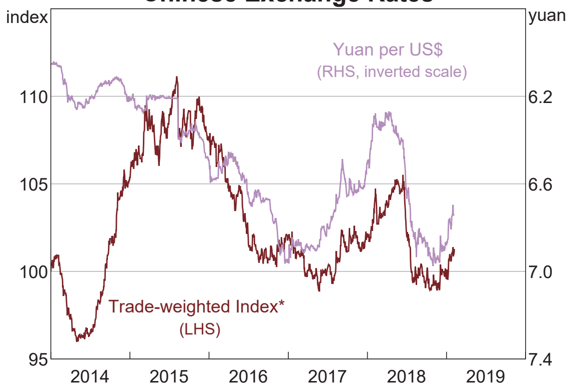


* SHIBOR is an average of the rate at which large banks say they will lend unsecured funds to other banks

** Measures price movements of 300 A-share stocks listed on the Shanghai and Shenzhen exchanges

Sources: Bloomberg; CEIC Data; RBA

Graph 1.24
Chinese Exchange Rates



* Indexed to 1 January 2014 = 100

Sources: Bloomberg; China Foreign Exchange Trade System; RBA

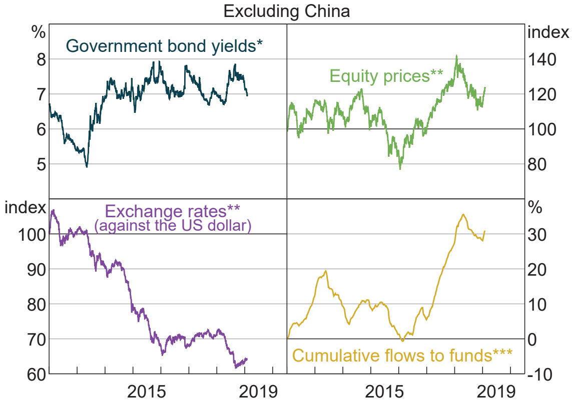
Government bond yields and those of advanced economies. China's foreign exchange reserves have remained stable at around US$3 trillion and private capital outflows have remained modest compared to the period of significant depreciation of the renminbi in 2015–16.

Financial conditions in emerging market economies have stabilised, but risks remain

In recent months, emerging market currencies have appreciated somewhat, equity prices have risen, bond yields have declined and capital outflows have moderated (Graph 1.25). These developments have reflected lower policy rate expectations in the United States and elsewhere, a modest depreciation of the US dollar, a slight easing in US–China trade tensions and the decline in oil prices (which benefits those economies that import oil). Political risks to fiscal positions have also eased in some places, with newly elected administrations in Brazil and Mexico emphasising fiscal responsibility.

Some emerging markets with relatively acute vulnerabilities have continued to undergo significant macroeconomic adjustment following the bout of financial stress last year. In Turkey and

Graph 1.25
Emerging Financial Markets
Excluding China



* Local currency bonds, weighted by market value
** 1 January 2012 = 100
*** Includes flows to bond and equity funds
Sources: Bloomberg; EPFR Global; IMF; JP Morgan; RBA

Argentina, sharp currency depreciations in 2018 added to inflationary pressures and increased the financing burden associated with unhedged foreign currency debt, leading policymakers to significantly tighten monetary policy. Argentina also received an IMF financial package on the condition of a significant fiscal tightening. In turn, economic growth has slowed sharply in both countries and current account deficits have narrowed.

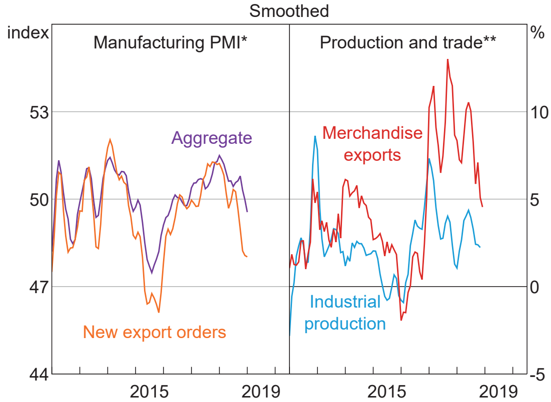
For many other emerging economies, the tightening of financial conditions over 2018 has had a more limited flowthrough to the real economy. In particular, growth in emerging market economies in Asia has remained relatively resilient. For these economies, the tightening in financial conditions has been less pronounced than in some more vulnerable emerging markets. This resilience reflects low external financing vulnerabilities, generally strong institutional frameworks, sustainable fiscal positions and low and stable inflation.

Nevertheless, there remains a risk that financial conditions in emerging markets could tighten further in the period ahead. Concerns persist over trade tensions and that there could be a more marked slowdown in global growth, particularly in China. Emerging markets in Asia may be more exposed to these risks given their integration into global supply chains, which often include China. Political developments are also likely to remain a focus in the year ahead because elections are expected in a number of emerging markets, including in Asia.

Growth in east Asia eased a little over 2018

In the east Asian region, softer external demand has weighed on growth in most high- and middle-income economies. Export growth, while still strong, has eased and surveyed new export orders have fallen sharply to below-average levels in much of the region (Graph 1.26). Industrial production growth and surveyed business conditions have also declined in recent months, but remain around average.

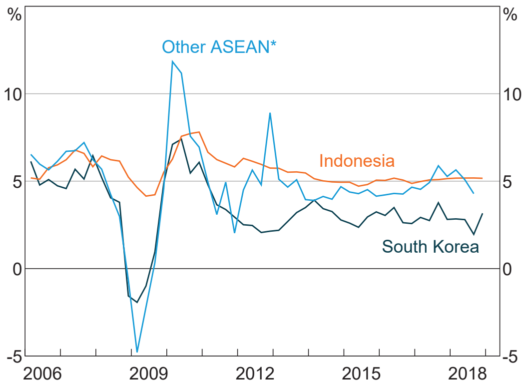
Graph 1.26
East Asia – Economic Indicators
Smoothed



* Purchasing Managers' Index
** Year-ended growth
Sources: CEIC Data; IHS Markit; RBA

In Korea, weaker external demand, particularly for semi-conductors, has weighed on the business sector. Business investment fell over 2018, largely because previous investment initiatives to increase productive capacity in the electronics sector were completed. Construction investment also fell in 2018, following changes to real estate and property taxes aimed at cooling the housing market. Moreover, there has been a considerable decline in Korean consumer confidence, following the sharp weakening in private sector employment growth since early 2018. Despite this, the preliminary estimates point to year-ended GDP growth picking up in the December quarter, partly due to stronger growth in public spending, which follows the introduction of targeted stimulus measures to support business investment (Graph 1.27). Investment growth has generally been strong in the rest of the region.

Graph 1.27
East Asia – GDP Growth
Year-ended



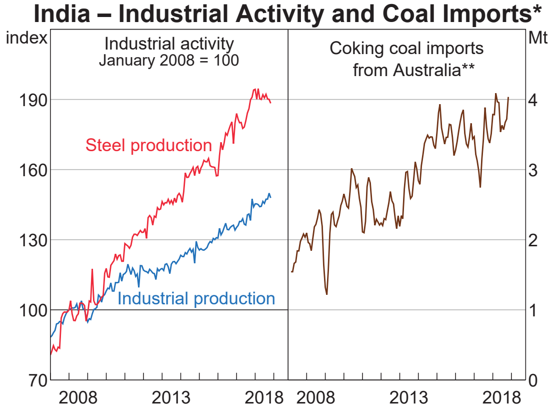
* Includes Singapore, Thailand, Malaysia, Philippines; Vietnam from 2013
Sources: CEIC Data; IMF; RBA

In contrast to the rest of the region, growth in Indonesia has been steady, driven by consumption growth and a broad-based increase in investment growth for both machinery & equipment and buildings & structures. Indonesia undertook a range of measures over 2018 to support capital inflows and stabilise the rupiah exchange rate. An increase in the policy rate has had a very limited pass-through to banks' lending rates, and therefore has not weighed much on domestic activity.

Indian growth remains robust, but conditions have softened at the margin

Growth in India has eased in recent quarters. Private consumption growth has declined a little, partly due to earlier increases in fuel prices, and despite a reduction in the GST on a range of household goods. In contrast, investment growth remains strong and continues to support industrial production (Graph 1.28). Crude steel production in India has moderated a little in recent months, but output remains at high levels, which is supporting coking coal imports from Australia. The merchandise trade deficit narrowed a little in the December quarter, reflecting falls in both oil and non-oil imports. Indian export shipments have grown solidly over the past year, but have moderated a little in recent months, possibly related to the slowdown in global trade.

Graph 1.28
India – Industrial Activity and Coal Imports*

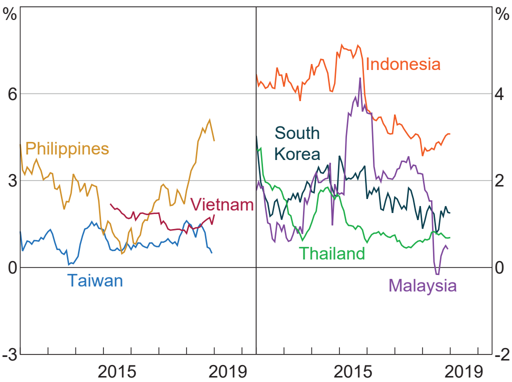


* Seasonally adjusted by the RBA
** Three-month moving average
Sources: ABS; CEIC Data; RBA; worldsteel

Inflation is generally subdued in Asia

Inflation remains generally subdued in Asia, other than in the Philippines and India. Inflation in the Philippines has eased, following substantial monetary tightening since the start of the year, although it remains above the central bank's target as a result of domestic demand pressures (Graph 1.29). Inflation has been volatile in Malaysia due to changes in consumption taxes and has been quite low in recent quarters.

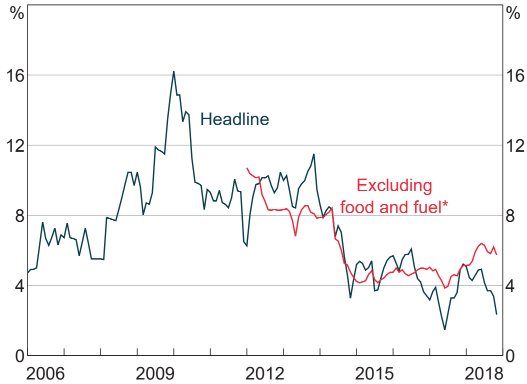
Graph 1.29
East Asia – Core Inflation
Year-ended



Sources: CEIC Data; RBA

Indian CPI inflation moderated further in November as a result of falling food prices and easing retail fuel price inflation (Graph 1.30). The Reserve Bank of India expects headline inflation to remain below its target of 4 per cent (+/–2 per cent) until the second half of 2019, but has warned that recent food price falls could reverse quickly. Core inflation has also eased but remains elevated.

Graph 1.30
India – Consumer Price Index
Year-ended



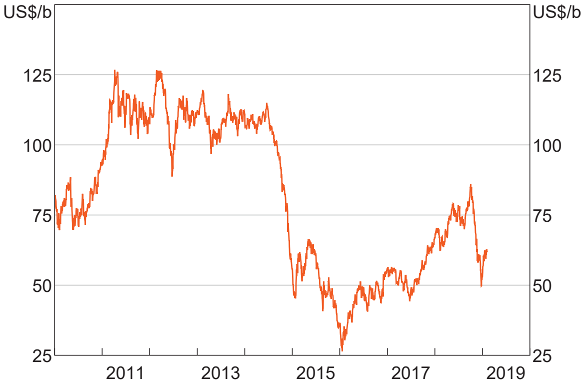
* Constructed by the RBA; food and fuel comprise 52.7 per cent of the CPI basket

Sources: CEIC Data; RBA

Oil prices have declined significantly in recent months

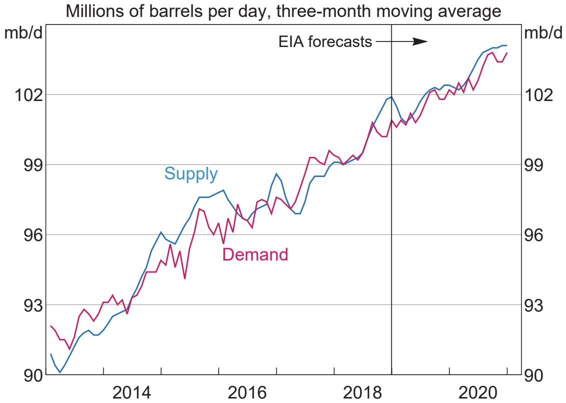
Oil prices have fallen significantly since the previous *Statement*, but have increased somewhat in recent weeks (Graph 1.31). The global supply of oil increased over the second half of 2018 because production increased in a number of countries, particularly in the United States (Graph 1.32). At the same time, expectations for more moderate global growth have weighed on the outlook for global oil demand. In response to recent falls in oil prices, OPEC and a number of non-OPEC countries agreed in December to cut production by 1.2 million barrels per day. However, global production is expected to be sustained at high levels. Over recent weeks, prices have been supported by Saudi Arabia increasing its commitment under the OPEC production cuts.

Graph 1.31
Brent Crude Oil Price



Source: Bloomberg

Graph 1.32
Global Crude Oil Demand and Supply
Millions of barrels per day, three-month moving average



Source: EIA

Graph 1.33
Chinese Steel and Iron Ore Spot Prices

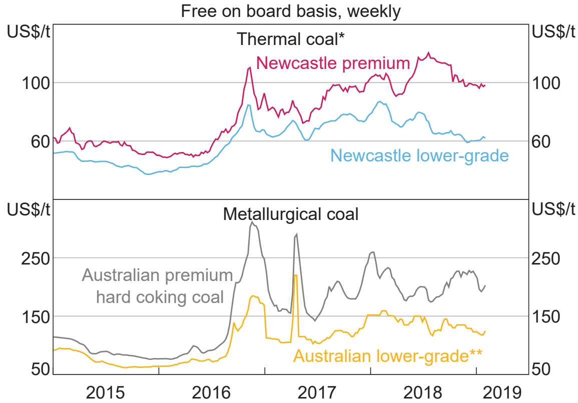
* Average of hot rolled steel sheet and steel rebar prices
** 62% Fe index; free on board basis
Sources: Bloomberg; RBA

Iron ore prices have increased sharply but other commodity prices have been mixed

The benchmark iron ore spot price has increased strongly since the previous *Statement* (Graph 1.33; Table 1.1). Iron ore prices had declined in mid November, alongside a sharp decline in Chinese steel prices, but received some support late in the year as Chinese steel makers increased their demand for iron ore ahead of a seasonal pick-up in production. More recently, however, prices have increased sharply after a tailings dam collapse resulted in the closure of a number of iron ore mines in Brazil. Collectively these mines account for around 4½ per cent of global seaborne supply. While increased production at other Brazilian mines may offset some of this production loss, there remains significant uncertainty around the outlook for seaborne iron ore supply and prices, particularly with iron ore markets currently closed for Chinese New Year.

Coal prices have declined since the previous *Statement* (Graph 1.34). Nonetheless, the spot price of Newcastle premium thermal coal remains elevated, reflecting relatively steady growth in demand and limited growth in supply. Market reports suggest that one factor supporting prices for higher-quality thermal coal has been a shift in demand towards higher-calorific low-ash coal as countries look to reduce pollution and achieve more stringent environmental targets. This shift has contributed to a wider price differential between premium and lower-quality thermal coal. The spot price for premium hard coking coal is lower than its recent peak in early December, reflecting some easing in supply constraints; the constraints were mainly due to Australian port maintenance .

Graph 1.34
Coal Prices



* Newcastle premium energy content is 6,000 kcal/kg; Newcastle lower-grade energy content is 5,500 kcal/kg

** Australian low volatile pulverised coal injection

Sources: IHS Markit; RBA

Base metal prices are little changed since the previous *Statement*. Rural prices have increased because dry conditions in Australia and abroad have reduced the supply of a number of rural commodities.

Australian export prices (including the prices of non-commodity exports) are expected to have increased in the December quarter. Export prices are still likely to decline over the next few years as Chinese demand for bulk commodities eases and further global supply comes online; bulk commodities represent around one-third of Australia's total export values. The value of Australia's oil-related exports, including LNG exports, now exceeds the value of oil-related imports; the fall in oil prices therefore reduces Australia's terms of trade. Nonetheless, the terms of trade are expected to remain above their early 2016 trough (see 'Economic Outlook' chapter).

Table 1.1: Commodity Price Growth(a)

	Since previous *Statement*	Over the past year
Bulk commodities	8	10
– Iron ore	21	21
– Coking coal	–5	–2
– Thermal coal	–2	0
Rural	4	5
Base metals	1	–10
Gold	8	4
Brent crude oil(b)	–11	–8
RBA ICP	1	5
– Using spot prices for bulk commodities	4	9

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

(b) In US dollars

Sources: Bloomberg; IHS Markit; RBA

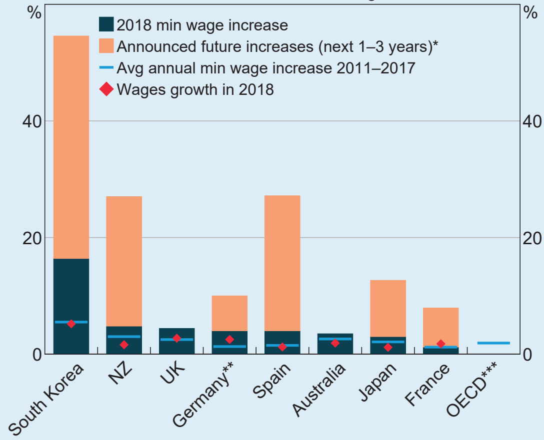
Box A

Minimum Wage Developments in Advanced Economies

Minimum wages were increased substantially in 2018 in several advanced economies, in many cases to fulfil election commitments to reduce inequality. These increases were larger than average minimum wage increases of recent years and aggregate wages growth in 2018 (Graph A1). In Korea, the minimum wage was increased by 16 per cent in 2018, and a further increase of about 30 per cent is planned over coming years. In Spain, the minimum wage was increased by 22 per cent in early 2019, while New Zealand is planning a 21 per cent increase by 2021. Japan's planned minimum wage increases are smaller, but are large relative to Japanese inflation and aggregate wages growth over the past couple of years. The French government announced an 8 per cent increase in the minimum wage in 2019 following public protests. Germany, where a national minimum wage was introduced only in 2015, plans to increase it in line with the strong growth in aggregate wages over recent years. Some Canadian provinces, such as Alberta and British Columbia, implemented substantial minimum wage increases in 2018.

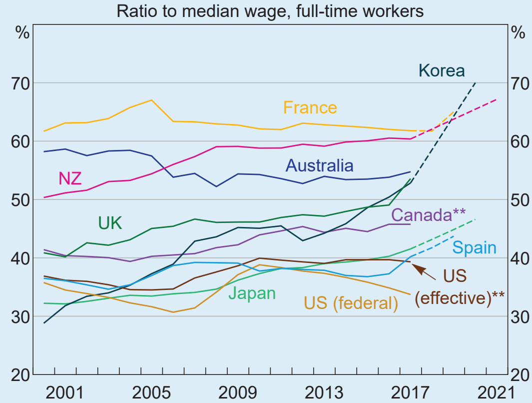
These recent increases have boosted the ratio of minimum to median wages in many advanced economies (Graph A2). In Korea, this ratio has risen steeply since 2000. The Korean government is targeting a ratio of 70 per cent by 2020, which is likely to be the highest among the advanced economies. The United States is a notable exception to this trend: the national ratio is declining there because the federal minimum wage has been unchanged since 2009. However, over half of US states have state-based minimum

Graph A1
Minimum Wage Increases
From 2017 minimum wage



* Announced increases in South Korea by 2020, NZ by 2021, Germany by 2020, Spain by 2019, Japan by 2021, and France by 2019. No announced increases for Australia and UK
** Increase in 2017 from 2016 minimum wage
*** Average of selected OECD countries
Sources: National sources; OECD; Refinitiv

Graph A2
Minimum Wage*
Ratio to median wage, full-time workers



* Dotted lines are projections based on announced minimum wage increases
** Weighted average of state minimum wages for the US, and provincial minimum wages for Canada
Sources: National sources; OECD; RBA

wages that are above the federal minimum and these have increased in recent years. As a result, the effective US minimum wage has kept pace with the median wage over the past decade. In 2018, 18 states increased their minimum wage and a number of states plan substantial increases in coming years.[1] There have also been some high-profile 'internal minimum wage' increases by US companies in recent years, including Amazon and Walmart.

Minimum wage increases could push up aggregate wages growth and increase inflationary pressures, depending on how employment and hours worked are affected. Economic theory does not make strong predictions about the effect on employment but the response is likely to depend on the size of the increase and the share of the workforce who is affected. This could include workers who earn slightly above the minimum wage. Historical experience, which is mainly of small, incremental increases in the minimum wage, suggests little to no effect. However, there is less prior experience of larger increases similar to those seen recently, so it is possible that the effects on employment could be more negative for these recent cases.

A relatively high share of the Korean workforce, around 20 per cent, earns the minimum wage. As a result, aggregate Korean wages growth doubled to nearly 5½ per cent following the substantial 2018 minimum wage increase, and employment growth slowed sharply. It is likely that the negative effect on employment was strong because a large share of the Korean workforce is on temporary contracts and earning the minimum wage, and these workers are quite easy to fire. There appears to have been little impact on inflation so far, although the Bank of Korea has identified the minimum wage increase as an upside risk to its inflation outlook. It is possible that the sustained increases in Korea's minimum wage over the next few years could eventually lead to a pick-up in inflation.

In most other advanced economies the effects are likely to be smaller because the minimum wage increases are smaller. For example, in Japan, the share of workers on the minimum wage is only about half of that in Korea and minimum wage increases have been comparatively modest. So far, employment growth does not seem to have been affected; strong growth in underlying demand for labour could be offsetting effects that might otherwise occur. The effect of minimum wage increases may be more discernible in Spain and in New Zealand, where the increases, just implemented or planned, are substantial. The Reserve Bank of New Zealand, however, expects that the higher wage costs will mostly be absorbed in firms' margins and therefore not affect inflation much.

In Australia, only around 2 per cent of workers are on the national minimum wage, but around 20 per cent of employees are on industry- and skill-specific minimum wages (award wages), which are set in a similar way to the national minimum wage. To date, Australian minimum wage increases have tended to be small and incremental, and have not adversely affected employment via hours worked or job losses.[2]

1 Most notably, the minimum wage is set to increase by about 40 per cent by 2022 in California, which is the largest US state accounting for about 12 per cent of US employment. Other states with planned large minimum wage increases are Michigan, Oregon and New York.

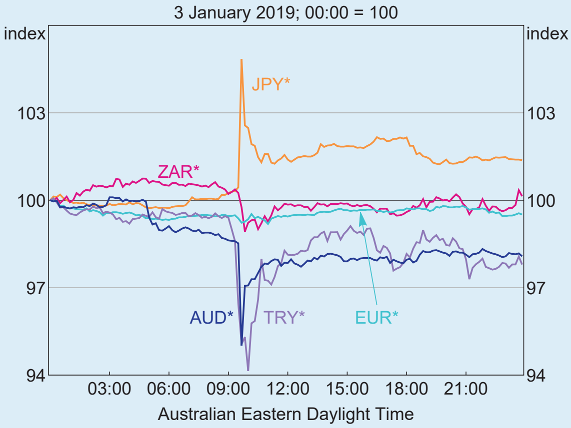
2 See RBA (2017), 'Box C: Minimum Wage Decision', *Statement on Monetary* Policy, August, pp 42–43; and Bishop (2018), 'The Effect of Minimum Wage Increases on Wages, Hours Worked and Job Loss', RBA *Bulletin*, September, viewed 10 January 2019. Available at <https://www.rba.gov.au/publications/bulletin/2018/sep/the-effect-of-minimum-wage-increases-on-wages-hours-worked-and-job-loss.html>.

Box B

The Recent Japanese Yen Flash Event

On 3 January, the Japanese yen appreciated very sharply against the US dollar over a few minutes around the open of the Asian trading session (Graph B1). This 'flash' event quickly cascaded across a number of other markets, with the Australian dollar depreciating sharply during a period of low liquidity. Such events have been observed in recent years in a number of markets. As in those earlier events, prices and liquidity recovered quickly and there were no systemic effects. This Box summarises how the event unfolded and describes several factors that are likely to have contributed to the abruptness of the moves.

Graph B1
Selected Currencies against the US Dollar



* AUD = Australian dollar; EUR = euro; JPY = Japanese yen; TRY = Turkish lira; ZAR = South African rand

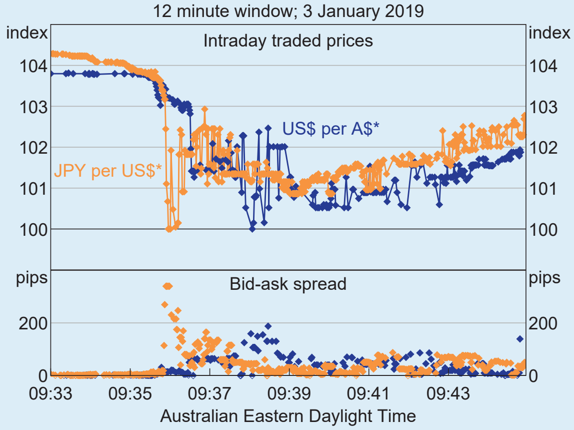
Sources: RBA; WM/Reuters

Timeline of the flash event

The hour leading up to the event saw a general deterioration in risk sentiment, which was reflected in orderly price movements in a number of financial markets. This followed news that Apple had cut its quarterly revenue guidance, citing weakness in some emerging markets and a slowdown in China. In response, Apple shares fell noticeably in after-hours trade and US equity futures declined modestly (the US cash equities market had already closed). US and Australian government bond yields declined slightly in futures markets. In currency markets, the yen appreciated modestly, including against the US and Australian dollars. Some emerging market currencies depreciated, including the Turkish lira. Initial price movements in foreign exchange markets were orderly, with indicators of liquidity such as bid-ask spreads (the difference between the quoted prices for buying and selling) little changed.

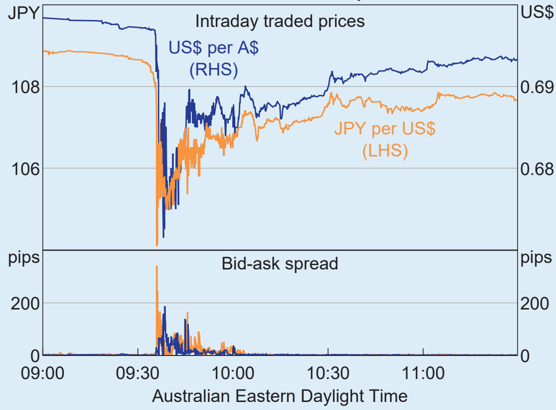
Conditions in foreign exchange markets deteriorated shortly after 9:30 am Australian Eastern Daylight Time (AEDT) (Graph B2). At that time, US and Japanese fixed income and equity (cash and futures) markets were closed and thus currencies were the main vehicle through which global portfolio adjustments could occur. At 9:36 am AEDT, over the span of about 30 seconds, and in the absence of any material news, the yen appreciated by 3 per cent against the US dollar amid a significant imbalance between orders to buy and sell yen. Bid-ask spreads also widened

Graph B2
Currency Flash Episode
12 minute window; 3 January 2019



* intraday trough = 100
Sources: RBA; Thomson Reuters

Graph B3
Currency Flash Episode
2.5 hour window; 3 January 2019



Sources: RBA; Thomson Reuters

substantially from around 2 pips to 100–300 pips (i.e. 1–3 yen, or roughly 1–3 US cents).[1]

The appreciation of the Japanese yen then appeared to set off a sharp depreciation of the Australian dollar. Starting around 30 seconds after the significant move lower in the US dollar against the yen, and within a span of about two minutes, the Australian dollar depreciated by 3 per cent against the US dollar (to be around 7 per cent lower against the yen; Graph B3). That move saw the Australian dollar briefly reach a 10-year low of 0.6715 against the US dollar. Bid-ask spreads widened to over 100 pips (1 US cent) for a short period.

Market conditions then recovered within a few minutes. The Japanese yen and Australian dollar retraced around half of their price moves (relative to the US dollar) and the movements unwound further over the next hour. Market contacts reported a return to normal trading conditions within a few minutes and bid-ask spreads returned to normal levels within an hour.

Factors contributing to the event

It is difficult to draw firm conclusions on the causes of the flash event, partly because foreign exchange market trading activity is fragmented across an increasing number of different platforms. However, three key factors are likely to have contributed to the brief deterioration in market conditions on 3 January.

First, the impact of the liquidation of 'carry trade' positions, particularly of Japanese retail investors (who comprise as much as 10 per cent of total foreign exchange trading in Japan), are likely to have contributed to the disorderly appreciation of the yen. Carry trades involve taking long positions in currencies that have a higher yield than that of the funding (short) currency. Publicly available data on retail positions suggest that Japanese investors held aggregate long positions in high-yielding currencies (including the US dollar, Australian dollar, South African rand and Turkish lira) prior to the event (Graph B4).[2] Retail brokers will automatically liquidate these

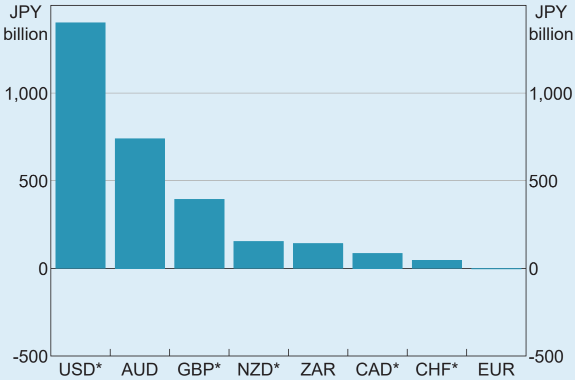
1 Bid-ask spreads are typically measured in 'pips' in foreign exchange markets. For example, the AUD/USD bid-ask spread for a bid price of 0.6900 US dollars and an ask price of 0.6901 US dollars is 1 pip.

2 Data on Japanese retail investor positions by currency are primarily reported by the Financial Futures Association of Japan (over-the-counter transactions) and Tokyo Financial Exchange (on-exchange transactions). Data may provide a partial snapshot of aggregate positioning across platforms.

Graph B4

Japanese Retail Net Long Positioning

End December 2018

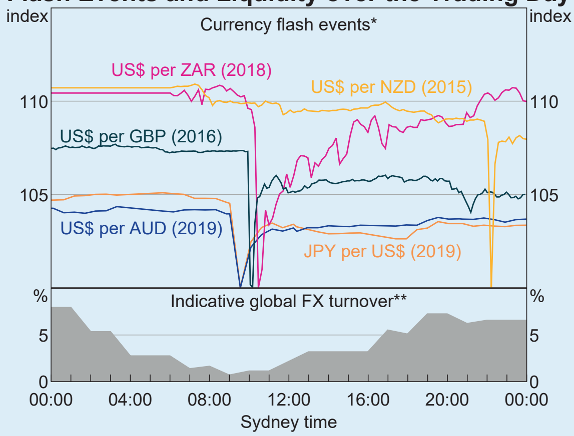


* CAD = Canadian dollar; CHF = Swiss franc; GBP = UK pound; NZD = New Zealand dollar; USD = US dollar

Source: The Financial Futures Association of Japan

Graph B5

Flash Events and Liquidity over the Trading Day



* time in Sydney when flash event occurred; intraday trough = 100

** indicative share of global daily turnover occurring in a given hour; calculation based on average daily turnover and trading hours of six major trading centres; average of winter and summer; Sydney time

Sources: BIS; Bloomberg; RBA

positions (via 'stop loss' orders) if losses due to adverse exchange rate movements exceed pre-determined levels (which are often linked to the value of the equity held in the accounts of the retail investors). On 3 January, following the initial orderly phase of yen appreciation, these automatic orders may have been triggered at an increasing rate. This would have contributed to the outsized depreciation in some high-yielding currencies relative to the yen.

Second, market liquidity was seasonably low at this time of the day and year, making the market more susceptible to imbalances between buy and sell orders. Although foreign exchange markets trade 24 hours a day during the business week, trading volumes are particularly low in the time between the closing of US markets and the opening of the Tokyo session, when Auckland and Sydney are the only foreign exchange centres open. Several flash episodes in the foreign exchange market have been recorded during this time period in recent years (Graph B5). On 3 January, liquidity is likely to have been further reduced due to the time of year (close to New Year's Day and during the vacation period for many participants) and because Japanese banks, many of whom act as foreign exchange market-makers, were closed for a public holiday in Japan. The relative lack of liquidity left the market vulnerable to disruptive price movements.

Third, algorithmic trading strategies may have acted as amplifiers during the flash event. Some algorithmic trading platforms that provide liquidity to the market during normal conditions are programmed to automatically 'switch off' in unusual market conditions, thereby reducing liquidity in the market during stress periods. For a brief period on 3 January, this may have contributed to the unusual widening in bid-ask spreads. Other participants may have added to the imbalance in long yen orders as the currency appreciated, thus amplifying price moves – in particular, 'momentum-based' algorithms (i.e. those betting that the market will continue moving in the prevailing direction) or participants engaged in systematic cross-asset hedging (using spot foreign exchange markets to hedge exposures in other markets) .

As with other flash events in the foreign exchange market, it is also difficult to be definitive about what brought about the restoration of orderly market functioning. In the case of the Australian dollar, market contacts ascribed the intraday low (relative to the US dollar) on 3 January to a combination of discretionary buy orders by traditional market-making banks and institutional accounts, which assisted in re-establishing the process of price discovery. The stabilisation in the price may have been sufficient to trigger the resumption of market-making algorithms, as reflected in the rapid subsequent tightening in bid-ask spreads. However, data limitations prohibit firm conclusions being drawn.

More broadly, while the flash event of 3 January did not lead to wider disruption, it adds to a growing list of extremely sharp moves in foreign exchange (and other asset) markets. These events are likely to owe in part to key changes in the structure of markets more broadly over the past decade; for example, the make-up and behaviour of principals, intermediating agents and trading platforms.

2. Domestic Economic Conditions

Conditions in the domestic economy continue to be supported by low interest rates and growth in the global economy. Australian economic growth was low in the September quarter, but looks to have been firmer more recently and remains a bit above potential growth in year-ended terms. Surveyed business conditions have declined from high levels to be closer to average, and households' sentiment towards their own finances has remained relatively resilient to falls in housing prices. Employment growth remains strong and the unemployment rate declined further to be around 5 per cent in late 2018.

Growth in economic activity is a little above trend

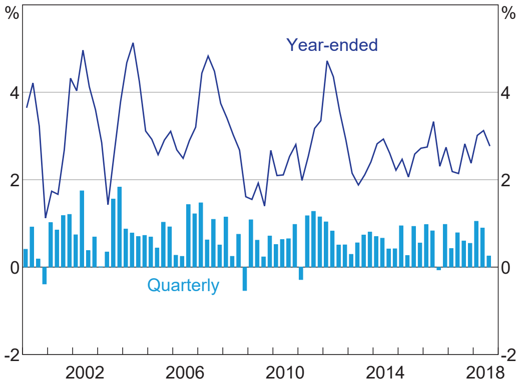
GDP growth in the September quarter eased to 0.3 per cent following two quarters of strong growth (Table 2.1; Graph 2.1). Information from surveys, the Bank's business liaison program and labour market indicators suggest that there was a bit more momentum in domestic demand than implied by the September quarter data. Year-ended growth in the economy remains a bit above estimates of potential growth. Domestic final demand grew by 2.7 per cent over the year, with positive contributions from most components.

Table 2.1: Demand and Output Growth
Per cent

	September quarter 2018	June quarter 2018	Year to September quarter 2018
GDP	0.3	0.9	2.8
Domestic final demand	0.3	0.7	2.7
– Consumption	0.3	0.9	2.5
– Dwelling investment	1.0	1.9	7.1
– Mining investment	–7.5	6.5	–13.6
– Non-mining investment	–0.1	–2.0	3.6
– Public consumption	0.5	0.9	4.8
– Public investment	5.1	–1.1	3.5
Change in inventories[(a)]	–0.3	0.1	0.1
Exports	0.1	1.2	4.1
Imports	–1.5	0.5	1.5
Mining activity[(b)]	–3.0	2.6	3.7
Non-mining activity[(b)]	0.7	0.6	2.6
Farm GDP	–0.9	1.0	–8.1
Non-farm GDP	0.3	0.9	3.0
Nominal GDP	1.0	1.1	5.2
Terms of trade	0.8	–1.1	2.7

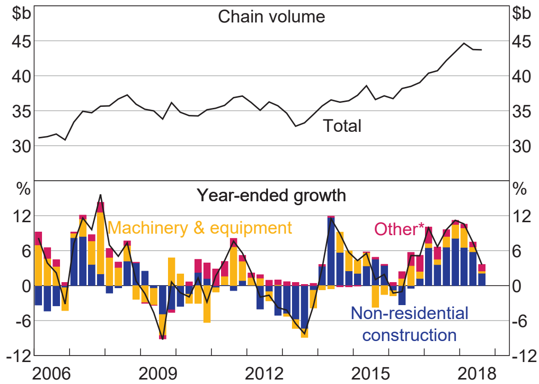
(a) Contribution to GDP growth
(b) RBA estimates
Sources: ABS; RBA

Graph 2.1
GDP Growth



Source: ABS

Graph 2.2
Private Non-mining Business Investment
RBA estimates



* Includes cultivated biological resources (mainly livestock, vineyards, and orchards), computer software, research & development and artistic originals

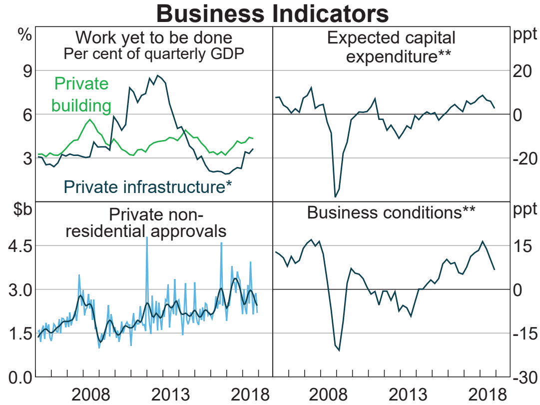
Sources: ABS; RBA

Non-mining business investment has moderated, but indicators generally remain positive

Private non-mining business investment was little changed in the September quarter, but grew by 3½ per cent over the year (Graph 2.2). Growth over the year was led by non-residential construction activity, which includes buildings and infrastructure-related projects. The rapid pace of building activity seen over 2017/18 has moderated recently for most building types, while private sector spending on infrastructure-related projects remains elevated, supported by electricity projects (including renewable energy), as well as road and water projects. Machinery & equipment investment also expanded over the year, partly reflecting an increase in firms' purchases of motor vehicles.

Leading indicators point to continued growth in non-mining business investment over the next year or so. Private non-residential building approvals remain around their average since 2016 and the stock of work yet to be done on private buildings has increased over the past couple of years, led by offices (Graph 2.3). The pipeline of work yet to be done on private infrastructure projects has also risen over the past year or so, with road and electricity projects prominent.

Graph 2.3
Business Indicators



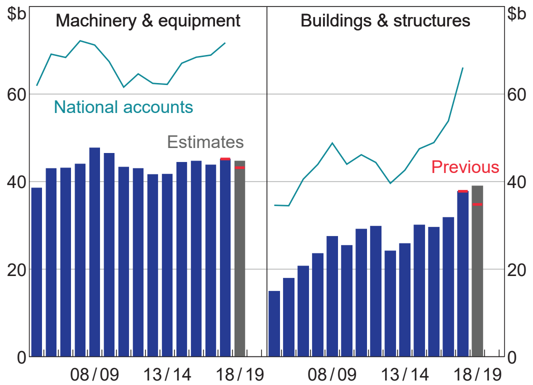
* Excludes resources and other heavy industry

** Non-mining; NAB survey; net balance, deviation from long-run average

Sources: ABS; NAB; RBA

Investment intentions for 2018/19 reported by firms in the Australian Bureau of Statistics (ABS) Capital Expenditure (Capex) survey were revised higher in the most recent survey and point to solid growth in buildings & structures investment (Graph 2.4). By industry, the largest contribution to the upgrade in expectations came from the transport sector. Survey indicators of business conditions have declined from the very high levels seen in the first half of 2018 to be closer to their long-run average.

Graph 2.4
Non-mining Capital Expenditure*
Nominal



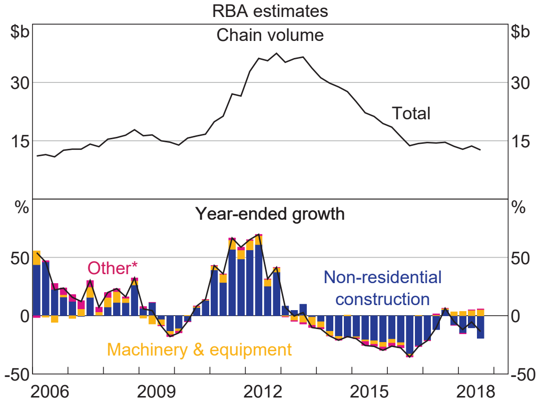
* Estimates are firms' expected capital expenditure; adjusted for past average differences between expected and realised spending

Sources: ABS; RBA

The long decline in mining investment is almost complete

Mining investment declined sharply in the September quarter as construction on the remaining liquefied natural gas (LNG) projects continued to wind down (Graph 2.5). There may be some further declines in mining investment over the remainder of 2018/19, but they are likely to be smaller than those seen in recent quarters. The Capex survey, information from the Bank's liaison program and company announcements

Graph 2.5
Mining Investment
RBA estimates



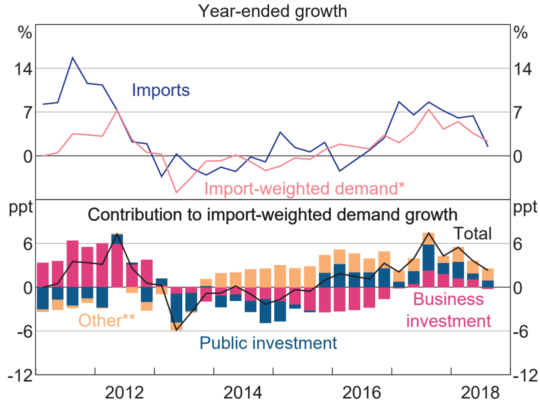
* Includes mineral exploration, computer software and research & development

Sources: ABS; RBA

indicate that mining firms have been increasing spending on machinery & equipment over the past year and further growth is anticipated.

Alongside slower growth in investment, imports contracted in the September quarter after several quarters of sustained growth (Graph 2.6). Available indicators suggest that there was modest growth in imports in the December quarter.

Graph 2.6
Imports and Demand
Year-ended growth



* Constructed by weighting each component of demand by its relative import-intensity, as derived from ABS input-output tables

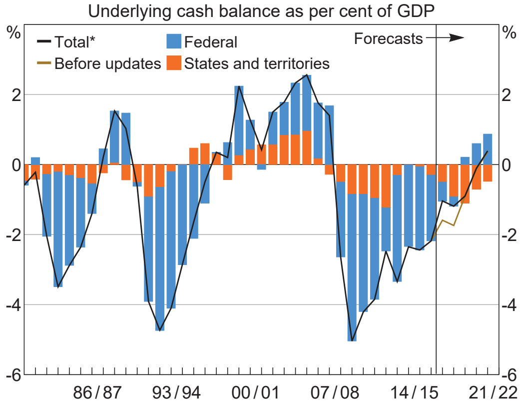
** Includes total consumption and exports

Sources: ABS; RBA

Public demand remains strong

Public demand grew by 1.4 per cent in the September quarter, and by 4.5 per cent in year-ended terms. Public investment grew at a strong pace in the quarter and the large pipeline of projects is expected to continue to support public investment over coming years. Public consumption growth has eased over recent quarters, but remains close to 5 per cent in year-ended terms. Updates to state and federal budgets indicate that consolidated government underlying deficits in 2017/18 and 2018/19 will be around 0.5 per cent of GDP smaller than previously projected, supported by stronger federal revenues (Graph 2.7).

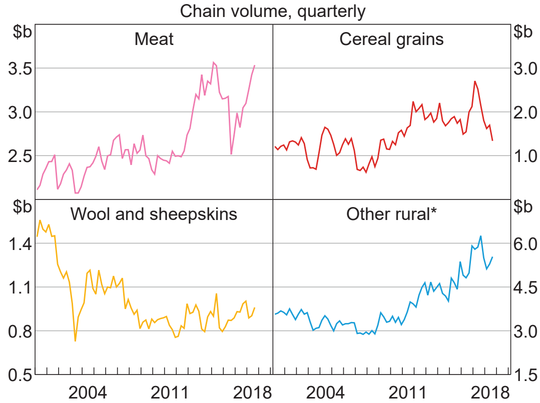
Graph 2.7
Consolidated Government Deficit
Underlying cash balance as per cent of GDP



* Using available updates to 2018/19 budgets, including the federal mid-year economic and fiscal outlook

Sources: ABS; Australian Treasury; RBA; State and territory budgets

Graph 2.8
Rural Exports
Chain volume, quarterly



* Includes horticulture and dairy exports

Sources: ABS; RBA

Drought continues to weigh on rural activity and exports

Drought conditions have affected large parts of south-eastern Australia over the past year or so, although some of the affected regions have benefited from rainfall in recent months. The dry conditions have weighed on some types of rural production and have contributed to higher farm input costs. Consistent with this, and partly reflecting a return to lower output levels after a record harvest in 2016/17, farm GDP and rural exports fell by almost 10 per cent over the year to the September quarter, subtracting ¼ of a percentage point from year-ended GDP growth.

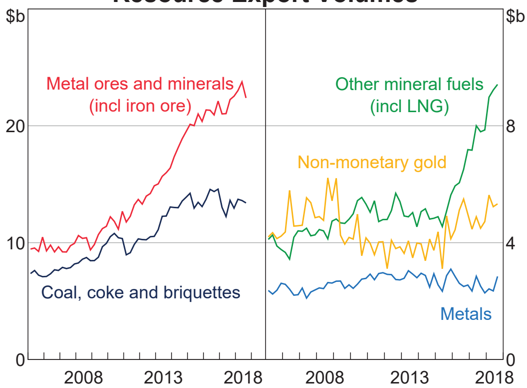
Rural exports increased a little in the September quarter in part because strong overseas demand and drought-related destocking supported meat exports (Graph 2.8). But as livestock numbers fall, this support for meat production will diminish. Together with lower crop production, this is expected to see rural output fall further in coming quarters, with continued dry weather forecast for some regions.

Other non-resource exports have continued to grow

Service and manufactured exports have grown steadily over recent years, supported by the continued economic expansion in Australia's major trading partners. Service exports are expected to remain a significant contributor to export growth over the next couple of years. In particular, rising enrolments of overseas students in Australia are expected to support education exports.

LNG exports continued to grow strongly in the September quarter, though resource exports declined overall, driven by iron ore and coal, which were affected by supply disruptions (Graph 2.9). Resource export volumes are expected to have declined again in the December quarter. Although there have been some reports of tighter coal import restrictions in China, which accounts for almost one-quarter of Australia's coal exports, information from the Bank's liaison program suggests that coal demand from other markets remains favourable. Iron ore exports are expected to have declined a little in the December quarter, partly due to further supply disruptions.

Graph 2.9
Resource Export Volumes

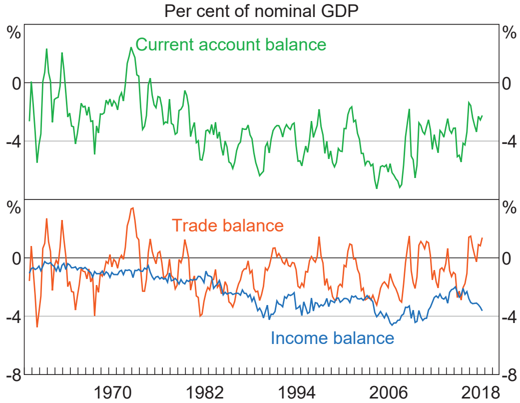


Sources: ABS; RBA

Increases in resource exports are expected over the next year as production from the final LNG projects in Western Australia continues ramping up. Other resource commodities are also expected to contribute modestly to GDP growth over the coming year, supported by productivity improvements and mine expansions from Australia's major producers.

The increase in export volumes, together with higher export prices, increased the trade surplus in the September quarter (Graph 2.10). The increase has offset some recent widening in the net income deficit, keeping the current account deficit at relatively low levels. The widening in the net income deficit over the past couple of years is consistent with a pick-up in dividend payments to non-residents because revenues in the largely foreign-owned mining sector have increased. Available data suggest another sizeable trade surplus in the December quarter.

Graph 2.10
Current Account Balance
Per cent of nominal GDP

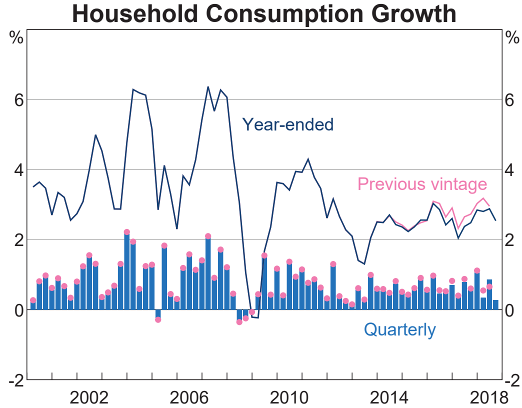


Sources: ABS; RBA

Household consumption growth has been weaker than earlier reported

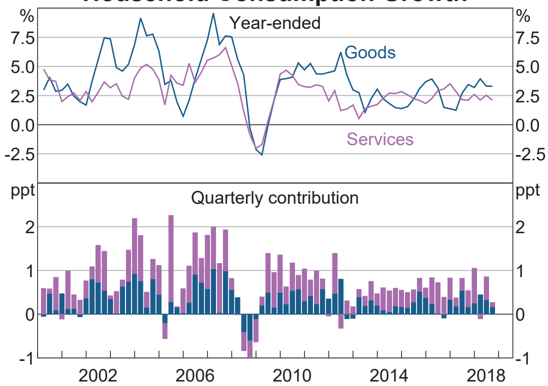
Household consumption growth was 0.3 per cent in the September quarter and eased to 2.5 per cent in year-ended terms (Graph 2.11). Sizeable revisions to consumption growth in both directions in recent national accounts have made it hard to gauge underlying momentum. In the latest release, consumption growth was revised lower in most quarters over recent years, mainly due to lower spending on items such as finance & insurance and recreation & cultural services. Growth in goods consumption, which is measured with more timely data and is less prone to revisions, remained robust at 3¼ per cent over the year to September (Graph 2.12). By state, consumption growth continues to be strongest in Victoria, supported by strong population growth. Consumption growth in Western Australia has been weak for a few years, which has weighed on national growth.

Graph 2.11
Household Consumption Growth



Sources: ABS; RBA

Graph 2.12
Household Consumption Growth



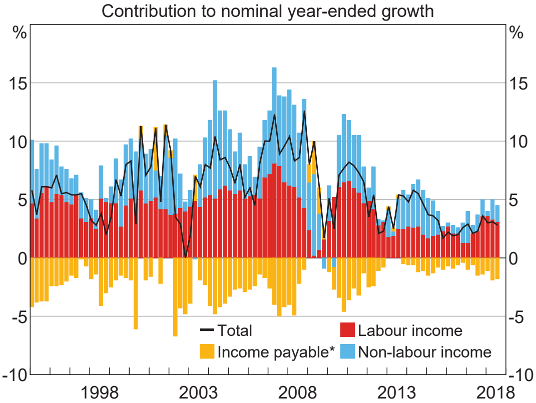
Sources: ABS; RBA

Timely indicators of household consumption have been subdued in recent months. Retail sales volumes grew by 0.1 per cent in the December quarter, weighed down by weakness in New South Wales and sales of household goods. Retailers in the Bank's liaison program judged that underlying sales growth had slowed a little in recent months, and that the timing of sales had shifted with 'Black Friday' and post-Christmas discounting. Online retail sales growth remains strong, however, sales of new motor vehicles to households declined by 3 per cent in the three months to January (although they account for only 2 per cent of consumption). Household sentiment towards their own finances has remained around average.

Household income growth has remained low despite strong employment growth

Growth in household income remains below its long-run average. Growth in disposable income in the September quarter was 0.3 per cent. In year-ended terms, growth in labour income remains stronger than in recent years, mostly reflecting increases in employment (Graph 2.13). However, measured non-labour income growth has been relatively weak; social assistance payments have not grown for around four years and income from unincorporated businesses declined in the September quarter. Notwithstanding slow growth of household incomes in gross terms, strong growth in tax payments has also contributed to the low growth in household disposable income.

Graph 2.13
Household Disposable Income
Contribution to nominal year-ended growth

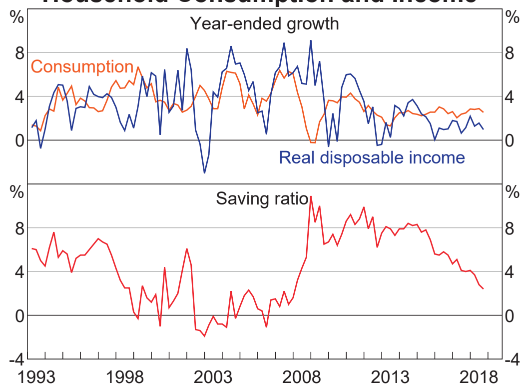


* Includes tax and interest payments
Sources: ABS; RBA

The outlook for household spending is a key source of uncertainty

The prospect of continued low growth in household disposable income remains a key risk to the outlook for household consumption, especially given high levels of household debt and the recent declines in housing prices. Despite the recent downward revisions, consumption growth has in recent years been relatively resilient to weak income growth and has outpaced income growth (Graph 2.14). This has implied a decline in the rate of household saving. As discussed in the 'Domestic Financial Conditions' chapter, growth in household credit has slowed in recent months and the ratio of household debt to income is estimated to have been broadly stable at a relatively high level in the September quarter. Recent asset price movements mean that

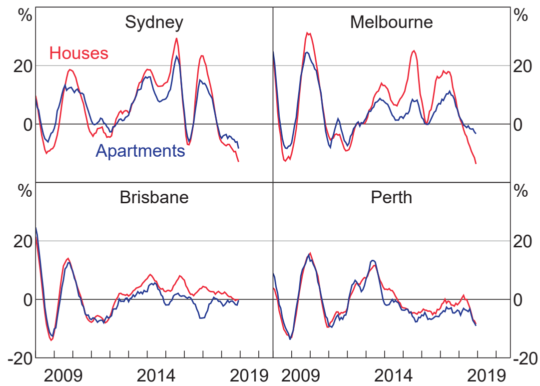
Graph 2.14
Household Consumption and Income*



* Disposable income is after tax and interest payments; saving ratio is net of depreciation

Sources: ABS; RBA

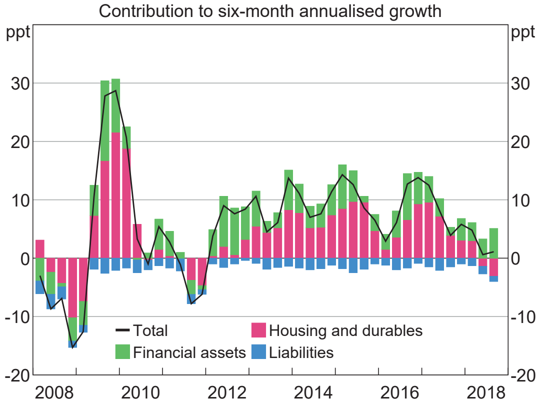
Graph 2.16
Housing Price Growth by Dwelling Type
Six-month-ended annualised



Sources: CoreLogic; RBA

net household wealth is likely to have declined in the December quarter, following several years of strong growth (Graph 2.15).

Graph 2.15
Household Net Wealth
Contribution to six-month annualised growth



Sources: ABS; RBA

Housing prices have declined further in some cities

Conditions in a number of housing markets weakened further since the previous *Statement*, particularly in Sydney and Melbourne. In these cities, housing prices have declined by around 4 per cent since the previous *Statement*, (Graph 2.16; Table 2.2), with falls across detached housing, apartments, and different price segments. Notwithstanding recent declines, housing prices in Sydney and Melbourne remain considerably higher than five years ago. Housing prices have also fallen further in Perth and Darwin, where they have now retraced to levels of around a decade ago. In most other capital cities housing price growth has remained subdued, though, in Hobart, housing prices increased by 9 per cent over 2018.

Non-price indicators, such as vendor discounts and days on the market, also suggest housing market conditions have deteriorated in Sydney and Melbourne in recent months. Housing turnover continues to decline in these cities, and auction clearance rates remain low (Graph 2.17).

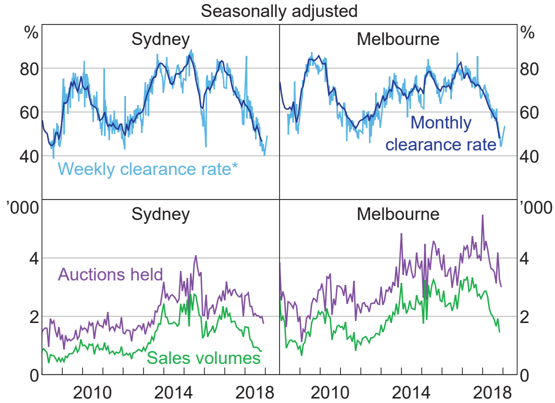
The declines in housing prices reflect changes in both demand and supply. Demand has softened in response to the prior years of strong price growth and reduced interest from foreign buyers. As prices have declined, sentiment towards the housing market has become more cautious, especially among investors in the Sydney and Melbourne markets. The shift in tone has been reflected in a slowing in demand for housing finance at the same time as lenders have tightened credit supply in response to regulatory

Table 2.2: Growth in Housing Prices
Percentage change, hedonic

	January Three-month-ended	January Year-ended	January Fall since peak	January Growth since 2013
Sydney	–4.5	–9.7	–12	48
Melbourne	–4.0	–8.3	–9	43
Brisbane	–0.4	0.0	–1	18
Perth	–2.7	–5.6	–17	–10
Adelaide	–0.1	0.9	na	19
Canberra	0.8	3.8	na	23
Hobart	1.0	7.4	na	41
Darwin	–2.8	–3.5	–26	–24
Australia[a]	–3.3	–6.9	–8	33

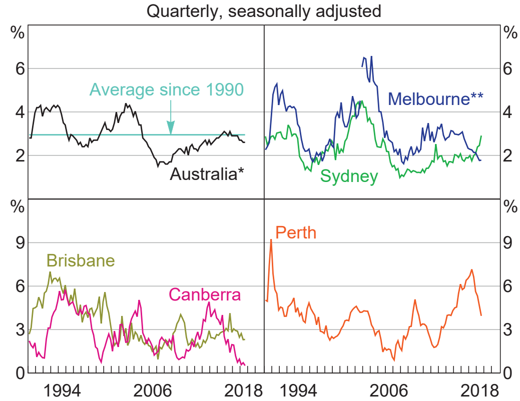
(a) Based on capital cities
Sources: CoreLogic; RBA

Graph 2.17
Auction Market Indicators
Seasonally adjusted



* Not seasonally adjusted
Sources: APM; CoreLogic; RBA; REIV

Graph 2.18
Rental Vacancy Rates
Quarterly, seasonally adjusted



* Capital cities excluding Adelaide, Darwin and Hobart
** Series break December quarter 2002
Sources: RBA; REIA

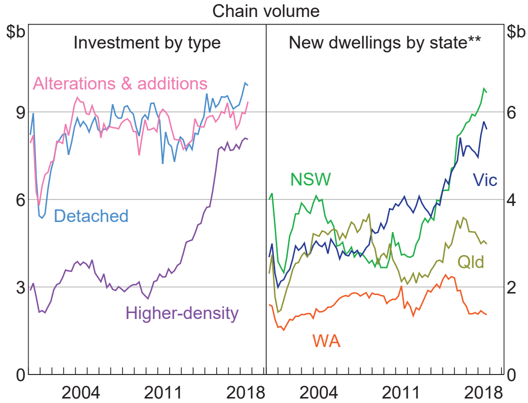
actions (see 'Domestic Financial Conditions' chapter). A large supply of new dwellings in some cities has also placed downward pressure on housing price growth and rents. In general, supply has been concentrated in cities where there has been relatively strong population growth, which should continue to support the underlying demand for new dwellings.

In the rental market, the national vacancy rate is a little below average (Graph 2.18). This partly reflects the low vacancy rate in Melbourne as population growth continues to absorb the supply of new dwellings. In contrast, the vacancy rate in Sydney has risen, particularly in the middle-ring suburbs as new supply has come online; advertised rent inflation has declined. In other capital cities, rental vacancy rates have fallen and advertised rents have generally risen.

Dwelling investment is close to its peak

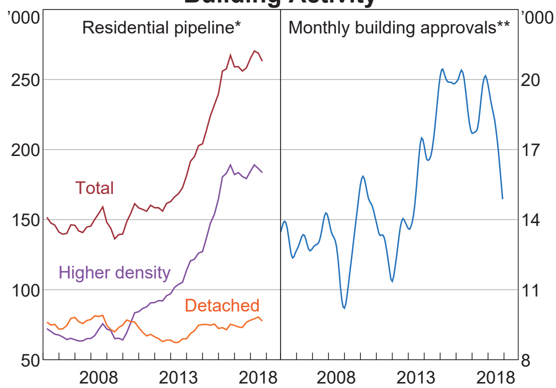
Dwelling investment rose by 1 per cent in the September quarter. Strong growth in alterations and additions investment more than offset small declines in investment in both new detached and higher-density dwellings across most states (Graph 2.19). A range of indicators suggest dwelling investment is around its peak for the cycle. The pipeline of work to be done remains very large, which should continue to support a high level of dwelling investment in the near term (Graph 2.20). However, the number of building approvals has been trending lower for more than a year to be around its lowest level since 2013. Information from the Bank's liaison program also points to a slowing in the earlier stages of residential development over the past year. In particular, demand for new, off-the-plan apartments in Sydney and Melbourne has declined, driven by weaker demand from domestic investors and foreign buyers. Greenfield land sales have also fallen over the past year. Many property developers cite tighter access to credit as a dampening factor.

Graph 2.19
Dwelling Investment*
Chain volume



* Reference year is 2016/17
** New dwellings includes detached and higher density but not alterations and additions
Source: ABS

Graph 2.20
Building Activity



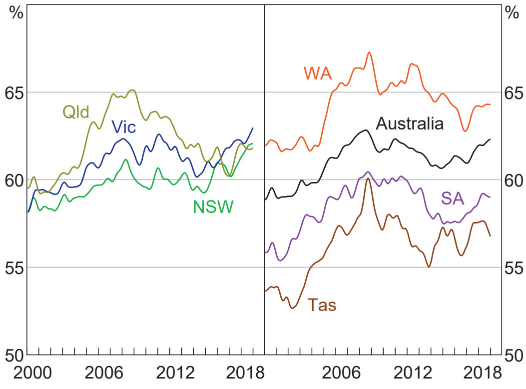
* Includes dwellings approved but not yet commenced and private dwellings under construction
** Trend measure
Sources: ABS; RBA

Employment growth remains strong

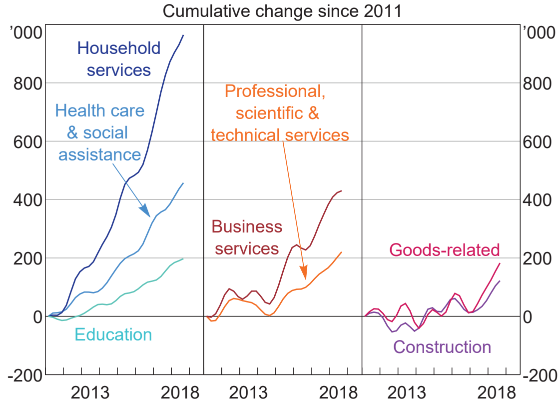
Employment increased by a further 80,000 in the December quarter to be 2¼ per cent higher over the year. This increase was stronger than growth in the working-age population and, as a result, the ratio of employment to the working-age population has risen to its highest level since early 2011 (Graph 2.21). Full-time employment has accounted for most of the employment growth over the past two years, though in the final two months of the year the growth was all in part-time employment. Full-time employment growth is often relatively strong during periods of improvement in the labour market.

Labour market conditions have continued to strengthen in Victoria and New South Wales over the December quarter. Employment has increased to an historically high share of the working-age population in both states, even though population growth has been strong relative to history (Graph 2.22). Employment in the other states has been little changed in recent months, and declined slightly as a share of the respective states' populations. In Western Australia, there has been moderate employment

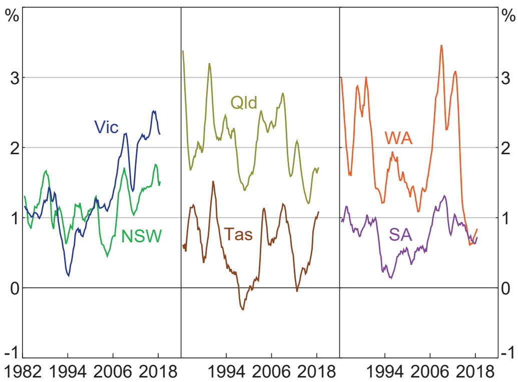
Graph 2.21
Employment-to-Population Ratios
Trend



Graph 2.23
Employment by Sector
Cumulative change since 2011



Graph 2.22
Population Growth by State
Year-ended



growth over the past year at the same time as a modest increase in population growth.

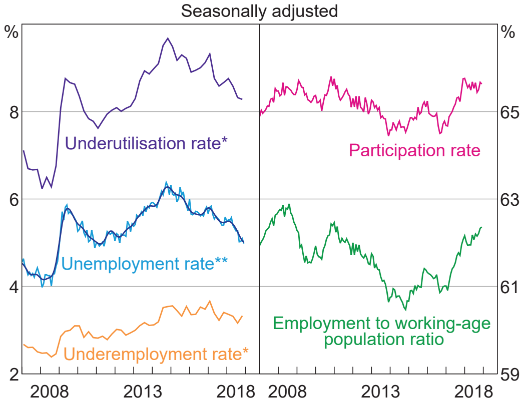
Employment growth was concentrated in four industries over the year to September 2018: education; health care & social assistance; construction; and professional, scientific, & technical services (Graph 2.23). Growth in employment in education and health care & social assistance reflects the longer-run trend towards stronger demand for these services, including from overseas students. Construction employment growth has been driven by demand from residential and public infrastructure building activity. In this *Statement*, we have shifted to discussing industry employment trends based on the ABS' new Labour Account publication (see 'Box C: New Industry Employment Estimates').

The unemployment rate has declined, but some spare capacity remains

The unemployment rate was 5 per cent in the December quarter, having declined by half a percentage point over 2018 (Graph 2.24). Taking a longer perspective, the unemployment rate has declined gradually over the past four years and is now at its lowest level since mid 2011. Over recent years, the unemployment rate has moved closer to conventional estimates of full employment. However, the labour market could still have some capacity to absorb additional labour demand before anything more than gradual upward pressure is generated for wage and price inflation.

A broader measure of labour market underutilisation – which captures the additional hours that underemployed people would like to work as well as hours sought by the unemployed – has also declined further over

Graph 2.24
Labour Market
Seasonally adjusted

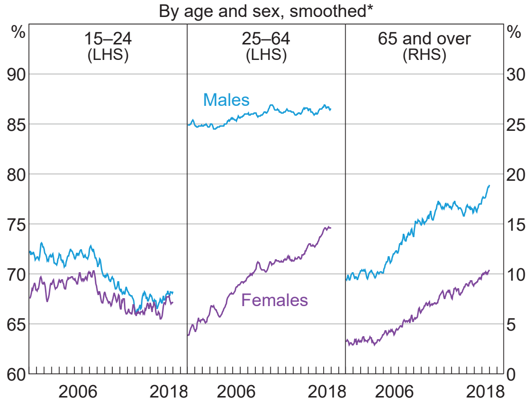


* Hours-based measure
** Trend unemployment in dark blue
Sources: ABS; RBA

the past few years. This has mostly been driven by the decline in unemployment, although the underemployment rate has also declined a little over the past two years. At the same time there has been a notable increase in the net flow of workers from part-time to full-time jobs, which had been below average for a number of years.

The labour force participation rate remained around record highs in the latter months of 2018. The participation rates of both sexes across most broad age categories have been little changed or declined a little this year (Graph 2.25). One exception is those over the age of 65, especially males, who have recorded a further increase in participation; this is likely to be related, at least in part, to the increase in the age of pension eligibility to 65½ years in mid 2017.

Graph 2.25
Participation Rates
By age and sex, smoothed*

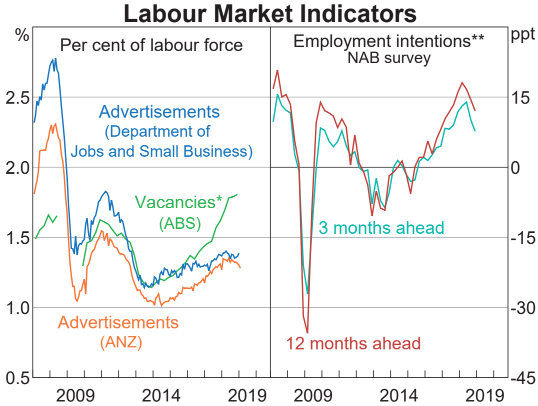


* Three-month trailing average
Sources: ABS; RBA

Leading indicators of labour market conditions remain positive

Labour demand indicators suggest that growth in labour demand will remain slightly above average in early 2019 (Graph 2.26). Job vacancies remained at a high level as a share of the labour force in November, though growth in vacancies had slowed since earlier in 2018. While measures of the number of job advertisements have stabilised or declined a little over the past year or so, business' employment intentions remain strong according to the NAB survey and the Bank's liaison program.

Graph 2.26
Labour Market Indicators



* This survey was suspended between May 2008 and November 2009
** Net balance of employment intentions for the following period; deviation from average; 12-months-ahead measure seasonally adjusted by RBA
Sources: ABS; ANZ; Department of Jobs and Small Business; NAB; RBA

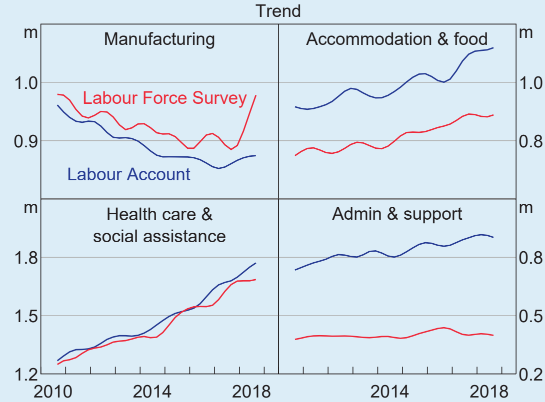
Box C

New Industry Employment Estimates

The Australian Bureau of Statistics (ABS) has recently introduced an experimental labour market data release called the Labour Account. This pulls together information from separate household, business and government data sources. The Labour Account includes quarterly estimates of employment and jobs by industry, as well as information on multiple job holders and breakdowns of hours paid for ordinary and overtime hours.[1] Prior to the Labour Account release, the only regular estimates of industry employment were from the household Labour Force Survey (LFS). At present, the Labour Account remains experimental and revisions to the data between quarterly releases have been relatively large. While the LFS will remain the best and most timely indicator of overall labour market developments (including employment growth and the unemployment rate), the ABS suggests that the Labour Account is likely to become the primary source of industry employment information.[2]

Estimates of industry employment differ noticeably between the Labour Account and the LFS (Graph C1). The differences in levels are relatively large in the administration & support and accommodation & food industries, and relatively small in the health care & social assistance industry. Reported trends can also differ between the two sources; for instance, the Labour Account suggests that manufacturing employment did not increase as much recently as the LFS reported.

Graph C1
Employment by Select Industries



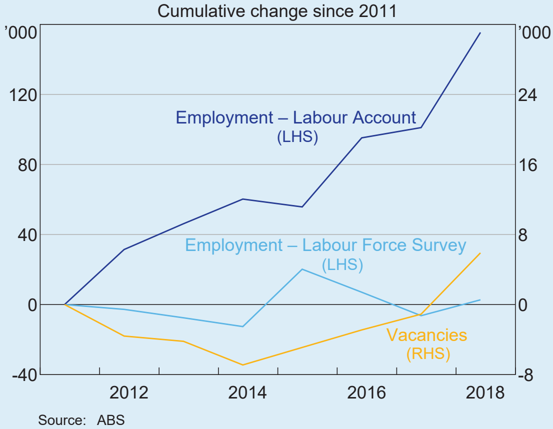
Source: ABS

The differences between the industry employment estimates may arise from differences in how households and businesses report their industry. Labour supply firms may be one reason for the discrepancy. These firms supply their own employees to a client's business on a fee or contract basis. The ABS classifies employees of labour supply firms as being employed in administrative services, part of the administration & support industry, although many of those employees report in the LFS that they are working in the industry of their place of work, such as transport or manufacturing. Though administrative services account for around 5 per cent of jobs in the economy, administrative services vacancies have grown strongly over the past four years to

1 Under the Labour Account framework, the number of filled jobs in the economy will exceed the number of employed persons to the extent that some employed people hold multiple jobs. Secondary jobs (two or more jobs) account for around 7 per cent of total filled jobs.

2 The LFS also provides a longer history of data, from 1978, and more disaggregation of outcomes by demographic group and sub-industry than is currently available in the quarterly Labour Account.

account for around 10 per cent of total vacancies. This suggests that labour supply firms may be growing in importance (Graph C2).



The Labour Account's industry employment numbers have a number of potential advantages of over those in the LFS. The industry classification in the Labour Account aligns better with the measurement of industry value-added in the national accounts, and so the Labour Account should contribute to better estimates of industry productivity growth.[3] The Labour Account also takes a more comprehensive approach to estimating the amount of labour employed in each industry, for instance by including the employment of non-resident visa holders.

Given the Labour Account is a new release and is still considered experimental, the Bank will continue to monitor industry employment trends in both releases, as well other sources of information on industry trends from business liaison and business surveys.

3 While the industry estimates in the Labour Account rely on business-based surveys, the Labour Account estimates of total employment and jobs in the economy remain largely dependent on household-based sources, in particular the LFS.

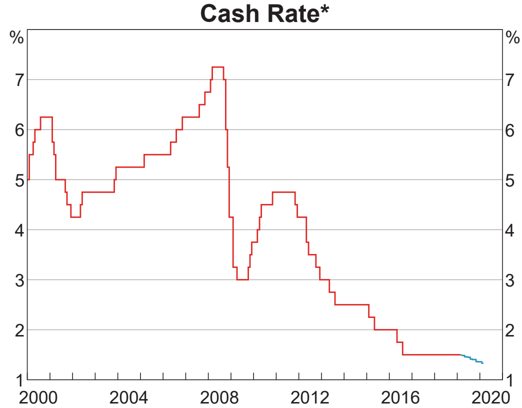
3. Domestic Financial Conditions

Domestic financial conditions continue to be accommodative for most households and large businesses. Financial market prices suggest that the cash rate is expected to remain unchanged over the months ahead, with some expectation of a decrease by later this year. Money market interest rates have remained higher than they were a year ago. While funding costs for banks increased a little since then, they are still at low levels. Housing and business interest rates have increased slightly since mid last year, but are low by historical standards. Growth in housing credit has slowed, which is broadly consistent with weaker demand from investors and the decline in dwelling prices in Sydney and Melbourne. Credit conditions for housing and small business have been tighter than they have been for some time and there are some concerns that a cautious approach by lenders may be affecting some lending decisions. In contrast, growth in business credit has picked up, driven by lending to large businesses, with contributions from both foreign banks and larger Australian banks. In line with international markets, the Australian equity market has been more volatile in recent months, but prices have bounced back from their lows late last year. The Australian dollar remains within its narrow range of recent years.

Investors expect the cash rate to remain unchanged over the next few months

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 over the next few months, with some expectation of a decrease by later this year (Graph 3.1).

Graph 3.1
Cash Rate*



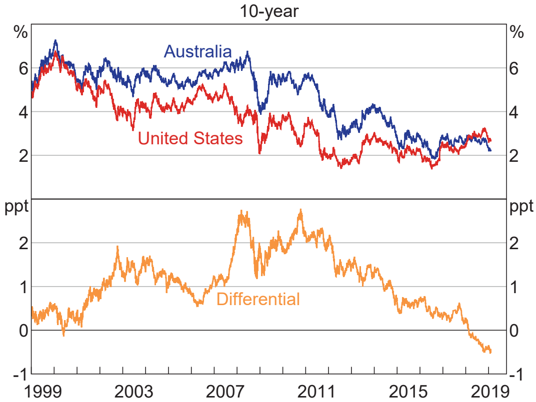
* Data from March 2019 onwards are expectations derived from interbank cash rate futures

Sources: ASX; Bloomberg

Government bond yields have declined

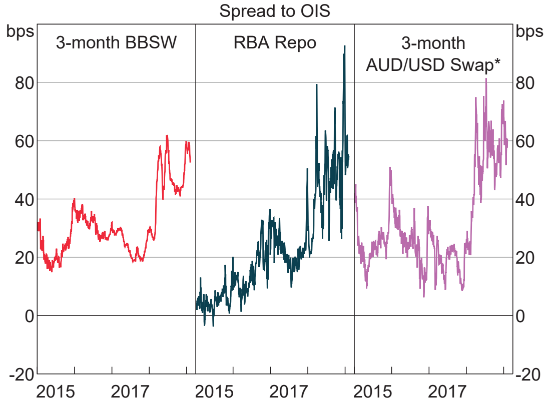
Yields on 10-year Australian Government Securities (AGS) have declined by around 50 basis points over recent months, to be around 2.15 per cent. This has been broadly in line with the decline in US Treasury yields, with the difference between US Treasury and AGS yields remaining around 50 basis points (Graph 3.2). The pace of net issuance by the Australian Government is expected to decline over 2019, reflecting the narrowing in the forecast budget deficit.

Graph 3.2
Government Bond Yields
10-year



Sources: Bloomberg; RBA

Graph 3.3
Australian Dollar Money Market Spreads
Spread to OIS



* Implied cost of offshore issurance in US dollars swapped back to Australian dollars

Sources: ASX; Bloomberg; RBA

Short-term money market rates remain higher than a year ago

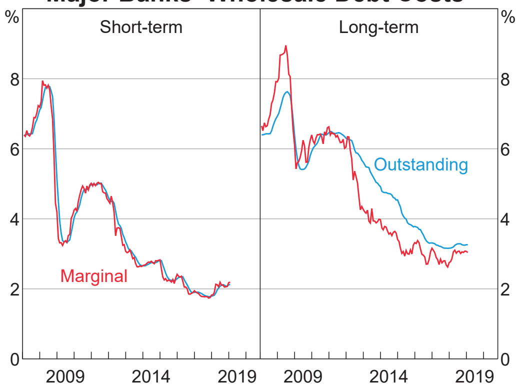
The higher spreads and increased volatility in money markets over the past year continue to reflect structural developments, including banks supplying less liquidity in these markets. This is, in part, the consequence of changes in banking regulation and a lower risk appetite of banks following the global financial crisis. At the same time, the demand for Australian dollar funding in money markets has been relatively strong.

Interest rates in bank bill, repurchase agreement (repo) and foreign exchange swap markets rose towards the end of the December quarter (Graph 3.3). Rates have eased back somewhat in all three markets. The spread of rates on 3-month bank bills relative to overnight indexed swaps (OIS) is around 55 basis points. Spreads on 3- and 6-month bank bills relative to OIS are currently around 30 basis points higher than their average level over 2017. According to liaison with market participants, liquidity conditions in the bank bill market have not changed significantly in recent months and the elevated levels of BBSW rates reflect developments in offshore funding markets for the banks, as well as the repo market. The cost of raising US dollar funding and then converting these funds into Australian dollars in the foreign exchange swap market also rose in December, peaking at around 80 basis points over OIS, before declining modestly. Repo rates increased to 90 basis points over OIS into the end of 2018, and are currently around 55 basis points over OIS as demand for secured funding remains robust, particularly from offshore borrowers. Meanwhile, the cash rate has continued to trade at the Reserve Bank Board's target.

Banks' funding costs are a little higher than in recent years but remain low

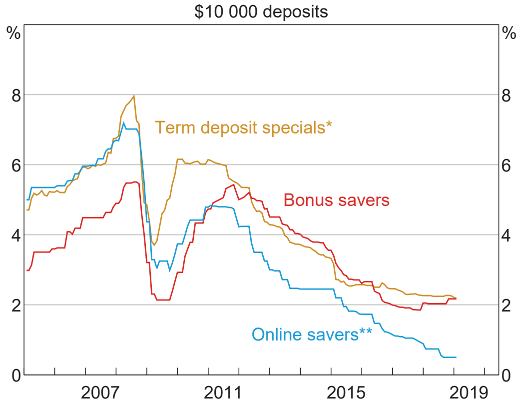
There has been some upward pressure on banks' funding costs over the past year reflecting movements in short-term money markets (Graph 3.4). Nevertheless, while banks' funding costs are a little higher than they were in 2017, they remain low by historical standards. Banks' funding costs have increased by less than money market rates since interest rates on retail deposits – which account for around one-third of banks' debt funding – declined over the same period (Graph 3.5). This largely reflected a decline in the interest rates on online saver accounts.

Graph 3.4
Major Banks' Wholesale Debt Costs*



* RBA estimates; rates do not include interest rate hedges
Sources: APRA; Bloomberg; RBA; Refinitiv

Graph 3.5
Major Banks' Retail Deposit Rates
$10 000 deposits

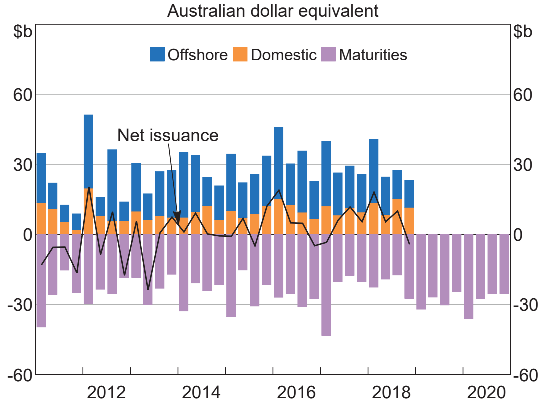


* Average of 1–12, 24-, 36- and 60-month terms
** Excludes temporary bonus rates
Sources: Banks' websites; Canstar; RBA

Banks continue to issue wholesale debt at relatively low yields

Australian banks issued bonds at a similar pace to previous years, with around $115 billion of bonds issued in 2018. Net issuance, which takes into account bond maturities, was well above average over 2018, with issuance outpacing scheduled maturities by around $25 billion. A greater volume of bond maturities is scheduled in 2019 (Graph 3.6). While the majority of the banks' long-term wholesale debt funding has typically been raised in offshore markets, the second half of 2018 saw a slightly lower share of offshore issuance than in previous years. Bank bond issuance has remained robust in early 2019 despite an increase in spreads over recent months.

Graph 3.6
Australian Banks' Bond Issuance
Australian dollar equivalent



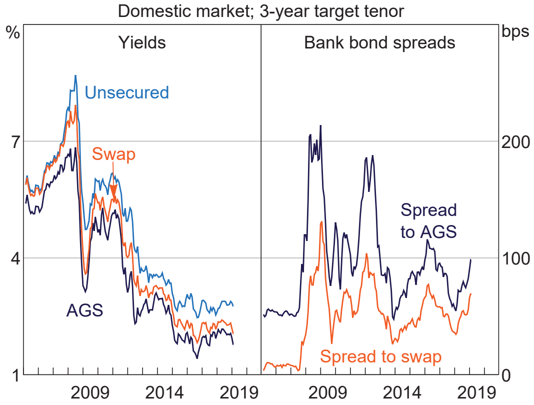
Sources: Bloomberg; KangaNews; RBA

The spreads of major bank bond yields to reference rates increased over 2018, with secondary market spreads on 3-year bonds issued in the Australian market now around 30 basis points wider than the narrow spreads seen in early 2018 (Graph 3.7). The recent increase in spreads is broadly in line with the general rise in bank bond spreads across other advanced economies. Notwithstanding these increases, spreads on Australian bank bonds remain below the levels seen in early 2016, and yields have been little changed at very low levels for four years or so.

Turning to other wholesale funding sources, Australian banks issued around $6.5 billion of Tier 1 capital instruments and $4 billion of Tier 2 capital instruments last year. These wholesale funding sources also count towards regulatory capital for prudential purposes. Late in 2018, the Australian Prudential Regulation Authority (APRA) announced plans to implement a loss-absorbing capacity regime in Australia by 2023.[1]

1 See APRA (2018), 'Increasing the loss-absorbing capacity of ADIs to support orderly resolution', Discussion Paper, November.

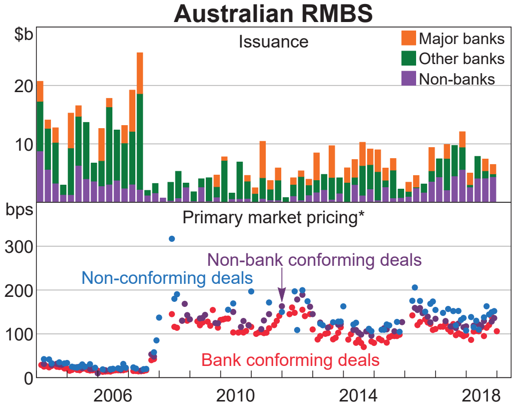
Graph 3.7
Major Banks' Bond Pricing
Domestic market; 3-year target tenor



Source: Bloomberg

Australian banks issued a smaller volume of residential mortgage-backed securities (RMBS) in 2018 compared with 2017, driven by lower issuance by non-major banks (Graph 3.8). However, with non-bank lenders continuing to issue around $15 billion of RMBS over the year, overall issuance levels remained robust. Prices for new deals – expressed as a spread to BBSW rates – increased over 2018 from the low levels seen at the start of the year.

Graph 3.8
Australian RMBS



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

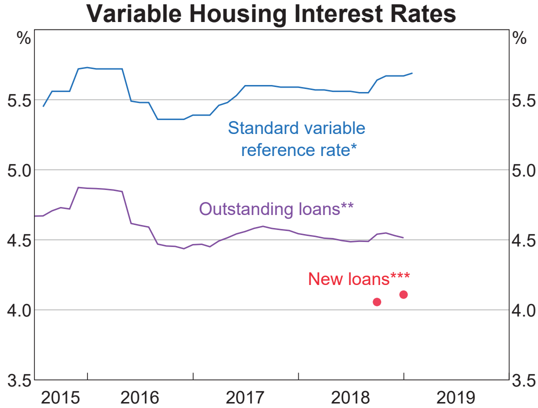
Sources: Bloomberg; KangaNews; RBA

Housing lending rates have increased a little …

Most banks have increased their standard variable rates (SVRs) by around 10–15 basis points since September last year. Banks cited higher funding costs as the key reason for this change.

Data from the Reserve Bank's Securitisation Dataset suggest that outstanding variable interest rates had increased by a few basis points from the trough in August 2018 to the end of the year (Graph 3.9; Table 3.1).[2] While preliminary APRA data suggest that banks passed on some of the SVR increases to new loans in the December quarter, interest rates on new loans continue to be significantly lower than interest rates on outstanding loans. Some existing borrowers refinanced at these lower rates with a different lender or renegotiated the rate of their loan with their existing lender. Borrowers

Graph 3.9
Variable Housing Interest Rates



* Average across major banks' rates; data to January 2019

** Data to December 2018; data from the Securitisation System

*** Average new variable lending rate based on APRA quarterly data; last observation is preliminary

Sources: APRA; RBA; Securitisation System

2 The Securitisation Dataset covers around a quarter of the market for housing loans and includes information on the loans underlying both marketed securitisations and ADIs' self-securitisations. These data provide useful indicators of developments in home lending, although loans in the dataset may have different characteristics from those not covered by the dataset. See Fernandes K and D Jones (2018), 'The Reserve Bank's Securitisation Dataset', RBA *Bulletin*, December, viewed 7 February 2019. Available at <https://www.rba.gov.au/publications/bulletin/2018/dec/the-reserve-banks-securitisation-dataset.html>.

Table 3.1 Intermediaries' Housing Lending Rates
December 2018

	Interest rate	Change since August 2018	Change since December 2017
	Per cent	Basis points	Basis points
Variable principal-and-interest rate			
– Owner-occupier	4.28	3	–1
– Investor	4.75	5	0
Variable interest-only rate			
– Owner-occupier	4.79	7	5
– Investor	5.13	5	2
Fixed rate			
– Owner-occupier	4.12	–6	–13
– Investor	4.30	–3	–7
Average outstanding rate	4.48	2	–4

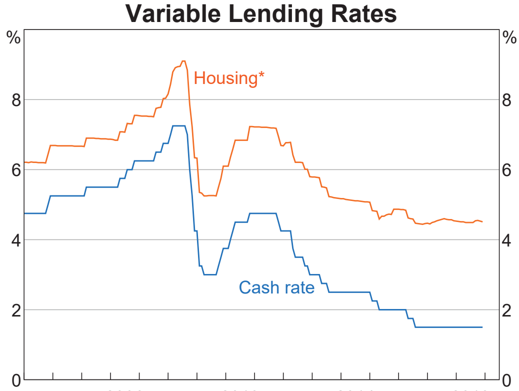
Sources: Securitisation System; RBA

also continue to switch from interest-only to principal-and-interest (P&I) loans at lower interest rates. Consistent with these latter two factors, it appears that outstanding variable interest rates declined a little in November and December.

… but housing lending rates remain low …

Even taking the recent increases in housing lending rates into account, these rates are at very low levels compared with history, consistent with the low level of the cash rate (Graph 3.10).

Graph 3.10
Variable Lending Rates



* Average variable outstanding rate; to May 2015, RBA estimates based on advertised rates; data from Securitisation System thereafter
Sources: APRA; banks' websites; RBA; Securitisation System

Moreover, advertised fixed rates declined throughout 2018 and are at low levels relative to history. Housing loans with fixed interest rates account for around 20 per cent of outstanding housing credit, and the rates paid on the stock of these loans adjust only gradually.

… and there is strong competition for low-risk borrowers

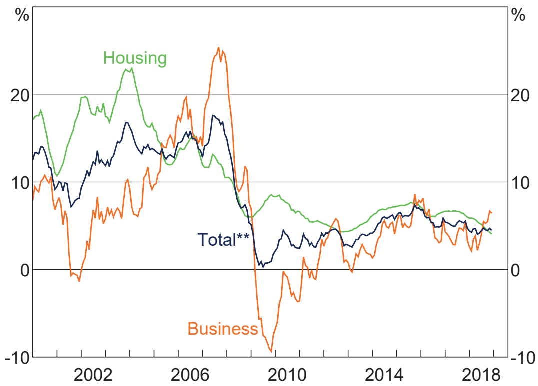
A number of indicators suggest that competition for new loans remains strong, particularly for low-risk borrowers. Liaison with mortgage brokers and banks suggests that lenders are competing vigorously to attract borrowers with high-quality credit profiles that are applying for owner-occupier P&I loans. In particular, owner-occupiers with low loan-to-valuation ratios who can demonstrate the ability to service their loan are being offered quite low interest rates. Liaison also suggests that borrowers with these characteristics who have had a home loan for some time and want to refinance can often obtain a lower interest rate from another institution or convince their existing lender to lower the rate that they are paying.

There is also some evidence that competition for investor loans has increased a little recently. This is particularly the case among the smaller authorised deposit-taking institutions (ADIs) that are experiencing faster investor credit growth. These lenders are among those that are offering the most competitive interest rates for new investor loans.

Housing credit growth has slowed while business credit growth has picked up

Total credit growth has remained around 4½ per cent on a six-month annualised basis since the start of 2018, with growth in housing credit moderating to 4 per cent while business credit growth picked up to 6½ per cent (Graph 3.11; Table 3.2).

Graph 3.11
Credit Growth by Sector*
Six-month-ended annualised



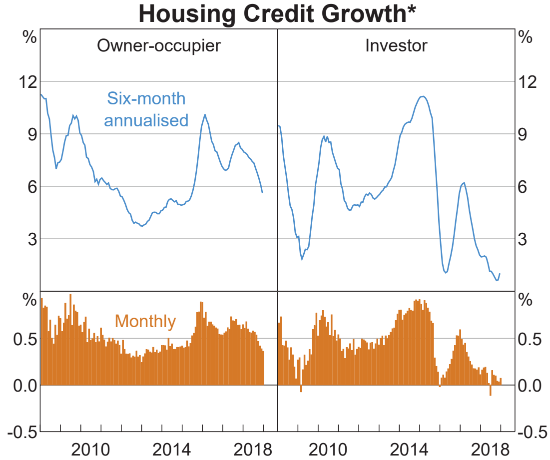
* Seasonally adjusted and break-adjusted; including securitisation
** Includes housing, personal and business credit
Sources: ABS; APRA; RBA

There has been a pronounced slowing in investor credit growth …

The decline in housing credit growth has been most pronounced for investors, with investor credit increasing at an annualised rate of 1 per cent over the past six months (Graph 3.12). Credit extended by the major banks to investors contracted over the period, consistent with a decline in investor housing loan approvals by these banks (Graph 3.13).

However, this had been partly offset by a pick-up in investor credit growth at a number of other ADIs and non-ADIs. These institutions only

Graph 3.12
Housing Credit Growth*



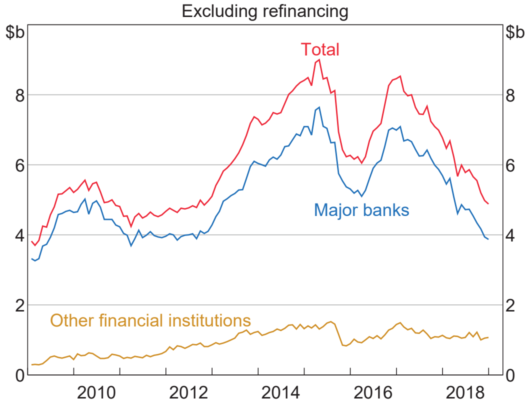
* Seasonally adjusted and break-adjusted
Sources: APRA; RBA

Table 3.2: Financial Aggregates
Percentage change(a)

	Three-month ended annualised		Six-month ended annualised	
	Sep 2018	Dec 2018	Jun 2018	Dec 2018
Total credit	5.4	3.6	4.2	4.5
– Housing	4.7	3.4	5.3	4.1
– Owner-occupier housing	6.5	4.8	7.4	5.6
– Investor housing	1.5	0.6	1.1	1.0
– Personal	–1.6	–3.7	–1.5	–2.6
– Business	7.8	5.2	3.0	6.5
Broad money	3.5	1.2	2.6	2.3

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

Graph 3.13
Investor Housing Loan Approvals*
Excluding refinancing



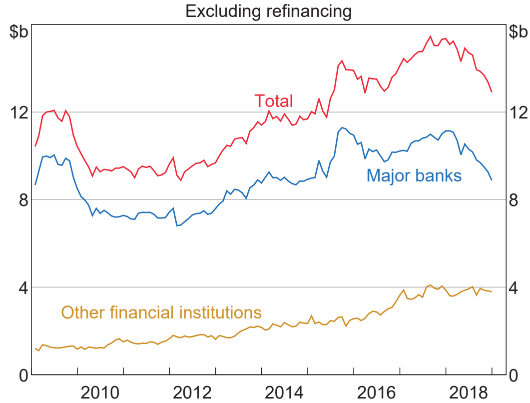
* Seasonally adjusted
Sources: APRA; RBA

account for a small share of housing credit, but have experienced faster investor credit growth recently. In April 2018, APRA announced that ADIs could apply to be released from the 10 per cent benchmark for investor lending growth if they were able to demonstrate strong lending standards. In December 2018, APRA announced that the interest-only benchmark (of less than 30 per cent of new loans) will be removed for those ADIs that have had the investor benchmark removed.

… and owner-occupier housing credit growth has also slowed

Growth in credit to owner-occupiers has eased to be around 5½ per cent in six-month-annualised terms. This has largely reflected slowing in the growth of credit extended by the major banks since mid 2017. This was consistent with a decline in approvals for new owner-occupier loans by the major banks, while their approvals for refinancing were little changed (Graph 3.14). In the past few months, both approvals and credit growth at other ADIs have eased. Estimates suggest that growth in non-ADI lending to owner-occupiers remains strong but has also eased a little recently.

Graph 3.14
Owner-occupier Housing Loan Approvals*
Excluding refinancing



* Seasonally adjusted
Sources: APRA; RBA

Overall, non-ADI credit growth remains strong; growth of housing credit extended by non-ADIs appears to be growing at least twice as fast as that extended by ADIs, although precise estimates of this are not possible given available data. Liaison with non-ADIs and brokers indicates that non-ADIs have been lending to borrowers who may have otherwise borrowed from ADIs if the earlier tightening in their lending criteria had not occurred.

There is less demand for housing loans

The slowing in credit growth is consistent with reduced demand for housing finance, particularly from investors. Indeed, liaison with major banks and mortgage brokers indicates that they have been receiving significantly fewer loan applications over the past year or more. Also, liaison with the banks and mortgage brokers indicates that most loans are still being approved; banks reported that the conversion rates of applications to approvals were stable at high levels in 2018. The fall in housing prices in major markets appears to have reduced the demand for credit, particularly from investors who are especially sensitive to expectations of capital losses associated with declining housing prices.

Overall housing credit conditions are tighter than they have been for some time

Housing credit conditions are tighter than they have been for some time following the improvements in lending policies and practices over recent years.[3] Over the past year, there has been ongoing work to improve lenders' assessment of potential borrowers' expenses. Lenders have also increased their focus on their responsible lending obligations. At the same time, in cases where the board of an ADI has provided assurance on the strength of its lending standards, APRA has removed the benchmarks on investor and interest-only lending, which it introduced in 2014 and 2017, respectively.

Liaison with mortgage brokers suggests that lenders are no longer making as many exceptions to their credit policies as they did in the past. Mortgage brokers also suggested that the increased public scrutiny associated with the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry may have led some individual loan assessors to apply criteria that are stricter than required by official lending requirements. Consequently, some borrowers who would previously have obtained a loan from the banks have been borrowing from non-ADI lenders. However, the banks report that while loan assessors are referring more approvals to credit officers, the final approval rate remains high.

With lenders now examining loan applicants' income and expenses more closely, the time taken from application to approval has lengthened slightly for some banks; the typical time from application to approval is around one week. Applicants are also declaring a higher value of expenses. This more thorough assessment of loan applicants' expenses has reduced the maximum loan size available to many households. Nevertheless, only a small share of households had previously borrowed close to the maximum amount that they were offered. Given this, even noticeable reductions in maximum loan sizes are not likely to be binding for most households.[4] Lower-income households have been more affected than others by these changes because more of these households borrow close to the maximum they are offered. Consistent with this, a number of sources suggest that average loan sizes have continued to increase over the past year, which would be consistent with a change in the composition of lending away from smaller value loans.

In summary, there is little evidence that the further tightening in lending standards over the past year or so is the main explanation for the recent decline in housing credit growth. Liaison with banks, other lenders and mortgage brokers suggests that the demand for housing loans has declined. Liaison also reported that most people who apply for a housing loan can still obtain one, though they have to provide more documentation, answer more questions and wait a few days longer to be approved.

The final report of the royal commission included recommendations about the laws relating to lending to consumers and small businesses. This should help to reduce some of the uncertainty that may have been adversely affecting the supply of credit.

3 See RBA (2018), 'Assessing the Effects of Housing Lending Policy Measures', *Financial Stability Review*, October, pp 75–88.

4 See RBA (2018), 'Box B: The Impact of Lending Standards on Loan Sizes', *Financial Stability Review*, October, pp 32–36.

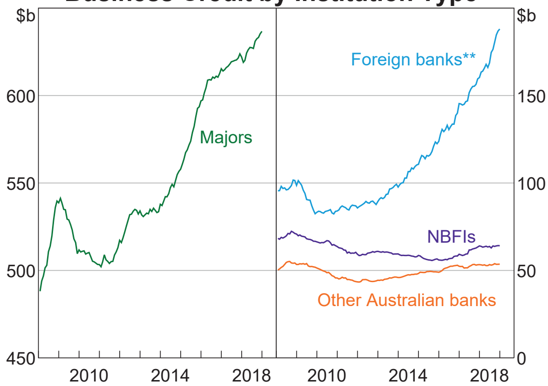
Funding conditions for large businesses are accommodative …

Growth in a broad measure of business debt picked up in the second half of 2018, driven by an increase in business credit extended by banks (Graph 3.15). Much of this growth owes to lending by foreign banks operating in Australia, as has been the case for some time (Graph 3.16). Recent growth in foreign bank lending has primarily reflected their involvement in a range of large infrastructure transactions. Even so, the contribution to business credit growth by the major Australian banks has increased over the past year or so, with this pick-up occurring alongside the slower growth in their housing lending. Lending to large businesses appears to have accounted for the bulk of the growth in business credit over the same period.

The associated increase in business loan approvals can be broken down by purpose and industry. Loan approvals for the purchase of commercial property have picked up. Approvals for the construction of commercial property have also risen over the past year. In contrast, business loan approvals for residential property have declined since late 2017, particularly in NSW and Victoria. This is consistent with banks tightening their lending standards for residential property development. Loan approvals have picked up across a range of other industries in recent months including manufacturing, transport & storage, retail and mining.

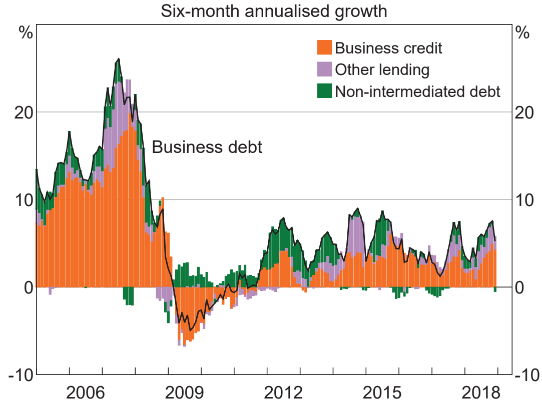
Non-financial corporations issued around $25 billion of bonds over 2018, which was just enough in aggregate to offset scheduled maturities. Notwithstanding this, funding conditions for large corporations remain accommodative, with secondary market yields remaining around historically low levels (Graph 3.17).

Graph 3.16
Business Credit by Institution Type*



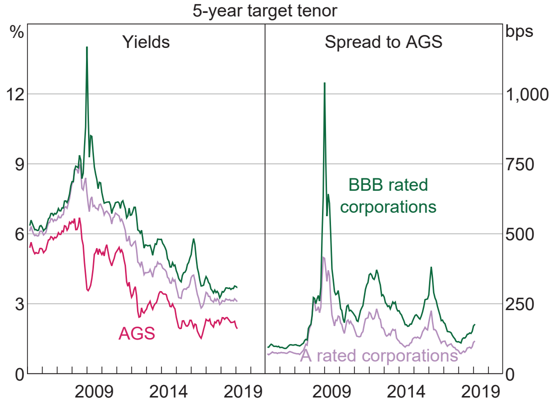
* Seasonally adjusted and break-adjusted
** Not all foreign banks report to APRA
Sources: APRA; RBA

Graph 3.15
Business Debt*
Six-month annualised growth



* Break-adjusted, non-seasonally adjusted
Sources: APRA; Bloomberg; RBA; Refinitiv

Graph 3.17
Australian Corporate Bond Pricing
5-year target tenor

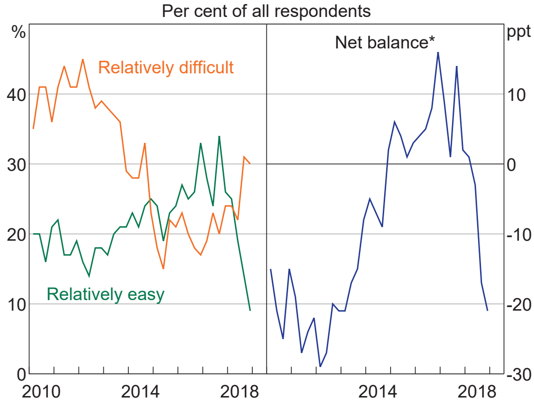


Sources: Bloomberg; RBA; S&P Capital IQ

… but credit conditions for small businesses have tightened

Small businesses' perception of their access to finance deteriorated in the second half of 2018 according to business surveys (Graph 3.18). The increased scrutiny of conduct in the financial services sector associated with the royal commission appears to be weighing on lending to small businesses. Recent liaison with mortgage brokers suggests that some ADIs have responded by tightening mortgage serviceability standards for residentially secured small business loans. The distinction between the business and personal finances of entrepreneurs is often blurred. Banks appear to be applying the more onerous responsible lending rules required for consumer lending to some small business lending. Market participants have highlighted that there is a trade-off between providing protections for small business borrowers and the willingness of banks to lend. Lending to small businesses has been little changed over the past year, which is in contrast to the growth seen in lending to large businesses.

Graph 3.18
Small Business' Perception of Access to Finance
Per cent of all respondents



* Net balance is the difference between the percentage of firms indicating access is relatively easy and the percentage of firms indicating access is relatively difficult

Sources: RBA; Sensis

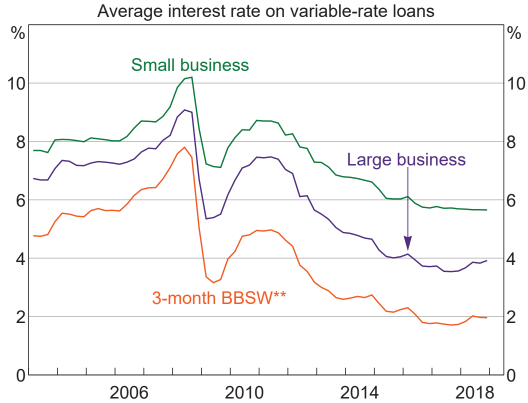
In response to the difficulties faced by many small businesses in obtaining finance, the Australian Government has announced that it would set up an Australian Business Securitisation Fund (ABSF). The ABSF would purchase asset-backed securities that are backed by loans to small businesses issued by lenders other than the major banks. The Australian Government is also encouraging the private sector to develop an Australian Business Growth Fund, similar to arrangements in the United Kingdom and Canada, to provide longer-term funding to small businesses.

Interest rates on business loans are low

Interest rates for loans to large businesses have risen over the past year, as around three-quarters of such loans are linked to BBSW rates. Rates on outstanding loans to large businesses are estimated to have increased by around 35 basis points over the past year (Graph 3.19; Table 3.3). Nevertheless, large business interest rates are still low by historical standards.

Small business rates are noticeably higher than interest rates for large businesses. Lending rates

Graph 3.19
Variable Business Lending Rates*
Average interest rate on variable-rate loans



* RBA estimates

** 3-month trailing average

Sources: APRA; ASX; RBA

Table 3.3 Intermediaries' Business Lending Rates
December 2018

	Interest rate Per cent	Change since December 2017 Basis points
Small business[a]		
– Average outstanding variable rate	5.65	–4
– Average outstanding fixed rate	5.31	+7
Large business[b]		
– Average outstanding variable rate	3.92	+36
– Average outstanding fixed rate	3.79	+24

(a) Loans under $2 million
(b) Loans over $2 million
Sources: APRA; RBA

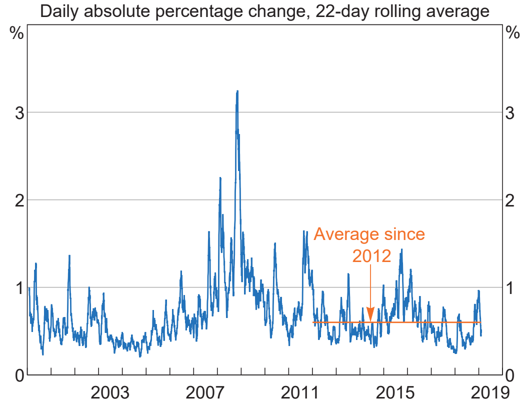
on outstanding loans to small businesses have been little changed for much of the past year, as small business rates are generally not directly linked to BBSW rates. However, some banks have increased interest rates on small business loans over the past few months, with some lenders attributing this to higher funding costs.

Australian equity prices have been more volatile of late

Volatility in Australian equity prices picked up toward the end of 2018, alongside a similar increase in volatility in global equities markets (Graph 3.20). Daily movements in Australian equity prices in recent months have exceeded the average seen over the past five years or so. The cumulative effect of these movements was a decline of 14 per cent in the Australian share market from its late August peak to its December trough. Since then, the share market has risen around 10 per cent in tandem with developments in global equities markets.

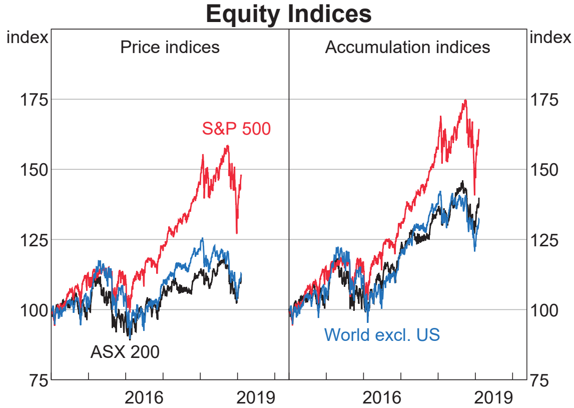
Australian equity prices are currently around their level at the beginning of 2018 (Graph 3.21). However, the accumulation index – which accounts for company dividend payments – has risen by 4 per cent over the same period. Calculating returns on this basis, the Australian

Graph 3.20
Australian Share Market Volatility
Daily absolute percentage change, 22-day rolling average



Sources: Bloomberg; RBA

Graph 3.21
Equity Indices



Sources: Bloomberg; MSCI; RBA; Refinitiv equity market has underperformed the US equity market but outperformed other major global equities markets.

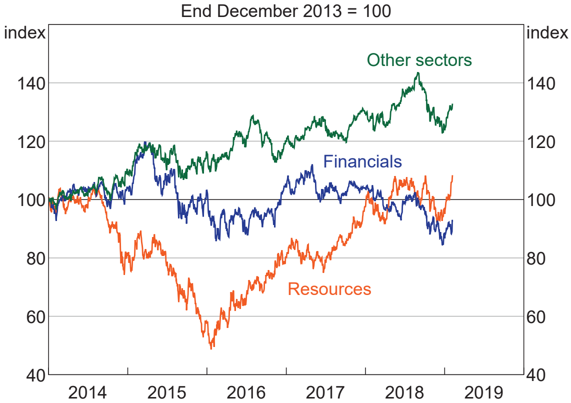
The share prices of financial corporations declined over 2018, partly in response to developments at the royal commission but also at the same time that there were falls in the share prices of financial corporations globally (Graph 3.22). While share prices of the major banks rose following the release of the final report of the royal commission, the banking sector remains around 13 per cent below its level at the start of 2018.

The resources and other sectors ended the year little changed, although there were some notable differences in performance among 'other' sectors. Share prices of healthcare companies increased significantly over the year, amid strong earnings expectations and mergers and acquisitions activity, while communication services stocks fell.

Price-to-earnings ratios declined in late 2018 alongside declines in share prices (Graph 3.23). Ratios for the resources and financial sectors are now below their long-run averages, although ratios for other sectors remain elevated, supported by the healthcare and information technology sectors.

Graph 3.22
Australian Share Price Indices

End December 2013 = 100



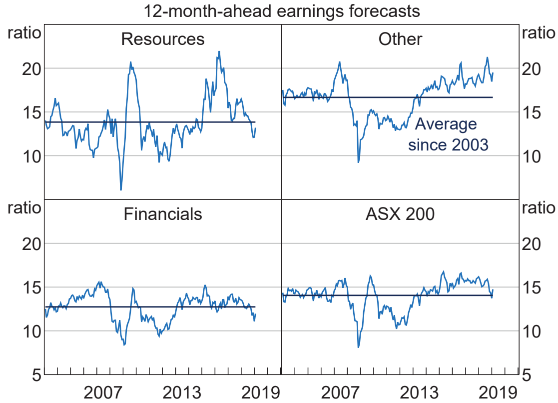
Source: Bloomberg

Mergers and acquisitions activity was robust in 2018, with the highest value of deals completed since the global financial crisis. Around $35 billion in deals were completed in the December quarter and potential deals worth a further $50 billion were announced (Graph 3.24).

Equity raisings by listed companies were slightly lower in 2018 than in 2017. Several initial public offerings were delayed as market volatility picked up in the second half of the year, while some businesses that had been considering listing were sold to private investors instead.

Graph 3.23
ASX 200 Price-earnings Ratios

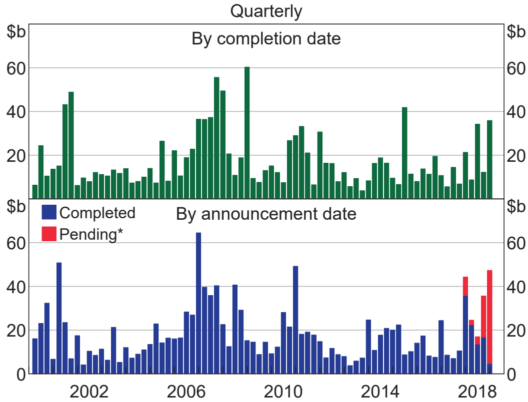
12-month-ahead earnings forecasts



Sources: RBA; Refinitiv

Graph 3.24
Australian Mergers and Acquisitions

Quarterly



* Includes transactions announced in the past 15 months but not yet completed

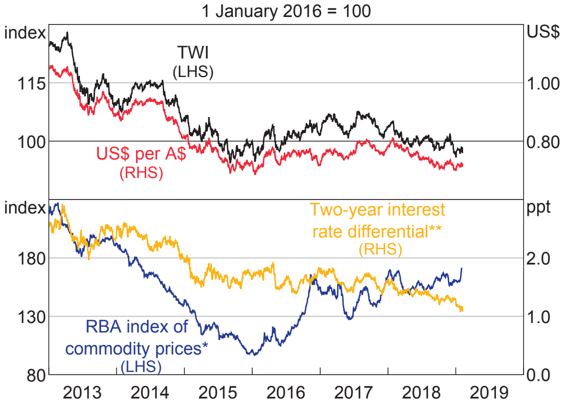
Sources: RBA; Refinitiv

Nonetheless, capital raisings by already listed companies continued at around their usual pace, supported by a large raising by Transurban to fund its Westconnex acquisition. Share buybacks picked up late in 2018, as resource companies returned capital to shareholders in line with previously announced plans.

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

The Australian dollar remains in its narrow range of the past few years on a trade-weighted (TWI) basis (Graph 3.25). Over time, movements in the Australian dollar tend to be related to developments in commodity prices (and the terms of trade more generally) and interest rate differentials. Over recent years, these two forces have been working in offsetting directions; the RBA Index of Commodity Prices has increased while Australian government bond yields have declined relative to those in major markets, particularly the United States. The net effect of these two forces has been consistent with little change in the Australian dollar.

Graph 3.25
Australian Dollar
1 January 2016 = 100

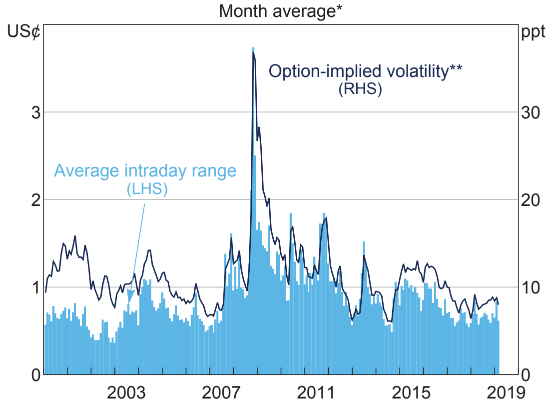


* With spot bulks
** Spread to equally-weighted nominal yields in Germany, Japan, the United Kingdom and the United States
Sources: Bloomberg; RBA

Even so, over the past few months, the Australian dollar has depreciated a little on a TWI basis. Much of the depreciation has been against the Chinese renminbi and Japanese yen, which have both appreciated against a range of currencies in recent months (see 'The International Environment' chapter).

As has been the case for the currencies of other advanced economies, measures of volatility in the Australian dollar remain low but have increased modestly in recent months (Graph 3.26). In early January, temporary market dislocation led to a 'flash' appreciation of the yen and a sharp but short-lived depreciation of the Australian dollar (see 'Box B: The Recent Japanese Yen Flash Event').

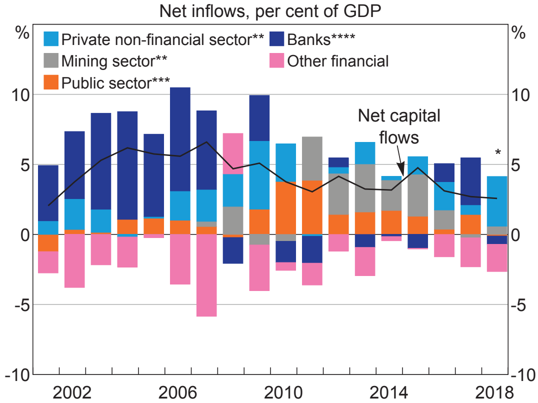
Graph 3.26
Volatility in AUD/USD
Month average*



* February 2019 is month to date
** 1-month options
Sources: Bloomberg; RBA

Net capital inflows to Australia continue to be modest (Graph 3.27), consistent with the relatively low level of the current account deficit. At a sectoral level, there have been increased flows of foreign investment to the non-mining corporate sector in the past few years. This has partly offset a decline in flows to the mining sector and modest outflows from the banking sector in the first half of 2018. The banking

Graph 3.27
Australian Capital Flows
Net inflows, per cent of GDP

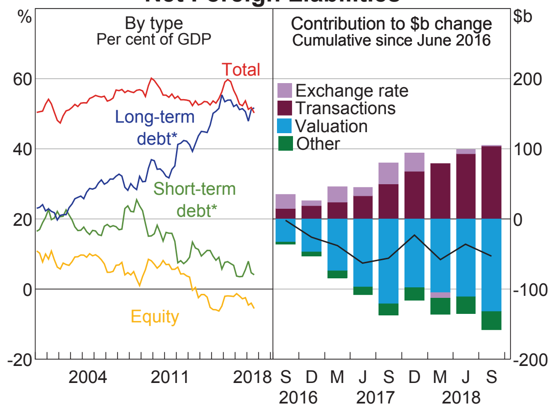


* Year to September quarter
** Prior to 2007 the mining sector is included in the private non-financial sector
*** Excludes official reserves and other RBA flows
**** Adjusted for US dollar swap facility in 2008 and 2009
Sources: ABS; RBA

sector has continued to experience bond inflows (in line with positive net offshore bond issuance by Australian banks in the first half of 2018, although more recently this has reversed). However, these inflows have been more than offset by outflows in the form of deposits and commercial paper. This may reflect a decline in short-term Australian bank securities held by US corporations with large cash holdings, such as those in the technology sector. This is consistent with continued repatriation of funds by such corporations to the United States following tax changes there that came into effect in early 2018.

Australia's net foreign liability position has declined as a share of GDP over recent years to its lowest level since 2002 (Graph 3.28). This partly reflects a decline in net capital inflows at a time when the nominal growth of the economy has picked up. It also reflects asset valuation effects, whereby the value of Australian assets held abroad has increased relative to Australia's liabilities with the rest of the world. This is consistent with foreign equities outperforming Australian equities over the past couple of years,

Graph 3.28
Net Foreign Liabilities



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

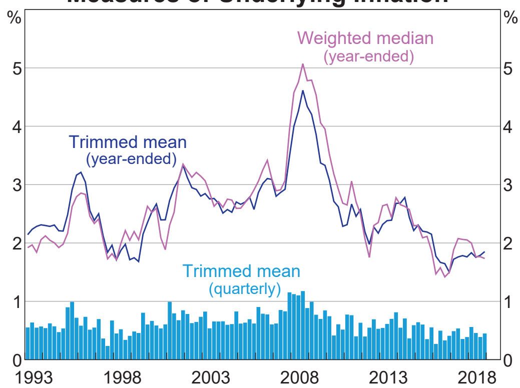
and the sizeable offshore equity holdings of the Australian superannuation sector. Over the past year, the depreciation of the Australian dollar has also increased the value of Australia's foreign assets (which are largely unhedged) relative to foreign liabilities (which are mostly denominated in Australian dollars or hedged against a depreciation of the Australian dollar). ✠

4. Inflation

Inflation remains low

Underlying inflation was a little under ½ per cent in the December quarter and 1¾ per cent over the year (Table 4.1; Graph 4.1). This was slightly lower than the forecast in the November *Statement on Monetary Policy*. The inflation outcomes in the December quarter did not materially change the Bank's assessment of underlying inflation pressures in the economy. Headline inflation was 0.4 per cent (seasonally adjusted) in the December quarter and 1.8 per cent over the year (Graph 4.2). This was also lower than the forecast in the November *Statement*, largely due to a decline in fuel prices in the quarter.

Graph 4.1
Measures of Underlying Inflation*



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

Sources: ABS; RBA

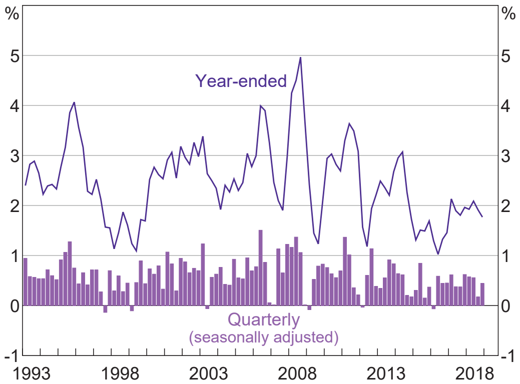
Year-ended underlying inflation is above its trough and has been around 1¾ per cent for some time. The tightening of the labour market over this period and associated gradual pick-up in wages growth has provided a little bit of upward pressure on inflation. There has been some upward

Table 4.1: Measures of Consumer Price Inflation
Per cent

	Quarterly(a)		Year-ended(b)	
	December quarter 2018	September quarter 2018	December quarter 2018	September quarter 2018
Consumer Price Index	0.5	0.4	1.8	1.9
Seasonally adjusted CPI	0.4	0.2	–	–
– Tradables	–0.1	0.2	0.6	1.4
– Tradables (excl volatile items)(c)	0.2	0.0	–0.1	–0.8
– Non-tradables	0.8	0.2	2.4	2.2
Underlying Measures				
Trimmed mean	0.4	0.4	1.8	1.8
Weighted median	0.4	0.4	1.7	1.8
CPI excl volatile items(c)	0.6	0.1	1.6	1.2

(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
Consumer Price Inflation*

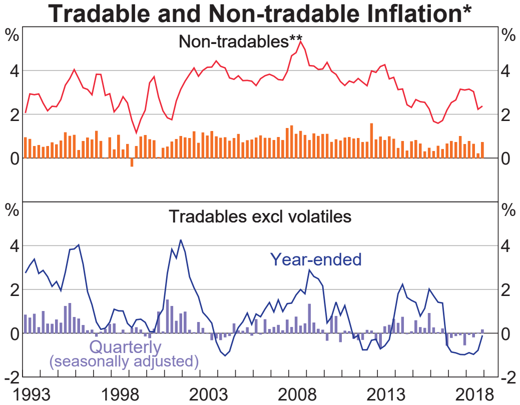


* Excludes interest charges prior to the September quarter 1998; adjusted for the tax changes of 1999–2000

Sources: ABS; RBA

momentum in inflation in those parts of the CPI basket that have historically been sensitive to changes in the unemployment rate. More recently, deflation in the prices of tradable items (excluding volatile items) has eased, consistent with some pass-through from the exchange rate depreciation over the past year (Graph 4.3). In contrast, administered price inflation, including utilities, and new dwelling cost inflation have declined (Graph 4.4). Over the past year, the share of items for which inflation has increased has been similar to the share of items for which inflation has declined.

Graph 4.3
Tradable and Non-tradable Inflation*

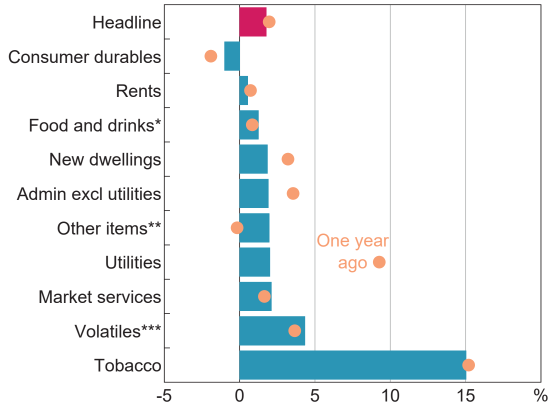


* Adjusted for the tax changes of 1999–2000

** Excludes interest charges and deposit & loan facilities

Sources: ABS; RBA

Graph 4.4
Inflation by Component
Year-ended, December 2018



* Excludes fruit, vegetables, meals out and takeaway

** Includes travel, telecommunications and pet products

*** Includes fruit, vegetables and automotive fuel

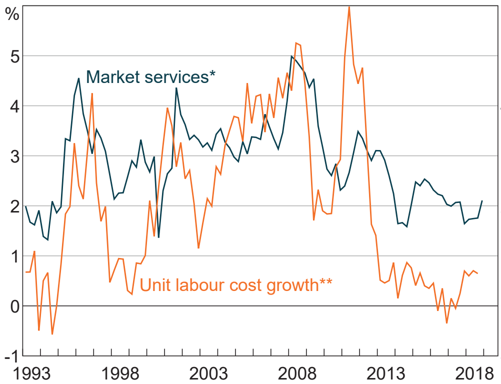
Sources: ABS; RBA

Domestic price pressures remain subdued

Inflation in the prices of market services, which include hairdressing, financial services and meals out & takeaway, has increased a little from a year ago but remains low (Graph 4.5). The prices of these services are generally driven by domestic factors such as labour costs and commercial rents, which have also increased relatively slowly over recent years.

Rent inflation was 0.5 per cent over the year, which is around its lowest rate since mid 1993 (Graph 4.6). Rent growth continues to differ considerably across capital cities. Rents are 6 per cent lower over the year in Perth, and have been falling since 2015. However, the pace of these falls has eased since mid 2017 as the Perth vacancy rate has declined. Rent inflation has declined a little in Sydney, reflecting an increase in the vacancy rate to above-average levels and falls in newly advertised rents. In contrast, Hobart rents are growing at around 5 per cent in year-ended terms.

Graph 4.5
Market Services Inflation

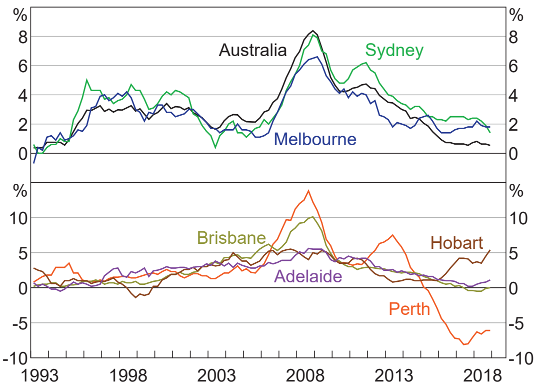


* Year-ended; includes household services, meals out & takeaway and insurance & financial services; adjusted for the tax changes of 1999–2000

** Two year-ended annualised growth

Sources: ABS; RBA

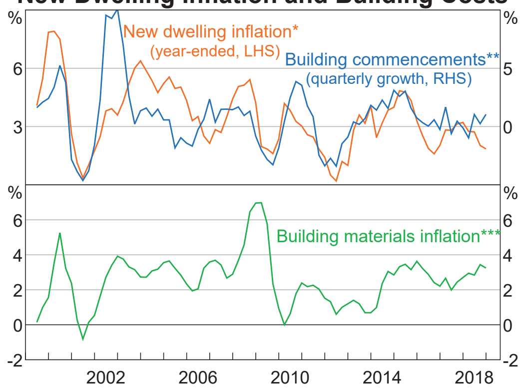
Graph 4.6
Rent Inflation
Year-ended



Source: ABS

New dwelling inflation remains subdued despite high levels of dwelling investment over recent years. The cost of building a new dwelling increased by 1.8 per cent over the year to December, well below its long-run average (Graph 4.7). Over the year, the increases in the cost of new dwelling construction in Sydney and Melbourne were relatively large. This is consistent with reports that competition from infrastructure and commercial projects has contributed to higher material prices and wage pressures in the eastern states.

Graph 4.7
New Dwelling Inflation and Building Costs



* Adjusted for the tax changes of 1999–2000

** Chain volume measure, six-quarter trailing average lagged by one quarter; other residential building commencements included from March 2017 with a 20 per cent weight

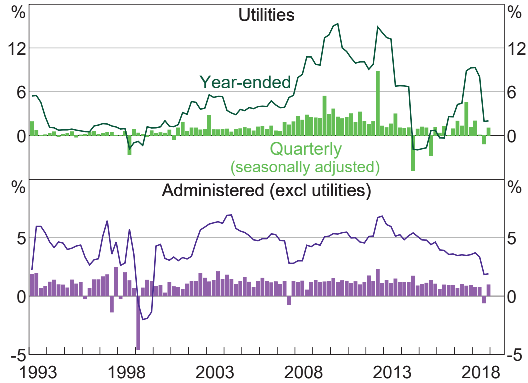
*** Year-ended change in producer prices for inputs to house construction

Sources: ABS; RBA

Administered price inflation has slowed

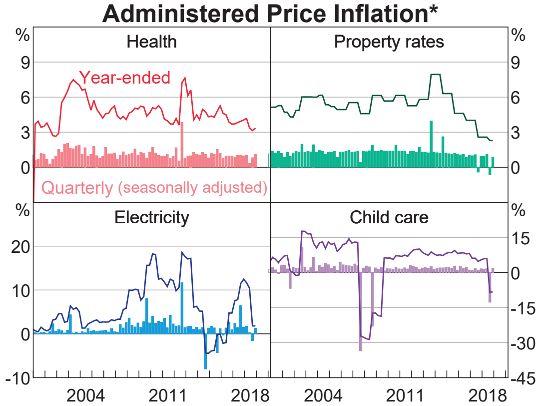
Inflation in the price of administered items has slowed considerably over the past year to 1.9 per cent (Graph 4.8). Administered items are those for which prices are (at least partly) regulated or those which are mainly provided by the public sector. The recent decline in inflation for these items reflects several pricing decisions, including lower-than-average property rates and health insurance premium increases, the introduction of the new child care subsidy payment, and the pass-through of lower wholesale energy prices to retail electricity prices (Graph 4.9). In the December quarter itself, administered prices were little changed in non-seasonally adjusted terms, since few administered price changes occur at the end of the calendar year. Several administered price changes occur in the March quarter, including the annual adjustment to standing offer electricity prices in Victoria.

Graph 4.8
Administered Price Inflation*



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

Graph 4.9
Administered Price Inflation*

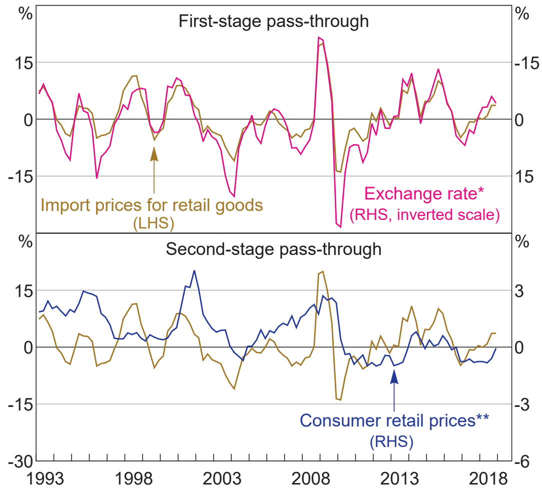


* Adjusted for the tax changes of 1999–2000
Sources: ABS; RBA

Higher import prices have put upward pressure on retail prices

Retail prices rose a little in the December quarter, to be unchanged over the year. This follows a number of years of retail price deflation and is consistent with the depreciation of the exchange rate (Graph 4.10). Nonetheless, retail inflation remains low, suggesting ongoing competitive pressures in the industry. The pick-up in retail inflation in the December quarter has been broad based across both food and consumer durable items. Furniture & furnishings and household appliances & utensils prices increased

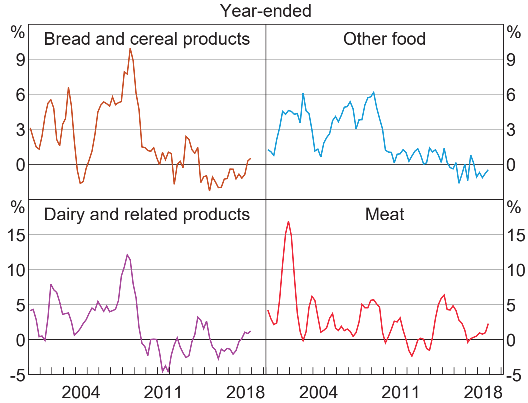
Graph 4.10
Retail Prices and the Exchange Rate
Year-ended



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

in the December quarter, after falling for several years. The drought in eastern Australia is one factor that has contributed to higher food prices. Inflation in dairy products increased in the December quarter following the imposition of a drought-related levy on certain milk products in some supermarkets (Graph 4.11). Meat inflation also increased strongly, because of both the drought and strong international demand for Australian meat.

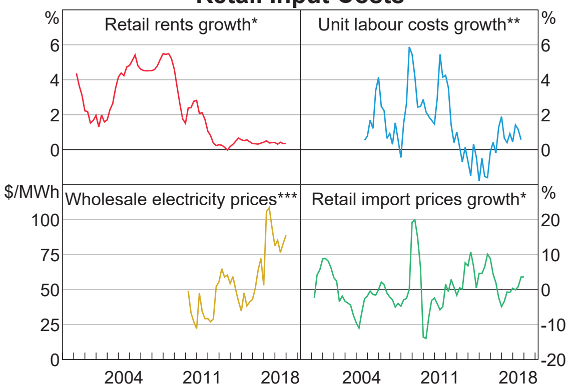
Graph 4.11
Food Price Inflation*
Year-ended



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

Growth in the retail industry's input costs has been subdued (Graph 4.12). Retail rents have been little changed for some time, while growth in retail labour costs has been low. Wholesale electricity prices are little changed over the past year, though the level of electricity prices is much higher than a couple of years ago.

Graph 4.12
Retail Input Costs

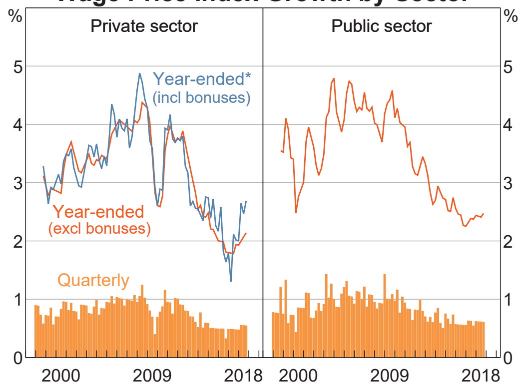


* Year-ended
** For retail firms; two year-ended annualised
*** State-level wholesale prices weighted by each state's generation capacity
Sources: ABS; Bloomberg; JLL; RBA

Wages growth has picked up, but remains low

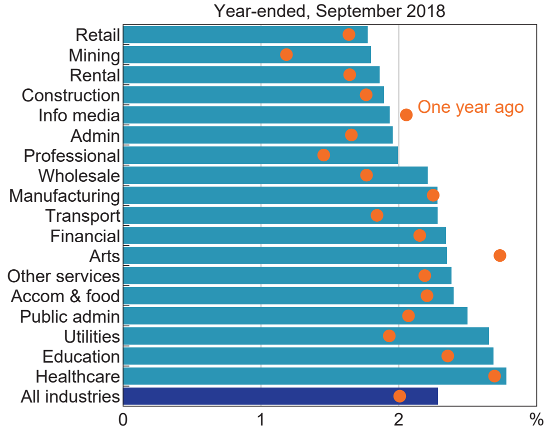
Growth in the Wage Price Index (WPI) increased to 0.6 per cent in the September quarter, to be 2.3 per cent higher over the year (Graph 4.13). The increase in wages growth over the year is more pronounced when bonuses and commissions are included. Year-ended wages growth is higher than it was a year ago in most industries. It remains strongest in the health care & social assistance and education industries, and lowest in the retail and mining industries (Graph 4.14). The modest increase in wages growth since 2016 is consistent with the gradual tightening of the labour market over that period.

Graph 4.13
Wage Price Index Growth by Sector



* Not seasonally adjusted; bonuses include commissions
Source: ABS

Graph 4.14
Wage Price Index Growth by Industry*
Year-ended, September 2018

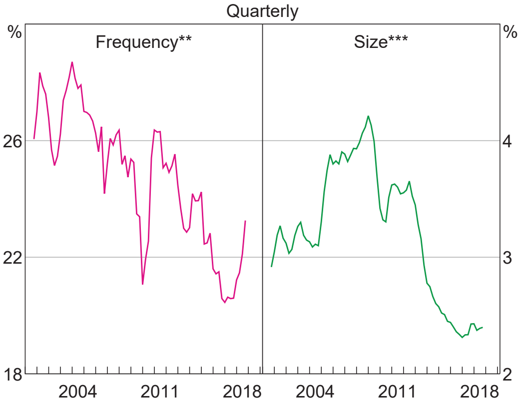


* Excluding bonuses; not seasonally adjusted
Sources: ABS; RBA

Wages growth in the quarter was also boosted by the 3.5 per cent increase in the award and minimum wages on 1 July. As at May 2018, a little over 20 per cent of employees had their pay set by awards, which are mostly determined by the Fair Work Commission (FWC). The FWC award decision is also likely to influence wage outcomes for some employees not on an award. For example, data from the Department of Jobs and Small Business suggest that nearly 20 per cent of employees on existing federal enterprise bargaining agreements have their wage outcomes linked in some way to FWC decisions.

Analysis of the micro-level WPI data from the Australian Bureau of Statistics suggests that the small pick-up in wages growth since 2016 stems from a higher share of jobs experiencing a change in wages in any given quarter, rather than an increase in the average size of the changes (Graph 4.15). This is largely because wage 'freezes' have become less common. The decline in the share of jobs with wage freezes has been fairly broad based across both the public and private sectors, and among those groups whose pay is set by enterprise bargaining agreements (EBAs) and individual agreements. For example, a number of large retail EBAs have recently been finalised after a lengthy delay in negotiations that had resulted in pay freezes. Analysis using the micro-level data suggests jobs that had experienced a wage freeze tend to get larger wage increases than jobs that had not had a wage freeze. However, the share of workers experiencing wage freezes remains elevated (relative to a longer-run average) in some industries.

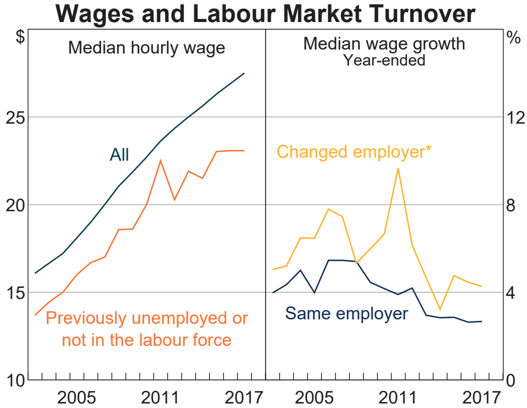
Graph 4.15
Frequency and Size of Wage Changes*
Quarterly



* Smoothed using a four-quarter trailing average
** Share of jobs with a wage change
*** Average percentage wage change, conditional on a wage change
Sources: ABS; RBA

Growth in the national accounts measure of average earnings per hour (AENA) has risen a little over the past year, but remains subdued. AENA captures a broader range of labour costs than the WPI, and is affected by compositional changes in employment. One of these compositional changes may be related to a decline in voluntary turnover; around 10 per cent of employed persons changed jobs voluntarily in each of the last five years, down from around 13 per cent per year during the strong labour market conditions of the mid 2000s. Data from the Household, Income and Labour Dynamics in Australia (HILDA) survey shows that wages growth is typically lower for workers that do not change employer, and that as of 2016/17 there had been no pick-up in wages growth for this group (Graph 4.16). Furthermore, the gap between the wages of those entering into employment and those already working has continued to widen.

Graph 4.16
Wages and Labour Market Turnover



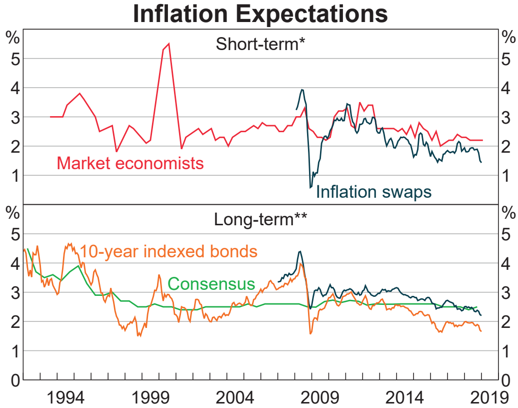
* Smoothed with a three-year-centred moving average
Sources: HILDA Release 17; RBA

Market-based measures of inflation expectations have declined

Short-term and long-term market-based measures of inflation expectations have declined in recent months to be around 2016 levels (Graph 4.17). These declines, which have also occurred in market measures of inflation expectations for other economies, appear to be related to the recent sharp fall in oil prices.

In contrast, survey-based measures of inflation expectations for Australia are little changed. Long-term survey-based measures of inflation expectations remain around 2½ per cent. ✢

Graph 4.17
Inflation Expectations



* Over the year ahead
** Five-to-ten years ahead
Sources: Bloomberg; Consensus Economics; RBA; Yieldbroker

5. Economic Outlook

Domestic economic conditions have been a bit softer than were expected at the time of the November *Statement*. As a result, the forecast for GDP growth has been revised lower. Consistent with this, the forecast for inflation has also been revised slightly lower. In summary, GDP growth is expected to be a little above trend over the forecast period and underlying inflation is expected to pick up to 2 per cent by late 2019 and to be a little higher in the following year.

As discussed in the chapter on 'The International Environment', GDP growth in Australia's major trading partners is projected to moderate from the strong growth seen in 2017 and early 2018. Growth is expected to slow by a bit more than was expected at the time of the November *Statement*, largely because growth in some of Australia's major trading partners slowed by a little more than expected in the second half of 2018. Ongoing trade tensions between the United States and some of its key trading partners, which had already lowered the outlook for global growth in the August and November *Statements*, remain a downside risk.

Although growth in the major advanced economies is expected to moderate, it is expected to remain sufficient to maintain upward pressure on inflation. Tight labour markets and a pick-up in wages growth are supporting consumption and adding to inflationary pressures. However, the decline in oil prices since the previous *Statement* will continue to reduce inflation in the near term. Should oil prices remain at current levels for a sustained period, this could be expected to support GDP growth in our trading partners because most of these economies are net oil importers.

Domestic GDP growth has been revised lower

GDP growth over the year to the September quarter was weaker than previously anticipated. This partly reflected weaker-than-expected consumption growth in the quarter and slower growth in household income. Consumption growth was also revised lower over recent years. There were also downward revisions to the recent history of some other components of GDP. As a result, the starting point for the year-ended growth forecasts is ¾ percentage point lower than previously expected (Table 5.1). Recent partial indicators point to firmer GDP growth in the December quarter resulting in year-ended growth of a bit below 3 per cent, which is a little above estimates of potential output growth.

Year-ended growth is expected to be around 3 per cent over 2019 and 2¾ per cent over 2020 (Graph 5.1). Accommodative monetary policy and tighter labour market conditions are expected to provide ongoing support to growth in household income and consumption. However, consumption growth is now expected to be 2¾ per cent over the forecast period, rather than 3 per cent as had been expected for some time. This reassessment of the outlook for consumption is informed by the downward revision in the national accounts and, to some extent, the recent declines in housing market activity. The outlook for household consumption growth continues to be one of the key sources of uncertainty for the domestic growth forecasts, particularly given uncertainties around the outlook for income

Table 5.1: Output Growth and Inflation Forecasts[a]

Per cent

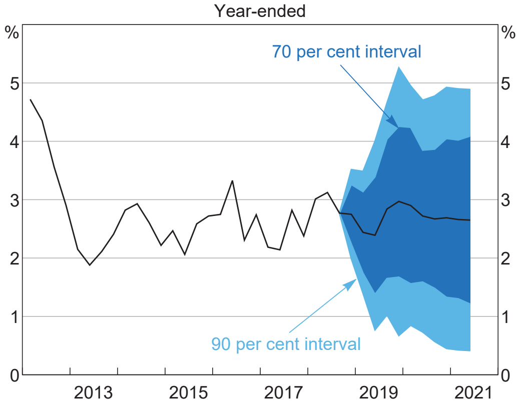
	Year-ended					
	Dec 2018	June 2019	Dec 2019	June 2020	Dec 2020	June 2021
GDP growth	2¾	2½	3	2¾	2¾	2¾
(previous)	(3½)	(3¼)	(3¼)	(3¼)	(3)	(n/a)
Unemployment rate[b]	5.0	5	5	5	4¾	4¾
(previous)	(5)	(5)	(5)	(4¾)	(4¾)	(n/a)
CPI inflation	1.8	1¼	1¾	2	2¼	2¼
(previous)	(2)	(2)	(2¼)	(2¼)	(2¼)	(n/a)
Trimmed mean inflation	1.8	1¾	2	2	2¼	2¼
(previous)	(1¾)	(2)	(2¼)	(2¼)	(2¼)	(n/a)
	Year-average					
	2018	2018/19	2019	2019/20	2020	2020/21
GDP growth	3	2½	2¾	2¾	2¾	2¾
(previous)	(3½)	(3¼)	(3¼)	(3¼)	(3¼)	(n/a)

(a) Technical assumptions include TWI at 62, A$ at US$0.72 and Brent crude oil price at US$63 per barrel; shaded regions are historical data; figures in parentheses show the corresponding forecasts in the November 2018 *Statement*

(b) Average rate in the quarter

Sources: ABS; RBA

Graph 5.1
GDP Growth Forecast*
Year-ended



* Confidence intervals reflect RBA forecast errors since 1993

Sources: ABS; RBA

growth and how developments in housing markets will affect household decision-making (see below).

The domestic forecasts are conditioned on the technical assumption that the cash rate evolves in line with market pricing. The exchange rate is assumed to be constant around 2 per cent below where it was at the time of the November *Statement*. The oil price is assumed to remain 13 per cent lower than at the time of the November *Statement*. The population aged 15 years and over is assumed to grow by 1.6 per cent per annum over 2019 and 2020 and by 1.5 per cent over 2021.

Consumption growth has been revised lower

Consumption growth was weak in the September quarter and was revised lower in most quarters over recent years, mainly because of lower spending on services such as finance & insurance. Consumption growth is expected to recover somewhat in the December quarter and year-ended growth is expected to increase gradually to be around 2¾ per cent, rather than 3 per cent, which had been the medium-term forecast for some time. This reassessment of the outlook for consumption growth is informed by the downward revision to the history of consumption, which has lowered annual consumption growth by 0.2 percentage points for the past three years. Sizeable revisions (in both directions) in recent national accounts have made it challenging to gauge underlying momentum in consumption growth. Recent declines in housing prices and housing market activity are also expected to weigh on consumption.

Recent measured growth in household disposable income, which is a significant determinant of consumption, has been weaker than expected due to subdued growth in non-labour income and strong growth in tax payments. Over coming years, household disposable income growth is expected to be supported by employment growth and a gradual pick-up in wages growth. Income tax cuts already announced will also support disposable income. The forecast contribution to household disposable income growth from unincorporated businesses has been revised lower in the near term due to a lower starting point for farm income than previously expected, as well as lower income for unincorporated businesses involved in the residential building sector, as dwelling investment declines. With household disposable income forecast to grow at about the same rate as consumption over the forecast period, the household saving ratio is expected to stabilise.

Dwelling investment will decline over the forecast period …

Dwelling investment is likely to be around its peak for this cycle, and is projected to decline over coming years. The pipeline of work to be done on higher-density housing remains very large, which should continue to support activity in the near term. This is consistent with reports from construction firms and developers in the Bank's liaison program. However, higher-density building approvals have been trending lower for around a year, and are expected to decline further over coming quarters. This implies a much lower level of activity once the current pipeline of work is completed. Information from the liaison program also points to a significant fall in pre-sales for new apartments over the past year. In addition to the difficulty of obtaining pre-sales, liaison with developers suggests that financial conditions have tightened further over the past six to twelve months. As a result, some developers are obtaining financing from alternative sources, though at a higher interest cost. Sales of new detached dwellings have also slowed. Detached housing investment is forecast to decline in the near term, broadly consistent with the decline in building approvals over the past year.

… but business investment is expected to support growth …

Non-mining investment growth slowed to around 3½ per cent over the year to the September quarter, mainly reflecting a moderation in non-residential building investment consistent with the slower pace of approvals since late 2017. Partial indicators and liaison indicate there is a solid pipeline of private infrastructure investment (particularly transport and electricity projects) and buildings (particularly offices and short-term accommodation), suggesting non-residential construction will pick up over coming quarters. Investment in machinery & equipment and computer software is also expected to support non-mining investment over the forecast period.

Mining investment fell sharply in the September quarter, associated with a further decline in spending on liquefied natural gas (LNG) projects. Information from the ABS' Capital Expenditure Survey and liaison suggest that there is little further expenditure needed to finalise the remaining LNG projects under construction, and these projects are now ramping up production and exports. Accordingly, mining investment is expected to be close to its trough, and should gradually pick up over 2019 and 2020 as resource firms increase expenditure to sustain production.

… along with public demand

Public demand is expected to provide an ongoing impetus to growth. Public investment will be supported by the large pipeline of infrastructure projects. Growth in public consumption is being supported by the rollout of the National Disability Insurance Scheme, which is due to be completed by mid 2020.

The federal government budget is expected to return to surplus over the coming years. More broadly, public demand is likely to be supported by additional revenues as employment continues to grow and mining profits remain high, although this may be offset to some extent by lower stamp duty revenues associated with easing housing market conditions, especially in New South Wales and Victoria. State and federal budgets indicate that public investment will remain at a high level for at least the next couple of years, though growth is expected to moderate over the forecast period.

The outlook for imports and exports is broadly unchanged

Imports are expected to continue growing over the forecast period, after declining in the September quarter, consistent with ongoing growth in public and private investment (which are relatively import-intensive types of spending).

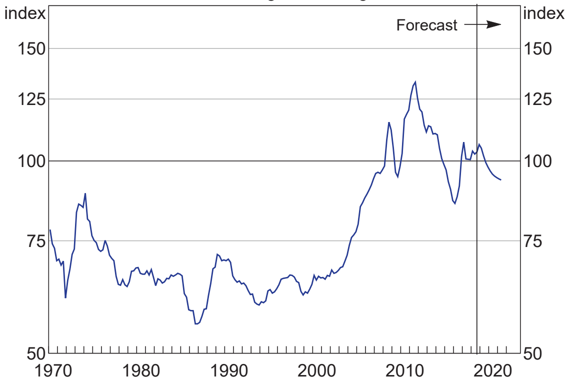
The outlook for export growth is a little lower in 2019, mainly because rural exports are likely to be weaker than previously expected. This follows updated information from the Australian Bureau of Agricultural and Resource Economics and Sciences about the impact of drought conditions on rural production and exports, particularly cereal crops. This weakness is expected to be offset to some extent by manufacturing and service exports, given the depreciation of the exchange rate over the past year or so and rising enrolments of overseas students. Resource exports are expected to have declined a little in the December quarter, based on partial trade data. LNG production is likely to ramp up a little more slowly in the next few quarters than was previously expected, but the outlook over the rest of the forecast period is little changed. By the end of 2019 all LNG projects are expected to have reached their targeted production levels; resource exports will then be at historically high levels but contributing little to GDP growth.

The terms of trade are still expected to moderate

The terms of trade are still expected to moderate over the forecast period (Graph 5.2) as Chinese demand for bulk commodities gradually declines and other low-cost supply enters the market. However, relative to the November *Statement*, the terms of trade have been revised a little lower from mid 2019 onward, predominantly reflecting the effect on LNG export prices of the recent decline in oil prices but are expected to remain above their early 2016 trough.

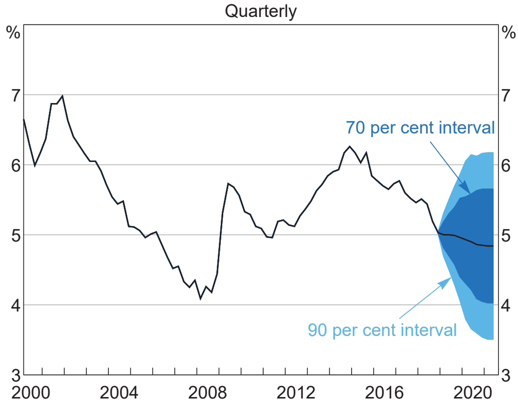
The forecast for the iron ore spot price has been revised higher, largely reflecting the closure of multiple Brazilian mines after a dam collapse; the potential for additional regulatory responses to the incident makes the outlook for prices more uncertain. The prices of other bulk commodity export prices have evolved largely as expected over recent months. Although the forecasts for thermal coal prices are broadly unchanged compared with the previous *Statement*, there

Graph 5.2
Terms of Trade
2016/17 average = 100, log scale



Sources: ABS; RBA

Graph 5.3
Unemployment Rate Forecast*
Quarterly



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

remains some upside risk given the continued strength in demand (particularly from Asia) and the lack of investment in new supply.

The unemployment rate is expected to move a little lower …

Labour market outcomes in the December quarter were better than expected at the time of the November *Statement*. Near-term leading indicators of labour demand suggest employment growth will remain above growth in the working-age population over the next six months. Further out, employment growth has been revised down marginally, consistent with the downward revision to GDP growth. The participation rate is expected to increase further, encouraged by strong labour market conditions. From a lower starting point, the unemployment rate is still expected to decline to around 4¾ per cent by late 2020 (Graph 5.3).

… leading to a gradual pick-up in wages growth

There has been little change to the wages growth profile since November. The gradual pick-up in wages growth is expected to continue, consistent with information from the Bank's liaison program and the expectation of a decline in labour market spare capacity. Wages growth in new enterprise bargaining agreements has increased a little and the share of workers that face wage freezes is expected to decline further. Average earnings from the national accounts, which is a broader measure of labour costs, is expected to grow at a slightly faster pace than the Wage Price Index (WPI) over the next few years. This forecast implicitly assumes that whatever compositional or other changes had been holding average earnings growth below WPI growth in recent years will gradually dissipate. How far this pick-up in wages growth translates into inflationary pressures will depend on whether there is an accompanying increase in productivity growth.

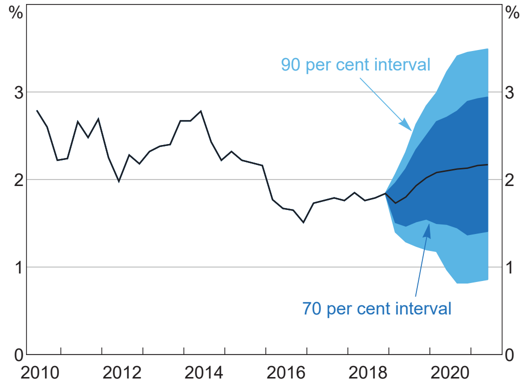
The inflation outlook has been revised lower

The December quarter inflation outcomes were marginally lower than forecast in the November *Statement*. For headline inflation this was largely because fuel prices were lower than expected. From this lower starting point, there has been a small downward revision to the underlying inflation forecast; year-ended trimmed mean inflation is now expected to increase to 2 per cent by the end of 2019 (previously in mid 2019) and to 2¼ per cent by the end of 2020 (Graph 5.4). This revision is consistent with the lower GDP growth profile and incorporates some of the previously flagged downside risk to administered and utilities price inflation in the near term. The depreciation of the exchange rate since the November *Statement* provides some offsetting effect.

In the near term, the forecast for headline inflation has been revised lower relative to the forecast for underlying inflation because of the large decline in fuel prices. The 11 per cent fall in fuel prices in the March quarter to date is expected to subtract 0.3 percentage points from headline inflation in the quarter. As a result, year-ended headline inflation is now forecast to fall to 1¼ per cent in early 2019. Further out, headline inflation is expected to grow around the same pace as underlying inflation. The tobacco excise increases, which have boosted headline inflation by around 0.4 per cent per annum over the past few years, are legislated until the end of 2020.

In terms of the components of inflation, policy developments suggest that inflation in utilities and administered prices may remain below average in 2019. It is unclear how households might respond to the shift in relative prices of these non-discretionary items. Leading indicators suggest that rent growth is likely to remain low in some capital cities for some time; overall, rent growth will depend on the outlook for construction activity and population growth. Retail prices will also be influenced by any sustained movements in the exchange rate, changes in household spending decisions and the persistence of competitive forces putting downward pressure on retail prices.

Graph 5.4
Trimmed Mean Inflation Forecast*
Year-ended



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

There are a number of global and domestic uncertainties for the forecasts

Over the past three months, the downside risks to the global outlook have increased. Ongoing trade tensions continue to create uncertainty. In China, this has added to the considerable uncertainty that has existed for some time around how the authorities will balance the need to support growth at the same time as managing financial risks. Another factor affecting the balance of risks around the global growth outlook is that financial conditions appear to have tightened somewhat.

There are also a number of domestic uncertainties for the growth and inflation outlook. As has been the case for some time, uncertainty about the outlook for consumption growth is a key risk. Uncertainty about the outlook for household disposable income continues to be a factor, but the potential for lower household net wealth to affect consumption decisions has increased with recent developments in housing markets. Declining housing market activity also poses risks for other parts of the economy.

Labour market conditions over the past year suggest that economic activity has been stronger than the GDP data have signalled. Relatedly, there continues to be uncertainty about how quickly the unemployment rate will decline and how quickly that will feed into wage pressures and so inflation. In the near term, the outlook for inflation also depends on the extent to which utilities and administered price changes continue to put downward pressure on inflation.

Trade tensions remain a material risk to the global growth outlook and other political risks have increased

The outcome of the ongoing negotiations between the United States and China remains uncertain, but an escalation of trade tensions continues to be a significant risk. The United States is also considering adjustments to its trade policy on automotive imports, which could lead to much higher import tariffs or strict quotas. This would have a significant effect on economies with large automotive exports to the United States, such as Germany and Japan, and economies that are connected to automotive supply chains. The effects of these tensions are already apparent in data on trade and are likely to have contributed to the decline in investment intentions in some economies. The longer the uncertainty lasts, the larger these effects, and the adverse consequences for global growth, are likely to be.

There are a number of other political uncertainties that could materially harm the global growth outlook, particularly if they are not resolved quickly. The uncertainty about how the United Kingdom will exit the European Union and the future relationship between the two is likely to depress UK investment and consumption and spill over to weaker investment in the euro area. Political uncertainty in the euro area itself has also increased because of widespread social unrest in France and the resulting policy changes, and elevated concerns about economic and fiscal policies in Italy.

It is uncertain how policies in China will balance supporting growth and addressing financial risk

The Chinese authorities continue to face a number of policy trade-offs, and uncertainties about how they will be resolved pose risks to the outlook for the Chinese economy, demand for bulk commodities and Australia's terms of trade. Recent fiscal and monetary policy measures have focused on specific areas of weakness in the economy – namely, public infrastructure spending and small and private sector firms – so as to avoid adding to already high debt levels. If economic activity responds less vigorously to these measures than anticipated, Chinese growth could be weaker than forecast. However, in this event the government could introduce more aggressive stimulus measures. Uncertainty about the relative responses of growth and debt to the current policy mix complicates the challenge that authorities face in controlling economy-wide leverage. For example, even if the current relatively targeted approach to stimulus implies a further moderation in broad credit growth, slowing growth in nominal incomes will make it harder for the existing debt principal to be inflated away.

Trade frictions with the United States have eased in recent months, but there is a risk that they could increase again and become entrenched, or be resolved in a way that distorts bilateral (and third-country) trade flows. This would result in medium-term negative effects on China's manufacturing export sector. While the impact could be mitigated by allowing the renminbi to depreciate, authorities might resist such an outcome to avoid fuelling expectations of further currency depreciation, which could encourage capital outflows. The evolution of policies towards China's property markets, infrastructure spending and environmental controls will also be significant for the growth trajectory and, in particular, the outlook for Chinese steel demand.

A significant tightening of global financial conditions could have real effects

Conditions in financial markets have tightened somewhat in the major advanced economies after a lengthy period during which conditions were very accommodative. However, the cost of finance and particularly compensation for financial risk remain low relative to history, so there is a risk of further tightening. This could occur in response to a range of triggers, including: trade tensions escalating; growth in China decelerating more sharply than expected; a disorderly Brexit; or concerns about sovereign and banking sector risk in Italy re-emerging. The effect would be larger for economies with pre-existing vulnerabilities, such as elevated sovereign, corporate or household debt, or less resilient financial institutions and markets. In some circumstances, these effects could spill over to other economies. The capacity of economies to offset these effects through domestic policy or adjustment in exchange rates differs.

The prices of financial securities in Australia tend to move closely with those in major financial centres, so a tightening in global financial conditions could transmit quite quickly to Australia. However, the Australian dollar also tends to depreciate during periods of heightened volatility, acting as a shock absorber for the Australian economy, particularly given that foreign borrowing by Australian institutions and residents is well hedged against currency movements.

Domestically, the outlook for consumption remains a key source of uncertainty

As discussed above, the recent volatility in the consumption data and a series of revisions in recent quarters has made it harder than usual to gauge the underlying momentum in consumption growth. As has been the case for some time, the ongoing uncertainty about the outlook for household income also has a direct bearing on forecasts for consumption. Recent developments in housing markets have highlighted the additional risks that come from uncertainty about how households might change their consumption decisions in response. Household consumption accounts for just over half of GDP, so if consumption growth were to be materially higher or lower than currently forecast, there would be implications for the forecasts for overall GDP growth, employment growth and inflation.

As noted above, real disposable income growth is expected to pick up, supported by a tightening in labour market conditions and income tax cuts. Some uncertainties that affect the outlook for inflation, such as the level of retail competition and administered prices, also affect households' purchasing power, and so their real disposable income. If household income growth does not increase as expected, or households take some time to feel confident that wages growth will pick up in a sustained way, then consumption growth could be lower than currently forecast. Consumption has thus far been resilient to measured weak income growth, which has been absorbed through a lower rate of saving. This is less likely in an environment where net household wealth is declining.

The decline in housing turnover over the past year has weighed on demand for items such as household appliances and furnishings that are more likely to be purchased when moving into a new home. More generally, the decline in household wealth associated with falling housing prices has likely put some downward pressure on consumption growth. However, these recent falls have followed several years of very strong growth in prices. If households take a longer-term perspective of their wealth, they may look through the recent declines; even if they do react, it is unclear how quickly this might occur.

The high level of household debt also remains a key consideration for household consumption. In general, more indebted households are likely to be more sensitive to changes in their expected income growth and household wealth; consumption growth may be weaker for a time if households become concerned about their debt levels and choose to pay down debt more quickly. It is also possible that households that are highly indebted or credit-constrained will be more sensitive to falling housing prices than to rising prices.

Weaker housing construction and prices could have pervasive economic effects

There are a number of channels other than consumption through which housing market conditions can affect economic activity. These channels have been incorporated into the central forecasts, but the effects are uncertain, particularly when there is uncertainty about the outlook for housing prices.

The decline in housing prices will have a direct effect on dwelling investment but the timing and magnitude of the effect is uncertain. The pipeline of work to be done is large and is expected to support dwelling investment for some time, even though residential building approvals have already declined considerably. The extent of the support from the pipeline could be more protracted than currently expected. But there is a risk that dwelling investment declines sooner and by more than currently forecast. This would have flow-on effects to the outlook for employment and household income. Very weak conditions in the earlier stages of residential development identified in business liaison point to further downside risk to dwelling investment in 2020 and beyond.

There are also a number of indirect channels through which a decline in housing prices could affect the economy. Lower housing prices could limit how much small businesses can borrow when using housing as collateral. The decline in housing market turnover associated with the decline in housing prices has implications for business and household services, such as real estate and legal services. Changes in housing prices and turnover can also affect public demand through their effect on state government stamp duty revenue.

Labour market conditions could tighten faster than expected

Labour market conditions over the past year could imply that economic activity has been stronger than the GDP data have signalled. Furthermore, some of the leading indicators suggest that the unemployment rate may fall faster than forecast over the first half of 2019. If this is realised, there may be less of a downside risk to income and consumption growth than outlined above. In addition, strong labour demand could be met to a greater extent than usual by existing workers or those who are currently outside the labour force (which would also imply a stronger participation rate than currently projected).

Regardless, as spare capacity in the labour market declines, wages growth is expected to increase gradually. To date, the data that have become available and reports from liaison have been consistent with this outlook. However, it remains uncertain how fast this spare capacity will be absorbed, and this is compounded by uncertainty about how fast this will translate into wage pressures. Recent international evidence indicates that this process could take longer than previous experience suggests, but that wage pressures do eventually build in very tight labour markets.

A number of other factors could lead to lower inflation than forecast

Headline inflation is expected to decline in the near term due to the recent sharp fall in oil prices. If the decline in oil prices is sustained, this will lower business input costs, which could flow through to lower underlying inflation over time. Reserve Bank estimates suggest that a sustained 15 per cent fall in oil prices will subtract about ½ percentage point from headline inflation immediately through direct effects and could cumulatively subtract around ¼ percentage points from underlying inflation through indirect effects over two to three years. At a component level, government initiatives to reduce cost-of-living pressures could result in downward pressure on administered price inflation for some time. There is also a risk that wholesale electricity prices could decline significantly over the next few years as a large volume of new renewable energy generation comes online.

Longer-term measures of inflation expectations remain consistent with the Bank's medium-term inflation target. Although the effect of lower oil prices on inflation should be temporary, some measures of inflation expectations are quite sensitive to oil prices. More broadly, an extended period of inflation below the target range could lead to lower inflation expectations, potentially affecting wage and price setting. At the same time, lower fuel prices and lower inflation for utilities and administered items will boost households' real purchasing power, which could contribute to price pressures elsewhere.

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