RESERVE BANK OF AUSTRALIA

Statement on **Monetary Policy**

May 2024

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Contents

Overview

Key messages

Inflation remains high and is falling more gradually than expected.

Recent data confirm that inflation continues to moderate but more gradually than expected. Services inflation has peaked but remains high. Domestic cost pressures remain elevated and conditions in the labour market have eased by less than anticipated. Taken together, this information suggests that the labour market is tighter than previously thought.

Higher interest rates are expected to bring demand into better balance with supply. The staff's assessment is that the stance of monetary policy in Australia is currently restrictive, based on financial indicators and the ongoing easing in the growth of aggregate demand. Demand growth is expected to be subdued over 2024 and employment growth is expected to slow but remain positive. As demand comes into better balance with supply, inflation is expected to reach the target range of 2–3 per cent in the second half of 2025 and to reach the midpoint in 2026.

The cash rate target is unchanged to support inflation returning to target.

At its May 2024 meeting, the Reserve Bank Board decided to hold the cash rate. The Board expects that it will be some time yet before inflation is sustainably in the target range. Returning inflation to target within a reasonable timeframe remains the Board's highest priority. Keeping the cash rate at the current level supports continued progress of inflation to the target and moderate growth in employment.

The outlook remains uncertain. The path of inflation on its return to target is unlikely to be smooth. The path of interest rates that will best ensure that inflation returns to target in a reasonable timeframe remains uncertain and the Board is not ruling anything in or out. The Board will rely upon the data and the evolving assessment of risks and remain vigilant to the risks of inflation remaining too high.

What's going on in the economy?

Global economic growth has remained subdued and inflation is above target in many economies.

Economic growth has been soft across most advanced economies, although some recent indicators have been more positive. In many countries, subdued economic growth has been driven by sluggish household consumption – although the United States has been an exception to this, with domestic demand and household consumption growth remaining strong.

Timely indicators of business conditions have lifted in some advanced economies; recent increases in some commodity prices also point to some pick-up in global demand. Consistent with this, economic growth in China picked up in early 2024, driven by a rebound in household consumption and stronger external demand. The prices of iron ore and coking coal (which are key Australian exports) have partially recovered from sharp declines earlier in the year as the outlook for the Chinese economy has improved.

Inflation remains above target in most advanced economies and progress in lowering inflation has slowed in some. Core services inflation remains elevated abroad and the latest US data in particular have surprised to the upside. There are also some signs that disinflation in core goods prices may have run its course in some economies.

The expected timing of global policy easing has been pushed out.

Market participants generally expect that policy rates have peaked in most advanced economies. But they also expect that policy will be eased more gradually than was anticipated a few months ago, consistent with central banks' own communications. Yields on government and corporate bonds have increased alongside increases in policy rate expectations. At the same time, a range of asset prices, including for equities, remain elevated and conditions in international wholesale funding markets remain favourable overall, reflecting market expectations that restrictive monetary policy will see inflation ease without a substantial downturn in economic activity.

In Australia, the expected path for the cash rate has shifted up since the February *Statement*.

Market participants revised up cash rate expectations in response to stronger-than-expected Australian inflation and labour market data. Market pricing implies there is some chance of one more rate increase in Australia this year, with no reduction in the cash rate expected until 2025. Indeed, market participants expect policy to be eased more gradually and noticeably later than previously anticipated. As was the case previously, rate cuts are expected to be fewer and to begin later than in peer economies.

Economic growth has remained subdued, but the level of demand still exceeds supply.

The monetary policy tightening to date has contributed to a noticeable slowing in the growth of demand over the past year. Most of the increase in the cash rate since May 2022 has been passed on to borrowers. For households, this has led to a significant rise in the share of incomes used to meet debt payments, which, along with high inflation, has put pressure on household budgets. Household credit growth has been subdued in the face of higher interest rates.

The overall level of demand has continued to exceed the economy's supply capacity but the gap is narrowing as restrictive monetary policy flows through the economy. Very weak household consumption growth has more than offset strong growth in business investment and public demand. Households have reduced their spending: saving has been higher than expected, which appears to be supported by the current high-interest-rate environment.

The supply of housing has fallen short of underlying demand. Housing supply has been hampered by ongoing capacity constraints and increases in construction costs, while demand has been supported by strong population growth and the shift in preferences for more housing space. As a result, both housing prices and rents have continued to rise.

Labour market conditions have been easing but remain tight relative to full employment.

Labour market conditions have eased more gradually than was anticipated in the February *Statement*. Employment has grown in line with the working-age population, and the participation rate and employment-to-population ratio remain near record high levels. The unemployment rate remains only modestly above its late-2022 trough. Much of the easing in labour market conditions over the past year has occurred through declining average hours worked and can also be seen in fewer job vacancies.

Wages growth has been a little stronger than expected but may be around its peak. Growth in wages for workers on individual arrangements, whose wages tend to be more responsive to current labour market conditions, has eased somewhat. Recent business liaison also suggests that growth in wages is expected to moderate over the year ahead. Unit labour cost growth is elevated but has moderated slightly in line with the pick-up in labour productivity growth late last year.

How do we see the economy developing?

Subdued economic growth is expected to pick up gradually at home and abroad.

While global conditions look to have improved, growth in Australia's major trading partners is expected to remain subdued for the next year or so. The IMF has revised up a little its outlook for global growth and risks to the global outlook have become more balanced. The near-term growth outlook for the United States and China has been revised higher, although the impact of those revisions on trade-weighted demand for Australian exports has been offset by downward revisions in other trading partners.

In Australia, past monetary policy tightening and associated weak consumption growth is likely to weigh on economic growth in the near term. Households have reduced their spending and saved more than expected. Consumption growth is expected to remain subdued for most of 2024. The near-term forecast for GDP growth has been revised down a little compared with the forecasts published in the February *Statement*.

A recovery in real incomes is expected to support a pick-up in household spending. From late 2024, GDP growth is expected to pick up gradually as household consumption growth recovers. Dwelling investment growth is also expected to pick up from around mid-2025, reflecting increased demand for new housing from recent population growth, higher prices for established housing and improved conditions in the construction industry.

The labour market is expected to ease gradually over the next couple of years. Labour market conditions have proven stronger than expected and the unemployment rate is expected to increase more slowly than thought at the time of the February *Statement*. Much of the labour market adjustment is expected to continue to occur through declining average hours worked and fewer job vacancies. As labour demand eases, employment growth and nominal wages growth are expected to moderate gradually.

Inflation is expected to reach the target range of 2–3 per cent in the second half of 2025.

Inflation is expected to be higher in the near term than anticipated at the time of the February *Statement*. Services inflation has declined by a little less than expected, the labour market is assessed as being tighter than previously thought and the outlook for the labour market is slightly stronger. Higher petrol prices and the legislated end of energy rebates will also lift headline inflation in the near term.

The forecasts assume that the cash rate is higher for longer. The staff forecasts are conditioned on the assumption that the cash rate target remains around its current level until mid-2025 before gradually declining over the remainder of the forecast period. This path is about ½ percentage point higher from 2025 onwards than in the February *Statement*.

The higher cash rate path in the forecasts supports the return of inflation to target. Tighter monetary policy dampens expected real economic activity, closing the gap between demand and supply and reducing inflationary pressure in the second half of the forecast period. Inflation is expected to reach the target range of 2–3 per cent in the second half of 2025 and to reach the midpoint in 2026. Inflation expectations are expected to remain consistent with achieving the inflation target.

Key risks to the outlook

The staff assess the risks to the domestic outlook to be broadly balanced. The recent flow of data suggests that the risk that inflation takes longer to return to target than anticipated has increased. The labour market is tighter than anticipated and businesses' production costs could increase further if productivity growth were to remain weak. At the same time, the risk that demand is weaker than expected is still present, with recent labour market and consumption data providing different signals about the strength of domestic demand. Weaker demand growth would lead to more spare capacity and dampen inflationary pressures.

Costs associated with the upside risk to inflation are greater than the costs of downside risks. The longer it takes for inflation to return to target, the greater the risk that inflation and wage expectations drift higher. History shows that, should this occur, it would require more monetary policy tightening and a costly period of higher unemployment to stabilise inflation expectations and return inflation to target. Downside risks to the outlook for economic activity would see a faster return to the inflation target, likely at a cost to the employment objective.

What did the Board decide?

The Board decided to hold the cash rate. The Board expects that it will be some time yet before inflation is sustainably in the target range. Recent data indicating that labour market conditions are tighter than previously thought and that inflation is falling more gradually than expected demonstrate that the path of inflation back to the target range of 2–3 per cent is unlikely to be smooth.

Today's decision supports the dual objectives of monetary policy. It balances the return of inflation to target in a reasonable timeframe with gradual easing in labour market conditions to levels consistent with full employment. The path of interest rates that will best ensure that inflation returns to target in a reasonable timeframe remains uncertain. It will depend upon the data and the evolving assessment of risks, and the Board is not ruling anything in or out.

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

	Year-ended					
	Dec 2023	Jun 2024	Dec 2024	Jun 2025	Dec 2025	Jun 2026
GDP growth	1.5	1.2	1.6	2.1	2.3	2.4
(previous)	(1.5)	(1.3)	(1.8)	(2.1)	(2.3)	(2.4)
Unemployment rate[(b)]	3.9	4.0	4.2	4.3	4.3	4.3
(previous)	(3.8)	(4.2)	(4.3)	(4.4)	(4.4)	(4.4)
CPI inflation	4.1	3.8	3.8	3.2	2.8	2.6
(previous)	(4.1)	(3.3)	(3.2)	(3.1)	(2.8)	(2.6)
Trimmed mean inflation	4.2	3.8	3.4	3.1	2.8	2.6
(previous)	(4.2)	(3.6)	(3.1)	(3.0)	(2.8)	(2.6)

	Year-average					
	2023	2023/24	2024	2024/25	2025	2025/26
GDP growth	2.1	1.5	1.3	1.7	2.1	2.3
(previous)	(2.0)	(1.6)	(1.5)	(1.9)	(2.2)	(2.3)

(a) Forecasts finalised on 1 May. The forecasts are conditioned on a path for the cash rate broadly in line with expectations derived from financial market pricing; the cash rate is assumed to remain around its current level of 4.35 per cent until the middle of 2025 before declining to around 3.8 per cent by the middle of 2026. Other forecast assumptions (assumptions as of February *Statement* in parenthesis): TWI at 62 (62); A$ at US$0.65 (US$0.66); Brent crude oil price at US$84bbl (US$80bbl). The rate of population growth is assumed to have peaked in the September quarter of 2023 at 2.5 per cent, after which it is expected to decline back to its pre-pandemic average of around 1.4 per cent. Shading indicates historical data.

(b) Average rate in the quarter.

Sources: ABS; RBA.

Chapter 1
Financial Conditions

Summary

- **Monetary policy settings in most advanced economies remain restrictive overall and the expected timing for policy easing has been pushed out.** Market participants expect that policy rates have peaked in most advanced economies but are likely to be eased more gradually than anticipated a few months ago. This is most notable for the United States and Australia, where stronger-than-expected inflation has led to a reassessment of progress towards inflation consistent with the target.
- **Yields on government and corporate bonds have increased alongside increases in policy rate expectations.** At the same time, a range of asset prices, including for equities, remain elevated and conditions in international wholesale funding markets remain favourable overall, reflecting market expectations that restrictive monetary policy will see inflation ease without a substantial downturn in economic activity.
- **In Australia, the expected path for the cash rate has shifted up materially since the February *Statement*.** Market pricing implies some chance of one more rate increase this year, with no reduction in the cash rate expected until next year. Market participants expect policy to be eased more gradually and noticeably later than previously anticipated. Compared with other peer economies, fewer rate cuts are anticipated in Australia, and these are expected to begin later.
- **Overall financial conditions in Australia are restrictive, most notably for households.** Increases in the cash rate have caused a significant rise in household debt payments. Despite pressures on their budgets, nearly all borrowers continue to service their debts on schedule and households with mortgages are collectively contributing a little more to their offset and redraw accounts than before the pandemic. Indeed, higher interest rates are providing an incentive for all households to save more.
- **The increases in the cash rate have also caused a tightening in financial conditions for businesses overall.** Business lending rates and corporate bond yields have increased materially over the tightening phase. Even so, larger businesses have benefited from strong balance sheets and nominal earnings. Business credit growth has been slightly above its post-global financial crisis (GFC) average and larger firms have been raising funds from bond markets.
- **The Australian dollar trade-weighted index (TWI) has remained within the narrow range observed since the start of 2022.**

1.1 Interest rate markets

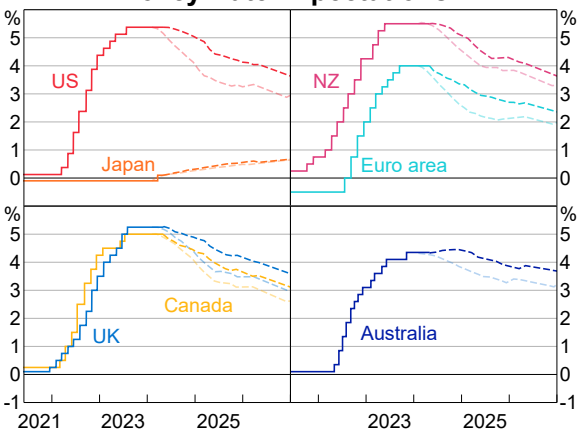
Most advanced economy central banks have signalled the next move in policy rates is likely to be down but are waiting for further evidence that inflation is declining sustainably towards their targets.

Most advanced economy central banks have held their policy rates unchanged since the February *Statement* at levels they assess to be restrictive. While most have also indicated that policy rates are likely to have peaked, central bank communications about the likely timing of policy rate decreases have become more divergent, reflecting differing progress on lowering inflation (see Chapter 2: Economic Conditions). A small number of central banks, including the European Central Bank, have discussed decreasing their policy rates around midyear and the Swiss National Bank has already reduced its policy rate. By contrast, several US Federal Reserve (Fed) officials have indicated that it may take longer to achieve the economic conditions necessary to warrant cuts to the Fed's policy rate after stronger-than-expected US inflation data since the start of the year.

Market participants have scaled back expectations of the timing and extent of policy easing by most advanced economy central banks, though generally by less than for the United States (Graph 1.1). The strength of US inflation and labour market data has supported a shift up in expected policy paths globally, albeit to a lesser extent than the expected US policy rate path. This widening gap to US expectations for most economies reflects more favourable inflation outcomes in other advanced economies and the divergent central bank commentary about the policy outlook.

Meanwhile, the Bank of Japan (BoJ) raised its policy rate and announced an end to its yield curve control and several of its asset purchasing programs in March. In doing so, the BoJ cited increasing confidence that it will be able to sustainably achieve its inflation target after having had very low inflation for many years. Despite this tightening, Japanese Government bond yields remain well below the levels of other advanced economies and the Japanese yen has continued to depreciate.

Graph 1.1
Policy Rate Expectations*



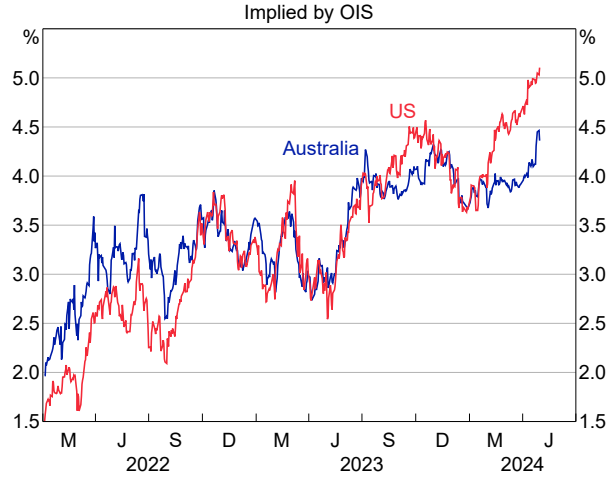
* Darker dashed lines show expectations implied by current overnight indexed swap rates; lighter dashed lines show the same expectations as at the February SMP.

Sources: Bloomberg; RBA.

Market pricing implies that there may be one further rate increase in Australia with policy easing later than previously anticipated.

In Australia, market participants' expected path for the policy rate has also shifted up materially since the February *Statement*. Expectations for the cash rate rose in response to stronger-than-expected Australian inflation and labour market data. As is the case in other economies, a reassessment of the outlook for the policy rate in the United States also contributed to a revision to expectations in Australia (Graph 1.2).

Graph 1.2
End-2024 Cash Rate Expectations
Implied by OIS



Sources: Bloomberg; LSEG; RBA.

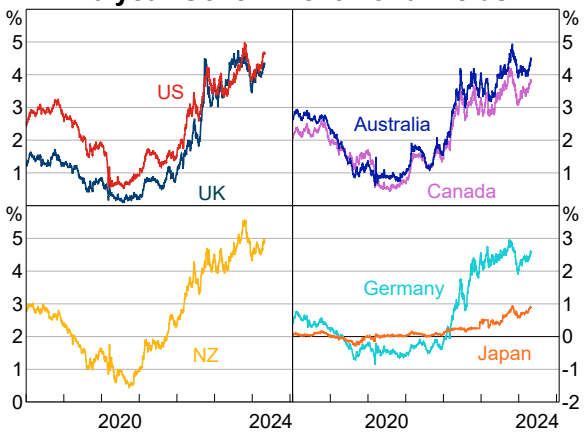
Market pricing implies that the cash rate is not expected to be reduced over the coming year. Indeed, market pricing points to around an even chance of one further increase in 2024, with cuts in the cash rate seen as likely to take place in 2025. Market participants expect fewer cuts in Australia, and for these cuts to begin later than in many other advanced economies. But in coming years the cash rate is expected to converge to a similar level to the policy rates in several other advanced economies, where rates are currently higher. On average, market economists expect the RBA to begin cutting the cash rate a little earlier than implied by market pricing – in either the December quarter of this year or the March quarter of 2025 – although some market economists have also noted the possibility of a rate increase in coming months.

Government bond yields in advanced economies have increased in line with market expectations of a more gradual reduction in central bank policy rates.

The increase in government bond yields in advanced economies has generally been largest in the United States, consistent with the adjustment in policy rate expectations (Graph 1.3). The increase in yields predominantly reflects a rise in real yields, amid stronger-than-expected US inflation and labour market data (Graph 1.4). The increase in real yields across advanced economies also partly reflects higher term premia, which is the additional yield that investors demand to hold longer-duration securities.

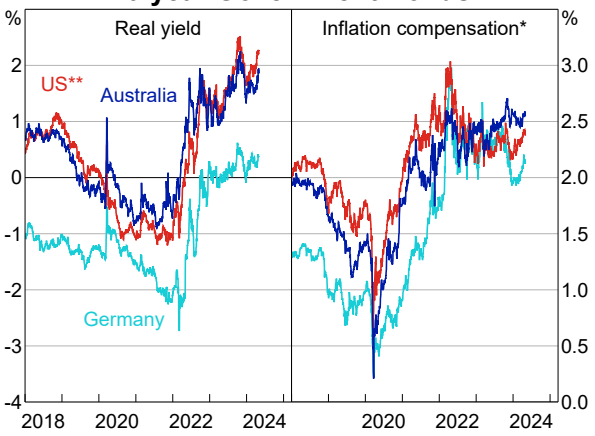
Yields on Australian Government bonds have increased by a similar amount to those in many other advanced economies, but by a little less than US Treasury yields. Longer term inflation expectations inferred from government bond markets have risen by less in Australia than elsewhere and overall remain consistent with the RBA's target band (see Chapter 2: Economic Conditions).

Graph 1.3
10-year Government Bond Yields



Source: Bloomberg.

Graph 1.4
10-year Government Bonds



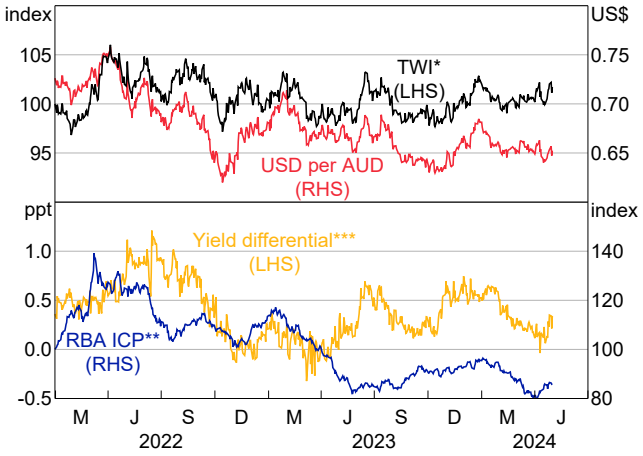
* Spread between yields on nominal and inflation-linked bonds.
** The price index referenced in US inflation-linked bonds has averaged 0.5 percentage points more than the index targeted by the US Federal Reserve over the longer term.

Sources: Bloomberg; RBA.

The Australian dollar TWI remains in the range observed since early 2022.

The Australian dollar is little changed against the US dollar and has appreciated on a TWI basis since the February Statement (Graph 1.5). This appreciation of the TWI has been largely driven by broad-based weakness in the Japanese yen; Japan is Australia's second-largest trading partner. Nonetheless, the Australian dollar TWI remains around early-2022 levels, which is when global central banks began raising their policy rates. Based on historical relationships, the level of the Australian dollar (in real TWI terms) continues to be broadly consistent with model estimates implied by the forecast terms of trade and real yield differentials.

Graph 1.5
Australian Dollar



* Trade-weighted index; 31 December 2021 = 100.
** Index of Commodity Prices (USD terms); 31 December 2021 = 100.
*** Three-year Australian sovereign yield less yields of the United States, Japan and Germany, weighted by GDP.

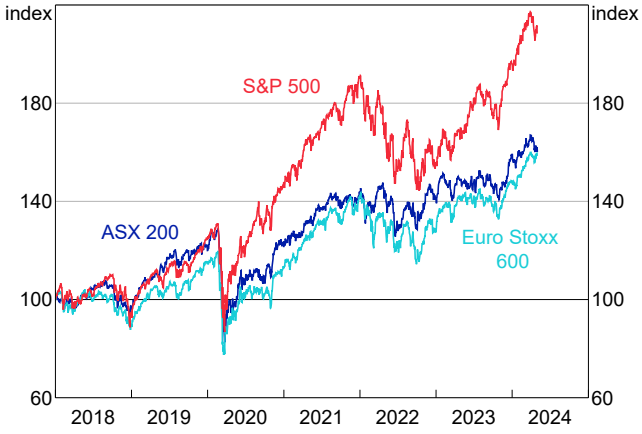
Sources: Bloomberg; RBA.

1.2 Other measures of financial conditions

While monetary policy settings in most advanced economies remain restrictive overall, several other measures of global financial conditions have eased since late 2023.

Equity prices remain close to record highs despite having recently declined somewhat in many economies alongside higher government bond yields (Graph 1.6). The increase in equity prices since late 2023 in part reflects a decline in estimates of risk premia, particularly for small groups of large companies, and upward revisions to estimates of future earnings, mostly for large US technology companies. In Australia, the financial sector has contributed the most to the increase in the ASX 200 since late 2023, while IT and real estate equity prices have risen the most. Adjusting for inflation, the real total return (capital gains plus dividends) that investors in the Australian share market have received over the past year is around 5 per cent.

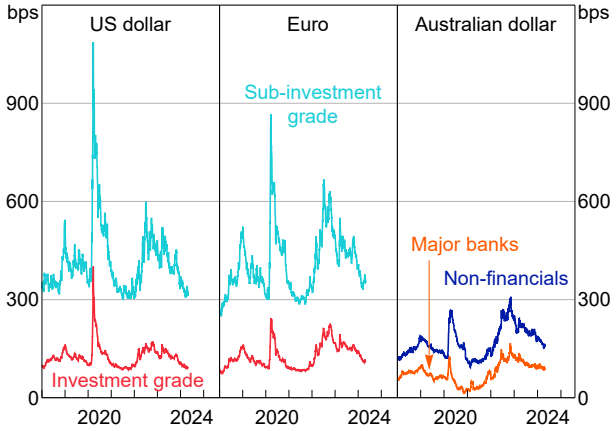
Graph 1.6
Equity Prices*
1 January 2018 = 100



* Total return basis.
Sources: Bloomberg; LSEG.

In the past month, corporate bond yields in the United States, Europe and Australia have increased somewhat as sovereign bond yields have risen (Graph 1.7). Even so, spreads on corporate bonds in Australia, Europe and the United States are narrower than they were in late 2023. The narrowing of spreads reflects expectations of a relatively benign credit outlook and strong investor demand.

Graph 1.7
Corporate Bond Spreads
Spread to equivalent maturity government bond yield



Sources: Bloomberg; ICE Data used with permission; RBA.

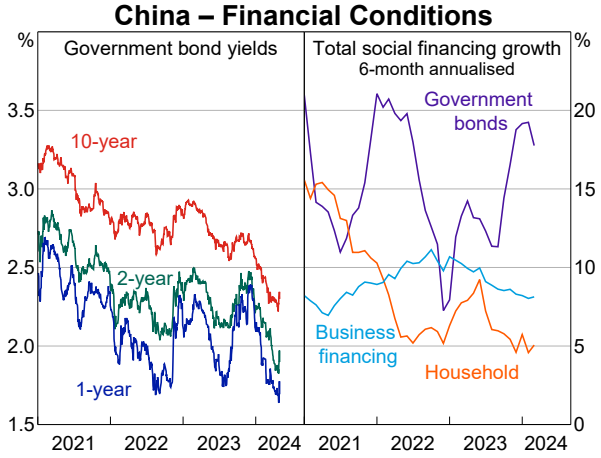
Corporate bond issuance has increased in the past few months in the United States, Europe and Australia. Companies have been seeking to take advantage of strong investor demand, while market reports suggest US companies have brought forward issuance to avoid potential market volatility around the upcoming Presidential election. Bank credit growth remains positive but below pre-pandemic levels in the United States and Europe, with credit growth increasing slightly in Europe since reaching a trough late last year. Lending surveys suggest that the tightening in credit conditions slowed considerably in late 2023 in the United States and in the past few months in Europe, which has historically been associated with strengthening economic activity.

Chinese financial conditions remain moderately accommodative.

Chinese Government bond yields have declined alongside further monetary easing (Graph 1.8). The People's Bank of China guided banks to lower the five-year loan prime rate – a key mortgage lending reference rate – by 25 basis points in February. Overall, monetary policy easing has been more gradual than in past cycles as authorities continue to balance a desire to support growth against a need to contain longer term financial risks. This includes the risk of an excessive build up in private sector leverage as has occurred in past easing phases. Nonetheless, market participants still expect some further monetary easing.

Growth in total social financing has slowed further, although it remains in line with the authorities' target. Chinese authorities have continued to provide guidance to banks to lend to priority sectors, including through the purchase of government bonds to support fiscal spending. Household credit growth has remained subdued over recent months, amid weak consumer sentiment and ongoing stress in the property sector. Many property developers remain under severe financial stress despite recent support, including authorities directing banks to lend to specific 'white-listed' projects to support completions. If stresses in the Chinese economy and financial system were to intensify or broaden, these could spill over to the rest of the world (including Australia). However, a recent pick-up in growth and equity prices may alleviate some of these concerns in the near term (see also Chapter 2: Economic Conditions).

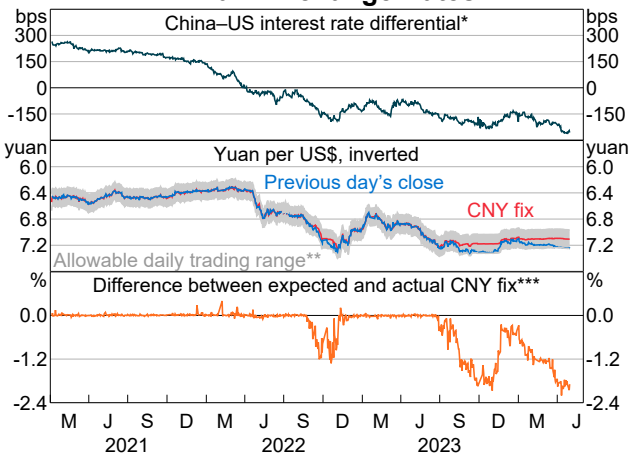
Graph 1.8
China – Financial Conditions



Sources: CEIC Data; RBA.

The renminbi has depreciated against the US dollar over recent months, alongside other emerging market currencies in Asia and elsewhere (Graph 1.9). Market expectations of further monetary policy easing by Chinese policymakers alongside expectations that the US Fed policy rate will now be reduced later than previously anticipated have contributed to a widening of the interest rate differential between Chinese Government bond and US Treasury yields. Authorities have responded by setting the strongest 'CNY fix' – the midpoint of the permitted daily trading range of +/- 2 per cent – for the renminbi since a survey of market expectations began in 2018. The renminbi has depreciated by around 1 per cent against the Australian dollar in the past three months.

Graph 1.9
China – Exchange Rates



* Five-year government bond yields.

** Since early 2014 the CNY has been allowed to trade in a daily range of +/- 2 per cent from the CNY fix.

*** Negative value indicates official fix was stronger then expected by market economists, supporting the yuan against the US dollar.

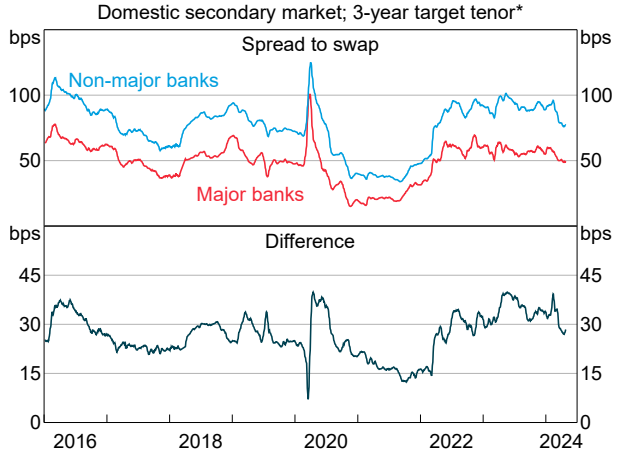
Sources: Bloomberg; CEIC Data; RBA.

1.3 Australian banking and credit markets

Wholesale funding market conditions remain favourable for financial institutions.

While bank bond yields have increased, spreads relative to the swap rate – a reference rate for the pricing of securities – have narrowed in recent months. This narrowing is more noticeable for the non-major banks (Graph 1.10). Banks have reported that there is less need to raise funds offshore because of favourable conditions in the domestic market. Conditions in the asset-backed securities (ABS) market have been similarly strong, with issuance in the first four months of the year at a post-GFC high, driven by non-bank lenders. Spreads for ABS have narrowed to be around pre-pandemic levels, with spreads for riskier tranches having narrowed by more than those for higher rated tranches.

Graph 1.10
Banks' Bond Pricing
Domestic secondary market; 3-year target tenor*

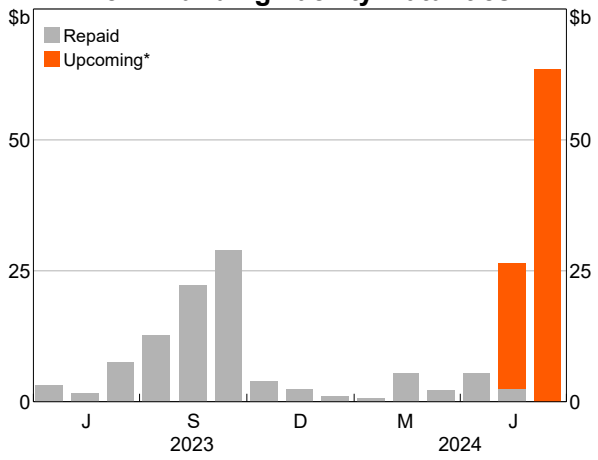


* Smoothed, seven-day moving average.
Sources: Bloomberg; RBA.

Banks are well placed to repay funds from the RBA's Term Funding Facility (TFF) by midyear.

The TFF was announced in March 2020 as part of the RBA's policy response to the COVID-19 pandemic. Under the TFF, the RBA provided $188 billion of funding, of which $100 billion has matured, with the remaining $88 billion to mature by midyear (Graph 1.11).[1] Banks have prepared for these maturities by prefunding; the value of bonds issued by banks in 2023 was a decade high and banks have increased the share of term deposits in their funding mix by around 5 percentage points over the past 18 months or so. Banks' liquidity ratios are also well above regulatory minimums because some of the funding raised via bond issuance is being used to purchase additional High Quality Liquidity Assets.[2]

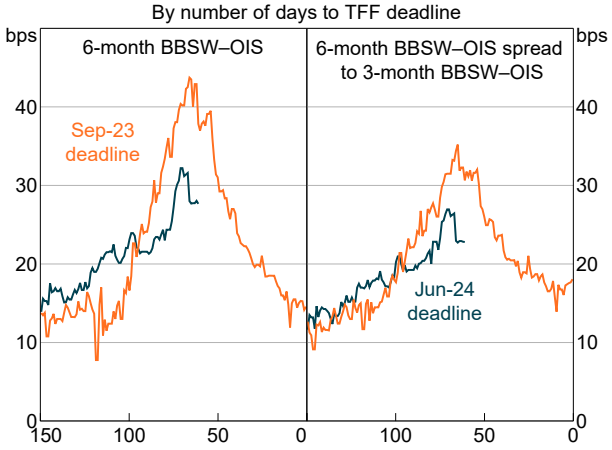
Graph 1.11
Term Funding Facility Maturities



* Includes small amount of TFF maturing on 1 July 2024.
Source: RBA.

Banks have also been adjusting their use of shorter-term debt to minimise rollover risk around the time of the TFF maturities. Partly reflecting this, the six-month bank bill swap rate (BBSW) to overnight indexed swap (OIS) spread has widened both in absolute terms and relative to three-month BBSW (Graph 1.12). This widening in spreads is similar to that experienced last year when the first tranche of the TFF was due. Remaining TFF maturities are larger, will be repaid over a shorter period and the supply of Exchange Settlement balances is now lower than when the first tranche matured. All of this increases the risk of a tightening in domestic money market conditions relative to the first tranche, though this risk still appears modest.

Graph 1.12
Major Bank Bill Pricing
By number of days to TFF deadline



Sources: ASX; LSEG; RBA.

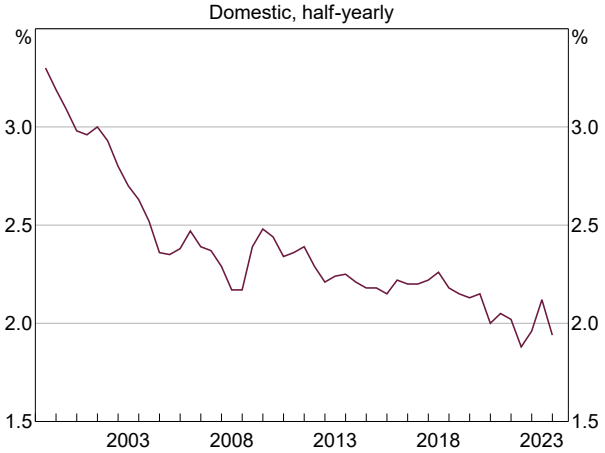
Banks' funding costs are little changed recently, although over the tightening phase higher funding costs have weighed on banks' net interest margins.

The TFF maturities marginally increase banks' funding costs. The TFF maturities add to bank funding costs because it involves replacing low-cost funding with other more expensive sources. However, the impact is small because the TFF only accounts for a small share of banks' overall funding and some of this funding was hedged, so part of the impact has already flowed through to funding costs.

Banks' funding costs have been little changed in recent months, though they have risen substantially over the tightening phase. In turn, this has mostly been passed through to lending rates.

- Banks' estimated funding costs have increased by around 370 basis points since May 2022, alongside the 425 basis points increase in the cash rate over the same period.
- Banks' lending spreads have narrowed over this period because funding costs have increased by more than the increase in lending rates. Lending rates have increased by around 345 basis points (the pass-through of monetary policy to lending rates is discussed further below).
- This narrowing in lending spreads has weighed on banks' net interest margins (NIMs), which are a little below their pre-pandemic level (Graph 1.13). Banks have cited increasing mortgage competition, higher wholesale funding costs and changes to their funding mix towards products that attract higher rates as some reasons for the decline in NIMs.

Graph 1.13
Net Interest Margin – Major Banks*
Domestic, half-yearly



* Data for a given period relate to banks' public profit reports released in that half; IFRS basis from 2006, AGAAP prior; excludes St George Bank and Bankwest prior to the first half of 2009.

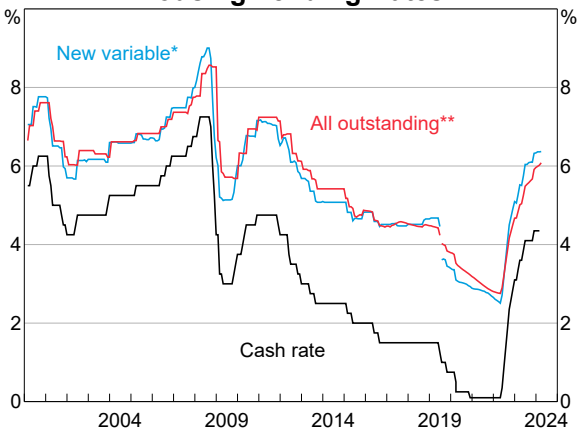
Sources: Banks' financial reports; RBA.

Overall financial conditions in Australia are restrictive, most notably for households.

The tightening of monetary policy has led to a significant rise in housing lending rates and scheduled household debt payments:

- **Housing lending rates have increased by around 335 basis points over the tightening phase** (Graph 1.14). As was broadly expected, pass-through to housing rates has been somewhat slower than in some previous episodes of tightening. This is because of the high share of mortgages fixed at low rates during the pandemic. In addition, there has been increased mortgage discounting by lenders amid strong competition for borrowers. Most of the remaining low fixed-rate loans from the pandemic era will expire this year. As these loans roll over to higher variable rates, it will add around 20 basis points to the average overall outstanding mortgage rate over the rest of 2024.
- **Scheduled principal and interest payments for mortgages are at a historically high share of household disposable income** (Graph 1.15). Even so, total household debt payments (including estimated repayments on consumer credit) remain slightly below the estimated 2010–2011 peak when the cash rate reached 4.75 per cent, because of a significant decline in the use of consumer credit since 2008.

Graph 1.14
Housing Lending Rates

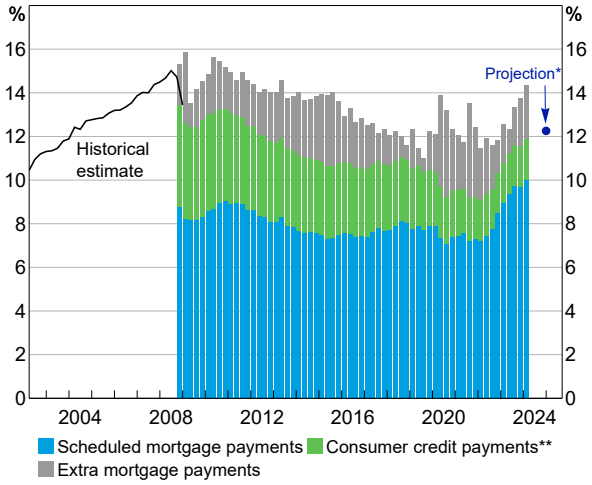


* Perpetual data used to 2013; advertised package rates to July 2019; thereafter, data from the EFS collection.

** Perpetual data used to 2015; data from the Securitisation System to July 2019; thereafter, data from the EFS collection.

Sources: APRA; Perpetual; RBA; Securitisation System.

Graph 1.15
Selected Claims on Household Income
Quarterly; share of household disposable income



* Projection for total scheduled payments on household debt at end-2024, based on the current level of the cash rate.

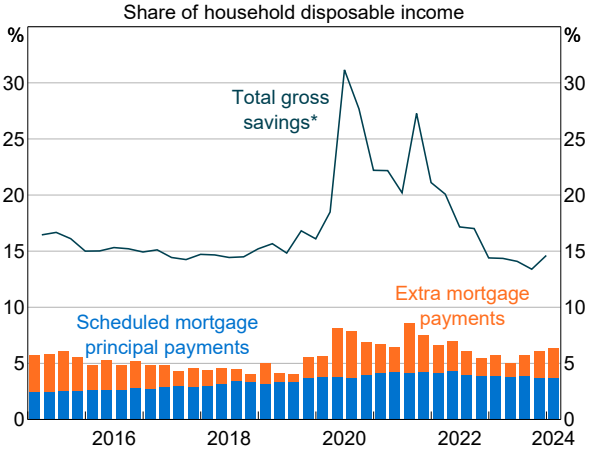
** Consumer credit includes credit cards and car loans (among other products). Principal and interest payments for consumer credit are estimated based on the stock outstanding and corresponding average interest rate across product types, assuming personal loans are repaid over a period of five years. Credit cards not accruing interest are excluded.

Sources: ABS; APRA; RBA.

The rise in household debt payments has put pressure on household budgets and contributed to the weakness in consumption growth (see Chapter 2: Economic Conditions). Despite budget pressures, nearly all borrowers (around 40 per cent of households have a mortgage) continue to service their debts on schedule. Most borrowers are expected to be able to service their debts and meet essential living expenses even if inflation is more persistent than anticipated and interest rates remain high for some time.[3]

Higher interest rates also provide an incentive for all households to save more. Consistent with this, households with mortgages are overall contributing a little more to their offset and redraw accounts than mid-last year. These payments are now a bit above their pre-pandemic average. In aggregate, despite cost-of-living pressures and higher household debt payments, the (gross) savings rate is around pre-pandemic levels; consistent with some households making extra mortgage payments, the savings rate has picked up since mid-2023 (Graph 1.16).

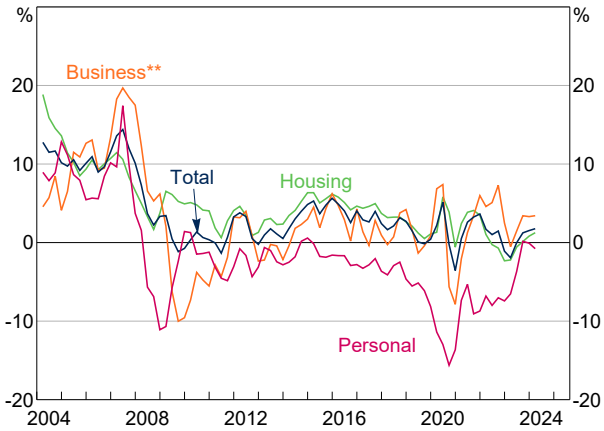
Graph 1.16
Saving Rates
Share of household disposable income



* Total gross savings for all households.
Sources: ABS; APRA; RBA.

Household credit growth has been subdued in the face of higher interest rates. Housing and personal credit growth have increased from around mid-2023 but remain low after accounting for inflation (Graph 1.17). New housing lending has increased over the past year, but this has had only a limited impact on housing credit growth as it has occurred at the same time as an increase in loan discharges. The share of credit card balances accruing interest declined over the March quarter and is at historically low levels, suggesting households in aggregate are not turning to personal credit in response to cost-of-living pressures.

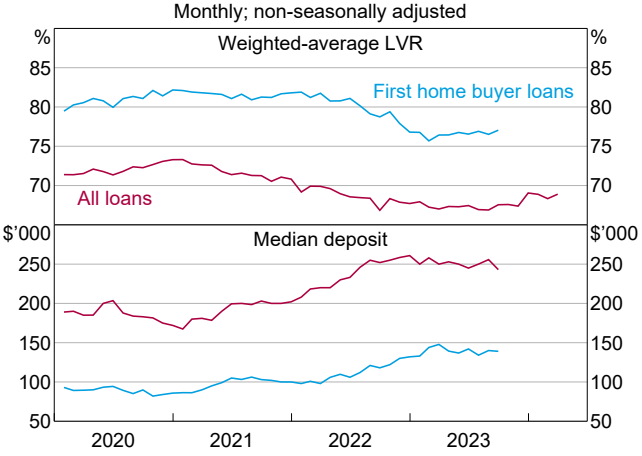
Graph 1.17
Real Credit Growth by Sector*
Six-month-ended annualised



* Quarterly, seasonally adjusted and break-adjusted; including securitisation. Deflated using seasonally adjusted CPI.
** Lending to non-financial businesses.
Sources: ABS; APRA; RBA.

Tighter borrowing constraints have also affected the composition of new lending. Throughout the tightening phase, the average loan-to-value ratio (LVR) for new mortgages has declined and the average income and deposit size for borrowers have increased (Graph 1.18). This suggests that some borrowers – particularly those with lower incomes and with less wealth – are constrained by how much banks are willing to lend in response to higher interest rates. Also, households' abilities to take on debt is weaker in the face of higher debt-servicing costs. Banks reported a further tightening in household credit conditions in the December quarter last year, and most banks expected mortgage serviceability requirements to remain at current levels or tighten over the next 12 months.

Graph 1.18
LVR and Deposit Size of New Loans*
Monthly; non-seasonally adjusted



* 'All loans' includes external refinancing. Deposit size is defined as the difference between between property value and loan value at origination. Weighted-average LVR data by borrower type and deposit data are only available to September 2023.

Sources: APRA; RBA; Securitisation System.

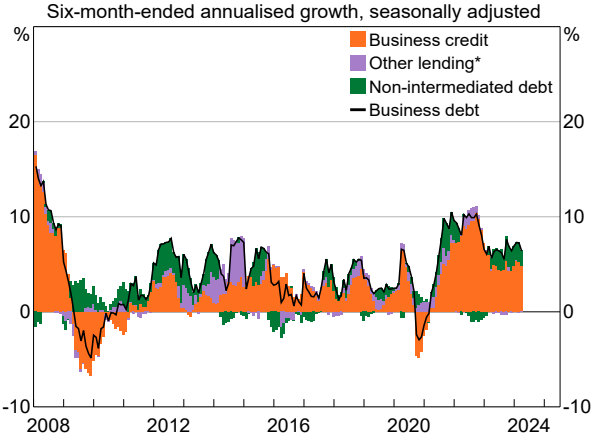
Increases in the cash rate have caused a tightening in financial conditions for businesses overall …

The tightening in monetary policy has led to an increase in business lending rates, corporate bond yields and interest expenses. For many medium and large businesses, this has been buffered by strong financial positions and nominal earnings. Most listed companies hold cash buffers that are slightly higher than pre-pandemic levels and the debt-servicing capacity of listed businesses is around the post-GFC average.[4] Although some indicators of financial stress among businesses have picked up recently, many are still around or below historical averages.

… though this has had less effect on larger businesses with access to wholesale funding markets.

Although businesses are paying high rates to take out debt, business credit growth is slightly above its post-GFC average and larger firms have been raising funds from wholesale markets (Graph 1.19). Non-financial corporate bond issuance has been strong and investor demand has contributed to tighter spreads relative to AGS, particularly for lower rated businesses (though corporate bond yields are well above pre-pandemic levels). Consistent with the more favourable financial conditions for larger businesses, business investment growth has been strong, though it is expected to slow alongside the broader slowing in aggregate demand growth (see Chapter 2: Economic Conditions and Chapter 3: Outlook). As has been the case for many years, small businesses report that accessing funding through banks with terms that suit their needs remains a challenge.

Graph 1.19
Business Debt
Six-month-ended annualised growth, seasonally adjusted



* Lending to large businesses by institutions that do not report to APRA.

Sources: APRA; Bloomberg; LSEG; RBA.

Endnotes

1 For more information about the Term Funding Facility, see Black S, B Jackman and C Schwartz (2021), 'An Assessment of the Term Funding Facility', RBA *Bulletin*, September.

2 For more information on banks' liquidity ratios, see RBA (2024), 'Chapter 3: Resilience of the Australian Financial System', *Financial Stability Review*, March.

3 For more information on household balance sheets, see RBA (2024), 'Chapter 2: Resilience of Australian Households and Businesses', *Financial Stability Review*, March.

4 For more information on business indebtedness, see RBA, n 3.

Chapter 2
Economic Conditions

Summary

- **Economic growth in most advanced economies is weak but recent indicators have been a bit more positive.** By contrast, growth in the United States has eased a little following very strong growth last year but remains firm.
- **Inflation in advanced economies remains above central bank targets and progress in lowering inflation has stalled for some.** Core services inflation remains elevated and the latest US data have surprised to the upside. More persistent services inflation could delay the return of inflation to target, particularly in those economies where there are emerging signs that disinflation in core goods prices may have run its course.
- **Economic growth picked up in China in early 2024 and is on track to reach the growth target for 2024 of 'around 5 per cent'.** However, conditions in the property market remain very weak and policy support will remain important to offset the drag on growth. After declining sharply earlier in the year, the prices of iron ore and coking coal (which are key Australian exports) have since partially reversed as the Chinese economic outlook has improved.
- **In the Australian economy, we assess that the level of demand continued to exceed supply in the December quarter of 2023, though the gap narrowed quickly due to subdued growth, as expected.** Demand has been supported by strong growth in business investment and public sector spending. But household consumption growth has been weak and consumption has declined in per capita terms, with households maintaining a higher rate of saving than was expected in February. After substantial declines, real household disposable income has started to stabilise.
- **Both housing prices and rents continue to rise as underlying demand for housing has been growing more strongly than supply.** New supply has been hampered by ongoing capacity constraints, particularly for finishing trades, and increases in construction costs. Demand, on the other hand, has been supported by strong population growth, and the shift in preferences for more housing space that occurred during the pandemic has persisted despite rising prices and rents.
- **Labour market conditions are assessed as still tight relative to full employment and have eased by slightly less than anticipated three months ago.** The unemployment rate remains only modestly above its late-2022 trough, while the participation rate and employment-to-population ratio remain near record high levels. Much of the easing in labour market conditions over the past year has occurred through declining average hours worked and fewer job vacancies.

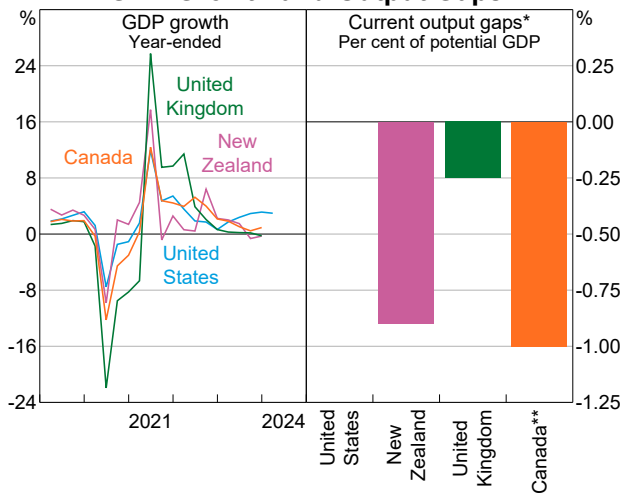
- **Wages growth appears to be around its peak for the current cycle, with some indications it will moderate over the year ahead.** Wages growth increased a little further in year-ended terms in the December quarter but has eased for workers on individual arrangements, whose wages are most responsive to current labour market conditions. Growth in unit labour costs remains elevated but it has moderated slightly in line with the recent pick-up in labour productivity growth.
- **Inflation eased further in the March quarter in year-ended terms but remains high.** Domestic labour and non-labour cost pressures remain elevated and it will take time for the economy to reach balance and for inflation to reach the target. Goods inflation has eased further over recent months in year-ended terms, but the earlier easing in import price growth now looks to have largely flowed through to domestic consumer prices. Services inflation has peaked but remains high.

2.1 Global economic conditions

Economic growth in advanced economies generally remains subdued, but some recent data have been a bit more positive.

Growth in economic activity remains weak in Europe, Canada and New Zealand, but is starting to pick up a little in these economies (Graph 2.1). In Canada and New Zealand, subdued output growth has occurred despite strong population growth, and GDP per capita has declined substantially since late 2022. In many advanced economies, growth in activity is below central bank estimates of potential growth and the level of demand is now likely to be below the level of potential output (see Chapter 4: In Depth – Potential Output for an explanation of these concepts). While quarterly GDP growth has generally started to pick up a little from its troughs in these economies, it remains below potential. As such, the degree of excess supply is still expected to increase further this year, which should place further downward pressure on inflation.

Graph 2.1
GDP Growth and Output Gaps

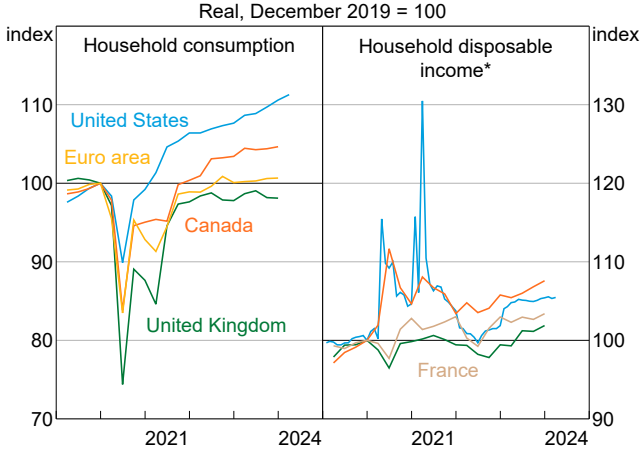


* As of March quarter 2024; central bank estimates, except US data which are Congressional Budget Office estimates.
** Average of Bank of Canada's upper and lower bound estimates.
Sources: Bank of Canada; Bank of England; Congressional Budget Office; LSEG; RBA; RBNZ.

By contrast, the US economy continues to experience robust growth in domestic demand, even as GDP growth has slowed from its strong pace last year. Official estimates suggest that the level of demand and supply potential in the US economy are balanced. Updated population estimates suggest recent population growth has been higher than previously thought, and this has added to both supply and demand in the economy. Growth has also picked up in some high-income economies in east Asia (e.g. South Korea), supported by stronger technology exports from the region.

The soft economic activity in most advanced economies has been driven by weak domestic demand, but some forward-looking indicators have improved. Household consumption growth has typically been sluggish, with partial indicators such as retail sales generally remaining soft; consumer confidence also remains well below its long-run average. Weakness in consumption growth has occurred despite positive growth in real household disposable incomes over the past year or so, supported by tight labour markets and declining inflation (Graph 2.2). The United States remains a key exception, where consumption growth has been more resilient alongside ongoing strong labour market and inflation data. On the other hand, business investment in some advanced economies has been relatively resilient over the past year or so, but growth has moderated in recent quarters. Looking further ahead, surveyed measures of business investment intentions are beginning to pick up again. Surveyed business conditions have also improved in a number of advanced economies in recent months, with growing signs of an expansion in services sector activity and less weakness in the manufacturing sector.

Graph 2.2
Consumption and Income
Real, December 2019 = 100

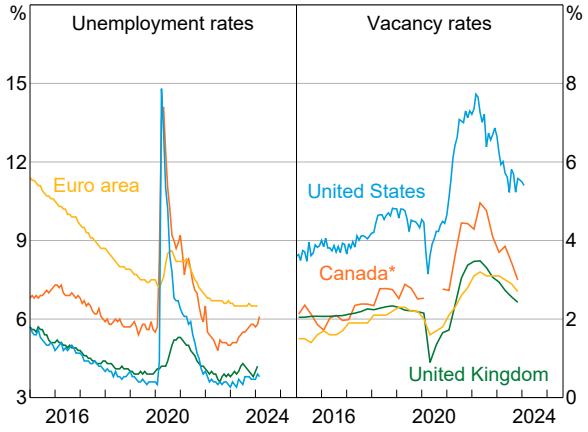


* The United States series is monthly; other series are quarterly.
Sources: LSEG; RBA.

The US labour market has surprised with recent strength, but most other advanced economies have seen labour market conditions ease gradually.

Labour markets remain tight, notwithstanding further gradual easing in most advanced economies. Much of the easing in labour demand has been seen in declines in job vacancy rates (from exceptionally high levels), with comparatively small increases in unemployment rates (Graph 2.3). Accordingly, unemployment rates are generally only a little above their recent troughs. Canada is a notable exception, where the unemployment rate has increased more substantially, as employment growth has not kept pace with gains in the labour supply (including from strong population growth). By contrast, the US unemployment rate has been little changed despite strong population growth, reflecting strong labour demand. Some modest further increases in unemployment rates are expected for most advanced economies, as labour demand continues to ease and vacancy rates reach more normal levels.

Graph 2.3
Labour Market Indicators



* Canadian vacancies data are unavailable for the June and September quarters of 2020.

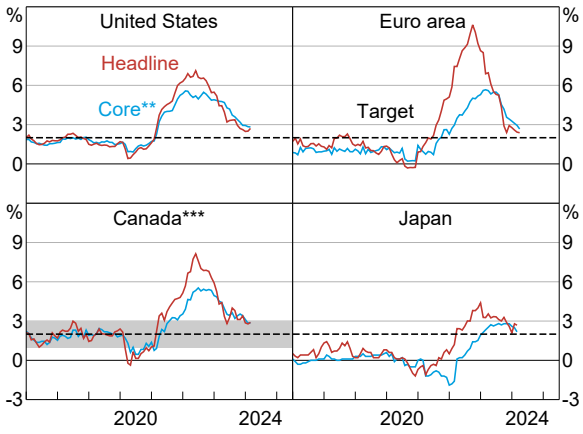
Sources: Eurostat; LSEG; RBA.

Wages growth is generally easing but remains elevated. Unit labour costs have also been growing very strongly; however, early signs of a pick-up in labour productivity in some economies has started to provide some offset to this. The pick-up in productivity growth has been especially pronounced in the United States since mid-2023 and as a result unit labour costs have not increased since then.

Inflation remains above target in most advanced economies and the decline in inflation has paused in some.

Although inflation has continued to ease in year-ended terms, progress has been uneven, and more timely measures of core inflation have increased in some economies (Graph 2.4; Graph 2.5). This has been most notable in the United States (e.g. in three- and six-month-ended annualised terms) but has also been evident in the euro area. By contrast, Canadian inflation has eased more rapidly than expected in early 2024, consistent with a marked easing in labour market conditions. After decades of below-target inflation, headline and core inflation in Japan has been above 2 per cent since early 2023, with wages growth also beginning to pick up. In response, the Bank of Japan raised its policy rate from negative levels in March for the first time in 17 years (see Chapter 1: Financial Conditions).

Graph 2.4
Inflation*
Year-ended

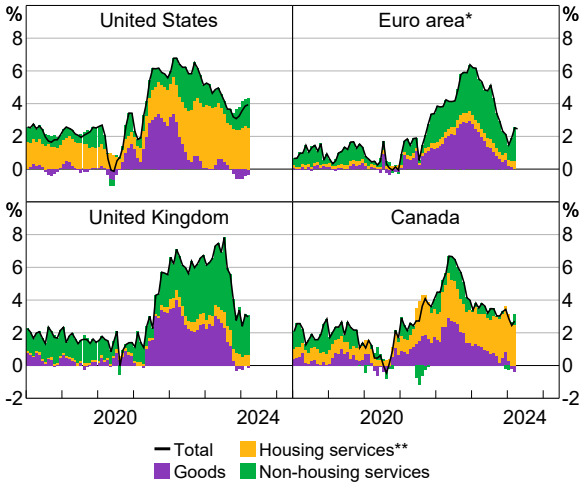


* PCE for the United States, CPI for others.
** Core is headline inflation excluding food and energy.
*** Shaded area represents target range for inflation.

Sources: LSEG; RBA.

Services inflation has generally been more resilient recently than it was late last year. In most economies, both housing and non-housing services inflation remains above pre-pandemic averages. Housing inflation remains especially high in economies where the supply of new dwellings has been slow to adjust to strong demand (such as in Canada) (Graph 2.5). Excluding housing services, core services inflation has generally remained elevated, and, in the United States, this measure has lifted again, consistent with resilient services sector activity and strong labour markets.

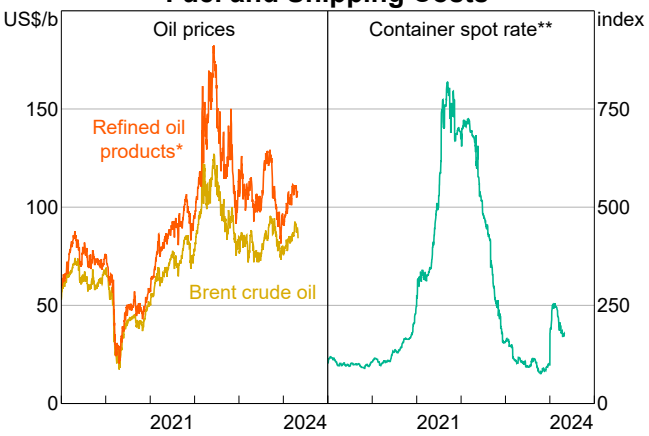
Graph 2.5
Core Consumer Price Inflation
Six-month-ended annualised, with contributions



* Contributions not available for April 2024.
** Current CPI housing weights range from around 10 per cent in the United Kingdom and euro area to 25 per cent in Canada and 37 per cent in the United States.
Sources: BLS; LSEG; RBA; Statistics Canada.

The easing in core goods inflation appears to have largely run its course in some economies, but there are risks in both directions. Oil prices have increased significantly since the start of the year due to geopolitical tensions, and further escalation in the Middle East poses renewed upside risk to oil and goods inflation (see Chapter 3: Outlook) (Graph 2.6). Acting in the opposite direction, there is still a little scope for further downward pressure on goods inflation if earlier disruptions to some global shipping routes continue to resolve, particularly through the Panama Canal.

Graph 2.6
Fuel and Shipping Costs

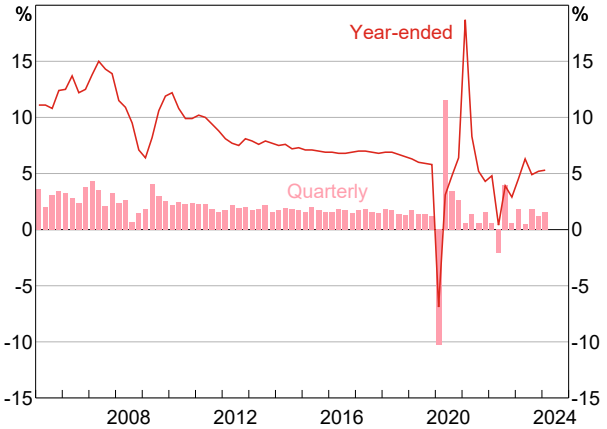


* Based on US wholesale petroleum and diesel prices; weighted by the typical share of output from one barrel of crude.
** Freightos Baltic Index; 2017–2019 average = 100.
Sources: Bloomberg; CEIC Data; LSEG; RBA.

Economic activity in China has strengthened at the start of 2024, but the property sector remains a significant drag on growth.

In China, GDP growth increased in the March quarter, driven by a rebound in household consumption – in part reflecting strong tourism spending during the Lunar New Year holiday – and stronger external demand (Graph 2.7). The strengthening in external demand was driven by stronger exports to east Asia and coincides with a modest improvement in global manufacturing conditions. If the March quarter pace of growth was maintained throughout the year, GDP growth would be on track to exceed the Chinese authorities' 2024 growth target of 'around 5 per cent'.

Graph 2.7
China – GDP Growth



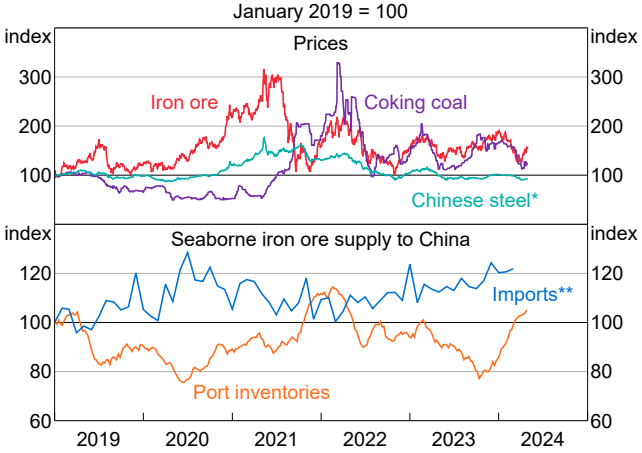
Sources: CEIC Data; RBA.

The real estate sector is continuing to drag on growth; new housing starts and sales remain weak, and declining housing prices are weighing on consumer confidence. Manufacturing and infrastructure investment growth continue to outweigh the drag from real estate investment, partly through policy support. This support is ongoing, with authorities budgeting for an increase in the consolidated fiscal deficit from 7 per cent of GDP last year to over 8 per cent in 2024. (The consolidated fiscal deficit is a broader measure than the published headline deficit as it includes the budget balance of government-managed funds and abstracts from balancing items.)

Iron ore and coking coal prices have partially recovered from sharp declines earlier in the year, alongside improved Chinese economic data, and base metal prices have also risen.

Iron ore prices declined sharply at the beginning of the year, alongside a steady build-up of iron ore inventories in China (Graph 2.8). This build-up occurred as iron ore imports remained strong despite a delayed recovery in steel demand following the Lunar New Year holiday. These factors have now started to unwind and, alongside improved Chinese economic data, have contributed to a partial recovery in iron ore prices over the past month. Base metals prices have also picked up in recent months amid early signs of a pick-up in demand, although supply disruptions have also contributed.

Graph 2.8
Bulk Commodity and Steel Indicators
January 2019 = 100



* Average of hot-rolled steel sheet and steel rebar prices.
** Seasonally adjusted by the RBA.
Sources: Bloomberg; CEIC Data; McCloskey by OPIS; RBA.

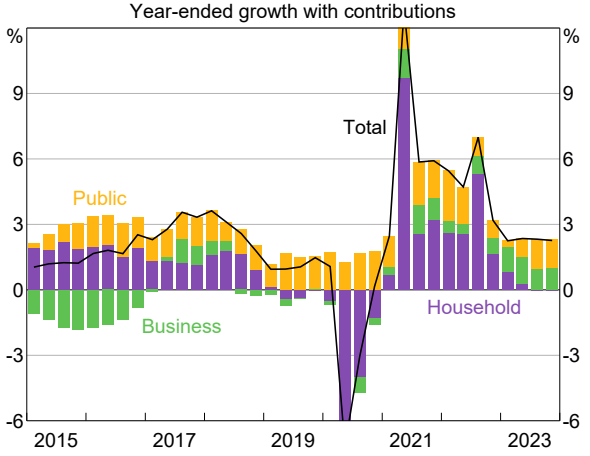
2.2 Domestic economic activity

Growth in the Australian economy remains subdued.

Growth has slowed considerably over 2023 – driven by weak growth in the household sector. This is helping to bring the level of demand back into balance with supply. However, our assessment is that demand remained above the economy's ability to supply goods and services without putting upward pressure on inflation.

Economic outcomes have been mixed across different sectors of the economy (Graph 2.9). Household consumption growth has been weak over the past year, as high inflation, strong growth in tax payments and higher interest rates have resulted in a decline in real household disposable income. Dwelling investment has also declined – reflecting low approvals, affordability concerns and capacity constraints. This has been partially offset by strength in business and public investment, as well as spending from tourists and international students, although quarterly growth across these components slowed in late 2023. The recent data, including partial indicators for the March quarter, suggest that economic growth since the start of the year has been a little softer than was expected at the time of the February *Statement*.

Graph 2.9
Domestic Final Demand*
Year-ended growth with contributions

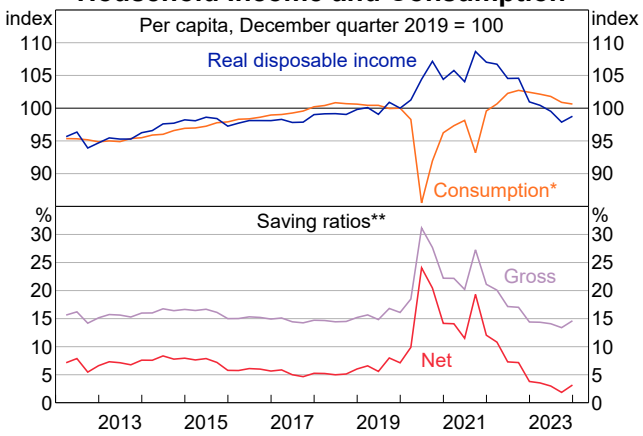


* Outliers during the COVID-19 pandemic were truncated.
Sources: ABS; RBA.

Household consumption growth remains weak amid high inflation, tax payments growing faster than incomes and higher interest rates.

Real disposable incomes have declined sharply over the past 18 months (Graph 2.10). Strong growth in nominal incomes has been offset by high inflation, strong growth in tax payments and higher interest rates. Real incomes are beginning to stabilise following the decline in inflation and slowing in the pace of interest rate increases. Further declines in inflation and the implementation of the Stage 3 tax cuts are expected to result in real incomes growing strongly in the second half of 2024.

Graph 2.10
Household Income and Consumption



* Population denominator excludes international students.
** The net saving ratio equals the gross saving ratio minus depreciation of household fixed assets (mainly dwellings).
Sources: ABS; Department of Home Affairs; RBA.

Households continue to curb their spending, particularly for discretionary items. Consumption growth remained weak in the December quarter and declined further on a per capita basis; the recent declines have been driven by a decline in spending on discretionary goods and services. Retail sales, spending indices based on transactional data, and information from the RBA's liaison program suggest that these weak outcomes have continued into the March quarter of 2024.

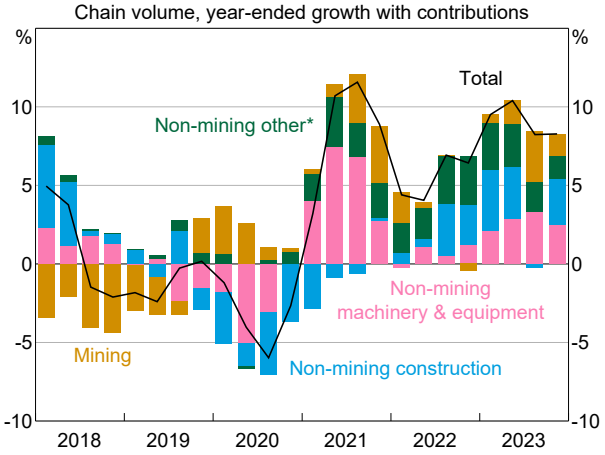
Households have been saving more than was expected three months ago. Household saving ratios were revised higher over most of 2023 and were much stronger than expected for the December quarter, reflecting downward revisions to consumption growth and stronger-than-expected growth in household incomes. Higher interest rates are providing an incentive for some households to save more, to a greater extent than was expected three months ago. Consistent with this, extra payments into mortgage offset and redraw accounts have increased since mid-2023 to be slightly above their pre-pandemic average (see Chapter 1: Financial Conditions).

Growth in total consumer spending in Australia has slowed further, driven by a slowdown in the growth in international student numbers. Total consumer spending faced by Australian businesses includes consumption by residents in Australia as well as spending by international students and tourists. Growth in international student numbers is expected to slow further this year, with tighter visa processing standards decreasing the proportion of student visa applications being granted. Demand for international education remains high though, with student visa lodgements still elevated amid a tightening of entry requirements in competing markets, particularly Canada and the United Kingdom.

Growth in business investment has been strong recently but is expected to slow.

Business investment has grown strongly over the past 18 months. Following broad-based strength in early 2023, growth in non-mining investment moderated somewhat in the second half of last year (Graph 2.11). Non-residential construction continued to grow strongly, supported by large renewable infrastructure projects, data centres, warehouses and continued progress on the pipeline of yet-to-be-done construction work. Firms also continued to invest in software alongside projects for automation and digitisation. Machinery and equipment investment has declined in recent quarters but remains at an elevated level, particularly for the construction and logistics industries. Firms in the RBA's liaison program have continued to report that investment has been supported by a backlog of orders and further easing in supply chain disruptions.

Graph 2.11
Business Investment
Chain volume, year-ended growth with contributions



* Includes biological resources, artistic originals, non-mining software and non-mining research & development.

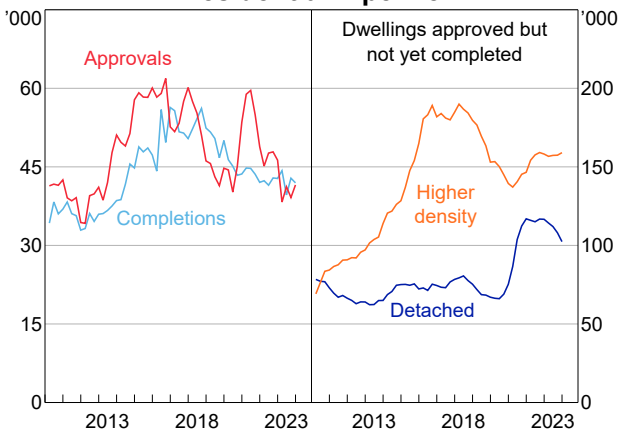
Sources: ABS; RBA.

Firms expect the pace of investment growth to slow in the year ahead. Firms' expectations for non-mining investment have been revised upwards for 2023/24, partly reflecting planned spending on heavy construction machinery related to large infrastructure projects. Early estimates of nominal investment intentions for 2024/25 show that firms intend to increase non-residential construction investment, supported by a pipeline of infrastructure and renewable energy projects. In other sectors, growth in investment is expected to slow from current elevated rates. Investment intentions reported by firms in the RBA's liaison program have declined to around their longer run average and the value of private non-residential building approvals have continued to trend lower in recent months to be around their pre-pandemic averages. This is consistent with the recent easing in surveyed measures of business conditions; some firms have cited higher costs and uncertainty around the outlook as weighing on their investment plans.

Housing supply continues to fall short of underlying demand.

The supply of new housing remains low because of capacity constraints in the latter stages of construction and weak demand for new building. Dwelling investment declined sharply in the December quarter after remaining little changed over the previous four quarters. RBA liaison contacts note that elevated construction activity in the private non-residential and public sectors is exacerbating capacity constraints, particularly for labour in the higher density construction sector that requires similar skills. Higher interest rates, elevated construction costs and construction delays have all weighed on buyer sentiment and dampened demand for new building, particularly for high-density construction where some developers in the RBA's liaison program have deemed new projects unviable in the current environment (Graph 2.12).

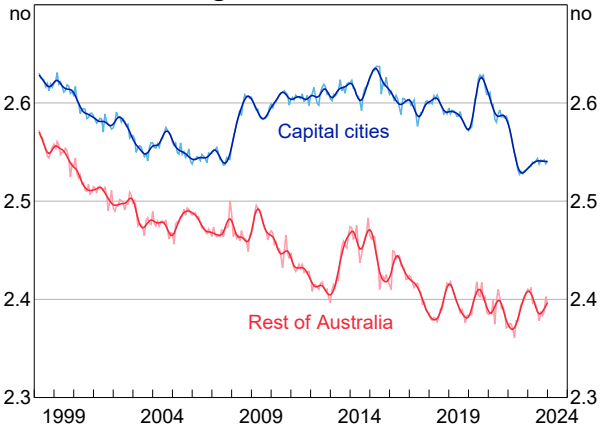
Graph 2.12
Residential Pipeline



Sources: ABS; RBA.

Low average household size and strong population growth have contributed to strong growth in the demand for housing space in recent years. A shift in preferences during the pandemic towards more residential space led to a lower average household size (Graph 2.13). Average household size has been little changed since mid-2023 and remains well below pre-pandemic levels in capital cities. The faster pace of price growth for houses than for units since the pandemic could also indicate a shift in preferences, with this price differential widening further in recent months.

Graph 2.13
Average Household Size*



* Smoothed lines are 13-period Henderson trends.

Sources: ABS; RBA.

Advertised rents continue to grow strongly but national housing price growth has slowed. Capital city advertised rents have grown by nearly 10 per cent over the past year, with growth broadly based across cities; growth in actual rents paid by new tenants has been a little higher than this over the past year but growth has now slowed to be closer to that of advertised rents. The pace of advertised rents growth has picked up in regional areas but remains below 2021 peaks. Housing prices grew around 9 per cent over the past year but quarterly annualised growth (seasonally adjusted) slowed to 3.5 per cent in March, with the slowing driven by the more expensive capital cities. Housing price growth has been stronger for lower value properties, which may indicate that buyers have been competing for more affordable properties.

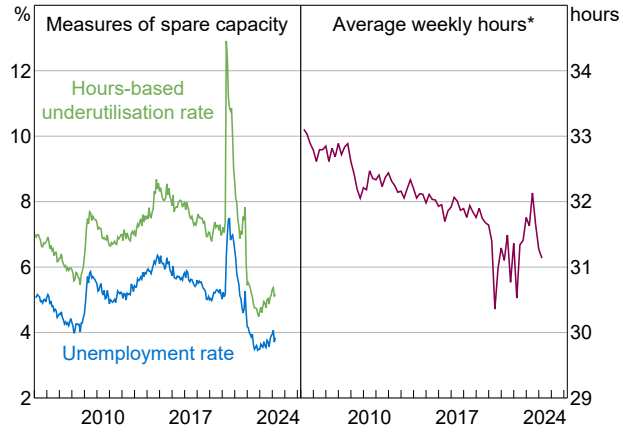
2.3 Labour market and wages

The labour market has continued to ease only gradually and remains tight.

The easing in labour market conditions over recent months has been more gradual than had been anticipated in the February *Statement*. The unemployment rate was 3.8 per cent in March, slightly above its 50-year low of 3.5 per cent in late 2022, and remains below estimates of the rate consistent with full employment (see section 2.4 Assessment of spare capacity). The participation rate remains near its record high owing to increased participation by females and older workers. As growth in employment has kept pace with working-age population growth, the employment-to-population ratio has been stable near its historically high level.

Much of the easing in labour market conditions over the past year has occurred through declining average hours worked and fewer job vacancies. Average hours worked have declined substantially over the past year, reversing the increase over 2022 (Graph 2.14). This has been driven by a decline in the average hours worked by full-time employed persons and an increasing share of employment growth occurring in part-time employment. The hours-based underutilisation rate has increased by more than the heads-based unemployment rate since late 2022, consistent with hours worked being a key margin of adjustment to the easing in labour demand.

Graph 2.14
Labour Underutilisation and Hours Worked



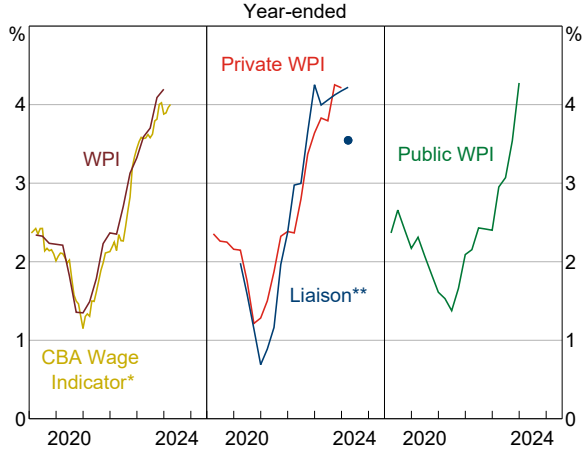
* Quarterly average.
Sources: ABS; RBA.

Firms have reduced labour demand more so by hiring fewer additional workers rather than laying off staff. Job advertisements and vacancies have continued to decline but remain above their pre-pandemic levels. Firms in the RBA's liaison program still expect to increase headcount in the year ahead, but at a slower pace than at the 2022 peak. Information from liaison and business surveys suggest labour availability has improved over the past year.

Wages growth appears to be around its peak for the current cycle, with some indications it will moderate over the year ahead.

Growth in the Wage Price Index (WPI) increased a little further in year-ended terms in the December quarter to be 4.2 per cent and appears to be around its peak for the current cycle (Graph 2.15). The most recent increase in WPI growth was partly driven by stronger-than-expected public sector wages growth, reflecting a larger proportion of jobs receiving a wage change than usual, particularly in New South Wales and Queensland. The outcome was also boosted by some large specific outcomes, including significant pay increases for NSW teachers. By contrast, private sector wages growth has begun to show signs of moderation following the easing in the labour market.

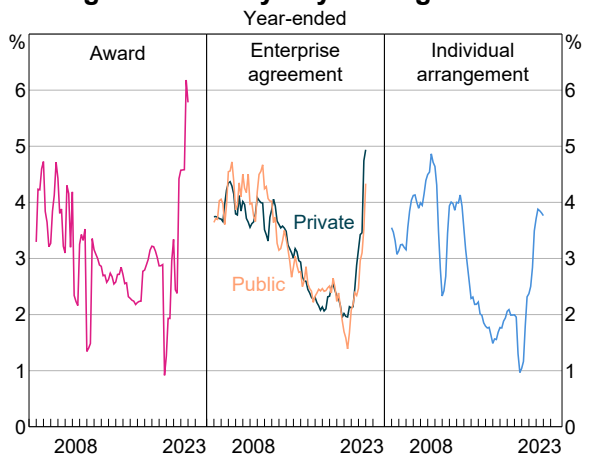
Graph 2.15
Measures of Wages Growth
Year-ended



* Changes in base wages (up to 15 per cent) based on a sample of CBA retail banking transactions.
** Private sector; trimmed mean; scaled to have the same mean as the private WPI; dot represents liaison expectations over the year ahead.
Sources: ABS; CBA; RBA.

Wages growth appears to have peaked for workers on individual arrangements, whose wages are most responsive to current labour market conditions. By contrast, wages growth has continued to strengthen for enterprise bargaining agreements where economic conditions take time to flow through (Graph 2.16).

Graph 2.16
Wages Growth by Pay-setting Method*



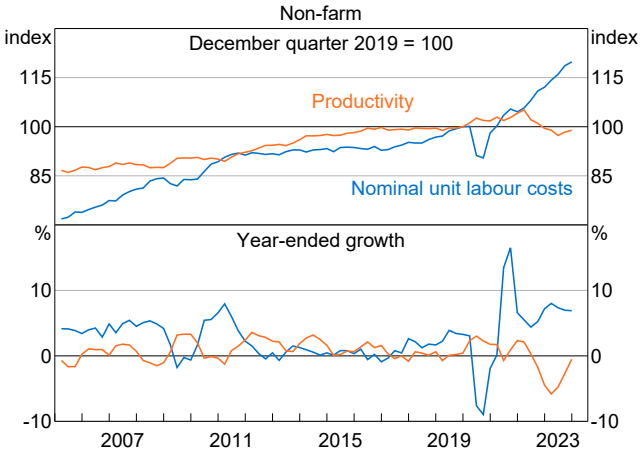
* Excludes bonuses and commissions.
Sources: ABS; RBA.

Market economists and firms in the RBA's liaison program expect wages growth to decline a little, with average wages growth expectations around 3½ per cent for the year ahead. Firms that expect a decline in wages growth have noted expectations for lower inflation, smaller award rate increases and a softening labour market as reasons for this.

Unit labour cost growth remains elevated, but it has moderated recently and is expected to slow further.

Year-ended unit labour cost growth appears to have peaked but remains strong, at around 7 per cent, reflecting robust wages growth and weak productivity outcomes (Graph 2.17). If prolonged, this would represent an upside risk to the inflation outlook and could delay inflation returning to target. Unit labour cost growth has moderated slightly in recent quarters, broadly as expected, reflecting the recent pick-up in labour productivity growth. A pick-up in labour productivity growth was expected, in part because the capital-to-labour ratio was forecast to recover in response to strong business investment.

Graph 2.17
Unit Labour Costs and Productivity



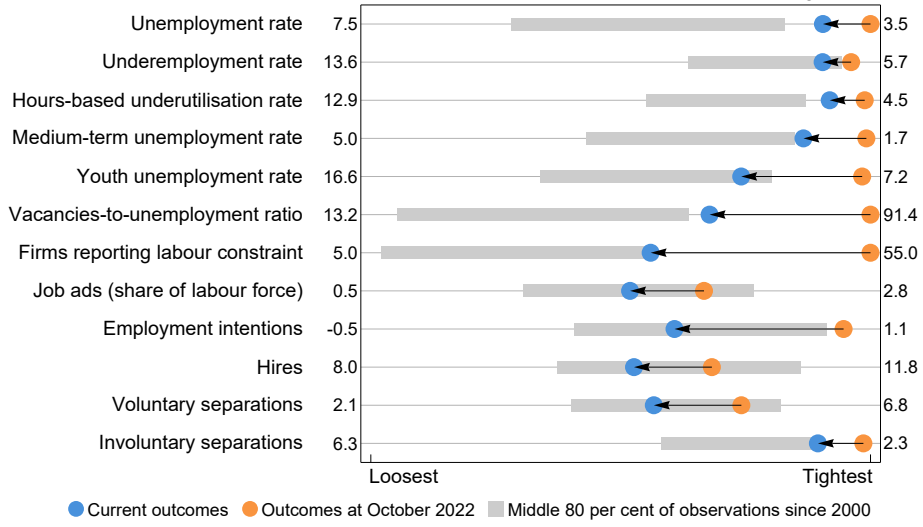
Sources: ABS; RBA.

2.4 Assessment of spare capacity

The labour market is assessed to still be tighter than full employment and is easing only gradually.

A broad range of indicators have eased from their very tight levels in late 2022, though several indicators remain tighter than their historical norms (Graph 2.18). The easing in some measures, including the unemployment rate, has been quite modest, particularly over recent months. Easing has been more apparent in forward-looking indicators such as job advertisements and employment intentions, which are now well within the range of their historical outcomes.

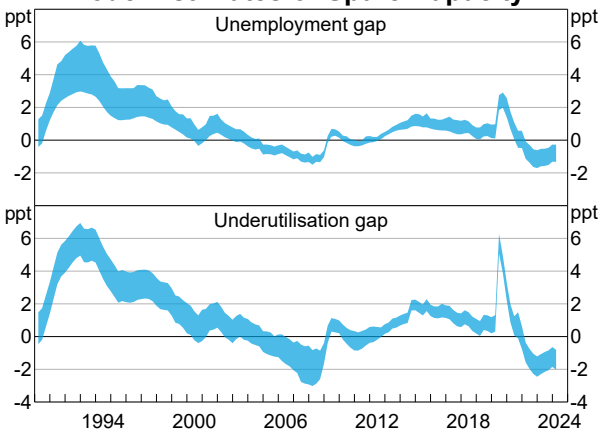
Graph 2.18
Full Employment Indicators
Current conditions relative to 2000–2024 range



Sources: ABS; JSA; NAB; RBA.

Model-based estimates suggest that the labour market has remained tighter than full employment, consistent with elevated domestic inflationary pressures and robust wages growth. Both the unemployment rate and the broader hours-based underutilisation rate remain lower than estimates of rates that are consistent with full employment, resulting in negative 'gaps' (Graph 2.19). These gaps have narrowed over the past year, but by slightly less than expected since the February *Statement*, suggesting the labour market is only gradually moving towards full employment. There is substantial uncertainty surrounding estimates of full employment, particularly with how they evolved during and since the pandemic.

Graph 2.19
Model Estimates of Spare Capacity*



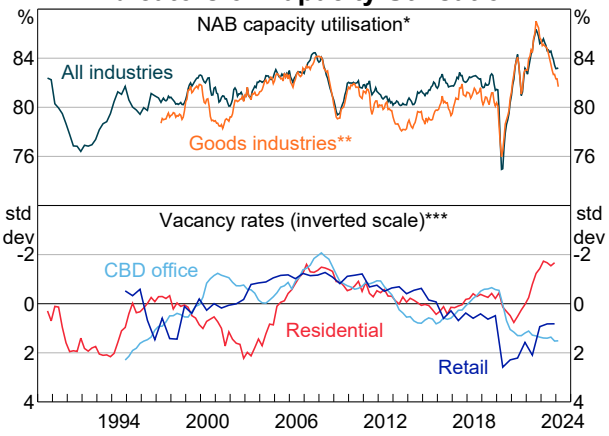
* Blue-shaded region shows illustrative range of central gap estimates from a selection of models; March quarter 2024 values are partial estimates; estimates are subject to substantial uncertainty, as well as revision due to data and model refinements.

Sources: ABS; RBA; Ruberl et al (2021).

Aggregate demand remained above the level of potential output, although the gap narrowed quickly.

Our overall assessment is that aggregate demand for goods and services remained above the supply potential of the economy in the December quarter of 2023. This assessment is informed by a range of indicators, including model-based estimates of the output gap (the difference between actual and potential output) and survey measures of capacity utilisation, alongside inflation outcomes (see Chapter 4: In Depth – Potential Output for more information on how this assessment is made). Since the February *Statement*, survey measures of capacity utilisation have continued to ease, suggesting the economy is moving closer to balance than three months ago (Graph 2.20).

Graph 2.20
Indicators of Capacity Utilisation



* Quarterly data prior to May 1997, three-month moving average thereafter; excludes mining.

** Goods industries include manufacturing, construction, wholesale and retail.

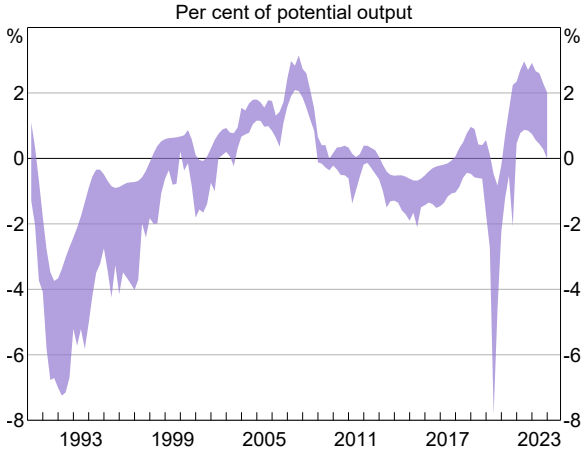
*** Series are standardised to measure the number of standard deviations each series is from its mean value; retail refers to regional retail centres.

Sources: ABS; JLL Research; NAB; RBA; REIA.

A range of model-based estimates suggest the output gap was positive, but closing (Graph 2.21). The level of output remained above estimates of potential output in the December quarter of 2023 – both labour and capital resources were being utilised beyond the maximum intensity that can be sustained without creating inflationary pressures. Although the output gap was estimated to be positive across the suite of models, subdued growth in output relative to potential is returning the economy to a more balanced state. This has occurred as demand in the economy has continued to slow in response to high interest rates and high inflation.

However, there is significant uncertainty around when the output gap will close. An important source of uncertainty is whether productivity growth over recent years and in the period ahead results in an overall persistent adverse effect on the *level* of productivity, and therefore potential output. The continued easing of capacity pressures on economic activity is consistent with the easing in labour market conditions, with the decline in labour demand so far being absorbed more by average hours and vacancies rather than the heads-based unemployment gap.

Graph 2.21
Model Estimates of Output Gap*
Per cent of potential output



* Violet-shaded region shows illustrative range of central gap estimates from a selection of models encompassing different measures and definitions of the output gap; estimates are subject to substantial uncertainty, as well as revision due to data and model refinements.

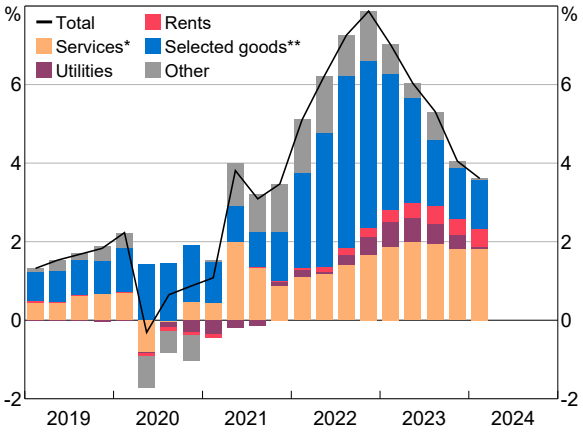
Sources: ABS; OECD; RBA.

2.5 Inflation

Inflation eased further in the March quarter in year-ended terms but remains high and the pace of disinflation has slowed.

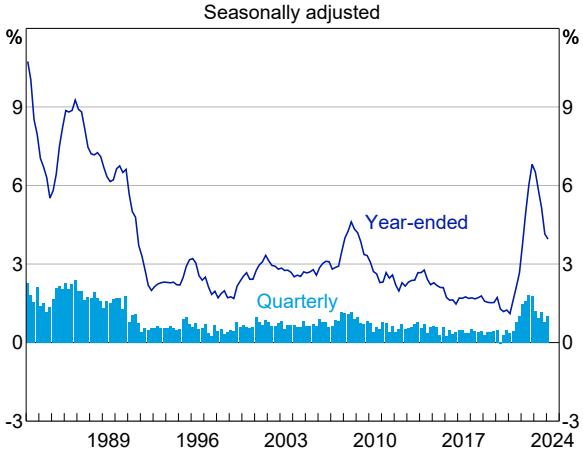
The easing in inflation over the year to March was mainly driven by a further easing in goods and utilities inflation, while other services inflation remains high. The CPI increased by 0.9 per cent in the March quarter to be 3.6 per cent higher over the year, down from 4.1 per cent in the December quarter (Graph 2.22). Measures of underlying inflation (which are designed to better capture the trend in inflation) also eased in year-ended terms; trimmed mean inflation was 1 per cent in the quarter and 4 per cent over the year (Graph 2.23). These outcomes were stronger than expected at the time of the February *Statement*. Despite seeing further progress on disinflation in year-ended terms, the pace of disinflation has slowed in recent quarters. This slowing, together with inflation being still too high, is consistent with the assessment that the labour market has remained tight, that output has been above potential, and domestic cost growth has been high.

Graph 2.22
CPI Inflation
Year-ended with contributions



* Includes market services and administered items; excludes utilities, rents and holiday travel & accommodation.
** Includes groceries, alcohol & tobacco, consumer durables and new dwellings.
Sources: ABS; RBA.

Graph 2.23
Trimmed Mean Inflation*
Seasonally adjusted

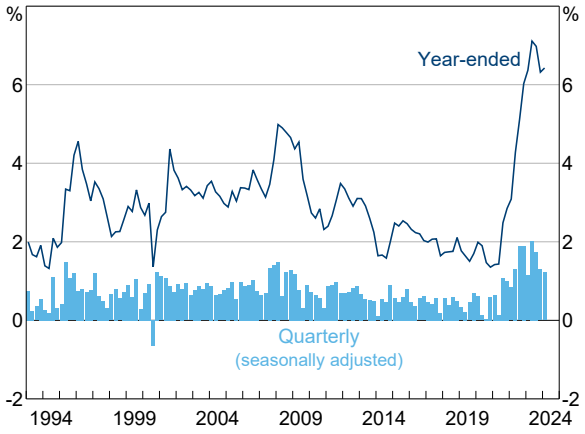


* Excludes interest charges prior to the September quarter of 1998 and deposit & loan facilities; adjusted for the tax changes of 1999–2000.
Sources: ABS; RBA.

Services inflation has passed its peak, but remains elevated.

Market services inflation remains high and broadly based across categories (Graph 2.24). Inflation in the March quarter was stronger than expected three months ago and remains above its historical average for a range of household services and insurance. This reflects continued pressure from both labour and domestic non-labour input costs such as insurance, legal, accounting and other administrative services. Unit labour costs represent a particularly large share of input costs for many services firms and continue to grow strongly. Retail and office rents are some of the few non-labour costs that are not adding materially to inflationary pressures. More recently, easing demand growth for some discretionary services, such as meals out and takeaway food, is starting to place downward pressure on inflation.

Graph 2.24
Market Services Inflation*

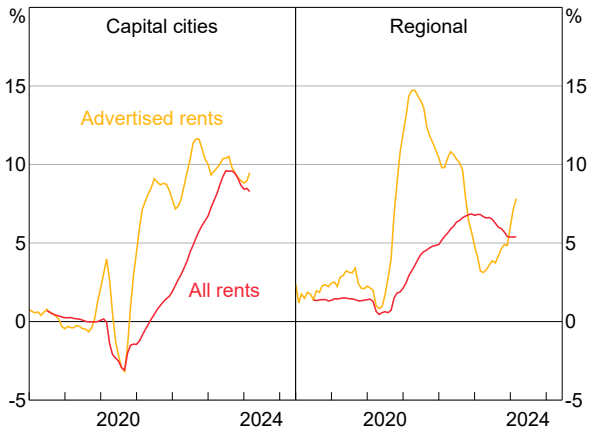


* Excludes domestic holiday travel & accommodation and telecommunications; adjusted for the tax changes of 1999–2000.

Sources: ABS; RBA.

Rent inflation remains high, and this is expected to persist. Rent inflation – for the stock of rents captured in the CPI (which excludes regional areas) – was 2.1 per cent in the quarter and 7.8 per cent over the year (Graph 2.25). The pick-up in quarterly inflation was expected after the earlier increase to Commonwealth Rent Assistance lowered rent inflation in the December quarter. Tight rental market conditions across the capital cities will likely contribute to ongoing high advertised rent growth, which will in turn keep CPI rents inflation elevated.

Graph 2.25
Housing Rent Inflation
Six-month-ended annualised



Sources: ABS; CoreLogic; RBA.

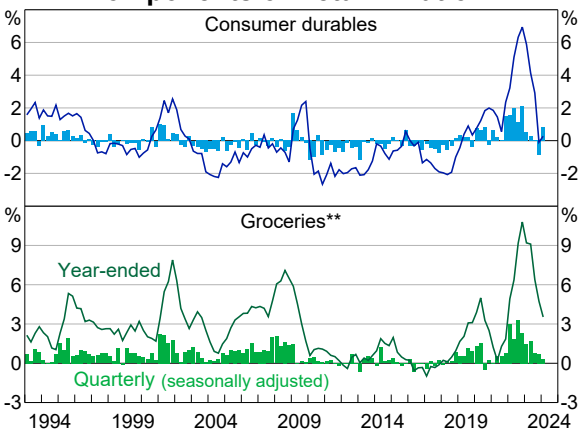
Inflation for goods and services with administered prices eased in year-ended terms. In the CPI basket, 'administered prices' are (at least partly) regulated or relate to items for which the public sector is a significant provider. Higher inflation for education over the year was offset by easing health and utilities inflation, particularly for electricity. Electricity contributed around 0.3 percentage points less to year-ended headline inflation in the March quarter than otherwise due to the government rebates, though these rebates are legislated to unwind over coming quarters.

Goods price inflation continued to ease, albeit at a slowing pace.

Quarterly goods inflation was higher than expected and is beginning to stabilise, though easing continued in year-ended terms. This is consistent with the earlier easing in price inflation of imported consumption goods having largely flowed through to domestic prices. Most firms in the RBA's liaison program report that supply chains are largely operating as normal after several years of disruption. Upward pressure on shipping costs due to the Red Sea conflict has been less significant than anticipated, and disruptions to the Panama Canal have begun to ease. Nonetheless, domestic labour and non-labour costs (including electricity, insurance, and warehousing and logistics rents) continue to place some upward pressure on goods prices.

Consumer durables inflation was around zero over the year to March (Graph 2.26). This is consistent with information from the RBA's liaison program suggesting firms are intensifying cost discipline with a variety of approaches (e.g. re-evaluating expenses and pushing back on supplier cost increases) to moderate cost and price growth. Groceries inflation continued to ease sharply and in a broad-based manner.

Graph 2.26
Components of Retail Inflation*



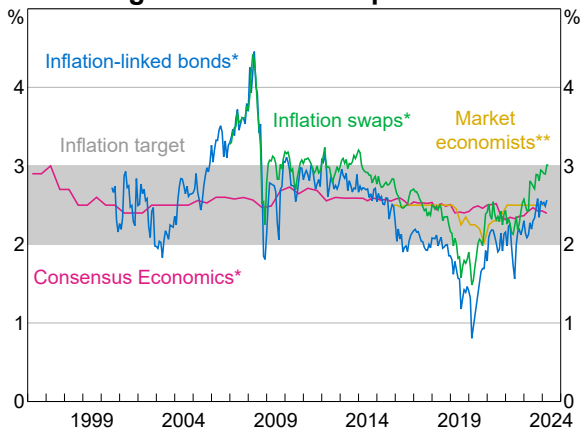
* Adjusted for the tax changes of 1999–2000.
** Excludes fruit & vegetables.
Sources: ABS; RBA.

New dwelling cost inflation has stabilised in recent quarters, above its average level over recent decades. Labour costs and some energy-intensive materials are driving ongoing cost growth, partly driven by the large pipeline of work and ongoing capacity constraints in construction.

Inflation expectations remain consistent with achieving the inflation target over time.

Survey and financial market measures of short-term expectations have declined notably from their mid-2022 peaks, consistent with recent declines in actual inflation, though some expectations measures continue to suggest that inflation over the next year is expected to remain above the RBA's inflation target. Measures of medium- and long-term expectations have increased over the past year but overall remain consistent with the inflation target (Graph 2.27).

Graph 2.27
Long-term Inflation Expectations



* Average over the five years starting from five years ahead.
** Average over the next 5–10 years.
Sources: Bloomberg; Consensus Economics; RBA.

Box A: Insights from Liaison

This Box highlights key messages collected by teams based in Adelaide, Brisbane, Melbourne, Perth and Sydney during discussions with around 230 businesses, industry bodies, government agencies and community organisations over the period from the beginning of February 2024 to the end of April 2024.

Recent liaison discussions suggest that demand conditions have been little changed since the end of 2023, and economic activity is not expected to grow much in the period ahead. Given the current high-cost environment, some firms have scaled back their investment plans, though the outlook for investment in infrastructure remains strong. Firms are reporting that it is becoming more difficult to pass cost increases through to prices and have increased their focus on cost discipline and/or improving productivity. Growth in wages and prices is expected to moderate further over the year ahead.

Consumer spending remains cautious and price sensitive.

Retailers generally report that sales volumes have been little changed in recent months, although most discount retailers have seen a lift in sales. Households are budget-conscious and seeking value. Consumers have been trading down to cheaper products, reducing non-essential purchases and concentrating their spending during promotional periods that offer potential savings. Retailers generally expect current conditions to persist over coming months, with overall sales volumes little changed.

Demand for domestic travel improved in the first few months of 2024, supported by entertainment events, though contacts report that consumers remain cautious in their spending because of cost-of-living pressures and high travel prices. Contacts generally expect domestic tourism demand to be unchanged over the next 12 months.

Community service organisations report that demand for assistance remains very strong for all their services across metropolitan, regional and remote areas. Cost-of-living pressures and the lack of housing availability and affordability are key drivers of this demand. Contacts continue to see requests from people who have not previously sought assistance, including wage earners and those with mortgages. People are also increasingly needing support with a more complex range of interconnected personal and financial issues, so community organisations need to spend more time with each person.

International student intakes are expected to grow at a slower pace or even decline over the year ahead.

Underlying international demand for education in Australia remains strong, following exceptionally strong growth in commencements in 2023. However, universities report that changes to student visa eligibility and slower visa processing times have limited commencements at some institutions in 2024 so far. There is considerable uncertainty around how student visa settings will impact commencements going forward, but contacts generally expect international student commencements to grow at a slower pace or decline in 2024 and 2025. In response, some institutions are seeking to reduce costs, investment plans and/or staff numbers. Domestic university student numbers remain lower than a few years ago, as more people choose to work rather than study given the still strong labour market.

International tourism has picked up but remains below pre-pandemic levels. Liaison contacts expect international visitor arrivals to reach pre-pandemic levels over the year ahead.

Home building is expected to slow as builders work through their backlog of projects.

Sales of house and land packages have been fairly stable in recent months, at low levels. There is considerable variation across the country, reflecting factors such as population flows and relative affordability. Demand for off-the-plan apartments is low. Contacts are cautiously optimistic about the outlook, and generally expect demand for new homes will pick up as buyer perceptions of interest rate stability and affordability improve.

Most detached home builders expect their workload to decline in coming months as they work through their backlog of projects, due to the lower sales in 2023 and in 2024 so far. New apartment construction has already declined. Many high-rise residential developments are stalled or not going ahead due to the high costs of construction relative to apartment sale prices and capacity constraints in the construction industry. While the pace of construction cost growth is easing as material costs improve and supply chains normalise, the cost and availability of labour remains a challenge, particularly for high-density projects that compete with the large volume of infrastructure projects for similar skills.

Investment intentions have declined to their long-run average level.

Firms' investment intentions eased in early 2024, to be around their long-run average level. Firms that have pulled back on planned investment spending attribute this to higher construction costs and uncertainty around the economic outlook. For those firms that are investing, many contacts typically point to projects related to technology, digitisation and automation.

A strong pipeline of infrastructure work, particularly in the public and energy sectors, is underway or likely to begin soon. Firms continue to express concerns around the capacity of the construction industry to deliver these projects (particularly in smaller capital cities and regional areas), which may result in delays and further cost escalation.

Firms are intensifying their focus on containing costs as they find it harder to increase prices.

Firms have increased their focus on cost management over the past 12 months to improve productivity and maintain or rebuild margins, in an environment where cost growth is still relatively high and it is becoming more difficult to pass cost increases through to prices. The approach taken to managing costs and/or improving productivity varies considerably by firm and industry. Examples include reviewing staffing structures, converting contractors or casuals to permanent staff, changing working or opening hours, and considering offshoring for some roles. Firms have also been investing in labour-saving technology, such as introducing automation and robotics. This recent boost to firms' investment in technology will not necessarily lead to higher productivity though, at least in the near term. For example, some of the investment is focused on risk mitigation, and transition costs often weigh on productivity in the early stages of the adoption of new technology.

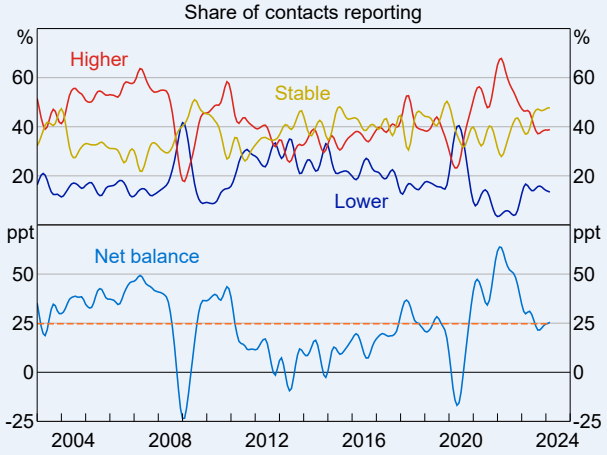
Despite firms' focus on cost management, hiring intentions have been relatively stable in recent months and are around their long-run average (Graph A.1). Labour availability has improved over the past 12 months; voluntary staff turnover rates have declined and many firms have noted that it is somewhat easier to fill vacancies. However, the labour market remains tighter than prior to the pandemic; staff turnover rates are still above average and finding suitable labour continues to be difficult for many firms.

Average wage growth across private sector contacts in the liaison program was just above 4 per cent over the year to the March quarter. Most firms expect stable or slower wages growth in the period ahead, with contacts' average year-ended wage growth expected to be around 3½ per cent over the next 12 months. Contacts attribute this easing to their expectation that inflation and award rate outcomes will be lower in 2024 than in the previous year, and that the labour market will soften further.

Many firms report a gradual easing in the pace of growth in non-labour costs over the past year, particularly for imported goods, but note that overall input cost growth remains unusually high due to increases in domestic costs such as logistics, energy, insurance and labour (Graph A.2). Firms expect overall cost growth to continue to moderate over the next 12 months.

As demand has softened, a growing number of firms have noted that their customers along the supply chain have become less accepting of attempts to pass on cost increases to prices. Contacts expect to increase their prices by less over the next 12 months compared with the prior 12 months.

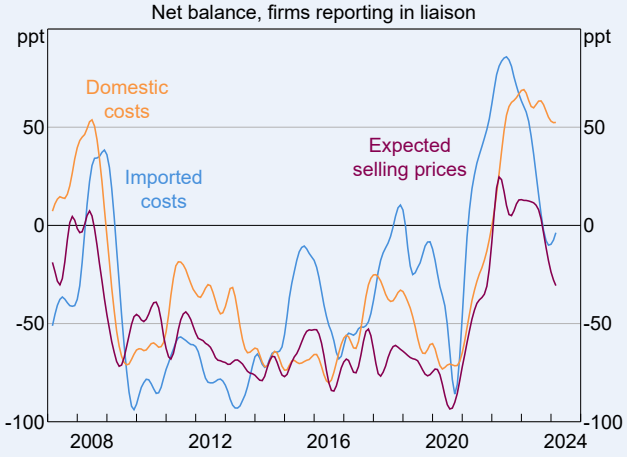
Graph A.1
Employment Intentions*
Share of contacts reporting



* Over the year ahead; smoothed with a 13-month Henderson trend; dashed line is monthly average of net balance line since 2003.

Source: RBA.

Graph A.2
Change in Firms' Non-labour Costs and Prices*
Net balance, firms reporting in liaison



* Share of firms reporting above-average increases less share reporting decreases, no change or below-average increases; average increase indexed to 0; smoothed with a 13-month Henderson trend.

Source: RBA.

Chapter 3
Outlook

Summary

- **Growth in Australia's major trading partners is expected to remain subdued, but broader global conditions have improved and the risks have become more balanced.** The IMF's outlook for global growth has improved in recent months, largely as a result of an upgraded outlook for the United States. By contrast, the outlook for Australia's trading partner growth is unchanged, due to downward revisions elsewhere including in New Zealand and Japan. Stronger-than-expected inflation outcomes in some economies, most notably the United States, have led expectations for monetary policy easing to be scaled back in recent months. But most advanced economy central banks continue to expect inflation to return to target by the end of 2025.
- **Following a period of limited spare capacity and high inflation, economic growth in Australia is expected to be subdued in part because of the effects of earlier increases in interest rates.** The near-term forecast for GDP growth has been revised down a little compared with three months ago. Households have reduced their spending more than expected, and the recovery in household consumption is now expected to take longer to materialise. From late 2024, GDP growth is expected to pick up gradually as the continued recovery in real incomes supports a pick-up in household spending. The higher assumed path for the cash rate will dampen the expected pick-up in GDP growth.
- **The stronger-than-expected labour market data indicates there is marginally less spare capacity in the labour market than previously expected.** The labour market is projected to continue easing to be broadly consistent with full employment in the next couple of years, but this easing is now expected to take longer than previously thought.
- **Subdued growth in aggregate demand is expected to return demand and supply into balance in the next couple of years.** Taken together, the data on the labour market, activity and inflation suggest that there is slightly less spare capacity in the economy than had been expected three months ago. The forecast is for the output gap to close and labour market conditions to ease over the next couple of years, albeit at a more gradual pace than over the past year. This is expected to return the economy to a more balanced position.
- **Higher petrol prices, the legislated end of energy rebates and stronger recent data will lift headline inflation in the near term. Trimmed mean inflation is expected to moderate a bit more gradually than anticipated three months ago, but is still expected to be within the target range of 2–3 per cent in 2025 and to reach the midpoint in 2026.** The more gradual moderation reflects the recent stronger-than-expected inflation and labour market outcomes. Nevertheless, the timing of the anticipated return to target remains the same as previously forecast, as weaker activity is expected to dampen inflationary pressure in the second half of the forecast period.

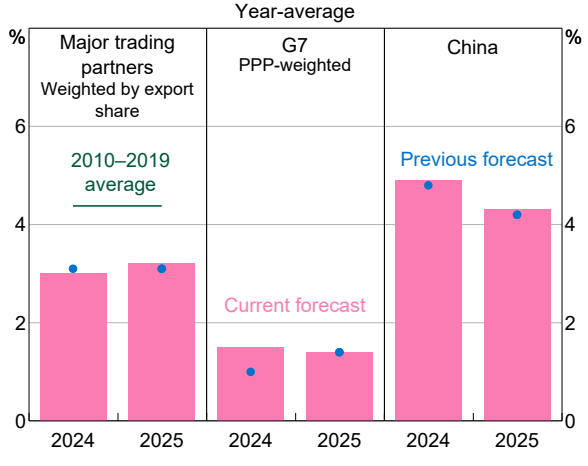
- **On balance, the risks to the domestic outlook are broadly balanced, though the costs associated with these risks differ.** The key risks are: (i) inflation could take longer to return to target than anticipated, which would be costly for the employment and inflation objectives; and (ii) demand could be softer than expected, leading to higher unemployment.

3.1 The global outlook

Growth in Australia's major trading partners is expected to be moderate and most central banks expect inflation to be close to target by the end of 2025.

Year-average GDP growth for Australia's major trading partners is expected to ease to around 3 per cent in 2024 and to be a little higher in 2025. The overall outlook for growth in Australia's major trading partners in 2024 is little changed (Graph 3.1). The stronger forecast growth in 2024 in the United States and China, which is also partly reflected in the recent pick up in global commodity prices, is offset by downward revisions to growth in New Zealand, Japan and some middle-income economies in east Asia. The unchanged outlook for Australia's major trading partner growth in 2024 contrasts with an upgrade to the IMF's forecasts for global growth, in part reflecting the fact that the US economy makes a larger contribution to global GDP than it does to Australia's trade. The outlook for major trading partner growth in 2025 has been revised up a little, led by an upward revision to the outlook for China.

Graph 3.1
GDP Growth
Year-average



Sources: ABS; CEIC Data; Consensus Economics; LSEG; RBA.

Most advanced economy central banks are expecting headline inflation to be close to 2 per cent by the end of next year, alongside widening output gaps and further gradual easing in labour market tightness. However, recent inflation and labour market data in the United States have been stronger than expected, prompting private forecasters to revise up their near-term projections for US inflation and market participants to scale back their expectations for the timing and extent of monetary policy easing by the Federal Reserve (see Chapter 1: Financial Conditions). In a number of other advanced economies, expectations for monetary policy easing have been scaled back a little against the backdrop of stronger near-term global inflationary pressures.

The outlook for growth in China has improved, although growth is still expected to slow over the next two years. The upgrade to the forecast reflects a stronger-than-expected outcome in the March quarter and confirmation that the authorities will target 'around' 5 per cent growth this year. Policy measures are expected to continue to support infrastructure and manufacturing investment, more than offsetting ongoing weakness in the property sector.

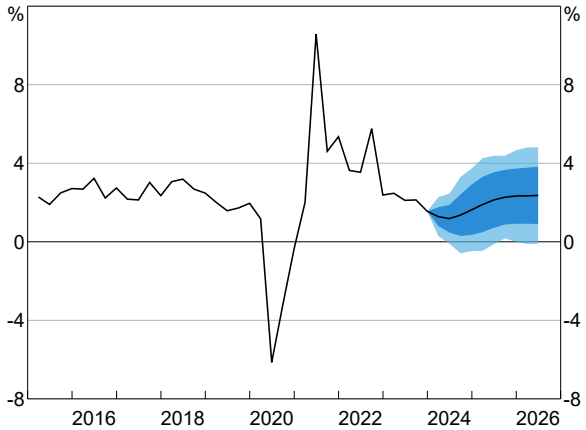
3.2 The domestic outlook

Economic growth is expected to remain subdued over most of 2024, with the outlook a little weaker than three months ago, as earlier interest rate increases continue to weigh on demand.

Overall, the forecasts for economic activity have been revised down slightly compared with three months ago. Household spending has been weaker and the saving rate stronger than previously anticipated. This is expected to continue in the near term, notwithstanding a stronger profile for employment and household income. In addition, the cash rate is assumed to remain around its current level until mid-2025, around nine months longer than assumed in February; this will moderate the expected pick-up in GDP growth. The technical assumption for the cash rate is based on pricing from overnight indexed swap markets on 1 May (see Table 3.1: Detailed Forecast Table for more information).

The near-term downgrade to GDP reflects a softer near-term outlook for household consumption and dwelling investment. The soft outlook for GDP growth in the first half of 2024 reflects subdued growth in domestic final demand, with weakness most pronounced in the household sector (Graph 3.2). While income growth in late 2023 has been stronger than expected, consumption growth has remained a little weaker than anticipated, resulting in a much higher household saving ratio. Overall, households have been saving more than expected three months ago in response to higher interest rates and the economic environment. A key judgement in the forecasts is that consumption growth remains subdued for most of 2024, despite real income growth picking up in response to strong labour income growth, a smaller drag from (declining) inflation, and the Stage 3 tax cuts (Graph 3.3). Continuing capacity constraints and weak demand will hamper dwelling investment in the near term, with affordability constraints and high construction costs expected to continue weighing on new demand and activity in 2025 and 2026.

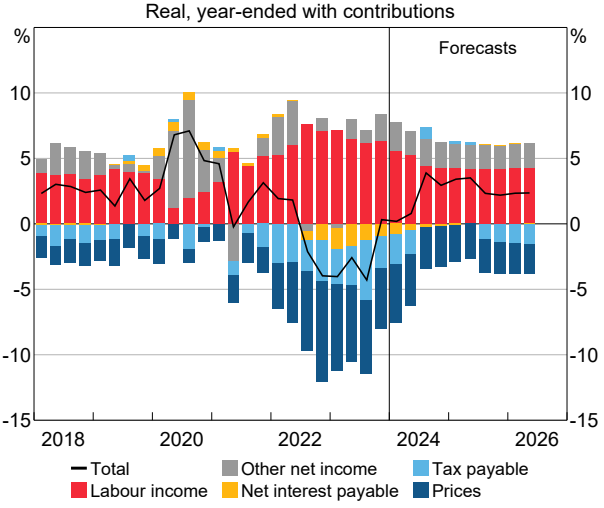
Graph 3.2
GDP Growth Forecast*
Year-ended



* Confidence intervals reflect RBA forecast errors since 1993, with the 70 per cent interval shown in dark blue and the 90 per cent interval shown in light blue.

Sources: ABS; RBA.

Graph 3.3
Household Disposable Income Growth
Real, year-ended with contributions

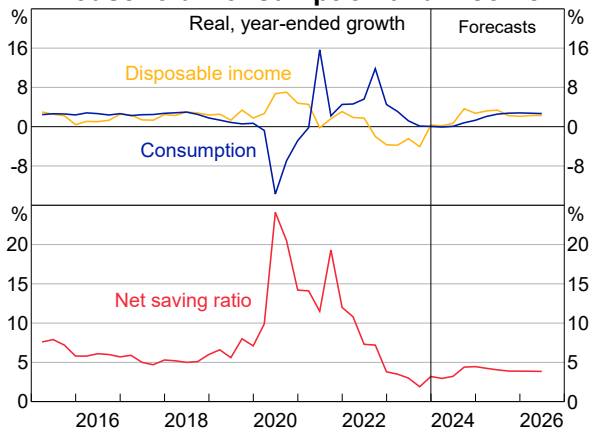


Sources: ABS; RBA.

The levels of public spending, business investment and services exports are expected to remain high relative to recent years, but growth is forecast to slow in 2024 from the high rates seen in 2023. Business investment growth is expected to ease in response to subdued domestic demand and cost pressures and despite support from investment related to the large pipeline of infrastructure work, digitisation and the renewable energy transition. Growth in spending by tourists and international students (which is counted as exports) is also expected to slow as the recovery following the reopening of the border nears completion.

GDP growth is forecast to increase gradually from late 2024, driven by a pick-up in household consumption growth. Consumption growth is expected to pick up to around pre-pandemic averages in 2025 following the earlier recovery in real incomes. This implies that the household saving ratio will lift over 2024 before declining later in the forecast period, though there is considerable uncertainty around this expectation (see section 3.3 Key judgments, below) (Graph 3.4). Dwelling investment growth is expected to pick up from around mid-2025. This reflects increasing demand for new housing as recent population growth, higher prices for established housing and improved conditions in the construction industry offset the effects of affordability constraints and high construction costs. The higher assumed cash rate path will moderate the pick-up in GDP growth. Overall, the forecasts for GDP growth beyond the near term are broadly unchanged from three months ago. However, the *level* of GDP at the end of the forecast horizon is a little lower.

Graph 3.4
Household Consumption and Income

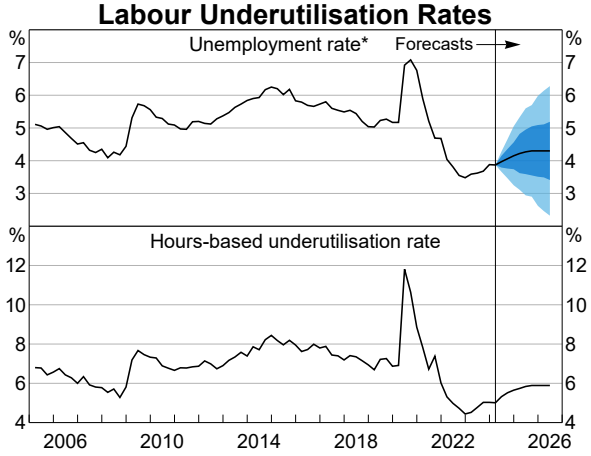


Sources: ABS; RBA.

The labour market is expected to ease further to be broadly consistent with full employment in the next couple of years.

Labour underutilisation rates are forecast to rise further, but this is starting from a lower (tighter) level and is at a slightly more gradual pace than anticipated three months ago. Much of the labour market adjustment to subdued economic growth has occurred through a decline in average hours worked and vacancies. Both the unemployment rate and the broader hours-based underutilisation rate (i.e. people working fewer hours than desired) have increased only gradually from their late-2022 troughs, though the increase in the latter has been a little more pronounced. It is judged that there will continue to be an adjustment to softer labour demand through a further decline in vacancies and average hours worked, as observed during previous labour market downturns. The unemployment rate is also expected to increase gradually over coming quarters before stabilising around levels consistent with full employment from mid-2025 onwards (Graph 3.5).

Graph 3.5
Labour Underutilisation Rates



* Confidence intervals reflect RBA forecast errors since 1993, with the 70 per cent interval shown in dark blue and the 90 per cent interval shown in light blue.

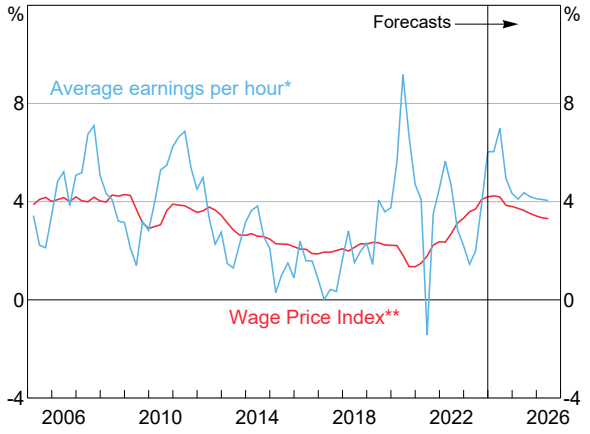
Sources: ABS; RBA.

Employment growth is expected to slow but remain positive as demand for labour eases. Growth in employment is forecast to be below growth in the working-age population for a time, resulting in the forecast gradual increase in the unemployment rate. The labour force participation rate is expected to decline slightly alongside the cyclical slowing in the economy. The participation rate has been supported by longer run trends of increased participation by females and older workers and is expected to remain high by historical standards over the forecast horizon.

Growth in nominal wages is expected to moderate as the labour market eases.

Nominal wages growth looks to be around its peak and is expected to decline gradually. Wages growth has started to slow in parts of the private sector and this is expected to become more broadly based and pronounced over the forecast horizon. Growth in nominal wages is forecast to ease a little more gradually than previously expected, reflecting both the strength in recent wage outcomes and the slightly stronger outlook for the labour market (Graph 3.6).

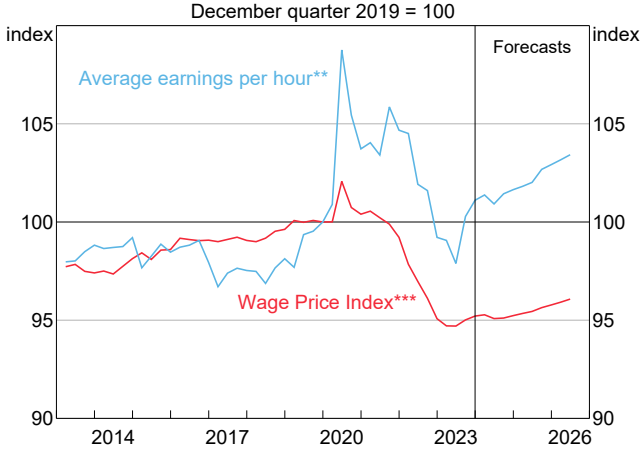
Graph 3.6
Wages and Earnings Growth
Year-ended



* Non-farm; includes social contributions.
** Excluding bonuses and commissions.
Sources: ABS; RBA.

Real wages are forecast to increase over the forecast horizon as nominal wages growth is expected to decline more slowly than inflation (Graph 3.7).

Graph 3.7
Real Wages*
December quarter 2019 = 100

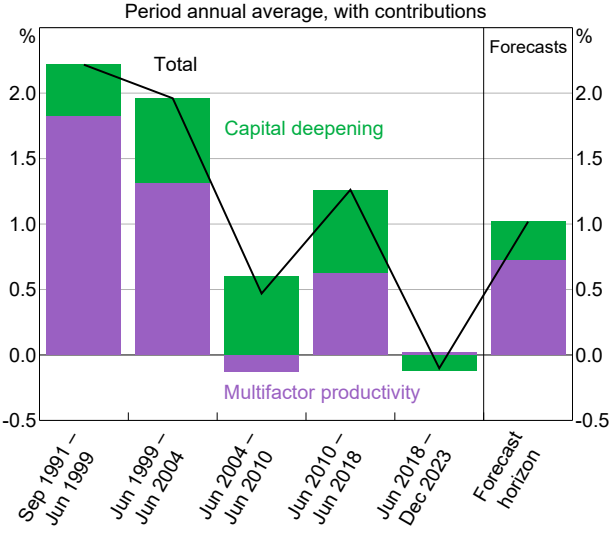


* Deflated using the headline Consumer Price Index.
** Non-farm; includes social contributions.
*** Excluding bonuses and commissions.
Sources: ABS; RBA.

Growth in unit labour costs remains strong but is expected to moderate further over the coming years. Nominal unit labour costs – the measure of labour costs most relevant for firms' cost of production and so for inflation outcomes – are forecast to grow at a less rapid pace as nominal wages growth gradually eases and labour productivity growth picks up. Growth in nominal unit labour costs is expected to slow to a rate consistent with inflation returning to target, assuming labour productivity growth converges to around its long-run average and wages growth eases in line with forecasts. If productivity is weaker than assumed, businesses would face higher costs of producing a given amount of output to the extent they have limited ability to adjust wages to reflect lower productivity outcomes.

Productivity is assumed to continue to increase, although substantial uncertainty remains around the outlook. Labour productivity increased by less than anticipated in the December quarter, and assumed productivity growth in the first half of 2024 has also been revised a little lower. The outlook further out is little changed. Growth is assumed to stabilise around its long-run (excluding the pandemic) average rate over the forecast period. The pick-up in labour productivity growth reflects the recovery in the capital-to-labour ratio, consistent with the recent strength in business investment, and a pick-up in multifactor productivity growth (i.e. output growth not attributed to labour or capital growth) as capacity constraints ease in some industries such as construction (Graph 3.8).

Graph 3.8
Labour Productivity Growth
Period annual average, with contributions



Sources: ABS; RBA.

However, the outlook for productivity – which is a key determinant of the economy's supply capacity, real incomes and hence living standards – is highly uncertain. Productivity growth weakened over the 2010s, reflecting various factors such as declining rates of new business formation, slowing capital and labour reallocation, slowing knowledge diffusion and declining competition. If we return to these slower rates of dynamism, productivity growth will be weaker than long-run pre-pandemic trends. Furthermore, the extent and timing of any potential gains from the adoption of new technologies, including of artificial intelligence, are highly uncertain. Major gains from general purpose technologies often take many years to manifest as businesses adapt their business models to harness the benefits.

Subdued growth in aggregate demand is expected to return the economy into balance in the next couple of years.

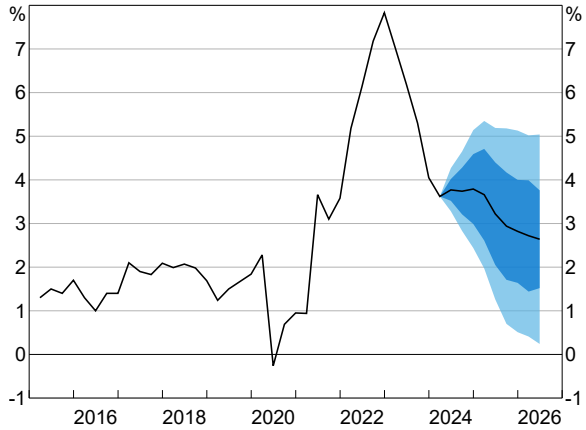
The staff forecast is for the output gap to close over the next couple of years, but at a more gradual pace than over the past year, returning the economy to a more balanced state. Recent data suggest that the output gap (the difference between actual and potential output) remained positive late last year (see Chapter 4: In Depth – Potential Output for an explanation of these concepts), indicating that demand continued to exceed sustainable supply capacity. However, there is considerable uncertainty over both the estimates of the output gap and the pace of decline in the output gap.

In addition to uncertainty about the outlook for aggregate demand, the pace at which the output gap closes is sensitive to the assumption about growth in the economy's potential output. After a period of subdued growth in potential output over recent years – largely due to weak trend productivity growth – potential output is assumed to grow at around 2½ per cent per year over the next few years, which is not too far from the longer run average growth rate. This reflects a decline in population growth from its current high rate being offset by an increase in trend productivity growth towards its pre-pandemic rate. However, there is considerable uncertainty around these assumptions.

Headline inflation will rise in the near term, while trimmed mean inflation is expected to ease further to fall below 3 per cent in 2025 and to the midpoint of the target in 2026.

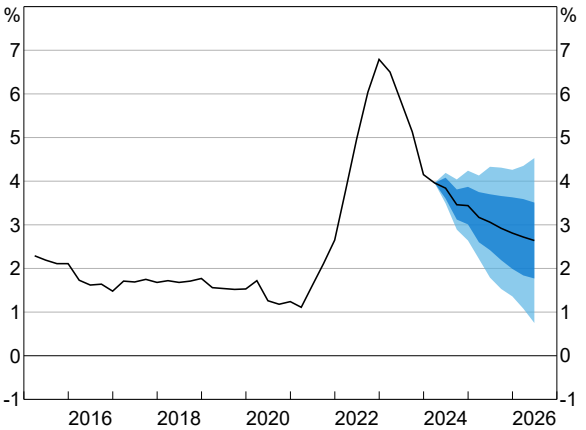
Headline inflation is expected to lift in the near term from temporary factors, and then decline a bit more gradually than previously forecast. The recent rise in petrol prices and unwinding of electricity rebates are each expected to add ¼ percentage points to year-ended headline inflation in the December quarter of 2024 (Graph 3.9). For underlying inflation, the near-term forecast has been revised higher owing to the stronger-than-expected March quarter inflation data, which suggest the pace of disinflation has slowed, and the economy is assessed to have slightly less spare capacity than previously estimated (Graph 3.10).

Graph 3.9
Headline Inflation Forecast*
Year-ended



* Confidence intervals reflect RBA forecast errors since 1993, with the 70 per cent interval shown in dark blue and the 90 per cent interval shown in light blue.
Sources: ABS; RBA.

Graph 3.10
Trimmed Mean Inflation Forecast*
Year-ended



* Confidence intervals reflect RBA forecast errors since 1993, with the 70 per cent interval shown in dark blue and the 90 per cent interval shown in light blue.
Sources: ABS; RBA.

Inflation is forecast to be within the target range in 2025 and to reach the midpoint of the target in 2026. Despite the upward revision to inflation over the year ahead, the inflation outlook is little changed further out. The output and unemployment gaps are projected to close over the forecast period, bringing the economy back to a balanced position and inflation back to target. Inflation expectations are assumed to remain consistent with achieving the inflation target within this timeframe.

Services inflation remains elevated and is expected to decline only gradually. Strong domestic cost pressures (both for labour and non-labour inputs) have held up inflation outcomes in recent quarters, and services inflation was a little stronger than expected in the March quarter. Services inflation is expected to ease gradually as growth in input costs and demand moderates over the forecast horizon. The more gradual decline in services inflation relative to goods inflation is in line with trends overseas; the experience abroad also highlights the risk that services inflation could be more persistent than expected (see section 3.3 Key judgements, below). Further easing in services inflation is necessary for inflation to return to target.

Rent inflation is expected to remain high over the entire forecast period. Advertised rents growth remains elevated due to ongoing tight rental market conditions across capital cities. Demand for housing has outstripped supply in recent years such that vacancy rates remain below average; in part, this reflects solid growth in nominal incomes, strong population growth and an increased preference for a smaller average household size since the pandemic. It will take some time for the expected increase in dwelling investment over the next few years to feed through to lower pressure on rent growth and this will also depend on developments in housing demand, including preferences for household size.

Goods inflation is expected to be relatively modest over the forecast horizon. The easing in imported goods inflation as global supply chains normalised last year has largely passed through to domestic goods prices. The risk of a large spike in global shipping costs has receded somewhat and growth in domestic labour and non-labour costs is moderating (though both remain high).

3.3 Key judgements

The central forecasts incorporate many judgements, such as the choice of models used and whether to deviate from the models given the signal from recent data or qualitative information from liaison. The key judgements that the staff have extensively considered and incorporated this forecast round are included below.

Consumption is expected to remain subdued for most of 2024.

The consumption forecasts are guided by a range of models that suggest that consumption growth will pick up quickly over coming quarters, reflecting the earlier rebound in housing prices and the strong recovery in real household incomes expected from mid-2024. However, the staff have applied downwards judgment to the model forecasts in the near term. In making this judgment, the staff have taken considerable signal from recent outcomes, where consumption growth has been weaker than expected and the saving ratio has been higher than expected, as well as the experience of many peer economies, where consumption growth is yet to increase despite an earlier recovery in income growth.

There is less spare capacity in the labour market than earlier anticipated.

The unemployment rate has increased since its lows in late 2022 but appears to have stabilised more recently. The staff forecast is for the unemployment rate to increase a little more gradually than previously expected over the next year, with this view guided by recent stronger-than-expected labour market outcomes and a suite of models. This would suggest that there is more tightness in the labour market than previously assumed, which, taken by itself, implies more upward pressure on inflation. Overall, the unemployment rate forecast is consistent with the historical relationship between the unemployment rate and the trajectory for GDP growth. The forecasts suggest that a little under half of the adjustment will be via relatively slow growth in employment, consistent with the experience in mild downturns. If the hours adjustment has now run its course, then there may be a more rapid increase in the unemployment rate.

Despite the upward surprise in the March quarter inflation data, disinflation is expected to continue.

The central forecast is for inflation to continue to decline over the forecast horizon, albeit at a slower pace than it has over the past year and from a higher starting point. This forecast disinflation is guided by a suite of models that take some signal from the stronger-than-expected March quarter CPI outcome. However, it is possible that more signal should be taken from the upside data surprise as it may suggest that there is more persistence or 'stickiness' in domestically determined components of the basket than currently assumed (which is not offset by the higher cash rate path assumption underpinning these forecasts). This is also consistent with there being less spare capacity in the economy and the resilience in the labour market of late. Recent inflation outcomes in some overseas economies, such as the United States, provide additional evidence of the risk that high inflation may be more persistent than currently anticipated. One way through which the forecasts for services inflation already incorporate some upward judgment is through expected labour cost growth, where the staff's forecast for wages growth is higher than suggested by the suite of wages models.

3.4 Key risks to the outlook

The recent flow of data suggests that the risk that inflation takes longer to return to target than anticipated has increased since the February *Statement*. At the same time, the risk that demand is weaker than expected (leading to spare capacity) is still material, with recent labour market and consumption data providing different signals about the strength of domestic demand. With inflation continuing to be above target, the costs associated with the upside risks are larger. It would be costly (in terms of both the employment and inflation objectives) if a sustained period of high inflation led to inflation expectations drifting upwards. On the other hand, while some of the downside risks to the outlook would see a faster return to the inflation target, this would likely be accompanied by a cost to the employment objective.

Key risk #1 – If inflation takes longer to return to target than anticipated, the greater the risk that inflation expectations drift higher, which would require a costly period of higher unemployment.

Inflation is expected to be above the target range for around four years in total according to staff forecasts. The central forecast is for inflation to decline alongside an easing in the labour market. This assumes inflation expectations remain anchored over the period ahead. A sustained period of inflation being above the target range could result in inflation expectations drifting higher. A drift higher in inflation expectations would lock in a rate of inflation and nominal wages growth that is persistently higher, with no benefit to real wages. History suggests that it would require more monetary policy tightening and a sustained and costly period of higher unemployment to reset inflation expectations and bring inflation back to target.

Some key channels through which inflation could be higher for longer than forecast include:

- **There may be less spare capacity in the economy than we currently judge.** There is a risk that the forecast easing in the labour market is not sufficient to return inflation to target if we have misjudged the degree of spare capacity. Uncertainty about the extent of spare capacity is more elevated than normal (see Chapter 4: In Depth – Potential Output), and there is a risk that the degree of excess demand in the economy is larger than currently assumed. If this risk scenario played out, wages growth and domestic inflation would be persistently higher than forecast.
- **Demand could be stronger than expected, and inflation could be higher for longer than anticipated as a result.** The recovery in consumption over the coming 12 months is expected to be gradual, with households choosing to save a large share of the expected increase in incomes in the second half of 2024. However, households might instead choose to spend more of this income boost, especially in light of their already-large holdings of liquid assets. There is also a large amount of work in the construction pipeline that could be worked through more quickly than anticipated, increasing the competition for scarce labour and materials. These scenarios would result in employment growth being stronger than forecast in the near term and inflation declining by less than anticipated.

- **Services inflation could be more persistent than anticipated.** The evidence from other economies suggests that services inflation has moderated only gradually (and, in some cases, recent progress appears to have stalled), despite significant goods disinflation.
- **Supply shocks could boost inflation.** While the pandemic-related disruptions to supply chains have largely resolved, the risk of other supply shocks have increased. If there were to be trade disruptions from an escalation of geopolitical tensions, global commodity prices could increase and disrupt the supply of goods. This could lead to price inflation being higher than forecast for a time, which could further delay the return of inflation to target.
- **Inflation could be more persistent than expected if productivity growth does not pick up.** The baseline forecasts include an assumption that labour productivity growth increases to the rate recorded in the decades preceding the pandemic. Productivity growth could prove weaker than assumed if capital deepening does not eventuate (i.e. the rate of investment is insufficient relative to employment growth) or if the structural factors that were key drivers of the productivity growth slowdown since the mid-2000s persist (e.g. declining business dynamism and slowing technology adoption). If productivity is weaker than assumed, businesses would face higher costs of producing a given amount of output, putting upward pressure on prices paid by consumers.

Key risk #2 – If demand is weaker than expected (or supply is larger than expected), it could lead to spare capacity in the labour market.

With the labour market expected to ease to be around the level consistent with full employment during the forecast period, materially weaker demand for goods and services would lead to spare capacity in the labour market. At the same time, weaker demand would also temper inflationary pressures, resulting in inflation returning to target earlier.

Some key channels through which demand could be weaker than expected include:

- **The recent weakness in household consumption could persist for longer than expected.** This could occur if the decline in real disposable incomes over the past couple of years has a larger or more persistent effect on consumption than anticipated; consumption growth has not picked up in response to a recovery in real incomes in a number of peer economies.
- **International demand for Australian goods and services could be weaker than expected.** Although the recent flow of data suggests the downside risks to global growth have diminished, there are still some risks that would have a significant adverse effect on growth were they to materialise. There are onaqgoing downside risks to Chinese economic growth, which could eventuate if the weak conditions in the property sector have larger-than-expected spillovers to the household sector or constrain investment through their effect on local government finances. Further, trade tensions remain elevated and a further increase in tensions or restrictions on trade would lead to lower global growth.

3.5 Detailed forecast information

The RBA forecasts reflect our best estimate of future economic outcomes and are published every quarter. The forecasts are pulled together using a combination of single-equation models, leading indicators (for nowcasts and the near term) as well as applying appropriate judgement to incorporate information that cannot easily be captured by models (e.g. information from the liaison program or large shocks such as the pandemic). These forecasts are interrogated thoroughly during the forecast process to ensure they are internally consistent and produce a clear economic narrative. The full-system economic model (known as MARTIN) is run in parallel and used as a consistency check on the forecasts.

The forecasts incorporate several technical assumptions:

- The cash rate is assumed to move broadly in line with expectations derived from financial market pricing; previously this assumption also included information derived from surveys of professional economists, but recent staff analysis has found that using only financial market pricing is the best predictor of the future cash rate path unless there is unusual financial market volatility. Using this methodology, the cash rate remains around its current level until mid-2025 before declining to around 3.8 per cent by the middle of 2026. This cash rate path is higher than at the time of the February *Statement*.
- The exchange rate is assumed to be unchanged at its current level, which is 1 per cent higher than the February forecasts on a trade-weighted basis.
- Crude oil prices are assumed to be broadly unchanged around their current levels for the rest of the forecast period, which is around 4.6 per cent higher than at the time of the February *Statement*.
- The assumed level of the population is broadly unchanged relative to the February *Statement*. Year-ended population growth is assumed to have peaked in the September quarter of 2023 at 2.5 per cent, after which it is expected to decline back to its pre-pandemic average of around 1.4 per cent.

Table 3.1 provides additional detail on forecasts of key macroeconomic variables. The forecast table from current and previous Statements can be viewed, and data from these tables downloaded, via the Statement on Monetary Policy – Forecast Archive.

Table 3.1: Detailed Forecast Table[a]

Percentage change through the four quarters to quarter shown, unless otherwise specified[b]

	Dec 2023	Jun 2024	Dec 2024	Jun 2025	Dec 2025	Jun 2026
Activity						
Gross domestic product	1.5	1.2	1.6	2.1	2.3	2.4
Household consumption	0.1	0.1	1.3	2.6	2.8	2.7
Dwelling investment	–3.1	–3.2	0.2	0.2	0.9	1.8
Business investment	8.3	1.5	0.7	1.7	2.0	2.2
Public demand	4.6	3.2	1.5	2.1	3.0	3.2
Gross national expenditure	1.3	1.6	1.9	2.3	2.6	2.6
Major trading partner (export-weighted) GDP	3.4	2.9	3.2	3.3	3.0	2.9
Trade						
Imports	3.5	1.1	4.2	3.9	4.2	4.5
Exports	4.2	0.8	2.7	2.8	2.9	3.2
Terms of trade	–3.9	–3.3	–4.1	–1.4	–1.4	–1.3
Labour market						
Employment	3.0	2.1	1.4	1.2	1.3	1.4
Unemployment rate (quarterly, %)	3.9	4.0	4.2	4.3	4.3	4.3
Hours-based underutilisation rate (quarterly, %)	5.0	5.3	5.6	5.8	5.9	5.9
Income						
Wage Price Index	4.2	4.2	3.8	3.6	3.4	3.3
Nominal average earnings per hour (non-farm)	6.0	7.0	4.3	4.4	4.1	4.0
Real household disposable income	0.3	0.8	2.9	3.4	2.1	2.3
Inflation						
Consumer Price Index	4.1	3.8	3.8	3.2	2.8	2.6
Trimmed mean inflation	4.2	3.8	3.4	3.1	2.8	2.6
Assumptions						
Cash rate (%)[c]	4.2	4.3	4.4	4.2	3.9	3.8
Trade-weighted index (index)[d]	60.9	62.1	62.2	62.2	62.2	62.2
Brent crude oil price (US$/bbl)[e]	83.2	87	84.1	84.1	84.1	84.1
Estimated resident population[f]	2.5	2.0	1.5	1.4	1.4	1.4
Memo items						
Labour productivity[g]	–0.6	1.8	0.8	1.3	1.2	1.1
Household savings rate (%)[h]	3.2	3.2	4.5	4.0	3.9	3.8
Real Wage Price Index[i]	0.1	0.4	0	0.4	0.6	0.6
Real average earnings per hour (non-farm)[i]	1.9	3.1	0.5	1.1	1.3	1.4

(a) Forecasts finalised on 1 May 2024.

(b) Forecasts are rounded to the first decimal point. Shading indicates historical data.

(c) The cash rate is assumed to move broadly in line with expectations derived from financial market pricing.

(d) The daily exchange rate (TWI) is assumed to be unchanged at its current level going forward.

(e) Oil prices are assumed to remain constant at the current price over the current quarter. For the rest of the forecast period oil prices are expected to remain around the price implied by the six-month-forward rate.

(f) The population assumption draws on a range of sources, including partial indicators from the Australian Bureau of Statistics, migration policies, and estimates made by the Australian Government.

(g) GDP per hour worked (non-farm). The downward revisions to year-ended labour productivity growth over the next year relative to the February *Statement* owe, in part, to an improved method for forecasting non-farm GDP growth.

(h) Household savings ratio refers to the ratio of household saving (disposable income minus consumption) to household disposable income, net of depreciation.

(i) Real Wage Price Index and non-farm average earnings per hour worked are both deflated by Consumer Price Index.

Sources: ABS; Bloomberg; CEIC Data; Consensus Economics; LSEG; RBA.

Chapter 4
In Depth – Potential Output

Summary

- **Potential output is the maximum amount of goods and services that can be produced by an economy while maintaining low and stable inflation.**
- **The difference between actual output and potential output – the 'output gap' – is an important consideration for monetary policy.** It indicates the extent to which the economy is operating above or below the level of activity that is consistent with inflation staying around the RBA's target. A negative output gap tends to coincide with a shortfall of employment from the RBA's full employment objective, and a positive output gap tends to coincide with a tight labour market.
- **Since the objectives of monetary policy are to achieve price stability and full employment, keeping aggregate demand and potential output broadly in balance plays a key role.** Monetary policy does this by steering aggregate demand towards potential output. Changes in potential output itself are primarily driven by factors that monetary policy has little direct influence on in the longer run, such as population and productivity growth.
- **The RBA forms its assessment of potential output and the output gap using a range of information.** This includes survey-based and other indicators of capacity utilisation in the economy, a suite of model-based estimates, and inflation outcomes.
- **Assessments of the output gap are subject to considerable uncertainty.** This is because potential output cannot be observed directly and is often inferred using models. The disruptions from the pandemic and a series of global supply shocks have heightened uncertainty in recent years.
- **As agreed between the Treasurer and the Reserve Bank Board in the Statement on the Conduct of Monetary Policy, the RBA will regularly communicate its assessment of potential output.**

4.1 What is potential output?

Potential output is the total amount of goods and services that can be produced by an economy that is operating at a 'sustainable' capacity.

When the overall demand for goods and services is equal to potential output, the economy is considered to be in balance. At this level of output, factors of production such as labour and capital (which includes the buildings, machines and equipment firms use to produce their goods and services) are being utilised at 'sustainable' levels to meet demand, without being underutilised or utilised too intensively. In this context, sustainable means being consistent with low and stable inflation over the business cycle (provided that longer term inflation expectations remain anchored). Over the medium-to-long term, an economy that is operating at its potential level of output is also achieving sustained full employment.[1]

Australia's potential output varies over time because of changes in the availability of labour, capital and the growth of productivity. The availability of labour evolves with growth in the overall size of the population and the number of hours each person is willing and able to work when the economy is at full employment. The stock of capital increases or decreases as firms invest in new assets and maintain or retire assets that have depreciated over time. The entire capital stock is not fully utilised all the time, even when output is at potential – for example, machines often require downtime for maintenance, equipment may be sitting idle while waiting to be moved to a different location, and retail and office buildings are typically not in use 24 hours a day. How effectively the economy can use its resources to produce goods and services is another source of change in potential output over time. This depends on productivity growth. When productivity grows, the economy can produce more output even if no additional labour or capital is used. All else equal, productivity growth can reduce inflationary pressure in the short term, as goods and services can be produced more cheaply by using inputs more efficiently.

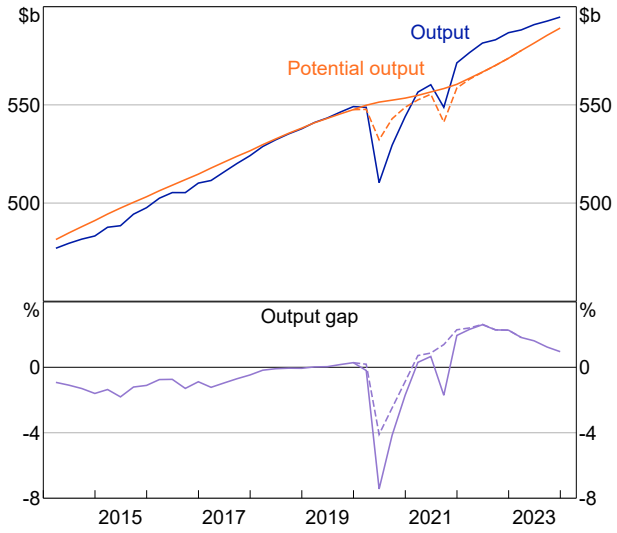
Longer term economic growth is determined by growth in potential output. Growth in potential output depends on growth in the supply of labour and capital as well as growth in productivity. An important development in recent decades is that the growth rate of potential output appears to have been on a downward trend in many advanced economies, including Australia. This might reflect a number of factors, including slower growth in the labour force, capital stock and productivity. A decline in the growth rate of potential output means the economy cannot achieve the same rates of GDP growth it had in the 1990s and 2000s without putting upward pressure on inflation.

4.2 Why does potential output matter to central banks?

Potential output provides a benchmark to assess the balance of aggregate demand and supply in the economy.

When aggregate demand (as measured by actual output) exceeds potential output, there is a positive 'output gap' (Graph 4.1).[2] When this occurs, factors of production are being utilised intensively to meet demand. While this is feasible in the short run, it cannot be sustained without inflationary pressures rising. Inflation will typically rise above its target, as wage pressures increase in the face of very low unemployment, high vacancies and staff turnover, and as other input costs tend to rise when firms operate their stock of capital intensively and compete for scarce inputs. Once aggregate demand and potential output move closer into balance, inflation will typically move closer to target.

Graph 4.1
Aggregate Demand and Supply*
Selected model estimates



* Estimates of potential output and output gap from one of the models in the RBA's suite; dashed lines include an illustrative adjustment for pandemic activity restrictions; levels reflect 2021/22 prices.

Sources: ABS; RBA.

Aggregate demand below potential output (a negative 'output gap') often coincides with employment below full employment and capital being underutilised. This is costly in terms of the lost production and consumption from not making full use of Australia's resources, and in terms of the financial and social costs of employment being below full employment.[3]

The output gap plays an important role in informing monetary policy deliberations and strategy.

Potential output is not an objective of monetary policy and monetary policy can do little to directly influence it. Potential output is instead determined by technological progress, the stock of capital, investments in innovation and skills, and changes in the size and composition of the workforce. Nevertheless, by maintaining low and stable inflation, the RBA creates the conditions required for sustained economic growth, such as providing the confidence for firms to make longer term investments.[4]

The output gap is closely connected to price stability and full employment. Monetary policy affects aggregate demand to bring it closer into line with potential output (i.e. closing the output gap); doing so plays a key role in achieving the RBA's objectives of price stability and full employment.

An output gap close to zero is important in achieving price stability. Deviations of actual output from potential output tend to see inflation deviating from the inflation target. Forming a view on the current and future path of output relative to potential output is therefore an important input into the RBA's forecast for inflation, which in turn informs the Board's monetary policy decisions. However, in practice, the output gap is not necessarily the most useful leading indicator for forecasting inflation, and for this reason, measures of labour market spare capacity play a larger role in informing the RBA's forecasts (see below).

Full employment and an output gap close to zero are interrelated. Full employment is the maximum level of employment consistent with low and stable inflation over the medium term. While this implies a balance between demand and supply in the labour market, low and stable inflation over the medium term also requires balance in the markets for goods and services, and thereby economic activity in line with potential output. Short-term movements of output from potential output tend to coincide with movements of employment from full employment. How the output gap relates to the labour market is discussed in the next section.

4.3 What drives movements in the output gap?

Shocks to demand and supply have different effects on the output gap and potential output.

A range of demand-driven shocks can affect the balance between demand and supply. For example, an increase in foreign demand for Australia's exports or a rise in government spending increases aggregate demand and so can result in a higher output gap. Excess demand – or a positive output gap – typically warrants tighter monetary policy to ensure output returns to levels consistent with low and stable inflation.

Temporary supply shocks can affect actual output but are not likely to affect potential output. Temporary shocks to the production of goods and services will affect the economy's supply capacity for only brief periods. As a result, they are less likely to matter for inflation over the medium term. For example, severe weather, such as floods, can temporarily disrupt the domestic production of certain foods. While such events can lead to a shortage of these foods, and put significant upwards pressure on their prices, the effects on the overall productive capacity of the economy are typically not persistent enough to affect potential output over the horizon that is important for monetary policy. That said, a series of temporary supply shocks in one direction that moves inflation away from target for some time could pose the risk that inflation expectations could also drift away from target, which may then become embedded in price- and wage-setting behaviour.

Persistent supply shocks can affect the balance between demand and supply. The pandemic is likely to have had some persistent effects on the trend *level* of productivity – that is, the level of productivity abstracting from cyclical and temporary factors.[5] Possible reasons are that firms initially needed to focus more on survival than on growth, firms reorganised their supply chains, and on-the-job learning was disrupted. All else equal, this lowered – for a time – the growth of potential output and so the rate at which demand could grow without putting strain on labour and capital resources. As a result, this generated pressure on inflation.[6]

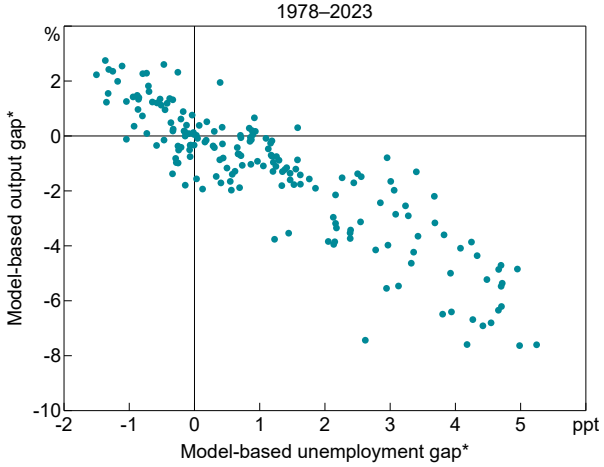
Developments on the supply side of the economy can also have implications for aggregate demand. For example, lower potential output that is the result of lower trend productivity growth would feed through into lower expected growth in real incomes (because of higher inflation and/or slower wages growth); lower income growth in turn would mean less demand. This adjustment process tends to take some time to play out, however, and so the output gap may be positive for a time as businesses and households gradually adjust their behaviour. Changes in population growth will also affect both supply and demand for goods and services and so do not necessarily change the output gap. However, rapid growth in the population could have an effect on the output gap because it takes time for the capital stock to adjust. This is particularly relevant for the housing market.

Short-term deviations of actual output from potential output do not always coincide with deviations of employment from full employment.

Full employment and a closed output gap are tightly connected in the medium term, but in the short term, full employment does not necessarily imply a closed output gap. This is because labour is not the only factor of production – whether firms are over- or under-utilising their existing capital can also be important for assessing overall spare capacity and thus inflationary pressure. For example, the 'mining boom' saw a substantial rise in the demand for Australia's commodity exports. While this led to higher demand for both labour and capital in the mining and mining-related sectors, at least for a time capital was in short supply relative to labour. During this period, most estimates of the output gap were higher than suggested by labour market spare capacity alone, until the many large-scale mining investment projects became operational.

However, it is common for short-term imbalances between aggregate demand and supply to be felt across both the markets for labour and for goods and services in a broadly similar way.
Short-term movements of employment above full employment usually correlate with an unemployment rate below levels consistent with low and stable inflation – that is, a negative 'unemployment gap'. Such periods tend to coincide with intensive use of capital inputs and a deviation of output from its potential level. This is a well-documented empirical relationship known as 'Okun's law'. While estimates of Okun's law can be sensitive to modelling assumptions and the precise measures of spare capacity used, and can change over time, the model-based estimate for Australia suggests that a negative unemployment gap of 1 percentage point tends to be associated with a positive output gap of 1¼ per cent, on average (Graph 4.2). In addition to the utilisation rates of capital and labour responding similarly to shifts in aggregate demand, the association in the graph also reflects the fact that labour inputs account for a large share of costs of production in the aggregate economy – that is, the 'labour' component comprises a substantial portion of the output gap. But there is still some variation in the relationship, which reflects how the respective gaps do not always paint the same picture about the balance between demand and supply in the economy.

Graph 4.2
Okun's Law
1978–2023



* Estimates from one of the models in the RBA's suite.
Sources: ABS; RBA.

4.4 How do we use these concepts in practice?

A key question for monetary policy is whether the output gap is a useful indicator for forecasting inflation, or whether a narrower focus on spare capacity in the labour market is sufficient.

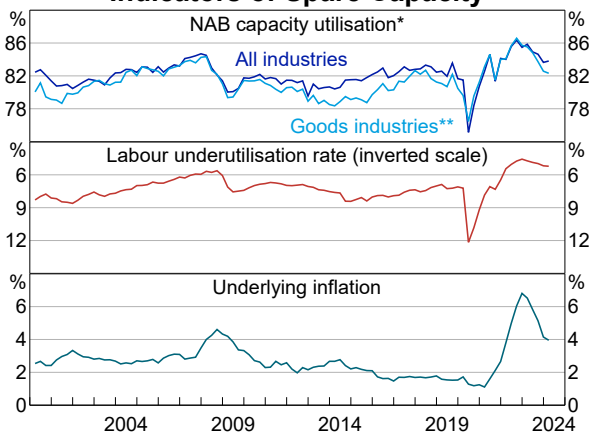
Conceptually, the output gap is a better indicator of near-term inflationary pressures than measures of spare capacity in the labour market alone, but this might not be the case in practice. The output gap captures imbalances between aggregate demand and supply in the markets for goods and services and therefore the ability of, or need for, firms to adjust prices. However, most of the cyclical variation in output gap measures either comes from, or is strongly associated with, variation in labour market gaps. The unemployment gap also provides more statistical explanatory power for inflation than the output gap in many models of inflation, which could reflect the tendency for labour market gaps to be better measured than output gaps in Australia. Additionally, the official labour market data are available ahead of the data on output, the capital stock and productivity, which makes models based on labour market gaps more useful for forecasting. The RBA's forecasting framework for inflation includes – along with a number of other important factors such as inflation expectations and costs of labour and other inputs – a combination of labour market gaps and output gaps to capture any differing signals between them.[7]

Potential output and the output gap cannot be observed directly, they can only be inferred from other information and so estimates are uncertain.

Like full employment, potential output and the output gap cannot be observed directly. The RBA forms its assessment of potential output and the output gap using models, alongside a range of indicators that reflect demand, supply, capacity utilisation and inflationary pressures. Overall, there are fewer indicators of spare capacity in product markets than for labour markets, so our assessment of potential output and the output gap is more reliant on model-based estimates than is the case for full employment and spare capacity in the labour market. The models are also subject to considerable uncertainty, so our assessment of the output gap may be less reliable than our assessment of labour market spare capacity. Our assessments of potential output and the output gap are informed by:

- **Model-based estimates:** A suite of economic models provide a range of estimates of potential output and the output gap (see below).
- **Indicators of capacity utilisation:** Survey measures of capacity utilisation and liaison with businesses provide an important read on capacity, including in the more capital-intensive goods-related industries (Graph 4.3). Given the important role of labour market spare capacity, the suite of information used to assess full employment is also an input to the assessment of potential output and the output gap.[8]
- **Activity measures:** Measures of aggregate economic activity, in particular GDP, and trends in these measures form a first step of the assessment.
- **Inflation outcomes:** Changes in the balance between aggregate demand and supply often take time to flow through to inflation – that is, inflation is an important but lagging indicator of spare capacity (Graph 4.3). And, as noted above, some movements in inflation can reflect temporary shocks that are not likely to affect potential output.

Graph 4.3
Indicators of Spare Capacity



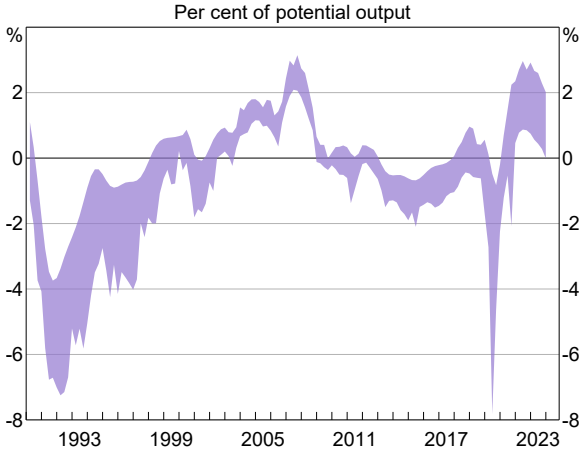
* Excludes mining.
** Goods industries include manufacturing, construction, wholesale and retail.
Sources: ABS; NAB; RBA.

No single model or indicator, by itself, is sufficient to assess potential output and the output gap, but taken together they can paint a more complete picture. As such, the full set of information suggests that growth in potential output was subdued during the pandemic and the output gap has been positive in recent years. Even though the level of output (and output per capita) is below the level implied by its pre-pandemic trend, inflation remains above target, and both labour and capital resources are being utilised much more intensively than they were prior to the pandemic. To a large extent this reflects the weak outcomes for productivity growth over recent years, which have weighed on growth in potential output. Providing some offset, there are signs that at least part of the large increase in labour market participation since 2019 reflects a permanent change in behaviour, and thereby has provided some support to growth in potential output. While population growth saw large swings as borders were closed and reopened, the level of the population has returned to be broadly in line with its pre-pandemic trend.

We use economic models to estimate potential output and the output gap.

We maintain a suite of economic models that provide a range of estimates of potential output and the output gap. The suite includes models developed within the RBA, as well as model estimates from third parties such as the OECD (Graph 4.4). Each model has its strengths and weaknesses, so there is no 'best' model. Using a range of models and different sources of information helps to inform a more robust assessment given uncertainty about which is the better model. At a high level, all of the models separate short- to medium-term fluctuations in output (i.e. the output gap) from longer run structural trends in economic activity (i.e. potential output). To do this, the models use statistical techniques and economic theory to infer these unobserved concepts from a range of economic data.

Graph 4.4
Model Estimates of Output Gap*
Per cent of potential output



* Violet-shaded region shows illustrative range of central gap estimates from a selection of models encompassing different measures and definitions of the output gap; estimates are subject to substantial uncertainty, as well as revision due to data and model refinements.

Sources: ABS; OECD; RBA.

Another benefit of a suite of models is that different models can embody different concepts of potential output and provide different insights into how and why potential output is changing. Some of our models – so-called 'multivariate filters' – estimate the level of output that would be consistent with low and stable inflation. These models take direct signal from inflation and other economic indicators, particularly GDP and unemployment, to inform their estimate of the output gap. These models could be described as applying a medium-run view of supply, consistent with how central banks, including the RBA, define potential output for monetary policy. Other models take a longer run view, by estimating the level of output achievable if all resources were utilised at their longer run trends. These 'production function' approaches focus on structural trends in the underlying factors of production that drive potential output – that is, potential labour, capital and productivity.

Estimates of the output gap are uncertain.

Graph 4.4 shows that central estimates of the output gap differ across models. At each point in time, there are a range of estimates and these sometimes give conflicting indications about capacity utilisation in the economy. Some model-based estimates suggest that there was a significant amount of excess demand in the economy at the end of 2023, while others suggest that demand and supply were close to balance. The wide range of central estimates highlights the uncertainty around making assessments about spare capacity. Each individual estimate is also subject to additional uncertainty not shown in the graph, driven by how well a model fits the data, and further uncertainty occurs in real-time due to data revisions and changes in seasonal patterns. Overall, this justifies using a broad set of information, models and judgement. It also highlights why the RBA is focused on continual improvements in its models and analytic frameworks, to incorporate both new insights and the evolving structure of the economy.

The Reserve Bank Board is attentive to the uncertainty involved in making assessments about the output gap, especially at turning points in the economy. The current level of uncertainty is more elevated than normal due to the unique set of shocks the economy has experienced over recent years. In this environment, it is prudent to regularly interrogate our assessments of the balance between demand and supply in the economy. Our overall assessment of output relative to potential output is included in Chapter 2: Economic Conditions of this Statement, and will be covered in that chapter regularly.

Endnotes

1 For details on the role of full employment in monetary policy and how it is assessed, see RBA (2024), 'Chapter 4: In Depth – Full Employment', *Statement on Monetary Policy*, February.

2 The RBA often uses the terms 'aggregate demand' and 'aggregate supply' (or simply demand and supply) to refer to actual output and potential output, respectively. In this context, 'aggregate demand' and 'aggregate supply' should not be confused with the quantity of output demanded, or the quantity of output supplied, which should be equal, aside from any changes in inventories.

3 The experience of many economies after the global financial crisis led to suggestions that demand shortfalls can have very persistent (or even permanent) effects on potential output; see, for example, Ball L (2014), 'Long-term Damage from the Great Recession in OECD Countries', *European Journal of Economics and Economic Policies: Intervention*, 11(2), pp 149–160.

4 One of the channels through which monetary policy affects economic activity is by affecting how much businesses are willing to invest (in part by affecting demand), which in turn affects the overall stock of capital in the economy. However, these effects tend to be relatively small compared with the overall stock of capital and balance out over the economic cycle.

5 Productivity is difficult to measure and estimates are volatile, so it is more informative to focus on trend productivity when forming assessments of potential output. The pandemic seems to have disrupted productivity growth for a number of years; the overall weaker rate of productivity growth during this period may result in a lower level of productivity than would have otherwise been the case.

6 The models were adjusted to take less signal from inflation outcomes between 2021 and 2023 to largely remove supply-driven inflation from measures of the output gap.

7 For further details on the RBA's forecasting models, see Cassidy N, E Rankin, M Read and C Seibold (2019), 'Explaining Low Inflation Using Models', RBA *Bulletin*, June; Kohler M (2023), 'The Why, How and What of Forecasting', Address to CEDA, Perth, 3 May.

8 See RBA, n 1.