B.33

11/2023

Monetary Policy STATEMENT

Reserve Bank of New Zealand
Te Pūtea Matua

POLICY ASSESSMENT
Monetary policy to remain restrictive

The Monetary Policy Committee today agreed to maintain the Official Cash Rate (OCR) at 5.50%.

Interest rates are restricting spending in the economy and consumer price inflation is declining, as is necessary to meet the Committee's *Remit*. However, inflation remains too high, and the Committee remains wary of ongoing inflationary pressures.

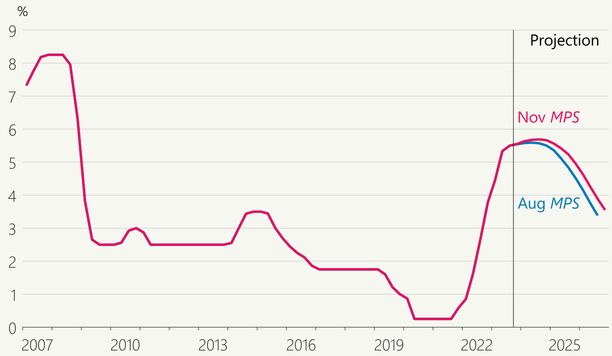
Internationally, economic growth has been stronger than was expected at the start of this year but remains below trend and is likely to slow further. This subdued growth outlook will continue to restrain New Zealand's export revenues.

In New Zealand, demand growth has eased, but by less than anticipated over the first half of 2023 in part due to strong population growth. The OCR will need to stay restrictive, so demand growth remains subdued, and inflation returns to the 1 to 3 percent target range.

Wage growth has eased from recent peaks. Demand for labour is softening, with job advertisements now below pre-COVID-19 levels. At the same time, strong inward migration is increasing the population and adding to labour supply.

While population growth has eased supply constraints, the effects on aggregate demand are becoming apparent. This is increasing the risk of inflation remaining above target.

Figure i.1
OCR
(quarterly average)



Source: RBNZ estimates.

The Committee is confident that the current level of the OCR is restricting demand. However, ongoing excess demand and inflationary pressures are of concern, given the elevated level of core inflation. If inflationary pressures were to be stronger than anticipated, the OCR would likely need to increase further.

The Monetary Policy Committee agreed that interest rates will need to remain at a restrictive level for a sustained period of time, so that consumer price inflation returns to target and to support maximum sustainable employment.

Meitaki, thanks.

Adrian Orr
Governor

Monetary Policy Framework

The Monetary Policy Committee operates and makes decisions under the monetary policy framework that comprises the following key components:

- the *Remit*;
- the *Charter*;
- the *Code of Conduct*; and
- the monetary policy strategy.

The corresponding documents to these components and additional information can be accessed on our website under the monetary policy framework.

rbnz.govt.nz

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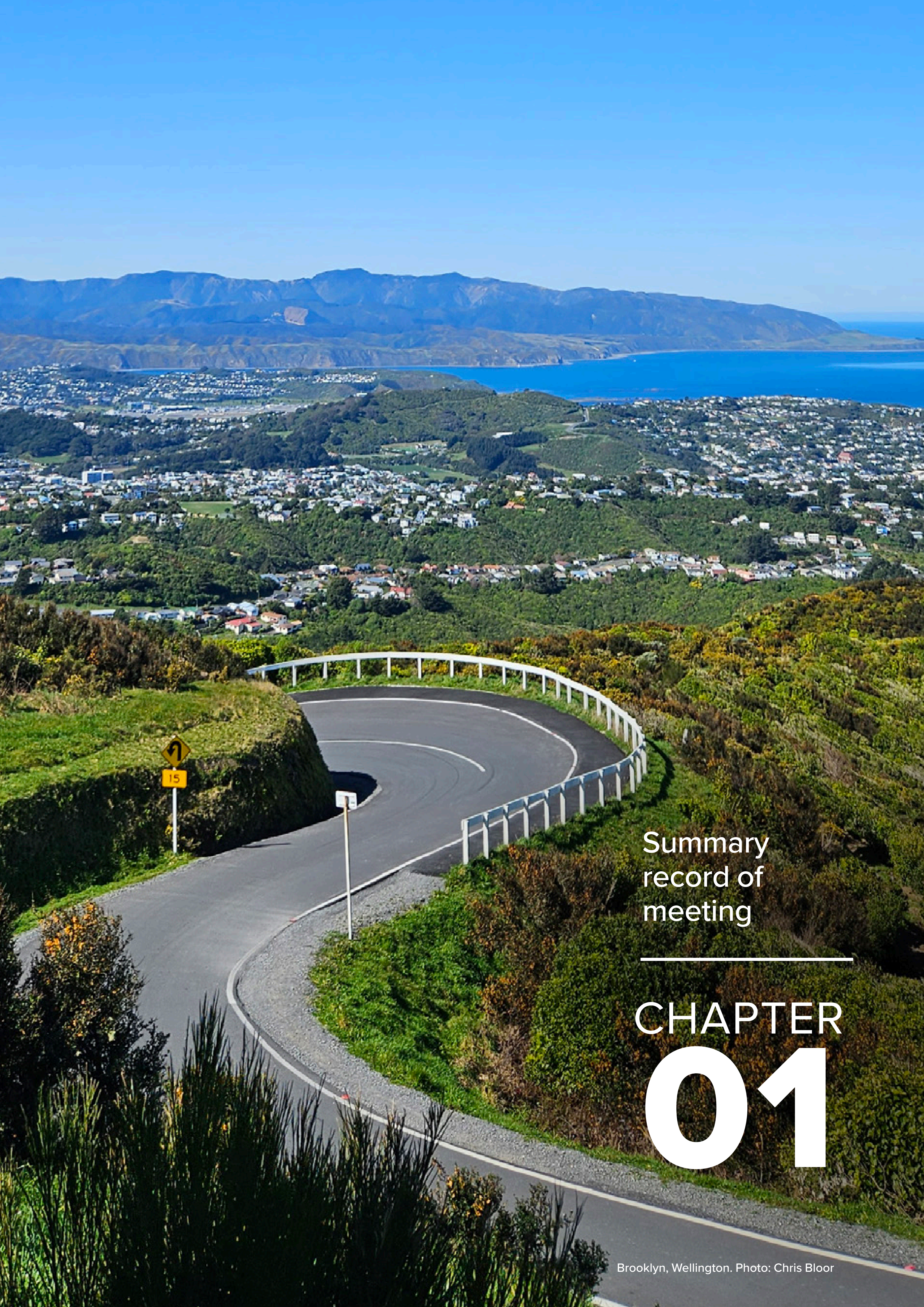
Thank you to RBNZ staff for photography in this report.
Cover image: Ben Lomond, Queenstown. Photo: Thomas Bohm

11/2023
Monetary Policy STATEMENT

Contents

The projections were finalised on 23 November 2023. The official cash rate (OCR) projection incorporates an outlook for monetary policy that is consistent with the MPC's monetary policy assessment, which was finalised on 29 November 2023.



Summary record of meeting

CHAPTER 01

Brooklyn, Wellington. Photo: Chris Bloor

CHAPTER 1
Summary record of meeting

The Monetary Policy Committee discussed recent developments in the New Zealand economy. The Committee agreed that monetary conditions are restricting spending and reducing inflationary pressure. Supply constraints in the economy continue to ease and demand growth is slowing, but to a lesser extent than expected. Inflation remains too high and inflationary pressures continue to emerge. Further slowing in spending growth is needed to reduce demand toward the economy's ability to supply goods and services, to ensure that consumer price inflation returns to its target range.

Global economic growth remains below trend as high interest rates weigh on demand. Easing global demand is placing downward pressure on New Zealand exports, and export revenues are lower than in recent years. However, global prices for some products, such as dairy, have stabilised in recent months. Members noted that to date, global growth has been stronger than was expected at the start of this year, supported by sustained strength in the US economy and a recent lift in economic activity in China. However, going forward, subdued global growth is expected to restrain demand and prices for New Zealand's exports over the medium term.

The Committee discussed international inflation trends. Globally, headline inflation continues to fall, but there are differences in both the timing and magnitude of these declines across countries. Housing rent inflation is an important source of difference in services inflation across countries, with greater upward pressure in economies experiencing high net immigration, such as New Zealand and Australia.

In discussing global financial conditions, the Committee noted that long-term interest rates for government debt have increased, largely in response to the rising volume of public debt. More recently, interest rates have decreased as financial markets anticipate the end of the phase of monetary policy tightening by major central banks. Members also noted that most major central banks have indicated that they intend to retain current restrictive policy rates for longer, and are willing to tighten further, if required.

The Committee discussed recent domestic economic developments. While growth in parts of the economy is slowing, there has been less of a decline in aggregate demand growth than expected earlier in the year. As was noted in the October *Review*, GDP growth in the second quarter of 2023 was higher than expected while growth in the first quarter was revised up. Consumer spending growth is broadly easing, but some areas of services spending remain more resilient. On an aggregate level, consumption is being supported by the strong growth in population, whereas on a per capita basis, consumption is declining.

Members noted that net immigration has been higher than previously assumed. This has increased the supply of workers into a tight labour market. However, the demand-side effects are becoming apparent. Strong population growth has contributed to an increase in housing rents. Rent increases, and any increases in construction costs in response to greater housing requirements, affect inflation directly, as rental prices and construction costs are accounted for in the consumer price index. Members noted that the outlook for residential investment was currently muted, despite the surge in population growth.

House prices have stabilised after earlier declines, with strong population growth and increased nominal disposable incomes offsetting the effect of higher debt servicing costs. House price increases affect inflationary pressures indirectly, via higher household wealth and an associated increase in consumption. Some members considered that the willingness of households to consume out of wealth may be lower given recent house price falls, higher debt servicing costs, and a softening labour market. Other members considered that there may be upside risks to house prices, and therefore consumption, given the anticipated decline in residential investment.

Annual headline inflation was lower than expected in the September 2023 quarter. This was accounted for by lower inflation for tradable goods and services. Members noted that tradable inflation can be volatile and cannot be relied upon to achieve their inflation target. Non-tradable inflation is easing only gradually and, while all measures of core inflation have declined, they are still elevated. Short-term inflation expectations have declined, and members expect this to continue as headline inflation moves lower. Some members were concerned that 2-year inflation expectations were not declining particularly quickly and that longer-term inflation expectations had also increased. Other members were less concerned as they viewed longer-term inflation expectations as still close to the target midpoint.

In discussing the labour market, members noted that the underutilisation rate and unemployment rate both increased in the September 2023 quarter. Population growth has increased labour supply, as seen in declines in surveyed measures of labour shortages. As economic activity slows, labour demand is also declining, with job advertisements falling to below pre-COVID-19 levels. Wage inflation has eased. Members noted that whilst pressures in the labour market are easing, it is still tight, and employment remains above its maximum sustainable level.

At the time of the October *Review*, members had noted updates in the *Pre-election Economic and Fiscal Update* 2023 *(PREFU)*. Specifically, while total government spending as a share of potential GDP is still forecast to decline, this was now by less than previously expected. The *PREFU* included a material increase in government investment over the medium term, linked to infrastructure requirements.

Members agreed that population growth and government investment would both likely support aggregate supply in the economy. However, they noted that in the short to medium term, demand could only sustainably grow at the economy's production potential without adding to inflationary pressure. The current context is that aggregate demand has been greater than the economy's ability to supply goods and services, creating inflationary pressure. While the economy is moving back into balance, ensuring that demand remains contained will make the task of returning inflation to target much easier.

The Committee noted that the estimate of the long-run nominal neutral OCR has increased by 25 basis points to 2.50 percent within the economic projections, consistent with the Reserve Bank's indicator suite. The long-run nominal neutral rate impacts the central economic projections but has a larger impact in the latter part of the forecast horizon and beyond. Members agreed that the current level of the OCR remains contractionary.

The Committee discussed domestic financial conditions. Credit demand remains subdued as higher interest rates and a slowing economy reduce the ability and willingness of businesses and households to borrow. Mortgage rates have continued to increase, as expected. Members noted that the average rate on outstanding mortgages is expected to increase from 5.4 percent currently to 6.4 percent by mid-2024. The share of disposable income going to debt servicing for households with a mortgage is expected to increase from 15 percent currently to 19 percent.

The Committee discussed the expected evolution of retail interest rates, given ongoing changes in bank funding. Term deposits rates and volumes have increased. Higher term deposit rates are now contributing to ongoing increases in mortgage rates. As competition for term deposits continues, the margin between mortgage rates and wholesale interest rates is expected to return to more historically normal levels. Members agreed this expectation was consistent both with their previous discussions around future changes to retail interest rates, and with assumptions in the economic projection.

The Committee discussed the balance of risks for inflation, output, and employment. Members agreed that the while the risk profile remained broadly similar to that discussed at the time of the August *Statement*, some of the short-term upside risks to activity appear to have eventuated and have therefore been incorporated in the central economic projection. In considering risks, members also specifically discussed two scenarios.

The first scenario was one of persistent domestic demand strength supported by strong population growth, with increases in rents and aggregate consumption feeding into greater inflationary pressure and higher house prices. The second scenario considered a larger global economic slowdown, with growth below trend for longer than currently anticipated. A greater slowdown in global growth would see a fall in the price of imports and further reduce goods export prices and export volumes.

Given the current high level of core inflation, members agreed that there was an asymmetry in the distribution of risks to the outlook for monetary policy across the two scenarios. A global slowdown would likely unwind the additional inflationary pressure that has recently been observed, whereas further domestic demand strength would likely necessitate additional monetary tightening. Some members noted that inflation has now been above target for some time, and that there should be a low tolerance for any increase in the time to return inflation to target.

The Committee noted that the incoming Government's policy programme will have implications for economic activity and inflation. Members agreed that this would be assessed as policies are formally incorporated into the Treasury's official forecasts.

The Committee discussed the backdrop of heightened geopolitical tension and risk of spillovers to the global economy. Members noted that whilst they remain attentive to global developments, they will respond to shocks if and when they eventuate. The Committee also discussed the outlook for China and noted that while economic data over recent months have improved, structural challenges facing the Chinese economy remain concerning for long-term growth prospects. Potential growth is slowing, partly due to demographic trends, but also due to substantial declines in productivity growth. High levels of debt, particularly in the property sector, and weak demand remain the most acute downside risks.

Members were cognisant of the likelihood of an El Niño climate pattern in coming months. They noted that the scale of potential impact is highly uncertain and depends on the timing and location of any droughts. There may be differentiated impacts for different agricultural commodities. No specific drought impacts have been incorporated in the economic projection and members agreed they would continue to closely monitor the evolution of El Niño over coming months.

The Committee agreed that in the current circumstances, there is no material trade-off between meeting their inflation and employment objectives and maintaining stability of the financial system. Members noted that slowing economic activity is not being experienced evenly across the economy. The commercial property and agricultural sectors are starting to experience challenges and may be vulnerable. For highly-indebted households, pockets of stress are likely to grow as debt servicing burdens increase.

In discussing their *Remit* objectives, the Committee noted inflation is still expected to decline to within the target band by the second half of 2024. Pressure in the labour market is easing, although employment remains above its maximum sustainable level. Members agreed that monetary policy was supportive of sustainable house prices.

In discussing the appropriate stance of monetary policy, members agreed they remain confident that monetary policy is restricting demand. Nevertheless, ongoing excess demand and inflationary pressures were of concern, given high core inflation. Members discussed the possibility of the need for increases to the OCR. Members agreed that with interest rates already restrictive, it was appropriate to wait for further data and information to observe the speed and extent of easing in capacity pressures in the economy.

The Committee agreed that interest rates will need to remain at a restrictive level for longer, to ensure annual consumer price inflation returns to the 1 to 3 percent target range and to support maximum sustainable employment. On Wednesday 29 November, the Committee reached a consensus to maintain the Official Cash Rate at 5.50 percent.

Attendees:

Reserve Bank members of MPC:

Adrian Orr, Karen Silk, Christian Hawkesby, Paul Conway

External MPC members:

Bob Buckle, Peter Harris, Caroline Saunders

Treasury Observer:

Dominick Stephens

MPC Secretary:

Kate Poskitt

Current economic assessment and monetary policy outlook

CHAPTER 02

Wellington. Photo: Karan Dasgupta

CHAPTER 2
Current economic assessment and monetary policy outlook

Key points

- The New Zealand economy expanded in the second quarter of 2023, with growth in gross domestic product (GDP) higher than expected in the August *Statement*. Along with upward revisions to the March 2023 quarter, this suggests that growth momentum in the first half of the year was stronger than anticipated. Recent data suggest that economic growth has been slowing more in the second half of 2023. Labour shortages also eased further in the September 2023 quarter. However, a more significant slowing in demand will likely be needed to bring it more in line with the economy's ability to supply goods and services, and therefore reduce inflationary pressure.
- Restrictive interest rates continue to reduce demand in the economy. Spending in parts of the economy that are sensitive to interest rates – such as durables retail spending and residential investment – has declined when adjusted for inflation. Credit demand also remains subdued across businesses and households as higher interest rates and a slowing economy weigh on their ability and willingness to borrow.
- However, developments in less interest rate sensitive parts of the economy continue to add to demand. In particular, high levels of net immigration appear to be adding slightly more upward pressure to house prices and rents. Net immigration has also coincided with stronger total household consumption, but this has been much softer on a per-capita basis. Government spending also continues to support demand, as evidenced by upward revisions to medium-term government investment in the *Pre-election Economic and Fiscal Update* (*PREFU*) 2023.
- Export revenues have declined, due to lower global commodity prices. However, global dairy prices have stabilised in recent months due to reductions in inventories and declines in expected milk supply. Slowing global growth is expected to restrain overall export demand and prices over the medium term.
- The New Zealand dollar is lower than assumed in the August *Statement*. Higher expectations for global interest rates relative to those in New Zealand have put downward pressure on the New Zealand dollar.
- Global supply-chain bottlenecks continue to free up. Surveyed global backlogs of work in manufacturing are declining, and shipping costs to New Zealand have fallen further in recent months.

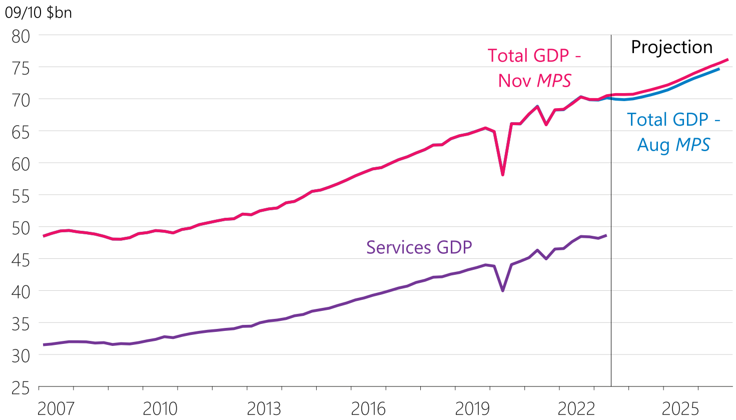
- High levels of net immigration have added to the available workforce and contributed to declines in surveyed labour shortages. However, high net immigration also adds to demand, and the overall effect on inflationary pressure is uncertain. In recent months, high net immigration appears to have put more pressure on rental price growth.
- Overall, current inflation remains too high, and above the Monetary Policy Committee's (MPC) 1 to 3 percent target band. Inflationary pressures have eased due to declining demand and increasing supply. Annual headline inflation was lower than expected in the September 2023 quarter. However, much of the fall was accounted for by lower inflation in tradable goods and services, which are more influenced by global factors. Domestically generated inflation is easing more gradually. While all measures of core inflation have declined, they remain elevated.
- Average inflation expectations for businesses and households have fallen at the one- and two-year horizons as headline inflation has continued to decline. We expect that shorter-term expectations will continue to fall relatively quickly.
- A tight labour market continues to add to inflationary pressure, but to a lesser extent. While we assess that employment remains above its maximum sustainable level, labour shortages have started to ease more materially in the second half of 2023. Labour demand appears to be declining, with online job ads now below pre-COVID-19 levels. The unemployment rate has continued to increase, rising to 3.9 percent in the September 2023 quarter and above the record lows seen in late 2021 and early 2022. The underutilisation rate also increased further. The participation rate eased slightly from record highs amidst a reduction in employment. Consequently, wage inflation has started to ease gradually, although it remains elevated.
- Restrictive interest rates are needed to further restrain demand relative to the economy's ability to supply goods and services sustainably. Weaker demand relative to supply reduces inflationary pressure over the medium term. Subdued economic growth is expected over the coming year.
- While there is significant uncertainty about its effect, high net immigration may lead to a stronger rebound in the housing market and spending via the wealth effect, which would provide some offset to the effects of higher interest rates. With a new Government settling in, the fiscal outlook is also highly uncertain.
- Notwithstanding pervasive uncertainty, relative to the August *Statement*, factors adding to inflationary pressure include higher starting-point growth momentum, a stronger recovery in house prices, increases in projected government investment, higher global interest rates and an upward revision to the neutral OCR. These are partially offset by lower import and export prices. On balance, depending on how the data evolve over coming months, there is some chance that the OCR may need to increase from its current level. In any case, it is likely that the OCR will remain contractionary for longer than assumed in the August *Statement* for the MPC to meet its inflation and employment objectives.

Current economic assessment

Demand is easing gradually

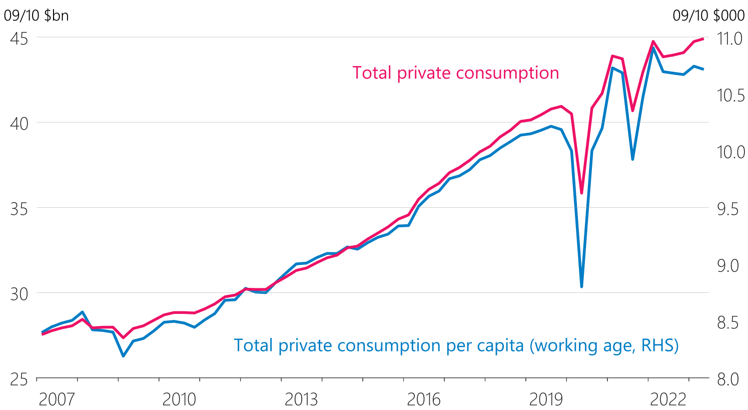
Economic activity in New Zealand, as measured by the production measure of GDP, increased by 0.9 percent in the June 2023 quarter (figure 2.1). This was higher than expected in the August *Statement*. This growth was accounted for by strength in manufacturing, business services and public administration, partially offset by a decline in primary industries and wholesale and retail trade.

Figure 2.1
Production GDP
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

Figure 2.2
Total private consumption and private consumption per capita
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

On the expenditure GDP side, growth was accounted for by household consumption and government spending. High population growth from net immigration has been an important driver of strong near-term aggregate household consumption expenditure. However, per-person spending slowed in the first half of 2023, consistent with tighter monetary conditions since late 2021 (figure 2.2). Exports also increased, partially due to a run-down of inventories as agricultural production was reduced by damage sustained in the North Island severe weather events of early 2023.

Higher interest rates and the higher cost of living have contributed to slower domestic demand growth in recent quarters. Since the second half of 2022, lower house prices and housing activity have also been contributing to lower domestic demand. Further, real government consumption has decreased slightly over the last year as COVID-19-related spending has been largely phased out. Lower export volumes overall since the second half of 2021 are consistent with moderating global demand growth over this period.

Despite the easing in domestic spending, demand continues to exceed the economy's ability to supply goods and services sustainably. In addition, the easing in demand has been more gradual than anticipated. The output gap – an estimate of the extent to which demand is matched by the level of production that the economy can sustainably supply – has been highly positive over the last two years, contributing to high inflation.

As higher interest rates have reduced domestic demand, the output gap is estimated to have declined significantly since its peak in 2022 and is expected to become negative by the end of 2023. Much higher-than-expected net immigration over the past year has been associated with a fast narrowing of the output gap. High net immigration has alleviated acute labour shortages caused by tight border restrictions during the COVID-19 period. However, there are signs that a stronger demand impulse from high population growth is emerging, contributing to an upward revision of our outlook for capacity pressure (figure 2.3).

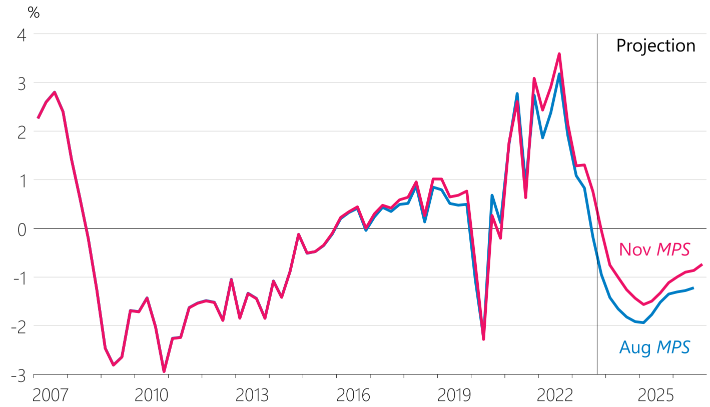
High-frequency activity indicators suggest GDP growth eased over the September 2023 quarter, but remained positive, with mixed performance across industries (figure 2.4). In particular, merchandise trade data suggest goods exports have fallen since mid-2023, led by weaker dairy exports to China. By contrast, the high level of visitor arrivals – after accounting for seasonal patterns – suggests a continued recovery in service exports.

Overall, we expect low economic growth over the coming year as additional spending from high net immigration and a moderate housing market recovery are partially offset by ongoing tight domestic monetary conditions and slowing global demand for our goods exports.

Figure 2.3

Output gap

(share of potential GDP, seasonally adjusted)

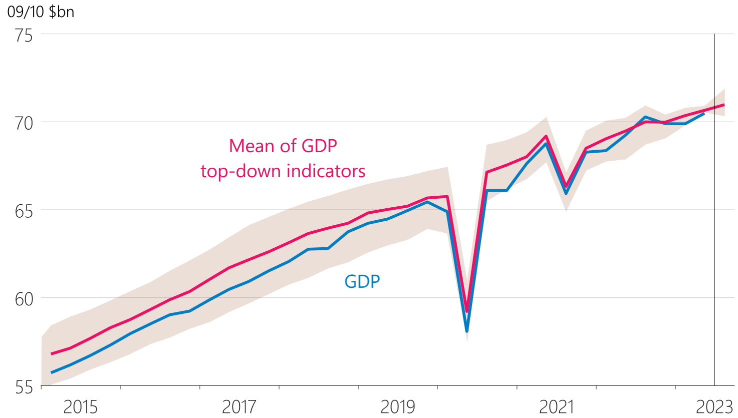


Source: Stats NZ, RBNZ estimates.

Figure 2.4

Top-down indicators for production GDP

(seasonally adjusted)



Source: ANZ, BusinessNZ, NZIER, Stats NZ, RBNZ estimates.

Note: The shaded area indicates the range between the maximum and minimum values of the GDP top-down and nowcasting indicators. The GDP top-down indicators comprise the Performance of Services Index (activity/sales), Performance of Manufacturing Index (production), Quarterly Survey of Business Opinion (domestic trading activity, past quarter), New Zealand activity index, ANZ Truckometer (heavy traffic), ANZ Business Opinion (capacity utilisation), QES (total paid hours). The GDP top-down indicators were created through linear regressions for each indicator with GDP in quarterly or annual percentage changes. In addition, a GDP nowcasting indicator is included that is based on a dynamic factor model and uses Kalman filtering techniques. This nowcasting indicator is based on the Nowcasting Report from the Federal Reserve Bank of New York. The fitted values were transformed back into GDP levels. To avoid statistical bias, for most top-down indicators the nationwide COVID-19 lockdowns in 2020 and 2021 were captured through dummy variables in the regressions, as these indicators were unlikely to accurately capture the impact of lockdowns on GDP.

Interest rate sensitive spending is ebbing, but supported by strong population growth

The influence of higher interest rates has recently been most visible in retail sales and construction. Higher mortgage rates have increased debt servicing costs for households, reducing the amount of household income available for other spending. Spending on large discretionary items, such as durables, is well below its peak in early 2022. Higher interest rates have also made borrowing for housing more expensive. In conjunction with lower house prices since late 2021 and ongoing high construction costs, this has made housing development less attractive. New residential building consents have fallen over the past year (figure 2.5), indicating a substantial slowdown in residential building activity ahead.

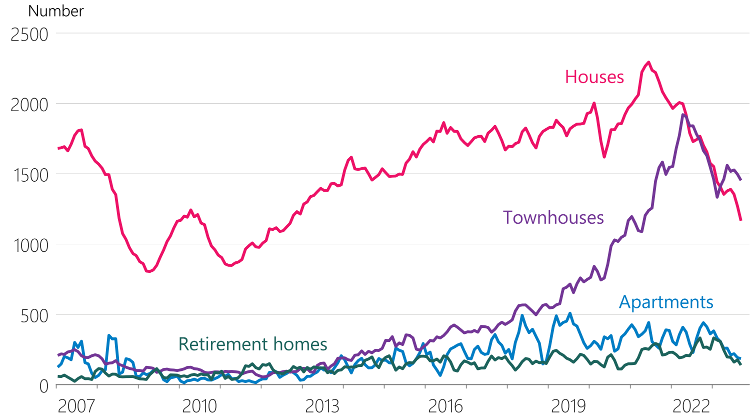
The impact of recent increases in mortgage rates is yet to be fully reflected in aggregate households' cash flows. The average mortgage rate paid by existing borrowers is expected to increase by approximately one percentage point over the coming 12 months, as borrowers roll onto higher interest rates. New mortgage lending rates have also continued to increase in recent quarters, despite a steady OCR (see chapter 5).

Although activity in interest rate sensitive parts of the economy is slowing, activity in other parts of the economy is mixed. In part, this is driven by strong population growth via net immigration, and the ongoing tourism recovery since borders reopened in mid-2022. New orders in service industries have stabilised recently, after falling along with goods demand in recent quarters (figure 2.6). Mixed signals are also apparent in diverging employment intentions by industry, with higher services and manufacturing employment intentions contrasting with ongoing weakness in the construction sector in particular (figure 2.7).

Figure 2.5

Residential consents by type

(3-month moving average, seasonally adjusted)

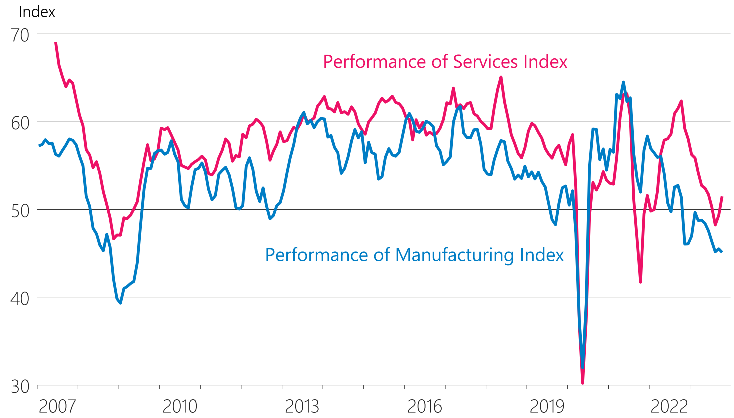


Source: Stats NZ.

Figure 2.6

Surveyed new orders

(3-month moving average, seasonally adjusted)

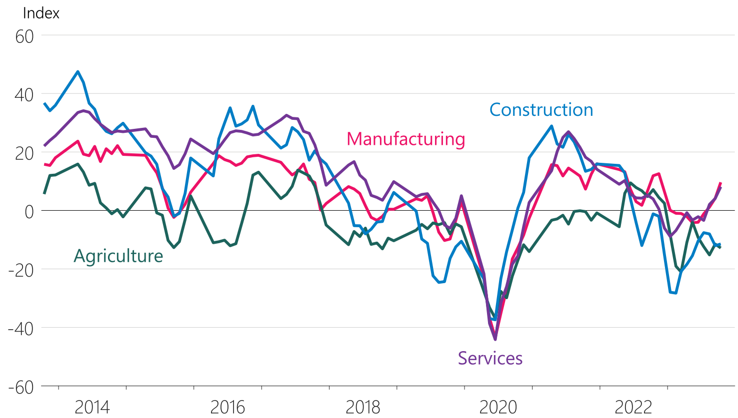


Source: BusinessNZ.

Figure 2.7

Surveyed employment intentions by industry

(3-month moving average, seasonally adjusted)



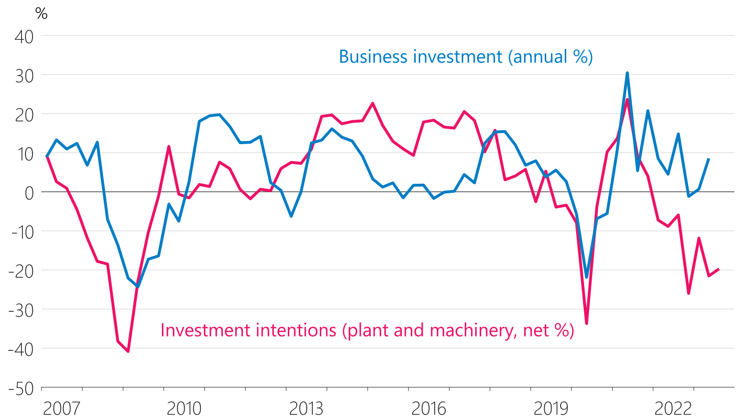
Source: ANZ.

Overall, lower demand also reflects slower rates of business investment growth, although investment has generally held up more than signalled by intentions in recent quarters (figure 2.8). This slowdown has been particularly acute in agriculture. Farmers have come under pressure from weakening global demand, as well as high cost inflation and interest rates. Weaker agriculture investment can already be seen in weak credit growth to the agriculture sector. The El Niño weather pattern may yet result in dry growing conditions over the next year, putting further pressure on farmers. Other sectors have subdued but still positive investment intentions, including manufacturing and service industries.

Figure 2.8

Investment intentions – next 12 months, and business investment

(seasonally adjusted)



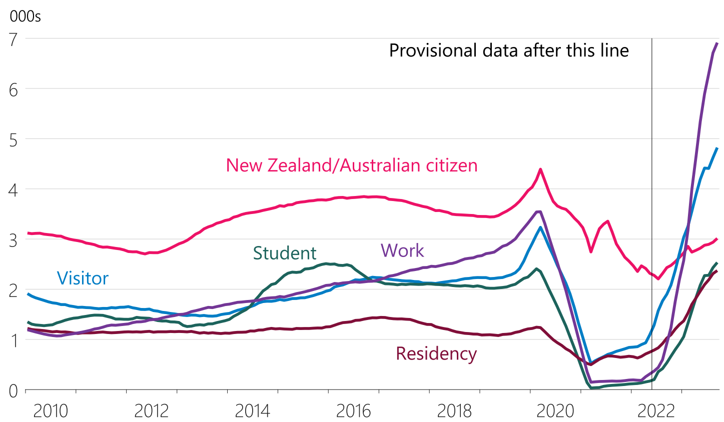
Source: Stats NZ, NZIER, RBNZ estimates.

Note: 'Net %' refers to net percentage of respondents planning to increase or decrease investment in the next 12 months compared to the previous 12 months.

Figure 2.9

Migrant arrivals by visa type

(12-month moving average, seasonally adjusted)



Source: Stats NZ.

Note: Arrivals from March 2020 to December 2022 are not seasonally adjusted, because border restrictions and reopening disrupted regular seasonal patterns. Seasonal adjustment was resumed from January 2023.

Factors less sensitive to interest rates are adding to demand

Several factors that are less sensitive to higher interest rates continue to add to demand and inflationary pressure, with some of these showing early signs of being stronger than has been assumed over recent quarters.

International visitor numbers have increased in the second half of 2023, after adjusting for seasonal patterns, amidst the ongoing tourism recovery since the border reopened. However, numbers are yet to return to pre-COVID-19 levels. The FIFA Women's World Cup in the September 2023 quarter has helped reinforce this ongoing recovery in the near term. Strong net immigration has been associated with some easing in acute labour constraints, although some shortages persist. International flight capacity has also recovered substantially, although is still below pre-COVID-19 levels.

Net immigration increased substantially following the border reopening in mid-2022, reaching historic highs in early 2023. A substantial net outflow of New Zealand citizens has been more than offset by a greater net inflow of non-citizens, primarily on work visas. In recent months, the rate of inflow has decreased, but remains high relative to history. Current high net immigration is mainly the result of acute labour shortages that built up over the COVID-19 period, when GDP growth was strong but tight border restrictions limited access to labour from overseas. It may also reflect pent-up demand to migrate to New Zealand and an easing in immigration rules for some jobs in sectors with acute labour shortages, given the particularly strong increase in work visa arrivals recently (figure 2.9).

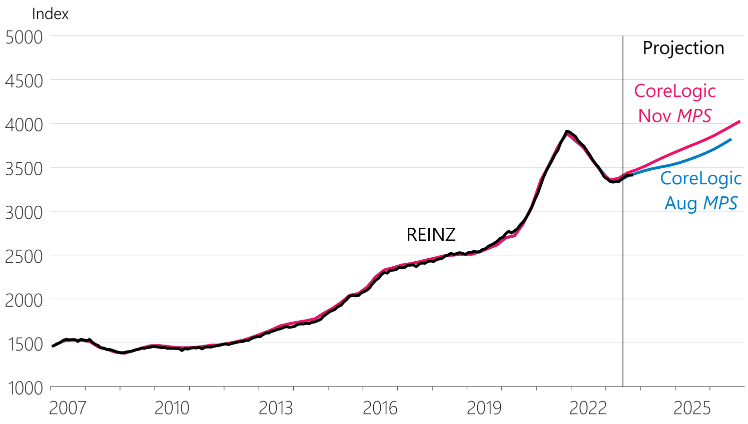
Ongoing high levels of net immigration have coincided with higher house prices and rents. High net immigration was initially more clearly associated with an easing in supply constraints in the labour market. The outlook for house prices has been revised higher over the past year, as the trough in prices has been reached earlier and the subsequent recovery looks stronger than initially assumed (figure 2.10). However, the outlook for house prices is highly uncertain. Strong population growth is also underpinning aggregate domestic spending levels, even as spending per household has started to decrease (figure 2.2).

The outlook for fiscal policy is uncertain, as the specific nature of policy changes that may be implemented by the incoming Government is currently unknown. However, the central projection assumes that government consumption and investment evolve as outlined in *PREFU* 2023. Government spending is assumed to decline as a share of potential GDP over coming years but remain above levels seen immediately prior to the COVID-19 pandemic (figure 2.11). Government consumption is expected to remain relatively steady in real terms, while the rest of the economy grows. By contrast, real government investment is expected to continue to grow strongly, underpinned by activity in civil construction and related industries for an extended period. This impact will be spread out over several years, with infrastructure repairs following the severe weather events in the North Island earlier this year assumed to take a long time.

New Zealand's goods export growth is slowing

New Zealand's exports have increased from their pandemic lows but are not expected to return to pre-COVID-19 levels in real terms until late 2024. Exports of services have increased strongly with the recovery in international visitors since the border reopened. By contrast, real goods export levels have been comparatively steady since the beginning of the pandemic (figure 2.12).

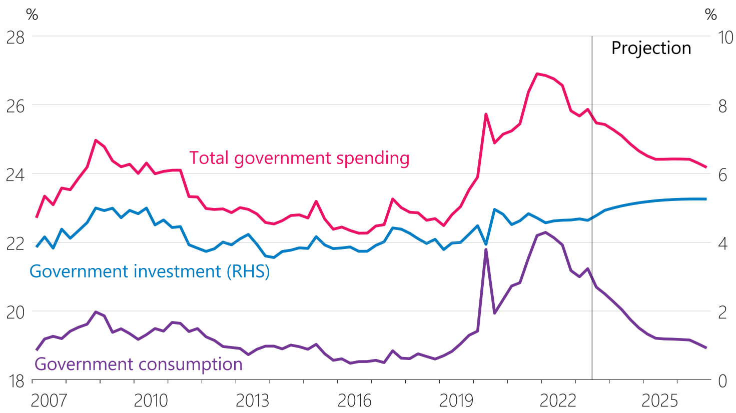
Figure 2.10
House prices
(nominal, seasonally adjusted)



Source: CoreLogic, REINZ, RBNZ estimates.

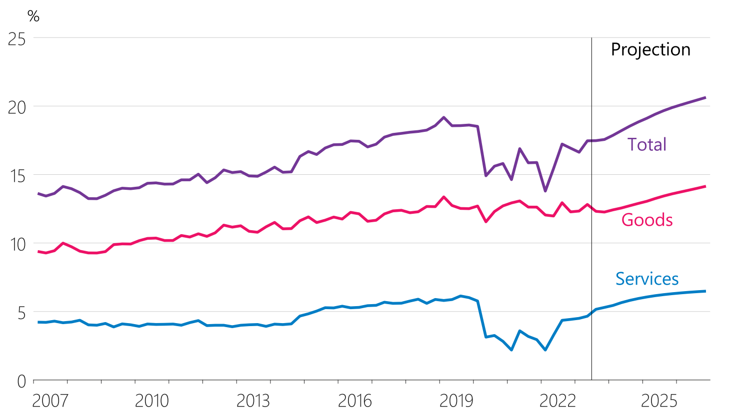
Note: The REINZ house price index is indexed to the CoreLogic house price index in the March 2007 quarter.

Figure 2.11
Government spending
(share of potential GDP)



Source: Stats NZ, Treasury, RBNZ estimates.

Figure 2.12
Exports
(share of potential GDP)



Source: Stats NZ, RBNZ estimates.

In early 2023, goods exports were lower, partly because of storms disrupting farms, orchards and ports, and labour shortages affecting New Zealand's ability to produce commodity exports. However, growth in global demand for our goods exports has been easing. This has been reflected in declines in a variety of New Zealand's commodity export prices (figure 2.13). Dairy prices have stabilised in recent weeks, likely due to concerns about supply disruptions associated with the emerging El Niño weather pattern, and as inventories in some key export markets such as China have been run down. Economic growth is expected to remain below trend for most of our key trading partners for at least the next year (see chapter 3).

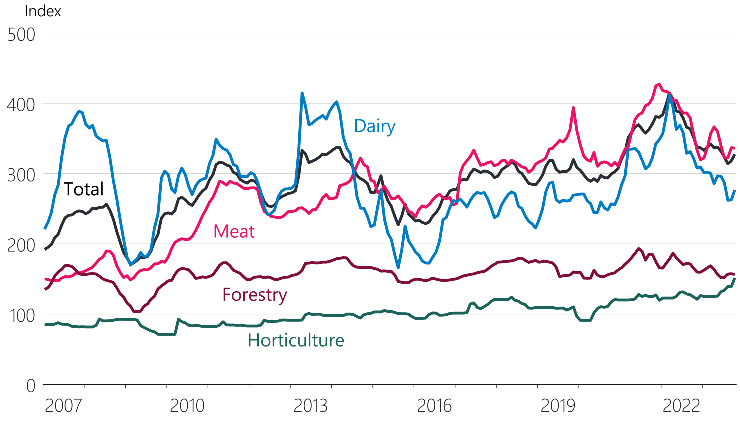
The New Zealand dollar trade-weighted index (TWI) is currently slightly below the level assumed in the August *Statement* (figure 2.14). Downward influences include a narrower differential between interest rates here and abroad, and ongoing lower key commodity export prices (see chapter 3).

Supply constraints have continued to ease

Global supply-chain bottlenecks continue to ease. Surveyed global backlogs of work in manufacturing are declining, and shipping costs to New Zealand have fallen further in recent months. These price falls have been widespread across air and sea freight as international capacity has been rebuilt and connections have been restored (figure 2.15).

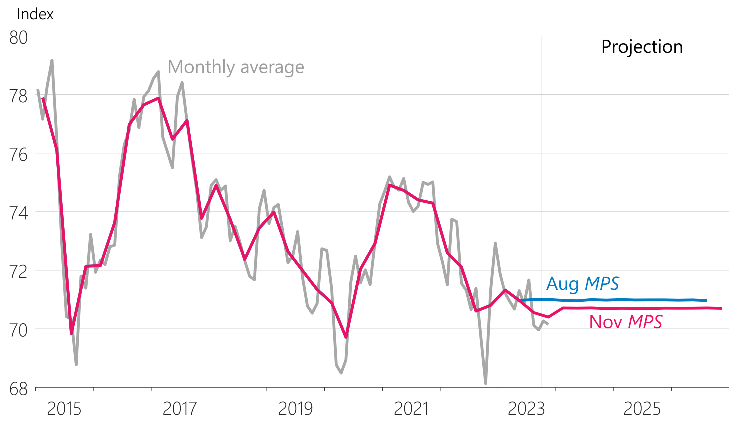
Global commodity input prices – particularly oil prices – have held relatively steady in recent months after falling sharply from peaks in 2022. However, there is an ongoing risk that the Israel-Hamas war spills over into wider regional conflict, which would likely push oil prices higher. Previous OPEC supply cuts and Russia's war against Ukraine also continue to support oil prices via lower supply. More recently, slowing global oil demand, and increased production from some non-OPEC countries, have helped offset some of these supply concerns.

Figure 2.13
Commodity prices
(nominal)



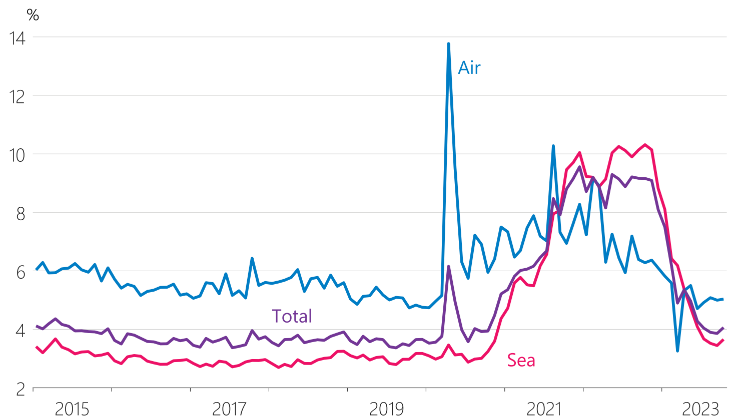
Source: ANZ.

Figure 2.14
New Zealand dollar TWI
(nominal)



Source: RBNZ estimates.

Figure 2.15
Shipping costs for consumer goods imports
(share of import value for duty)



Source: Stats NZ, RBNZ estimates.

Note: These series are estimated by taking the value of consumer merchandise imports including freight and insurance costs (CIF) and subtracting the reported value for duty (VFD), which excludes these costs. They are expressed as a percentage of the VFD figure.

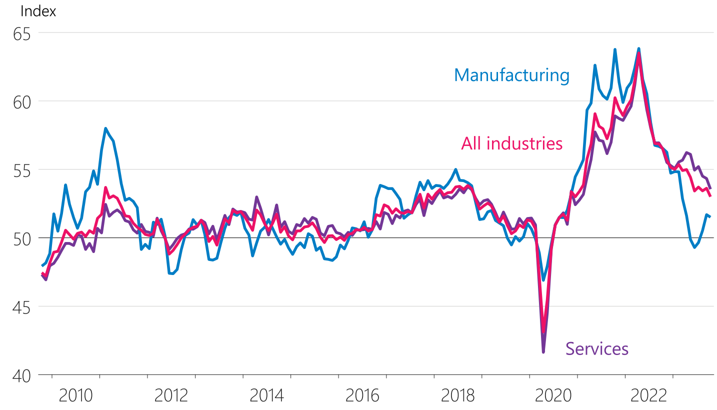
Global output prices have continued to decline from recent peaks, although the pace of normalisation has been relatively slow in service industries compared to manufacturing (figure 2.16). Strong goods demand in the early stages of the COVID-19 pandemic, combined with high input cost inflation and supply-chain bottlenecks, saw an initial surge in prices of manufactured goods in 2020 and 2021. This started to unwind in mid-2022 as global consumer spending switched back to services, global supply chains began to normalise, and commodity input prices began to drop. In contrast, services inflation has remained strong compared to pre-COVID-19 rates. Price rises in services are contributing to elevated ongoing overall inflationary pressure in many countries.

Domestically, labour shortages have eased according to surveyed difficulties finding labour, although some shortages of specialised skills persist (figure 2.17). This is supported by our recent discussions with businesses and the Quarterly Survey of Business Opinion (QSBO), which suggest that although the overall choice of job candidates has improved, pockets of shortages remain, especially in some specialist areas. The aggregate number of job vacancies has also declined and is now below pre-COVID-19 levels.

Additional labour supply is coming from exceptionally strong net immigration. In addition, a relatively high share of the population is participating in the labour force. This share dropped slightly to 72 percent in the September 2023 quarter as employment declined, but remains well above the 10-year average of just over 70 percent.

Figure 2.16

Global Purchasing Managers' Index – output prices



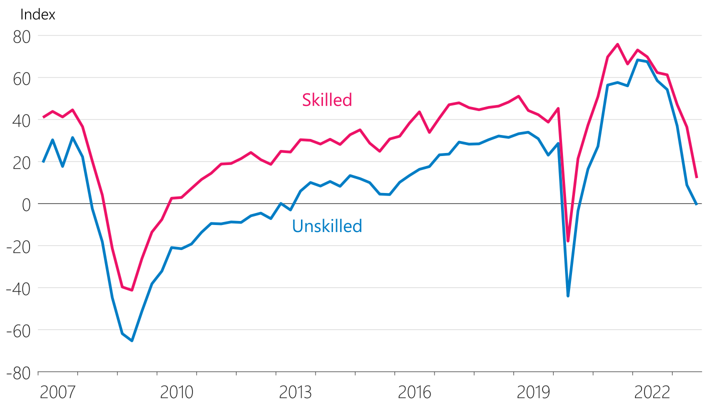
Source: JP Morgan.

Note: A level above 50 indicates an increase in prices, while a number below 50 indicates a decrease.

Figure 2.17

QSBO difficulty in finding labour

(seasonally adjusted)



Source: NZIER.

Headline inflation is easing, but domestic pressures persist

Inflation remains too high and well above the MPC's 1 to 3 percent target band. However, inflationary pressures in the economy have continued to reduce due to easing demand growth and improved supply. Annual headline inflation declined by more than expected to 5.6 percent in the September 2023 quarter. Much of this decline was accounted for by lower-than-expected food prices. Non-tradables inflation continued to ease gradually as expected in the third quarter of 2023, reflecting persistence in services inflation as consumer spending has shifted from goods to services over the past year (figure 2.18).

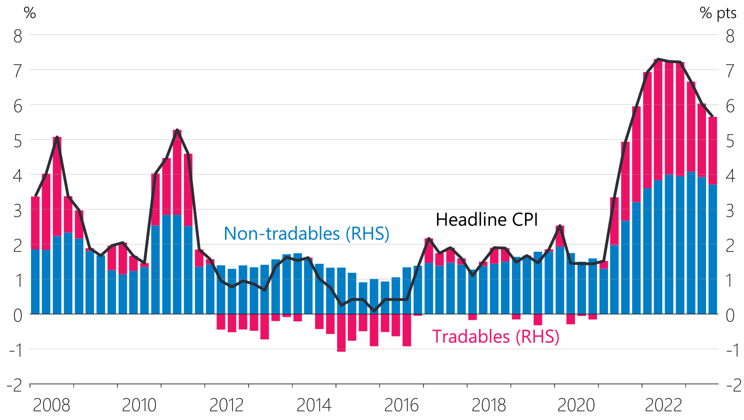
Annual tradables inflation fell from 5.2 to 4.7 percent in the September 2023 quarter, significantly below its peak of 8.7 percent in 2022. Food prices in particular fell by more than expected in the September 2023 quarter, led by fruit and vegetables. This may partly reflect a delayed pass-through of lower global agricultural commodity prices over the past year. This was partially offset by a large increase in transport prices, caused by OPEC and Russian oil production cuts.

Annual non-tradables inflation – which measures price changes for goods and services that are less exposed to international competition – eased more slowly from 6.6 to 6.3 percent in the September 2023 quarter. Resilience in non-tradables inflation reflects ongoing capacity constraints, even as demand moderates, including a degree of residual labour market tightness. High net immigration is also coinciding with recent increases in rents. Annual construction price inflation remains elevated but is easing as residential investment has started to slow since late 2022.

Figure 2.18

Contributions to CPI inflation

(annual)

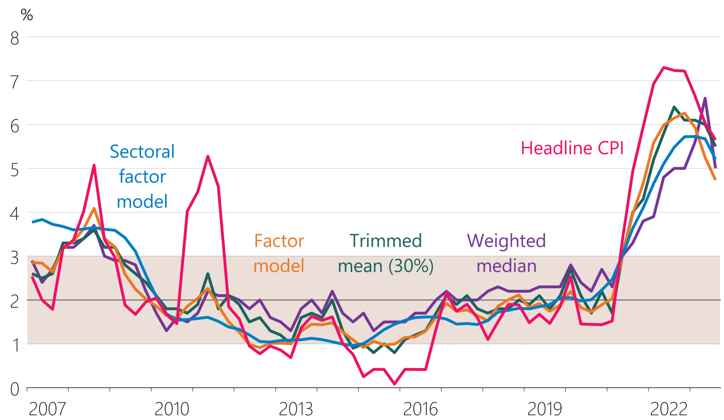


Source: Stats NZ, RBNZ estimates.

Figure 2.19

Headline and core inflation measures

(annual)



Source: Stats NZ, RBNZ estimates.

Note: The shaded area represents the MPC's 1 to 3 percent target range for inflation over the medium term.

While headline inflation decreased more than expected in the September 2023 quarter, it remains too high. In addition, most measures of 'core' inflation have remained elevated, albeit below recent peaks (figure 2.19). Elevated core inflation indicates that inflation will take some time to return to the mid-point of the MPC's 1 to 3 percent target range.

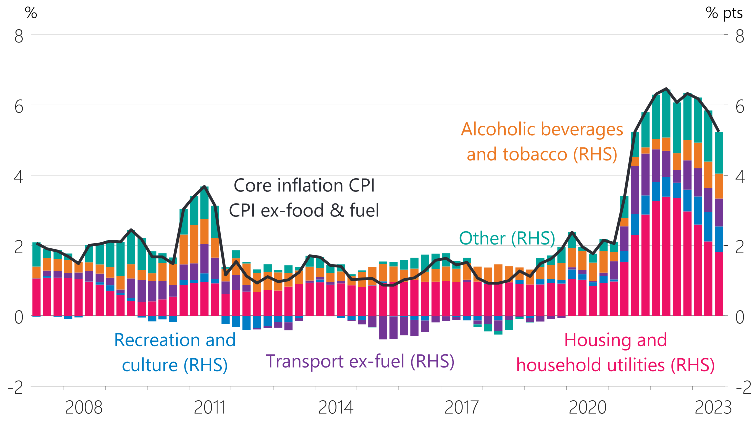
Within the ex-food and fuel measure of core inflation, a wider range of components have been contributing to high inflation in recent years (figure 2.20). In annual terms, housing-related costs continue to account for the largest share of sustained inflationary pressure. But this factor has increasingly been reinforced by price increases in transport, recreation and culture, and household contents and services. Relatively broad-based inflationary pressure is consistent with some ongoing tightness in the labour market and still elevated inflation expectations.

Following the recent decline in headline CPI inflation, household and business expectations for inflation one year ahead have continued to fall (figure 2.21). At the two-year-ahead horizon, inflation expectations have remained at elevated levels. However, expectations for inflation five and ten years ahead have edged higher in recent data, posing some upside risk to the inflation outlook.

Figure 2.20

Core inflation ex-food and fuel by group

(annual)

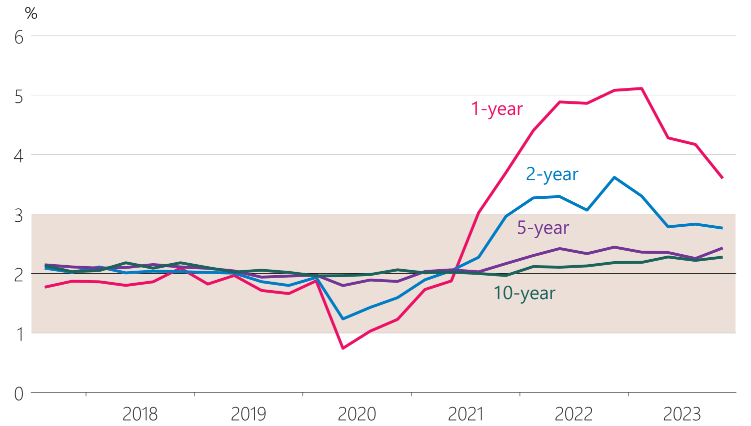


Source: Stats NZ, RBNZ estimates.

Figure 2.21

Inflation expectations

(annual, years ahead)



Source: *RBNZ Survey of Expectations* (*Business*).

Note: The shaded area represents the MPC's 1 to 3 percent target range for annual CPI inflation over the medium term.

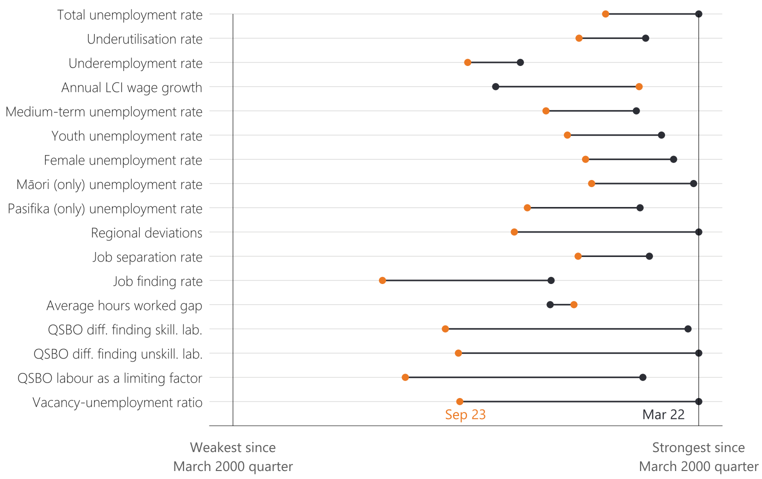
A tight labour market continues to support inflationary pressure, but to a diminishing extent

Inflationary pressure from the labour market continues to ease, although some labour market stretch remains. A variety of lagging indicators from the September 2023 quarter suggest that the labour market remains strong overall, but has started to ease relative to early last year when the labour market was particularly tight (figure 2.22). The unemployment rate increased from 3.6 percent to 3.9 percent in the September 2023 quarter (figure 2.23). Broader measures of labour utilisation have also eased further, such as an increase in the underutilisation rate.

More contemporaneous and forward-looking business surveys of conditions, such as the difficulty finding labour in the QSBO, also suggest that labour shortages have begun to ease significantly. This has coincided with the recent spike in net immigration, underpinned by a large increase in work visas. The increase in work visas coincides with streamlined processing of visas for some sectors with acute shortages. Domestic labour supply has also been supported by ongoing high levels of participation. Labour market participation and employment as a share of the working-age population both reached new record highs in mid-2023, although they declined slightly in the September 2023 quarter. Forward-looking indicators of the labour market suggest further easing is likely at the end of 2023, although demand for labour is mixed across industries.

Figure 2.22

Maximum sustainable employment (MSE) indicator suite



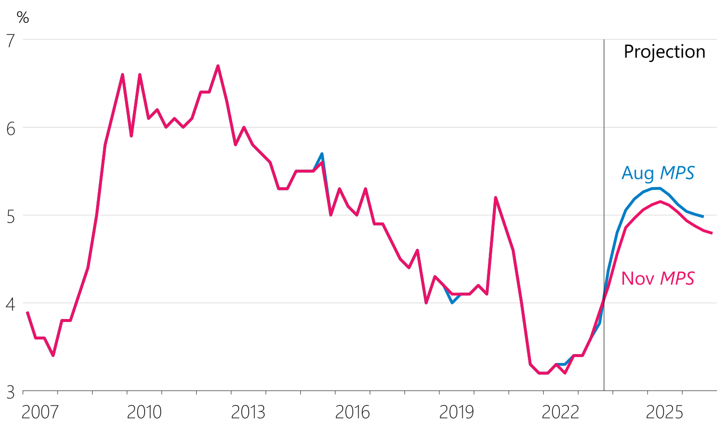
Source: NZIER, Stats NZ, MBIE, ANZ, RBNZ estimates.

Note: The Reserve Bank uses a range of indicators when assessing MSE, consistent with clause 2.1b of the *Remit*. The vertical lines on the left-hand and right-hand sides represent the weakest and strongest data outcomes since 2000, respectively. For example, a lower unemployment rate is considered to be stronger. An orange dot to the left of a black dot means that the latest data outcome was weaker than in the March 2022 quarter, when the labour market was particularly tight.

Figure 2.23

Unemployment rate

(unemployed people as a share of the labour force, seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

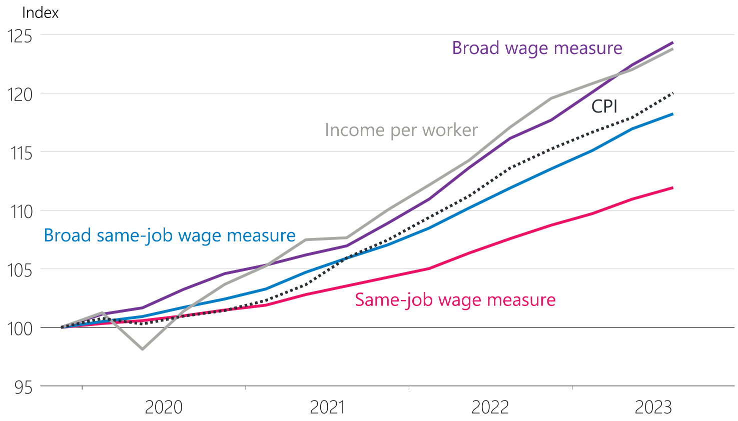
Inflation-adjusted same-job wages – the real unit cost of labour most directly relevant for inflationary pressure after adjusting for productivity – continued to increase below CPI inflation in the September 2023 quarter. However, broader wage and income measures are better indicators of growth in household income, and these grew at a faster pace than CPI inflation, continuing a trend from the past two years (figure 2.24).[1] Very high employment, strong household income growth and accumulated savings continue to put upward pressure on household spending, and inflationary pressure, in the near term.

Restrictive interest rates are required to return inflation to 2 percent

Restrictive interest rates are required to further slow demand relative to the economy's ability to supply goods and services sustainably. Lower demand will result in less pressure on available labour and capital resources in the economy. This will help reduce pressure on prices, leading to lower domestic inflation. Slower global growth is also expected to contribute to falling inflationary pressure through declining import price inflation and lower demand for our goods exports. Overall, we expect slow growth in GDP until at least the end of 2024.

Labour market tightness is expected to decrease further over coming quarters, reducing pressure on wages. Easing labour market tightness is assumed to reflect slow growth in economic activity over the coming year and further growth in labour supply. One measure of labour market slack – the unemployment rate – is expected to increase from currently low levels. Keeping the unemployment rate near current levels without experiencing unsustainably high wage and inflation pressures would require structural changes in the labour market that are beyond the control of the Reserve Bank.

Figure 2.24
Wage measures and headline CPI
(index=100 in Q4 2019)



Source: Stats NZ, RBNZ estimates.

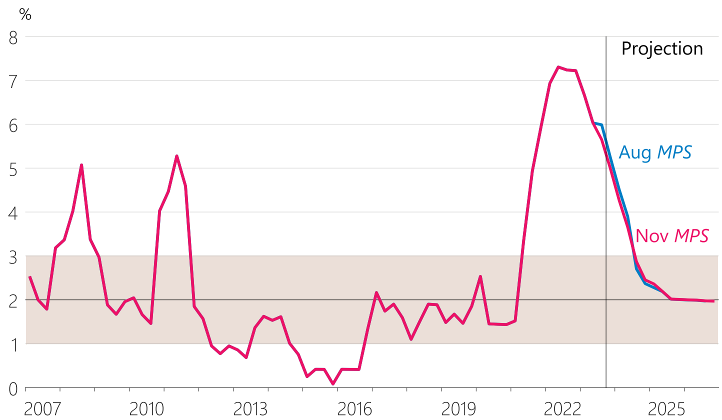
Note: Same-job wage measure: The adjusted labour cost index (LCI) measures wage inflation for a fixed quantity and quality of labour.

Broad same-job wage measure: The unadjusted LCI measures the same as adjusted LCI but includes any wage changes due to quality changes within an occupation (as reported by employers).

Broad wage measure: The Quarterly Enterprise Survey (QES) average hourly earnings measure the average hourly earnings across the economy. It is affected by opportunities that arise in a tight labour market, eg from promotions or shifts from low-paying industries to high-paying industries.

Income per worker measure: The QES total gross earnings per filled job measures the total income per job. In addition to the influence of the above, the QES income measure also takes into account employees working extra hours.

Figure 2.25
CPI inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Note: The shaded area represents the MPC's 1 to 3 percent target range for annual CPI inflation over the medium term.

Slower demand growth in New Zealand and overseas is expected to lead to declines in non-tradables and tradables inflation over the medium term. Annual headline CPI inflation is assumed to return to within the 1 to 3 percent target range in the second half of 2024, and to 2 percent by the second half of 2025 (figure 2.25).

1 For more information on real wages see chapter 4.2 in the November 2022 *Statement*.

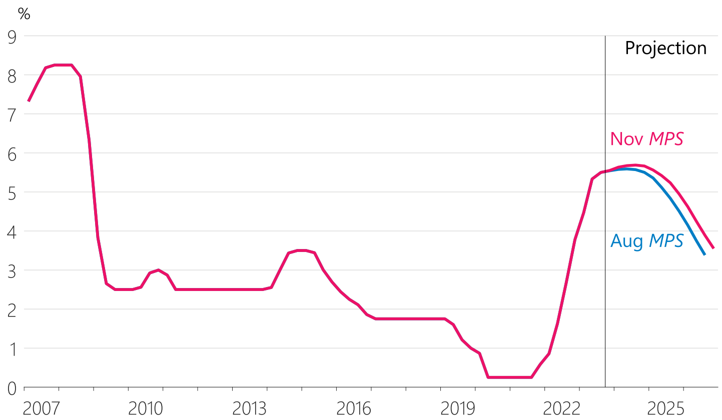
Monetary policy outlook

The outlook for inflationary pressure is highly uncertain. However, it appears that inflationary pressures are higher than in the August *Statement*, even as employment is easing broadly as expected. Capacity pressures have started to ease, with supply increasing and spending by households and firms reducing from post-COVID-19 peaks. However, capacity pressures are assumed to decline by less than in the August *Statement* over the projection, supported by strong net immigration, a higher outlook for house prices, and stronger government investment over the medium term. World interest rates have also increased, placing downward pressure on the New Zealand dollar exchange rate and, all else equal, boosting inflationary pressure within the economy. As discussed below and in chapter 6, the nominal neutral OCR has also been revised higher. These factors more than offset a lower outlook for export and import prices.

We have revised our assumption of the long-run nominal neutral OCR in the current projections from 2.25 percent up to 2.5 percent from Q4 2023 onwards. The neutral OCR is the rate that, on average over time, would be consistent with no over- or under-utilisation of resources and stable inflation (see chapter 6). The OCR remains significantly contractionary at its current level based on this revised assumption. Taken on its own, the upward revision to the neutral OCR would create slightly more upward pressure on the OCR over time.

Conditional on our central economic outlook, it is assumed that the OCR will need to follow a higher path than assumed in the August *Statement* in order for the MPC to meet its inflation and employment objectives (figure 2.26).

Figure 2.26
OCR
(quarterly average)



Source: RBNZ estimates.

Global developments and outlook

CHAPTER 03

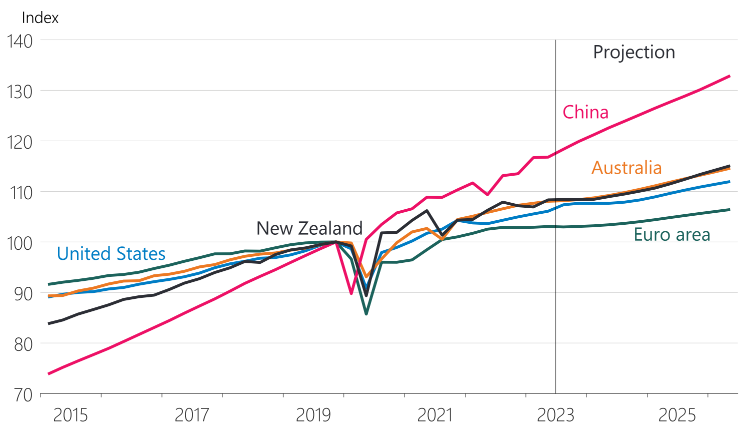
Mount Aspiring National Park. Photo: Kate Poskitt

CHAPTER 3
Global developments and outlook

Global economic growth remains below its longer-term trend. While growth has been stronger than economic forecasters predicted at the start of 2023, it is expected to slow further in 2024. This is particularly so in developed economies as higher interest rates reduce demand.

Economic growth in the US exceeded expectations this year, despite higher interest rates and a tightening in credit conditions following the period of banking stress earlier in 2023. Growth has slowed more significantly in Europe, as household consumption has weakened due to high energy prices and tighter monetary policy. Economic growth in China has recovered slightly following a weak period in the middle of the year.

Figure 3.1
Key trading partner GDP forecasts
(index=100 in Q4 2019)



Source: Consensus Economics, Haver Analytics, RBNZ estimates.

Note: GDP forecasts are based on Consensus Economics estimates, except New Zealand's which is based on our current projection.

Global headline inflation has continued to decline in recent months, although core inflation has declined more gradually across economies. Labour markets in developed economies remain tight, with relatively low unemployment, but worker shortages are showing signs of easing in some regions.

Long-term interest rates have increased since the August *Statement*, contributing to steeper sovereign yield curves. Despite higher interest rates, global equity prices have been fairly robust. Several major central banks have kept policy rates on hold but continue to express willingness to tighten further, should it be required. Financial market pricing for policy rates suggests that market participants expect little or no further tightening by most major central banks, and that policy rates will begin to decline from around the middle of 2024.

Global economic growth has been resilient

Global economic growth remained resilient in the September 2023 quarter. New Zealand's trading partners' GDP is expected to grow by 3 percent in 2023, the same pace of growth as in 2022. Global growth forecasts have been revised up over the course of the year but have remained lower than the pre-COVID-19 (2014-2019) average of 3.6 percent. Trading partner growth has been supported by stronger activity levels in China this year following the removal of COVID-19 restrictions in December 2022. Growth in most other economies has slowed compared to 2022 in response to higher central bank policy interest rates.

The US economy expanded 2.9 percent in the year to the September 2023 quarter, largely accounted for by strong household consumption. The strength has come despite tighter credit conditions following the banking stress in the first half of the year. However, declining credit availability is expected to reduce aggregate demand over the coming year. Labour market pressures in the US continue to ease from historically tight levels, with job vacancies and wage growth declining.

In contrast, economic growth in Europe has been weak. Euro area GDP growth slowed to 0.1 percent in the year to the September 2023 quarter, as household consumption and export demand remained weak. Higher interest rates and high inflation are weighing on real household incomes. Despite slower GDP growth, conditions in the labour market remain tight, and wage inflation remains high.

In high-income Asian economies, tighter financial conditions have constrained domestic demand growth, although an easing of supply-chain disruptions and lower commodity prices have provided a partial offset. For developing Asian economies, relatively accommodative financial conditions have been supporting domestic demand, while the weak outlook for external demand remains a headwind for growth.

In Australia, some parts of the economy have remained resilient to monetary policy tightening to date, with annual GDP growth slowing but expected to reach 1.8 percent in 2023. Slower household consumption growth is being offset by strong public and private investment and an improvement in net exports. Strong net immigration has been boosting labour supply but also adding to demand, particularly for housing.

Growth in China has stabilised, but structural challenges remain

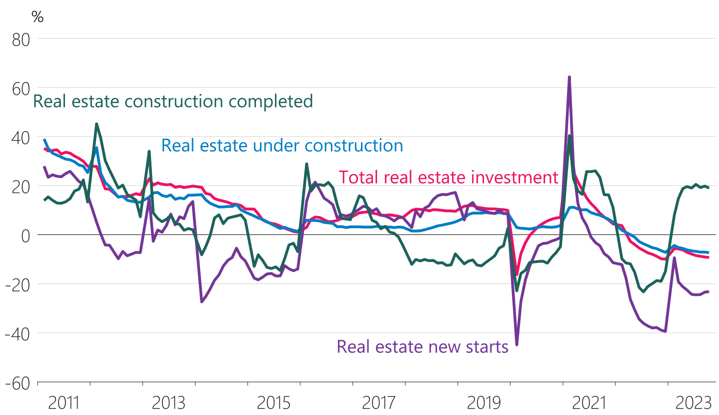
The Chinese economy expanded 4.9 percent in the year to the September 2023 quarter, consistent with the Government's target of around 5 percent for this year but stronger than Consensus Economics expectations. Monthly activity indicators suggest that growth has stabilised following a period of weakness in the middle of the year. Chinese authorities have taken a number of policy actions to support the economy in recent months, although policy support has been gradual compared to previous periods of slowing growth.

China's economy faces several structural challenges that pose downside risks to the near-term outlook, and are expected to weigh on potential growth over the longer term. Debt levels for corporates and local governments are high. Financial stress remains acute in the highly leveraged property development sector. Policy support for the housing sector appears to have had a limited effect so far, and real estate investment has continued to decline (figure 3.2). Given the importance of the property sector for the Chinese economy, and its linkages with the broader financial system, continued weakness in the property market remains a significant downside risk to growth in China and global growth more broadly. From a longer-term perspective, China's ageing and declining population and the need to gradually rebalance the economy away from debt-financed investment and towards services are expected to reduce potential growth.

Figure 3.2

Chinese property market growth indicators

(annual)



Source: Bloomberg.

Global inflation is declining gradually

Headline and core inflation have gradually decreased in recent months across advanced economies (figure 3.3). Increases in energy prices since the middle of the year have placed some upward pressure on headline inflation over recent months, but this has been more than offset by moderating core inflation (figure 3.4). Services inflation remains elevated and has been slow to ease this year in most advanced economies. However, goods inflation has declined more materially and in some economies is now close to, or even below, its pre-COVID-19 level.

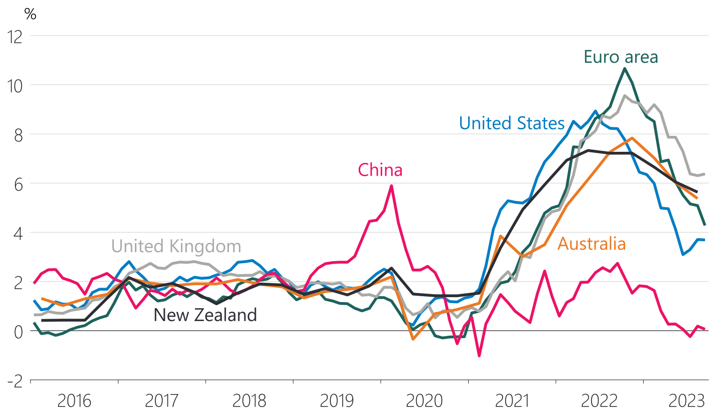
Despite different starting points, core inflation rates – excluding food and energy – have converged to a relatively narrow range of 4 to 5 percent in the US, euro area and Australia (figure 3.4). Core inflation has fallen sooner in the US than in most economies. This is partly due to an earlier increase in prices. Headline and core inflation are forecast to continue declining in advanced economies. Previous monetary policy tightening is expected to hold growth below trend, resulting in a further easing of capacity pressures.

Inflation in China has been lower than both its pre-COVID-19 (2014-2019) average and inflation in other major economies. Headline inflation fell to negative 0.2 percent in the year to October 2023 and core inflation was 0.6 percent over the same period. Low inflation in China has reflected weak domestic demand, slack in the labour market, and falling prices for some global commodities.

Figure 3.3

Headline inflation for key trading partners

(annual)



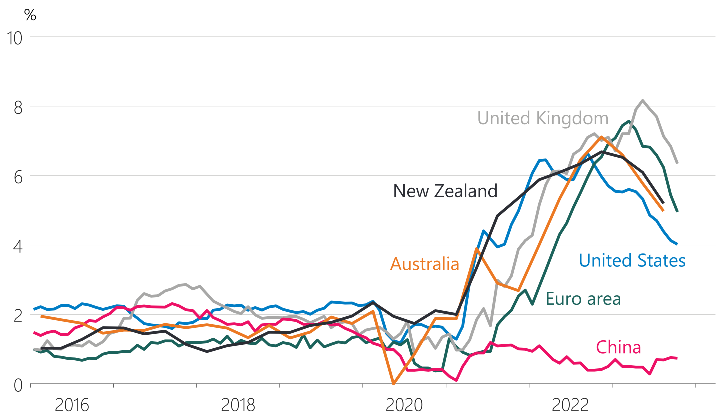
Source: Haver Analytics.

Note: Data are monthly, except for Australia and New Zealand, which only publish official inflation data quarterly.

Figure 3.4

Inflation excluding food and energy for key trading partners

(annual)



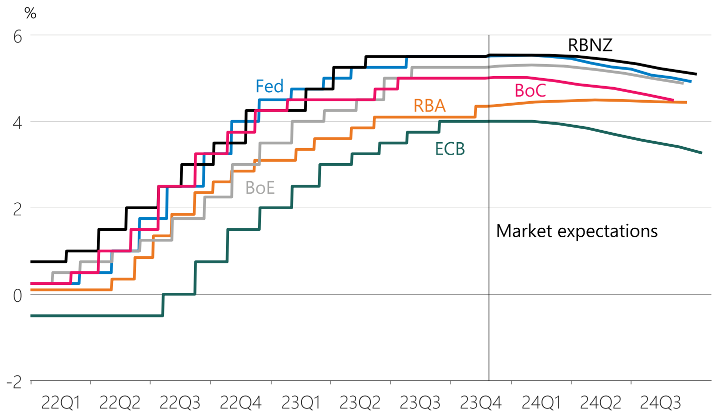
Source: Haver Analytics.

Note: Data are monthly, except for Australia and New Zealand, which only publish official inflation data quarterly.

Most major central banks remain on hold

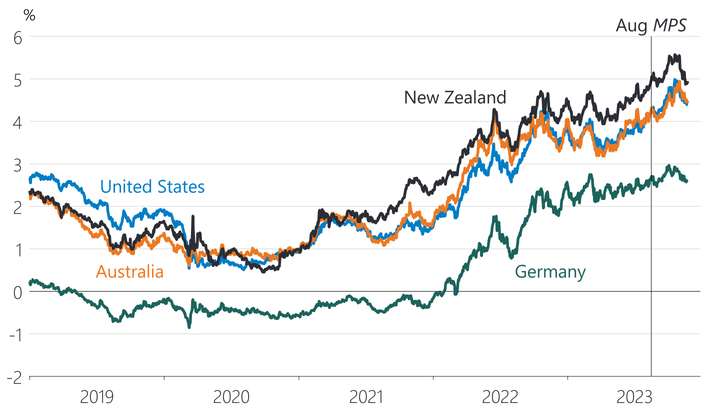
Several major central banks have left their policy rates unchanged since the August *Statement*, but continue to express willingness to tighten policy further if needed. The Reserve Bank of Australia increased its policy rate by 25 basis points to have more confidence in lowering inflation to its target within a reasonable period. Some global policymakers have noted that the increase in long-term interest rates in recent months – such as on government bonds – may reduce their need to tighten monetary policy further. Financial market participants expect central banks to leave policy rates unchanged until around the middle of 2024, before slowly reducing them toward more neutral levels (figure 3.5).

Figure 3.5
Market-implied path of policy rates



Source: Bloomberg.

Figure 3.6
10-year government bond yields



Source: Bloomberg.

Long-term interest rates have increased

Long-term interest rates have increased since the August *Statement* with the yield on 10-year US government bonds increasing 20 basis points. Fixed income market pricing has become increasingly sensitive to new information, leading to higher volatility.

The increase in long-term interest rates over the past two years has reflected both cyclical economic strength – resulting in expectations of higher central bank policy rates – and market participants having revised up their expectations for neutral interest rates. Over the past few months, a sharp increase in the supply of long-term government bonds, particularly in the US, has also pushed long-term interest rates higher. Meanwhile, market-implied expectations for inflation, based on inflation-indexed bond yields, have remained stable and close to central bank targets. This means increases in long-term interest rates are not due to investors requiring more compensation for expected inflation.

Global equity markets are higher since the August *Statement*. Global equity prices fell by as much as 7 percent over this period before recovering in recent weeks. Higher long-term government bond yields have placed downward pressure on equity prices over recent months. However, improving global risk sentiment and stronger corporate earnings have supported their recent recovery. Commodity prices are slightly lower since the August *Statement*. Oil prices have fluctuated on news related to supply and the war between Israel and Hamas, but have eased recently.

Special topic

CHAPTER 04

Waipunga Falls. Photo: India Power

CHAPTER 4
Special topic

Before the publication of each *Statement*, the MPC is provided with analyses of some topical issues.

A topic for the November *Statement* was monetary policy transmission lags.

Special topics in the past 12 months

Topic	Date/publication
The inflationary impact of recent migration	August 2023 *Statement* (Chapter 4)
Factors contributing to New Zealand's current account deficit and outlook	August 2023 *Statement* (Chapter 4)
The recovery in international tourism over the 2022/23 summer	May 2023 *Statement* (Chapter 4)
Have inflation expectations become more sensitive to higher inflation?	May 2023 *Statement* (Chapter 4)
The international dimension of non-tradables inflation	February 2023 *Statement* (Chapter 4)
Monitoring the labour market for inflationary pressures with high-frequency microdata	February 2023 *Statement* (Chapter 4)
The neutral interest rate	November 2022 *Statement* (Chapter 4)
Developments in real wages	November 2022 *Statement* (Chapter 4)

Monetary policy transmission lags

Summary

- Monetary policy takes time to impact inflation and employment as changes in the official cash rate (OCR) work through several transmission channels.
- The magnitude and duration of pass-through via each transmission channel is different, and can depend on the state of the economy. Therefore, changes to the OCR take a long and variable amount of time to have their peak effect on our economic objectives.
- We have updated our estimates of the time it takes for changes in the OCR to have their peak impact on inflation. The updated estimates suggest that the OCR typically takes *six to nine quarters* to reach its peak impulse on annual inflation. These empirical estimates are in line with those assumed in our primary forecasting model that underpins our economic projections.
- Much of the Reserve Bank's recent monetary policy tightening has been priced into wholesale market interest rates for more than six to nine quarters. Therefore, it is likely that past increases in the OCR are close to having their peak effect on the economy.
- The OCR remains contractionary – above the neutral interest rate – and will continue to have a dampening impulse on economic activity, employment and inflation over time.

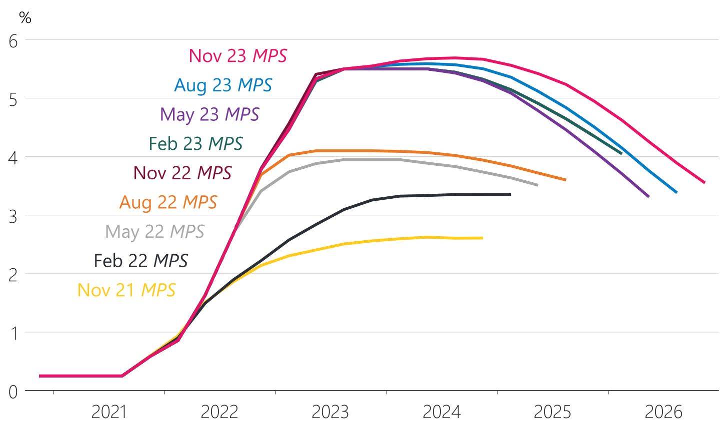
OCR decisions take time to affect the economy

The Monetary Policy Committee sets interest rates to meet its inflation and employment objectives. However, this is complicated by the fact that changes to the OCR do not affect inflation and employment instantaneously, but instead take time to work through several channels. Monetary policy settings that are too loose today would make it more likely for inflation expectations to become unanchored, and therefore allow high inflation to persist in the future. In contrast, when monetary policy is too restrictive today, the economy may experience unnecessary losses to output and employment later.

The MPC began tightening monetary policy from July 2021 when large scale asset purchases ceased. The OCR was increased from 0.25 percent to 5.50 percent between October 2021 and May 2023. However, by February 2022, more than half of this increase in the OCR was built into our published OCR forecast and priced into wholesale interest rates. Our published forecast and market pricing increased over 2022, and the OCR forecast peaked at 5.50 percent in the November 2022 *Statement* (figure 4.1). This has meant our tightening to date was reflected in wholesale interest rates at least 12 months ago, with most of it priced in closer to two years ago.

Figure 4.1

OCR forecasts from the past two years



Source: RBNZ estimates.

The higher OCR transmits to the real economy and price-setting behaviours via five key transmission channels (see the *Monetary Policy Handbook* for more detail):

Table 4.1

Monetary policy transmission channels

Transmission channel	Description
1. Savings and investment	Higher interest rates encourage households and businesses to save, and discourage borrowing and investment. Together, this leads to lower spending and demand.
2. Cash flow	Indebted households facing low disposable income and credit constraints may find increases in their debt repayment obligations force them to reduce their spending, beyond how they would from the savings and investment channel alone. The opposite effect would be true of net savers, whose interest income is boosted by higher interest rates. Overall, New Zealanders are net borrowers, so the reduction in spending tends to dominate.
3. House prices and housing wealth	Higher interest rates make it more difficult to finance the purchase of a home, leading to downward pressure on house prices. When house prices are lower, households can borrow less against the value of their homes and feel less wealthy, leading to lower spending.
4. Exchange rate	When the New Zealand dollar exchange rate appreciates, the cost of imports falls in New Zealand dollar terms, feeding directly to lower tradables inflation. Also, more spending on imports relative to domestic goods and services dampens economic activity and inflation. A higher exchange rate also reduces export incomes. When exports are priced in foreign currency, such as dairy exports priced in US dollars, incomes will be lower in New Zealand dollars. On the other hand, when prices are set in New Zealand dollars, they become less competitive internationally, and the quantity demanded will fall, also reducing incomes.
5. Inflation expectations	Higher interest rates tend to make households and businesses expect lower inflation in the future. When households do not expect prices to rise as much, they are more comfortable to hold off their consumption until later, and workers do not demand such large wage increases. When businesses have lower inflation expectations, they feel less pressure to increase prices. All these factors lead to less inflationary pressure in the economy.

The time taken for a higher OCR to transmit through each of these channels is different. For example, for the savings and investment channel, it may take time for a higher OCR to be reflected in term deposit and mortgage rates (see chapter 5). Once the higher OCR has been reflected in higher fixed mortgage rates, it takes time before mortgaged households roll onto higher mortgage rates, slowing transmission via the cash flow channel. This means that households only adjust consumption to higher interest rates with a lag. Because businesses set their prices infrequently, it may also take time for firms' price-setting to respond to slowing consumer demand.

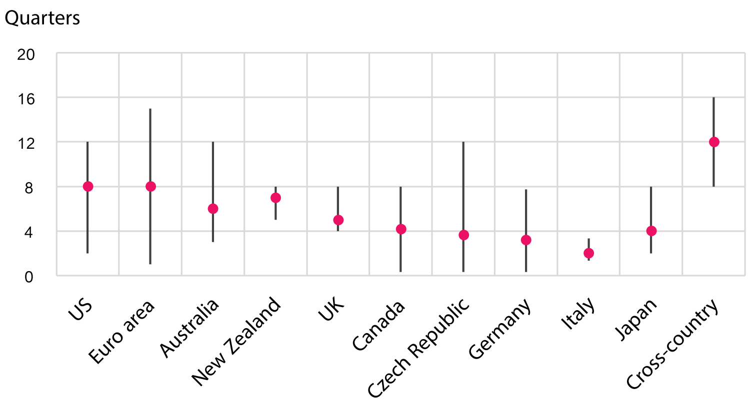
Although a higher OCR tends to be reflected in the exchange rate almost immediately, it can take time for a higher exchange rate to flow through to pricing decisions. Many businesses hedge against exchange rate fluctuations, and so are insulated from changes for a certain period. Even without hedging, businesses selling imported goods often make pricing decisions well in advance of sales.

The time taken for monetary policy to work through each of these channels will depend on the state of the economy. For example, transmission via the cash flow channel is slower when existing mortgages are fixed at longer terms. Transmission via the housing market will depend on current supply and demand conditions, as well as overall confidence in the market. We estimate that inflation expectations adjust more quickly to recent inflation in high-inflation environments than in low-inflation environments. The way consumers and businesses make decisions is influenced by the economic environment.

While these are simplified examples of transmission lags, they show that monetary policy transmission to the real economy and inflation is complex. It can depend on the state of the economy, and can change over time. This is why it is important to regularly reassess the lags of monetary policy transmission.

Figure 4.2

Quarter of peak impact of a monetary policy shock on annual CPI inflation



Source: See Havranek & Rusnak (2013), Cloyne & Hürtgen (2016), Drew, Karagedikli, Sethi, & Smith (2008), Sethi (2008), Choi, Willems, & Seung Yong (2023), Doh & Foerster (2022).

Note: Each line represents the range of transmission lags in the selected empirical studies, while the red dots denote the average impact derived from these studies.

Reviewing our estimate of the length of monetary policy lags

There is no simple way to summarise how long it takes for monetary policy to work its way through the economy. Most research focuses on estimating the time of peak impact, which is the time between a change in interest rates and the maximum effect on inflation. Evidence from these studies is diverse, with results dependent on the country, time period considered, and methodology used. Despite this diversity in results, many empirical studies indicate that it takes about eight quarters for monetary policy to have its peak impact on inflation (figure 4.2). These studies include work published by other central banks, including the Reserve Bank of Australia, Bank of England, European Central Bank and Bank of Canada.[2]

We recently conducted some empirical exercises to estimate how long it takes for the inflationary impact to reach its peak when there is a change in the OCR. It is challenging to measure monetary policy's impact on inflation, because our monetary policy is set *in response* to changes in the inflation outlook. Without controlling for this, we may find the misleading result that inflation increases in periods after interest rates increase, when in contrast, interest rates were increased *in anticipation* of higher inflation. This issue is called 'endogeneity' in the academic literature and has been dealt with in our estimation by attempting to identify monetary policy 'shocks'. Shocks refer to changes in monetary policy that are independent of other changes to the inflation outlook. We use three different approaches from the literature to identify these shocks.[3]

2 See Atkin & Cava (2017), Mann (2023), Lane (2022), Macklem (2023).

3 The first approach uses the central bank information set (see Bachmann, Gödl-Hanisch, & Sims (2022)). This assumes that imperfect information set at the time of central bank decision-making helps to isolate part of the variation in the monetary policy interest rate. The second is the narrative approach (see Romer & Romer (2004)). It shows changes in the intended policy rate that are not taken in response to information about current or likely future economic developments. The third approach uses high-frequency financial market data around the time of monetary policy decisions to estimate the unanticipated part of monetary policy (see Gertler & Karadi (2015) and Kuttner (2001)).

Once the monetary policy shocks are identified, we estimate the current and future responses of key macroeconomic variables and inflation to a monetary policy shock. We find that the peak response of GDP to monetary policy shocks varies quite widely, depending on which shock we use. However, we find more consistently that the impulse on inflation grows and dissipates gradually, with peak transmission occurring six to nine quarters after the shock (table 4.2), depending on the estimation approach. This affirms the assumption in our primary forecasting model (NZSIM) that the OCR takes eight quarters to reach peak transmission.

Table 4.2

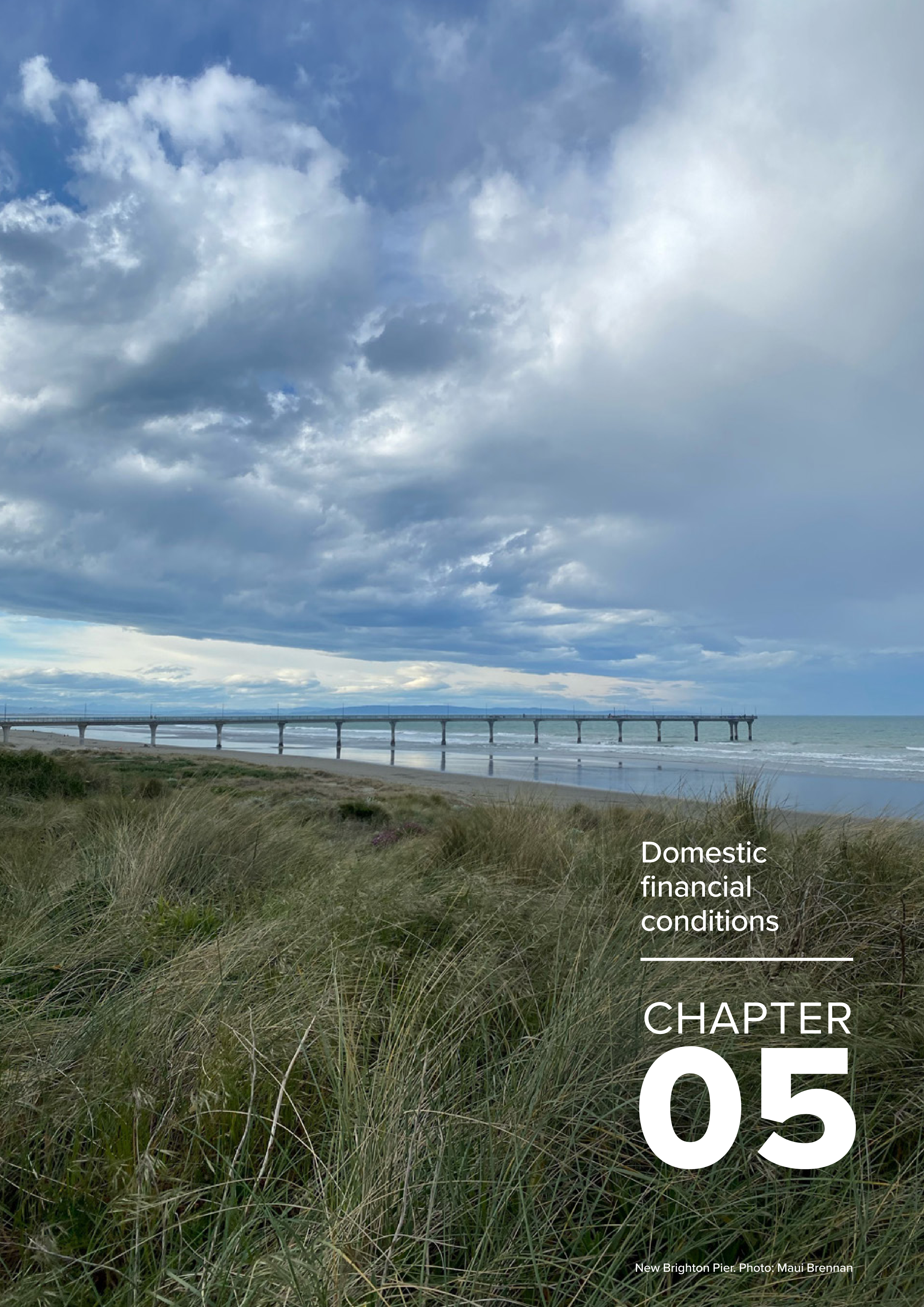
Number of quarters taken for the peak impact of a monetary policy shock on annual CPI inflation

Estimation approach	Quarters
Central bank information set approach	6
Narrative approach	8
High-frequency identification	9
NZSIM	8

Implications for monetary policy formulation today

Given this, we believe most of the recent monetary tightening is already having its peak effect on inflation. This does not mean that transmission is complete, only that the impacts are unlikely to get much larger over time. Past monetary policy tightening continues to play out through various channels. For example, transmission continues through the cash flow channel, with some households continuing to transition to higher mortgage rates. Even after transmission reaches its peak, the OCR will continue to constrain the economy and reduce inflation as long as it remains above the neutral rate.

When setting monetary policy in this environment, we will continue to weigh up the headwind of restrictive monetary policy against the other headwinds and tailwinds acting on the economy (see chapters 2 and 6).



Domestic financial conditions

CHAPTER
05

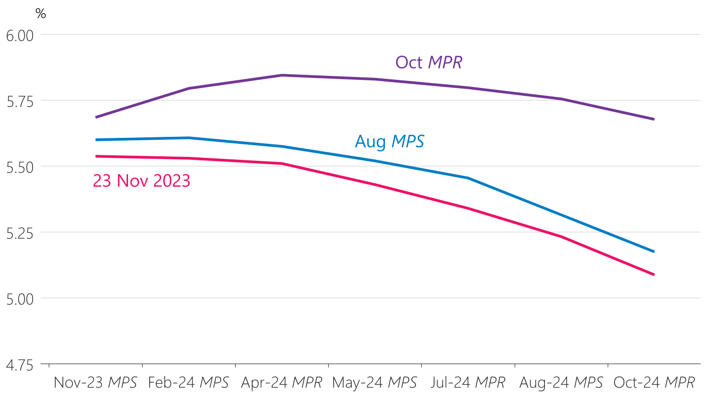
New Brighton Pier. Photo: Maui Brennan

CHAPTER 5
Domestic financial conditions

Monetary policy affects economic activity by influencing financial conditions in New Zealand. These include the interest rates at which households and businesses save and borrow, the exchange rate, and other factors such as credit availability.

Financial conditions have become slightly more restrictive since the August *Statement*. Retail interest rates, such as mortgage and term deposit rates, have increased, especially at terms of two to five years. Wholesale interest rates have decreased when compared to immediately before the August *Statement*, particularly at horizons of up to two years. Despite the higher interest rate environment, New Zealand's financial system remains sound and is in a good position to face looming challenges (see the *Financial Stability Report* November 2023).

Figure 5.1
Market expectations for the OCR



Source: Bloomberg.

Note: Each data point represents market expectations of the level of the OCR at a given point in the future, as measured by overnight indexed swap pricing.

Market participants' near-term expectations for the OCR increased immediately following the August *Statement* and continued to increase in the lead-up to the October Review, reflecting increases in global interest rates. However, market expectations for future OCR decisions have fallen in the past month following the release of inflation and labour market data for the third quarter, and as global interest rates have moved lower. As of 23 November 2023, market expectations are for OCR cuts to begin by July 2024. Overall, market expectations for upcoming decisions are lower than at the time of the August *Statement* (figure 5.1).

Domestic wholesale rates such as interest rate swaps have decreased at all horizons since the August *Statement* (figure 5.2). The 2-year swap rate has decreased around 30 basis points, consistent with lower near-term OCR expectations, and the 10-year swap rate has decreased around 5 basis points as global interest rates have decreased. The interest rate swap curve is less inverted than at the time of the August *Statement*. Short-term rates are still higher than long-term rates, but not as much as three months ago. Changes in New Zealand government bond (NZGB) yields have been similar to those in swap rates over recent months.

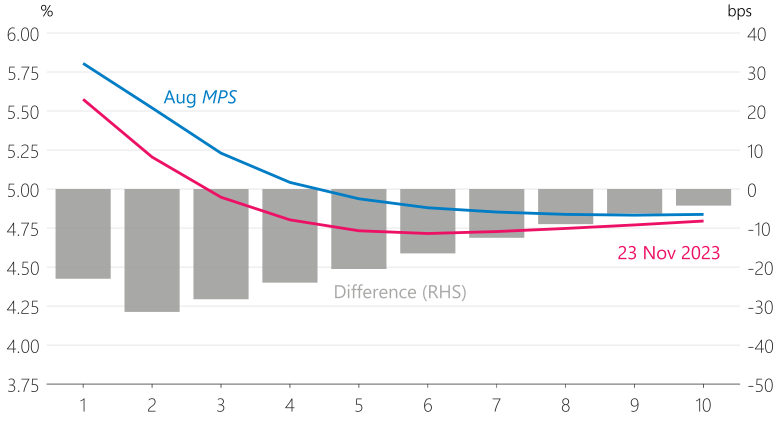
The New Zealand dollar exchange rate is broadly unchanged on a trade-weighted basis since the August *Statement* (figure 5.3). Global interest rates have increased by more than comparable domestic rates, resulting in a narrowing of interest rate differentials between New Zealand and its key trading partners. This narrowing in interest rate differentials has put downward pressure on the New Zealand dollar. However, global risk sentiment has improved recently, supporting the exchange rate.

Interest rates on term deposits, which make up a large share of banks' core funding, have continued to increase. This has increased the spread between term deposit rates and comparable wholesale rates (figure 5.4). However, this spread remains significantly lower than pre-COVID-19 averages, holding down the cost of bank funding. A large share of customer deposits are transaction accounts. As these pay a very low interest rate compared to wholesale rates, they are holding bank funding costs down. Bank funding costs are likely to increase over the medium term, with banks expected to compete more aggressively for customer deposits as accommodative funding conditions for banks continue to fade.

Figure 5.2

New Zealand swap rates

(terms in years)



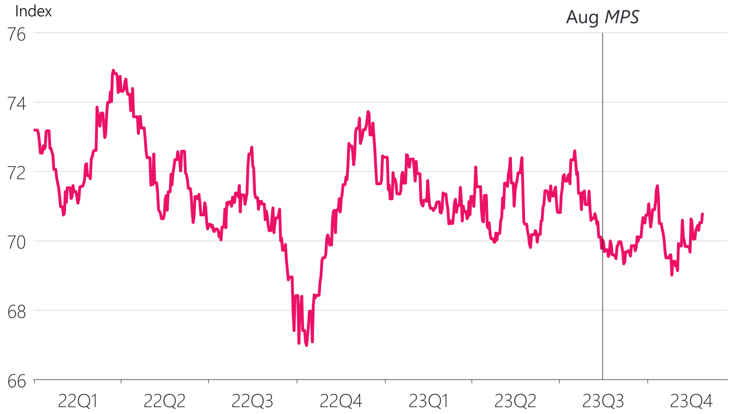
Source: Bloomberg.

Note: Swap rates are wholesale interest rates often used as a benchmark by financial institutions in setting other interest rates in the economy. They represent the fixed interest rate that one party to the swap agreement receives in exchange for paying a floating rate to the other party over the period of the agreement.

Figure 5.3

New Zealand dollar TWI

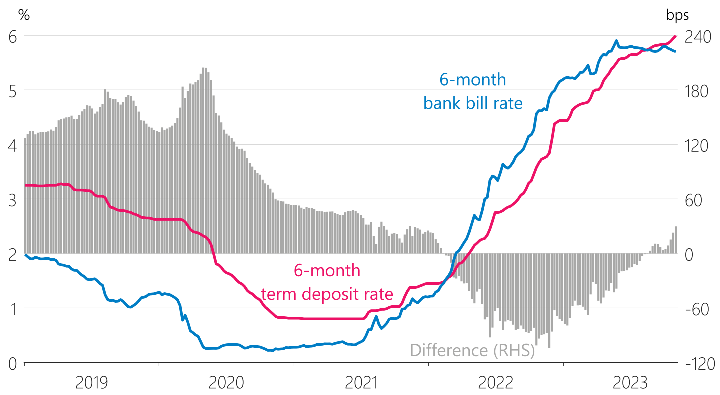
(nominal)



Source: RBNZ.

Figure 5.4

Spread between 6-month term deposit rate and 6-month bank bill rate

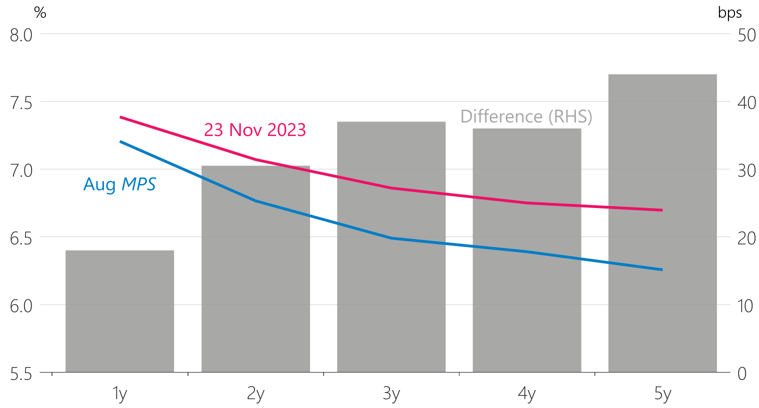


Source: Bloomberg, interest.co.nz.

Note: The term deposit rates shown are the average of the latest fixed-term rates on offer from ANZ, ASB, BNZ and Westpac. Bank Bill rates represent the rates at which banks are willing to borrow from, or lend to, one another for terms of 1 to 6 months.

Mortgage rates have also increased since the August *Statement*. Banks have been passing on higher term deposit costs to mortgage rates (figure 5.5). The spread between mortgage rates and wholesale rates remains low by historical standards but has increased over the past year (figure 5.6). Mortgage rates are likely to continue to increase relative to swap rates over the next few years, as banks' cost of deposit funding increases.

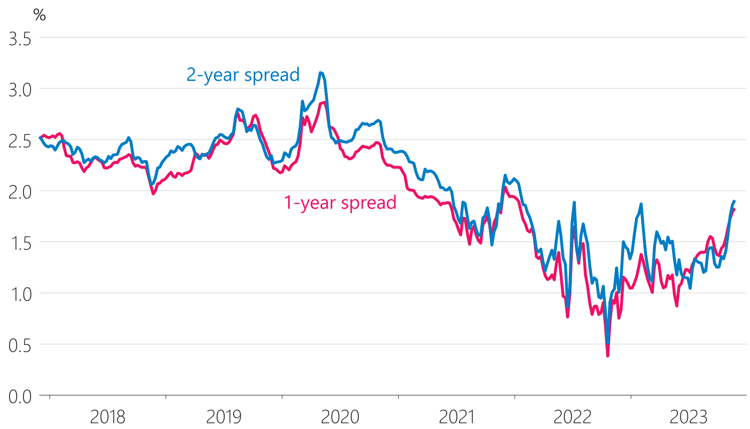
Figure 5.5
New Zealand mortgage rates



Source: interest.co.nz.

Note: The mortgage rates shown are the average of the latest fixed-term rates on offer from ANZ, ASB, BNZ and Westpac.

Figure 5.6
New Zealand 1- and 2-year mortgage rates as a spread to equivalent swap rates



Source: Bloomberg, interest.co.nz.

Table 5.1

Developments in domestic financial conditions as at 23 November 2023

Wholesale interest rates	
Market pricing for the OCR	• The August *Statement* contributed to an upward shift in market participants' expectations for the OCR over 2023. This was primarily due to the higher-than-anticipated OCR forecast, which peaked at 5.59 percent. However, market pricing for the OCR has since shifted lower following the release of Q3 domestic inflation and labour market data, and declining global interest rates. • Market pricing for the OCR is currently slightly lower than at the time of the August *Statement.* Financial market expectations for the peak OCR in this cycle, as measured by overnight indexed swap pricing, have decreased by 10 basis points to 5.50 percent. Expectations for the level of the OCR in 2024 are also lower than at the time of the August *Statement*, with a first OCR cut priced to occur by mid-2024. The current and expected OCR settings are contractionary, sitting above our estimates for the neutral OCR (see figure 7.4).
Interest rate swaps	• Short- and long-term New Zealand swap rates have fallen since the August *Statement*, with the 2-year and 10-year swap rates 30 and 5 basis points lower respectively. Consequently, the degree of inversion in the interest rate swap curve has reduced, with the difference between the 2- and 10-year swap rates narrowing from about minus 70 basis points to about minus 40 basis points. • Longer-term global interest rate swaps increased during August and September in response to stronger-than-expected economic data, and potential further monetary policy tightening by central banks. However, this increase has since reversed following recent global economic data. Global interest rates continue to be a key influence on longer-term interest rate movements in New Zealand.
New Zealand government bonds	• Short-term NZGB yields have decreased since the August *Statement*, reflecting lower expectations for the OCR. Long-term NZGB yields are roughly unchanged. • Bid-ask spreads, which are how far apart buyers and sellers are from reaching an agreed price to trade, have narrowed slightly since the August *Statement.* In contrast, the intra-day trading range for bonds has widened at times. Demand for NZGBs at New Zealand Debt Management tenders, as measured by bid-cover ratios, has fluctuated around its long-term weighted average of 3 times bid-cover since the August *Statement,* with recent tenders receiving strong demand. • NZGB yields have moved broadly in line with swap rates over recent months. The difference between NZGB yields and swap rates remains at a relatively high level, reflecting increased supply of NZGBs.
New Zealand dollar	
Interest rate differentials	• The difference between interest rates in New Zealand and our advanced trading partner economies such as Australia, the United States, and euro area has narrowed since the August *Statement*. For example, the difference between the 2-year NZGB yield and the 2-year Australian government bond yield has decreased from around 170 basis points to around 105 basis points since the August *Statement*, as Australian yields increased by more than New Zealand yields. • Declines in New Zealand interest rates relative to key trading partners are often associated with a depreciation in the New Zealand dollar. However, overall, the New Zealand dollar is broadly unchanged on a trade-weighted basis since the August *Statement*.
Risk sentiment	• During periods of higher uncertainty or volatility, financial market participants' willingness to take on additional risk decreases, and demand for safe haven currencies, such as the US dollar, increases. • Market risk sentiment deteriorated in October, largely reflecting market concerns about the Israel-Hamas war. Risk sentiment has since improved, supported by a partial unwind of earlier increases in long-term global bond yields. The improvement in risk sentiment is likely to have provided upward pressure on the New Zealand dollar.
Commodity prices	• Increases in New Zealand's key export commodity prices tend to be associated with an appreciation in the New Zealand dollar, all else equal. • Prices of key export commodities in New Zealand are broadly unchanged since the August *Statement*.

Retail interest rates	
Mortgage rates	• The mortgage rate curve has become less inverted in recent months. The 1-year mortgage rate has increased by around 20 basis points since the August *Statement*, while 2- to 5-year mortgage rates have increased by around 30 to 40 basis points. • The spread between mortgage rates and comparable wholesale rates has increased over the past year but remains well below pre-COVID-19 levels. Mortgage rates are likely to increase relative to wholesale rates over coming years, as banks' deposit funding costs increase.
Deposit rates	• Term deposit rates have increased since the August *Statement*. The 6-month rate has increased by nearly 30 basis points. Term deposit spreads to wholesale rates have continued to increase and are likely to continue towards pre-COVID-19 levels over the coming years, as banks compete more aggressively for deposit funding. • Rates on other types of deposits, including bonus saver and transaction accounts, remain very low compared to wholesale interest rates, holding down the cost of bank funding.

Bank funding conditions	
Funding composition	• Term deposit volumes have continued to increase since the August *Statement*. Depositors have continued to switch from on-call accounts as the spread between term and on-call deposit rates has continued to increase. Term deposit volumes grew by around $5 billion across August and September, while on-call account volumes fell by around $4.5 billion. • Banks remain well funded and have strong liquidity buffers. Lower-cost deposit types such as transaction accounts remain a larger share of bank funding compared to pre-COVID-19 averages, which has contributed to lower average bank funding costs. Bank core funding ratios remain relatively high at 90.3 percent in September.
Credit spreads	• The cost of raising long-term wholesale bank funding relative to benchmark wholesale rates has been stable since the August *Statement*. • Domestic bank credit spreads are marginally higher than at the time of the August *Statement*.

Economic projections

CHAPTER 06

Abel Tasman. Photo: Lydia Dudson

CHAPTER 6
Economic projections

This chapter summarises the baseline economic projections that MPC members considered when making their policy assessment. The projections were finalised on 23 November 2023 based on existing government policies.

These projections rely on a set of key assumptions about the global and domestic factors influencing the economy. These include:

- the speed at which labour market and wage pressures ease, and the impact of these factors on household spending and core inflation;
- the outlook for net immigration, and to what extent high net immigration contributes relatively more to aggregate demand or labour supply;
- the extent to which the net decline in house prices since late 2021, on balance, contributes to lower residential construction activity and household consumption;
- the extent to which activity and inflation in our key trading partners slows over the coming year and the consequences for domestic financial conditions, demand for New Zealand's goods and services exports, and export and import prices;
- the extent to which business investment weakens as a result of lower export prices and declining capacity pressures in the economy;
- how businesses, consumers, and workers respond to ongoing cost pressures and high interest rates in New Zealand; and
- that government consumption and investment evolve in line with the macroeconomic and fiscal forecasts in the *Pre-election Economic and Fiscal Update* (*PREFU*) 2023. The specific nature of policy changes which may be implemented by the incoming Government were not known at the time these projections were finalised.

Uncertainty around these assumptions is high, as there are several large and partially offsetting factors influencing the economic environment. These factors include: the impact of higher interest rates on demand and inflation globally; the ongoing impact of regional wars; and a return to more normal fiscal spending from high levels during the COVID-19 pandemic. The change of Government may also materially change the outlook for fiscal spending, revenue and broader economic policy.

While GDP grew by more than expected in the June 2023 quarter, employment and headline CPI inflation in the September 2023 quarter declined by more than expected in the August *Statement*. The latest data suggest that economic growth has slowed in the September 2023 quarter. However, the high level of net immigration and the recovery in house prices point to capacity pressures softening less than expected in the August *Statement*. The output gap is the extent that demand outstrips the economy's current ability to supply goods and services sustainably. Although lower, the output gap is estimated to have remained positive and is therefore adding to inflation.

The output gap is forecast to remain higher over the medium term than forecast in the August *Statement,* but still decline substantially as economic growth continues to slow. Several factors are expected to reduce economic growth: subdued global goods demand, higher interest rates and their dampening effect on house prices, private consumption and investment, as well as declining government spending as a share of the economy.

This moderation in domestic capacity pressure is projected to contribute to lower inflation over the medium term. In addition, global inflationary pressures are easing, which is expected to result in lower imported inflation in New Zealand. High interest rates in most of New Zealand's trading partners are reducing demand. In addition, a return to more normal global supply chains and falls in global food and energy commodity prices over the past 18 months are reducing imported cost pressures. As a result, New Zealand's import prices have fallen in recent months, and we expect this trend to continue over the medium term.

Core inflation measures and shorter-term inflation expectation measures have eased over recent quarters but are still high. This is consistent with an increase in labour supply resulting from the reopened border and declining wage inflation. As these factors continue to ease and capacity pressures decline, non-tradables inflation is expected to gradually decrease over the medium term.

Overall, annual consumer price inflation is expected to return to its 2 percent target midpoint towards the latter half of 2025. Given the expected slowing in domestic demand, unemployment is likely to rise, and employment is expected to fall below its maximum sustainable level for a time.

Relative to the August *Statement*, the output gap is higher at the starting point and over the forecast horizon. This is consistent with the more inflationary pressure caused by high net immigration and, consequently, stronger house prices and more robust domestic demand in the economy. Based on *PREFU* 2023, higher government spending also adds more to domestic demand. The nominal neutral OCR has been revised higher, but only increases the OCR projection gradually over a number of years. Lower forecast export and import prices provide only a small offset. Conditional on our central economic outlook, the OCR is expected to be somewhat higher than in the August *Statement,* in order for the MPC to meet its inflation and employment objectives.

The neutral OCR is the rate that, on average over time, would neither stimulate nor constrain the economy, and be consistent with no over- or under-utilisation of resources and stable inflation in the economy. Based on our neutral OCR indicator suite, we have revised our estimate of the long-run nominal neutral OCR from 2.25 percent up to 2.5 percent from the December 2023 quarter onwards.[4] The increase in our neutral indicator suite primarily reflects that long-term interest rates have increased substantially since the end of 2021. The OCR remains contractionary at its current level based on this revised assumption. Taken on its own, the upward revision to the neutral OCR creates gradual upward pressure on the OCR over time.

4 For more information on the neutral interest rate and our indicator suite see chapter 4.1 in the November 2022 *Statement*.

Table 6.1

Key projection assumptions

Key factors	
Global factors	• Over recent quarters, economic strength has been mixed among New Zealand's key trading partners. Economic growth in the US and Australia has remained resilient despite higher interest rates. By contrast, growth in Europe and China has been slower than forecasters' expectations since the start of the year. • Regional wars have had limited effects on commodity markets recently. In particular, economic disruptions from Russia's war against Ukraine have been subsiding. However, potential for wider conflict continues to add to global economic uncertainty. • On balance, global economic growth is expected to slow further over coming years, similar to what was anticipated in the August *Statement*. Globally, higher interest rates and the normalisation of government spending as a share of GDP from high levels reached during the COVID-19 pandemic are expected to further reduce demand. • Overall, slowing global demand is reducing capacity and inflationary pressures. Consequently, we expect that lower global inflation will result in lower imported inflation in New Zealand over time. • Expected global policy interest rates are higher than assumed in the August *Statement*, reflecting more resilience in activity, particularly in the US and Australia. This has narrowed the difference in the interest rates between New Zealand and its trading partners, creating downward pressure on the TWI. However, the TWI has depreciated only slightly since the August *Statement*. • The TWI is assumed to remain at 70.7 over the projection.
International tourism	• Services exports, particularly tourism and education, have recovered rapidly since the border reopened in 2022. We maintain a strong growth projection for services exports. The FIFA Women's World Cup in July and August 2023 is expected to have added noticeably to exports of tourism services in an otherwise seasonally quiet time of the year. Additional spending by overseas tourists is contributing to capacity pressures across the transport, accommodation, and hospitality sectors. • We assume that tourism exports will have recovered to around 90 percent of their pre-COVID-19 levels in inflation-adjusted terms over the 2023/24 summer and will surpass pre-COVID-19 levels by the end of the projection.

Migration and house prices	• Net immigration since the border reopened has been exceptionally strong and much higher than anticipated in previous *Statement*s. • Robust economic activity during the COVID-19 period with constrained labour supply caused by tight border restrictions contributed to strong wage inflation. Since the border reopened, many businesses have been able to fill vacant jobs with migrants. This has contributed to easing wage pressures. To this extent, high net immigration has been disinflationary. • Immigrants add to the supply of labour but also add to aggregate demand. Immigrants need to establish new homes in New Zealand, which increases demand for housing and housing-related goods and services. Over recent months the inflationary impacts from high net immigration have become more evident. • As the supply of housing is not as flexible as the rapid increase in demand from high net immigration, rents for housing and prices for existing houses have increased by more than anticipated in previous *Statement*s. • Monthly REINZ house prices fell around 15 percent in seasonally adjusted terms from their peak in November 2021 to March 2023. House prices have since risen 2.4 percent up to October 2023. • High net immigration is a significant contributor to the recent recovery in house prices. However, other contributing factors are an increase in the number of residents due to the one-off 2021 resident visa, strong employment and nominal wage growth, and a relatively low number of houses available for sale. • Consequently, we project stronger house price inflation over the medium term than in the August *Statement*. We assume house prices will increase at an annual rate of 4 to 6 percent over the forecast. • Although house prices have started to recover, they are forecast to remain significantly below their previous peak for the next two years. This lower level of house prices is expected to flow through to less household spending over the projection, as aggregate household wealth has fallen substantially since its peak in late 2021. However, this effect is much weaker than in the August *Statement*, due to the higher outlook for house prices.
Economic growth	
Production	• We assume that production GDP grew by 0.3 percent in the September 2023 quarter. However, private consumption and investment are expected to decline. The continued strong recovery in services exports, lower imports and increasing government investment are factors supporting GDP growth. The stock of produced goods (inventories) is also expected to fall by less than in the previous quarter. • Stronger-than-expected GDP in the June 2023 quarter and the stronger demand impulse from high net immigration have translated into a higher estimate of capacity pressures at the start of the forecast than assumed in the August *Statement*. We estimate that the output gap peaked at 3.6 percent of potential GDP in the September 2022 quarter and has reduced to 0.8 percent of potential GDP in the September 2023 quarter. • In these projections, we expect close to zero quarterly GDP growth in the December 2023 and March 2024 quarters, as global growth slows and high interest rates dampen domestic demand. However, quarterly changes in GDP are highly uncertain. For the March 2024 year, annual GDP growth is projected to slow to 1.2 percent. • Over the medium term, the productive capacity of the economy is expected to grow, increasing economic activity. In large part, this is supported by strong population growth through net immigration that adds to labour supply. • We expect the output gap to close and become negative from late 2023, with actual production below the economy's potential. An extended period of below-trend growth is expected to be necessary to see our employment and inflation objectives met sustainably over the medium term.

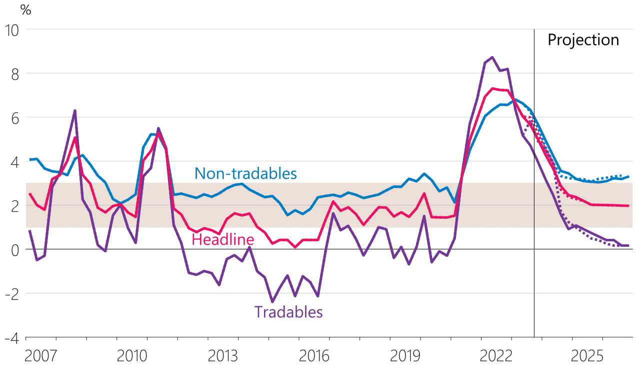
Consumption	• Consumption remained more robust and broad-based in the June 2023 quarter than expected in the August *Statement*. However, recent card spending data suggest a decline in consumption in the September 2023 quarter. • Consumption is expected to decline further in the December 2023 quarter and to grow only slightly in early 2024, as households with mortgages move onto higher interest rates and the effect of lower house prices continues to pass through to lower spending. In addition, the labour market is expected to weaken further, and wage inflation is expected to fall, reducing aggregate labour income. However, high net immigration is expected to provide some support for aggregate consumption and house prices. Consumption on a per capita basis is expected to decline by around 3 percent from the March 2023 to the March 2024 quarter. • Consumption is expected to gradually recover from mid-2024, supported by lower interest rates later in the projection and increasing house prices.
Investment	• Significant pressure on available resources has supported high levels of business investment over the last few years. • Business investment is expected to decline over coming quarters, due to high interest rates, declining export prices and easing capacity pressures. The global economic slowdown and regional wars are also likely to reduce business investment further by adding to uncertainty about future global demand. • Residential investment has fallen only slightly in recent quarters despite a rapid fall in the number of dwelling consents. This may be due to the long pipeline of work still to be worked through. Our projected decline in residential investment is consistent with current high mortgage interest rates, high construction costs, and lower house prices relative to their peak in November 2021. • The impact from high net immigration on housing demand and house prices is expected to result in a smaller decline in residential investment over the medium term than assumed in the August *Statement*. We project the share of residential investment to potential GDP to return to around pre-COVID-19 levels by the end of the forecast.
Government	• We assume that government consumption and investment evolve in line with the macroeconomic and fiscal forecasts in *PREFU* 2023. • Government investment, particularly in infrastructure, is projected to increase considerably as rebuild and repair work associated with the severe weather events in the North Island in early 2023 continues. Government investment is forecast to be significantly higher over the later part of the forecast horizon than assumed in the August *Statement*. • Over the medium term, real government consumption and investment as a share of potential GDP is expected to continue to decline gradually from high levels during the height of the COVID-19 pandemic. Overall, this means that government spending will be adding less to inflationary pressures over the forecast than it has in recent years, albeit more than assumed in the August *Statement*. • The projections for government consumption, government investment, and the impact of taxation on spending by private households and businesses may change as a result of new policies.
Exports and imports	• Overall, prices of New Zealand's commodity exports have been declining since early 2022, in particular for dairy, meat and forestry products. The global economic slowdown has reduced demand for our goods exports, and this is expected to persist into 2024. • Goods export volumes are expected to remain around current levels in the near term before gradually increasing over the medium term, as global economic growth recovers from early 2024. • International travel is recovering broadly as expected. By the end of the projection, services exports are assumed to have surpassed pre-COVID-19 levels. • Non-oil import prices increased strongly over 2021 and 2022. However, recent GDP data and other indicators suggest that non-oil import prices fell over the first half of 2023 by more than anticipated in the August *Statement*. This is in line with declining global goods demand and falling shipping costs. We assume this lower price level will persist and that non-oil import prices will decline only slightly further over the medium term. • Oil prices are at lower levels than assumed in the August *Statement*. Concerns around oil supply caused by ongoing regional wars have been contained, and the expectation of further subdued global economic growth has dampened prices. In line with futures pricing, the price for Dubai oil is assumed to decline from around US$82 currently to around US$77 by the end of the projection.

Labour market	
Employment and wages	• The New Zealand labour market has been easing. The unemployment rate increased from 3.6 to 3.9 percent and employment fell in the September 2023 quarter. The labour force continued to grow in the September 2023 quarter but by much less than the working-age population. Overall, our suite of labour market indicators provides consistent evidence that labour market pressures have been easing relative to last year. Still, employment remains above its maximum sustainable level. • Over coming quarters, employment growth is expected to remain low in line with slowing economic activity. Employment may fall below its maximum sustainable level for a time. The slowing in economic growth, together with gradual growth in the labour force, is expected to further relieve labour market pressures. The unemployment rate is assumed to increase to around 5.2 percent in the first half of 2025, in line with the declining output gap. • Strong net immigration has been alleviating labour shortages. The number of job vacancies has been falling as immigrants fill existing job vacancies and high interest rates reduce new labour demand. These factors have better balanced labour supply and demand. This reduces inflationary pressures, at least in the near term, without a rapid increase in unemployment. In line with this, annual same-job wage inflation decreased from 4.3 to 4.1 percent in the September 2023 quarter, as expected in the August *Statement*. To this extent, high net immigration has been disinflationary. However, over recent months net immigration has added to demand more substantially – in particular for housing. • On balance, we expect same-job wage inflation to decline gradually over the medium term, as labour market pressures continue to ease. However, wage inflation is assumed to stay above pre-COVID-19 levels as nominal same-job wages catch up to some extent with lost purchasing power because of high consumer price inflation in recent years.

Inflation	
Headline	• Annual headline CPI inflation has continued to decline from its peak and is projected to decrease to 5.0 percent in the December 2023 quarter. • Annual headline CPI inflation is projected to return to within the 1 to 3 percent target band in the second half of 2024, reaching the 2 percent target midpoint towards the latter half of 2025.
Tradables	• Annual tradables inflation has continued to decline from its peak and is projected to decrease over the forecast horizon, as global inflationary pressures ease further. Petrol prices and non-oil import prices are forecast to gradually decline over the forecast, contributing to the fall in tradables inflation.
Non-tradables	• Annual non-tradables inflation is assumed to have peaked but is still supported by ongoing domestic capacity pressures and strong wage growth. • Starting-point capacity pressures are assessed to be higher than assumed in the August *Statement*. However, high interest rates are expected to reduce domestic demand. At the same time, the productive capacity of the economy is expected to increase, mainly because of high net immigration. On balance, non-tradables inflation is assumed to decrease only slowly, as capacity pressures ease and core inflation and inflation expectations decline.

Charts

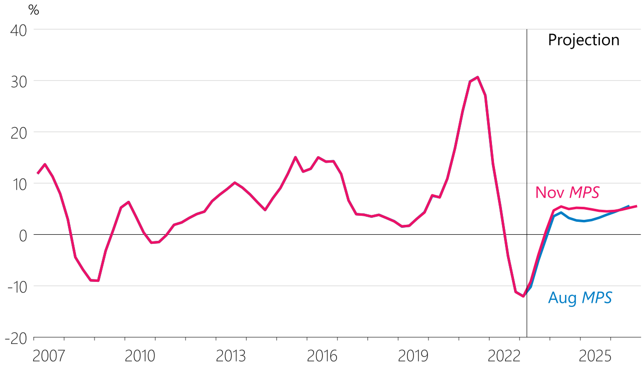
Figure 6.1
Inflation components
(annual)



Source: Stats NZ, RBNZ estimates.

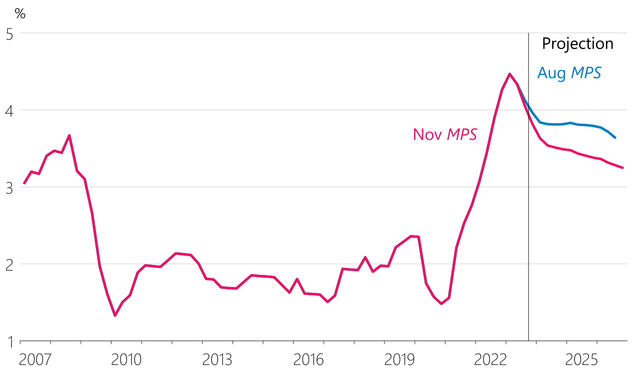
Note: Dotted lines show the projections from the August *Statement*. The shaded area represents the MPC's 1 to 3 percent target range for annual CPI inflation over the medium term.

Figure 6.4
House price growth
(annual)



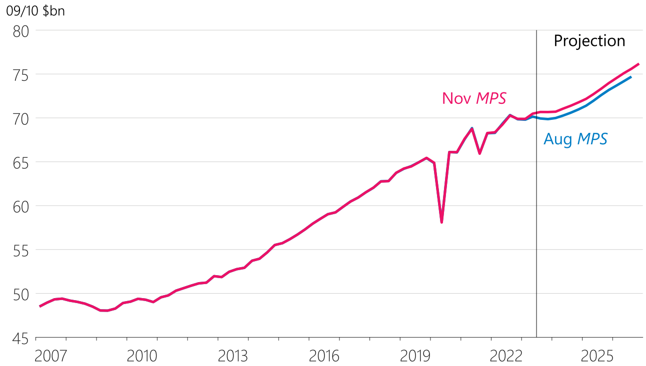
Source: CoreLogic, RBNZ estimates.

Figure 6.2
Private sector LCI wage inflation
(annual)



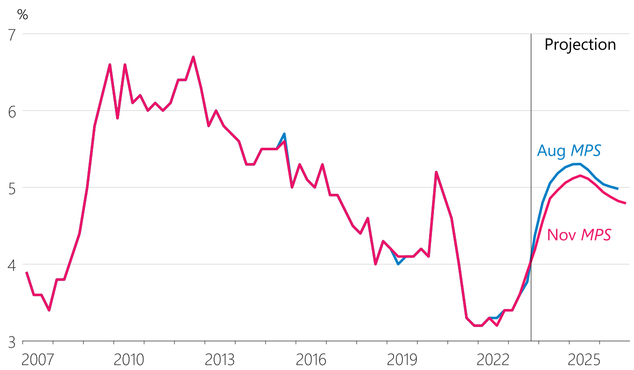
Source: Stats NZ, RBNZ estimates.

Figure 6.5
Production GDP
(quarterly, seasonally adjusted)



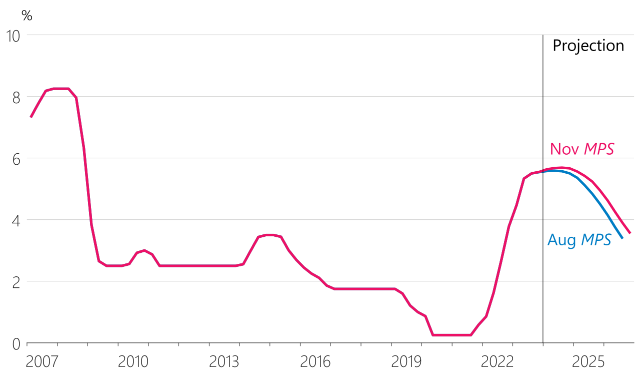
Source: Stats NZ, RBNZ estimates.

Figure 6.3
Unemployment rate
(unemployed people as a share of the labour force, seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

Figure 6.6
OCR
(quarterly average)

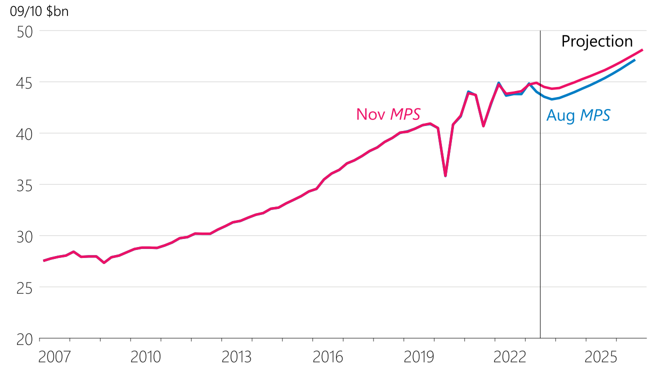


Source: RBNZ estimates.

Figure 6.7

Private consumption

(quarterly, seasonally adjusted)

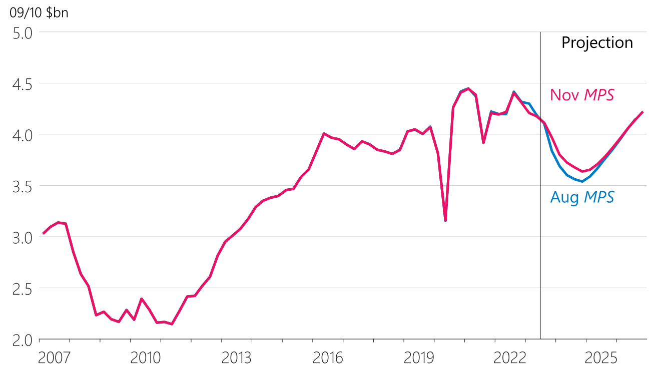


Source: Stats NZ, RBNZ estimates.

Figure 6.8

Residential investment

(quarterly, seasonally adjusted)

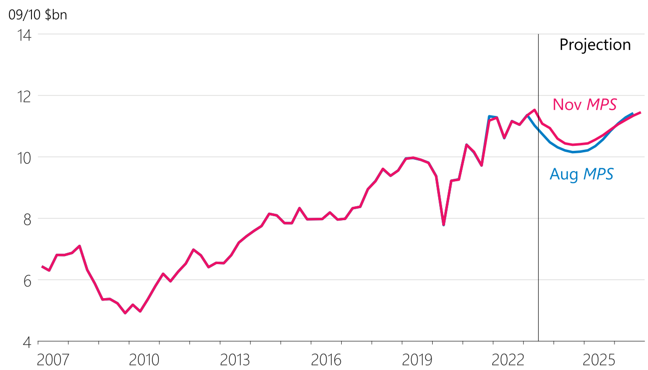


Source: Stats NZ, RBNZ estimates.

Figure 6.9

Business investment

(quarterly, seasonally adjusted)

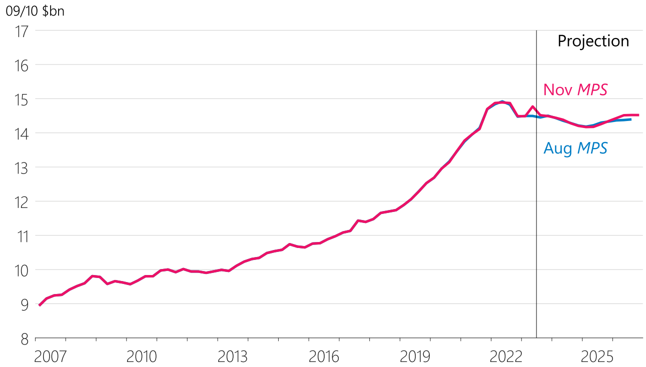


Source: Stats NZ, RBNZ estimates.

Figure 6.10

Government consumption

(quarterly, seasonally adjusted)

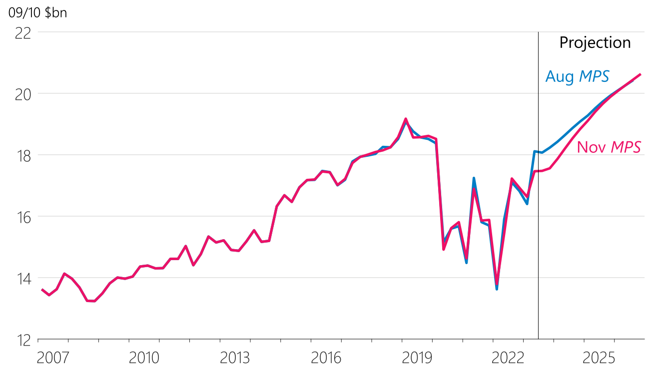


Source: Stats NZ, RBNZ estimates.

Figure 6.11

Total exports

(quarterly, seasonally adjusted)

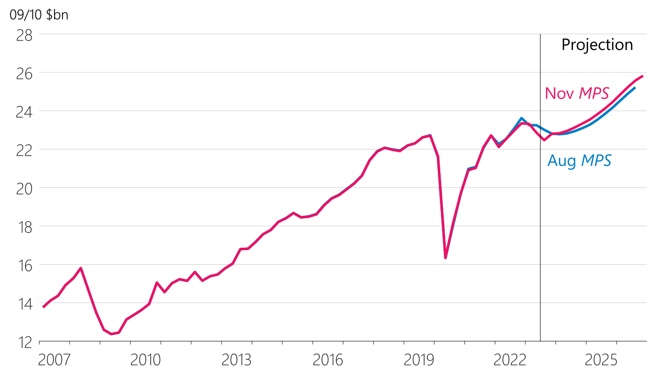


Source: Stats NZ, RBNZ estimates.

Figure 6.12

Total imports

(quarterly, seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

Appendices

CHAPTER 07

Makara. Photo: Brandon Kengmana

CHAPTER 7
Appendices

Appendix 1: Statistical tables

Table 7.1
Key forecast variables

		GDP growth Quarterly	CPI inflation Quarterly	CPI inflation Annual	Unemployment rate	TWI	OCR
2021	Mar	2.3	0.8	1.5	4.6	74.9	0.3
	Jun	1.7	1.3	3.3	4.0	74.7	0.3
	Sep	-4.1	2.2	4.9	3.3	74.4	0.3
	Dec	3.6	1.4	5.9	3.2	74.3	0.6
2022	Mar	0.1	1.8	6.9	3.2	72.6	0.9
	Jun	1.3	1.7	7.3	3.3	72.1	1.6
	Sep	1.5	2.2	7.2	3.2	70.6	2.7
	Dec	-0.5	1.4	7.2	3.4	70.8	3.8
2023	Mar	0.0	1.2	6.7	3.4	71.3	4.5
	Jun	0.9	1.1	6.0	3.6	71.0	5.3
	Sep	**0.3**	1.8	5.6	3.9	70.6	5.5
	Dec	**0.0**	**0.8**	**5.0**	**4.2**	**70.4**	**5.6**
2024	Mar	**0.1**	**0.6**	**4.3**	**4.6**	**70.7**	**5.6**
	Jun	**0.5**	**0.5**	**3.7**	**4.9**	**70.7**	**5.7**
	Sep	**0.5**	**1.0**	**2.9**	**5.0**	**70.7**	**5.7**
	Dec	**0.5**	**0.4**	**2.5**	**5.1**	**70.7**	**5.7**
2025	Mar	**0.6**	**0.5**	**2.4**	**5.1**	**70.7**	**5.6**
	Jun	**0.7**	**0.3**	**2.2**	**5.2**	**70.7**	**5.4**
	Sep	**0.8**	**0.8**	**2.0**	**5.1**	**70.7**	**5.2**
	Dec	**0.9**	**0.4**	**2.0**	**5.0**	**70.7**	**4.9**
2026	Mar	**0.8**	**0.5**	**2.0**	**4.9**	**70.7**	**4.6**
	Jun	**0.7**	**0.3**	**2.0**	**4.9**	**70.7**	**4.3**
	Sep	**0.7**	**0.8**	**2.0**	**4.8**	**70.7**	**3.9**
	Dec	**0.8**	**0.4**	**2.0**	**4.8**	**70.7**	**3.6**

Table 7.2

Measures of inflation, inflation expectations, and asset prices

	2022				2023			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Inflation (annual rates)								
CPI	6.9	7.3	7.2	7.2	6.7	6.0	5.6	
CPI non-tradables	6.0	6.3	6.6	6.6	6.8	6.6	6.3	
CPI tradables	8.5	8.7	8.1	8.2	6.4	5.2	4.7	
Sectoral factor model estimate of core inflation	4.7	5.1	5.5	5.7	5.7	5.7	5.2	
CPI trimmed mean (30% measure)	5.2	5.8	6.4	6.1	6.1	6.0	5.5	
CPI weighted median	3.9	4.8	5.0	5.0	5.6	6.6	5.0	
GDP deflator (expenditure)	6.2	6.0	4.6	5.0	5.6	6.2		
Inflation expectations								
ANZ Business Outlook – inflation 1 year ahead (quarterly average to date)	5.4	6.0	6.1	6.3	5.9	5.5	5.1	4.9
RBNZ Survey of Expectations – inflation 2 years ahead	3.3	3.3	3.1	3.6	3.3	2.8	2.8	2.8
RBNZ Survey of Expectations – inflation 5 years ahead	2.3	2.4	2.3	2.4	2.4	2.4	2.3	2.4
RBNZ Survey of Expectations – inflation 10 years ahead	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.3
Asset prices (annual percent changes)								
Quarterly house price index (CoreLogic NZ)	13.8	5.3	-4.2	-11.2	-12.1	-9.1		
REINZ Farm Price Index (quarterly average to date)	29.4	28.1	12.2	5.0	-3.2	-5.7	-11.8	
NZX 50 (quarterly average to date)	-3.9	-9.0	-11.3	-12.8	-3.5	3.8	1.9	-1.5

Table 7.3

Measures of labour market conditions

(seasonally adjusted, changes expressed in annual percent terms, unless specified otherwise)

	2022				2023		
	Mar	Jun	Sep	Dec	Mar	Jun	Sep
Household Labour Force Survey							
Unemployment rate	3.2	3.3	3.2	3.4	3.4	3.6	3.9
Underutilisation rate	9.4	9.3	8.9	9.4	9.1	9.9	10.4
Labour force participation rate	70.9	70.9	71.6	71.8	72.1	72.4	72.0
Employment rate (% of working-age population)	68.6	68.6	69.3	69.4	69.6	69.8	69.1
Employment growth	2.5	1.3	1.2	1.7	2.9	4.1	2.4
Average weekly hours worked	33.3	33.7	33.8	34.0	33.6	33.4	33.5
Number unemployed (thousand people)	95	97	95	100	103	110	118
Number employed (million people)	2.82	2.81	2.85	2.87	2.90	2.93	2.92
Labour force (million people)	2.91	2.91	2.95	2.97	3.00	3.04	3.04
Extended labour force (million people)	3.00	2.99	3.02	3.05	3.09	3.13	3.13
Working-age population (million people, age 15 years+)	4.10	4.10	4.11	4.13	4.16	4.19	4.22
Quarterly Employment Survey – QES							
Filled jobs growth	4.2	1.5	1.5	1.3	2.2	6.5	6.2
Average hourly earnings growth (private sector, ordinary time)	5.4	7.0	8.6	8.1	8.2	7.7	7.1
Other data sources							
Labour cost index growth, private sector, adjusted	3.1	3.4	3.9	4.3	4.5	4.3	4.1
Labour cost index growth, private sector, unadjusted	5.0	5.2	5.6	6.1	6.1	6.1	5.7
Estimated net working-age immigration (thousands, quarterly)	-7.1	-3.2	7.7	19.1	25.3	37.5	18.7
Change in All Vacancies Index	21.0	3.5	8.8	-3.3	-15.6	-22.0	-26.5

Note: The All Vacancies Index is produced by MBIE as part of the monthly Jobs Online report, which shows changes in job vacancies advertised by businesses on internet job boards. The unadjusted labour cost index (LCI) is an analytical index that reflects quality change in addition to price change (whereas the official LCI measures price changes only). For definitions of underutilisation, the extended labour force, and related concepts, see Statistics New Zealand (2016) 'Introducing underutilisation in the labour market'. Estimated net working-age immigration is the Stats NZ outcomes-based measure.

Table 7.4

Composition of real GDP growth

(annual average percent change, seasonally adjusted, March years, unless specified otherwise)

	Actuals								Projection		
March year	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Final consumption expenditure											
Private	4.2	6.4	4.8	4.5	2.4	-0.2	6.1	2.6	**0.9**	**1.3**	**2.7**
Public authority	2.1	2.1	3.9	3.4	5.5	7.6	8.1	1.9	**-0.9**	**-2.0**	**0.3**
Total	**3.7**	**5.4**	**4.6**	**4.3**	**3.1**	**1.6**	**6.6**	**2.4**	**0.4**	**0.5**	**2.2**
Gross fixed capital formation											
Residential	7.1	8.8	-1.8	-0.1	2.7	2.1	2.6	2.6	**-6.3**	**-8.5**	**4.3**
Other	2.2	0.0	10.1	7.2	2.8	-2.8	13.0	3.8	**1.6**	**-2.1**	**4.0**
Total	**3.4**	**2.3**	**6.8**	**5.3**	**2.8**	**-1.6**	**10.4**	**3.5**	**-0.2**	**-3.5**	**4.1**
Final domestic expenditure	3.6	4.7	5.1	4.5	3.0	0.8	7.4	2.7	**0.3**	**-0.5**	**2.6**
Stockbuilding*	-0.3	0.1	0.2	-0.2	-0.2	-0.3	0.6	-0.2	**-1.1**	**1.0**	**0.0**
Gross national expenditure	**3.2**	**4.8**	**5.6**	**4.3**	**2.7**	**-0.4**	**8.7**	**2.7**	**-0.6**	**0.4**	**2.6**
Exports of goods and services	7.0	2.0	3.8	3.3	0.2	-17.9	2.4	6.1	**6.3**	**6.1**	**5.8**
Imports of goods and services	3.1	5.1	7.8	4.8	1.3	-15.9	17.2	4.7	**-1.3**	**2.2**	**4.6**
Expenditure on GDP	**4.3**	**3.9**	**4.3**	**3.9**	**2.5**	**0.0**	**4.8**	**2.9**	**1.2**	**1.3**	**2.8**
GDP (production)	3.8	3.7	3.5	3.5	2.5	-0.7	5.2	2.9	**1.2**	**1.4**	**2.8**
GDP (production, March qtr to March qtr)	4.0	3.3	3.6	3.5	1.0	4.2	1.1	2.2	**1.2**	**2.1**	**3.3**

* Percentage point contribution to the growth rate of GDP.

Table 7.5

Summary of economic projections

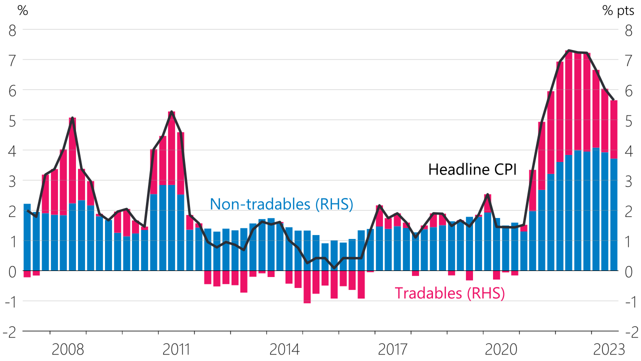
(annual percent change, March years, unless specified otherwise)

	Actuals								Projection		
March year	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Price measures											
CPI	0.4	2.2	1.1	1.5	2.5	1.5	6.9	6.7	**4.3**	**2.4**	**2.0**
Labour costs	1.8	1.5	1.9	2.0	2.4	1.6	3.1	4.5	**3.6**	**3.5**	**3.4**
Export prices (in New Zealand dollars)	0.7	4.1	3.2	1.1	6.8	-6.0	20.9	1.1	**-3.6**	**3.3**	**3.8**
Import prices (in New Zealand dollars)	0.5	1.2	1.6	4.1	2.4	-2.4	18.9	7.0	**-2.4**	**-0.5**	**-0.4**
Monetary conditions											
OCR (year average)	2.9	2.0	1.8	1.8	1.2	0.3	0.5	3.1	**5.5**	**5.6**	**5.1**
TWI (year average)	72.6	76.5	75.6	73.4	71.7	72.4	74.0	71.2	**70.7**	**70.7**	**70.7**
Output											
GDP (production, annual average % change)	3.8	3.7	3.5	3.5	2.5	-0.7	5.2	2.9	**1.2**	**1.4**	**2.8**
Potential output (annual average % change)	3.2	3.3	3.3	3.2	2.9	-0.3	2.9	2.7	**3.3**	**3.0**	**2.8**
Output gap (% of potential GDP, year average)	-0.2	0.3	0.5	0.8	0.3	-0.1	2.2	2.5	**0.3**	**-1.3**	**-1.2**
Labour market											
Total employment (seasonally adjusted)	2.3	5.9	2.9	1.5	2.6	0.1	2.5	2.9	**1.0**	**1.2**	**2.1**
Unemployment rate (March qtr, seasonally adjusted)	5.3	4.9	4.4	4.2	4.2	4.6	3.2	3.4	**4.6**	**5.1**	**4.9**
Trend labour productivity	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.5	**0.4**	**0.5**	**0.7**
Key balances											
Government operating balance* (% of GDP, year to June)	0.7	1.5	1.9	2.4	-7.3	-1.3	-2.6	**-2.4**	**-3.0**	**-1.5**	**-0.2**
Current account balance (% of GDP)	-2.4	-2.5	-3.1	-3.8	-2.3	-2.5	-6.4	-8.1	**-6.6**	**-5.9**	**-4.5**
Terms of trade (SNA measure, annual average % change)	-2.6	2.1	4.4	-2.1	2.0	-1.0	0.4	-4.8	**-1.4**	**0.2**	**4.9**
Household saving rate (% of disposable income)	-1.8	-1.8	-2.0	-1.3	1.4	7.6	2.7	**1.7**	**0.8**	**-0.2**	**0.2**
World economy											
Trading-partner GDP (annual average % change)	3.4	3.5	4.0	3.5	1.8	-0.4	6.0	2.7	**2.9**	**2.6**	**2.9**
Trading-partner CPI (TWI-weighted)	1.2	1.9	1.9	1.4	2.4	0.8	4.0	4.8	**2.6**	**2.2**	**2.1**

* Government operating balance is a model-based estimate of OBEGAL divided by nominal GDP in the projection. The estimate is partial because it relies on projections for some components from the *Pre-Election Economic and Fiscal Update* 2023.

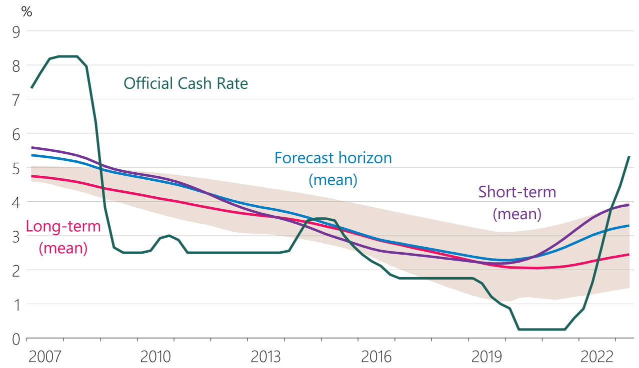
Appendix 2: Chart pack

Figure 7.1
Composition of CPI inflation
(annual)



Source: Stats NZ.

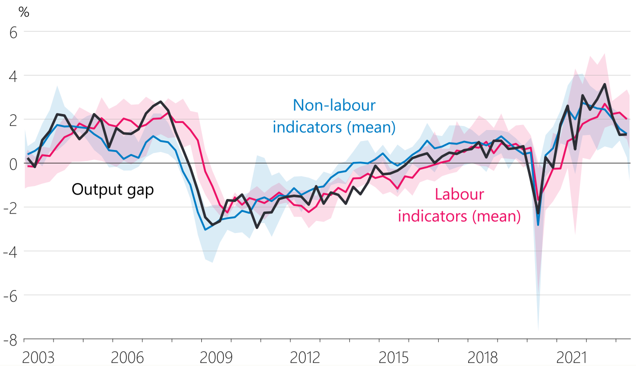
Figure 7.4
OCR and nominal neutral OCR indicator suite
(quarterly average)



Source: RBNZ estimates.

Note: The shaded area indicates the range between the maximum and minimum values from our suite of long-run nominal neutral OCR indicators. See chapter 4.1 of the November 2022 Statement for more information.

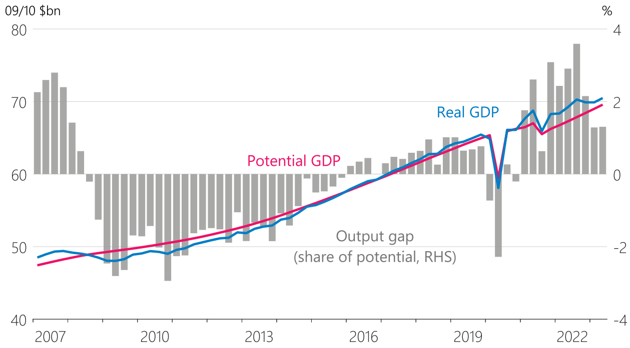
Figure 7.2
Output gap and output gap indicators
(share of potential)



Source: NZIER, MBIE, Stats NZ, RBNZ estimates.

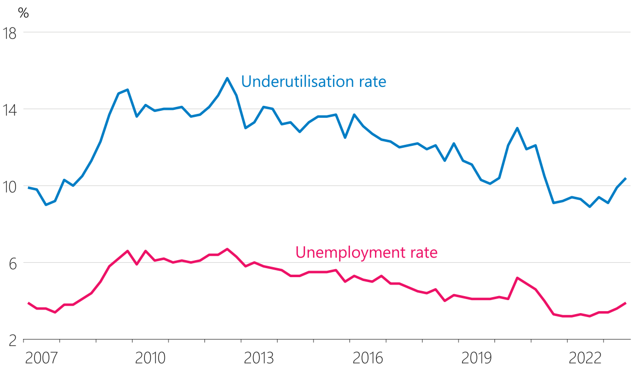
Note: The output gap indicators based on information about the labour market are shown separately from the other indicators. For each group of indicators, the shaded area shows the range of values and the line shows the mean value.

Figure 7.5
GDP and potential GDP
(seasonally adjusted)



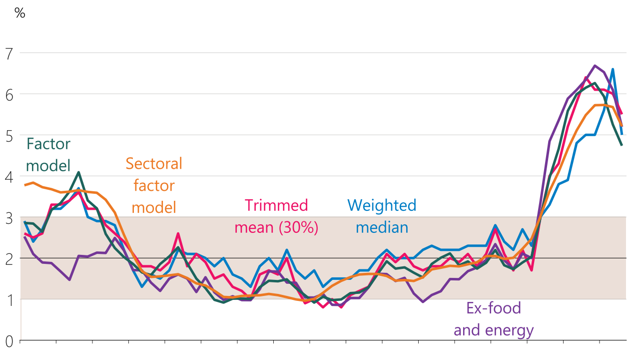
Source: Stats NZ, RBNZ estimates.

Figure 7.3
Unemployment and underutilisation rates
(seasonally adjusted)



Source: Stats NZ.

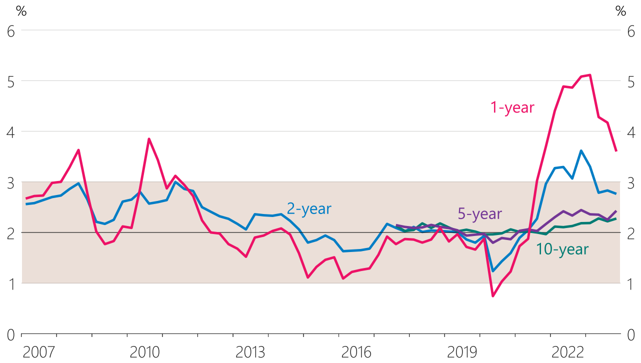
Figure 7.6
Measures of core inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Note: Core inflation measures exclude the GST increase in 2010. The shaded area represents the MPC's 1 to 3 percent target range for annual CPI inflation over the medium term.

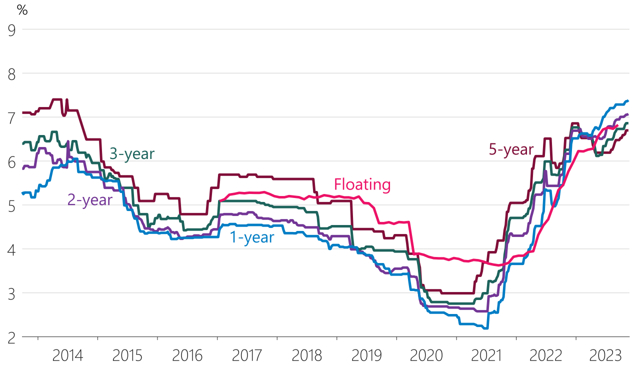
Figure 7.7
Inflation expectations
(annual, years ahead)



Source: RBNZ *Survey of Expectations (Business).*

Note: The shaded area represents the MPC's 1 to 3 percent target range for annual CPI inflation over the medium term.

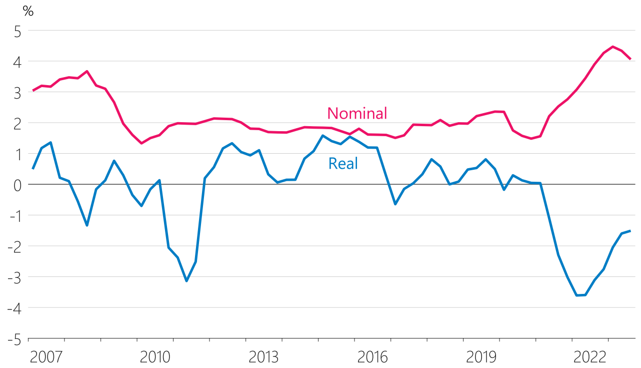
Figure 7.10
Mortgage interest rates



Source: interest.co.nz, RBNZ estimates.

Note: The rates shown for the fixed terms are the average of the advertised rates from ANZ, ASB, BNZ, and Westpac, shown as weekly data. The floating rate represents the monthly yield on floating housing debt from the RBNZ *Income Statement* survey.

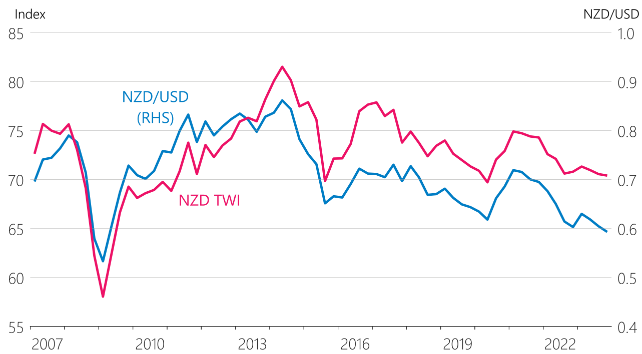
Figure 7.8
Private sector wage growth
(annual)



Source: Stats NZ, RBNZ estimates.

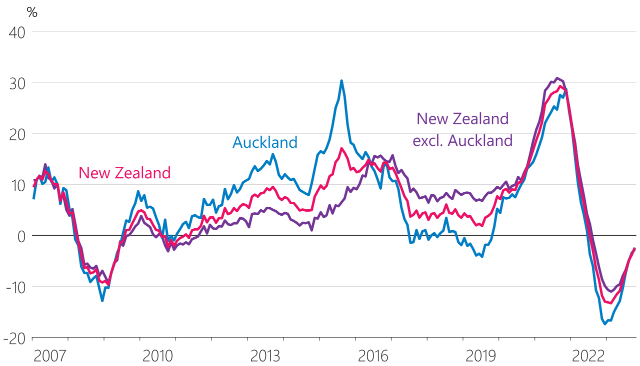
Note: Private sector wage growth is measured by the labour cost index, all salary and wage rates, private sector. Real labour cost index is deflated with headline CPI inflation.

Figure 7.11
New Zealand dollar exchange rates
(quarterly average)



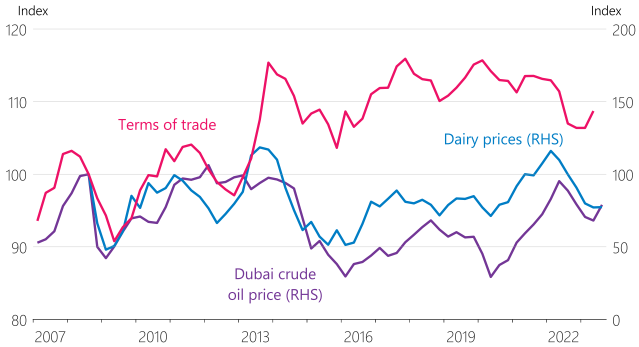
Source: NZFMA, RBNZ.

Figure 7.9
House price inflation
(annual, nominal)



Source: REINZ.

Figure 7.12
Terms of trade, dairy and oil price indices
(index=100 in Q3 2008)



Source: Stats NZ, Global Dairy Trade, Refinitiv, RBNZ estimates.

Reserve Bank
of New Zealand
Te Pūtea Matua