

## Monetary Policy Statement.

August 2024



### **Policy assessment.** OCR 5.25% – Monetary restraint tempered as inflation converges on target

# OCR reduced by 25 basis points to 5.25%.

New Zealand's annual consumer price inflation is returning to within the Monetary Policy Committee's 1 to 3 percent target band. Surveyed inflation expectations, firms' pricing behaviour, headline inflation, and a variety of core inflation measures are moving consistent with low and stable inflation.

Economic growth remains below trend and inflation is declining across advanced economies. Some central banks have begun reducing policy interest rates. Imported inflation into New Zealand has declined to be more consistent with pre-pandemic levels.

Services inflation remains elevated but is also expected to continue to decline, both at home and abroad, in line with increased spare economic capacity. Consumer price inflation in New Zealand is expected to remain near the target mid-point over the foreseeable future.

The Committee agreed to ease the level of monetary policy restraint by reducing the OCR to 5.25 percent. The pace of further easing will depend on the Committee's confidence that pricing behaviour remains consistent with a low inflation environment, and that inflation expectations are anchored around the 2 percent target.

Meitaki, thanks.

Adrian Orr Governor

#### Figure i.1

Official Cash Rate (OCR)





Source: RBNZ estimates.

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#### **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.



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## Monetary Policy Statement. August 2024

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The projections were finalised on 12 August 2024. 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 14 August 2024.





Summary record of meeting

## **Chapter 1.** Summary record of meeting

## The Monetary Policy Committee discussed recent economic and financial developments and their implications for monetary policy in New Zealand.

The Committee noted that the weakening in domestic economic activity observed in the July *Monetary Policy Review* has become more pronounced and broadbased. Headline inflation has declined, and business inflation expectations have returned to around 2 percent at medium- and longer-term horizons. Committee members agreed that monetary policy restraint can now begin to ease. The pace of loosening will depend on the extent to which pricesetting behaviour continues to adapt to lower inflation and inflation expectations remain well anchored to the target mid-point.

Global growth remains below trend across advanced economies. Growth in China has been softer than expected, due to a depressed property market and weak consumer demand. While US growth has been firm, some indicators show emerging weakness. Recent volatility in global asset markets reflects nervousness about US economic prospects, geopolitical risks, and the outlook for international trade policy.

The Committee noted that global inflation has continued to decline but remains elevated in some parts of the services sector in many countries. The Committee noted that some central banks have recently begun cutting policy interest rates, reflecting lower core inflation, weaker activity, and softer labour markets. In this respect, New Zealand's economic activity and nearterm inflation indicators now resemble those in countries in which central banks have started cutting policy rates. While official economic statistics have evolved in line with expectations in the May *Monetary Policy Statement*, a broad range of high-frequency indicators point to a material weakening in domestic economic activity in recent months. These include various survey measures of business activity, electronic card transactions, vehicle traffic, house sales, filled jobs, and job vacancies. These indicators collectively provide a consistent signal that the economy contracted in recent months. The output gap is now assessed to be more negative than was assumed in the May *Monetary Policy Statement*, indicating increased spare capacity.

The Committee discussed possible reasons for the current economic weakness. Alongside restrictive monetary policy, an earlier or larger impact of tighter fiscal policy could be constraining domestic demand. Falling net migration may also be playing a role. The Committee noted that measurement challenges, including methodological changes by Statistics New Zealand in the national accounts, are creating additional uncertainty around the composition and likely persistence of this weakness.

The Committee discussed recent developments in the labour market. The June quarter data suggest that employment growth has slowed, with declines in private sector jobs, hours worked, and wage growth. The impact of government spending restraint and public sector job losses are expected to materialise in further weakening in employment growth over coming quarters. In discussing fiscal policy, the Committee noted that government expenditure is declining as a share of the economy, with contractionary impacts already felt and expected to continue. However, whether tax cuts will boost consumption is more uncertain. While tax cuts could stimulate demand, it is also possible that households might be more cautious about spending in the current economic environment.

The Committee discussed global and domestic financial conditions. Weaker economic data globally have prompted markets to price in lower policy rates for the rest of the year, pushing down sovereign yields in most advanced economies. While domestic financial conditions remain restrictive, they have loosened over recent months. Market expectations for the forward path of the Official Cash Rate (OCR) have contributed to lower wholesale and borrowing rates, along with some depreciation in the nominal exchange rate. The Committee also noted that more households are choosing shorter pricing tenors, meaning that further reductions in mortgage interest rates will flow through to lower household interest costs relatively quickly.

The Committee noted that while credit remains available, demand for credit is weak. This provides a further signal of soft economic activity. High interest rates, sluggish housing market activity and low investment intentions have curbed demand for credit. The agriculture sector has also paid down debt, curbing credit demand.

The Committee considered risks to the financial system. With elevated debt servicing costs and weak economic conditions, some households and businesses are experiencing financial stress. The Committee noted that banks had tightened lending standards in recent years, increased loan loss provisions and were well capitalised, making the financial system more resilient. Non-performing loans have increased from a year ago but remain relatively low by historical standards, and banks are well positioned to support borrowers. In this environment, the Committee agreed that there is no material trade-off between meeting its inflation objectives and maintaining financial system stability.

The Committee discussed inflation developments. Inflation fell considerably in the June quarter, due mostly to lower tradables inflation, while domestic inflation declined in line with expectations. Members were encouraged that surveyed business inflation expectations have returned to around 2 percent at medium- and longerterm horizons. All measures of core inflation have fallen and the components of CPI that are sensitive to monetary policy have declined further. Together with the weaker high-frequency indicators of economic activity, these developments provide the Committee with more confidence that headline inflation is returning to the target band in the September 2024 quarter.

The Committee discussed upside risks to the inflation outlook. The persistence of domestic inflation and the pace at which price-setting behaviour will adjust to a low-inflation environment remain uncertain. Members noted the possibility that firms might adjust prices asymmetrically changing prices quickly when inflation was high and rising, but more slowly when inflation is falling. The Committee noted uncertainty around the outlook for potential output, given weak productivity growth. If potential output grows more slowly than currently assumed, there will be less spare capacity and less downward pressure on domestic inflation.

Furthermore, ongoing geopolitical and trade tensions and the global reshoring of manufacturing activities could lead to higher import prices for New Zealand. Members also discussed the significant rise in global shipping costs, caused by ongoing disruptions to Red Sea and Panama Canal freight routes. Given New Zealand's relatively limited trade through these routes, the effects on shipping costs for New Zealand imports are assumed to be more moderate, and feed through to import prices with a lag.

The Committee discussed downside risks to the outlook. Members agreed that a weaker global economy, particularly in China, could dampen demand for New Zealand exports and reduce exporters' earnings. More subdued global demand could also lead to lower import prices. Members also noted that domestic inflation could fall more quickly than projected if wage- and price-setting behaviour adjusts more rapidly to a low inflation environment. For example, headline inflation will fall sustainably back to the target mid-point more quickly if price and wage setters adjust more to expected future inflation rather than to past inflation.

The Committee discussed the reasons why inflation has been outside of the target range and the expected timeframe for inflation to return to the 2 percent target mid-point. Members noted the lingering effects on inflation from demand effects of monetary and fiscal stimulus, pandemic-related disruptions to supply, increased commodity prices and shipping costs from geopolitical tension, severe weather impacts on local food prices, and low productivity.

Conditional on the information available, the Committee felt that the OCR track in the projection reflected its view on the policy strategy that would best deliver on its *remit*. The Committee noted that monetary policy settings are consistent with annual headline CPI inflation remaining within the target band near the 2 percent mid-point over the forecast horizon.

The Committee observed that the balance of risks has progressively shifted since the May *Monetary Policy Statement*. With a broad range of indicators suggesting the economy is contracting faster than anticipated, the downside risks to output and employment that were highlighted in July have become more apparent. Members were also concerned about avoiding unnecessary near-term instability in output and employment given the evolution of recent indicators.

In discussing the appropriate stance of monetary policy, the Committee noted that recent indicators give confidence that inflation will return sustainably to target within a reasonable time frame. With headline CPI inflation expected to return to the target band in the September quarter and growing excess capacity expected to support a continued decline in domestic inflation, the Committee agreed there was scope to temper the extent of monetary policy restraint. However, members noted that monetary policy will need to remain restrictive for some time to ensure that domestic inflationary pressures continue to dissipate. The pace of further easing will thus be conditional on the Committee's confidence that pricing behaviour is continuing to adapt to a lowinflation environment and that inflation expectations remain anchored around the 2 percent target. On Wednesday August 14, the Committee reached a consensus to reduce the Official Cash Rate by 25 basis points to 5.25 percent.

#### **Attendees:**

### Reserve Bank members of MPC:

Adrian Orr (Chair), Christian Hawkesby, Karen Silk, Paul Conway

#### **External MPC members:**

Bob Buckle, Carl Hansen, Prasanna Gai

#### Treasury Observer:

Dominick Stephens

#### MPC Secretary:

Calista Cheung



Recent economic developments and monetary policy outlook

# **Chapter 2.** Recent economic developments and monetary policy outlook

### Summary

High interest rates are reducing demand in the New Zealand economy. Subdued global growth, slowing net immigration, and lower government spending are also dampening demand. The economy is shifting from a period of excess demand to excess supply. Less pressure on available resources domestically and lower imported inflation have driven declines in Consumers Price Index (CPI) inflation.

Global growth is below trend, and inflation is declining in most of New Zealand's major trading partners. Some central banks have begun lowering policy interest rates, and financial markets expect others to do so over coming months. Slowing growth in China is reducing demand for New Zealand's exports.

Gross domestic product (GDP) increased by 0.2 percent in the March 2024 quarter, following two quarters of modest declines. GDP has been broadly flat since late 2022. Recent indicators of economic activity suggest that GDP contracted in the June 2024 quarter. We assume that GDP will decline further in the September 2024 guarter, but there is a risk that the weakness is more severe or prolonged than we expect. We estimate that the potential growth rate of the economy has slowed, reflecting lower growth in population and productivity. However, the projected decline in GDP means that we expect the output gap to decline to around -2 percent in late 2024.

Subdued economic activity has meant that firms have cut back on hiring. Annual employment growth has slowed to 0.6 percent. While net immigration has recently eased from very high levels, labour supply has continued to grow. Weaker labour demand and growing labour supply have resulted in worsening labour market conditions. The unemployment rate increased to 4.6 percent in the June 2024 quarter. Businesses are reporting that it is much easier to find workers, and other measures of spare capacity in the labour market have also increased.

The New Zealand dollar exchange rate has depreciated in recent months, partly reflecting lower market expectations for the OCR. Global prices for New Zealand's imports have been declining, reflecting low global growth and normalisation in prices for goods following supply chain disruptions over the COVID-19 pandemic.

Annual CPI inflation declined from 4.0 percent in the March 2024 quarter to 3.3 percent in the June 2024 quarter. We expect annual CPI inflation to fall further to 2.3 percent in the September 2024 quarter, returning to within the Monetary Policy Committee's (MPC) 1 to 3 percent target band. Weaker demand and falling import prices have contributed to a sharp decline in annual tradables inflation. Non-tradables inflation – which measures price changes for goods and services less exposed to international competition – remains high, but is declining as spare capacity in the economy opens up.

Measures of core inflation have declined at a similar pace to headline inflation over the past year. Survey measures of household and business inflation expectations have declined. Business expectations for mediumand long-term horizons are now close to the 2 percent target midpoint.

Conditional on the central economic outlook, we project the OCR to decline over time. As inflationary pressure eases, monetary policy can become less restrictive. Compared to the May *Statement*, the outlook for the OCR is lower. This mostly reflects the weaker outlook for GDP and capacity pressures this year, and an updated assumption that businesses' wage- and price-setting behaviour will adapt to a low-inflation environment more quickly over coming years.



### **Current economic assessment**

## Economic growth has remained weak

Economic activity in New Zealand, as measured by production GDP, increased by 0.2 percent in the March 2024 quarter. This was in line with our forecast at the time of the May *Statement* (figure 2.1). Activity in goodsproducing industries has continued to fall, and is now around 10 percent lower than its peak in 2021. Activity in services industries has remained relatively resilient, but contracted slightly in the March 2024 quarter. The overall level of real GDP remains below its peak in the September 2022 quarter. In recent months, timely indicators of economic activity have weakened materially. Based on historical relationships, these indicators suggest that GDP contracted in the June 2024 quarter. Reflecting this, our projection for economic activity over 2024 is weaker than in the May *Statement*, as discussed in box A. The persistence of weaker economic activity is uncertain.

Economic growth is assumed to recover over the 3-year projection period, supported by falling interest rates.

#### Figure 2.1 Production GDP (seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

### Box A: Timely indicators suggest weakening economic activity

A broad range of timely indicators suggest that economic activity contracted in the June 2024 quarter. Monthly indicators generally deteriorated over the course of the quarter.

A range of indicators of economic activity from business surveys declined in the June 2024 quarter. These indicators have historically correlated closely with GDP growth. Firms in the Quarterly Survey of Business Opinion (QSBO) reported weaker trading activity, and the Performance of Manufacturing Index (PMI) and Performance of Services Index (PSI) both reported that activity declined through the quarter (figure A.1 and figure A.2). The ANZ Business Outlook survey reports the net share of firms seeing weaker activity levels compared to a year ago increased since the start of the year. Activity levels have deteriorated further in July.

Other timely indicators of economic activity have also declined (figure A.3). Real electronic card transactions fell in May and June, continuing a similar pace of decline as over the past year. Heavy vehicle traffic and dwelling consents fell sharply in June. While employment grew in the June quarter, monthly filled jobs declined and total hours worked and paid contracted. Job vacancies and house sales also fell sharply in May and June. The annual change in the New Zealand Activity Index – a broad measure of economic activity based on monthly indicators – fell from 1.0 percent in May to -1.1 percent in June, reflecting developments in these and other indicators.

#### Figure A.1

Performance of Manufacturing Index (production) (seasonally adjusted)



Source: BNZ-BusinessNZ.

#### Figure A.2

#### Performance of Services Index (activity/sales) (seasonally adjusted)



Source: BNZ-BusinessNZ.

#### We have revised our near-term assumption for GDP lower, but there is uncertainty around the persistence of this weakness

Our assumption for GDP growth over 2024 is materially weaker than at the time of the May *Statement*. We assume that GDP declined by 0.5 percent in the June 2024 quarter, which is within the middle of the range of estimates based on historical relationships between timely indicators of economic activity and GDP growth.

We assume that GDP declines at a slower pace in the September 2024 quarter, before increasing slightly in the December 2024 quarter. This slowing pace of decline partly reflects:

- income tax cuts, which took effect from 31 July and are assumed to support household spending from this date; and
- easing financial conditions, reflecting a lower OCR and term interest rates – such as fixed mortgage rates – and a weaker New Zealand dollar exchange rate.

The underlying weakness in demand suggested by timely indicators could be more or less persistent than we assume, and the path of economic activity over 2024 is highly uncertain. This uncertainty reflects both the sharp apparent change in the pace of GDP growth, and uncertainty about the degree to which different factors have contributed to the decline. Key economic data series are also less reliable than in the past, due to several factors. These include changes in seasonal patterns, and methodologies that affect Stats NZ's ability to measure quarterly spending by New Zealand households and foreign residents (see chapter 6).

#### Figure A.3 Selected economic activity indicators

(seasonally adjusted, index=100 in January 2020)



Source: ANZ, Stats NZ, RBNZ estimates.

Note: Electronic card transactions have been deflated using the CPI (interpolated monthly).

## Household and government spending are easing

High interest rates are contributing to reduced household consumption, despite strong population growth. Measured household consumption grew in the March 2024 quarter, but Stats NZ has advised that these quarterly estimates are currently less reliable than usual. We assume that household consumption eases over 2024, reflecting high interest rates, a softening housing market, and the weakening labour market (figure 2.2). Tax cuts, which took effect on 31 July, are assumed to provide some support to household consumption, but this support is outweighed by other factors.

Government consumption declined in the March 2024 quarter, and we assume it drops further over 2024. The outlook for government consumption and investment is lower than assumed in the May *Statement*, based on information from *Budget* 2024. The lower outlook for government spending reduces aggregate demand. Box B discusses how changes to our fiscal policy assumptions have affected our projections.

#### Figure 2.2 Private consumption







Source: Stats NZ, RBNZ estimates.

### Box B: Fiscal policy

In *Budget* 2024, the Government chose to reduce spending in the public sector and increased income thresholds for personal income tax rates. Spending reductions in the public sector will reduce inflationary pressure, and income tax threshold changes will increase inflationary pressure.<sup>1</sup> The net impact for monetary policy is expected to be small and is highly uncertain.

#### Government spending is forecast to be a smaller share of the economy

Compared to Half-Year Economic and Fiscal Update (HYEFU) 2023, Government operating allowances – a summary measure of changes to operational spending and taxation policy – were lowered. However, Treasury's lower outlook for potential GDP means it expects to collect less tax and issue more debt than assumed in HYEFU 2023.

Between HYEFU 2023 and Budget 2024, the Treasury's fiscal expenditure forecasts have fallen, but our assumptions for potential GDP growth have also fallen. In our current projections, we have incorporated a lower path for government consumption and investment as indicated by Budget 2024. However, this reduction is only slightly larger than the fall in our potential output assumption since the February Statement (figure B.1).

#### Tax cuts and government consumption reductions have a similar fiscal multiplier

In our projection, we have assumed a 'fiscal multiplier' of 0.5.<sup>2</sup> For example, a \$1 decrease in government consumption decreases GDP by \$0.50, and a \$1 decrease in tax revenue increases GDP by \$0.50. Our assumption is broadly in line with New Zealand fiscal multiplier estimates for both government consumption and tax revenue. There is a wide range of estimates of fiscal multipliers, and inflationary pressures from *Budget* 2024 could be higher or lower than we assume.

Economic activity is not the only channel through which tax cuts can affect inflationary pressure. Tax cuts can also increase labour supply and affect wage bargaining, which may partially offset the inflationary pressure from higher spending.

#### Figure B.1

#### Government consumption and investment

(share of potential, seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

#### The net effect of government spending reductions and income tax cuts on inflationary pressure is uncertain

Some of the reduction in government spending in *Budget* 2024 has already occurred. This means, both now and at the time of the May *Statement*, we had already observed some of the effects of lower government consumption and investment in timely indicators of economic activity (see box A). In contrast, tax cuts were implemented from 31 July so we are yet to observe their effect.

On net, our updated assumptions about fiscal policy have added slightly to medium-term inflationary pressure since the May *Statement*, for several reasons.

- The May *Statement* had already implicitly accounted for a share of the effect of lower government spending via lower GDP forecasts over mid-2024.
- We have incorporated an estimate of the effect of income tax cuts on GDP from the September 2024 quarter, which had not been included in the May *Statement*.
- Our downward revision to government consumption and investment as a share of potential GDP has been slightly offset by a further reduction in our potential output assumption (see chapter 6).

The net effect of government spending reductions and income tax cuts on inflationary pressure is uncertain. As we observe more data, we will be able to better assess the macroeconomic implications.

<sup>1</sup> On net, changes to other tax and transfer policies are likely to be broadly offsetting for inflationary pressure.

<sup>2</sup> A fiscal multiplier is the effect of a change in government spending or revenue on GDP. The multiplier of 0.5 is the cumulative effect throughout a year, and includes the response of interest rates.

## Investment is declining, reflecting weaker demand

Residential investment has continued to decline, as high interest rates and the soft housing market reduce the demand for new housing. Business investment has also fallen, consistent with weak demand and high interest rates. Our projections assume that residential and business investment decline further over the coming year, recovering thereafter as interest rates decline and economic activity increases.

## Net immigration has slowed sharply

High levels of net immigration have driven strong population growth over the past year, supporting economic activity and boosting labour supply. However, estimated monthly net immigration has fallen sharply this year. Lower net immigration reflects both lower migrant arrivals and an increase in departures of New Zealanders, partly in response to weakening economic and labour market conditions. Net immigration is assumed to fall further over the coming year, before recovering as labour market conditions in New Zealand eventually improve (figure 2.3).

High net immigration supported housing market activity over 2023, and contributed to rent inflation rising to historically high levels. The weaker outlook for net immigration is assumed to have broadly offsetting effects on inflationary pressure, as smaller contributions to demand and spending are offset by slower growth in labour supply and potential output.

#### Figure 2.3 Net immigration

(annual, share of working-age population)



#### Figure 2.4

Output gap and indicator suite

(share of potential, seasonally adjusted)



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

Note: The shaded area shows the range of indicators in the suite. The vertical line shows the final quarter of published GDP data. The dotted line shows the mean of our labour and non-labour indicators.

#### Capacity pressures are easing

The past 2 years of broadly flat economic activity have resulted in a decline in capacity pressures. For example, the share of firms in the June 2024 guarter QSBO citing orders as the factor most limiting production reached around 60 percent, the highest level in nearly 10 years. The economy is shifting from a period of excess demand to one of excess supply. The weaker outlook for GDP this year means that the output gap is assumed to fall to a lower level than assumed in the May Statement, troughing at around -2 percent of potential output at the end of 2024 (figure 2.4). Our assumption for potential output is slightly weaker than at the time of the May Statement, consistent with lower estimated net immigration.

#### Figure 2.5

#### Labour market indicator suite



Source: Stats NZ, NZIER, RBNZ estimates.

Note: See Ball (2024), 'Assessing and communicating labour market indicators of inflationary pressure', Analytical Note, Reserve Bank of New Zealand.

## Labour market conditions are weakening

Subdued economic activity has meant that firms have cut back on hiring. Annual employment growth slowed to 0.6 percent in the June 2024 quarter. While net immigration has recently slowed from very high levels, labour supply has continued to grow – the working-age population grew by 2.6 percent in the year to the June 2024 quarter.

#### Figure 2.6 Unemployment rate

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



Source: Stats NZ, RBNZ estimates.

Weaker labour demand and growing labour supply have resulted in weakening labour market conditions. A wide range of measures of labour market pressure have eased substantially over the past year (figure 2.5). Most of the measures in our labour market indicator suite are weaker than their average levels since 2000. The unemployment rate increased to 4.6 percent in the June 2024 guarter, job vacancies have continued to fall sharply, and businesses are reporting that it is much easier to find workers. We assume that labour market conditions will weaken further over the coming year. The unemployment rate is projected to increase further over the coming year, peaking at 5.4 percent (figure 2.6).

The easing labour market and declining headline inflation are contributing to lower growth in nominal wages. A smaller increase in the minimum wage in April compared to previous years has also contributed to slower wage growth. Annual same-job wage growth, as measured by the Labour Cost Index (LCI, ordinary and overtime, private sector) declined from 3.8 percent to 3.6 percent in the June 2024 quarter. Growth in other broader wage measures has also eased. Wage growth is assumed to decline further as labour market conditions and headline inflation continue to ease.

#### Global growth is below trend, and central banks are beginning to reduce policy rates

Growth in New Zealand's trading partners remains below trend (see chapter 3). Interest rates in most advanced economies are above estimates of neutral, as central banks are restricting demand to lower inflation. Growth in China has slowed, reflecting the weak property market and slower growth in household consumption. Financial market volatility has increased, in part because investors have become more uncertain about the outlook for GDP growth and interest rates in major economies such as the US.

Headline inflation has continued to decline in advanced economies, and is now at or close to central bank inflation targets in some economies. Globally, goods inflation rates have declined substantially, while services inflation rates remain elevated and are declining more slowly. Spare capacity is increasing and labour market conditions are softening across economies. A number of central banks have begun lowering policy interest rates, and others are expected to do so over coming months (see chapter 4.2). Market expectations for central bank policy rates have fallen in most economies since the May *Statement*.

#### Figure 2.7 New Zealand dollar trade-weighted index (nominal)



## Lower global inflation is feeding into New Zealand's import prices

Lower global interest rates place upward pressure on the New Zealand dollar exchange rate. However, the New Zealand dollar has depreciated since the May *Statement*, partly reflecting a fall in market expectations for the OCR (figure 2.7, see chapter 5). All else being equal, a lower New Zealand dollar exchange rate leads to higher import prices and increases exporters' returns in New Zealand dollars.

World prices for New Zealand's imports have declined from their peaks in 2022, consistent with easing global inflation, particularly for goods. We assume that import prices will remain around their current level over the medium term. However, there is a wide range of possible outcomes for import prices, and trends over time will depend on factors such as globalisation, trade barriers, and global manufacturing capacity.

Global shipping costs have remained elevated since late last year, as disruptions to shipping routes through the Red Sea have continued. However, shipping costs for imports to New Zealand (as measured by merchandise trade data) have yet to increase. We assume that higher global shipping costs will be reflected in temporarily higher New Zealand import prices (see chapter 4.1 of the February *Statement*).

World prices for New Zealand's exports are assumed to have increased over the first half of 2024, consistent with higher prices for dairy and a range of other commodities over this period. We assume that export prices are broadly unchanged in real terms over the next few years, consistent with subdued growth in global demand.

Source: RBNZ.

#### Figure 2.8 Contributions to CPI inflation (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.

#### Figure 2.9

### Headline and core inflation measures (annual)



Source: Stats NZ, RBNZ.

Note: The dashed lines represent the MPC's 1 to 3 percent target range for inflation over the medium term. The shaded area shows the range of core inflation measures. The core inflation measures include the sectoral factor model, factor model, trimmed mean (30%), weighted median, and CPI excluding food and energy.

#### Figure 2.10

#### **Business inflation expectations**

(annual, years ahead)



Source: RBNZ's Survey of Expectations (Business).

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

#### Inflation is expected to return to the 1 to 3 percent target range in the September 2024 quarter

Annual CPI inflation declined from 4.0 percent in the March 2024 quarter to 3.3 percent in the June 2024 quarter (figure 2.8). This was below the 3.6 percent expected at the time of the May *Statement*. Annual inflation has declined since the beginning of 2023, and we expect a further fall to 2.3 percent in the September 2024 quarter, within the MPC's 1 to 3 percent target band.

Measures of annual core inflation declined in the June 2024 quarter and have eased substantially from their peaks in 2022-2023 (figure 2.9). The pace of decline in core inflation measures indicates that underlying inflationary pressure is easing quickly, and the decline in headline inflation does not just reflect declines in a few categories. Survey measures of household and business inflation expectations have declined. Firms' inflation expectations have returned close to the 2 percent midpoint of the inflation target range for medium- and long-term horizons, for the first time since late 2021 (figure 2.10).

Annual tradables inflation declined to 0.3 percent in the June 2024 quarter (figure 2.11). This was below the 1.1 percent rate assumed in the May *Statement* and accounted for the weaker-than-assumed rate of headline inflation. Annual tradables inflation is now in line with pre-COVID-19 rates.

Falling prices for some volatile items, such as fruit, vegetables, and international airfares, have contributed to lower tradables inflation, as these prices normalise from previously elevated levels. However, falling import prices and weakening retail demand have also contributed to large and broad-based declines in inflation across a range of other tradable items, including cars, furniture, appliances, and household equipment.

Annual tradables inflation is expected to remain low over 2024. We assume that tradables inflation then rises. This is because recent declines in tradables inflation partly reflect normalisation in volatile prices from earlier peaks. We assume that tradables inflation then settles around pre-COVID-19 levels at the end of the projection period.



#### Figure 2.11

2011

2014

#### Figure 2.12

2008

#### Non-tradables inflation



2017

2020

2023

2026

Source: Stats NZ, RBNZ estimates.

#### Figure 2.13

#### **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

Annual non-tradables inflation declined from 5.8 percent to 5.4 percent in the June 2024 quarter (figure 2.12). This was marginally higher than we expected at the time of the May Statement. Non-tradables inflation remains elevated compared to history, and broad-based across categories. However, inflation has declined for items such as restaurant and takeaway meals, and domestic accommodation, partly in response to households cutting back spending on discretionary items.

Inflation for administered goods and services remains high - these are items that are highly influenced by regulated or government-set prices. This inflation is likely to ease over time in response to falling cost pressures and lower headline inflation.

Insurance inflation is also contributing significantly to non-tradables inflation (as premiums rise in response to severe damage from weather events in 2023), but we expect the contribution of insurance inflation to wane over the coming year.

Overall, the different rates of decline across components of non-tradables are as expected given that some components respond more quickly to monetary policy than others (see chapter 4.1 of the May Statement).

Annual non-tradables inflation is assumed to fall sharply over the coming year. Spare capacity in the economy is opening up, and this will flow through to lower non-tradables inflation over time, although prices for some categories will continue to respond more quickly than others. Our projection assumes that wage- and price-setting behaviour adapts more guickly to a low-inflation environment over the medium term than assumed in the May Statement (see chapter 4.1).

Headline inflation is expected to be lower over the next 12 months than at the time of the May Statement, mostly reflecting weaker tradables inflation (figure 2.13). Annual CPI inflation is expected to reach the 2 percent midpoint of the target range in the June 2026 quarter.

Source: Stats NZ, RBNZ estimates.



### Monetary policy outlook

Conditional on the central economic outlook, we project the OCR to decline over time (figure 2.14). As inflationary pressure abates, monetary policy can become less restrictive.

Compared to the May *Statement*, the outlook for the OCR is lower. This reflects both the weaker outlook for GDP and capacity pressures this year, and an updated assumption that businesses' wage- and price-setting behaviour will adapt to a lowinflation environment more quickly over the medium term. The OCR needs to decline sooner than previously assumed, in order for inflation to sustainably settle at the 2 percent target midpoint in the medium term.

#### Figure 2.14 OCR



Source: RBNZ estimates.



## Global developments and outlook

### **Chapter 3.** Global developments and outlook

#### This chapter outlines recent developments as of 8 August 2024.

Headline inflation rates have continued to decline globally, and now sit within 1 percentage point of central bank targets in most advanced economies. Persistent services inflation continues to slow the pace of further disinflation. Labour market conditions have continued to weaken gradually, with unemployment rates across a range of advanced economies back to pre-COVID-19 levels.

Several major central banks have reduced their policy rates over recent months and others are expected to follow later this year. Weaker economic data releases over recent months have lowered policy rate expectations in a range of advanced economies. Sovereign bond yields and global equity prices have also decreased in response to the weaker data. Global shipping costs have increased further in recent months. However, these costs have yet to pass through to global goods prices or shipping costs for New Zealand's imports.

Growth across New Zealand's key trading partners remains below trend and is expected to remain weak until the end of 2025. High interest rates continue to reduce demand and have resulted in emerging spare capacity. Economic growth in China has slowed due to weak consumer spending and structural challenges in the housing market. Economic growth in the US has continued to be strong this year despite restrictive monetary policy settings. However, labour market data and several activity indicators in the US have eased over recent months.

# Global growth is expected to remain below trend until the end of 2025

Annual growth across New Zealand's key trading partners was 2.9 percent in the March 2024 quarter, slightly below the 3.0 percent recorded in the December 2023 quarter. Key trading partner GDP growth is expected to be 2.8 percent over 2024, before picking up slightly over 2025.

Divergences between regions remain. US and China GDP growth are both higher than OECD estimates of potential GDP growth, while most advanced economies continue to grow below potential on an annual basis (figure 3.1). Despite some timely activity indicators and labour market data in the US beginning to show signs of weakness, US GDP remained robust in the June 2024 quarter, increasing 3.1 percent annually. This growth was mostly accounted for by household consumption. This has increased 2.5 percent, which is in line with its longterm trend.

#### Figure 3.1

### Latest GDP growth versus OECD potential growth (annual)



Source: Haver Analytics, OECD.

Note: Unless otherwise specified, the latest data are for the March 2024 quarter.

#### Figure 3.2

### China GDP growth and retail sales (annual)

lannaa



#### Source: Haver Analytics.

#### Figure 3.3

#### Unemployment rates

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



Source: Haver Analytics.

## Structural challenges continue to limit growth in China

GDP growth in China was weaker than expected in the June 2024 quarter, increasing at an annual rate of 4.7 percent. China's GDP data highlighted a 'two-speed' economy, with weakness in consumer demand and the service sector partially offset by increases in manufacturing activity and net trade (figure 3.2). Retail sales grew 2.3 percent annually in the June 2024 quarter, versus an average of 7.5 percent prior to the COVID-19 pandemic. Annual CPI inflation remained low, at just 0.2 percent in the June 2024 quarter. Weak consumer sentiment amid challenges in the housing sector remain a key drag on the Chinese economy. Measures of real estate activity remain weak. Compared with late 2021 (when real estate stresses emerged), new construction, buildings sold, and investment completed were respectively around 70, 40 and 30 percent lower.

## Global labour markets continue to weaken gradually

In advanced economies, unemployment rates have increased over the last year, and are broadly in line with their pre-COVID-19 levels in most cases (figure 3.3). The most recent jobs report in the US showed the unemployment rate unexpectedly increasing, from 4.1 percent in June to 4.3 percent in July. Across advanced economies, job openings have continued to fall from high levels. Wage growth remains elevated but is expected to continue declining in response to lower inflation and weak economic activity.

# Inflation continues to decline slowly towards central bank targets

Annual headline inflation rates have declined to within 1 percentage point of central bank inflation targets in most advanced economies. Annual headline inflation in the US, euro area, and Australia is 2.5, 2.5 and 3.8 percent respectively, according to the latest available data. Declines in headline inflation rates have largely been accounted for by falling goods price inflation. At an aggregated level for advanced economies, goods prices are no longer increasing. However, the pace of global disinflation has slowed in recent months, largely due to persistent services inflation. Services inflation has remained largely flat across most economies over the first half of 2024 (figure 3.4). Despite this, core inflation has continued to slowly decline across advanced economies.



Source: Haver Analytics, RBNZ estimates.

2014

2012

2010

Note: Advanced economy aggregate inflation is calculated by Haver Analytics using goods CPI inflation series weighted by the countries' shares of world GDP based on PPP estimates from the IMF. Countries included in the sample are the US, UK, Euro area, Japan, Canada and South Korea.

2018

2020

2022

2024

2016

## Some major central banks have started lowering their policy rates

The European Central Bank (ECB), Bank of Canada (BoC) and Bank of England (BoE) have lowered their policy rates in recent months. All three central banks indicated that monetary policy no longer needed to be as restrictive to bring inflation back to target.

The ECB lowered its policy rate by 25 basis points in June before keeping it unchanged in July, and noted future decisions will be data-dependent. Additionally, the BoE lowered its policy rate by 25 basis points at its latest meeting in August. The BoE MPC voted by a majority of 5-4 to reduce the Bank Rate, assessing that the restrictive stance of monetary policy continues to weigh on activity in the real economy. Meanwhile, the BoC lowered its policy rate by 25 basis points at both its June and July meetings. The BoC cited excess supply and downside risks to growth as reasons for reducing its policy rate a second time. Market pricing implies that investors expect the ECB, BoE and BoC to lower their policy rates further over 2024, by 70, 45 and 70 basis points respectively (figure 3.5).

Market pricing currently suggests that the US Federal Reserve (Fed) will begin lowering its policy rate at its next meeting in September, with around 105 basis points of cuts expected over 2024. This has increased from the 45 basis points of cuts expected at the time of the May *Statement* and largely reflects the softer-than-expected activity, labour market and inflation data in the US over this period.

Financial market participants are expecting the Reserve Bank of Australia (RBA) to lower its policy rate later than other advanced economy central banks. This is consistent with expectations at the time of the May *Statement* and primarily reflects persistent inflation amid a tight labour market in Australia. Chapter 4.2 compares macroeconomic conditions between countries that have and have not reduced policy rates this year.





Source: Bloomberg

#### Figure 3.6

#### Global equity prices



#### Figure 3.7

#### 2-year sovereign yields



Source: Bloomberg

In July, the People's Bank of China (PBoC) cut the 7-day reverse repo rate (its new key policy rate) and medium-term lending facility rate by 10 and 20 basis points respectively. This reduction was not expected by market participants. It followed weaker-thanexpected June 2024 quarter GDP data and continued concerns regarding deflationary pressures.

## Sovereign yields and equity prices have declined

Weaker-than-expected US labour market data in early August triggered a large decline in investor risk sentiment and lower global equity prices (figure 3.6). Since the May Statement, global equity prices have decreased 1.1 percent, and the US S&P 500 is unchanged, having fallen as much as 8.5 percent in early August. Additionally, US equity market volatility briefly increased to its highest level since October 2020, as measured by the VIX. Declines in Japanese equity prices were particularly large, with the Nikkei 225 decreasing 9.8 percent since the May Statement. This was due to a sharply appreciating yen, driven by a narrowing of interest rate differentials with other advanced economies.

In the US, the 2-year Treasury yield has fallen by around 80 basis points since the May *Statement.* In other advanced economies, 2-year sovereign bond yields have also declined significantly (figure 3.7).

Risk sentiment in financial markets has deteriorated, reflecting concerns about a weaker global economy, triggered by a combination of weaker-than-expected US economic data, heightened stock market valuations and geopolitical risk in the Middle East.

## Global shipping costs continued to increase

The World Container Index has increased 60 percent since the May *Statement* and 235 percent since the beginning of 2024. Shipping rates continue to be affected by ongoing disruptions to travel in the Red Sea. Despite this increase, shipping costs have had a limited impact on global goods prices so far. Additionally, shipping costs paid by New Zealand importers have not increased this year (figure 3.8).

#### Figure 3.8





Source: Bloomberg, Stats NZ, RBNZ estimates.

Note: The merchandise trade shipping costs series is 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. The series is expressed as a percentage of the VFD figure.



## **Chapter 4.** Special topics

## Before the publication of each *Statement*, RBNZ staff provide analyses of some topical issues to the Monetary Policy Committee.

Topics for the August Statement included:

- 1. Price-setting behaviour in a low-inflation environment
- **2.** Comparing macroeconomic conditions in economies at different stages of monetary policy easing

#### Special topics in the past 12 months

| Торіс   | Date/publication                    |
|---|-------------------------------------|
| Non-tradables inflation in New Zealand                                    | May 2024 Statement (Chapter 4)      |
| Recent trends in New Zealand's exporting sector                           | May 2024 Statement (Chapter 4)      |
| The effect of higher shipping costs on inflation and the OCR              | February 2024 Statement (Chapter 4) |
| The effect of the Government's proposed policies on monetary policy       | February 2024 Statement (Chapter 4) |
| Monetary policy transmission lags   | November 2023 Statement (Chapter 4) |
| 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)   |



# Price-setting behaviour in a low-inflation environment

#### Summary

- Price-setting behaviour including of wages – plays a key role in determining how past inflation affects current inflation. We can use 'survey measures' (inflation expectations of households and firms) or 'modelled measures' to estimate pricesetting behaviour.
- Non-tradables inflation in the Reserve Bank's core forecasting model, NZSIM,<sup>3</sup> is mainly determined by modelled pricesetting behaviour and the output gap. Price-setting behaviour also influences wage growth and tradables inflation. Our projections for inflation and the OCR are therefore sensitive to our price-setting behaviour assumption.
- Given the large increase and subsequent decline in inflation in recent years, we have updated our previous research on price-setting behaviour. In line with the original research, our updated analysis suggests that when explaining nontradables inflation, modelled measures of price-setting behaviour perform better than survey measures.
- Price-setting behaviour in NZSIM is modelled as depending on its previous value and the most recent inflation data. Following our updated analysis, we now assume that price-setting behaviour is more sensitive to recent inflation data. This means that price-setting behaviour adapts faster when actual inflation changes significantly.
- As a result of this change, price-setting behaviour adapts faster over coming years in response to falling headline inflation than assumed at the time of the May *Statement*. This faster adjustment contributes to lower inflationary pressure over the medium term.

<sup>3</sup> See Austin and Reid (2017), 'NZSIM: A model of the New Zealand economy for forecasting and policy analysis', *Bulletin*, Reserve Bank of New Zealand.

#### Price-setting behaviour is important to understand inflationary pressure

Price-setting behaviour can be influenced by a range of factors, including inflation expectations, the degree of indexation to past inflation, and the frequency of price or wage adjustments. For example, when businesses and workers expect high inflation, they may attempt to increase their own prices or bargain for higher wages today, increasing inflationary pressure. Moreover, indexation of prices and contracts to past inflation can become more widespread in high inflation environments, making price-setting behaviour as well as inflation more persistent.

Figure 4.1

## Modelled explanation of non-tradables inflation in the central projection

(quarterly, seasonally adjusted)



Source: RBNZ estimates.

Note: 'Other' represents the unexplained residual, real wages and a lag term. The orange bars in the June 2025 and 2026 quarters are due to the inclusion of proposed changes to household electricity prices (see chapter 6).

In NZSIM, non-tradables inflation is largely determined by the output gap and pricesetting behaviour. Price-setting behaviour also affects wage growth and tradables inflation.

Our economic projections assume that restrictive monetary policy is needed partly because price-setting behaviour is assumed to take time to adjust to a lowinflation environment. Restrictive monetary policy leans against the inflationary pressure caused by price-setting behaviour by creating spare capacity in the economy (figure 4.1).

As price-setting behaviour adjusts to be consistent with a low-inflation environment, then monetary policy can become less restrictive. Therefore, the speed at which price-setting behaviour adapts is an important determinant of the outlook for the OCR.

Given the changing inflation environment, we are closely monitoring how different measures of price-setting behaviour are changing, and evaluating whether our assumptions remain appropriate. Moreover, recent international research suggests that price-setting behaviour can differ between high- and low-inflation environments.<sup>4</sup>

<sup>4</sup> See <u>Dedola et al. (2024)</u>, 'What does new micro price evidence tell us about inflation dynamics and monetary policy transmission?', *Economic Bulletin*, European Central Bank and <u>Bank of Canada (2024)</u>, 'Box 3: Analyzing businesses' price-setting behaviour', *April Monetary Policy Report.* 

#### Price-setting behaviour can be estimated using survey measures or modelled measures

Price-setting behaviour can be estimated using two broad types of methods. 'Modelled measures' are estimated using equations or models. For example, price-setting behaviour in NZSIM is modelled as depending on its previous value and the most recent inflation data. This means that price-setting behaviour adapts over time to changes in actual inflation. These measures can be quite persistent, depending on the assumed speed at which behaviour adapts.

'Survey measures' are based on surveyed inflation expectations of households or businesses. These measures assume that price-setting is solely based on expected future inflation. Depending on the survey, these measures often adjust faster to recent changes in inflation than modelled measures. For instance, our Survey of Expectations shows that businesses expect inflation near 2 percent beyond horizons of one year, despite experiencing high headline inflation rates over recent years.

#### Previous research found that modelled measures perform better than survey measures at explaining inflation

In 2015, we changed the price-setting behaviour measure in NZSIM from a survey measure to a modelled measure to better explain low non-tradables inflation over this period.

This decision reflected a range of analysis, such as Karagedikli and McDermott (2016)<sup>5</sup> and McDonald (2017)<sup>6</sup> that showed modelled measures were better able to explain developments in inflation. There is a range of reasons why modelled measures may perform better than survey measures. For instance, they may better capture:

- indexation direct (for example, excise taxes, contracts) or indirect (using inflation as a guide)
- behavioural change over time firms might get used to certain rates of price adjustment
- relative price dynamics following a period of high or low inflation, some prices may slowly adjust over time to restore relative prices to equilibrium.

Surveys have additional challenges, such as sampling error, and uncertainty as to whether the survey population represents those whose expectations matter most for determining inflation.

#### Modelled measures still outperform survey measures

McDonald (2017) analysed which measures of price-setting behaviour performed best at forecasting non-tradables inflation, when used in a range of different Phillips curve equations.

We recently undertook similar analysis to see whether this finding held when the highinflation period during the COVID-19 pandemic was incorporated. We find that modelled measures continue to outperform our survey measures at predicting non-tradables inflation. However, we also find that modelled measures that adapt more quickly to changes in recent inflation tend to perform better than the highly persistent measure used in NZSIM. Consequently, the evidence supports placing more weight on less persistent modelled measures of price-setting behaviour in our projections.

<sup>5</sup> See <u>Karagedikli and McDermott (2016)</u>, 'Inflation expectations and low inflation in New Zealand', *Discussion paper*, Reserve Bank of New Zealand.

<sup>6</sup> See McDonald (2017), 'Does past inflation predict the future?', Analytical Note, Reserve Bank of New Zealand.

## Price-setting behaviour measures are diverging by more than usual

Historically, survey and modelled measures of price-setting behaviour have been highly correlated. This reflects that firms and households partly form their inflation expectations based on recent developments in actual inflation. However, survey and modelled measures of price-setting behaviour have diverged sharply since 2023 (figure 4.2). Survey measures tend to react more quickly than modelled measures to changes in headline inflation. Even accounting for this, surveyed expectations have fallen at a slightly faster pace than historical relationships would suggest given the decline in headline inflation since 2023.7 The current divergence in pricesetting behaviour measures is likely to persist, conditional on our projection for headline inflation

#### Figure 4.2 Price-setting behaviour measures (standardised over history)



#### Source: RBNZ estimates.

Note: Measures have been standardised over history to make them comparable given differences in historical averages and degrees of variability between measures. The vertical axis shows how many standard deviations away from its historical average each measure is, where zero indicates the historical average. Survey measures include household expectations for inflation 1 year ahead and businesses' 1- and 2-year-ahead inflation expectations. Modelled measures include the measure for NZSIM, a more flexible variation of the NZSIM measure that is more sensitive to inflation data, and a measure based on the simple average of headline inflation over the past 3 years. Projections are based on estimated historical relationships with headline inflation, and conditional on our current projection for inflation.

#### Faster adjustment in price-setting behaviour lowers inflationary pressure over the medium term

We have adjusted our assumption for the path of price-setting behaviour over the medium term in our central projection. We assume that price-setting behaviour adjusts to a low-inflation environment more quickly over the medium term than in the May *Statement*.

Our updated assumption, that price-setting behaviour adjusts more quickly, contributes to lower inflationary pressure over the medium term relative to the May *Statement*. This means a lower path for the OCR is necessary, all else equal, as monetary policy does not need to remain as restrictive for as long to return inflation to the midpoint of the MPC's target range.

There are risks in both directions to our assumption for price-setting behaviour, reflecting the unusual experience with inflation since the COVID-19 pandemic. Pricesetting behaviour could be more persistent than we assume. For example, previous high inflation could be more entrenched in pricesetting processes. Price-setting behaviour could also adjust more quickly. Households and firms may recognise the unusual nature of the high inflation period in recent years, and so may adjust their behaviour more quickly to a low-inflation environment than historical relationships suggest.

<sup>7</sup> This may be explained by what the academic literature terms "rational inattention to inflation". **Bayarmagnai (2023)** finds that New Zealand households pay more attention to inflation when it is high and adjust their inflation expectations more quickly and accurately in high-inflation environments.



Figure 4.3

### Comparing macroeconomic conditions in economies at different stages of monetary policy easing

#### Summary

- On average, economies where central banks have lowered policy rates are experiencing softer GDP growth and inflation closer to target. Near-term consensus expectations for future inflation are also lower for economies where policy rates have been reduced.
- In New Zealand, GDP growth has been more in line with those economies where central banks have reduced policy rates, while inflation has been more aligned to those that have held rates steady.
- We project New Zealand GDP growth to weaken significantly this year, to below the growth rates in economies where central banks have lowered interest rates. If inflation declines as we assume in our projections, it will quickly align with central banks that have lowered policy rates.
- While comparing the differences in these economies can be useful, the divergences are relatively small. Broadly, all of the economies in our sample are seeing inflation fall and have similar medium-term outlooks.

#### How do economies that have lowered policy rates compare with those that are holding rates?

We analyse a sample of advanced small open economies that are similar to us and larger key trading partners, who we group together based on where they are in their monetary policy cycles. This allows us to understand if there are differences in macroeconomic conditions on average between economies where the central bank has begun to lower policy rates, and those where it has not. Our sample contains central banks from the following inflation-targeting economies: Sweden, the euro area, Canada, the UK, the US, Norway, Australia and New Zealand.

In this sample, Sweden, the euro area, Canada and the UK have already lowered policy rates while the US, Norway and Australia have not yet done so. However, market participants currently expect all the central banks in this sample to have begun reducing policy rates by the March 2025 quarter (table 4.1). The estimated degree of monetary policy rate restrictiveness is broadly similar across the two groups (figure 4.3). This suggests that those already reducing policy rates are doing so because of differing economic conditions, rather than because monetary conditions are much tighter.

### Estimated deviation of policy rates from neutral

Source: Sveriges Riksbank, Bank of Canada, European Central Bank, Bank of England, Federal Reserve Bank of St. Louis, Norges Bank, Reserve Bank of Australia, RBNZ estimates.

Note: Dotted lines denote simple averages for each group



#### Table 4.1

#### Policy rates and expectations across economies

|                         | Sweden      | Canada       | Euro area    | UK             | US                | Norway           | Australia        |
|-------------------------|-------------|--------------|--------------|----------------|-------------------|------------------|------------------|
| Peak policy<br>rate (%) | 4           | 5            | 4.5          | 5.25           | 5.25-5.50         | 4.5              | 4.35             |
| Month of first cut      | May<br>2024 | June<br>2024 | June<br>2024 | August<br>2024 | September<br>2024 | December<br>2024 | February<br>2025 |
| Current policy rate (%) | 3.75        | 4.5          | 4.25         | 5.0            | 5.25-5.50         | 4.5              | 4.35             |

Source: Bloomberg.

Note: Dates in italics are market-implied expectations of first rates cuts, derived from overnight indexed swap rates and Federal Funds Rate futures as at 8 August 2024. Euro area rates refer to their main refinancing operations fixed rate.

## Inflation is higher in countries that have not reduced policy rates

Across measures of inflation, outcomes differ between countries that have lowered policy rates and those that are yet to do so. For economies who have lowered rates, headline inflation is on average 0.1 percentage points above central bank targets. This compares to an average of 0.8 percentage points above for those that have held rates and 1.3 percent higher in New Zealand (figure 4.4). This divergence is larger with respect to goods inflation. The average annual rate of goods inflation in countries that have lowered policy rates is 1.1 percentage points below a level that has historically been consistent with inflation at target.<sup>8</sup> In countries that are holding, it is on average 0.5 percent higher than benchmark, while in New Zealand it is 0.2 percentage points higher. Services inflation remains materially higher than benchmark in all countries in the sample.

The outlook for inflation also differs between the two groups. Bloomberg consensus forecasts expect those that have lowered rates to have significantly lower inflation over the next 12 months relative to those who have not. While New Zealand's starting point of inflation is in line with countries that have held rates, our forecasts for inflation in New Zealand, based on more timely indicators for inflation, are more aligned with the economies who have lowered rates (figure 4.5).

#### Figure 4.4 Headline inflation

(annual, deviation from target midpoint)



Source: Haver Analytics, Stats NZ, RBNZ estimates.

Note: Dotted lines denote simple averages for each group. Data as at 8 August 2024.

#### Figure 4.5

#### Inflation projections (annual, deviation from target midpoint)



Source: Bloomberg consensus forecasts, RBNZ estimates.

Note: This chart shows the average inflation forecast for each group based on Bloomberg consensus forecasts for other economies, and the RBNZ's current projection for New Zealand. Data as at 8 August 2024.

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#### Activity has slowed significantly in countries that have lowered policy rates

GDP growth has slowed significantly in economies that have lowered policy rates. In the economies that have lowered rates, as well as in New Zealand, the average annual GDP growth rate is now below 0.5 percent, compared to an average of 1.7 percent in the economies that have held policy rates constant (figure 4.6). While GDP data are generally lagged in all economies, timely indicators such as business surveys suggest that this difference will continue in the near term.

Weak GDP growth is resulting in easing capacity pressures. While some of the central banks in our sample do not publish estimates of the output gap, available data show that those that have lowered rates have assessed their output gaps to have been negative since mid-2023, with the exception of the UK, which was the most recent to lower policy rates. We assume that the output gap in New Zealand turned negative in the June 2024 quarter, and will decline sharply over the rest of the year (figure 4.7).

## Labour market conditions have weakened in most economies

Labour market conditions in most of the economies in our sample have softened. The average change in unemployment rates over the last 12 months is broadly similar between the two groups in our sample (figure 4.8).

There is significant variation between economies that have lowered policy rates. Sweden (the first economy in our sample to lower rates) and Canada (which has lowered policy rates twice to date) have seen larger increases in unemployment rates over the past 12 months. In contrast, the UK has experienced a smaller increase and unemployment has been stable in the euro area. Over the same period, the unemployment rate in New Zealand has increased by a similar degree to Sweden and Canada.

#### Figure 4.6 GDP growth





Source: Haver Analytics. Stats NZ

Note: The chart includes GDP data up to the March 2024 quarter.

#### Figure 4.7

#### Central bank output gap estimates

(share of potential)



Source: Sveriges Riksbank, Bank of Canada, Bank of England, Norges Bank, RBNZ estimates. Note: Data as at 8 August 2024. Sweden, Canada and the UK have already reduced rates, while Norway has not. UK output gap has been linearly interpolated from published annual average excess demand/excess supply figures. Sweden estimates a GDP gap measuring the deviation of GDP from the Riksbank's assessed trend.

#### Figure 4.8 Unemployment rates (12-month change)



Source: Haver Analytics, Stats NZ.

Note: Dotted lines denote simple averages for each group. Data as at 8 August 2024.

#### How does New Zealand compare?

Broadly, economies that have lowered policy rates have lower inflation and weaker GDP growth than economies that have not yet lowered policy rates. However, compared to these economies, data in New Zealand are mixed and we do not completely align with either of these groups.

While headline inflation in New Zealand has been falling, inflation is still further above our target midpoint than all other countries in the sample (figure 4.4). In part, this may reflect that New Zealand publishes inflation only quarterly, whereas most other countries have monthly data. Our projections that consider more timely indicator data for inflation suggest that annual headline inflation will fall more quickly than in most economies holding policy rates and bringing us in line with economies that have already lowered rates (figure 4.5).

From an activity and unemployment perspective, the New Zealand economy has evolved broadly in line with those that have lowered policy rates. As indicated by recent timely data, we now expect GDP in New Zealand to contract over the middle of 2024. As a result, GDP growth and the output gap are likely to fall below economies where interest rates have been lowered (see box A, chapter 2). Over the last 12 months, the unemployment rate in New Zealand has increased by 1 percentage point, similar to Sweden and Canada and higher than the 0.6 percentage point average of those economies holding policy rates. New Zealand is currently mixed across these macroeconomic measures compared to the two groups of economies. New Zealand's output gap reached a higher level than other countries in our sample during the COVID-19 pandemic, indicating higher capacity pressures relative to our sample countries. The duration of border closures and New Zealand's remote geographical location impacted the availability of labour and goods, contributing to these larger capacity pressures.

Accommodative monetary and fiscal policy in New Zealand also supported domestic demand during the COVID-19 pandemic. Consequently, inflation in New Zealand has remained elevated. However, our economic projections show that this is likely to be unwound and we are quickly moving closer to the group of countries that have lowered policy rates.

# Chapter

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## Domestic financial conditions

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### **Chapter 5.** Domestic financial conditions

Monetary policy affects economic activity and inflation by influencing financial conditions in New Zealand. These financial conditions include the interest rates at which households and businesses save and borrow, the exchange rate and other factors such as credit availability. This chapter outlines recent developments in financial conditions in New Zealand, as at 8 August 2024.







Aug-24 MPS Oct-24 MPR Nov-24 MPS Feb-25 MPS Apr-25 MPR May-25 MPS July-25 MPR

Source: Bloomberg.

Note: The blue line shows market expectations for the OCR immediately before the May *Statement*. 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.

#### Figure 5.2



### New Zealand interest rate swap rates

Source: Bloomberg.

Note: Interest rate 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 for the duration of the agreement.

Financial conditions have loosened since the May Statement. Mortgage rates and term deposit rates have fallen at all horizons. Wholesale interest rates such as interest rate swaps have decreased significantly at all terms compared to immediately before the May Statement. One reason for the loosening in financial conditions is that market participants' expectations for upcoming OCR decisions are lower than they were immediately before the May Statement (figure 5.1). Market participants' near-term expectations for the OCR decreased significantly in July, in response to the July Monetary Policy Review, as well as weakerthan-expected data.

As of 8 August 2024, market pricing indicates that market participants expect 100 basis points of cuts to the OCR by the end of 2024 and 200 basis points by July 2025. Compared to before the May *Statement*, market expectations for the level of the OCR are around 55 basis points lower for the end of 2024 and 75 to 90 basis points lower across 2025.

Domestic wholesale interest rates have decreased significantly at all terms since the May *Statement* as market participants have reassessed the likely path of future OCR moves (figure 5.2). The 2-year swap rate has decreased by around 80 basis points, consistent with significantly lower near-term OCR expectations. The 10-year swap rate has also decreased by around 45 basis points. Following these moves, the interest rate swap curve is less inverted compared to before the May *Statement*. This is because shorter-term rates are now not as far above longer-term rates. The New Zealand dollar exchange rate has moved lower on a trade-weighted basis since the May *Statement* (figure 5.3). Expected short-term interest rates in New Zealand have declined to levels below those of some of our key trading partners, including the US and Australia. This has reduced the attractiveness of New Zealand assets for overseas investors looking for higher relative returns, putting downward pressure on the New Zealand dollar. Weaker risk sentiment has also contributed to a weaker New Zealand dollar.

Mortgage rates have declined since the May *Statement* (figure 5.4). Mortgage rates for 1- and 2-year tenors account for a large proportion of new mortgage flows. They have both declined by around 30 basis points. Despite this, we assess current mortgage rate levels as still being restrictive.

Decreases in wholesale rates have been larger than the decreases in mortgage rates. This means that spreads between mortgage rates and wholesale rates have increased since the May *Statement* (figure 5.5). The spreads between mortgage and wholesale rates at the 1- and 2-year horizons are now slightly below their average levels in the pre-COVID-19 period. Mortgage rates continue to be influenced by the low cost of bank funding.

#### Figure 5.3 New Zealand dollar trade-weighted index (nominal)



#### Figure 5.4 New Zealand mortgage rates



Source: interest.co.nz.

Note: The mortgage rates shown are the average of the latest advertised fixed-term rates on offer from ANZ, ASB, BNZ and Westpac for mortgages with a loan-to-value ratio of less than 80%.

#### Figure 5.5

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



Source: interest.co.nz, Bloomberg.

Interest rates on term deposits, which make up a large share of banks' core funding, are lower at all terms. The spread between the 6-month term deposit rate and the equivalent wholesale rate has increased since the May *Statement* (figure 5.6). This spread, which has trended upwards since the start of 2023, remains lower than its pre-COVID-19 average, holding down the cost of bank funding. Relative bank funding costs are likely to increase over the medium term, with banks expected to compete more aggressively for customer deposits as accommodative bank funding conditions continue to fade.

#### Figure 5.6

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



Source: interest.co.nz, Bloomberg.

Note: The term deposit rate shown is the average of the latest 6-month term rates on offer from ANZ, ASB, BNZ and Westpac. The 6-month bank bill rate represents the rates at which banks are willing to borrow from, or lend to, one another over a 6-month term.

## Table 5.1Developments in domestic financial conditions as of 8 August 2024

| Wholesale intere                          | st rates   |
|---|--|
| Market pricing<br>for the OCR             | <ul> <li>Market expectations for the OCR can be inferred from prices for overnight indexed swap (OIS) contracts, which measure the expectations of market participants for the OCR. Market pricing for the OCR has been volatile since the May <i>Statement</i>. After the May <i>Statement</i>, market participants' expectations for the OCR over 2024 increased. However, the July Monetary Policy Review and weaker-than-expected recent data contributed to a significant downward shift in market participants' expectations for the OCR is currently significantly lower than at the time of the May <i>Statement</i>. Immediately after the July Monetary Policy Review was released, market participants moved to price in a larger degree of monetary policy easing. Markets are now pricing in around 100 basis points of cuts by November, which is around 55 basis points of additional easing compared to what was priced in at the time of the May <i>Statement</i>. The current and expected OCR settings are contractionary, sitting above our estimates for the neutral OCR (see figure 7.4).</li> </ul>   |
| Interest rate<br>swaps                    | <ul> <li>An interest rate swap involves the exchange of fixed and floating interest rate payments between two parties over a specified period. The level of interest rate swaps will be approximately equal to market expectations for average short-term market interest rates over the swap tenor.</li> <li>New Zealand swap rates have been volatile since the May <i>Statement</i>. Overall, swap rates are significantly lower than they were just before the May <i>Statement</i>. The 2-year swap rate is around 80 basis points lower over this period and the 10-year swap rate is around 45 basis points lower. Consequently, the degree of swap curve inversion (when shorter-term rates are higher than longer-term rates) has decreased, with the difference between the 2- and 10-year swap rates narrowing from around -40 basis points at the time of the May <i>Statement</i> to around -5 basis points.</li> <li>Domestic developments have been a key influence on recent interest rate movements. Wholesale rates increased in response to the May <i>Statement</i> and remained in a relatively close range between the May <i>Statement</i> and the July Monetary Policy Review. Weaker activity indicators and lower-than-expected CPI data have also contributed to declines in interest rate swaps. These factors have resulted in interest rate swaps moving to their lowest levels since the middle of 2022.</li> </ul> |
| New Zealand<br>government<br>bonds (NZGB) | <ul> <li>NZGB yields are lower since the May <i>Statement</i>, influenced by similar factors to interest rate swaps (discussed above).</li> <li>Bid-ask spreads, which measure how far apart buyers and sellers are from reaching an agreed price to trade, are broadly unchanged since the May <i>Statement</i>.</li> <li>Demand for NZGBs has remained relatively strong given the level of issuance over recent years, but there are signs that elevated issuance levels are having an effect on market conditions. Recent NZGB auctions for longer tenor bonds have had lower-than-average bid-cover ratios, although demand for short and medium tenor bonds has remained relatively strong.</li> <li>The difference between NZGB yields and swap rates has moved higher since the May <i>Statement</i>. These spreads are now at their highest levels since 2011, reflecting both the recent increase in supply of NZGBs, and high levels of forecast issuance in coming years.</li> </ul>   |

| New Zealand dol                | lar   |
|--------------------------------|---|
| Interest rate<br>differentials | • Differences between interest rates in New Zealand and both the US and Australia have decreased since the May <i>Statement</i> . This has contributed to a depreciation in the New Zealand dollar against the US dollar and Australian dollar.   |
| Risk sentiment                 | <ul> <li>Market risk sentiment has been weaker since the May <i>Statement</i>. US equities are slightly lower, and US equity market volatility, as measured by the VIX Index (a measure of option implied volatility on the US S&amp;P 500 index), has increased. Bond market volatility measures have also increased.</li> <li>Overall, risk sentiment has likely contributed to a weaker New Zealand dollar since the May <i>Statement</i>.</li> </ul>  |
| Commodity<br>prices            | <ul> <li>Decreases in New Zealand's key export commodity prices tend to cause the New Zealand exchange rate to depreciate.</li> <li>Prices of key export commodities in New Zealand – particularly dairy – have declined slightly since the May <i>Statement</i>. These moves have likely contributed marginally to a weaker New Zealand dollar since the May <i>Statement</i>.</li> </ul>  |
|                                |   |
| Retail interest rat            | es  |
| Mortgage rates                 | <ul> <li>Mortgage rates have decreased since the May <i>Statement</i>, following the reduction in swap rates. While mortgage rates have declined, they have decreased by less than wholesale swap rates. As a result, the spreads between mortgage rates and swap rates have increased since the May <i>Statement</i>.</li> <li>Mortgage rates at shorter terms have decreased by more than longer-term mortgage rates since the May <i>Statement</i>. 1- and 2-year mortgage rates have both decreased by around 30 basis points, while 4- and 5-year mortgage rates have decreased by around 15 and 30 basis points, respectively.</li> </ul> |
| Deposit rates                  | <ul> <li>Term deposit rates have decreased at all terms since the May <i>Statement</i>.</li> <li>The spread between term deposits and swap rates has increased slightly since the May <i>Statement</i>. Term deposit spreads had remained relatively unchanged through early 2024, after increasing significantly during 2023. Term deposit spreads are likely to increase towards pre-COVID-19 levels</li> </ul>   |

in coming years, as banks compete more aggressively for deposit funding.
Rates on other types of deposits, including bonus saver and transaction accounts, remain low compared to wholesale interest rates. This continues to hold down the overall cost of bank funding.

| Bank funding co        | onditions  |
|------------------------|--|
| Funding<br>composition | <ul> <li>Term deposit volumes have increased over recent months, while on-call transaction and savings<br/>deposit volumes have declined slightly. Term deposit volumes grew by around \$2 billion<br/>between April and June 2024, while on-call account volumes fell by around \$1 billion.</li> </ul>   |
|                        | <ul> <li>Banks remain well funded and have strong liquidity buffers. Lower-cost deposit types, in particular transaction accounts, remain a larger share of bank funding compared to pre-COVID-19 averages. This has contributed to lower average bank funding costs. Bank core funding ratios remain high, sitting at 89.1 percent in June 2024.</li> </ul> |
|                        | <ul> <li>Banks have paid back around 20 percent of the approximately \$20 billion of loans that were<br/>taken out as part of the Funding for Lending Programme (FLP). The volume of repayments will be<br/>particularly high during August 2024, with around \$2 billion of loans set to be repaid.</li> </ul>  |
|                        | • The speed at which banks repay the remainder of the FLP borrowings slows over the rest of 2024, before increasing in 2025. The final repayments will be made at the end of 2025. As these loans are repaid, bank competition for other sources of funding, such as deposits, is expected to increase.  |
| Credit spreads         | • The cost of raising long-term wholesale bank funding relative to benchmark wholesale rates has remained at a similar level since the May <i>Statement</i> .  |
|                        | • Domestic bank credit spreads are lower than at the time of the May <i>Statement</i> . Broad wholesale funding conditions remain relatively favourable, particularly in the context of a high interest rate environment.  |

Chapter 06

## Economic projections



This chapter summarises the baseline economic projections that MPC members considered when making their policy assessment. The projections were finalised on 12 August 2024

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

- the magnitude and persistence of recent weakness in economic activity;
- the level of potential GDP and the extent to which the output gap has declined recently;
- the pace at which price-setting behaviour adapts to a low-inflation environment;
- the speed at which labour market and wage pressures ease and the effects of these factors on household spending and core inflation;
- the extent to which high interest rates and house price declines from their peak in late 2021 contribute to lower residential construction and household consumption;
- the extent to which business investment weakens as a result of declining capacity pressures in the economy;

- the outlook for net immigration and the extent to which it contributes relatively more to aggregate demand or labour supply;
- the extent to which trends in activity and inflation in our key trading partners affect domestic financial conditions, demand for New Zealand's goods and services exports, and prices for imports;
- the extent to which households increase their consumption as a result of income tax cuts that came into effect 31 July 2024;
- that government consumption and investment evolve consistent with the fiscal forecasts – including final operating allowances – in *Budget* 2024 (see box B, chapter 2).

There is significant uncertainty about these assumptions.

The projections take account of recent data, which show New Zealand's economy is weakening, spare capacity is opening up and headline inflation is declining (see box A, chapter 2). Surveys of business activity, spending data, job vacancies, building consents and house sales suggest that economic activity contracted in the June 2024 quarter.

We assume that potential GDP growth has been relatively subdued. Weaker potential GDP growth relative to the May *Statement* is accounted for, in part, by a lower forecast for net immigration. However, the expected fall in economic activity over the middle of 2024 means that significant spare capacity emerges in the economy. This is expected to contribute to lower non-tradables inflation.

The labour market has also continued to weaken, with the unemployment rate increasing to 4.6 percent in the June 2024 quarter.

We now assume that price-setting behaviour adapts more quickly over the medium term in response to falling headline inflation (see chapter 4.1). A lower assumption for price-setting behaviour contributes to lower inflationary pressure over the medium term. Annual tradables inflation is expected to decline further in the near term. We assume tradables inflation then rises as the effect of normalisation in volatile prices from earlier peaks wanes, before settling back around pre-COVID-19 levels at the end of the projection period.

CPI inflation data in the June 2024 quarter showed non-tradables inflation declining gradually as expected. The decline in headline inflation to date has been largely accounted for by tradables inflation. However, opening spare capacity suggests non-tradables inflation will ease over the coming year. We forecast headline inflation to be well within the 1 to 3 percent target band in the September 2024 quarter. Annual inflation is expected to reach the 2 percent midpoint of the target range in the June 2026 quarter.

#### Table 6.1

#### Key projection assumptions

| Key factors                       |  |
|-----------------------------------|--|
| Global factors                    | • World interest rates have fallen since the May <i>Statement</i> . Several central banks have reduced policy rates, and market expectations for future policy rates have fallen.  |
|                                   | <ul> <li>The New Zealand dollar trade weighted index (TWI) is assumed to remain at 69.5 over the<br/>projection.</li> </ul>  |
| Domestic<br>capacity<br>pressures | • Our updated assessment for GDP growth is considerably weaker in the near term. The change in the near-term outlook is based on timely indicators of activity that declined in May and deteriorated further in June.  |
|                                   | • Although we had already been expecting subdued growth for the remainder of 2024, we have revised the outlook for GDP lower due to recent data including the QSBO, PMI, PSI, Truckometer, electronic card transactions, house sales and building consents.  |
|                                   | • In this projection, the output gap reaches -2.2 percent of potential GDP in the December 2024 quarter, lower and sooner than the May <i>Statement</i> projected trough of -1.6 percent in the March 2025 quarter. The mean of our output gap indicator suite was -0.8 percent in the June 2024 quarter.  |
| Price-setting<br>behaviour        | <ul> <li>Price-setting behaviour is assumed to be persistent, because this approach better explains inflation over history than survey measures of inflation expectations (see chapter 4.1). We now assume that price-setting behaves more consistently with a low-inflation environment over the medium term, in response to falling headline inflation. A lower assumption for price-setting behaviour contributes to lower inflationary pressure, and so a lower outlook for the OCR over the medium term.</li> </ul> |
| Economic growth                   |  |
| Production                        | • We assume that the economy contracted by 0.5 percent in the June 2024 quarter. GDP is assumed to contract further in the September 2024 quarter and grow slightly in the December 2024 quarter.  |
|                                   | • We assume that significant spare capacity is emerging and will increase until early 2025. The supply of goods and services is expected to continue to improve, supported by continued population growth through immigration which expands the productive capacity of the economy.  |

| Consumption | <ul> <li>Consumption growth has been subdued since the beginning of 2022, despite high population growth over that period. We have incorporated the \$9.6 billion tax cuts programme approved in <i>Budget</i> 2024, over the Treasury's forecast period. The positive impetus of these tax cuts on private consumption has largely been offset by lower house price and population growth forecasts, leaving a slightly lower near-term consumption forecast than in the May <i>Statement</i>. We project continued subdued consumption through 2024, before it starts to recover in 2025 due to lower interest rates and a recovery in house prices.</li> </ul>   |
|-------------|---|
|             | <ul> <li>Reported consumption was unusually strong in the March 2024 quarter, which we largely attribute to measurement issues. In 2022, Stats NZ changed the method for measuring exports of travel services, which are subtracted from total spending in New Zealand to calculate private consumption. Stats NZ has changed how foreign tourist spending is allocated between quarters. Previously, spending was allocated to the quarter tourists depart, but is now allocated across the days tourists are in New Zealand. This has the effect of increasing foreign tourist spending in December quarters, and reducing it in March quarters. Despite this, these series have not been backcast, which means that there is a significant series break in 2022 and issues with seasonal adjustment in the March 2024 quarter numbers. Therefore, reported consumption likely is higher than actual consumption in the March 2024 quarter GDP numbers. Stats NZ intends to review this issue.</li> </ul> |
|             | • Further to this, Stats NZ estimates that 'imports of low-value goods purchased directly by households' rose 20 percent in the March 2024 quarter, contributing 0.5 percentage points to private consumption. This is likely an overestimate, because the measurement assumes a historic average value of low-value goods and multiplies this number (adjusted for inflation) by the number of packages imported. The rise of foreign online retailers such as Temu in the last year has likely reduced the average value of low-value goods, but increased the number substantially. This compositional shift has not been captured.  |
|             | • For the purposes of this projection, we assume low-value imports remain at their current elevated level, and we adjust for our estimate of travel receipt seasonal adjustment issues. However, these complications add to our usual uncertainty about the starting point for the economy.   |
| Investment  | • Business investment has declined by less to date than would usually be expected at this stage in the business cycle. We expect downwards pressure to materialise in the second half of this year from weak demand, restrictive interest rates, low business profitability, and emerging spare capacity. Given the significant deterioration in indicators of economic activity since the May <i>Statement</i> and weaker output gap assumed, we have revised down the expected trough in business investment. Starting in mid-2025, business investment is assumed to increase as the output gap becomes less negative.   |
|             | • A substantial decline in residential investment is underway and is expected to continue until the beginning of 2025. High interest rates and subdued house price growth are contributing to a decline in residential construction activity, consistent with the decline in dwelling consents since mid-2022. Lower interest rates and net immigration around its pre-COVID-19 average support a recovery in house prices and building activity in the second half of the projection.  |
|             | • The scale and speed of the residential investment slowdown is similar to the May <i>Statement</i> , given continued weakness in timely indicators like consents and ready-mixed concrete.   |
| Government  | <ul> <li>Government spending forecasts are consistent with the fiscal forecasts – including final operating<br/>allowances – in <i>Budget</i> 2024, but have been adjusted for the March 2024 quarter GDP data.</li> </ul>  |
|             | <ul> <li>Government investment is lower in each quarter over the projection horizon than the May<br/>Statement published forecast, given the downward revision in Budget 2024 and a downside<br/>surprise in the latest GDP release. However, government investment is a relatively small share of<br/>total government spending (17 percent of total government spending).</li> </ul>  |
|             | <ul> <li>Government consumption is lower in each quarter over the projection horizon than the May<br/>Statement projection, given the downward revision in <i>Budget</i> 2024. However, it had a slightly<br/>higher starting point than expected in March 2024 quarter GDP.</li> </ul>   |
|             | • The net result is lower total government spending over the medium term than published in the May <i>Statement</i> . Total government spending continues to decline as a share of potential GDP over the projection horizon, and slightly more quickly than in the May <i>Statement</i> forecast.  |

| Exports and imports     | <ul> <li>Services exports surprised significantly to the downside in the March 2024 quarter, accounted for by a major fall in exports of travel services. This is primarily caused by recent methodology changes. We continue to expect services exports to recover in the medium term due to the continued recovery of international tourism to pre-COVID-19 levels.</li> <li>Goods export volumes surprised to the upside in the March 2024 quarter, and are now close to our trend assumption. We assume goods exports grow at about the same rate as potential GDP.</li> <li>Import volumes surprised significantly to the upside in the March 2024 quarter, and recent merchandise trade data (which do not include low-value goods) have suggested further strength in goods imports in the June 2024 quarter. This strength in imports is unusual given the very weak activity indicators in the June 2024 quarter.</li> <li>There are two reasons to take limited signal from this strength in imports: firstly, because of measurement issues associated with low-value goods. Secondly, some of the March 2024 quarter strength may reflect catch-up from December 2023 quarter weakness, which was affected by shipping delays due to the initial Red Sea crisis.</li> </ul> |
|-------------------------|---|
|                         | • We assume imports will fail from their higher state 2024 quarter starting point according to their usual relationship with other components of GDP. However, their starting point is materially higher, so they remain higher than in the May <i>Statement</i> forecast until the end of 2026. This forecast makes the implicit assumption that the volume of low-value goods will remain at its March 2024 quarter level.  |
| Labour market           |   |
| Employment and<br>wages | <ul> <li>The New Zealand labour market has continued to ease. The unemployment rate increased further to 4.6 percent in the June 2024 quarter. Employment growth has slowed, and is expected to remain subdued over the next year.</li> <li>Same-job wage growth was as expected in the June 2024 quarter, and is expected to continue to ease.</li> <li>Tax cuts may increase the supply of labour and affect wage bargaining. This may partially offset the inflationary pressure from higher consumption spending due to tax cuts.</li> <li>Our suite of labour market indicators implies the labour market is now reducing pressure on inflation, and this is expected to continue throughout the forecast horizon.</li> <li>The unemployment rate is expected to continue to rise to a peak of 5.4 percent in early 2025, in line with a declining output gap. The unemployment rate is assumed to peak at a higher level than in the May <i>Statement</i> due to a more negative output gap projection.</li> </ul>  |
| Inflation               |   |
| Headline                | <ul> <li>Annual headline CPI inflation is expected to continue to decline to within the 1 to 3 percent target band in the September 2024 quarter, reaching the 2 percent target midpoint in the first half of 2026.</li> <li>Inflation is expected to remain in the upper half of the target range over the next 18 months, partly due to persistent price increases in categories such as local authority rates, insurance and utilities.</li> </ul>   |
| Tradables               | <ul> <li>Annual tradables inflation has been lower than expected over the past year, and is expected to be negative in the September 2024 quarter.</li> <li>In the later part of the projection, tradables inflation is assumed to be slightly higher than its pre-COVID-19 average. This is due to the assumed delayed effects of recent shipping disruptions and a lower assumption for the New Zealand dollar TWI, which puts upward pressure on tradables prices in New Zealand dollar terms.</li> </ul>  |
| Non-tradables           | <ul> <li>Annual non-tradables inflation is expected to decline slightly more quickly than previously assumed due to the lower assumption for activity and the output gap.</li> <li>We have included an additional judgement for non-tradables inflation to reflect proposed changes to household electricity pricing in the June 2025 quarter and the June 2026 quarter.<sup>9</sup> These adjustments are assumed not to feed significantly into ongoing pricing pressure.</li> </ul>  |

<sup>9</sup> See Commerce Commission draft decision.

Figure 6.4

## **Charts**

#### Figure 6.1

Inflation components (annual)





Source: Stats NZ, RBNZ estimates.

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

#### Figure 6.2 Private sector LCI wage inflation (annual)



Source: Stats NZ, RBNZ estimates.

#### Figure 6.3

#### Unemployment rate

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



Figure 6.5

#### **Production GDP**

(quarterly, seasonally adjusted)

Source: CoreLogic, RBNZ estimates.



#### Figure 6.6

#### OCR

(quarterly average)



Source: RBNZ estimates.

#### Figure 6.7

#### Private consumption

(quarterly, seasonally adjusted)



#### Figure 6.10

#### Government consumption

(quarterly, seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

#### Figure 6.8

#### **Residential investment**



Source: Stats NZ, RBNZ estimates.

#### Figure 6.9

#### Business investment

(quarterly, seasonally adjusted)

09/10 \$bn



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)





# Appendices

## **Chapter 7.** Appendices

### Appendix 1: Statistical tables

#### Table 7.1

Key forecast variables

|      |     | GDP growth<br>Quarterly | CPI inflation<br>Quarterly | CPI inflation<br>Annual | Unemployment<br>rate | TWI  | OCR |
|------|-----|-------------------------|----------------------------|-------------------------|----------------------|------|-----|
| 2022 | Mar | -0.1                    | 1.8                        | 6.9                     | 3.2                  | 72.6 | 0.9 |
|      | Jun | 1.0                     | 1.7                        | 7.3                     | 3.3                  | 72.1 | 1.6 |
|      | Sep | 1.8                     | 2.2                        | 7.2                     | 3.3                  | 70.6 | 2.7 |
|      | Dec | -0.5                    | 1.4                        | 7.2                     | 3.4                  | 70.8 | 3.8 |
| 2023 | Mar | -0.3                    | 1.2                        | 6.7                     | 3.4                  | 71.3 | 4.5 |
|      | Jun | 0.5                     | 1.1                        | 6.0                     | 3.6                  | 71.0 | 5.3 |
|      | Sep | -0.3                    | 1.8                        | 5.6                     | 3.9                  | 70.6 | 5.5 |
|      | Dec | -0.1                    | 0.5                        | 4.7                     | 4.0                  | 70.8 | 5.5 |
| 2024 | Mar | 0.2                     | 0.6                        | 4.0                     | 4.4                  | 71.6 | 5.5 |
|      | Jun | -0.5                    | 0.4                        | 3.3                     | 4.6                  | 71.4 | 5.5 |
|      | Sep | -0.2                    | 0.8                        | 2.3                     | 5.0                  | 70.0 | 5.4 |
|      | Dec | 0.1                     | 0.5                        | 2.3                     | 5.3                  | 69.5 | 4.9 |
| 2025 | Mar | 0.7                     | 0.5                        | 2.2                     | 5.4                  | 69.5 | 4.6 |
|      | Jun | 0.9                     | 0.5                        | 2.3                     | 5.4                  | 69.5 | 4.4 |
|      | Sep | 0.9                     | 0.9                        | 2.4                     | 5.3                  | 69.5 | 4.1 |
|      | Dec | 0.9                     | 0.3                        | 2.3                     | 5.2                  | 69.5 | 3.8 |
| 2026 | Mar | 0.8                     | 0.4                        | 2.1                     | 5.1                  | 69.5 | 3.6 |
|      | Jun | 0.7                     | 0.4                        | 2.0                     | 4.9                  | 69.5 | 3.4 |
|      | Sep | 0.8                     | 0.9                        | 2.0                     | 4.8                  | 69.5 | 3.3 |
|      | Dec | 0.8                     | 0.3                        | 2.0                     | 4.7                  | 69.5 | 3.1 |
| 2027 | Mar | 0.8                     | 0.4                        | 2.0                     | 4.6                  | 69.5 | 3.1 |
|      | Jun | 0.7                     | 0.4                        | 2.0                     | 4.5                  | 69.5 | 3.0 |
|      | Sep | 0.7                     | 0.9                        | 2.0                     | 4.5                  | 69.5 | 3.0 |

#### Measures of inflation, inflation expectations, and asset prices

|   | 2022     |       | 2023 |       |       | 2024 |       |     |
|---|----------|-------|------|-------|-------|------|-------|-----|
|   | Dec      | Mar   | Jun  | Sep   | Dec   | Mar  | Jun   | Sep |
| Inflation (annual rates)                                  |          |       |      |       |       |      |       |     |
| CPI   | 7.2      | 6.7   | 6.0  | 5.6   | 4.7   | 4.0  | 3.3   |     |
| CPI non-tradables   | 6.6      | 6.8   | 6.6  | 6.3   | 5.9   | 5.8  | 5.4   |     |
| CPI tradables   | 8.2      | 6.4   | 5.2  | 4.7   | 3.0   | 1.6  | 0.3   |     |
| Sectoral factor model estimate of core inflation          | 5.7      | 5.8   | 5.8  | 5.3   | 4.7   | 4.2  | 3.6   |     |
| CPI trimmed mean (30% measure)                            | 6.1      | 6.1   | 6.0  | 5.5   | 5.0   | 4.5  | 3.8   |     |
| CPI weighted median                                       | 5.0      | 5.6   | 6.6  | 5.0   | 4.4   | 4.4  | 3.5   |     |
| GDP deflator (expenditure)                                | 5.3      | 5.3   | 5.8  | 6.5   | 3.5   | 3.9  |       |     |
| Inflation expectations                                    |          |       |      |       |       |      |       |     |
| RBNZ Survey of Expectations<br>– inflation 1 year ahead   | 5.1      | 5.1   | 4.3  | 4.2   | 3.6   | 3.2  | 2.7   | 2.4 |
| RBNZ Survey of Expectations<br>– inflation 2 years ahead  | 3.6      | 3.3   | 2.8  | 2.8   | 2.8   | 2.5  | 2.3   | 2.0 |
| RBNZ Survey of Expectations<br>– inflation 5 years ahead  | 2.4      | 2.4   | 2.4  | 2.3   | 2.4   | 2.3  | 2.3   | 2.1 |
| RBNZ Survey of Expectations<br>– inflation 10 years ahead | 2.2      | 2.2   | 2.3  | 2.2   | 2.3   | 2.2  | 2.2   | 2.0 |
| Asset prices (annual percent changes)                     |          |       |      |       |       |      |       |     |
| Quarterly house price index (CoreLogic NZ                 | i) -11.2 | -12.0 | -9.0 | -4.1  | -0.6  | 2.6  |       |     |
| REINZ Farm Price Index<br>(quarterly average to date)     | 5.0      | -3.2  | -5.7 | -11.8 | -10.9 | -9.8 | -13.2 |     |
| NZX 50 (quarterly average to date)                        | -12.8    | -3.3  | 4.0  | 1.7   | -0.4  | -0.6 | -0.5  | 4.0 |

#### Measures of labour market conditions

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

|  | 2022 | 2023  |       | 2024  |       |       |       |
|--|------|-------|-------|-------|-------|-------|-------|
|  | Dec  | Mar   | Jun   | Sep   | Dec   | Mar   | Jun   |
| Household Labour Force Survey  |      |       |       |       |       |       |       |
| Unemployment rate  | 3.4  | 3.4   | 3.6   | 3.9   | 4.0   | 4.4   | 4.6   |
| Underutilisation rate  | 9.4  | 9.1   | 9.9   | 10.4  | 10.7  | 11.2  | 11.8  |
| Labour force participation rate  | 71.8 | 72.1  | 72.4  | 72.0  | 71.9  | 71.6  | 71.7  |
| Employment rate<br>(% of working-age population)                           | 69.4 | 69.6  | 69.8  | 69.2  | 69.0  | 68.4  | 68.4  |
| Employment growth  | 1.7  | 3.1   | 4.5   | 3.0   | 2.9   | 1.3   | 0.6   |
| Average weekly hours worked  | 34.0 | 33.5  | 33.5  | 33.5  | 33.7  | 33.8  | 33.2  |
| Number unemployed<br>(thousand people)                                     | 100  | 103   | 110   | 120   | 124   | 135   | 143   |
| Number employed<br>(million people)  | 2.87 | 2.90  | 2.94  | 2.94  | 2.95  | 2.94  | 2.95  |
| Labour force (million people)  | 2.97 | 3.01  | 3.05  | 3.06  | 3.07  | 3.08  | 3.10  |
| Extended labour force<br>(million people)                                  | 3.05 | 3.09  | 3.14  | 3.15  | 3.17  | 3.18  | 3.20  |
| Working-age population<br>(million people, age 15 years+)                  | 4.13 | 4.17  | 4.21  | 4.24  | 4.28  | 4.30  | 4.32  |
| Quarterly Employment Survey – QES  |      |       |       |       |       |       |       |
| Filled jobs growth   | 1.5  | 2.2   | 6.5   | 6.1   | 4.3   | 3.5   | -0.2  |
| Average hourly earnings growth (private sector, ordinary time)             | 8.1  | 8.3   | 7.7   | 7.1   | 6.6   | 4.8   | 4.0   |
| Other data sources   |      |       |       |       |       |       |       |
| Labour Cost Index growth, adjusted (private sector, ordinary and overtime) | 4.3  | 4.5   | 4.3   | 4.1   | 3.9   | 3.8   | 3.6   |
| Labour Cost Index growth, unadjusted (private sector, ordinary time)       | 6.1  | 6.1   | 6.1   | 5.7   | 5.7   | 5.2   | 4.8   |
| Estimated net working-age<br>immigration (thousands, quarterly)            | 20.3 | 29.2  | 40.0  | 22.7  | 12.1  | 9.5   |       |
| Change in All Vacancies Index*   | -3.4 | -13.8 | -21.5 | -27.9 | -27.6 | -27.3 | -33.4 |

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 <u>Stats NZ (2016) 'Introducing underutilisation</u> in the labour market'. Estimated net working-age immigration is the Stats NZ outcomes-based measure.

\*The All Vacancies Index is a non-seasonally adjusted series.

#### Composition of real GDP growth

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

|   |      | Actuals |      |      |       |      |            |      | Projection |      |      |
|---|------|---------|------|------|-------|------|------------|------|------------|------|------|
| March year                                  | 2017 | 2018    | 2019 | 2020 | 2021  | 2022 | 2023       | 2024 | 2025       | 2026 | 2027 |
| Final consumption expenditure               |      |         |      |      |       |      |            |      |            |      |      |
| Private                                     | 6.4  | 4.8     | 4.5  | 2.4  | 0.2   | 6.0  | 2.7        | 0.9  | -0.8       | 2.9  | 3.9  |
| Public authority                            | 1.9  | 3.8     | 3.3  | 5.8  | 6.9   | 7.9  | 2.0        | 0.5  | -3.3       | -0.9 | 0.7  |
| Total                                       | 5.4  | 4.6     | 4.3  | 3.2  | 1.8   | 6.4  | 2.5        | 0.8  | -1.4       | 2.0  | 3.2  |
| Gross fixed capital formation               |      |         |      |      |       |      |            |      |            |      |      |
| Residential                                 | 8.8  | -1.8    | -0.1 | 2.7  | 2.2   | 3.3  | -0.6       | -4.4 | -7.8       | 2.3  | 5.8  |
| Other                                       | 0.0  | 10.0    | 7.1  | 2.7  | -2.9  | 12.6 | 2.9        | -0.9 | -3.9       | 2.0  | 5.3  |
| Total                                       | 2.3  | 6.7     | 5.2  | 2.7  | -1.7  | 10.2 | 2.1        | -1.7 | -4.8       | 2.0  | 5.4  |
| Final domestic                              |      |         |      |      |       |      |            |      |            |      |      |
| expenditure                                 | 4.6  | 5.1     | 4.5  | 3.0  | 1.0   | 7.3  | 2.4        | 0.2  | -2.2       | 2.0  | 3.7  |
| Stockbuilding*                              | 0.1  | 0.2     | -0.2 | -0.2 | -0.3  | 0.6  | 0.0        | -1.5 | 1.4        | 0.0  | 0.0  |
| Gross national<br>expenditure               | 4.8  | 5.6     | 4.3  | 2.7  | -0.3  | 8.5  | 2.6        | -1.3 | -0.7       | 1.9  | 3.7  |
| Exports of goods                            | 2.0  | 3.8     | 33   | 0.2  | -179  | 24   | 61         | 61   | 54         | 3.8  | 28   |
| Imports of goods                            | 5.0  | 70      | 1.0  | 1.2  | 15.0  | 2.4  | 0.1<br>A A | 1.0  | 2.6        | 1.0  | 2.0  |
| and services                                | 5.1  | 7.0     | 4.0  | 1.5  | -15.9 | 17.1 | 4.4        | -1.0 | 5.0        | 1.9  | 4.0  |
| Expenditure on GDP                          | 3.9  | 4.3     | 3.9  | 2.5  | 0.1   | 4.7  | 2.8        | 0.4  | -0.6       | 2.4  | 3.1  |
| GDP (production)                            | 3.8  | 3.4     | 3.5  | 2.4  | -0.5  | 4.6  | 2.7        | 0.2  | -0.4       | 2.7  | 3.2  |
| GDP (production,<br>March qtr to March qtr) | 3.3  | 3.5     | 3.5  | 0.7  | 4.5   | 0.6  | 2.0        | 0.3  | 0.1        | 3.4  | 3.1  |

 $^{\ast}$  Percentage point contribution to the growth rate of GDP.

Summary of economic projections (annual percent change, March years, unless specified otherwise)

|  |      | Actuals |      |      |      |      |      |      | Projection |      |      |
|--|------|---------|------|------|------|------|------|------|------------|------|------|
| March year   | 2017 | 2018    | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025       | 2026 | 2027 |
| Price measures   |      |         |      |      |      |      |      |      |            |      |      |
| CPI  | 2.2  | 1.1     | 1.5  | 2.5  | 1.5  | 6.9  | 6.7  | 4.0  | 2.2        | 2.1  | 2.0  |
| Labour costs   | 1.5  | 1.9     | 2.0  | 2.4  | 1.6  | 3.1  | 4.5  | 3.8  | 2.8        | 2.4  | 2.2  |
| Export prices<br>(in New Zealand dollars)                    | 4.1  | 3.3     | 1.2  | 6.8  | -6.0 | 20.8 | 1.1  | -2.8 | 6.2        | 2.3  | 2.2  |
| Import prices<br>(in New Zealand dollars)                    | 1.2  | 1.6     | 4.1  | 2.4  | -2.5 | 18.8 | 8.1  | -3.9 | 3.3        | -1.2 | 0.1  |
| Monetary conditions  |      |         |      |      |      |      |      |      |            |      |      |
| OCR (year average)   | 2.0  | 1.8     | 1.8  | 1.2  | 0.3  | 0.5  | 3.1  | 5.5  | 5.1        | 4.0  | 3.2  |
| TWI (year average)   | 76.5 | 75.6    | 73.4 | 71.7 | 72.4 | 74.0 | 71.2 | 71.0 | 70.1       | 69.5 | 69.5 |
| Output   |      |         |      |      |      |      |      |      |            |      |      |
| GDP (production, annual<br>average % change)                 | 3.8  | 3.4     | 3.5  | 2.4  | -0.5 | 4.6  | 2.7  | 0.2  | -0.4       | 2.7  | 3.2  |
| Potential output (annual<br>average % change)                | 3.2  | 3.2     | 3.1  | 2.7  | -0.6 | 2.5  | 2.1  | 2.6  | 2.4        | 2.3  | 2.4  |
| Output gap (% of potential GDP, year average)                | 0.3  | 0.5     | 0.9  | 0.5  | 0.6  | 2.8  | 3.4  | 1.0  | -1.8       | -1.4 | -0.6 |
| Labour market  |      |         |      |      |      |      |      |      |            |      |      |
| Total employment<br>(seasonally adjusted)                    | 5.9  | 2.9     | 1.5  | 2.6  | 0.2  | 2.5  | 3.1  | 1.3  | -0.1       | 1.8  | 2.9  |
| Unemployment rate (March qtr, seasonally adjusted)           | 4.9  | 4.4     | 4.2  | 4.2  | 4.6  | 3.2  | 3.4  | 4.4  | 5.4        | 5.1  | 4.6  |
| Trend labour productivity                                    | 0.6  | 0.6     | 0.6  | 0.6  | 0.5  | 0.2  | -0.1 | -0.1 | 0.1        | 0.3  | 0.6  |
| Key balances   |      |         |      |      |      |      |      |      |            |      |      |
| Government operating<br>balance* (% of GDP,<br>year to June) | 1.5  | 1.9     | 2.4  | -7.3 | -1.3 | -2.7 | -2.4 | -2.7 | -3.3       | -1.8 | -0.4 |
| Current account balance<br>(% of GDP)                        | -2.5 | -3.1    | -3.8 | -2.3 | -2.5 | -6.5 | -8.2 | -6.8 | -6.1       | -4.3 | -4.0 |
| Terms of trade<br>(SNA measure, annual<br>average % change)  | 2.1  | 4.4     | -2.1 | 2.0  | -1.0 | 0.4  | -5.1 | -1.4 | 1.5        | 4.0  | 2.4  |
| Household saving rate<br>(% of disposable income)            | -1.8 | -2.0    | -1.3 | 1.4  | 7.6  | 2.7  | 2.0  | 0.0  | -1.4       | -2.3 | -2.4 |
| World economy  |      |         |      |      |      |      |      |      |            |      |      |
| Trading-partner GDP<br>(annual average % change)             | 3.5  | 4.0     | 3.5  | 1.7  | -0.5 | 6.2  | 2.7  | 3.1  | 2.6        | 3.0  | 2.8  |
| Trading-partner CPI<br>(TWI-weighted)                        | 1.9  | 1.8     | 1.4  | 2.4  | 0.8  | 4.1  | 4.8  | 2.2  | 2.4        | 2.0  | 2.2  |

\* 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 *Budget* 2024.

### Appendix 2: Chart pack

#### Figure 7.1

Composition of CPI inflation (annual)



#### 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 from labour market surveys 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. The output gap estimate in the final quarter is based on our near-term GDP estimate.

#### Figure 7.3

### Unemployment and underutilisation rates (seasonally adjusted)



#### 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 <u>Castaing et al</u>. (2024), 'Estimates of New Zealand's nominal neutral interest rate', *Bulletin*, Reserve Bank of New Zealand.

#### Figure 7.5

#### GDP and potential GDP

(seasonally adjusted)



#### 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 7.8

#### Private sector wage growth



Source: Stats NZ.

#### Figure 7.9 House price inflation (annual, nominal)





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 7.11

#### New Zealand dollar exchange rates (quarterly average)



Source: NZFMA, RBNZ.

#### Figure 7.12

#### Terms of trade, dairy and oil price indices (index=100 in Q3 2008, quarterly average)



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

