05/2022

Monetary Policy
STATEMENT

Reserve Bank of New Zealand
Te Pūtea Matua

STATEMENT of the MPC's monetary policy strategy

The Monetary Policy Committee's (MPC) monetary policy strategy is its overarching plan for how it will formulate monetary policy under different circumstances to achieve its objectives.[1] It outlines a consistent approach to how the MPC intends to achieve its objectives across time, accounting for trade-offs and uncertainty. Agreeing on and publishing a strategy promotes transparency, public understanding, and accountability.

Monetary policy framework and objectives

Under the *Reserve Bank of New Zealand Act 1989* (the Act), the MPC is responsible for formulating monetary policy to maintain a stable general level of prices over the medium term and to support maximum sustainable employment.[2] Operational objectives for monetary policy are set out in the Remit. The current *Remit* sets out a flexible inflation targeting regime, under which the MPC must set policy to:

- keep future annual inflation between 1 and 3 percent over the medium term, with a focus on keeping future inflation near the 2 percent mid-point; and
- support maximum sustainable employment, considering a broad range of labour market indicators and taking into account that maximum sustainable employment is largely determined by non-monetary factors.

In pursuing these objectives, the *Remit* requires the MPC to have regard to the efficiency and soundness of the financial system, seek to avoid unnecessary instability in the economy and financial markets, and discount events that have only transitory effects on inflation. The MPC must also assess the effect of its monetary policy decisions on the Government's policy to support more sustainable house prices.

The Reserve Bank's flexible inflation targeting framework and the MPC's monetary policy strategy reflect the fact that:

- low and stable inflation is monetary policy's best long-run contribution to the well-being of New Zealanders;
- in the short to medium term, monetary policy can influence real variables such as employment, and hence policy trade-offs can arise; and
- monetary policy is more effective if the Bank's policy targets are credible, so policy should be formulated in a way that ensures credibility is maintained.

Key aspects of monetary policy strategy

The MPC **practises forecast targeting**, which means that it sets monetary policy such that it expects to achieve its inflation and employment goals in the medium term. In most instances the MPC aims to return inflation to the target mid-point within a one to three year horizon. The appropriate horizon at each policy decision will vary based on how different policy paths will contribute to maximum sustainable employment, whether price-setters' expectations are consistent with the inflation target, and other considerations such as the balance of risks to the MPC's central economic outlook.

1 For a more in-depth discussion of monetary policy strategy in New Zealand, see J. Ratcliffe and R. Kendall (2019), 'Monetary policy strategy in New Zealand', Reserve Bank of New Zealand, *Bulletin*, Vol. 82, No. 3, April.

2 These economic objectives contribute to the overall purpose of the Act, which is to promote the prosperity and well-being of New Zealanders, and contribute to a sustainable and productive economy. See monetary policy framework for more information on New Zealand's monetary policy framework, including the full text of the *Remit*.

The MPC does not attempt to return inflation and employment to target immediately, because monetary policy actions take time to transmit through the economy. Attempting to return inflation to target too quickly would result in unnecessary instability in the economy and financial markets. The 1 to 3 percent target range for inflation provides the MPC with flexibility to ensure that managing inflation variability does not come at the cost of excessive variability in the real economy. For similar reasons, the MPC does not attempt to offset events that are expected to have only transitory effects on inflation.

The MPC **takes into account both its inflation and employment objectives** when setting policy. In the long run, no trade-off exists between the MPC's objectives. In the short to medium term, there may be situations where monetary policy can move one objective closer to target only at the cost of the other, resulting in a trade-off. When a trade-off does arise, the MPC will consider outcomes for both objectives in setting policy. In general, if employment is projected to be below its long-run sustainable level, the MPC would let inflation overshoot the target mid-point for a time, and vice versa (while staying within the 1–3 percent target range).

The MPC **responds to both deviations above target and deviations below target**. The MPC sets policy to stabilise employment near its maximum sustainable level, and to return inflation near to the target mid-point, regardless of whether inflation is currently below or above 2 percent. This approach helps to anchor inflation expectations at the target mid-point and promotes sustainable growth and employment by dampening fluctuations in the business cycle.

The MPC **considers the balance of risks** to its objectives that arise from uncertainty about the economic outlook and the transmission of its policy decisions. In general, the MPC will incorporate likely future developments into its central economic projections and set monetary policy in response. However, the MPC will also take into account risks to its central projections when setting policy. Under extreme uncertainty, the MPC may choose to publish scenarios instead of central projections to illustrate the range of possible situations and economic outcomes that could occur when circumstances are highly unpredictable.

The MPC **has regard to the efficiency and soundness of the financial system**, while recognising that in most instances prudential policy is better suited to leaning against risks to financial stability. The Reserve Bank takes prudential policy settings into account when setting monetary policy, and vice versa.

Implementation of strategy

The MPC applies the following process when formulating a policy decision:

1. Firstly, it assesses the outlook for the economy and the implications for its policy objectives. It then discusses risks to achieving its policy objectives.
2. Next, it considers which stance of monetary policy is most consistent with its monetary policy strategy given the current economic outlook, risks, and trade-offs.
3. Finally, the MPC decides how it will achieve the desired stance of monetary policy, including whether or not to adjust its policy settings at the current meeting and how it will communicate the policy outlook. The MPC has a suite of monetary tools to achieve its goals, and uses its Principles for Monetary Tools to make decisions on which tools to deploy.

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Monetary Policy **STATEMENT**

Contents

The projection was finalised on 19 May 2022. The OCR projection incorporates an outlook for monetary policy that is consistent with the MPC's monetary policy assessment, which was finalised on 25 May 2022.

Policy assessment

CHAPTER 01

CHAPTER 1
Policy assessment

Tēnā koutou katoa, welcome all.

The Monetary Policy Committee today increased the Official Cash Rate (OCR) to 2.0 percent. The Committee agreed it remains appropriate to continue to tighten monetary conditions at pace to maintain price stability and support maximum sustainable employment. The Committee is resolute in its commitment to ensure consumer price inflation returns to within the 1 to 3 percent target range.

Consistent with the economic outlook and risks ahead, monetary conditions need to act as a constraint on demand until there is a better match with New Zealand's productive capacity. A larger and earlier increase in the OCR reduces the risk of inflation becoming persistent, while also providing more policy flexibility ahead in light of the highly uncertain global economic environment.

The level of global economic activity is generating rising inflation pressures, exacerbated by ongoing supply disruptions driven by both COVID-19 persistence and the Russian invasion of Ukraine. The latter continues to cause very high prices for food and energy commodities.

The pace of global economic growth is slowing. The broad-based tightening in global monetary and financial conditions is acting to slow spending growth, accentuated by the high costs of basic food and energy staples. European geopolitical uncertainty is also weighing heavily on business confidence and investment intentions worldwide. Likewise, COVID-19 restrictions in significant regions of China are exacerbating supply-chain disruptions and adding cost and complexity to trade.

In New Zealand, underlying strength remains in the economy, supported by a strong labour market, sound household balance sheets, continued fiscal support, and a strong terms of trade. The reduction in COVID-19 health-related restrictions is also enabling increased economic activity, including hospitality and tourism.

However, headwinds are strong. Heightened global economic uncertainty and higher inflation are dampening global and domestic consumer confidence. Asset prices, in particular house prices, have also declined, reflecting in part higher mortgage interest rates and increased supply of housing.

On balance, a broad range of indicators highlight that productive capacity constraints and ongoing inflation pressures remain prevalent. Employment remains above its maximum sustainable level, with labour shortages now the major constraint on production. The Reserve Bank's core inflation measures are above 3 percent.

The Committee agreed to continue to lift the OCR at pace to a level that will confidently bring consumer price inflation to within the target range. The Committee viewed the projected path of the OCR as consistent with achieving its primary inflation and employment objectives without causing unnecessary instability in output, interest rates and the exchange rate. Once aggregate supply and demand are more in balance, the OCR can then return to a lower, more neutral, level.

Meitaki, thanks.

Adrian Orr
Governor

SUMMARY
Record of meeting

The Monetary Policy Committee discussed developments affecting the outlook for inflation and employment in New Zealand. Members noted that current inflation and employment were above their target and sustainable levels respectively. Members agreed that while the direction of their monetary policy decision was clear, the extent and timing of future increases in the Official Cash Rate (OCR) still depends on the economic outlook and avoiding major risks.

The Committee agreed that global economic activity was slowing more than previously expected, and that further weakening in global economic growth was likely. Members noted that while international fiscal and monetary policy actions have partly cushioned the effect of the COVID-19 pandemic on household incomes and employment so far, significant and ongoing disruption is now being felt.

The recent rise in global inflation pressures has led central banks to raise their policy interest rates and signal further tightening to come. These measures have been aimed to deliberately slow demand to be more consistent with the current constrained supply capacity of goods and services.

The Committee noted that the disruption caused by the Russian invasion of Ukraine has added to the underlying global inflation pressures. The cost of living has risen significantly, in particular due to shortages of food and fuel. This rise in costs is necessitating lower non-essential spending by households globally. High global commodity prices are likely to persist for some time, creating long-lasting cost pressure for firms and households, even as general consumer price inflation slows.

Economic activity globally, and especially in China at present, is still being severely disrupted by COVID-19. Members agreed that China's regional health-related economic restrictions are having a direct impact on global growth, supply chain efficiency, and New Zealand's trade outlook. New Zealand's trade performance is strongly linked to China's economy.

The recent rise in central banks' policy interest rates, and forward guidance for more increases, has led to a significant fall in global equity prices, albeit from high levels. The Committee noted that a rise in official rates creates a higher hurdle for investment decisions.

Members discussed developments in the New Zealand economy. It was noted that rising global interest rates have narrowed interest rate differentials with New Zealand, adding to downward pressure on the New Zealand dollar exchange rate. The Committee noted that the lower New Zealand dollar raises import prices – exacerbating the effect of elevated global prices.

The Committee agreed that both high food and energy costs, and rising mortgage interest rates for those with debt, will affect household budget decisions and lead to less discretionary spending. Members noted that over the past year or so, wage growth has been less than consumer price inflation, adding further pressure on discretionary spending.

Recent and expected increases in mortgage interest rates are likely to contribute to falls in house prices, further reducing households' willingness to spend. It was agreed that household consumption was likely to be relatively subdued in coming quarters. The Committee noted that house prices are now headed toward a more sustainable level.

The Committee noted the Government's *Budget* announcements. It was agreed that fiscal policy is currently supporting economic activity, but that this stimulus is expected to reduce in coming years. The current level of fiscal spending is contributing to a modest increase in demand. This is expected to diminish over time as a result of the end to the large, broad based, fiscal support packages the Government delivered during the initial phase of the COVID-19 economic response.

The Committee noted that measures of core consumer price inflation are above their target range. Surveyed measures of near-term inflation expectations are also high, in line with actual consumer price inflation. It was noted, however, that the medium-term measures of inflation expectations have remained near the centre of the target range, albeit heightened somewhat. The Committee agreed that it was critical for these medium-term inflation expectations to remain around 2 per cent.

Members also noted the factors responsible for the current elevated consumer price inflation. New Zealand's inflation rate reflects a relatively similar contribution of global imported price pressures and domestic price pressures. They observed that a key factor contributing to domestic inflation pressure is housing – including both the cost of construction and the operating costs of dwellings in general.

On the costs of construction, members noted that the growing delay in accessing key building materials is significantly slowing activity, and increasing the financial risks associated with construction. The Committee observed that these delays, cost pressures, and associated uncertainty could limit the conversion of building permits into dwellings, exacerbating the pressure on housing supply.

Members agreed that employment is above its maximum sustainable level, as highlighted by a suite of indicators. They agreed that rising wage pressures are an expected outcome, with access to labour the key constraint on firms' productive capacity. With the global labour market tight, people are also more willing and able to take up new roles for higher wages.

The Committee noted that the reopening of the border should see a return to a net inflow of migrants into New Zealand over the next two years. Over time, this net immigration will help to ease New Zealand's labour shortages. More immediately there is an outflow of New Zealanders creating supply capacity constraints. With the international border reopening, more immigrants will also bolster demand ahead of supply capacity as they settle. It was agreed that these patterns of migration will have an uncertain net effect on inflation pressure, as they will affect both supply and demand in the economy. As a result, these dynamics do not play a key role in determining monetary policy at present.

The Committee noted the weaker outlook for employment growth in New Zealand, which is likely to be outpaced by labour force growth. As a result of the increase in labour supply, measured unemployment is expected to rise to around levels more consistent with maximum sustainable employment.

The Committee discussed the future path of the OCR based on the outlook for inflation and employment pressures. Members noted that both inflation and employment are currently higher than previously expected, and that this strength is broad-based, arising from a range of economic factors.

Members agreed that a higher level of the OCR is necessary to ensure annual consumer price inflation returns to within its target range over the next two years. They agreed this was also consistent with ensuring employment remained near its maximum sustainable level.

Members discussed their 'least regrets' framework which in the current context amounted to the risk of tightening policy 'too little, too late' versus 'too much, too soon'. The Committee agreed that at present, with persistent cost pressures and rising inflation, the risk of moving too slowly and not far enough remained the most costly option.

On the risk of doing too much too soon, the Committee acknowledged that raising the OCR steeply puts pressure on some households' spending decisions, especially those that are highly indebted.

However, members noted that, on average, household balance sheets are healthy. Banks have been testing mortgage lending for higher interest rate possibilities – consistent with current projected levels – before recent home loans were made. They also noted that house prices are expected to remain above their pre-pandemic level. The Committee also noted that while higher interest rates will increase firms' hurdle to investing, recent business surveys suggest labour shortages are the main constraint preventing an increase in production.

The Committee agreed that stabilising inflation is its priority. Members agreed that raising the OCR by more and sooner was consistent with avoiding higher future costs to employment and the economy in general as a result of high inflation. Stable inflation expectations will be a key indicator that the current monetary policy strategy is working.

The Committee agreed to maintain its approach of briskly lifting the OCR until convinced that monetary conditions were sufficient to constrain inflation expectations and bring consumer price inflation to within the target range. Once aggregate supply and demand are more in balance, the OCR can then return to a lower, more neutral, level. The Committee viewed the projected path of the OCR as consistent with achieving their primary inflation and employment objectives without causing unnecessary instability in output, interest rates and the exchange rate.

On Wednesday 25 May, the Committee reached a consensus to increase the OCR to 2.0 percent.

Attendees:

Reserve Bank members of MPC:

Adrian Orr, Christian Hawkesby, Karen Silk, Adam Richardson

External MPC members:

Bob Buckle, Peter Harris, Caroline Saunders

Reserve Bank observer:

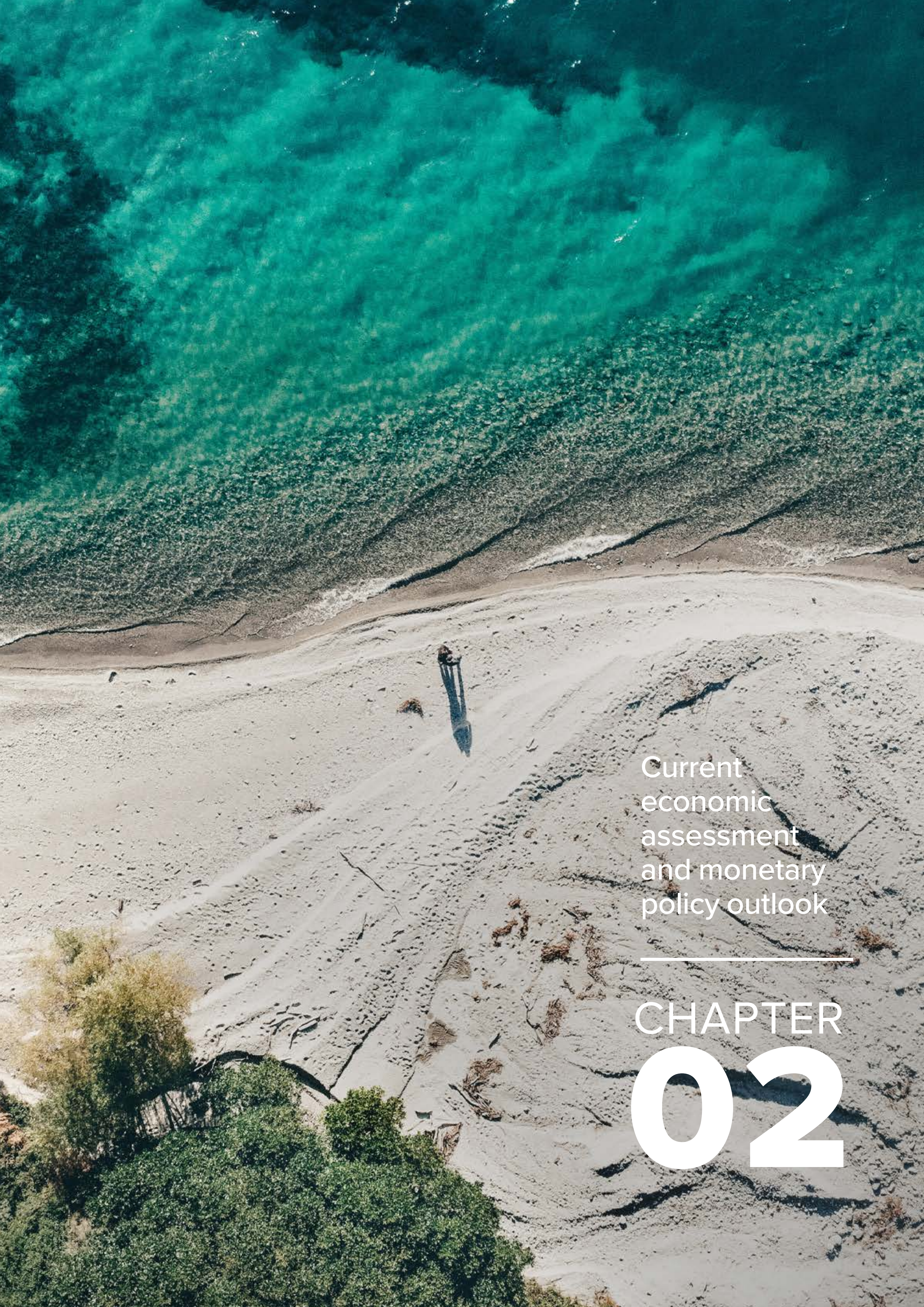
Paul Conway

Treasury Observer:

Dominick Stephens

MPC Secretary:

Gael Price



Current economic assessment and monetary policy outlook

CHAPTER 02

CHAPTER 2
Current economic assessment and monetary policy outlook

Summary

- Demand in the New Zealand economy has been resilient to the community spread of COVID-19 in recent months. Employment remains high and unemployment is very low. Home building work is strong. Government spending, as outlined in the 2022 *Budget*, is very high. Demand for New Zealand's key export commodities remains firm, supporting exporter and regional incomes.
- However, there have not been enough workers and goods available to meet this strong demand. Employers are finding it increasingly difficult to hire suitable workers, and to bring in goods given bottlenecks in global supply chains. Measures of underemployment have declined. Workers being off sick or having to self-isolate during the recent Omicron outbreak throughout New Zealand have exacerbated labour shortages in the near term. This has also caused stress for many households and contributed to a decline in consumer confidence.
- Disruptions to global supply chains have become worse in recent months, leading to more costly imports. The war in Ukraine has led to higher prices for a range of global commodities, especially fuel and food. Lockdowns in major Chinese cities have led to further bottlenecks in global production and trade. Central banks are responding to higher inflation by raising interest rates. Higher global interest rates are placing downward pressure on New Zealand's exchange rate, making imported goods and services more expensive.
- The pressure on available resources is contributing to high consumers price index (CPI) inflation and increasing wage growth. Annual CPI inflation in New Zealand increased to 6.9 percent in the March 2022 quarter, above the MPC's 1 to 3 percent target band. This reflected a mixture of global and domestic influences. Measures of persistent (or 'core') inflation have also increased in recent quarters. Expectations for inflation one and two years ahead have increased recently. Expectations at longer horizons have also increased, but to a lesser extent.
- The MPC has been tightening monetary conditions since mid-2021 in response to rising inflation and labour shortages. Interest rates faced by households and businesses have increased significantly in the past six months. In response to higher interest rates, slower population growth, strong home building activity, weak consumer confidence and regulatory measures, house prices have fallen in recent months, particularly in Auckland and Wellington.
- Aggregate demand growth is expected to moderate from the second half of 2022. Ongoing global uncertainty, lower house prices and higher spending by New Zealanders travelling abroad more than offset an expected gradual recovery in international tourism.

- Annual CPI inflation is expected to have peaked in the first half of 2022. Prices for commodities – notably oil – are assumed to ease gradually over the medium term. The spike in import prices is expected to drop out of the annual inflation calculation as global prices for our imports stabilise, or grow at a slower pace. Moderating domestic demand will also reduce firms' ability to pass on costs through larger increases in selling prices.
- However, the current economic outlook means that higher interest rates will be needed over coming years than assumed at the time of the February *Statement*. This reflects a stronger starting point for capacity pressures than originally assumed, including even longer delays in making and delivering goods than anticipated. Higher interest rates will ensure that demand growth slows enough for the MPC to meet its inflation and employment objectives.

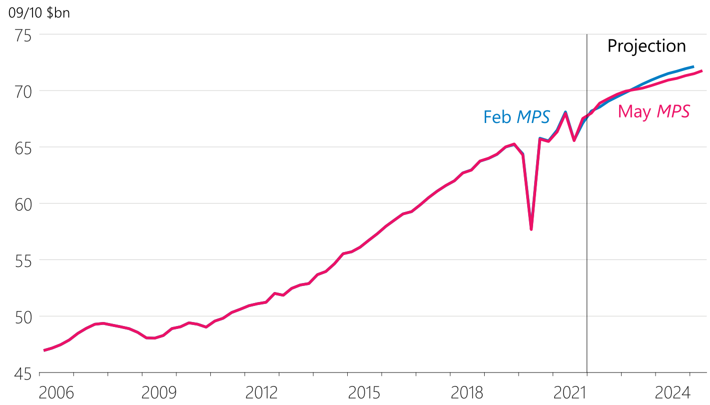
Current economic assessment

Demand has remained resilient

The New Zealand economy began 2022 in a stronger position than expected. Economic activity (as measured by the production measure of gross domestic product (GDP)) increased 3 percent in the December 2021 quarter. This rebound was stronger than expected after the nationwide lockdown and prolonged COVID-19 public health restrictions (figure 2.1). The spread of COVID-19 throughout New Zealand since February 2022 has dampened demand in face-to-face sectors such as hospitality and retail, and has likely contributed to lower consumer confidence. However, there are early signs that demand has started to recover as daily case numbers have declined.

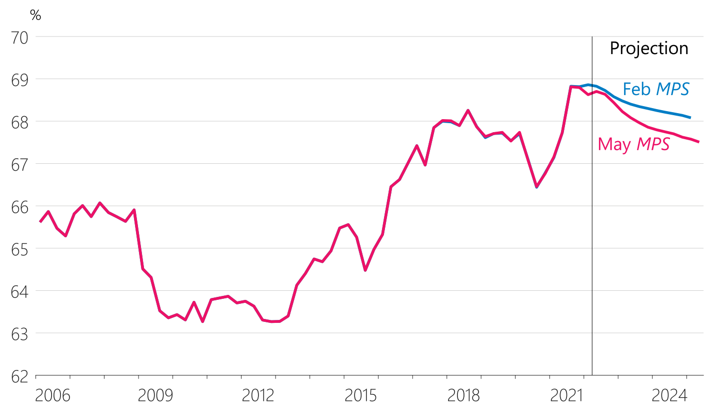
Consistent with robust demand in the economy, employment is at a historically high level as a share of the working-age population (figure 2.2). Government support and strong overall demand have encouraged businesses to hold on to workers despite periods of significant disruption because of the pandemic. Activity in the construction sector remains high, although limited by the availability of materials and labour. Government spending, as outlined in the 2022 *Budget*, is contributing to domestic demand (figure 2.3). Demand for New Zealand's primary goods exports has remained strong – reflected in particular by elevated dairy prices – boosting exporter income and investment.

Figure 2.1
Production GDP
(seasonally adjusted)



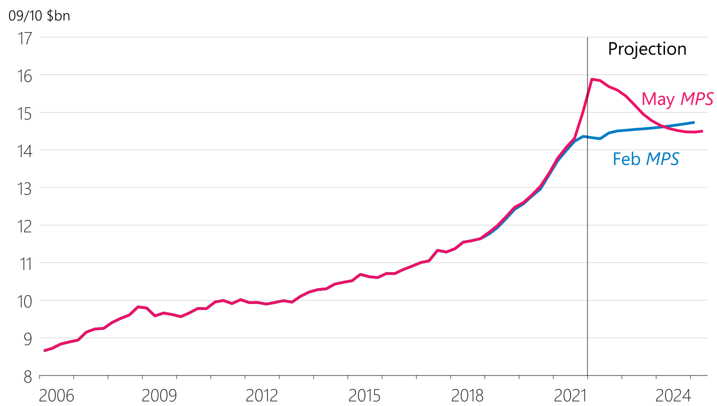
Source: Stats NZ, RBNZ estimates.

Figure 2.2
Employment rate
(seasonally adjusted, share of working-age population)



Source: Stats NZ, RBNZ estimates.

Figure 2.3
Real government consumption
(seasonally adjusted)



Source: Stats NZ, New Zealand Treasury, RBNZ estimates.

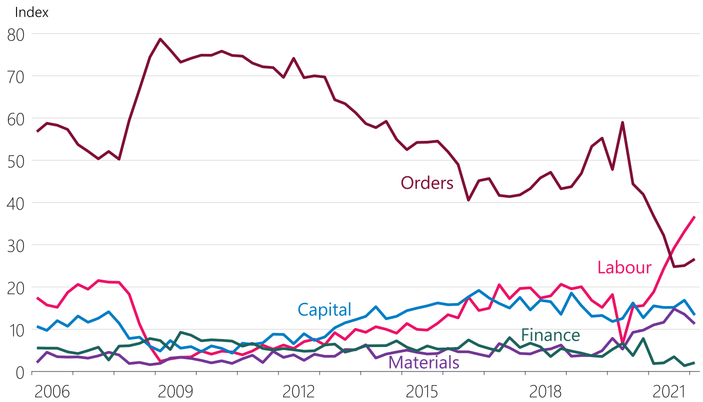
But the supply of labour and goods has not kept up with strong demand

While aggregate demand has remained robust, there have not been enough workers and goods to meet this demand. Pressure on available resources is high, particularly for labour (figure 2.4). The sharp decline in net migration has made it increasingly difficult for employers to find both skilled and unskilled labour (figure 2.5). The spread of COVID-19 throughout New Zealand and more workers either being off sick or self-isolating have made labour shortages worse in the near term.

Figure 2.4

QSBO factors most limiting production

(seasonally adjusted)

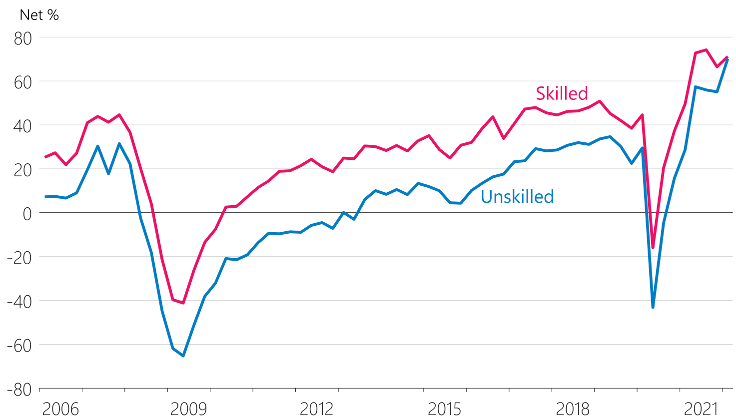


Source: NZIER, RBNZ estimates.

Figure 2.5

QSBO difficulty in finding labour

(seasonally adjusted)



Source: NZIER.

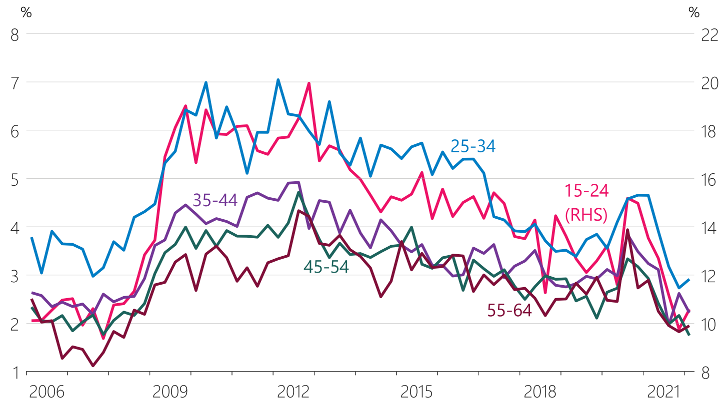
Employment is above its maximum sustainable level

At the start of the COVID-19 pandemic, women, youth and Māori and Pasifika peoples were most affected by the sharp slowdown in economic activity. Since then a lot of workers have moved between sectors, for example from tourism and hospitality to construction and healthcare. As a result, the national unemployment rates of all demographic groups have declined to very low levels relative to history (figures 2.6, 2.7 and 2.8). A wide range of measures suggest that employment in New Zealand is currently above its maximum sustainable level (figure 2.9).

Figure 2.6

Unemployment rate by age group

(seasonally adjusted, share of labour force)

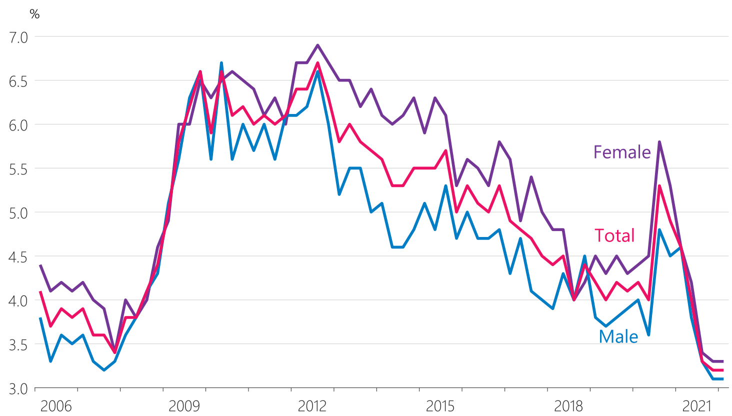


Source: Stats NZ, RBNZ estimates.

Figure 2.7

Unemployment rate by sex

(seasonally adjusted, share of labour force)

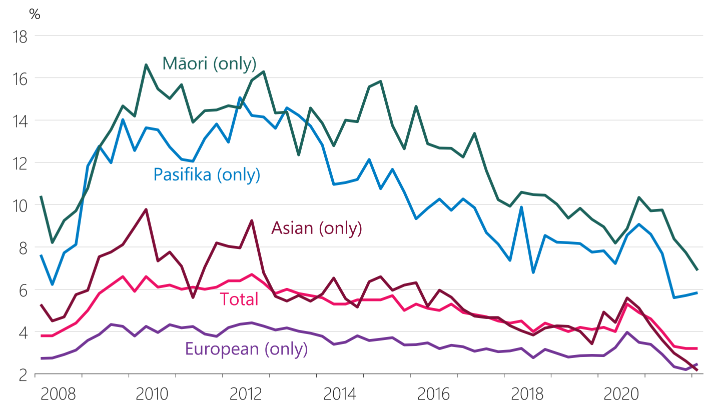


Source: Stats NZ.

Figure 2.8

Unemployment rate by ethnicity

(seasonally adjusted, share of labour force)



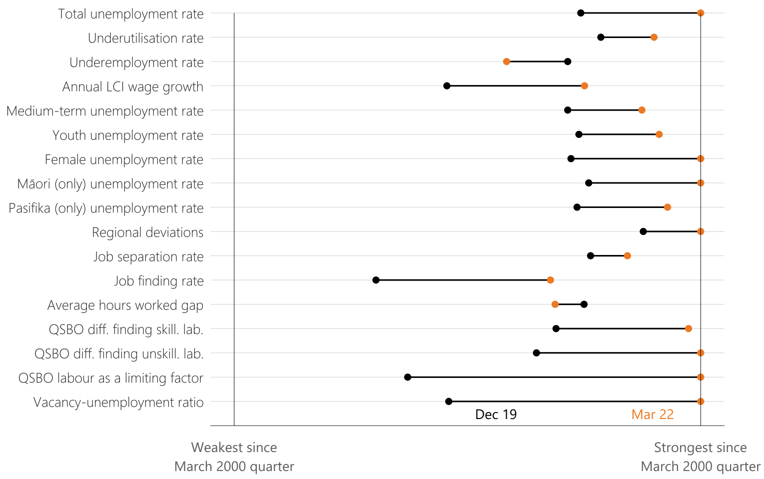
Source: Stats NZ, RBNZ estimates.

A strong labour market and higher costs of living have driven wages higher in recent quarters. The share of annual wage increases greater than 5 percent is near its peak prior to the global financial crisis (GFC). Despite this, wage growth for those staying in the same job has not generally kept up with inflation. Overall, household incomes have been supported by workers switching jobs for higher pay, promotions with the same employer, and working longer hours (figure 2.10). Once these factors are taken into account, aggregate labour income growth has been stronger than consumer price inflation over the course of the pandemic – albeit to a much lesser extent in the past year.

The labour shortage and increases in the minimum wage are expected to result in further increases in wage inflation over the coming year. Higher wages are one of many increased costs that businesses are expecting to pass on into higher prices.

Figure 2.9

MSE indicator suite



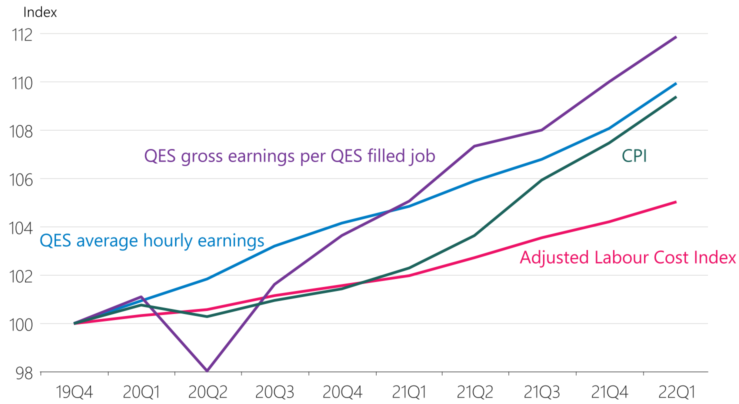
Source: NZIER, Stats NZ, MBIE, ANZ, RBNZ estimates.

Note: The Reserve Bank uses a range of indicators when assessing MSE and regards the December 2019 quarter as a period when this selection of indicators pointed to employment being at MSE. However, current outturns should not be directly compared to December 2019 quarter as the level of MSE is likely lower (discussed further in the August 2021 *Statement*). The vertical lines on the left-hand and right-hand sides represent the lowest and highest data outcomes since 2000, respectively. An orange dot to the right of a black dot means that the latest data outcome was stronger than in the December 2019 quarter.

Figure 2.10

Wage and labour income compared to CPI

(index=100 in 2019Q4)



Source: Stats NZ.

Note: The adjusted LCI (all sectors, all salary and wage rates) estimates wage growth for the same job, being done to the same quality and quantity. QES average hourly earnings (all industries, ordinary and overtime, seasonally adjusted) is an hourly labour income measure that reflects same job wage growth but also income changes due to productivity changes, job promotions and job switching. QES gross earnings (all industries, seasonally adjusted) per QES filled job (all industries, seasonally adjusted) includes all these factors as well as changes in the number of hours worked.

Global developments have increased uncertainty and added to price pressures

In addition to pressure on domestic resources, inflation has been pushed up by international events. The war in Ukraine has had a devastating impact on the lives of many in the region. The war and related economic sanctions have also led to sharp increases in global oil, grain and other commodity prices (figure 2.11). This has led to heightened uncertainty and a weaker outlook for global growth.

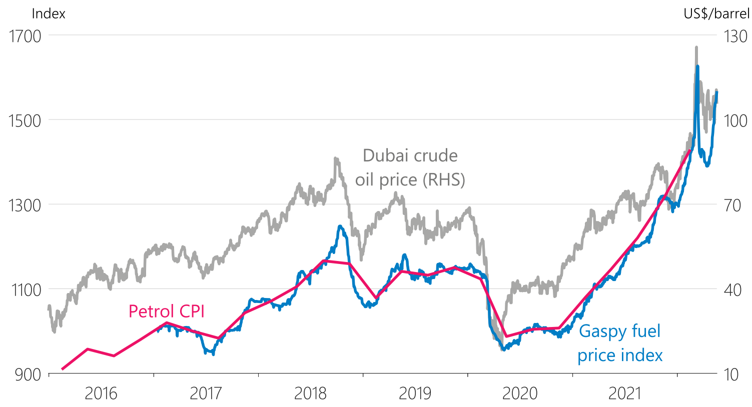
Further, the war in Ukraine and the reintroduction of COVID-19 lockdowns in significant Chinese port cities have added to longer-lasting supply-chain bottlenecks, increasing shipping delays and costs (figure 2.12). As a result, global inflationary pressures are expected to remain over 2022 (see figure 4.3). In response to higher realised and expected inflation, central banks have started to lift interest rates. Tighter actual and expected monetary policy abroad has contributed to a fall in the New Zealand dollar trade-weighted index (TWI). The TWI is lower than assumed at the time of the April Monetary Policy Review, making imports even more expensive but lifting exporter returns.

Reflecting both global and domestic factors, annual CPI inflation increased to 6.9 percent

Annual CPI inflation increased to 6.9 percent in the March 2022 quarter – well above the MPC's target band of 1 to 3 percent. This reflects ongoing supply-chain bottlenecks and other global factors, and pressure on available resources domestically. Inflation is being influenced by global and domestic factors, as reflected in the roughly equal contribution of tradable and non-tradable goods and services to overall consumer price inflation (figure 2.13). This follows an extended period when low tradables inflation helped to keep overall inflation low in New Zealand.

Figure 2.11

Petrol and Dubai oil prices



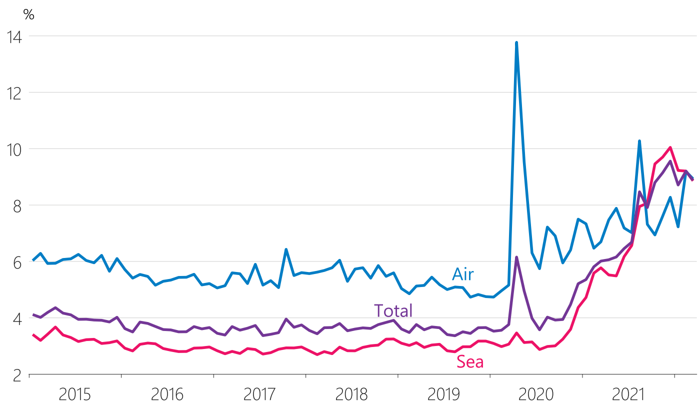
Source: Datamine – Gaspy data, Stats NZ, Reuters, RBNZ estimates.

Note: Gaspy fuel prices are indexed to the petrol CPI level in the December 2019 quarter.

Figure 2.12

Shipping costs for consumer goods

(share of import value for duty)



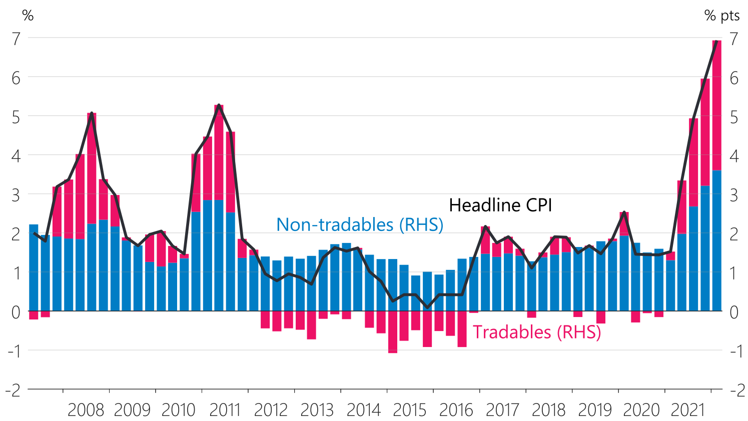
Source: Stats NZ, RBNZ estimates.

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

Figure 2.13

Contributions to annual CPI inflation

(annual)



Source: Stats NZ.

On the global side, oil prices and their pass-through to domestic petrol prices have played a particularly large role in the recent increase in tradables inflation (figure 2.14). Margins for refined oil products have risen significantly and are expected to contribute to high fuel price inflation in the near term. Food prices in New Zealand have also been increasing recently, in line with rising food prices around the world (see section 4.1). Tradables inflation is much higher than was anticipated a year ago, reflecting the series of shocks from the war in Ukraine and ongoing COVID-19 lockdowns in China.

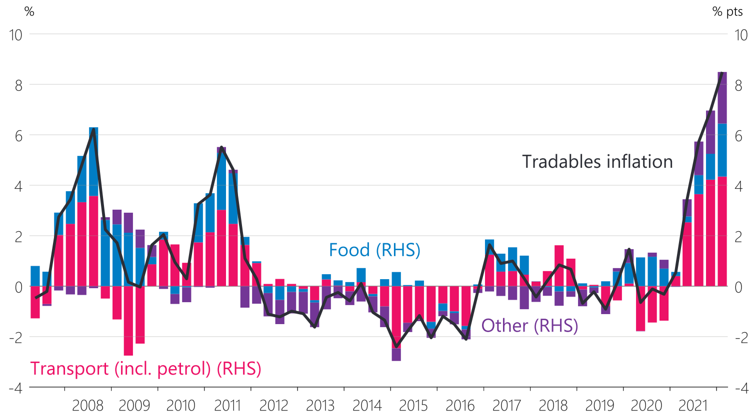
Domestically, construction and other housing-related prices have made the largest contribution to non-tradables inflation (figure 2.15). Construction and housing-related prices have also risen much more than expected a year or so ago. This reflects both stronger-than-expected underlying domestic demand and shortages of labour and building materials.

Inflation has broadened over recent quarters. Higher prices are being seen in an increasing share of goods and services. As a result, the distribution of price increases is moving higher (figure 2.16). Measures of 'core' inflation have increased to above 4 percent (figure 2.17).

Figure 2.14

Contributions to tradables inflation

(annual)

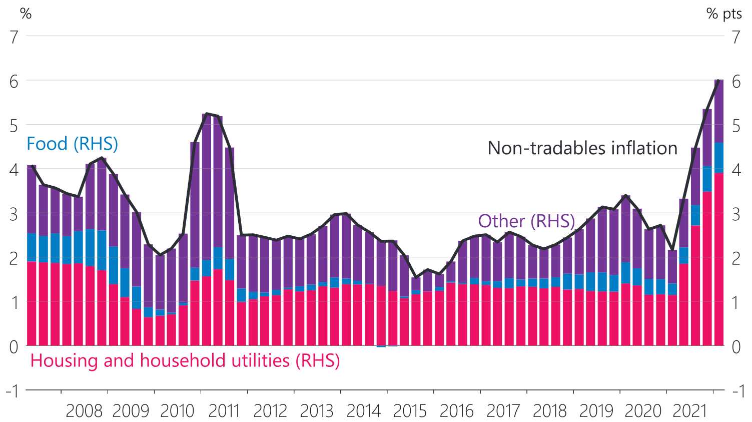


Source: Stats NZ.

Figure 2.15

Contributions to non-tradables inflation

(annual)

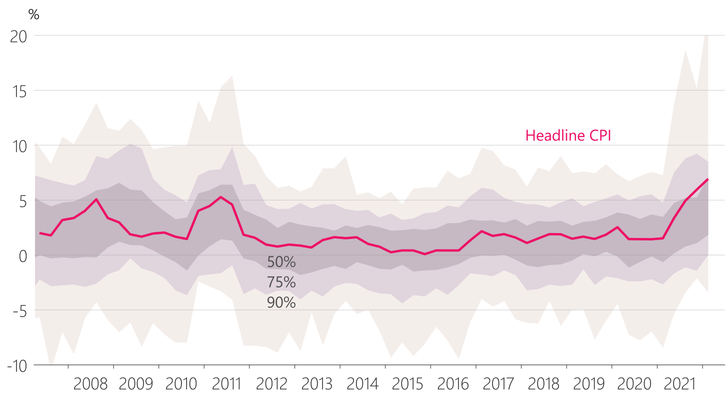


Source: Stats NZ.

Figure 2.16

Distribution of price movements in CPI classes

(annual)



Source: Stats NZ.

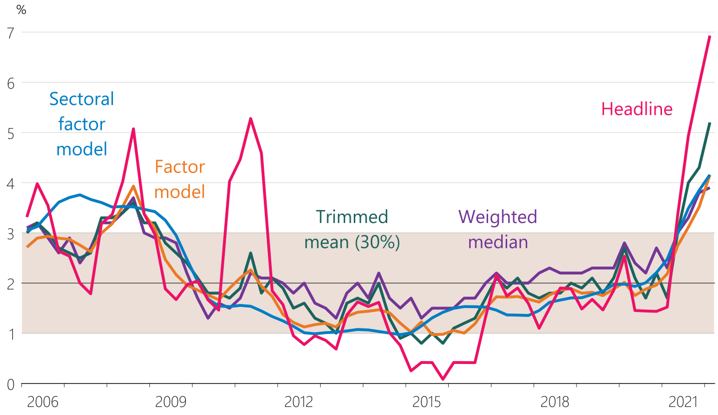
Note: There are more than 100 CPI classes – capturing prices for specific types of goods and services – for which the bands show the distribution of annual percent changes. Shaded areas represent: grey – middle 50 percent of CPI classes; purple – middle 75 percent of CPI classes; light brown – middle 90 percent of CPI classes.

Current expectations for future inflation have increased, particularly for one and two years ahead, as discussed in section 4.2 of the February *Statement* (figure 2.18). Expectations at longer horizons have increased slightly, but remain near the 2 percent target mid-point. Higher expectations will contribute to further increases in wages and prices in the near term.

Financial conditions have already tightened, contributing to a decline in nationwide house prices

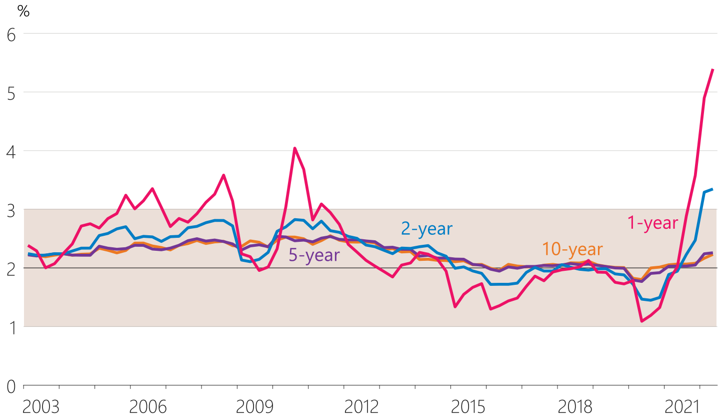
The MPC has been tightening monetary policy since mid-2021, in response to high actual and expected inflation and employment being above its maximum sustainable level. Interest rates faced by households and businesses have increased sharply over this period, as discussed in chapter 3 and section 4.2. An increase in mortgage interest rates, a fall in consumer confidence, weaker population growth, strong home building activity and the introduction of regulatory measures (such as changes to the Credit Contracts and Consumer Finance Act and tighter loan-to-value ratio restrictions) have all contributed to a fall in house prices over recent months.

Figure 2.17
Core inflation measures
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 2.18
Inflation expectations
(annual, years ahead)



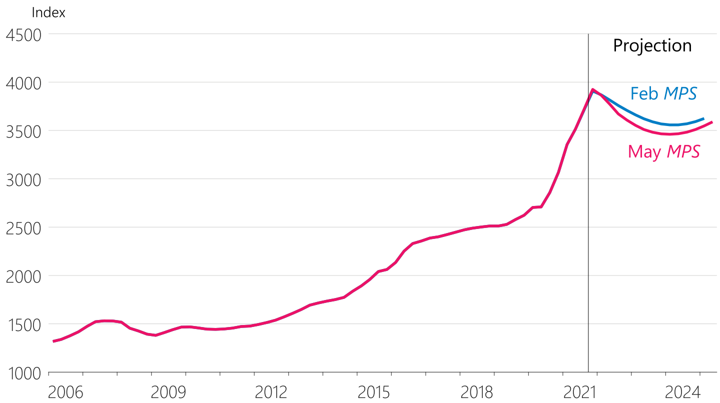
Source: ANZ, RBNZ, Consensus Economics, RBNZ estimates.

Economic and monetary policy outlook

Economic growth is expected to slow from this year

House prices are expected to continue moving lower towards more sustainable levels over the coming year (figure 2.19). This easing in house prices is expected to slow household spending growth due to the reduction in wealth and higher mortgage interest payments (discussed further in section 4.2). Recent declines in real wages – wages adjusted for inflation – are also assumed to hold back spending growth.

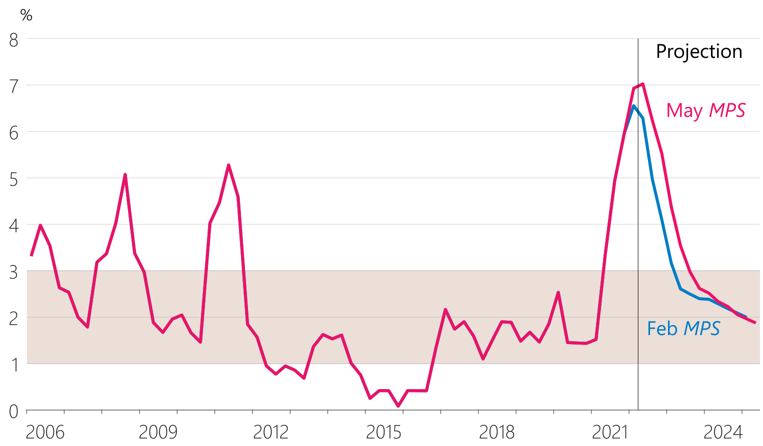
Figure 2.19
House prices
(nominal)



Source: CoreLogic, RBNZ estimates.

Note: This index is the official measure of house price levels in New Zealand.

Figure 2.20
Annual CPI inflation



Source: Stats NZ, RBNZ estimates.

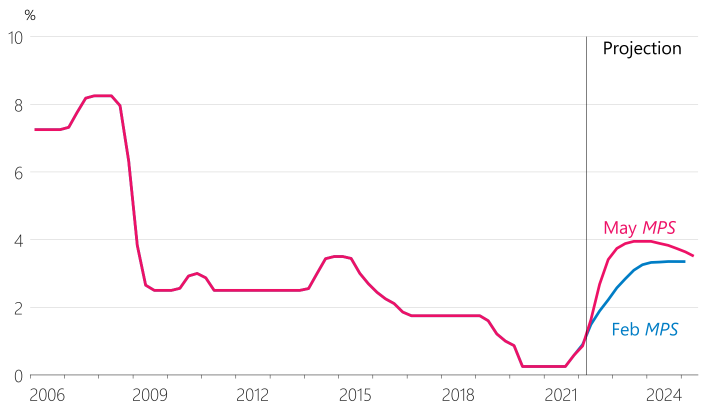
Economic growth in the first half of 2022 reflects an ongoing recovery from COVID-19 restrictions last year, a waning impact of the initial Omicron wave, the border reopening and higher government spending. However, domestic demand growth is expected to slow from mid-2022. High global uncertainty, higher interest rates and weakening business confidence are assumed to limit business investment, despite current capacity pressures. Real government consumption is also assumed to ease, although from higher levels than assumed in the February *Statement*, consistent with the 2022 *Budget*. In addition, pent-up demand for travel by New Zealanders going overseas is expected to more than offset the gradual recovery in spending by international tourists here.

But more monetary tightening is needed to bring inflation back to 2 percent

Slower growth in domestic demand is expected to coincide with a gradual freeing-up of supply bottlenecks. The shortage of workers is expected to moderate as fewer workers are off sick or self-isolating due to COVID-19 and net immigration returns toward its longer-term level. Inflation is forecast to decline as pressures on resources ease and oil prices decline in line with market expectations (figure 2.20).

Our projection implies that the MPC will need to increase the OCR by more than assumed in the February *Statement*, in order to achieve its economic objectives (figure 2.21). The increase in projected monetary policy tightening required reflects greater global inflationary pressures and shortages of workers and materials domestically. Additional OCR increases are needed to soften demand for goods and services and reduce demand for labour until persistent supply-side shortfalls can be resolved. This is required to rein in broadening domestic inflation, helping to return annual CPI inflation towards the MPC's target midpoint over the medium term, and to ensure employment returns towards its maximum sustainable level.

Figure 2.21
OCR
(quarterly average)



Source: RBNZ estimates.

Financial conditions

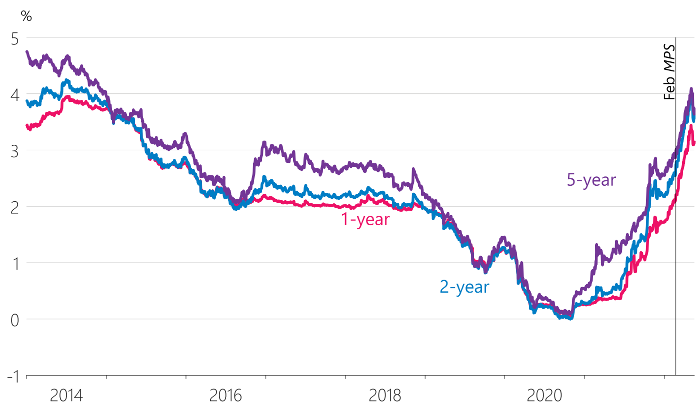
CHAPTER 03

CHAPTER 3
Financial conditions

A key way Te Pūtea Matua – the Reserve Bank – affects economic activity is by influencing conditions in financial markets. Financial conditions include the interest rates at which households and businesses save and borrow, the exchange rate and other factors such as credit availability. Since the February *Statement* the MPC has continued to raise the OCR and domestic financial conditions have tightened further. The OCR has returned closer to our estimate of its neutral rate, where it is neither boosting nor slowing down the economy. However, domestic wholesale and retail interest rates have seen a greater magnitude of tightening, reflecting market expectations for the OCR to rise much further. As a result, consumers and businesses are experiencing higher borrowing and lending rates.

Financial conditions have tightened since the February *Statement*

Figure 3.1
Interest rate swap rates



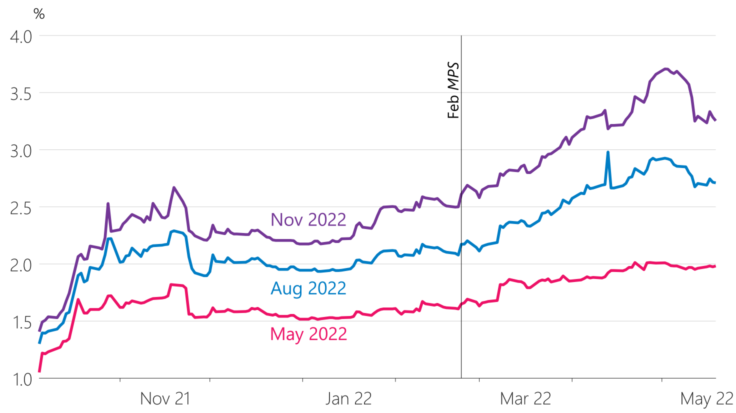
Source: Bloomberg.

Financial conditions have tightened since the February *Statement*, reflected in higher interest rates in a range of markets. Wholesale interest rates have increased rapidly due to the recent increases in the OCR, as well as financial market expectations of further increases to come. Domestic wholesale interest rates at terms most relevant to households and businesses (one and two years) are now near their highest levels since early 2015 (figure 3.1). Retail interest rates such as term deposit rates and mortgage rates have increased in line with wholesale rates. However, the New Zealand dollar exchange rate has depreciated on a trade-weighted basis in recent months, providing a small offset to the tightening in financial conditions.

Prices for overnight indexed swap (OIS) contracts indicate that financial market participants expect significant further OCR increases in coming months (figure 3.2). OIS contracts on Thursday 19 May suggested market participants fully anticipated one 50-basis-point hike at the May *Statement* and around a further 70 basis points of hikes by the August *Statement*. Market pricing is consistent with expectations of the OCR rising to 3.25 percent by the November 2022 *Statement* (figure 3.2), and continuing to rise after this. Expectations for future settings of the OCR are an important influence on financial conditions today. This is because fixed-term interest rates for consumers and businesses are influenced by wholesale rates at those timeframes, which are in turn influenced by expectations of the OCR in the future.

Figure 3.2

Market expectations for the OCR



Source: Bloomberg.

Note: Each line represents the expectations of the level of the OCR at a given point in time in the future, as measured by overnight indexed swap pricing. For example, the May 2022 line shows expectations over time for what the OCR decision would be at the May 2022 *Statement*.

Global economic and financial market changes have been a key influence contributing to higher domestic interest rates in recent months. New Zealand interest rates tend to move with global interest rates, particularly at longer maturities. Since the February *Statement*, global interest rates have risen sharply from low levels. Financial market participants have reassessed their expectations for global inflation and therefore the pace of monetary policy tightening by central banks (see section 4.1 for more discussion).

Uncertainty about how fast and how far central banks will need to raise interest rates has added to volatility in global financial markets, including in New Zealand. This uncertainty may be boosting domestic wholesale rates by increasing volatility and reducing liquidity. Market participants report that this has been most notable in short-term interest rate swap markets. Participants also report that the deterioration in conditions is partly due to domestic banks needing to hedge a large volume of recently refinanced fixed-term mortgages, and a drop in offshore participation in the market. These factors may be placing upward pressure on swap rates over and above expectations for the OCR, although the magnitude of this impact is difficult to assess.

The New Zealand government bond (NZGB) market continues to function normally. One indicator to assess this is the bid-ask spread. This measures how far apart buyers and sellers are from reaching agreed prices to trade. In times of market stress, bid-ask spreads can widen significantly. Bid-ask spreads have not widened since the February *Statement*, despite increased volatility in the NZGB market. One indicator that illustrates the general increase in volatility in the NZGB market is the intra-day range observed in the prices of the 10-year New Zealand government bond. This has increased slightly this year, mirroring global trends in fixed-income markets, and has generally remained above its long-term average since January.

The New Zealand dollar has weakened

The New Zealand dollar exchange rate has been volatile against a range of other currencies since the February *Statement*. Global commodity prices rose after the Ukraine war started, leading to an appreciation in the New Zealand dollar in March. However, since early April the New Zealand dollar TWI has fallen.

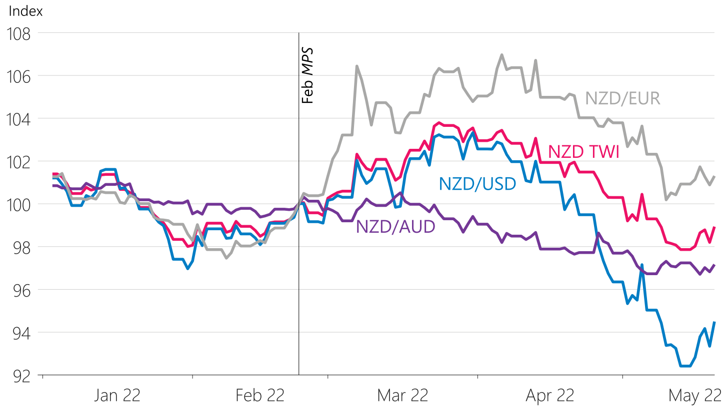
A number of factors have led to the fall in the exchange rate. Rising expectations of interest rates abroad, especially in the United States and Australia, have narrowed the gap between wholesale interest rates in New Zealand and those offshore. Prices for New Zealand's key export commodities, particularly dairy, have fallen from recent high levels. Investors have moved towards safer assets because market risk appetite has worsened in response to greater uncertainty about the impacts of the war in Ukraine and the weakening economic outlook in China. These factors have also contributed to general strength in the US dollar, which tends to strengthen during times of heightened investor risk aversion. This is due to the importance of the US dollar in the global financial system, and the perceived relative safety of US dollar assets.

Overall, the New Zealand dollar TWI has returned to a similar level to that assumed at the time of the February *Statement*. Falls have been greater against some currencies in the TWI basket of key trading partner currencies, such as the US and Australian dollars, than others (figure 3.3). The New Zealand dollar has remained relatively flat against the euro, as the economic outlook has worsened in Europe because of the war in Ukraine.

Figure 3.3

New Zealand dollar TWI and bilateral exchange rates

(Index = 100 at day of February Statement*)*



Source: Bloomberg.

Higher wholesale rates are being passed on to mortgage rates

Mortgage rates at the most popular one- and two-year terms increased by around 20 and 5 basis points respectively between the November and February *Statements*. However, they have since increased by around 75 and 90 basis points respectively (figure 3.4). Rates at longer terms have increased more, with five-year mortgage rates currently 105 basis points higher than before the February *Statement*.

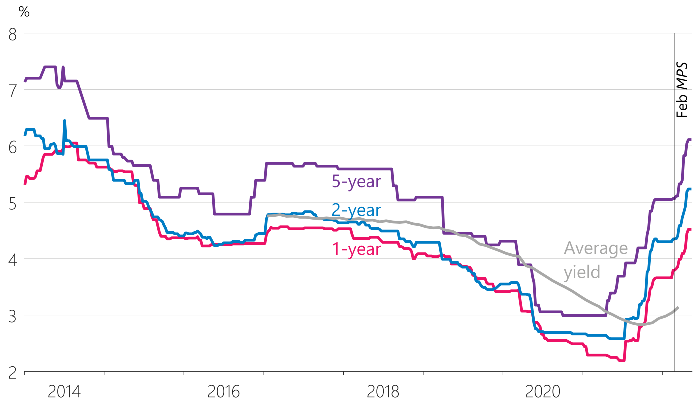
Higher mortgage rates will filter through to larger mortgage payments for many households over the coming year. Over half of the total mortgage debt is due for repricing during 2022. As mortgages are re-priced at higher rates, the average mortgage rate is likely to rise further. The average mortgage rate has risen to around 3 percent from 2021's low of 2.7 percent (see section 4.2 for more discussion). The average mortgage rate tends to lag changes in the rates offered by banks for new mortgage lending, because it mostly comprises fixed-rate mortgages that were fixed at the mortgage rates prevailing in the past.

Term deposit rates are also increasing, but more slowly

Rates on term deposits, which make up around a quarter of bank funding, have increased by around 60 and 45 basis points at the popular six-month and one-year terms respectively since just prior to the February *Statement* (figure 3.5). These increases are smaller than those seen in mortgage and swap rates, and the spread of term deposits to relevant benchmark wholesale rates is low compared to historical spreads. The relatively slow increase in deposit rates in part reflects favourable overall funding conditions for banks that reduce the need to compete strongly on deposit rates. However, deposit rates are likely to rise further as the OCR continues to increase and as the effects of additional monetary policy tools (such as the Funding for Lending Programme) on bank funding conditions wane over time. Further increases in deposit rates may add extra upwards pressure to mortgage rates as banks pass on the additional costs.

Figure 3.4

Mortgage rates and average interest rate on outstanding mortgages

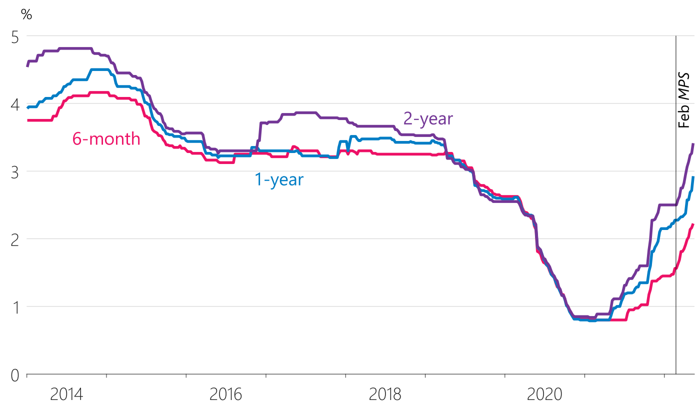


Source: Reuters, RBNZ *Income Statement survey*.

Note: The mortgage rate shown for each term is the average of the latest 'special' fixed-term rates on offer from ANZ, ASB, BNZ and Westpac. The average yield is the average interest rate of all outstanding mortgages.

Figure 3.5

Term deposit rates



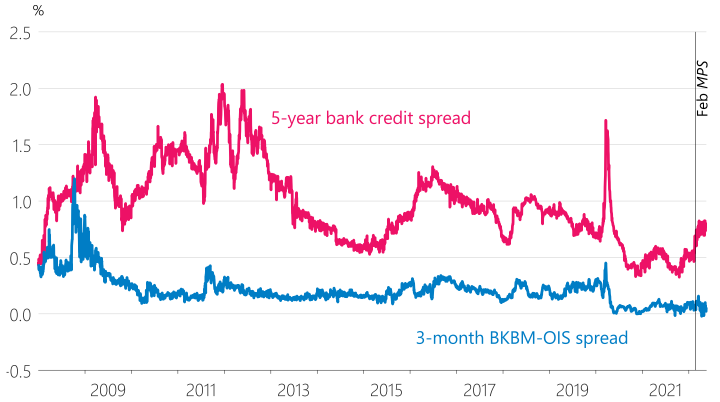
Source: interest.co.nz.

Note: The rate shown for each term is the average of the latest term deposit rates on offer from ANZ, ASB, BNZ and Westpac.

Bank funding conditions remain relatively accommodative

Banks are well funded overall, and have strong liquidity buffers. This means they can afford to be selective when accessing wholesale markets. Because of this, the impact of rising wholesale rates and periods of heightened volatility in global financial markets on banks' funding profiles has been limited to date. Short-term funding costs remain low, as evidenced by the three-month BKBM-OIS spread (which captures the difference between the Bank Bill Benchmark rate and the OIS rate). Longer-term bank funding spreads have increased, and have returned to pre-COVID-19 levels (figure 3.6).

Figure 3.6
Bank funding costs



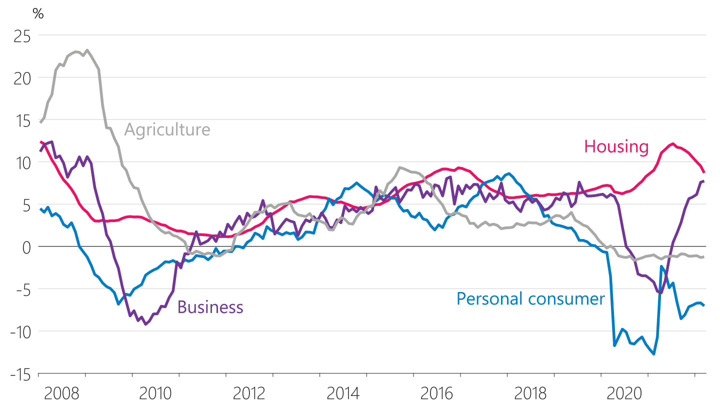
Source: Bloomberg, RBNZ estimates.

Note: Credit spreads are the differences between secondary market bond yields and the interest rate swap curve. The bond yields used for the five-year measure are the averages of bonds with a remaining maturity of five years issued in New Zealand dollars by ANZ, ASB, BNZ and Westpac. A lower spread represents a lower implied borrowing cost.

Banks report lower demand for household credit

Credit for housing is still growing, but the pace has slowed from its peak last year (figure 3.7). This slowdown is partly due to regulations, including changes to lending rules under the Credit Contracts and Consumer Finance Act (CCCFA) in late 2021. These changes have slowed down mortgage approvals due to tighter lending standards from banks. With the higher outlook for mortgage rates, banks have also increased the test interest rates used to assess mortgage serviceability, restricting the maximum mortgage size homebuyers can borrow. The recently released March *Credit Conditions Survey* showed that banks reported a reduction in demand for household credit, and that the availability of this credit had fallen (see section 4.2 for more discussion). Banks expect demand for housing credit to continue to decline over the coming months. Personal consumer lending is falling, and the weak demand for this type of lending is expected to continue due to low consumer confidence, widespread COVID-19 in New Zealand, and rising interest rates.

Figure 3.7
Sector lending growth
(annual)



Source: RBNZ Bank Balance Sheet survey.

Business lending is growing faster than in 2021. Credit standards for businesses were reported to have changed little in the March *Survey*, although banks reported a small increase in demand for borrowing by businesses, mainly for purposes other than capital investment. Banks do not anticipate an increase in business appetite for capital expenditure in coming months, with business confidence expected to remain subdued. Lending to the agriculture sector is also falling on an annual basis, although the March *Survey* reported that demand for lending in this sector was starting to improve due to high commodity prices and a more positive outlook for the sector in general.

Special topics

CHAPTER 04

CHAPTER 4
Special topics

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

Topics for the May *Statement* included:

1. Global inflation developments.
2. The outlook for household spending, house prices and construction.

Previous special topics in the past 12 months

Topic	Date/publication
International developments and risks	MPS February 2022 (Chapter 4)
Inflation expectations	MPS February 2022 (Chapter 4)
Transmission of global developments to New Zealand's economy	MPS November 2021 (Chapter 4)
Outlook for New Zealand's productive capacity	MPS November 2021 (Chapter 4)
Climate change and inflation	MPS November 2021 (Chapter 4)
The recovery of New Zealand's labour market	MPS August 2021 (Chapter 4)
The neutral interest rate	MPS August 2021 (Chapter 4)
Disruptions to global and domestic supply chains	MPS May 2021 (Chapter 4)
Monetary policy and house price sustainability	MPS May 2021 (Chapter 4)

1

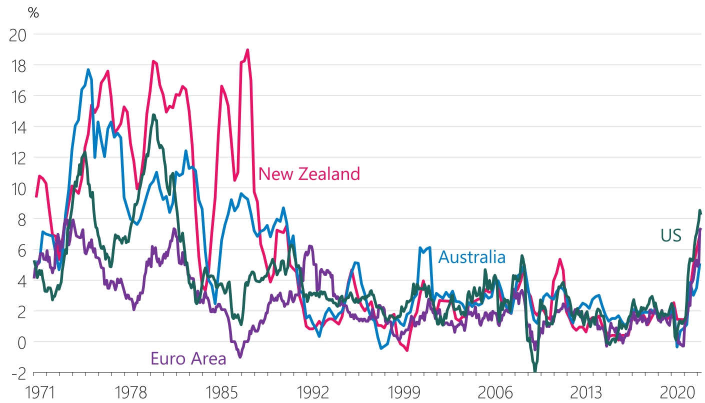
Global inflation developments

Inflation has risen sharply across the globe in 2021 and 2022, reaching multi-decade highs in many economies. Price pressures for a variety of consumer goods emerged as supply-chain disruptions escalated during the height of the COVID-19 pandemic. Underlying inflationary pressure has also been building, as demand has strengthened and labour shortages have grown in many economies. More recently, the war in Ukraine has led to a sharp increase in global commodity prices, particularly energy and food prices. Central banks, including Te Pūtea Matua – the Reserve Bank – are raising official interest rates to lower inflation and promote price stability.

Figure 4.1

Inflation in selected countries

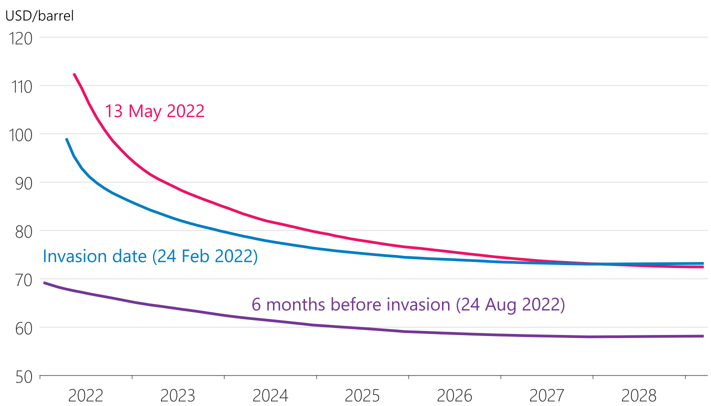
(annual)



Source: Haver Analytics.

Figure 4.2

Brent crude oil futures



Source: Bloomberg.

Successive COVID-19 disruptions and war in Ukraine are constraining global supply

The combination of several supply shocks and strong consumer demand for goods has caused inflation to increase to multi-decade highs in many regions (figure 4.1).

From early 2020, the COVID-19 pandemic led to a massive disruption in the production and transportation of goods. Consumer spending shifted from services towards goods such as computer and electronic equipment due to mobility restrictions. Higher demand for electronics has caused shortages of key production components, such as semiconductor chips. Mobility restrictions and social distancing requirements across economies have also reduced operating capacity at seaports, airports and other logistic hubs, creating transportation delays. The combination of these factors has resulted in higher prices for many consumer products.

As some of the pressures of the COVID-19 disruptions began to ease early this year, the war in Ukraine disrupted energy and food markets. Russia is a major supplier of oil and natural gas, and Ukraine is a major producer of wheat, grains and chemicals that are key raw materials for manufacturers. The prices of oil, wheat and other commodities have increased sharply. These impacts might be persistent. For example, the war in Ukraine may interrupt the planting, production and transport of food beyond this production season. Energy trade patterns may also be changed permanently by the war. Market prices show that investors expect the prices of oil, wheat and other grains to remain high for an extended period. This includes elevated pricing in crude oil futures (figure 4.2).

China continues to pursue its strict policy to eliminate the spread of COVID-19. In the past few months, major cities in China have been in lockdown. These are disrupting the production and transportation of goods, creating widespread pressures on the prices of materials and manufactured goods. The combined impact of supply disruptions from China and the war in Ukraine has intensified inflationary pressures for a broad set of food, consumer goods and energy supplies.

Inflation impacts have varied across countries

Price rises have been uneven around the globe due to the relative strengths of growth and labour market recoveries. Countries closer to Ukraine have been more directly affected by the disruption caused by the war.

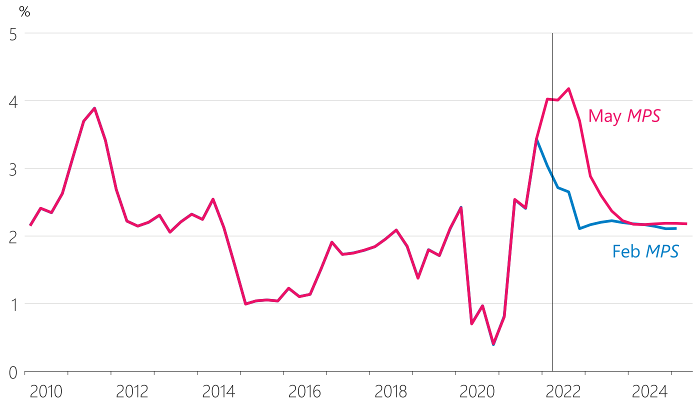
Inflation in the US is higher than in many other regions, reflecting strong demand and a tighter labour market. Economies in Europe have been more significantly impacted by the nearby war in Ukraine, due to having closer trade links with Russia. Energy prices have also risen more in Europe than elsewhere, making a more significant contribution to inflation than they have in other regions.

China has also been affected by global inflationary pressures, but its economic circumstances have kept demand pressures relatively low recently. Many economic indicators suggest the pace of China's recovery is slowing, in part due to ongoing lockdowns in its major cities to control the spread of Omicron. These lockdowns provide a drag on both production and consumption, and have materially slowed the pace of inflation in the country.

In Australia, inflation has increased due to rising food, housing and transport prices in particular. Core inflation has risen quickly in the past year as capacity pressures have built up. These themes have been similar in New Zealand. However, housing and food price inflation has been slightly stronger in New Zealand, partially reflecting a stronger housing market and a slightly higher relative share of imports in the CPI.

Inflation in New Zealand is affected by fluctuations in inflation among our trading partners, in particular for imported goods and services. New Zealand's trading partner inflation has increased sharply in the past few months, reflecting higher inflation in most economies other than China (figure 4.3).

Figure 4.3
Trading partner inflation



Source: Consensus Economics, Haver Analytics, RBNZ estimates.

Headline and core inflation have varied across countries. Headline inflation captures changes in all of the consumption basket, while core inflation estimates persistence in inflation by removing price movements that typically fluctuate significantly (for example, food and energy). The sharp increases in global energy and food prices in the past few months have pushed headline inflation up by considerably more than core inflation. This is especially true in Europe, where energy and food prices have risen faster due to the war in Ukraine.

Cross-country variations in wage growth are also resulting in different inflation dynamics

Another factor leading to uneven inflation outcomes between countries is differences in wage inflation. Global unemployment rates have fallen towards multi-decade lows, and job vacancies have increased. In response, employers have had to compete for labour by offering higher wages. Wages have started to rise, but increases have varied across countries and industries. Nominal wages have grown more quickly in the US than in the euro area and Australia, in part due to a tighter US labour market. Wages have been increasing more quickly in industries with strong post-pandemic recoveries, such as the retail services sector. Further price rises have the potential to feed into higher wages through wage negotiations. In turn, higher wage inflation may result in more persistent consumer price inflation, in particular for labour-intensive services.

Long-term inflation expectations have been increasing but remain moderate

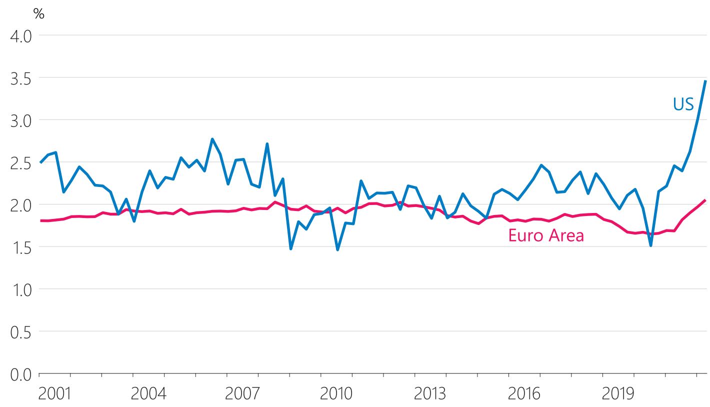
Expectations of long-term inflation have started to increase in most economies, reflecting recent sharp increases in inflation. Inflation expectations represent the rate at which consumers and businesses expect prices to rise in the future. This belief informs consumer and business decisions such as hiring and investment, and influences pricing decisions today. Anchoring inflation expectations helps consumers and businesses to make longer-term decisions, and makes it easier for central banks to return inflation to target over time. Surveyed expectations of inflation one to two years out have increased to a greater extent. Surveyed expectations of long-term inflation have increased somewhat in the past year, but they still remain close to central bank targets around the globe (figure 4.4).

This dynamic of higher near-term inflation expectations but relatively stable long-term inflation expectations is also apparent in market measures, which represent the inflation outlook of financial market participants. Market-implied inflation expectation measures have increased across the globe (figure 4.5). The increase has been most pronounced in market expectations of inflation over the next two to five years. Expected inflation over the next 10 years has been more stable.

Figure 4.4

Surveyed inflation expectations

(5 years ahead)

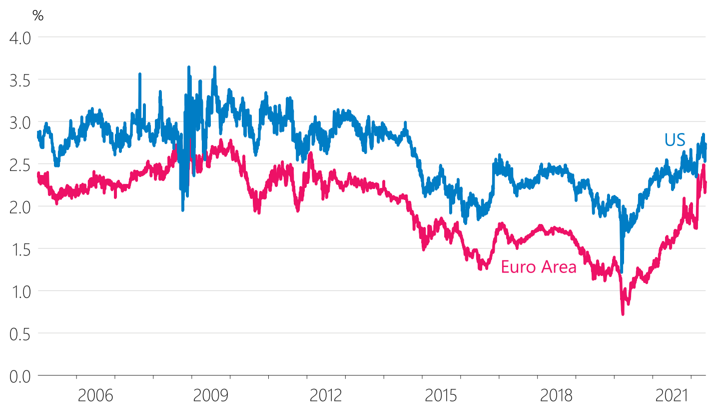


Source: European Central Bank, Federal Reserve Bank of Cleveland.

Figure 4.5

Market-implied inflation expectations

(5-year, 5-year USD inflation swap rate)



Source: Bloomberg.

Inflationary pressures are prompting tighter monetary policy globally

Central banks are tightening monetary policy in order to lower inflation (table 4.1). The US Federal Reserve, Bank of Canada, Reserve Bank of Australia and Bank of England have all raised their policy rates since the start of April by 25 to 50 basis points and announced their intention to decrease the sizes of their balance sheets. The European Central Bank has also indicated that it expects to tighten policy soon. Market expectations for the future path of policy rates reflect a belief that central banks will continue to increase policy rates for some time.

Geopolitics and COVID-19 will affect future inflation

Uncertainty about the global inflation outlook is high. Central banks are tightening monetary policy to ensure price stability, but the pace at which inflation returns to central bank targets is dependent on a range of factors that are difficult to predict. These include geopolitical developments and pandemic-related disruptions to global production and trade.

Table 4.1
Central bank snapshot as of May 21, 2022

	Fed	BoC	RBA	BoE	ECB	RBNZ
Policy rate	0.75-1%	1.00%	0.35%	1.00%	-0.5%	1.50%
Headline inflation	8.30%	6.8%	5.10%	9%	7.40%	6.90%
Unemployment	3.60%	5.20%	3.9%	3.7%	6.80%	3.20%

Source: US Federal Reserve (Fed), Bank of Canada (BoC), Reserve Bank of Australia (RBA), Bank of England (BoE), European Central Bank (ECB), Reserve Bank of New Zealand (RBNZ).

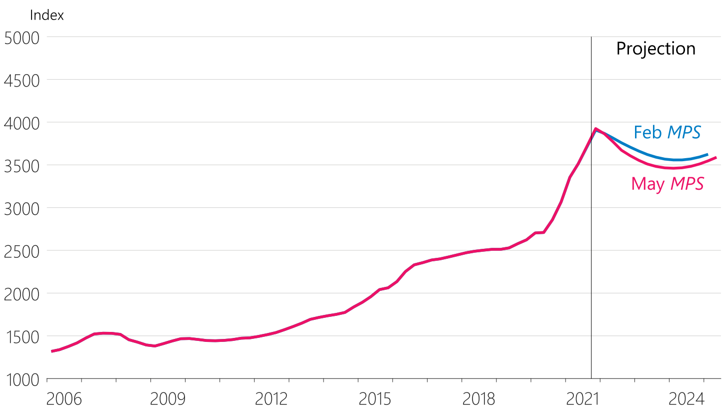
2 The outlook for household spending, house prices and construction

Households are facing many challenges this year. High consumer price inflation is affecting all households, with particularly pronounced impacts for those on lower incomes. Rising interest rates and falling house prices are placing pressure on indebted homeowners. For some, these challenges have been partly offset by increased job opportunities and relatively strong income growth in the past year. Individual household outcomes will vary widely and depend on a variety of factors including sources and levels of income, home ownership status and levels of accumulated equity in assets such as homes and shares. The analysis below considers the average household outlook.

At an economy-wide level, households are starting from a relatively strong position. Many homeowners have high amounts of equity in their homes and savings built up in the past two years. However, rising interest rates will put pressure on some households and may cause them to cut back their spending. Declining house prices and higher interest rates may also slow the pace of growth in new-home building.

There are risks that higher interest rates will lead to a more rapid decline in house prices than expected, which would cause a larger decline in household spending and construction than currently assumed. However, some slowing of domestic demand growth through household spending and construction is needed to bring inflation back towards its 2 percent target midpoint over the medium term and employment towards its maximum sustainable level.

Figure 4.6
House prices
(nominal)



Source: CoreLogic, RBNZ estimates.
Note: This index is the official measure of house price levels in New Zealand.

The housing market is cooling

House prices have fallen by about 5 percent since their peak in November 2021, towards more sustainable levels. Many factors have contributed to the downward pressure on house prices and sales, including:

- higher mortgage rates,
- changes to the Credit Contracts and Consumer Finance Act (CCCFA),
- the removal of interest deductibility for investors,
- tighter loan-to-value ratio (LVR) requirements,
- lower net immigration growth,
- increased housing supply, with a recent record number of building consents.

Despite recent declines, house prices remain above sustainable levels

Despite recent declines, house prices remain above levels that are justified based on their economic fundamentals, as outlined in the May 2022 *Financial Stability Report*. These fundamentals include, but are not limited to, the supply of houses, yields from rents, the opportunity costs of other investments, the tax treatment of housing, and interest rates.

From their peak in November 2021, we currently expect house prices to fall by about 14 percent by early 2024. While this seems like a relatively large decline compared to New Zealand's history, it would bring prices back to only April 2021 levels (figure 4.6). That said, the size and speed of the fall in house prices are highly uncertain.

Rising interest rates are contributing to declines in house prices

Rising interest rates have helped to cool the housing market. Mortgage rates have increased rapidly in the past 12 months, with fixed mortgage rates at the one- and two-year horizon increasing by more than 225 basis points. This has reduced demand from prospective buyers, especially in the context of high house prices (figure 4.7). As a result, house sales have declined, causing the stock of homes on the market to rise as some homeowners continue to list their properties for sale (figure 4.8). Gradually, sellers will adjust their price expectations lower to find buyers, or withdraw their listings.

As existing mortgages have begun to be repriced, the average interest rate on all mortgage debt has risen by 31 basis points since its trough to 3.14 percent. Just over half of all existing fixed mortgages are due to reprice in the next year (figure 4.9). Wholesale market pricing implies that the average (or 'effective') interest rate of all mortgage debt will increase to 5.3 percent in the next year (figure 4.10).

Figure 4.7

Indicative mortgage payments for a new buyer

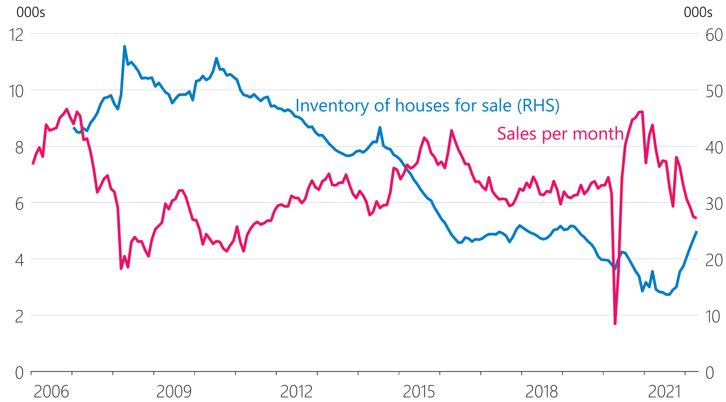
Source: RBNZ estimates.

Note: Calculated as the share of median household disposable income required to service a new 30-year mortgage on a median-priced house with a loan-to-value ratio of 80 percent at the average two-year mortgage rate.

Figure 4.8

House sales and inventories

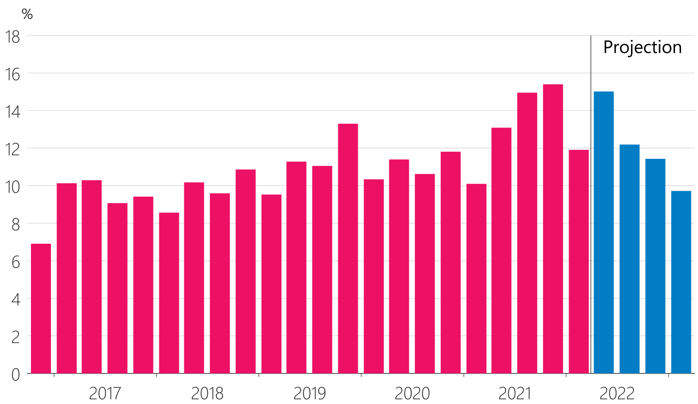
(seasonally adjusted)



Source: REINZ, realestate.co.nz.

Figure 4.9

Existing mortgage debt due to reprice



Source: RBNZ *Bank Balance Sheet survey*, RBNZ estimates.

Household credit growth is easing

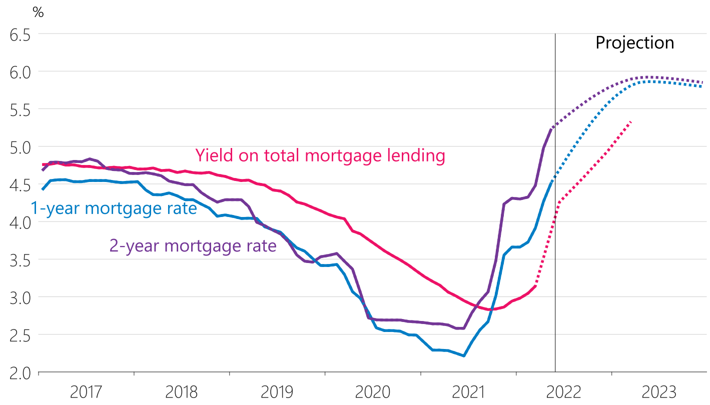
Growth in new mortgage borrowing has slowed in recent months, after rising in 2020 and 2021 (figure 4.11). Home buyers are finding it increasingly difficult to borrow at higher debt-to-income ratios due to banks' stricter lending rules. A greater scrutiny of expenses after changes to the CCCFA late last year also made it more difficult for some individuals to get credit, and loan approvals have taken longer.

Lower migration is weighing on housing demand

High net migration into New Zealand at the beginning of the pandemic contributed to housing market strength during 2020 and 2021. Net immigration surged in all age groups (figure 4.12). Since then, people aged between 20 and 29 years have been departing steadily, and net migration has plateaued in other age groups. Our central projection assumes that net immigration in coming years will be lower than it was prior to the COVID-19 pandemic, in part due to the Government's recent immigration policy announcements. This will reduce additional housing demand.

Figure 4.10

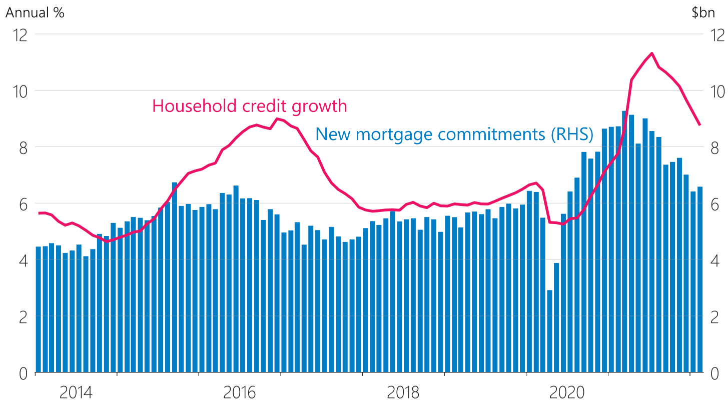
Mortgage interest rates and average rate on housing debt



Source: RBNZ *Income Statement survey,* interest.co.nz, RBNZ estimates.

Figure 4.11

Household credit growth and new mortgage commitments

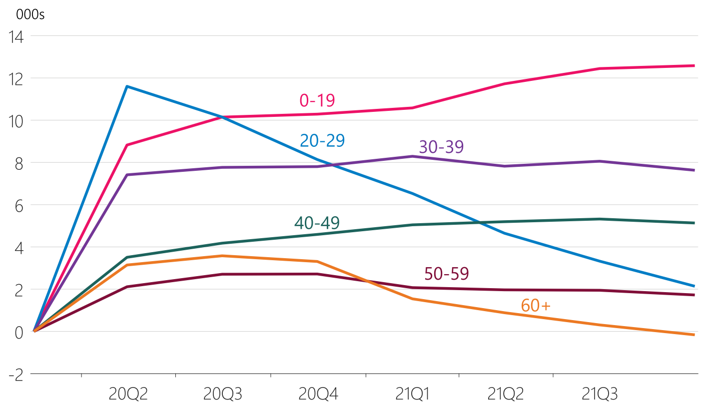


Source: RBNZ *Bank Balance Sheet survey,* RBNZ *LVR New Commitments Survey.*

Figure 4.12

Cumulative net immigration by age group

(since 2020Q1)



Source: Stats NZ.

Rising interest rates and declining house prices will lead to lower household spending

Rising interest rates and falling house prices are expected to reduce households' ability and willingness to spend. About two-thirds of households own their homes, and about two-thirds of those homeowners have mortgages. Households with the highest levels of debt relative to their incomes will likely need to cut back their spending on goods and services in order to service their mortgages. Households with less or no debt will still face pressure from the higher cost of living, which is being only partially offset currently by nominal wage growth and higher interest rates on deposits.

Overall, households are starting from strong positions

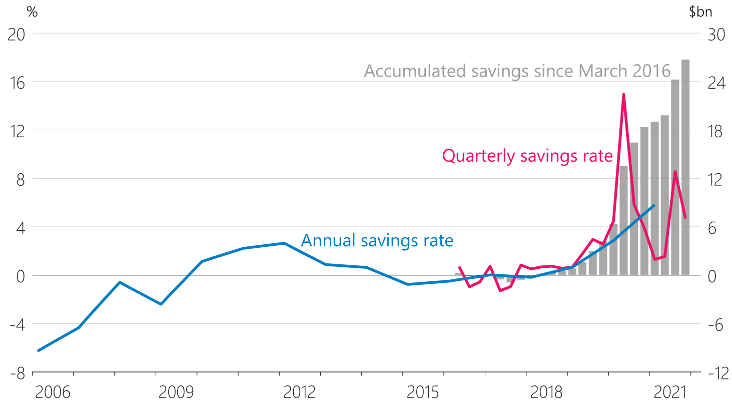
Households have been saving on net since the start of the COVID-19 pandemic, particularly during lockdown periods (figure 4.13). Government support measures such as the Wage Subsidy scheme maintained household incomes while mobility restrictions stopped some spending (for example, going to restaurants and travelling overseas). These savings have yet to be spent, and will give a buffer for some households against higher inflation and interest rates. However, if the bulk of these savings are spent domestically, they could create more persistent demand, which could increase inflation and interest rates further.

Although a 14 percent house price decline is large compared to New Zealand's history, a 30 percent decline in house prices from their peak would be required to bring them back to their pre-COVID-19 levels. As a result, many homeowners have significant equity buffers (the value of their homes less their mortgage debts). A very small proportion of households – estimated at around one percent of total mortgage lending – would be in negative equity, where a home is worth less than its mortgage, in our central projection. If house prices returned to their pre-COVID-19 levels, we estimate that around 10 percent of housing debt would be in negative equity.

Figure 4.13

Savings rate and accumulated savings

(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

Most households are well placed to meet higher interest costs

Most borrowers have experienced higher mortgage rates in the past and have been tested on the ability to service their mortgages at interest rates over 7 percent. In addition, many have seen their incomes rise, at least in nominal terms, since they first borrowed. We expect that nominal income growth will continue to increase in the near term, given the strong labour market.

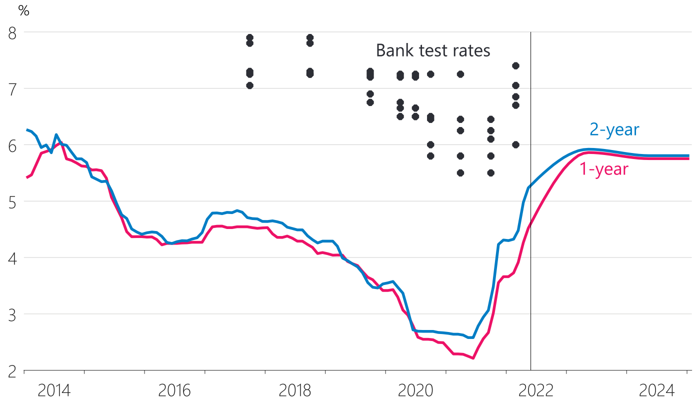
Mortgage rates have not yet risen to a level that would cause many borrowers to have difficulty paying their mortgages. During 2021, major banks tested new borrowers' ability to service mortgages at interest rates of 5.5-6.5 percent (figure 4.14). These test rates are used to assess customers' maximum borrowing capacity, and most will borrow less than the maximum. Therefore, mortgage rates up to these levels should result in relatively few borrowers having difficulty paying their mortgages. As a result, the reduction in aggregate household spending growth is expected to evolve as it has during previous monetary policy tightening cycles.

People who first borrowed during 2021 will find it more difficult to service their debts

Our current projection for the OCR implies that one- and two-year fixed mortgage rates will reach about 6 percent in the next year. If mortgage rates rise as forecast, there is a risk that a noticeable number of households that borrowed for the first time in 2021 will find it difficult to pay their mortgages and cover all their other usual expenses. This is because a 6 percent mortgage rate is close to the level at which borrowers were tested during the COVID-19 period. There is a risk that these borrowers will need to cut back spending by more than currently assumed to meet their higher debt-servicing costs.

Figure 4.14

Projected mortgage interest rates and bank test rates



Source: interest.co.nz, RBNZ *Credit Conditions survey,* RBNZ estimates.

Note: Mortgage rate forecasts are based on forward wholesale market pricing. Dots represent the five largest banks' test servicing rates. Some banks have announced further increases to their test rates since our latest data collection.

More broadly, declining house prices are likely to reduce spending via households' perceptions of their own wealth

Higher interest rates will reduce the disposable incomes of a large majority of mortgage holders, lowering household spending. Lower house prices will also weigh on consumption via the 'wealth effect'. Typically people spend more as house prices rise, and less as they fall. Spending on long-lasting goods – such as whiteware appliances and furniture – will be particularly affected by a slowing housing market. Spending on these types of goods has been very strong throughout most of the COVID-19 pandemic.

Falling house prices will slow home building

The number of dwelling consents issued in the past year has been very high, and was continuing to grow as of March. However, builders are facing challenges often associated with construction booms. Strong demand has exceeded supply capacity for materials and closed borders have made labour shortages worse. The price of building a new house has been the largest contributor to non-tradables inflation in the past 12 months.

Building consent growth is likely to slow

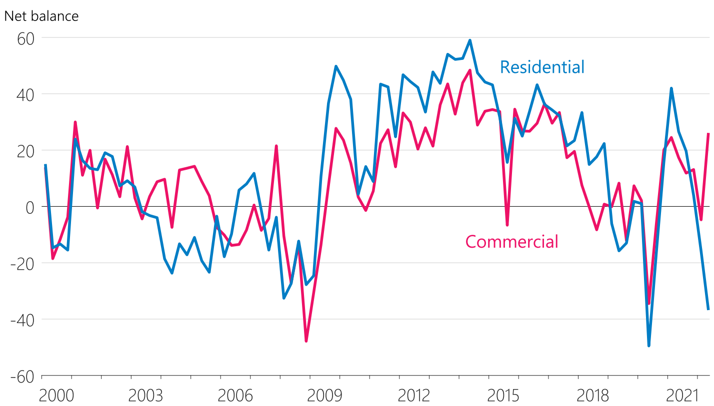
The combination of high construction costs, higher interest rates and house price declines will make it more difficult for housing developers to achieve their required return on investment. Developers will also find it increasingly difficult to secure pre-sales on new projects. As a result, we expect that the flow of new consents will begin to slow. Much of the strength in recent consent data is likely a lagged effect of housing market strength in the second half of 2021, as consents have been taking longer than usual to process. This aligns with recent ANZ Business Outlook (ANZBO) construction intentions data from surveyed construction firms (figure 4.15).

Lower residential construction demand should ease cost pressures

Lower demand for new residential construction should somewhat ease cost pressures on building materials, while the supply of building materials should gradually improve. We assume this will allow builders to work through their backlog of projects over the next year or two. Some construction firms and developers will experience more challenging financial conditions, as we have already seen. Still, the sector as a whole is expected to continue to operate near capacity. If the supply of building materials increases as anticipated, this should increase the number of completed dwellings.

There is a risk that interest rate increases and house price falls will lead to a large decline in construction-sector activity. In such a scenario, we would expect to see more developer insolvencies and a large number of incomplete or cancelled projects. This would result in a steep decline in residential investment and present downside risks to our medium-term outlook. However, New Zealand's financial system is in a much stronger starting position than during the last major downturn in the construction sector following the global financial crisis in 2008. Therefore, the availability of credit should support construction sector activity, albeit at a higher interest rate.

Figure 4.15
ANZBO construction intentions
(12 months ahead)



Source: ANZ.

Economic projection

CHAPTER 05

CHAPTER 5
Economic projection

This chapter summarises the economic projection that the MPC members considered when making their policy assessment. The projection was finalised on 19 May 2022.

This projection out to mid-2025 relies on a set of key assumptions about the domestic and global responses to the ongoing COVID-19 pandemic and the war in Ukraine. These relate to:

- The duration and pricing impacts of supply-chain bottlenecks, and how and when these delays are likely to ease.
- The economic impacts of, and recovery from, pandemic-related COVID-19 lockdowns and other restrictions on activity.
- How businesses, employees and consumers might change their behaviour as they learn to live with COVID-19 in the community.
- The pace at which central banks around the world are raising interest rates.

There is significant uncertainty about these assumptions, and outcomes could be different if they do not hold.

The projection takes into account recent data, which show rising inflation and a very tight labour market. The economy is starting from a stronger position than expected at the time of the February *Statement*. The factors underpinning this starting point are discussed in chapter 2, but include strong housing construction, robust demand for our goods exports and higher government spending (as outlined in the 2022 *Budget*).

The projection also accounts for the new timeline for the gradual reopening of New Zealand's borders. Borders are expected to be fully open by 31 July 2022, in line with the most recent Government announcement.

Inflation is expected to remain elevated in the near term. The war in Ukraine and renewed COVID-19 lockdowns in China have created additional capacity and price pressures on top of existing supply-chain disruptions and earlier increases in oil prices. As a result, these pressures are expected to continue for longer than previously expected.

Over the medium term, we assume that higher interest rates in New Zealand will help to moderate domestic demand growth. Real government spending is also forecast to ease from mid-2022. The resumption of workers coming to New Zealand as the borders reopen will provide space for some supply-chain bottlenecks to ease. A gradual recovery in net immigration is expected to help fill widespread job vacancies. Also, global oil prices are expected to come down from recent peaks in the next few years. As a result, CPI inflation is expected to return to its 2 percent target midpoint and employment towards its maximum sustainable level towards the end of the projection horizon.

Table 5.1

Key projection assumptions

Key factors	
House prices	• Higher interest rates are expected to constrain house price growth and new home building over the projection horizon. Rising costs for building materials and labour also curb home building although these pressures are assumed to ease gradually over the projection. • House prices (REINZ) have fallen by 5.0 percent since their peak in November 2021. House prices are projected to decline throughout 2022, consistent with fewer sales and higher listings volumes in recent months. From their peak in November 2021, house prices are forecast to fall by around 14 percent by early 2024 on a month-on-month basis. • Recent house price falls are expected to also slow household spending growth over the projection.
Global factors	• The global economic environment is highly inflationary, driven by recovering demand and prolonged supply-chain disruptions in the wake of COVID-19. Higher prices and a limited ability to increase production are now expected to persist for longer and peak higher than previously assumed due to the war in Ukraine and ongoing COVID-19 lockdowns in China. • The New Zealand dollar trade-weighted index (TWI) has fallen since the April Monetary Policy Review, pushing up import prices. The TWI is assumed to remain near its current level over the entire projection horizon. • Oil prices are expected to remain relatively high, even as global demand softens. Prices have dipped slightly from recent peaks because of increased production and the recent release of global oil reserves. Dubai oil prices are expected to gradually return from about USD 105 towards USD 80 per barrel, in line with risk-adjusted futures market pricing. Margins for refined oil products have risen significantly and are expected to keep fuel price inflation higher in the near term.
COVID-19 and health restrictions	• We assume that the restrictions and self-isolation requirements associated with the COVID-19 traffic light framework continue to weigh on both domestic demand and supply capacity. Illness, self-isolation and time out of work caring for those unwell have all weighed on labour supply, and contributed to shortages of materials and limited the amount businesses can produce. The Omicron outbreak has contributed to a drop in consumer confidence and spending, and weighed on economic growth in the first half of 2022. • We expect the impacts of COVID-19 restrictions on activity to ease over the projection horizon as Omicron case numbers fall, allowing some supply capacity to recover. • New Zealand's border restrictions will ease over 2022, as announced by the Government recently.

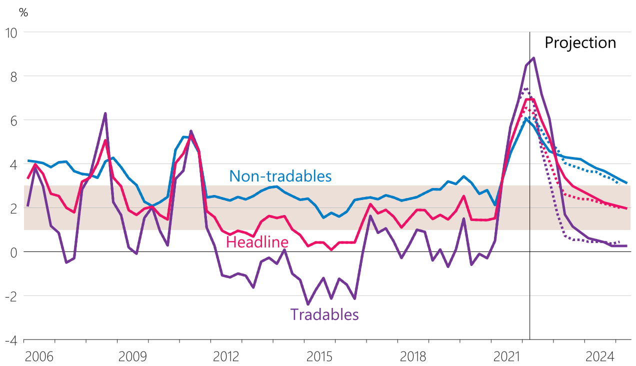
Economic growth	
Production	• The economic recovery from last year's lockdowns was stronger than expected in the February *Statement*. Elevated export prices, household savings built up during lockdowns, and high government spending are contributing to economic growth in the near term. • However, these factors are expected to fade over the forecast horizon. Higher interest rates, lower consumer confidence and recent falls in house prices will contribute to weaker growth over the second half of this year. Annual average GDP growth is then forecast to peak at 3.3 percent in 2023. • The spread of Omicron in the community and the associated restrictions on activity are estimated to have cut potential output by around 2 percent over the first half of 2022. A shortage of workers is expected to continue for the rest of the year. • The output gap is estimated to be around 2.5 percent of potential GDP at the end of 2021. This reflects both a tighter labour market and elevated capacity pressure in the goods market. • We expect the output gap to start closing after peaking in the first half of 2022, in part due to the relaxation of COVID-19 restrictions and fewer Omicron cases, which will allow businesses to increase production. • Over the medium term, higher interest rates, lower house prices and moderating real government spending (as outlined in the 2022 *Budget*) are expected to temper demand. We assume supply-chain bottlenecks continue to ease, and labour supply is bolstered by the resumption of migration.
Consumption	• Consumption has been volatile since the outset of the COVID-19 pandemic. However, underlying consumption growth was robust in the second half of 2021. We assume that consumption continues to be supported in the near term by robust household incomes and extra savings built up during the pandemic. Household incomes have also been buoyed by high export prices and government support for households and businesses. • High interest rates, lower house prices and falling real incomes (after adjusting for inflation) are expected to slow consumption growth from the second half of 2022. Consumption is expected to fall slightly on a per-capita basis over 2023.
Investment	• We assume that the outlook for business investment remains weak, relative to its trend. Factors supportive of business investment in recent quarters, including low interest rates, high export prices, fiscal support and capacity pressures, are expected to wane over the projection horizon. • We have lowered our outlook for new home construction relative to the February *Statement,* as the effects of capacity pressures, and higher interest rates on house prices, have become more evident. Despite the softening housing market, building consent issuance has so far remained elevated. We assume this is a lagged effect of housing market strength during the second half of 2021. Due to the capacity and cost pressures facing the construction sector, we expect some consented projects to be postponed or cancelled.
Exports and imports	• We assume that export prices remain high over 2022, reflecting the ongoing impacts of the war in Ukraine on global food, fertiliser and feed prices. • However, we assume that global food supply adjusts over the medium term, and that the demand for New Zealand's exports softens in line with declining global growth expectations. Import prices are expected to remain higher for longer than previously expected. The Ukraine war and renewed lockdowns in China have added to existing supply constraints, pushing up prices. As a result, we expect export prices to fall further than import prices over the projection horizon, resulting in a fall in the terms of trade from high levels. • Exports of tourism services are expected to recover gradually as New Zealand's borders open. The ongoing impacts of the pandemic, higher trading partner inflation and lower trading partner growth are expected to limit tourist arrivals, particularly out of China. We assume exports of services will remain well below pre-COVID-19 levels throughout the projection. However, New Zealanders are assumed to be more likely to travel overseas in the coming months due to pent-up demand and the fact that New Zealanders typically travel overseas more in winter. Imports of services are therefore expected to recover more quickly than exports of services, which will weigh on domestic demand.

Labour market	
Employment and wages	• The New Zealand labour market is robust. The unemployment rate remained at 3.2 percent in the March 2022 quarter, matching its lowest level since the start of the Household Labour Force Survey in 1986. Our suite of labour market indicators continue to suggest that the economy is well above maximum sustainable employment. The unemployment rate is assumed to decline marginally further in the June quarter, reflecting tight capacity pressures. • Labour market pressures are projected to gradually ease in line with a closing output gap. Employment gradually returns towards its maximum sustainable level over the medium term as demand growth for workers softens and net immigration recovers. This is in line with the unemployment rate increasing from a low of 3.1 percent in the June 2022 quarter to 4.8 percent by the end of the forecast horizon. The gradual increase in the unemployment rate reflects higher interest rates, which slow growth and lead to an extended period of below-trend job growth. We also expect a gradual pick-up in net working-age immigration in the second half of the projection. • Annual Labour Cost Index (LCI) private sector wage inflation is expected to continue to increase, peaking at 4.6 percent in 2023. This is due to ongoing labour shortages, the increasing minimum wage and rising living costs.

Inflation	
Tradables	• Annual tradables inflation is expected to peak at 9.1 percent in the June 2022 quarter, and then fall to 7.1 percent by the end of 2022. This reflects easing, but still strong, inflationary pressures from ongoing global supply-chain disruptions. • Supply-chain disruptions are expected to persist for longer than previously assumed, with both oil and ex-oil import prices only gradually returning to their longer-run levels in the latter half of the projection horizon.
Non-tradables	• Annual non-tradables inflation remains high but declines over the projection period, from 6.0 percent in the March 2022 quarter to 3.1 percent by the end of the forecast horizon. • Materials and labour shortages in the construction industry continue to underpin housing-related cost increases. However, capacity pressures are assumed to ease as monetary policy tightens. Slower domestic activity growth and falling house prices over 2022 are expected to reduce non-tradables inflation.
Headline	• Annual CPI inflation is expected to remain near its current peak of around 7.0 percent in the June 2022 quarter, and decline steadily to 4.4 percent in the March 2023 quarter. • Headline inflation is expected to continue trending lower in the latter half of the projection horizon, reaching the 2 percent midpoint of the target band at the end of the projection in early 2025.

Charts

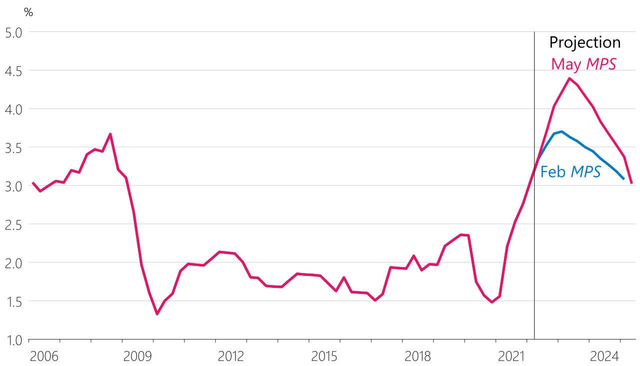
Figure 5.1
Inflation breakdown
(annual)



Source: Stats NZ, RBNZ estimates.

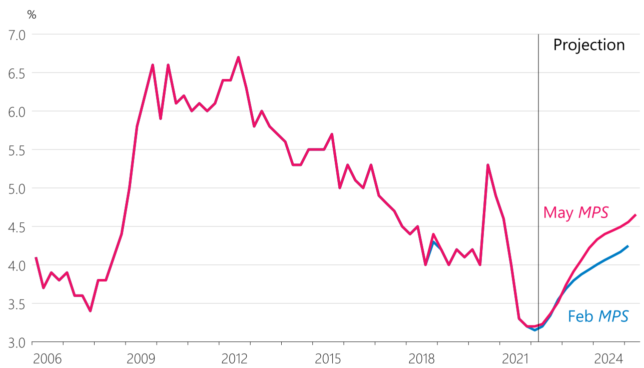
Note: Dotted lines show the projection from the February *Statement*.

Figure 5.2
Private sector LCI wage inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 5.3
Unemployment rate
(share of labour force, seasonally adjusted)

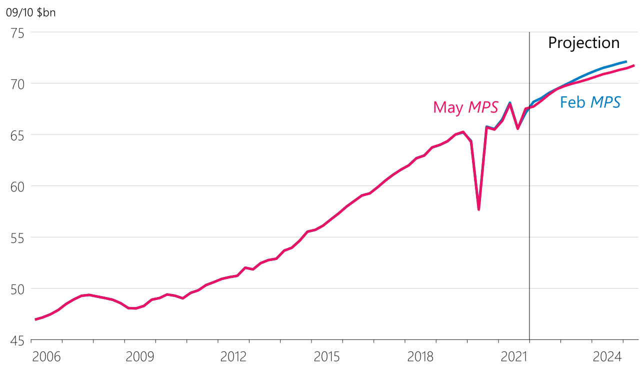


Source: Stats NZ, RBNZ estimates.

Figure 5.4
Annual house price growth
(seasonally adjusted)

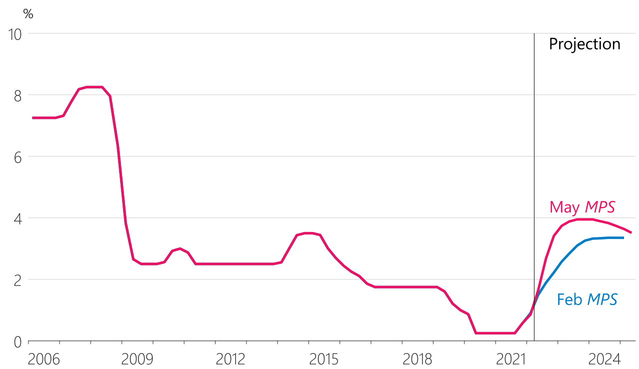
Source: CoreLogic, RBNZ estimates.

Figure 5.5
Quarterly production GDP
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

Figure 5.6
OCR
(quarterly average)



Source: RBNZ estimates.

Appendices

CHAPTER 06

CHAPTER 6
Appendices

Appendix 1: Statistical tables

Table 6.1
Key forecast variables

		GDP growth Quarterly	CPI inflation Quarterly	CPI inflation Annual	TWI	OCR
2020	Mar	-1.5	0.8	2.5	70.9	0.9
	Jun	-10.3	-0.5	1.5	69.7	0.3
	Sep	13.9	0.7	1.4	72.0	0.3
	Dec	-0.3	0.5	1.4	72.9	0.3
2021	Mar	1.3	0.8	1.5	74.9	0.3
	Jun	2.5	1.3	3.3	74.7	0.3
	Sep	-3.6	2.2	4.9	74.4	0.3
	Dec	**3.0**	1.4	5.9	74.3	0.6
2022	Mar	**0.7**	**1.8**	**6.9**	**72.6**	**0.9**
	Jun	**1.3**	**1.4**	**7.0**	**71.8**	**1.6**
	Sep	**0.6**	**1.5**	**6.2**	**71.8**	**2.7**
	Dec	**0.5**	**0.8**	**5.5**	**71.8**	**3.4**
2023	Mar	**0.4**	**0.7**	**4.4**	**71.8**	**3.7**
	Jun	**0.2**	**0.6**	**3.5**	**71.8**	**3.9**
	Sep	**0.2**	**0.9**	**3.0**	**71.8**	**3.9**
	Dec	**0.3**	**0.4**	**2.6**	**71.8**	**3.9**
2024	Mar	**0.4**	**0.6**	**2.5**	**71.8**	**3.9**
	Jun	**0.3**	**0.4**	**2.3**	**71.8**	**3.9**
	Sep	**0.2**	**0.8**	**2.2**	**71.8**	**3.8**
	Dec	**0.3**	**0.2**	**2.1**	**71.8**	**3.7**
2025	Mar	**0.2**	**0.5**	**2.0**	**71.8**	**3.6**
	Jun	**0.4**	**0.3**	**1.9**	**71.8**	**3.5**

Table 6.2

Measures of inflation, inflation expectations, and asset prices

	2020		2021				2022	
	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun
Inflation (annual rates)								
CPI	1.4	1.4	1.5	3.3	4.9	5.9	6.9	
CPI non-tradables	2.6	2.8	2.1	3.3	4.5	5.3	6.0	
CPI tradables	-0.1	-0.3	0.5	3.4	5.7	6.9	8.5	
Sectoral factor model estimate of core inflation	2.0	2.2	2.5	3.0	3.5	3.8	4.2	
CPI trimmed mean (30 percent measure)	1.7	2.2	1.7	3.0	4.0	4.3	5.2	
CPI weighted median	2.2	2.7	2.3	3.0	3.3	3.8	3.9	
GDP deflator (expenditure)	1.8	0.7	0.4	2.3	3.7	4.9		
Inflation expectations								
ANZ Business Outlook – inflation one year ahead (quarterly average to date)	1.4	1.5	1.9	2.2	2.9	4.0	5.4	5.9
RBNZ Survey of Expectations – inflation 2 years ahead	1.4	1.6	1.9	2.0	2.3	3.0	3.3	3.3
RBNZ Survey of Expectations – inflation 5 years ahead	1.9	1.9	2.0	2.1	2.0	2.2	2.3	2.4
RBNZ Survey of Expectations – inflation 10 years ahead	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1
Long-run inflation expectations*	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2
Asset prices (annual percent changes)								
Quarterly house price index (CoreLogic NZ)	10.8	16.9	24.1	29.7	30.6			
REINZ Farm Price Index (quarterly average)	-3.7	-0.5	6.9	6.3	15.1	20.5	25.6	30.1
NZX 50 (quarterly average)	8.6	13.2	14.4	17.1	10.3	3.0	-3.9	-6.8

Source: ANZ, Consensus Economics, RBNZ estimates.

*Long-run expectations are extracted from a range of surveys using a Nelson-Siegel model.

Table 6.3

Measures of labour market conditions

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

	2020		2021				2022
	Sep	Dec	Mar	Jun	Sep	Dec	Mar
Household Labour Force Survey							
Unemployment rate	5.3	4.9	4.6	4.0	3.3	3.2	3.2
Underutilisation rate	13.2	11.9	12.1	10.5	9.2	9.2	9.3
Labour force participation rate	70.1	70.2	70.4	70.5	71.2	71.1	70.9
Employment rate (percentage of working-age population)	66.5	66.8	67.2	67.7	68.8	68.8	68.6
Employment growth	0.4	0.6	0.1	1.5	4.1	3.5	2.8
Average weekly hours worked	33.7	34.9	33.9	34.0	31.2	33.5	33.4
Number unemployed (thousand people)	151	141	133	114	98	93	94
Number employed (million people)	2.71	2.73	2.75	2.77	2.82	2.82	2.83
Labour force (million people)	2.87	2.87	2.88	2.89	2.92	2.92	2.92
Extended labour force (million people)	2.97	2.97	2.99	2.98	3.01	3.00	3.01
Working-age population (million people)	4.08	4.09	4.09	4.10	4.10	4.11	4.12
Quarterly Employment Survey – QES							
Filled jobs growth	-0.6	0.2	0.5	2.5	4.0	4.1	4.2
Average hourly earnings growth (private sector, ordinary time)	3.7	4.6	4.1	4.5	3.6	4.1	5.3
Other data sources							
Labour cost index growth, private sector	1.6	1.5	1.6	2.2	2.5	2.8	3.1
Labour cost index growth, private sector, unadjusted	2.6	2.4	2.8	3.7	4.1	4.5	5.0
Estimated net migration (published, thousands, quarterly)	0.4	-2.5	-3.4	-3.4			
Change in All Vacancies Index	-21.1	-1.9	21.0	156.5	58.0	35.1	25.5

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

Table 6.4

Composition of real GDP growth

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

	Actuals							Projection			
March year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Final consumption expenditure											
Private	3.3	4.2	6.5	4.8	4.5	2.5	0.6	**4.5**	**1.7**	**0.7**	**1.9**
Public authority	2.9	2.2	1.9	3.7	3.4	5.8	7.5	**11.9**	**5.5**	**-4.7**	**-2.6**
Total	**3.2**	**3.7**	**5.4**	**4.5**	**4.3**	**3.2**	**2.2**	**6.3**	**2.6**	**-0.8**	**0.8**
Gross fixed capital formation											
Residential	8.3	7.1	8.8	-1.8	-0.1	2.8	1.8	**7.2**	**4.4**	**2.9**	**2.5**
Other	8.0	2.5	-0.1	10.3	7.0	2.4	-6.8	**11.0**	**6.6**	**2.3**	**-0.8**
Total	**8.1**	**3.6**	**2.2**	**7.0**	**5.2**	**2.5**	**-4.7**	**10.0**	**6.1**	**2.5**	**0.0**
Final domestic expenditure	4.3	3.7	4.6	5.1	4.5	3.1	0.6	**7.1**	**3.4**	**0.0**	**0.6**
Stockbuilding*	0.5	-0.3	0.1	0.2	-0.2	-0.2	-0.2	**0.5**	**-0.3**	**0.0**	**0.0**
Gross national expenditure	**4.6**	**3.2**	**4.8**	**5.6**	**4.3**	**2.8**	**-0.5**	**8.3**	**3.3**	**0.1**	**0.6**
Exports of goods and services	4.7	6.8	2.1	3.8	3.4	0.3	-17.7	**4.2**	**6.7**	**8.9**	**4.3**
Imports of goods and services	7.7	2.6	5.6	7.8	4.3	1.0	-15.9	**19.2**	**7.5**	**2.9**	**1.7**
Expenditure on GDP	**3.6**	**4.4**	**3.7**	**4.3**	**4.0**	**2.7**	**-0.2**	**4.2**	**2.7**	**1.3**	**1.2**
GDP (production)	3.8	3.8	3.8	3.6	3.4	2.2	-1.4	**5.4**	**3.2**	**1.3**	**1.2**
GDP (production, March qtr to March qtr)	3.8	4.1	3.3	3.6	3.2	0.4	3.2	**2.5**	**2.9**	**1.1**	**1.1**

*Percentage point contribution to the growth rate of GDP.

Table 6.5

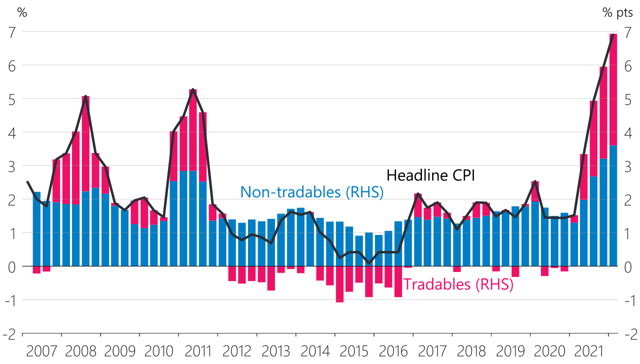
Summary of economic projection

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

	Actuals								Projection		
March year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Price measures											
CPI	0.3	0.4	2.2	1.1	1.5	2.5	1.5	6.9	**4.4**	**2.5**	**2.0**
Labour costs	1.8	1.8	1.5	1.9	2.0	2.4	1.6	3.1	**4.4**	**4.1**	**3.3**
Export prices (in New Zealand dollars)	-8.0	0.7	4.1	3.3	1.1	6.9	-6.4	**23.1**	**0.0**	**-3.4**	**-0.1**
Import prices (in New Zealand dollars)	-3.4	1.2	0.6	1.8	4.3	2.5	-2.7	**15.7**	**2.1**	**-1.9**	**-0.5**
Monetary conditions											
OCR (year average)	3.4	2.9	2.0	1.8	1.8	1.2	0.3	0.5	**2.9**	**3.9**	**3.8**
TWI (year average)	79.3	72.6	76.5	75.6	73.4	71.7	72.4	74.0	**71.8**	**71.8**	**71.8**
Output											
GDP (production, annual average % change)	3.8	3.8	3.8	3.6	3.4	2.2	-1.4	**5.4**	**3.2**	**1.3**	**1.2**
Potential output (annual average % change)	3.0	3.2	3.3	3.2	3.2	2.8	-1.0	**3.2**	**3.2**	**2.8**	**2.2**
Output gap (% of potential GDP, year average)	-0.7	-0.1	0.4	0.7	0.9	0.3	-0.2	**2.1**	**2.1**	**0.6**	**-0.4**
Labour market											
Total employment (seasonally adjusted)	3.6	2.2	5.9	3.0	1.5	2.6	0.1	2.8	**0.4**	**0.5**	**0.9**
Unemployment rate (March qtr, seasonally adjusted)	5.5	5.3	4.9	4.4	4.2	4.2	4.6	3.2	**3.8**	**4.4**	**4.7**
Trend labour productivity	0.7	0.6	0.5	0.5	0.6	0.8	1.0	1.0	**0.9**	**0.8**	**0.7**
Key balances											
Government operating balance (% of GDP, year to June)	0.2	0.7	1.5	1.9	2.4	-7.2	**-1.4**	**-4.8**	**-2.4**	**-1.6**	**-0.5**
Current account balance (% of GDP)	-3.5	-2.4	-2.6	-3.0	-3.7	-2.3	-2.4	**-6.2**	**-7.1**	**-6.9**	**-6.5**
Terms of trade (SNA measure, annual average % change)	0.1	-3.1	2.5	4.5	-2.5	1.9	-1.0	**1.4**	**0.9**	**-1.8**	**0.2**
Household saving rate (% of disposable income)	-0.8	-0.5	0.0	-0.2	0.7	2.9	5.8	**3.5**	**3.0**	**2.3**	**1.6**
World economy											
Trading-partner GDP (annual average % change)	3.7	3.4	3.5	3.9	3.5	1.7	-0.8	**5.7**	**3.6**	**3.4**	**3.2**
Trading-partner CPI (TWI weighted)	1.0	1.2	1.9	1.8	1.4	2.4	0.8	4.0	**3.4**	**2.1**	**2.2**

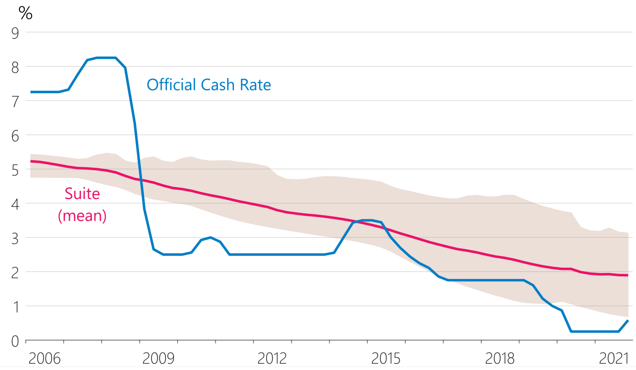
Appendix 2: Chart pack

Figure 6.1
Composition of CPI inflation
(annual)



Source: Stats NZ.

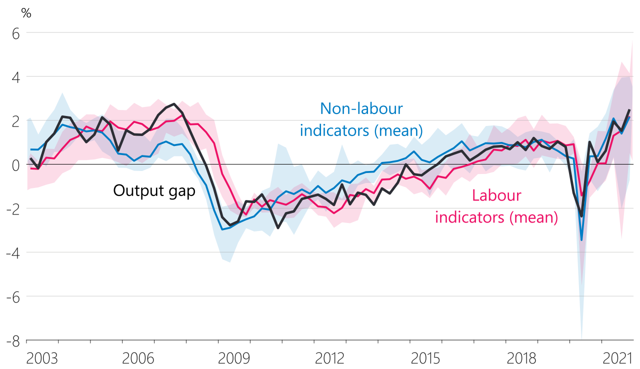
Figure 6.4
OCR and neutral OCR indicator suite
(quarterly average)



Source: RBNZ estimates.

Note: The shaded area indicates the range between the maximum and minimum values from a suite of neutral OCR indicators.

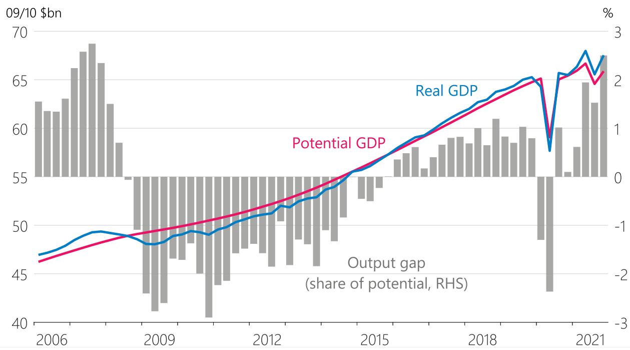
Figure 6.2
Output gap and output gap indicators
(share of potential)



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

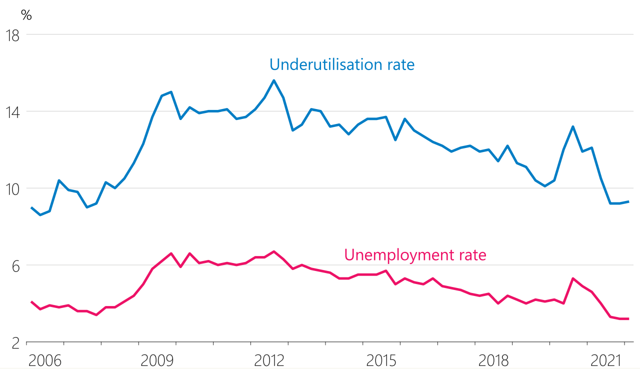
Note: The output gap indicators based on information about the labour market are shown separately from the other indicators. For each group of indicators, the shaded area shows the range of values and the line shows the mean value.

Figure 6.5
GDP and potential GDP
(seasonally adjusted)



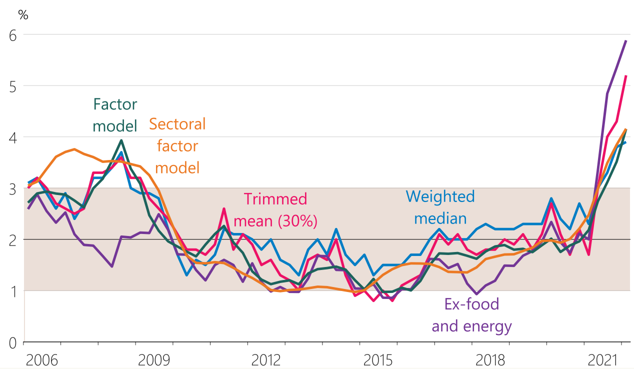
Source: Stats NZ, RBNZ estimates.

Figure 6.3
Unemployment and underutilisation rates
(seasonally adjusted)



Source: Stats NZ.

Figure 6.6
Measures of core inflation
(annual)



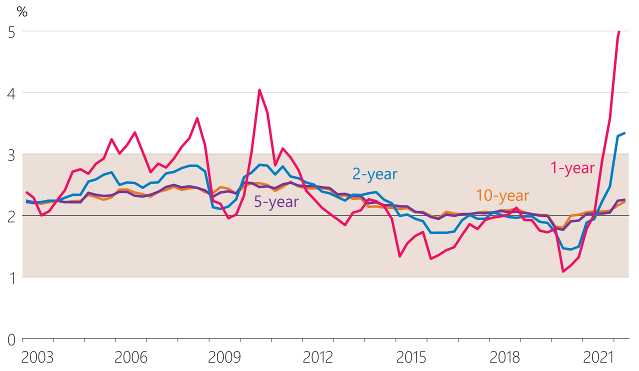
Source: Stats NZ, RBNZ estimates.

Note: Core inflation measures exclude the GST increase in 2010.

Figure 6.7

Inflation expectations

(annual)



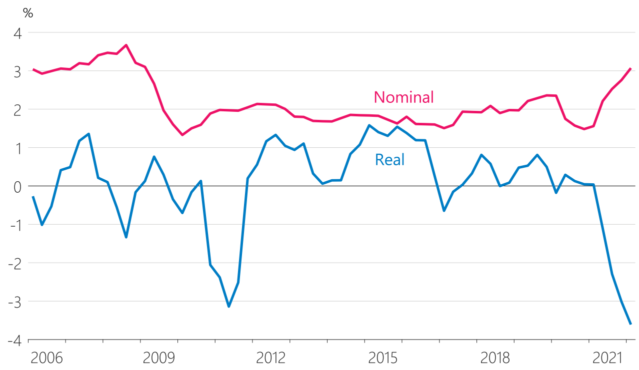
Source: RBNZ estimates.

Note: Inflation expectations are estimates from the RBNZ inflation expectations curve, based on surveys of businesses and professional forecasters.

Figure 6.8

Private sector wage growth

(annual)



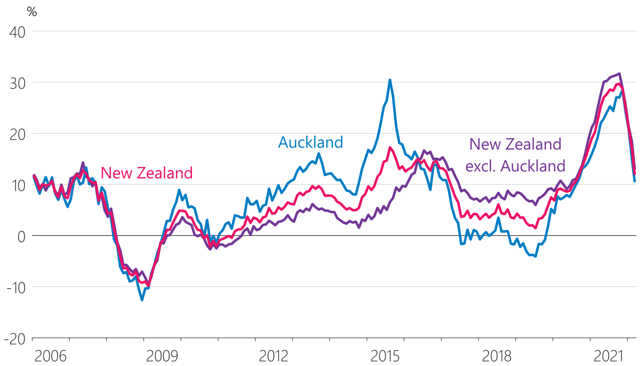
Source: Stats NZ, RBNZ estimates.

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

Figure 6.9

House price inflation

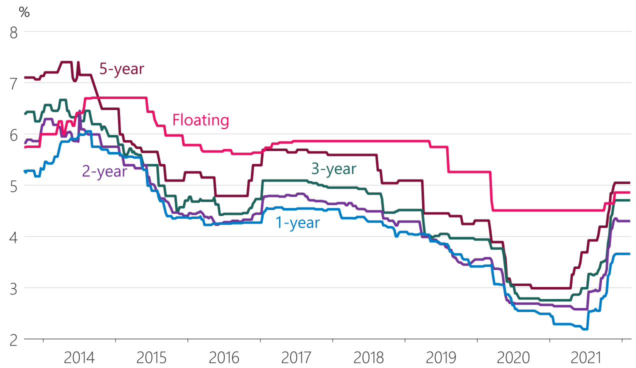
(annual)



Source: REINZ.

Figure 6.10

Mortgage rates



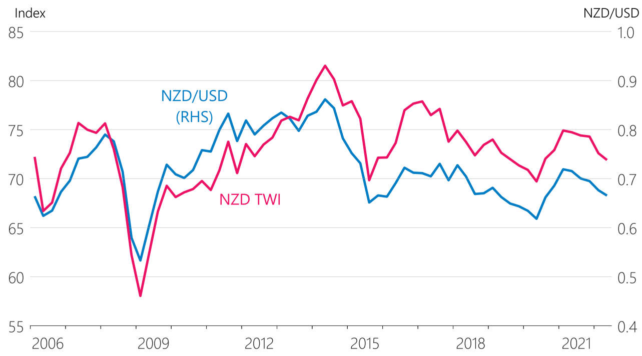
Source: interest.co.nz, RBNZ estimates.

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 6.11

New Zealand dollar exchange rates

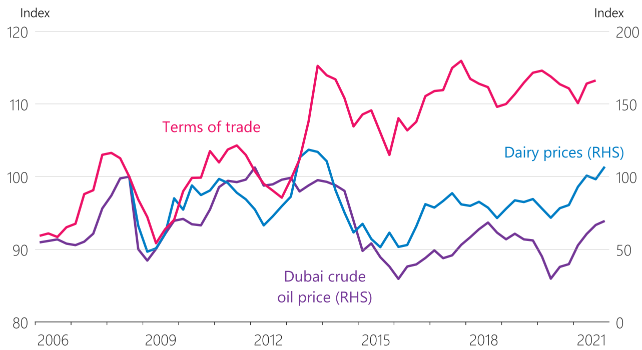
(quarterly average)



Source: Reuters, RBNZ.

Figure 6.12

Terms of trade, dairy and oil price indices



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