



# Monetary Policy Statement

February 2021

# Statement of the MPC's monetary policy strategy

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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.<sup>1</sup> 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.<sup>2</sup> 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 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.

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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*.

## 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.

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.

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 to the 2 percent target

mid-point, regardless of whether inflation is currently below or above target. 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.

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. Monetary policy and prudential policy are coordinated to ensure that changes in one policy are taken into account when setting the other.

## Implementation of strategy

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

1. Firstly, it considers the outlook for the economy and its policy objectives. It then discusses risks to achieving its policy objectives.
2. Next, it deliberates about 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.

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February 2021

Scenarios and data finalised on 17 February 2021.

Policy assessment and summary record of meeting finalised on 24 February 2021.



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# Chapter 1

## Policy assessment



### Tēnā koutou katoa, welcome all.

The Monetary Policy Committee agreed to maintain the current stimulatory level of monetary settings in order to meet its consumer price inflation and employment remit. The Committee will keep the Official Cash Rate (OCR) at 0.25 percent, and the Large Scale Asset Purchase (LSAP) Programme of up to \$100 billion and the Funding for Lending Programme (FLP) operation unchanged.

Global economic activity has increased since the November *Monetary Policy Statement*. However, this lift in activity has been uneven both between and within countries.

The initiation of global COVID-19 vaccination programmes is positive for future health and economic activity. The Committee agreed, however, that there remains a significant period before widespread immunity is achieved. In the meantime, economic uncertainty will remain heightened as international border restrictions continue.

Economic activity in New Zealand picked up over recent months, in line with the easing of health-related social restrictions. Households and businesses also benefitted from significant fiscal and monetary policy support, bolstering their cash-flow and spending. International prices for New Zealand's exports also supported export incomes, although the New Zealand dollar exchange rate has offset some of this support.

Some temporary factors were currently supporting consumer price inflation and employment. These one-off factors include higher oil prices, supply disruptions due to trade constraints, the recent suite of supportive fiscal stimulus, and a spending catch-up following the easing of social restrictions.

The economic outlook ahead remains highly uncertain, determined in large part by any future health-related social restrictions. This ongoing uncertainty is expected to constrain business investment and household spending growth. The Committee agreed that inflation and employment would likely remain below its *Remit* targets over the medium term in the absence of prolonged monetary stimulus.

The Committee agreed to maintain its current stimulatory monetary settings until it is confident that consumer price inflation will be sustained at the 2 percent per annum target midpoint, and that employment is at or above its maximum sustainable level. Meeting these requirements will necessitate considerable time and patience.

The Committee agreed that it remains prepared to provide additional monetary stimulus if necessary and noted that the operational work to enable the OCR to be taken negative if required is now completed.

Meitaki, thanks.

A handwritten signature in blue ink, appearing to be 'A. Orr', with a stylized flourish at the end.

Adrian Orr  
Governor

## Summary record of meeting

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The Committee reviewed recent international and domestic economic developments, and their implications for the outlook for inflation and employment. Members noted the lift in domestic economic activity, as evident across a range of indicators including inflation, employment, household spending, GDP, and asset prices.

The Committee discussed the key factors supporting the pickup in economic activity. Household and business balance sheets have fared considerably better than was anticipated at the start of the pandemic. This is in part due to the responses of monetary and fiscal policy, but also due to a number of other factors, in particular the containment of COVID-19 that has enabled ongoing domestic economic activity. People who arrived in New Zealand during the early stages of the pandemic and subsequently stayed on, are contributing to both housing and broader demand pressures. New Zealand's commodity export prices and volumes have also remained robust despite the global economic slowdown.

The Committee agreed that several of the factors supporting economic activity are likely to prove temporary. Fiscal policy will continue to support the economy, but its impulse is unlikely to be as strong as last year. In addition, economic uncertainty persists due to the sustained closure of international borders and the manifestation of new strains of the virus. These factors continue to weigh on business confidence and investment intentions.

Several members noted the projected increase in headline inflation can also in part be explained by one-off factors, particularly oil price increases. The Committee agreed that the interaction between the headline, core, and wage inflation, and inflation expectations, will be important in determining the sustainability of inflation pressures in the medium-term.

The Committee noted the labour market has proved more resilient than anticipated at the outset of the pandemic, although unemployment has risen. The Wage Subsidy scheme played an important role in helping businesses maintain employment. However, labour market conditions remain uneven across sectors and regions. Those sectors most reliant on tourism-related business activities continue to lag behind on job opportunities, with this likely to persist as long as international borders remain closed. Some members noted that labour effort is being reallocated to other activities and saw the potential for construction activity to remain strong. The Committee expects to see an ongoing gradual recovery in employment towards its maximum sustainable level.

The Committee noted that although the recovery in economic activity was uneven across countries, the performance of some of New Zealand's main trading partners, in particular China, has been more resilient than expected. The stronger performance of economies geared more towards global goods demand, which has provided continued support to New Zealand's commodity exports. However, the gains from higher export commodity prices have been somewhat offset by the stronger New Zealand dollar.



The Committee noted that the spread of more virulent strains of COVID-19 presents an ongoing risk to global economic activity. However, the development of effective COVID-19 vaccines has improved the medium-term economic outlook, helping to reduce uncertainty and boost confidence. Members noted the global economic recovery remains dependent on health outcomes and the success of the COVID-19 vaccine programmes.

The Committee noted that global financial asset prices have been inflated by both fiscal and monetary policy stimulus, and the expectations of the success of the vaccine programmes. Members also noted that long-term sovereign bond yields had increased, in part reflecting greater expected growth and inflation.

The Committee noted that domestic financial conditions remain highly stimulatory, that is, promoting spending and investing. Since the November *Statement*, international and domestic long-term interest rates have risen, driven by an improved growth and inflation outlook.

However, domestic borrowing rates faced by households and businesses have declined marginally. Members agreed that domestic borrowing costs would need to remain low to achieve the Committee's objectives.

The Committee discussed the effectiveness of monetary policy settings in delivering the necessary monetary stimulus. The level of Official Cash Rate (OCR) and forward guidance had helped anchor short-term interest rates. The Funding for Lending (FLP) programme had helped keep downward pressure on retail interest rates. The Committee noted that the Large Scale Asset Purchase (LSAP) programme had continued to apply a downward influence on long-term interest rates and provide bond market liquidity.

Members noted the FLP will continue to lower bank funding costs, even if international wholesale borrowing costs rise. The Committee noted that the decline in bank funding costs provides banks with scope to further reduce interest rates for household and businesses. The Committee agreed it expects to see the full pass-through of lower funding costs to borrowing rates, and it will closely monitor progress.

The Committee discussed how monetary policy settings were affecting financial stability. Members noted that monetary policy actions had supported financial stability as they have improved the cashflow positions of households and businesses. The Committee noted that the recent changes to the Bank's loan-to-value ratio (LVR) requirements occurred to ensure that financial system soundness is maintained.

Overall, the Committee agreed that the risks to the economic outlook are balanced, in large part due to the anticipated prolonged period of monetary stimulus. The Committee reflected on the international experience of central banks following the Global Financial Crisis. The Committee agreed that it was important to be confident about the sustainability of an economic recovery before reducing monetary stimulus. Some members also reflected on the extended period of below-target inflation in many countries, including New Zealand, prior to the pandemic.

The Committee agreed that, in line with its least regrets framework, it would not change the stance of monetary policy until it had confidence that it is sustainably achieving the consumer price inflation and employment objectives. The Committee expects that gaining this confidence will take considerable time and patience. While doing so, the Committee agreed to look through any temporary factors driving prices as required by the *Remit*, and noted that there will be periods during which inflation will be above the 2 percent target midpoint.

The Committee discussed the range and settings of its monetary policy tools. Members noted that the banking system is operationally ready for negative interest rates. The Committee assessed a negative OCR and the LSAP programme against its *Principles for Alternative Monetary Policy*. The Committee agreed that it was prepared to lower the OCR to provide additional stimulus if required.

The Committee discussed the LSAP programme and noted that many factors influence domestic long-term bond yields, including expectations for monetary policy, global bond yields, and the economic outlook. The Committee noted staff advice that reduced government bond issuance was placing less upward pressure on New Zealand government bond yields, and that domestic bond markets had continued to function well. Members noted that staff had adjusted purchase volumes since the November *Statement*, in light of these conditions.

The Committee agreed to continue with the LSAP programme with purchases of up to \$100 billion by June 2022. The Committee also endorsed staff continuing to adjust weekly bond purchases as appropriate, taking into account market functioning. The Committee agreed that weekly changes in the LSAP do not represent a change in monetary policy stance.

The Committee agreed that current monetary policy settings were appropriate to achieve its inflation and employment remit. The Committee agreed it would maintain monetary stimulus until it is confident that consumer price inflation will be sustained around the 2 percent target midpoint and employment is at or above its maximum sustainable level. The Committee expects a prolonged period of time to pass before these conditions are met.

On Wednesday 24 February, the Committee reached a consensus to:

- hold the OCR at 0.25 percent;
- maintain the existing LSAP programme of a maximum of \$100 billion by June 2022; and
- maintain the existing FLP conditions.

### *Attendees:*

**Reserve Bank members of MPC:** Adrian Orr, Geoff Bascand, Christian Hawkesby, Yuong Ha

**External MPC members:** Bob Buckle, Peter Harris, Caroline Saunders

**Treasury Observer:** Bryan Chapple

**MPC Secretary:** Nicholas Mulligan

# Chapter 2

## Where are we relative to our economic objectives?



The Reserve Bank's Monetary Policy Committee (MPC) is responsible for using monetary policy to achieve and maintain medium-term price stability, and support maximum sustainable employment. These outcomes are the best long-run contribution that monetary policy can make to the prosperity and well-being of New Zealanders.

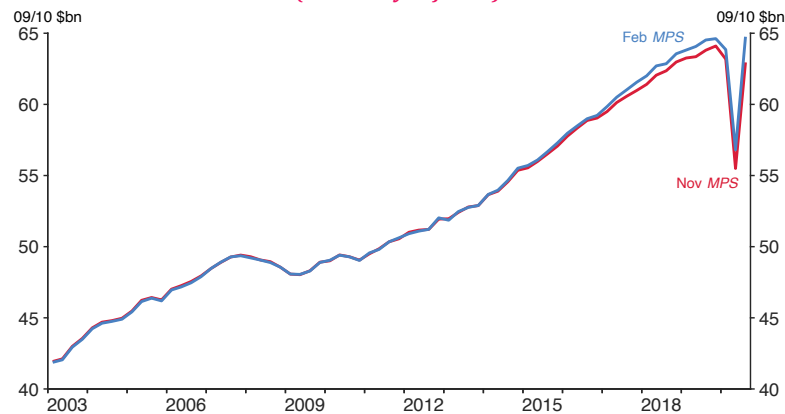
### *Key points*

- The New Zealand economy has rebounded to a stronger position than anticipated at the outset of the COVID-19 pandemic. Activity is now above its pre-COVID-19 level.
- The better-than-anticipated economic recovery reflects the relatively rapid containment of COVID-19 in New Zealand; robust demand for our export goods; resilient household and business balance sheets, supported by fiscal, monetary, and regulatory policy; and more of those who arrived in New Zealand during the early days of the pandemic staying.
- Timely data suggest that the current level of activity will be maintained in the near term. However, the domestic rebound has been uneven. Strength in the construction and retail sectors has offset ongoing weakness in tourism-related sectors.
- The recovery in economic activity has been reflected in a more resilient labour market and higher inflation than expected at the end of 2020. Some of the increase in inflation also reflects disruptions to global supply chains.
- How long the recent recovery in inflation and employment can be sustained is highly uncertain. Firms and households remain cautious given uncertainty surrounding the spread of COVID-19, the speed and efficacy of vaccination programmes, and the ongoing effects of closed borders on international tourism and education. In addition, some of the factors that supported the strong recovery are diminishing.
- Our baseline scenario for the economy, while starting from a stronger position than assumed in November, is subdued. Significant monetary stimulus remains necessary to confidently and sustainably meet our inflation and employment objectives.

## *New Zealand's economy has rebounded to a stronger position than anticipated at the outset of the pandemic*

Following the 11 percent contraction in economic activity in the second quarter of 2020, New Zealand's economy has rebounded to a stronger position than anticipated at the outset of the pandemic. GDP increased by 14 percent in the September 2020 quarter, to surpass its pre-COVID-19 level (figure 2.1). Revisions to the data also show that the level of economic activity was higher before the pandemic than previously estimated.

**Figure 2.1**  
**Quarterly production GDP**  
*(seasonally adjusted)*



Source: Stats NZ.

## *Lessons from the past 12 months*

At the outset of the pandemic, we began presenting scenarios rather than a central forecast. This change in practice reflected the high level of uncertainty created by the pandemic. Since then, the economy appears to have been more resilient than the most optimistic scenario presented at the time.

Our current assessment is that the stronger-than-anticipated rebound in economic activity can be attributed to four key factors:

- 1. Health outcomes in New Zealand have been better than originally feared.** The move to Alert Level 4 in late March was effective in reducing the spread of the virus. New Zealand's containment of the virus within a relatively short period of time (compared to the experience of many other countries) enabled many businesses and households to return to most of their usual activities.

The containment of the virus also seems to have given those in New Zealand the confidence to travel within the country. This has boosted domestic tourism and provided some offset to the loss of international visitors. The difficulty of travelling or purchasing from abroad also appears to have resulted in New Zealand residents substituting towards domestic goods and services, rather than saving all of what they might typically have spent on an overseas holiday.

**2. Demand for our goods exports has been robust.** New Zealand’s export sector typically fares poorly during significant global downturns, given that we are reliant on global demand for our goods and services. As the pandemic originated in one of our largest trading partners – China – we expected demand in our export sector to be particularly hard hit, and that we would observe much lower prices for our export commodities.

However, economic growth in China has to date been much stronger than expected, consistent with the shift in global demand towards goods and away from services. The rebound in the Chinese economy has supported demand for New Zealand’s export commodities – especially dairy. There has also been a shift in global consumption patterns towards some food products, which has further benefited New Zealand’s goods exports.<sup>1</sup>

**3. Household and business balance sheets have been resilient.** The balance sheets of households and businesses typically deteriorate sharply during an economic downturn, as more people become unemployed and firms lose income. High-level indicators imply that balance sheets have, in aggregate, been much more robust during this economic downturn than expected.

In large part, this reflects a transfer from the government’s balance sheet to private sector balance sheets. This occurred primarily via the Wage Subsidy scheme, as well as other policies introduced to support businesses and households. The size and speed with which the Wage Subsidy was deployed enabled businesses to retain their employees,<sup>2</sup> and provided employees with confidence in their incomes (at least in the near term).

Accommodative monetary and financial policies have also supported household cash flows. Declines in interest rates and the introduction of the mortgage deferral scheme have reduced borrowers’ debt servicing payments. These factors, as well as supportive bank behaviour, provided households and businesses with some confidence that they could weather a short-lived hit to their incomes.

The ability of many employees to work from home during Alert Levels 3 and 4 meant that fewer businesses stopped operating altogether, and allowed for a quicker recovery after restrictions were eased. Some of the short-term adjustment in the labour market also occurred via employees accepting pay cuts or reduced hours, rather than primarily through job losses.

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<sup>1</sup> See, for example, [A global view of how consumer behavior is changing amid COVID-19](#).

<sup>2</sup> Graham and Özbilgin (forthcoming) estimate that the Wage Subsidy saved over 180,000 jobs in New Zealand. They also found that the Wage Subsidy saved proportionally more jobs in the service sector and for people less than 30 years of age.

**4. Those who arrived before border restrictions were put in place seem much more likely to stay.** A significant number of people who had been living abroad arrived in New Zealand in the early stages of the pandemic, including many New Zealand citizens. Many of these people, who either were here incidentally or had returned as a result of concern about COVID-19, stayed in New Zealand as the pandemic unfolded.

We had assumed that most of these people would not settle in New Zealand, and instead behave more like temporary visitors (by staying with friends and relatives, for example). However, it is increasingly apparent that many of these people may be settling in New Zealand on a more permanent basis, and participating in New Zealand's economy in ways typical of permanent migrants (such as by seeking to purchase or rent houses).

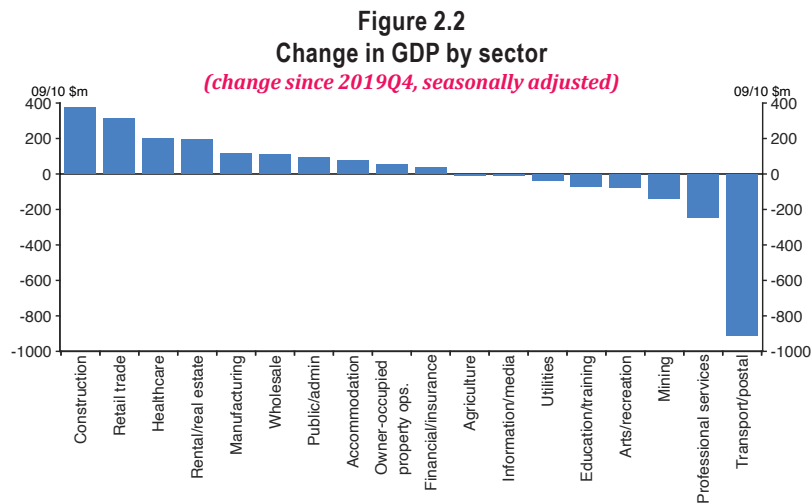
These key factors have resulted in a stronger New Zealand economy than anticipated. In particular, we have observed a more resilient labour market, supported through the worst of the economic shock by the Wage Subsidy and other programmes. More robust household incomes and balance sheets, on net, helped to limit adverse second-round impacts on the broader economy, by supporting consumer spending and parts of the business sector. In conjunction with specific policies, such as the now-expired 'Safe Harbour' law changes and ongoing Business Debt Hibernation scheme, this has meant that there have been fewer business insolvencies than in previous downturns (see figure 4.4).

A more resilient labour market and the arrival of more permanent migrants prior to the border closure have contributed to house price inflation being higher than assumed. High house price growth can also be attributed to constrained housing supply, declines in interest rates, rebalancing of investment portfolios, and the temporary removal of restrictions on high loan-to-value ratio (LVR) lending in April 2020. High house price growth has encouraged increased activity in the construction sector – a sector that has tended to perform poorly during economic downturns.

Much of what we have learned to date provides us with some indication that this higher level of economic activity will be maintained. However, the outlook remains highly uncertain and contingent on the evolution of the pandemic and global vaccination programmes. Underlying momentum in activity and the labour market will depend upon the length and magnitude of the difficulties facing tourism-related sectors and regions, and the extent to which ongoing weaknesses in these sectors spill over into the broader economy.

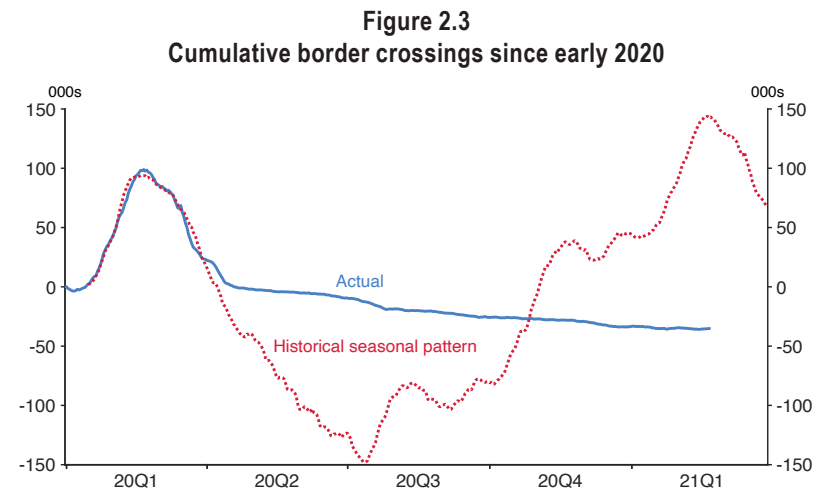
## The domestic recovery has been uneven

Although the economy has rebounded strongly, this has not been the case for all sectors. Much of the recent strength in activity has been seen in the construction and retail sectors (figure 2.2). Robust housing market activity has encouraged an increase in building consent issuance and residential investment, and bolstered household wealth. Retail spending growth has been strong, reflecting the factors already discussed: a resilient labour market; robust household balance sheets; higher asset prices; and the redirection of spending from international travel to domestic goods and services.



Source: Stats NZ.

However, demand for goods and services of sectors exposed to international tourism remains weak. The absence of international visitors continues to act as a drag on economic activity, and has been only partially offset by an increase in New Zealanders touring domestically. The continued absence of international tourists will become increasingly pronounced in the economic data. The number of overseas visitors in New Zealand would typically peak in the summer months (figure 2.3) as seasonal domestic tourism subsides.

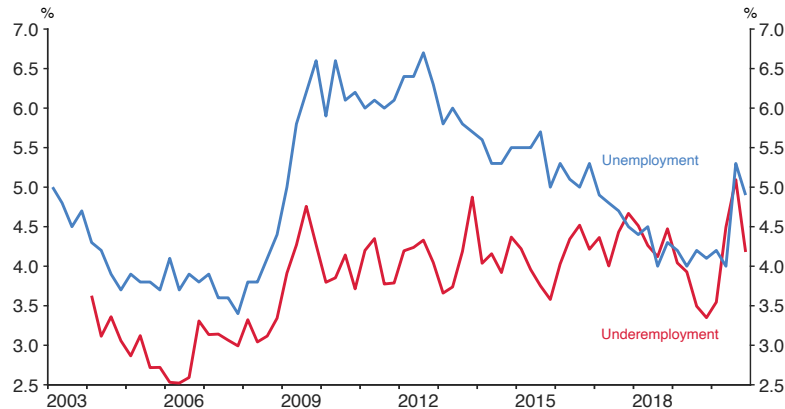


Source: New Zealand Customs Service, RBNZ estimates.

*The economic recovery has been reflected in a more resilient labour market*

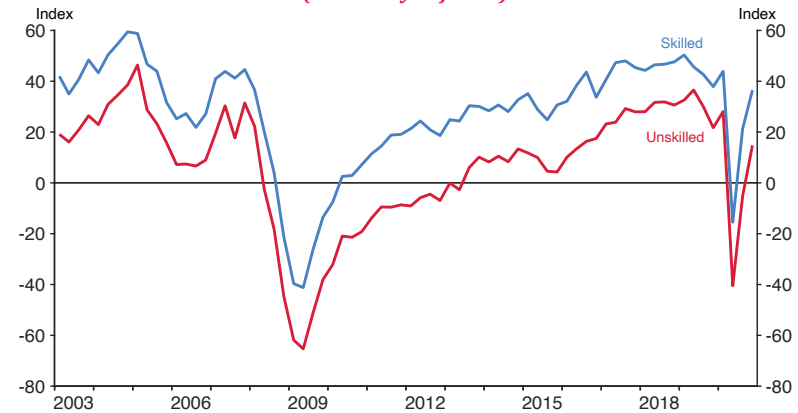
Notwithstanding weakness in some sectors of the economy, the labour market as a whole has been more resilient than previously expected. The unemployment rate fell to less than 5 percent at the end of 2020, against expectations of a further increase. Broader measures of spare capacity in the labour market – such as the underemployment rate and the ease employers are reporting in finding skilled and unskilled labour – have also declined from their mid-2020 peaks (figures 2.4 and 2.5).

**Figure 2.4**  
Unemployment and underemployment rate  
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

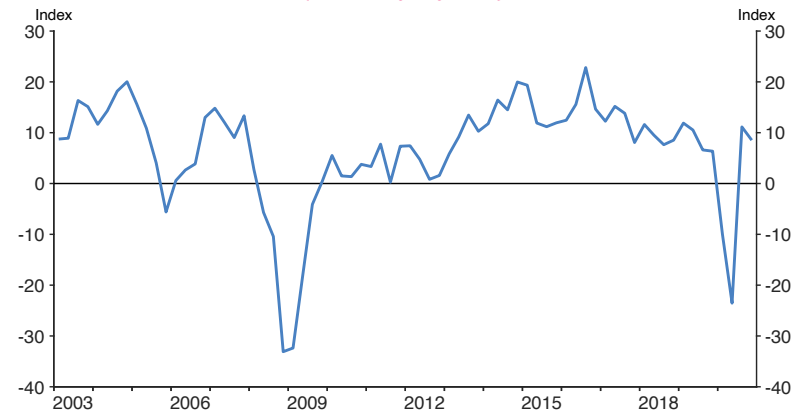
**Figure 2.5**  
QSBO difficulty in finding labour  
(seasonally adjusted)



Source: NZIER.

Note: These measures show the net percentage of firms that reported that getting labour is harder than it was three months ago.

**Figure 2.6**  
QSBO employment intentions  
(seasonally adjusted)

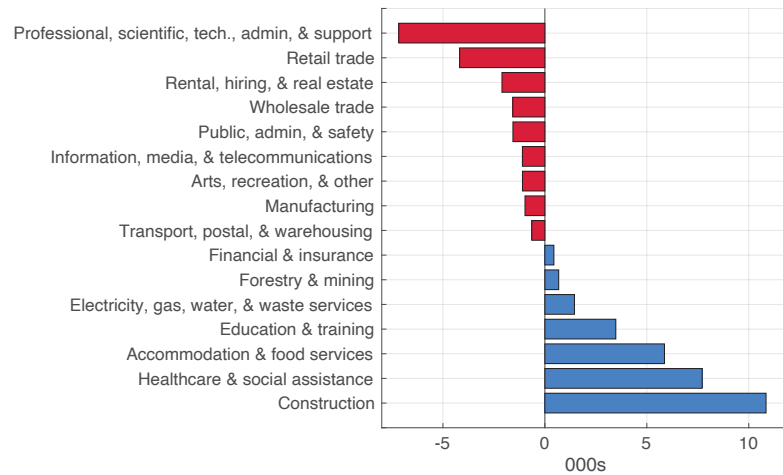


Source: NZIER.

Note: QSBO intentions measure the net percentage of firms that report an expected increase or decrease in the number of employees in the next three months, compared to the same period a year earlier.

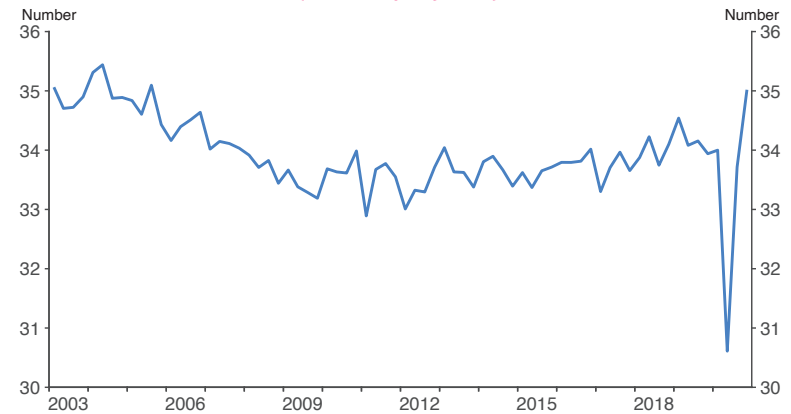


**Figure 2.7**  
**Employment by sector**  
*(change since 2020Q2, seasonally adjusted)*



Source: Stats NZ, RBNZ estimates.

**Figure 2.8**  
**Hours worked per person**  
*(seasonally adjusted)*



Source: Stats NZ, RBNZ estimates.

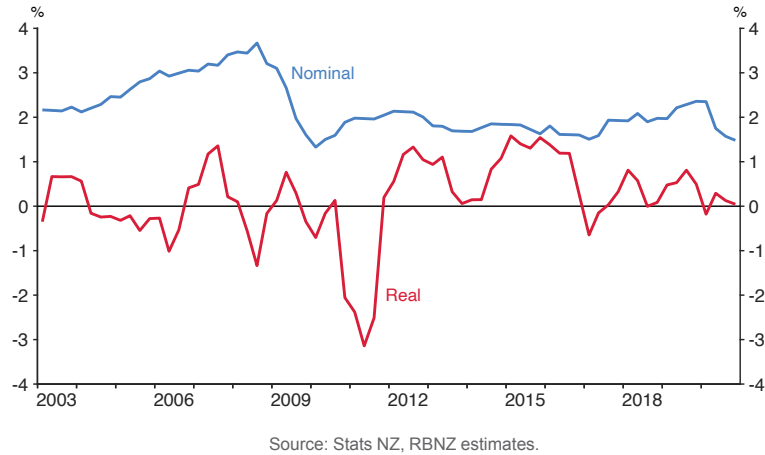
Many employers expect to continue to expand their workforces during the beginning of 2021, as indicated by a broad-based increase in hiring intentions (figure 2.6). Hiring intentions have been particularly strong in the retail and construction sectors, where the bounce-back in activity has been more rapid following Alert Level 4. Employment growth in the construction and healthcare sectors made a strong contribution to the labour market improvement during the past six months, more than offsetting declines in other sectors (figure 2.7).

The rebound in labour demand has been associated with the re-emergence of labour shortages in some industries. Our discussions with businesses have corroborated this, with firms reporting increased difficulty in hiring both skilled and unskilled workers, particularly in the construction sector. Closed borders have exacerbated shortages, particularly for workers with specialist skills.

To date, firms appear to have been able to fill any labour gaps temporarily, as existing staff have worked more hours than usual (figure 2.8). Businesses we have spoken to have also reported that they have hired casual workers to meet their labour needs.

Growth in wages has so far remained subdued, despite the strength in economic activity and the difficulty of finding workers. Although aggregate hourly earnings growth (as measured by the *Quarterly Employment Survey*) has been increasing, this reflects a shift in labour market composition away from typically lower paid jobs. When adjusted for the composition of work, as in the labour cost index (LCI), wage inflation is running close to consumer price inflation. This implies flat growth in real wages at present (figure 2.9). Wage growth is expected to increase in the year ahead, consistent with increased labour demand and further increases in the minimum wage from 1 April.

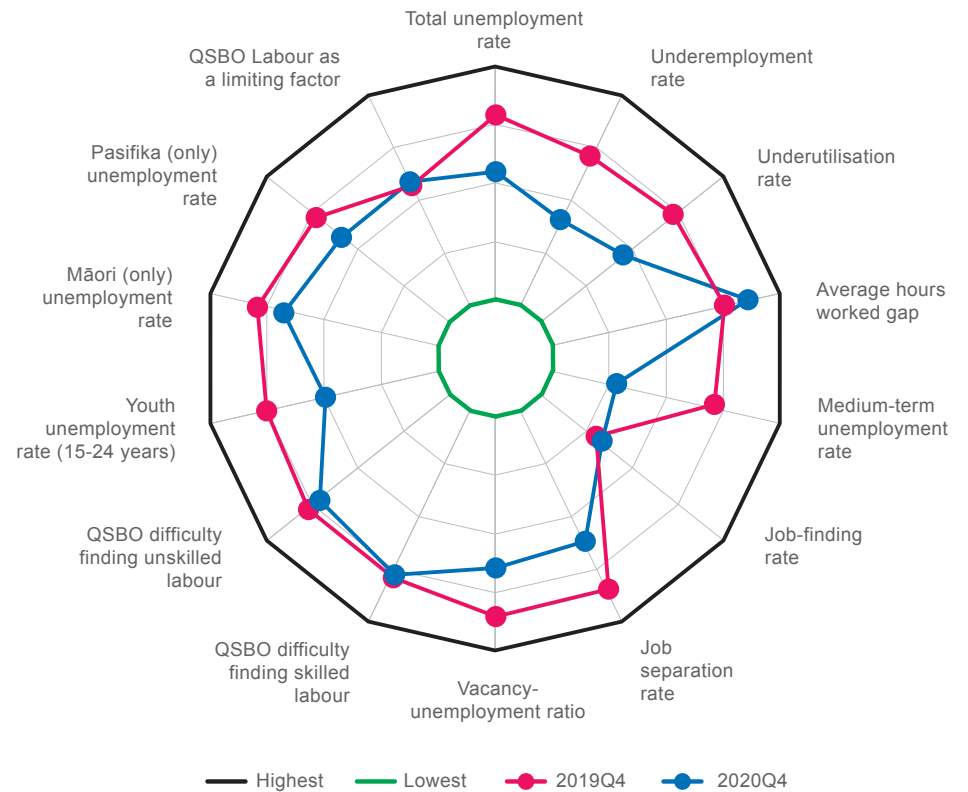
**Figure 2.9**  
Private sector LCI wage inflation  
(annual)



*Employment is still below, but closer to, its maximum sustainable level*

Overall, the labour market has been more resilient than anticipated, reflecting the relative strength in economic activity and the factors outlined previously – namely, that the Wage Subsidy was more effective than anticipated, more people were able to work from home, and much of the adjustment came through reductions in hours and wages rather than job losses. We currently assess employment as still being below, but closer to, its maximum sustainable level (figure 2.10). Box A discusses the importance of developments in the Māori economy for maximum sustainable employment.

**Figure 2.10**  
Labour market tightness indicators



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

Note: The black ring indicates the highest utilisation of labour while the green ring shows the lowest level since 2000Q1. The black ring should not be taken as being consistent with maximum sustainable employment, but as an overheated labour market. As we continue to learn more about the labour market and these measures we will develop a better sense of where maximum sustainable employment lies. The red line indicates where these measures were in 2019Q4, a time when we judged employment to be near its maximum sustainable level.

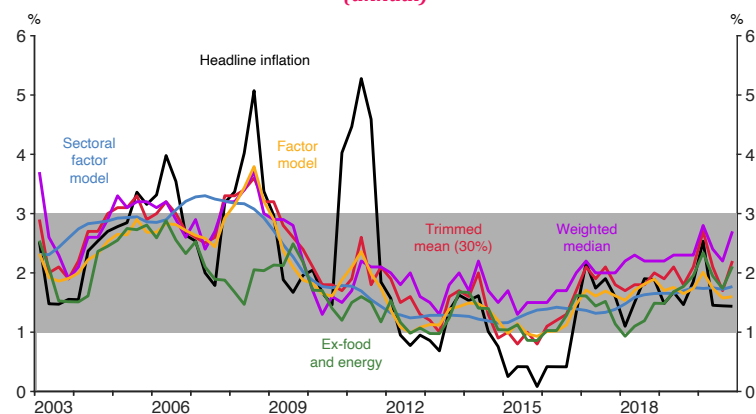
The labour market is expected to weaken slightly over 2021, reflecting ongoing challenges in tourism-related sectors, before recovering again as a reopening of New Zealand’s border and continued monetary policy support lead to increased pressures on capacity.

### *Inflation has also been higher*

Like the labour market, inflation has been more resilient than anticipated. Consumer price inflation appears to be returning to its slow upward trend since 2015, with measures of core inflation (which attempt to disregard temporary spikes in actual inflation) starting to move gradually towards 2 percent (figure 2.11). Expectations of near-term inflation continued to increase in early 2021, but remain below the 2 percent target mid-point (figure 2.12). Longer-term expectations remain at 2 percent.

A stronger near-term outlook for inflation reflects the faster-than-expected rebound in economic activity, resulting in less spare capacity since mid-2020. The trough in non-tradables inflation appears to have occurred earlier and been shallower than previously assumed (figure 2.13). The robust housing market is also expected to support inflation in the near term, with housing-related components accounting for roughly a fifth of the CPI basket. Non-tradables inflation is expected to increase gradually over the medium term, due to a relatively quick increase in capacity pressures when the border reopens (assumed to be in 2022).

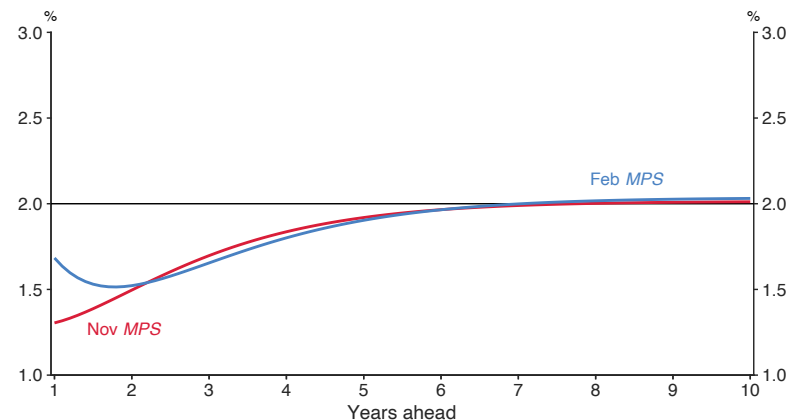
**Figure 2.11**  
**Core inflation**  
*(annual)*



Source: Stats NZ, RBNZ estimates.

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

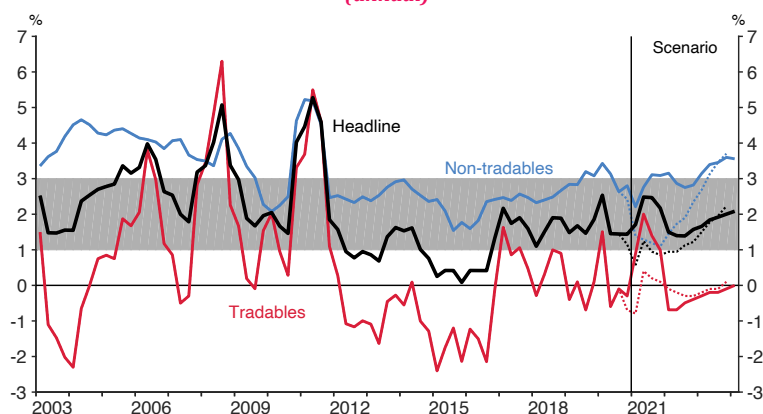
**Figure 2.12**  
**Inflation expectations**  
*(annual)*



Source: Stats NZ, RBNZ estimates.

Note: See Lewis and McDermott (2016) for a description of the estimation methodology.

**Figure 2.13**  
CPI inflation  
(annual)

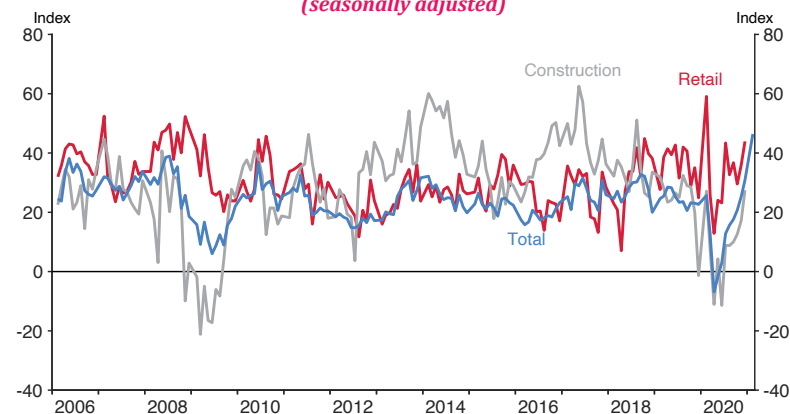


Source: Stats NZ, RBNZ estimates.

Note: Dotted lines show the baseline scenario from the November Statement.

Tradables inflation is expected to provide a further near-term boost to headline CPI inflation (figure 2.13). An increase in global oil prices in late 2020 has been a key factor via its impact on domestic petrol prices. Oil prices have increased alongside a range of other global commodity and asset prices, reflecting optimism about COVID-19 vaccination programmes globally in 2021. Tradables inflation is assumed to decline over the medium term, as the oil-price-induced spike drops out of the annual calculation and an elevated New Zealand dollar exchange rate weighs on the cost of our imports.

**Figure 2.14**  
ANZBO pricing intentions  
(seasonally adjusted)



Source: ANZ, RBNZ estimates.

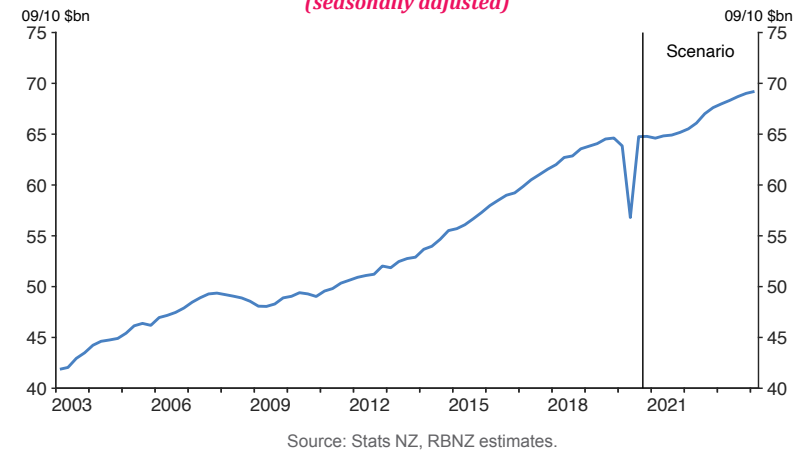
Supply chain bottlenecks (see chapter 4) have added a further layer to the price of our imported goods. Global transport prices have increased and the availability of imported goods has declined as safety measures introduced in response to the pandemic have disrupted global production and distribution. We expect some of these extra costs and supply shortages to eventually feed through into higher prices. Economy-wide pricing intentions have increased in recent months (figure 2.14).

## *The sustainability of the recent economic improvement is highly uncertain*

Although the economic recovery has been much stronger than anticipated at the outset of the pandemic, the outlook remains highly uncertain and contingent upon the path of the virus and the speed and efficacy of global vaccination programmes. Underlying momentum in activity and the labour market will depend on the duration and strength of the headwinds facing tourism-related sectors and regions, and the extent to which ongoing weakness in these sectors spills over into the broader economy. The baseline scenario assumes that the unemployment rate increases to a peak of 5.2 percent in mid-2021, reflecting ongoing challenges in tourism-related sectors. Fiscal policy is expected to remain stimulatory for several years, albeit less stimulatory than previously assumed.

Increasing house prices have been a contributor to the recovery in the construction and retail sectors. Some of the factors contributing to high house price inflation in 2020 are assumed to wane during 2021. Strong construction activity is assumed to alleviate some supply pressure. The effect of high migration prior to the border closure is expected to decline as migration has been low since March 2020. The reintroduction of restrictions on high-LVR lending for owner-occupiers and investors (and tightening for the latter) is also assumed to dampen further house price increases from the June 2021 quarter.

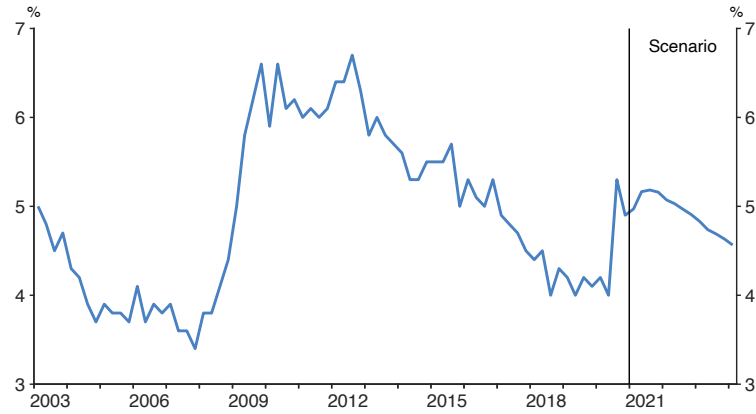
**Figure 2.15**  
**Quarterly production GDP**  
*(seasonally adjusted)*



## *Ongoing monetary stimulus is required to confidently and sustainably achieve our economic objectives*

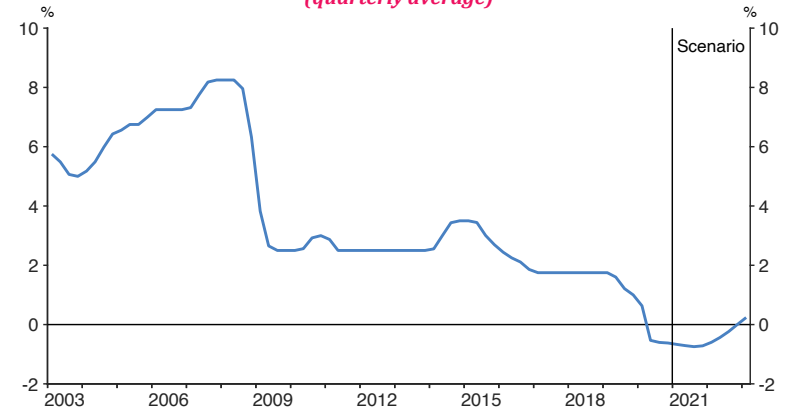
Despite starting from a stronger position than assumed at the time of the November *Statement*, the baseline economic scenario outlined in chapter 5 is subdued. Ongoing domestic momentum is required to ensure that the remaining spare capacity in the economy is absorbed, and reflected in sustained higher employment and inflation (figures 2.16 and 2.17 respectively). The degree of monetary stimulus is therefore assumed to remain at its currently accommodative level for an extended period (figure 2.18). However, the recent resilience in the domestic economy implies that no significant additional stimulus is required at this time.

**Figure 2.16**  
Unemployment rate  
*(seasonally adjusted)*



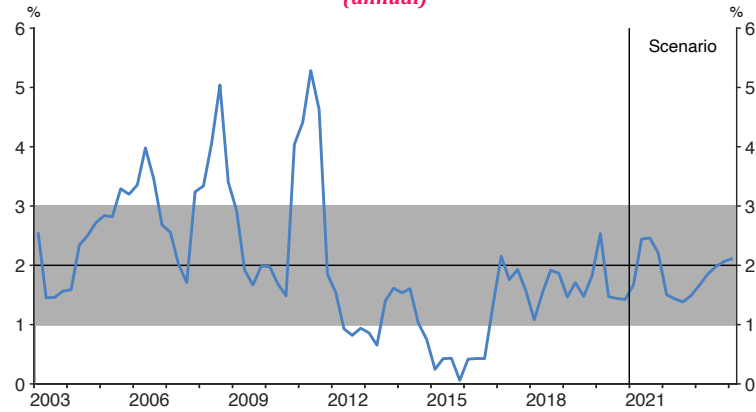
Source: Stats NZ, RBNZ estimates.

**Figure 2.18**  
Unconstrained OCR  
*(quarterly average)*



Source: RBNZ.

**Figure 2.17**  
CPI inflation  
*(annual)*



Source: Stats NZ, RBNZ estimates.

## Box A

# Ngā āhuatanga o te wā – Current conditions in the Māori economy

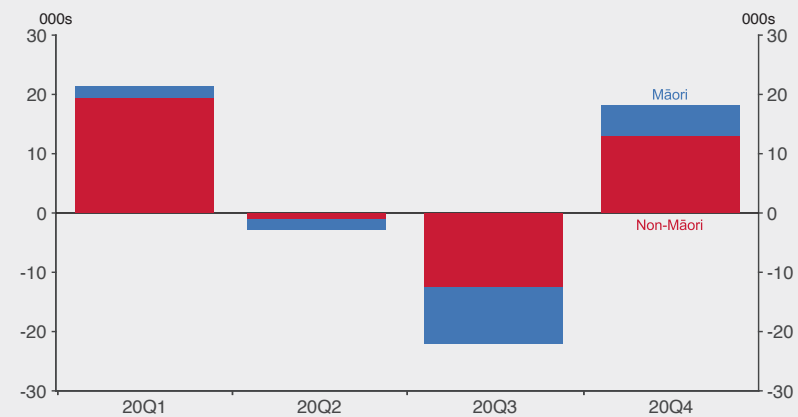
The Māori economy is an integral part of the New Zealand economy. Te ao Māori (the Māori world) is a unique characteristic of our society that we need to consider in order to fully understand the economy of Aotearoa. People of Māori ethnicity make important contributions to economic activity through their involvement in business, the labour market, the public sector, and voluntary work. These contributions were measured in the recent report *Te Ōhanga Māori 2018*, produced by Business and Economic Research Limited (BERL) in partnership with the Reserve Bank.

Understanding how Māori experience the labour market is important for our assessment of maximum sustainable employment (MSE). This is because Māori people will make up an increasing share of the future workforce as the large number of Māori currently aged under 15 begin to join the labour force in coming years.<sup>3</sup>

The past year has seen positive employment growth among Māori, reflecting the relative strength in the New Zealand labour market overall. Between the end of 2019 and the end of 2020, Māori employment increased by 5,100. This accounts for nearly a third of the total employment increase of 18,200 over the same period (figure A1). Since Māori make up only 14 percent of the working-age population, these figures show that Māori employment made a disproportionately large contribution to total employment growth over 2020.

Despite this strong employment growth, the Māori unemployment rate increased at the end of 2020. This was partly due to the sharp rise in labour market participation by Māori that occurred at the same time. Increasing participation when employment is strong can represent an ‘encouraged worker effect’ – people entering the labour market as they see employment increasing, but initially searching for work rather than becoming employed straight away.

**Figure A1**  
**Employment by ethnicity**  
*(cumulative change since 2019Q4)*



Source: Stats NZ.

<sup>3</sup> See page 21 of *Te Ōhanga Māori 2018*.

The volatility in Māori employment over 2020 is in keeping with what was seen in previous labour market cycles. Māori workers are usually disproportionately affected by economic downturns, with Māori employment falling more sharply and for longer than general employment in a typical contraction.<sup>4</sup> Indeed, this was the case through the middle of 2020 (see figure A1). The recovery in Māori employment in late 2020 is an encouraging sign, although it has only lasted for a single quarter thus far.

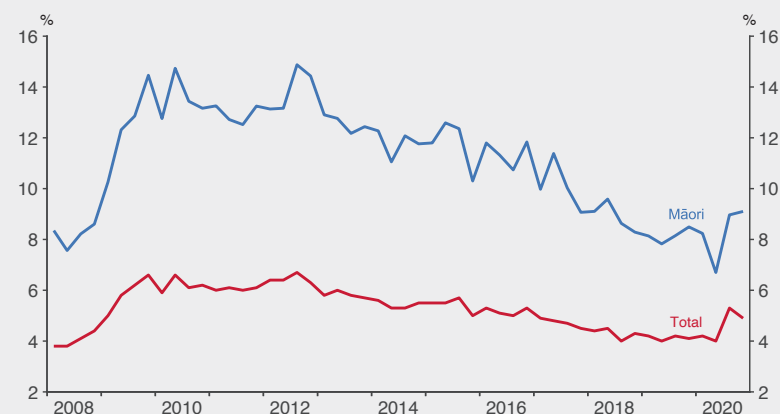
Turning to the business sector, Māori businesses have been exposed to the disruption caused by COVID-19. In 2018, 7.9 percent of Māori business activity was generated in the retail trade, accommodation, and food services industries.<sup>5</sup> This is a slightly higher exposure than in the general economy, where these industries account for 7 percent of economic activity.<sup>6</sup> As a result, it is likely that the GDP generated by Māori businesses was temporarily reduced by the COVID-19 containment measures imposed during 2020, in a similar way to the GDP of the economy as a whole.

The Reserve Bank's discussions with its Te Ao Māori advisory panel and joint outreach with the Treasury to Māori business leaders have revealed similar findings. COVID-19 has exacerbated difficulties within the tourism sector and for household incomes. These difficulties have been particularly pronounced for single-income households, with Māori women bearing a significant part of the impact.

Despite this disruption, the balance sheet of Māori businesses may be more robust on average than that of businesses in the general economy. This arises from the concentration of Māori economic activity among low-leveraged businesses in the primary sector.<sup>7</sup> The primary sector accounts for about 14 percent of Māori economy GDP and 34 percent of the Māori asset base.<sup>8</sup>

The recent strength in Māori employment is tempered by ongoing structural challenges. In the Māori population the unemployment rate is persistently higher than it is in the general population (figure A2), while the labour force participation rate is lower (figure A3). Together with barriers to accessing capital, and low incomes among working Māori,<sup>9</sup> these features could be constraining the level of MSE in New Zealand.

**Figure A2**  
Unemployment rates by ethnicity  
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

4 Markham, Özbilgin and Robinson (forthcoming), 'Labour markets and past recessions'.

5 See page 35 of *Te Ōhanga Māori 2018*.

6 Stannard, Steven and McDonald (2020), 'Economic impacts of COVID-19 containment measures', Reserve Bank of New Zealand *Analytical Note*, AA2020/04, page 12.

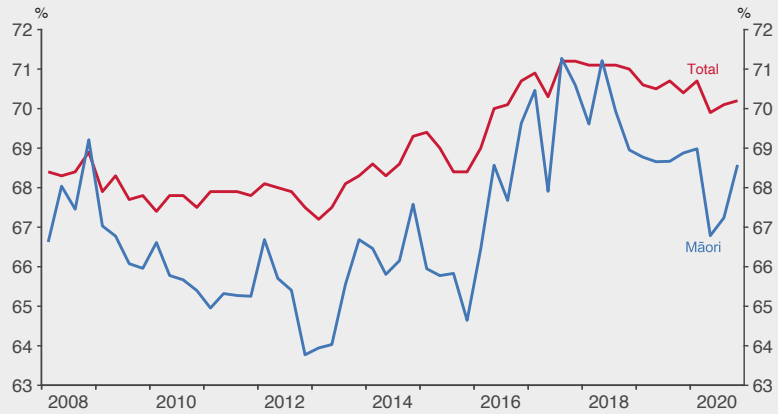
7 See *Emerging Challenges and Lessons from the Māori Economic Renaissance*, Reserve Bank of New Zealand speech, A. Orr, 27 September 2019.

8 See pages 35 (GDP) and 20 (asset base) of *Te Ōhanga Māori 2018*.

9 See page I of *Te Ōhanga Māori 2018*.



**Figure A3**  
**Participation rates by ethnicity**  
*(seasonally adjusted)*



Source: Stats NZ, RBNZ estimates.

If these structural features in the Māori labour market persist into the future, the level of employment that can be sustainably achieved in New Zealand could be further constrained. The structural barriers that Māori have faced in the labour market, interacting with a growing share of Māori in the labour force, could ultimately lead to MSE growing more slowly. On the other hand, if structural constraints on Māori employment were resolved, the New Zealand economy would be able to support a higher level of overall employment without generating inflationary pressure. Ultimately, addressing structural constraints on MSE would enhance well-being and prosperity for all New Zealanders.

# Chapter 3

## Monetary policy instruments



- The MPC's policy actions since early 2020 have been effective in providing stimulus in response to the adverse economic effects of the pandemic. This stimulus has supported the New Zealand economy and is helping to achieve the MPC's inflation and employment objectives.
- Financial conditions remain highly accommodative, despite some recent increases in long-term interest rates. Higher long-term interest rates partly reflect better-than-expected economic data.
- With operational preparations complete, a zero or negative OCR is now an available policy option.

### *The MPC introduced a range of new tools over 2020*

In response to the COVID-19 pandemic, the MPC took a number of monetary policy actions to support the New Zealand economy.

These included:

- lowering the OCR to 0.25 percent and providing forward guidance that the OCR would remain at this level until at least March 2021;
- launching the Large Scale Asset Purchase (LSAP) programme, under which the Reserve Bank helps to lower long-term interest rates by purchasing New Zealand government and Local Government Funding Agency (LGFA) bonds; and
- launching the Funding for Lending Programme (FLP), which aims to lower the cost of borrowing for businesses and households. The FLP does this directly, by providing low-cost funding to banks, and indirectly, by reducing the cost of banks' other sources of funding.

In addition, the Reserve Bank took a range of actions to support the functioning of financial markets (see box A in the May 2020 *Statement*). Together, these actions have been effective in providing monetary stimulus, supporting New Zealand's economy, and helping to achieve the MPC's inflation and employment objectives. Each monetary policy instrument works in a different way, and the appropriate mix of tools depends on the circumstances at the time.

## OCR and forward guidance

The OCR has been the Reserve Bank's primary monetary policy tool since 1999. The OCR works by influencing short-term market interest rates in New Zealand, and thereby interest rates at which households and businesses can borrow and save.<sup>10</sup>

The effects of a lower OCR can be supported by forward guidance to give market participants, as well as households and businesses, confidence that borrowing costs will not rise in the near future. The MPC did this in March 2020 by stating that the OCR would remain at its historically low level until at least March 2021.

In March 2020, the MPC faced an operational constraint, in that participants within the banking system may not have been able to transact with an OCR at or below zero. This operational constraint has now been overcome, and the OCR can be lowered below zero if required (see further discussion below).

## Large Scale Asset Purchases (LSAPs)

Forms of LSAP programmes have been used by many other central banks over the past decade. Similar to the OCR, the LSAP programme's purpose is to influence the level of interest rates. The LSAP programme is implemented by purchasing government bonds or other high-quality assets. This has the effect of raising the price of these assets, thereby lowering their yields. When government bond yields are lower than they otherwise might be, this encourages investment in riskier assets – enabling the issuers of debt or equity to raise funding at a lower cost than might otherwise be possible. In this way, the effect of LSAPs is similar to that of lowering the OCR. However, LSAPs have more of an influence on longer-term interest rates.

The LSAP programme is also a useful tool to address market dysfunction, such as that which occurred in March 2020. Due to the extreme uncertainty prevalent in financial markets at that time, market participants were less willing to trade government bonds and other financial assets with one another. By consistently purchasing large quantities of bonds, the LSAP programme gave market participants confidence to transact in these markets, which alleviated market dysfunction.

## Funding for Lending Programme (FLP)

The FLP is a Reserve Bank facility that provides banks with low-cost term funding in return for high-quality collateral. Under the FLP, banks can borrow for a term of 3 years at a floating rate matching the OCR. Providing banks with a secure form of low-cost funding means that liquidity is less of a constraint on banks' lending than it otherwise might be. During periods of high uncertainty, banks may be more cautious in their lending, in part because they are concerned about their ability to fund themselves. With this risk mitigated by the FLP, banks can be more confident to lend and more able to do so at lower rates.

A key channel of the FLP's effectiveness is the indirect channel. That is, the *availability* of the FLP puts downward pressure on other sources of funding such as term deposits. This reduces bank funding costs, irrespective of whether banks actually draw on the FLP. In this way the indirect channel helps to reduce funding costs for all financial institutions, regardless of whether they are eligible for direct access to the FLP.

By providing funding at the level of the OCR, the FLP also serves to complement the transmission of reductions in the OCR. However, the FLP can provide monetary stimulus in its own right by lowering bank funding costs, and therefore customer lending rates, to the extent that banks pass on these lower funding costs. The MPC decided at its November 2020 meeting to deploy the FLP without changing the OCR.

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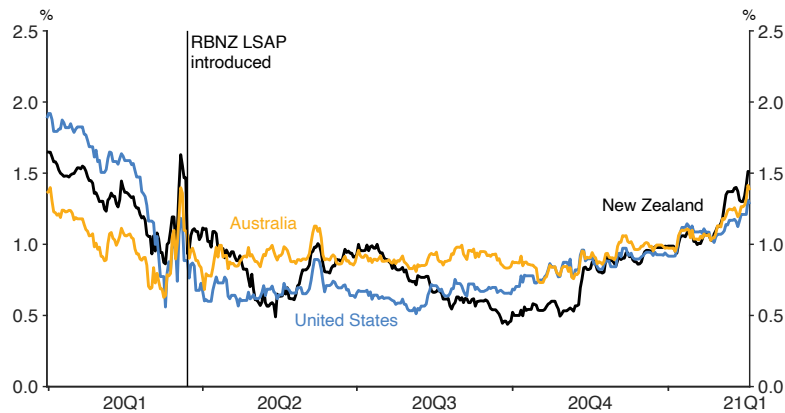
<sup>10</sup> See *Monetary Policy Handbook*.

## Monetary policy tools have eased financial conditions

The MPC's monetary policy actions to date have been successful in easing financial conditions in New Zealand. This has flowed through to lower interest rates for households and businesses, supporting the MPC's inflation and employment objectives.

Long-term bond yields fell significantly following the introduction of the LSAP programme, but have increased since the November *Statement*. This trend is also evident in other countries that have employed similar monetary policy tools, reflecting increased optimism among international investors about the outlook for global economic activity and inflation (figure 3.1).

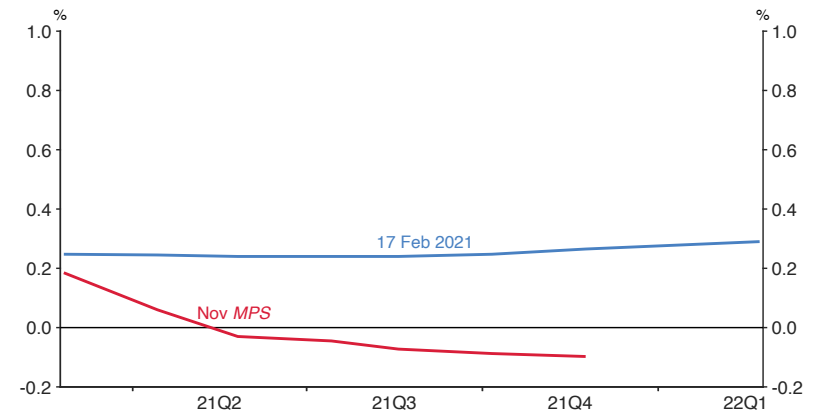
**Figure 3.1**  
10-year government bond yields



Source: Bloomberg.

In addition to international factors, stronger domestic economic data has seen market participants reduce their expectations for additional monetary stimulus, as evidenced by the significant repricing of overnight indexed swap (OIS) rates (figure 3.2). In November, OIS pricing implied market participants were expecting further reductions in the OCR. Market participants are now expecting the OCR to remain around its current level for the rest of 2021.

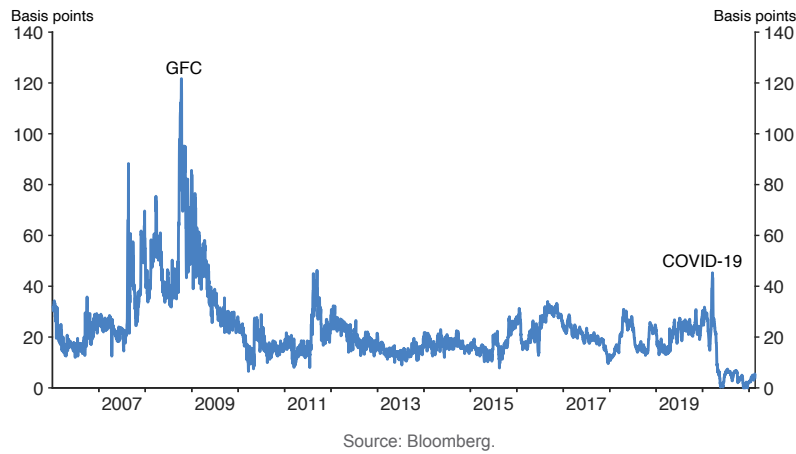
**Figure 3.2**  
Overnight indexed swap curve



Source: Bloomberg.

The Reserve Bank's policy actions have helped to reduce risk premia (the additional compensation investors require for risky investments) throughout the financial system and have lowered funding costs for banks. This can be seen in the spread between the 3-month bank bill (BKBM) rate and the 3-month OIS rate. A lower BKBM-OIS spread implies there is less funding stress in the banking system, since it implies investors are willing to accept less compensation for the risk of lending money to a bank.

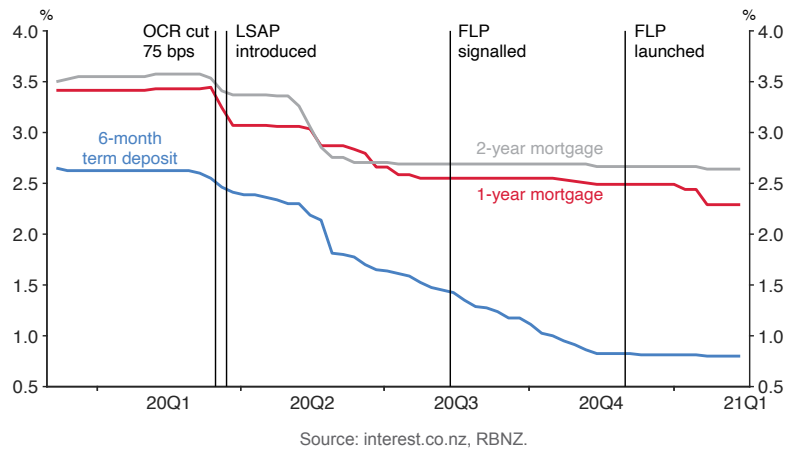
**Figure 3.3**  
**3-month BKBM-OIS spread**



The BKBM-OIS spread spiked in March 2020, and then declined in response to increased market operations by the Reserve Bank and the introduction of the LSAP programme. It remains near record low levels (figure 3.3). The FLP will help to keep bank funding conditions accommodative for a considerable period of time.

Accommodative financial conditions have flowed through to households and businesses (see figure 4.9). Mortgage rates fell immediately following the reduction of the OCR to 0.25 percent, and have continued to drift lower in response to further monetary easing (figure 3.4). Lending rates to businesses have also declined. Deposit rates fell steadily throughout the second half of 2020. Declines in deposit rates partly reflect the anticipation of the FLP, consistent with international evidence that monetary policy has significant ‘announcement effects’. That is, market participants react to the prospective implementation of a policy before it is operational.

**Figure 3.4**  
**Retail deposit and mortgage rates**  
*(average of 4 largest banks)*



More recently, there have been small declines in mortgage rates. Declines have been most prevalent in the 1-year mortgage rate, for which competition between banks appears to be strongest. Strength in the housing market led to record volumes in new mortgage commitments in late 2020, which may have dampened competitive pressure for further reductions in lending rates.

With highly accommodative financial conditions expected to remain for some time, we expect banks will pass through lower funding costs to lending rates over time.

Monetary stimulus has also lowered the cost of financing for firms through debt and equity markets. Corporate bond yields have fallen, and higher equity prices mean it is cheaper for firms to raise new equity.

The MPC's policy actions have also put downward pressure on the New Zealand dollar exchange rate. The New Zealand dollar trade-weighted index has appreciated significantly over recent months, partly reflecting improved sentiment among international investors and robust prices for New Zealand's commodity exports. However, the exchange rate would be considerably higher if not for the Reserve Bank's policy actions, with central banks globally providing extraordinary monetary stimulus in response to the pandemic.

### *A zero or negative OCR would provide additional monetary stimulus, if required*

The MPC has a range of monetary policy tools that can be deployed as appropriate to support the economy. With work to ensure that our financial system is ready to operate in a zero or negative interest rate environment complete, the toolkit now includes the option of a zero or negative OCR.

A zero or negative OCR would support the economy through the same channels as changes to the OCR above zero (figure 3.5). Lowering the OCR would reduce financial market interest rates, lower the exchange rate, and support asset prices and inflation expectations. We expect these channels of monetary policy to be just as effective when the OCR is zero or negative as when the OCR is positive.

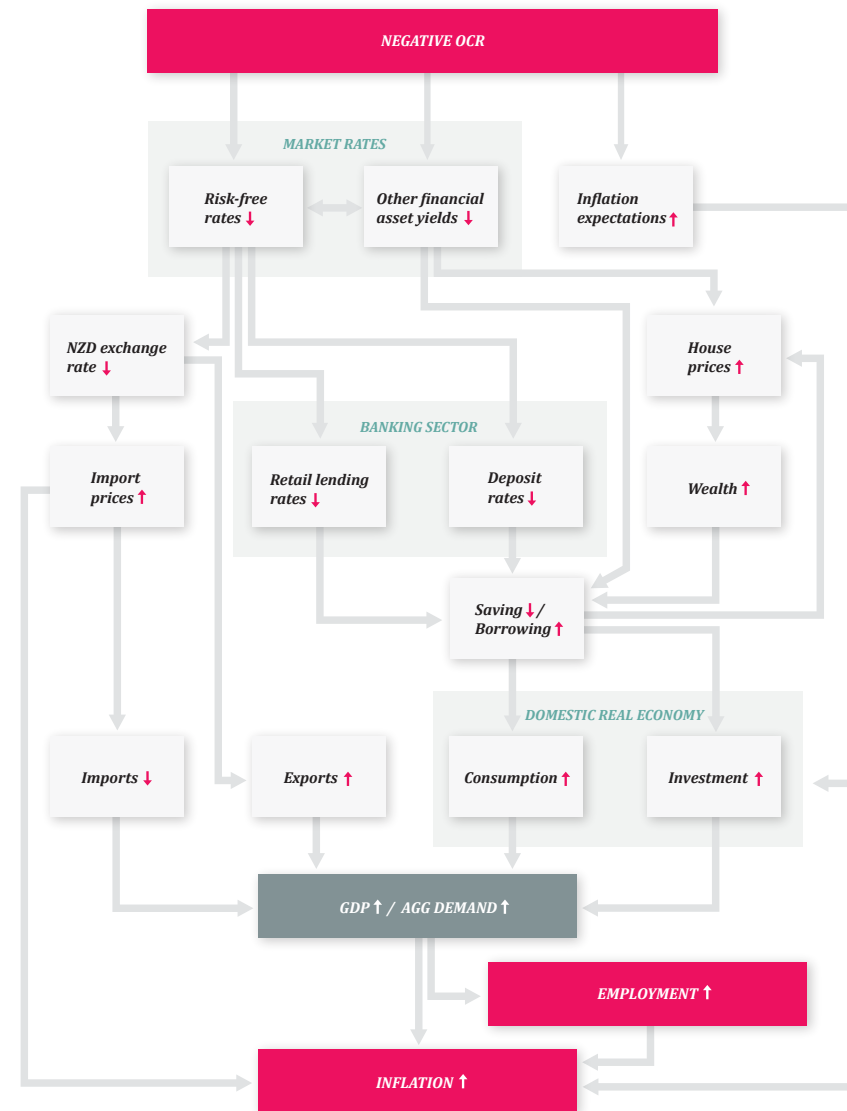
At the margin, the pass-through to retail interest rates may be weaker with a zero or negative OCR. In countries where negative interest rate policies have been implemented, deposit rates for households have generally stayed at or above zero even as other interest rates have declined. As deposits are an important source of bank funding, the pass-through to lending rates has also been weaker. As a result, reductions in the OCR may have a smaller impact on saving and borrowing when the OCR is zero or negative.

The more negative the OCR is, the more binding this constraint on monetary policy transmission may become. However, that does not mean that a negative OCR would be ineffective. Even if this particular channel were to become entirely ineffective, further reductions in the OCR would still support employment and inflation through other channels.

Furthermore, a complementary package of policies can strengthen the effectiveness of a negative OCR. The FLP is one such complementary tool that would support the pass-through of a negative OCR via the banking system. The FLP allows banks to borrow from the Reserve Bank at the OCR, which means that lowering the OCR would also work through the FLP to directly and indirectly lower banks' funding costs, supporting them to lend at lower rates.

Exemption tiering is another policy option that has been implemented internationally to support the pass-through of negative interest rates. Under exemption tiering, a portion of the deposits that banks hold at the central bank are exempt from being charged the negative policy rate. If a negative OCR were deployed in the future, the MPC would consider whether an exemption tiering scheme is suitable based on the conditions at the time and an assessment against its principles for monetary policy instruments.

**Figure 3.5**  
Transmission channels for a negative OCR



Source: RBNZ.

# Chapter 4

## Developments in the business and household sectors



- The recovery in economic activity has been strong, particularly for the construction and retail sectors, but tourism-related sectors are still facing weak conditions.
- The recovery in spending and significant fiscal and monetary measures have supported business incomes and balance sheets. However, firms remain cautious about new investment. Supply chain disruptions are also affecting some businesses.
- Labour demand has increased in some sectors, particularly the construction sector. This has partially offset weak labour demand in tourism-related sectors.
- Household incomes have been supported by a resilient labour market. Strong asset prices and savings accumulated during the higher alert levels have supported households' financial positions. As a result, spending has recovered to around or above pre-COVID-19 levels.

### *A tale of two economies*

As discussed in chapter 2, a range of factors contributed to New Zealand's strong recovery in economic activity in the second half of 2020. These factors have boosted household spending domestically and have underpinned an improvement in business activity, particularly in the construction and retail sectors.

However, sectors exposed to international tourism remain weak. While domestic tourism spending has been strong, it has not made up for the loss of international visitors. Activity in tourism-related sectors is likely to weaken further as the key domestic holiday season winds down around the same time of the year as international arrivals would typically peak.

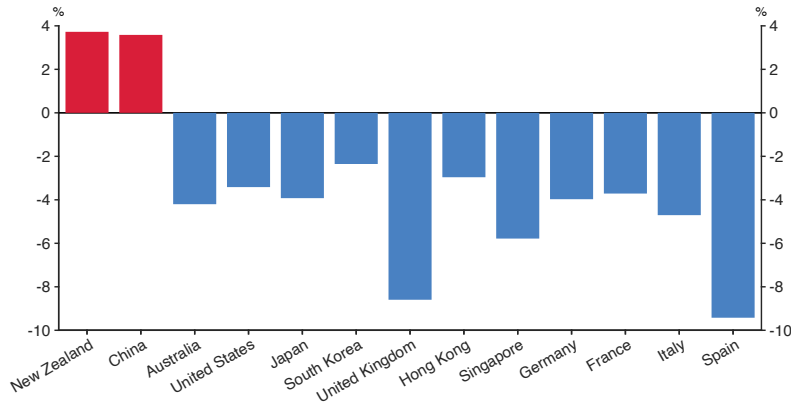
### *Global demand for our goods exports has remained firm*

Demand for our key export goods has remained robust, despite many of our trading partners experiencing significant economic slowdowns. China's recovery has significantly outperformed all of New Zealand's major trading partners and, like New Zealand's, China's economy has surpassed its pre-COVID-19 level (figure 4.1). This has supported demand for our key agricultural exports, such as dairy products. Whole milk powder prices reached US\$3,615 per metric tonne at the latest Global Dairy Trade auction, their highest level since 2014. While the strength in the New Zealand dollar trade-weighted index (TWI) has provided some offset to higher global commodity prices for New Zealand exporters (figure 4.2), many of the export-oriented firms we have spoken to have still benefited significantly.



**Figure 4.1**  
**GDP growth**

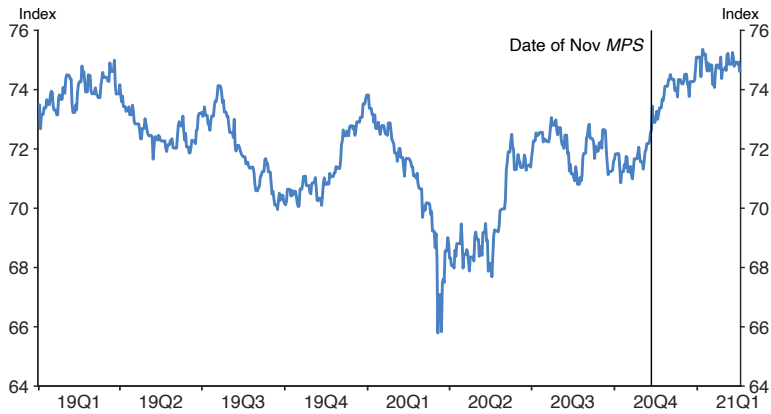
*(change since 2019Q4, seasonally adjusted)*



Source: Haver Analytics, Stats NZ.

Note: Bars show the percentage change in GDP from the December 2019 quarter to the September 2020 quarter.

**Figure 4.2**  
**New Zealand dollar TWI**

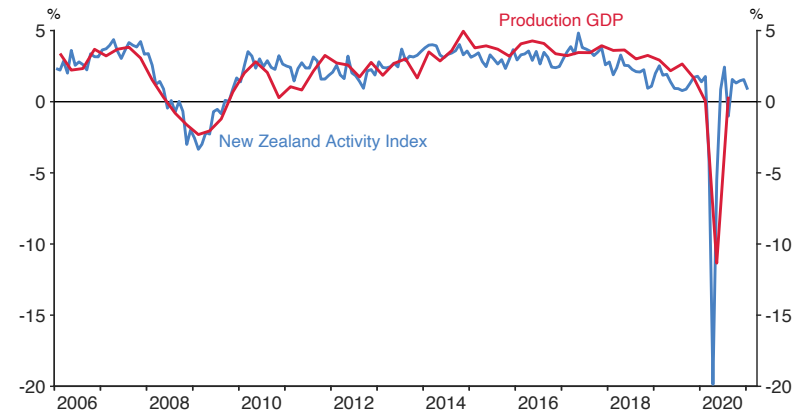


Source: RBNZ.

*Domestic demand has recovered strongly*

Domestic demand recovered strongly in the second half of 2020 (figure 4.3). This resurgence partially reflected pent-up demand from New Zealand's periods at Alert Levels 3 and 4, when consumption opportunities were more limited and households accumulated savings as a result. With border restrictions remaining in place, the demand recovery has been driven by onshore spending. In addition, house prices have increased sharply and have provided a boost to the construction and retail sectors.

**Figure 4.3**  
**New Zealand Activity Index**  
*(annual)*



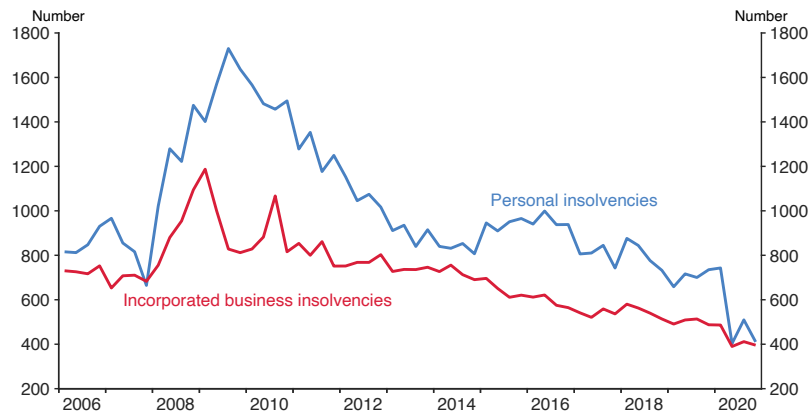
Source: Stats NZ, Treasury.

Note: The New Zealand Activity Index is a weighted average of eight monthly indicators of economic activity, covering consumer spending, unemployment, job advertisements, traffic volumes, electricity generation, the activity outlook, and manufacturing expectations.

## *Businesses have remained largely resilient to date*

Most businesses have remained viable, despite the disruptions to activity due to COVID-19. A range of government support measures, and accommodative monetary and financial policies, have helped businesses weather the impacts of the COVID-19 containment policies. To date, business failures have been at low levels (figure 4.4).

**Figure 4.4**  
**Quarterly insolvencies**  
*(seasonally adjusted)*



Source: MBIE, RBNZ estimates.

Note: Personal insolvencies include bankruptcies, no asset procedures, and debt repayment order filings with the New Zealand Insolvency and Trustee Service. Incorporated business insolvencies include liquidation, voluntary administration, and receivership notifications to the New Zealand Companies Office.

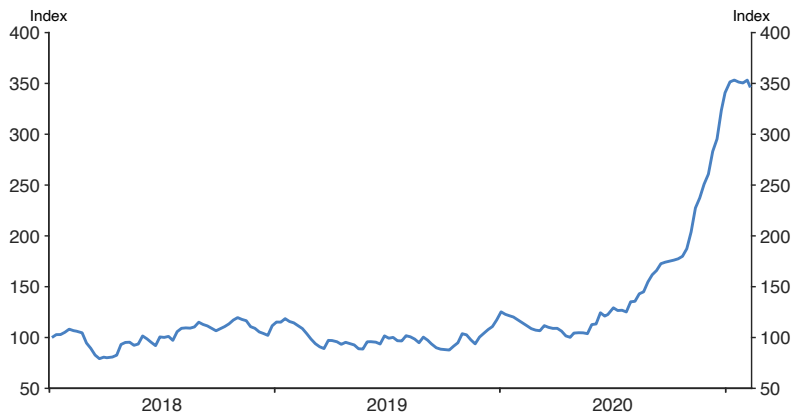
Programmes such as the Wage Subsidy have helped businesses meet their expenses despite reduced activity. The Small Business Cashflow (Loan) Scheme and the Business Finance Guarantee Scheme have helped businesses to meet working capital needs and fund their investments. Our discussions with businesses suggest these schemes have been significant in helping businesses to maintain their workforces and continue trading. Other government actions, including changes to tax policy, have also helped prevent otherwise viable businesses from failing as a result of temporary COVID-19 related disruptions.<sup>11</sup>

## *Supply chain disruptions are constraining some businesses*

Global and domestic supply chain disruptions are limiting some firms' capacity to meet demand for imported goods, and goods and services produced with imported materials. Our discussions with businesses have highlighted a range of challenges they are facing in getting goods into the country. These include significant shipping delays, higher shipping costs, and the occasional inability of overseas suppliers to fulfil orders (figure 4.5). While some of these issues are global in nature, others are exacerbated by New Zealand's distance from key trading hubs. Fewer overseas container ships than usual are currently travelling to New Zealand (figure 4.6).

<sup>11</sup> See [Government support for businesses recovering from COVID-19](#).

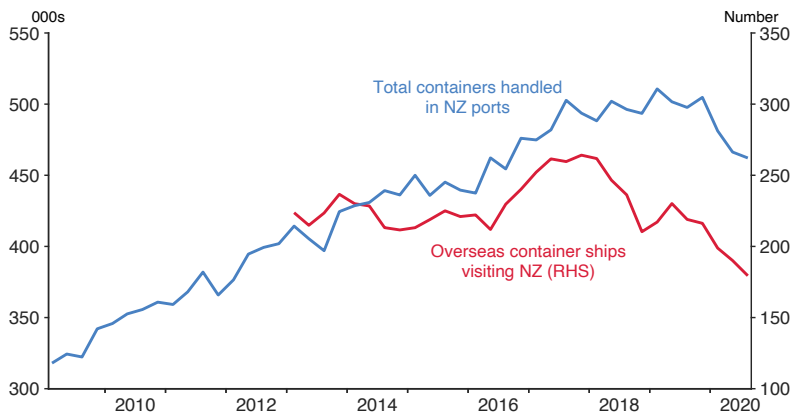
**Figure 4.5**  
**Shanghai Shipping Exchange index**  
*(seasonally adjusted, 1/1/2018 = 100)*



Source: Bloomberg, RBNZ estimates.

Note: This index reflects the weekly spot rates in the Shanghai export container transport market.

**Figure 4.6**  
**Containers and ships in New Zealand ports**  
*(quarterly, seasonally adjusted)*

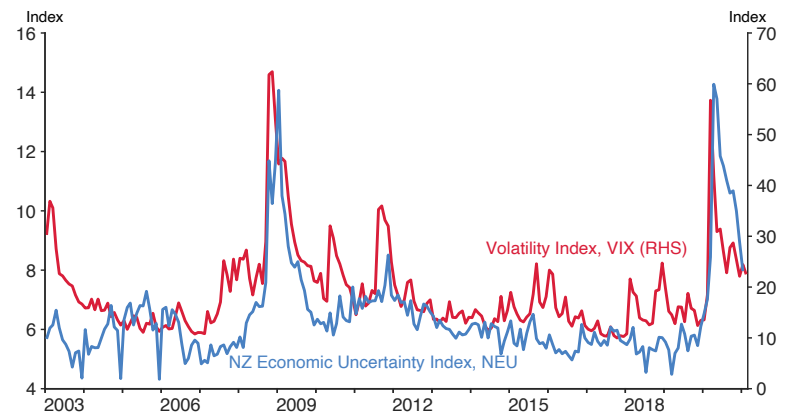


Source: Ministry of Transport, RBNZ estimates.

## Uncertainty is causing subdued investment

Many firms appear to be continuing to take a 'wait and see' approach to significant capital investment, influenced by ongoing elevated levels of uncertainty (figure 4.7). Many businesses we have spoken to in the past six months are choosing to postpone new investment projects. Business investment remained well below pre-COVID-19 levels in the September 2020 quarter, and growth in lending to businesses has remained subdued to date. Some planned projects may no longer be viable, as COVID-19 has changed the way many businesses operate, with more employees working from home and more customers shopping online. Retail and office vacancy rates in the largest cities are elevated, which may discourage significant investment in new commercial buildings in the near term (figure 4.8).

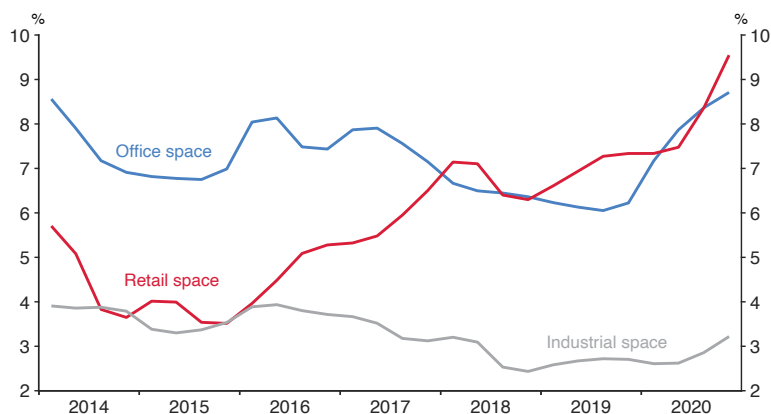
**Figure 4.7**  
**Economic uncertainty and market volatility indices**



Source: Bloomberg, Sense Partners.

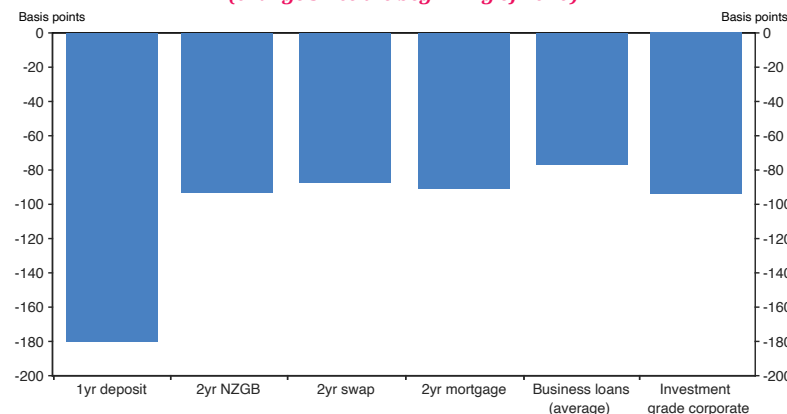
Note: The VIX shows implied US equity market volatility while the NZ Economic Uncertainty Index is a text analytic index that analyses mentions of phrases related to business uncertainty in New Zealand media.

**Figure 4.8**  
Commercial property vacancy rates



Source: Jones Lang LaSalle.

**Figure 4.9**  
Change in New Zealand interest rates  
(change since the beginning of 2020)



Source: Bloomberg, interest.co.nz, RBNZ.

Note: Data for business loans reflects the change in the average interest rate on outstanding business loans. Other rates are based on advertised and market rates. NZGB stands for New Zealand government bonds.

### *Monetary policy has reduced borrowing costs for businesses*

Accommodative monetary policy has reduced borrowing costs for businesses, making it cheaper for them to fund investment and working capital (figure 4.9). For example, the average interest rate on outstanding business loans is about 75 basis points lower than at the beginning of 2020. Firms report that borrowing costs are not currently a significant factor in their investment decisions, with uncertainty and future demand dominating. However, monetary policy is working indirectly to support investment by stimulating demand for firms' products.

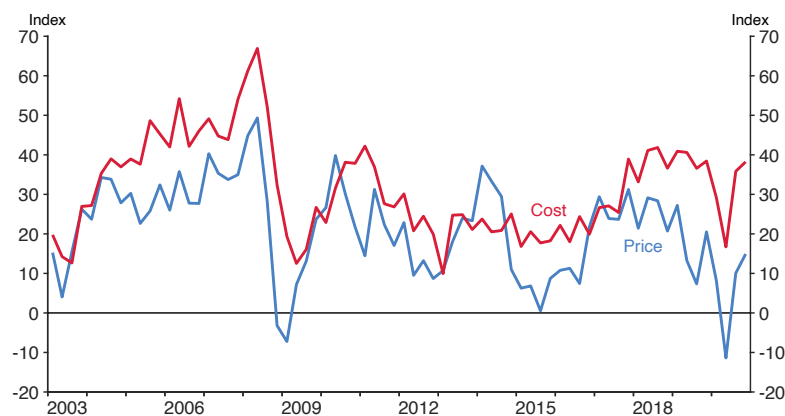
There are tentative signs that the improved economic outlook is encouraging some firms to reconsider new capital spending after previous cutbacks. In particular, survey measures of businesses' investment intentions partially recovered during the December 2020 quarter. As uncertainty lessens, lower borrowing costs will help to support a recovery in business investment.

## *Businesses focusing on cost containment*

Businesses are looking to improve resilience by cutting costs or minimising cost increases where possible. Firms are seeing a variety of significant cost increases, particularly for materials (exacerbated by the supply chain disruption described earlier). The announced minimum wage increase in April 2021 will increase labour costs. Difficulty accessing labour (both skilled and unskilled) while border restrictions are in place is making it harder for firms in some sectors to meet demand, contributing to elevated capacity pressures in these sectors.

Firms' pricing intentions have increased somewhat as cost pressures have increased (figure 4.10). However, some firms report that they remain cautious about increasing their prices given the uncertainty about the persistence of the recovery in demand. Caution about passing on higher costs has weighed on firms' profit expectations.

**Figure 4.10**  
**QSBO pricing and cost intentions**  
*(seasonally adjusted)*



Source: NZIER, RBNZ estimates.

Note: QSBO intentions measure the net percentage of firms that report an expected increase or decrease in prices/costs in the next three months, compared to the same period a year earlier.

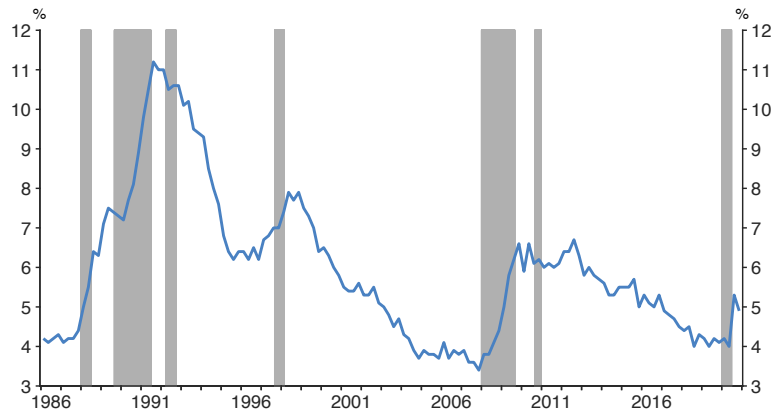
## *Household incomes and wealth have been resilient*

New Zealand household incomes have been supported by a resilient labour market. Household wealth has increased, driven by savings accumulated during periods at higher alert levels, as well as the buoyant housing and equity markets. These factors contributed to the rapid recovery in consumption spending in the September 2020 quarter to above pre-COVID-19 levels.

## *Increases in unemployment have been modest*

Overall, the rise in the unemployment rate to date has been modest compared to other downturns, including the global financial crisis (figure 4.11). As discussed in chapter 2, job losses in the sectors most exposed to international tourism have been somewhat offset by gains in the construction and healthcare sectors. In addition, temporary supports, including the Wage Subsidy, ensured that many New Zealanders remained attached to their jobs. At its peak, the Wage Subsidy supported 1.8 million jobs, with cumulative payments to firms amounting to roughly 4.4 percent of annual nominal GDP.

**Figure 4.11**  
**Unemployment rate in previous downturns**  
*(seasonally adjusted)*



Source: Stats NZ.

Note: The grey bars show recessions in New Zealand (defined here as two or more consecutive quarters with negative quarterly GDP growth).

### *Labour earnings have recovered to pre-COVID-19 levels*

Tightness in the labour market appears to be emerging. Total labour earnings have recovered to around pre-COVID-19 levels. In part, this reflects that employees have worked more hours than usual, consistent with strong labour demand in some sectors. Businesses are reporting difficulty finding both skilled and unskilled labour. While wage growth has not yet reflected this pressure to date, wage inflation is expected to increase going forward (also driven by the minimum wage increase).

### *Monetary policy is helping through the cash flow channel*

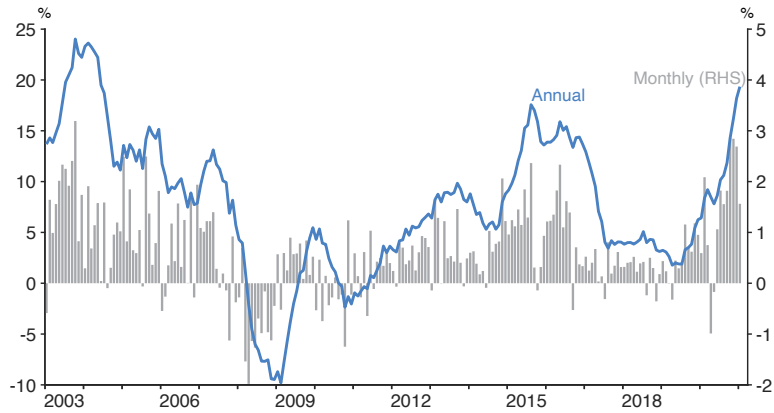
Reserve Bank policies to offset the COVID-19 related economic disruptions have supported cash flows for some households. Declines in interest rates have reduced some households' interest payments on mortgages and consumer loans. However, they have also reduced households' interest income from deposits. While household deposits are smaller in aggregate than household debt, they tend to be fixed for shorter periods. This meant that deposit income declined by more than interest costs initially. However, as fixed-rate mortgages reprice over time, the positive cash flow impact will begin to dominate and further support household spending power.

Impacts of other policies, such as mortgage payment deferrals, are playing a diminishing role, but provided significant support for households in mid-2020.

### *Domestic wealth buoyed by asset prices*

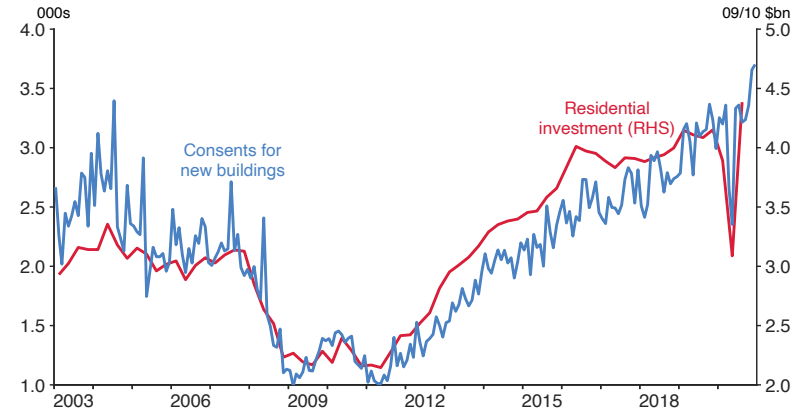
Increases in asset prices through most of 2020 further supported household spending. Equity investments in New Zealand listed corporates are an important component of household financial wealth. After declining in the March 2020 quarter, equity prices have steadily increased.

**Figure 4.12**  
House price inflation  
(seasonally adjusted)



Source: REINZ, RBNZ estimates.

**Figure 4.13**  
Consent issuance and residential investment  
(seasonally adjusted)



Source: Stats NZ, RBNZ estimates.

A larger portion of New Zealanders' wealth is in housing. House price gains over 2020 reflected a variety of demand factors, in the face of significant impediments to housing supply (figure 4.12). High inward migration prior to border restrictions being implemented is likely to have contributed significantly to the increase in house prices (see chapter 2). In addition, lower interest rates and the removal of LVR restrictions have made mortgages cheaper and more accessible for homebuyers, contributing to stronger demand. The resilient labour market has also been playing a supporting role, helping to underpin home loan serviceability.

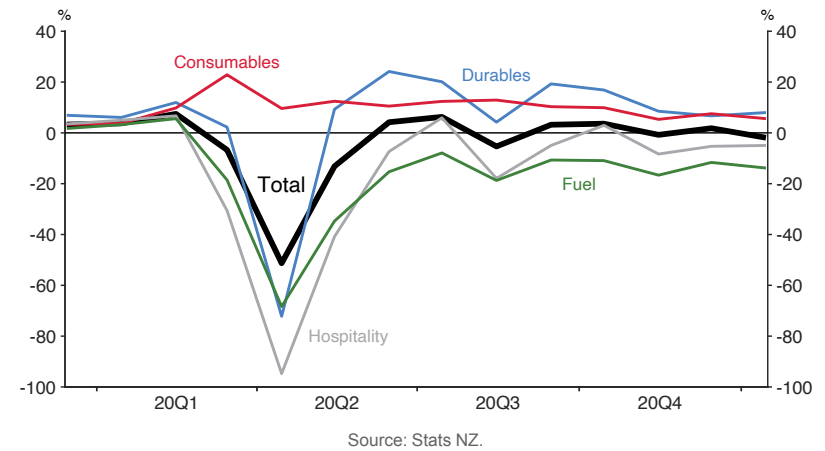
Residential investment has increased in response to strong momentum in the housing market. Consents for residential dwellings spiked over the latter half of 2020 (figure 4.13), suggesting strong construction activity will continue. However, recent levels of activity appear to be generating significant capacity pressures in the construction industry. Capacity constraints could limit scope to further scale up residential investment in the near term.

### *Consumer spending has rebounded sharply*

Spending rebounded sharply in the September 2020 quarter, led by spending on durables (figure 4.14). Spending on consumables held up over 2020, avoiding any significant fall even during higher alert levels. Strong durables and consumables spending is assumed to be at least partially driven by substitution away from international-travel-related expenditure towards onshore consumption. By contrast, spending in the hospitality and fuel industries has remained below pre-COVID-19 levels, likely explained by a shift towards working from home as well as lower petrol prices over 2020.

Recent data indicate that growth in spending has slowed, but that spending remains above pre-COVID-19 levels. The outlook for consumer spending remains highly uncertain.

**Figure 4.14**  
**Electronic card spending growth**  
*(annual)*





# Chapter 5

## Baseline scenario

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This chapter summarises the baseline economic scenario that the MPC considered in making its policy assessment. The baseline scenario was finalised on 17 February 2021.

The baseline scenario illustrates what the Reserve Bank perceives to be the most likely path for the economy. It relies on a set of key assumptions about the global and domestic responses to the pandemic. Different scenarios will eventuate if these assumptions do not hold. Even under this set of assumptions, there is a range of possible outcomes for the economy, reflecting uncertainty about the behaviour of households and businesses.

The baseline scenario takes into account the stronger starting point for the New Zealand economy compared to that of the November *Statement*. The factors underpinning this stronger starting point are discussed in chapters 2-4. Many of these same factors are assumed to persist in the baseline scenario. In this scenario, New Zealand is assumed to remain at Alert Level 1 with border restrictions in place until the beginning of 2022. With domestic demand remaining robust and borders reopening, broad capacity pressures are assumed to return. Inflation is assumed to return sustainably to around the 2 percent target mid-point in 2023 and employment returns towards its maximum sustainable level (MSE) near the end of the scenario horizon.

In the scenario, monetary policy needs to remain accommodative to maintain momentum in the economy, and for the Reserve Bank to sustainably meet its employment and inflation objectives.

TABLE 5.1

*Key assumptions for the baseline scenario*

<b>Key factors</b>	<b>Global growth</b>	<ul style="list-style-type: none"> <li>• The approval of several COVID-19 vaccines has decreased global uncertainty and supported global growth. China's strong recovery is assumed to support our trading partner economies.</li> <li>• Based on forecasts from Consensus Economics, annual GDP growth for our trading partners is assumed to reach 4.8% in late 2022 and to gradually decline thereafter.</li> <li>• The New Zealand dollar trade-weighted index (TWI) is assumed to stay around 75.</li> <li>• The Dubai oil price is assumed to moderate slightly, but remain around US\$50 per barrel over the medium term.</li> </ul>
	<b>Health restrictions</b>	<ul style="list-style-type: none"> <li>• New Zealand is assumed to remain at Alert Level 1 or lower over the scenario period.</li> <li>• Border restrictions are assumed to be eased at the beginning of 2022, with no travel bubbles prior to that.</li> <li>• Total net migration is assumed to be around 6,000 people over 2021. Once borders reopen it is assumed to increase to about 24,000 people per year.</li> </ul>
	<b>House prices</b>	<ul style="list-style-type: none"> <li>• Annual house price growth is expected to decrease over the scenario horizon, from 22% in mid-2021 to 5.6% in 2023.</li> <li>• The assumed slowdown reflects a range of factors, including the fading impact of interest rate declines, low net migration over most of 2020 and 2021, elevated unemployment compared to before the pandemic, and the reintroduction of LVR restrictions.</li> </ul>

<b>Economic growth</b>	<b>Demand</b>	<ul style="list-style-type: none"> <li>• Domestic economic activity is expected to remain around pre-COVID-19 levels until late 2021. Annual GDP growth accelerates from late 2022, peaking at 3.8%.</li> <li>• Annual potential GDP growth is just below 0.6% over late 2021. It then gradually increases to 1.9% after borders reopen, as migration begins to recover and current labour skill shortages are alleviated.</li> <li>• \$50bn of the \$62bn total fiscal envelope in response to COVID-19 is assumed to be spent.</li> </ul>
	<b>Consumption</b>	<ul style="list-style-type: none"> <li>• Consumption remains slightly above pre-COVID-19 levels until late 2021. Annual consumption growth then accelerates to around 4% in the second half of 2022.</li> </ul>
	<b>Investment</b>	<ul style="list-style-type: none"> <li>• Business investment remains subdued and relatively flat through most of 2021 as significant uncertainty remains.</li> <li>• Business investment is then assumed to recover as uncertainty fades and GDP growth recovers. It remains below pre-COVID-19 levels until late 2022.</li> <li>• Residential investment peaks at elevated levels in the first quarter of 2021. It then moderates over 2021 and 2022, but remains high relative to pre-COVID-19 levels.</li> </ul>
	<b>Exports and imports</b>	<ul style="list-style-type: none"> <li>• A strong Chinese economy is assumed to continue to underpin demand for New Zealand's exports, particularly dairy products.</li> <li>• Import prices are assumed to be soft due to ongoing spare capacity in the global economy. Oil prices moderate and temporary supply disruptions are assumed to resolve in 2021.</li> <li>• Export prices are assumed to increase more than import prices, leading to a higher terms of trade over the scenario period.</li> </ul>

**Labour market**

**Employment and wages**

- The unemployment rate is assumed to increase towards 5.2% over 2021 as activity in tourism-related industries continues to be weak and is not entirely offset by higher employment in other industries.
- Over the scenario period, the unemployment rate is assumed to gradually return to 4.6% as economic activity recovers and capacity pressure begins to increase.
- Annual labour cost index wage inflation is assumed to reach 2.5% at the end of 2021, due to a relatively tight labour market and the increase in the minimum wage. Annual wage inflation remains above 2% over the scenario period as capacity pressure re-emerges more sustainably.
- Employment is assumed to return towards MSE at the end of the scenario horizon.

**Inflation**

**Headline**

- Annual CPI inflation remains within the 1-3% target band over the scenario horizon, and is slightly above the 2% target midpoint towards the end of the horizon.
- The recovery in realised inflation is assumed to increase inflation expectations. This affects firms' future pricing decisions, and encourages a more sustained increase in inflation.

**Tradables**

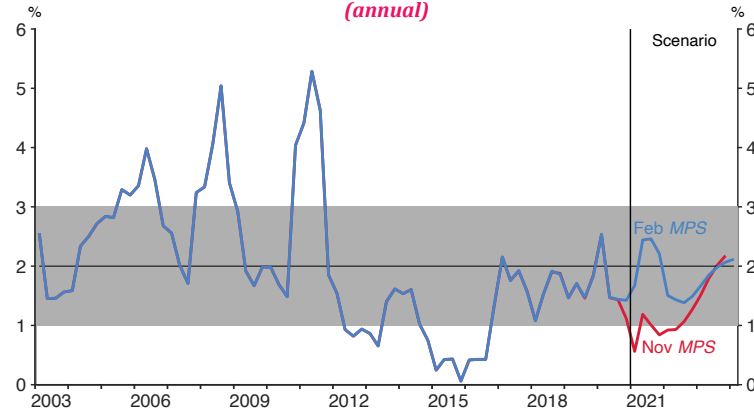
- Annual tradables inflation is expected to increase temporarily to 2% in the second quarter of 2021, largely due to recent increases in oil prices. Tradables inflation then declines, as oil prices moderate, to slightly below its 10-year average rate.
- A stronger TWI over the scenario period also dampens tradables inflation.

**Non-tradables**

- Annual non-tradables inflation remains around 2.5% to 3.5% over the scenario horizon.
- High house prices and construction costs support housing-related components of non-tradables inflation in the near term. This eases slightly later in 2021, as house price growth declines.
- Non-tradables inflation sustainably re-emerges as capacity pressure starts to build in the economy.

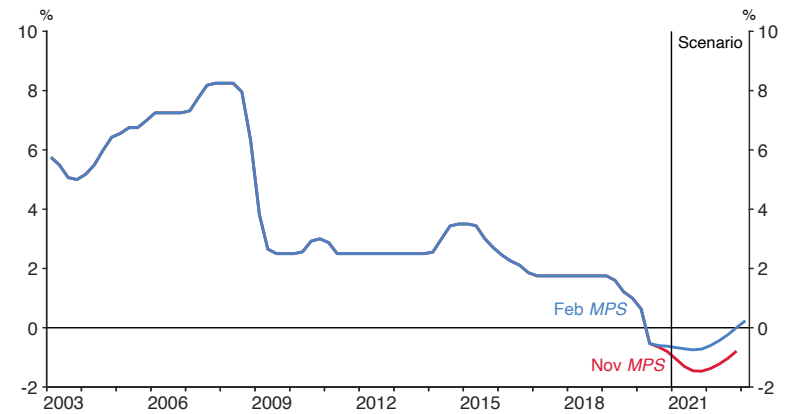
# Charts

**Figure 5.1**  
Inflation  
(annual)



Source: Stats NZ, RBNZ estimates.

**Figure 5.3**  
Unconstrained OCR



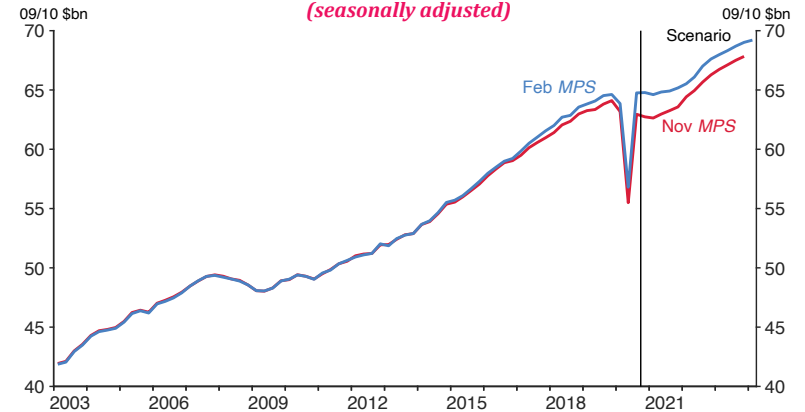
Source: RBNZ estimates.

**Figure 5.2**  
Unemployment rate  
(seasonally adjusted)



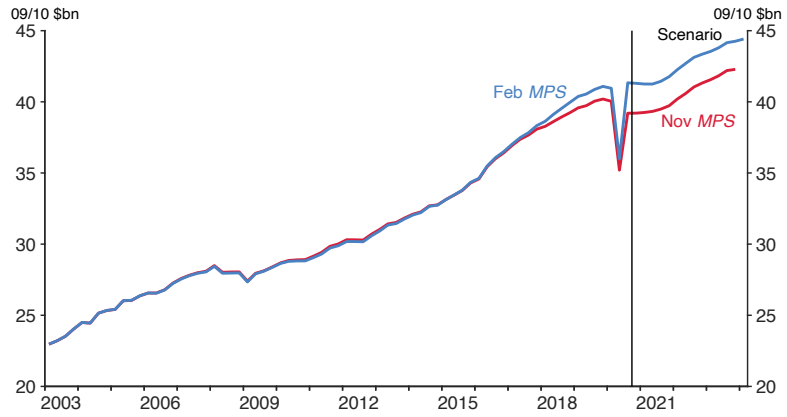
Source: Stats NZ, RBNZ estimates.

**Figure 5.4**  
GDP  
(seasonally adjusted)



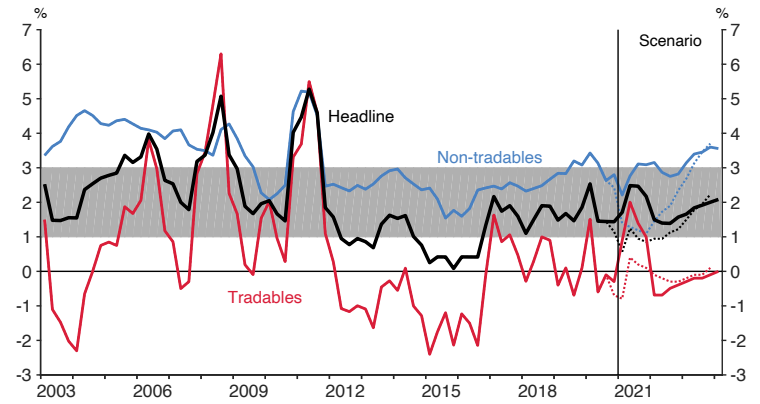
Source: Stats NZ, RBNZ estimates.

**Figure 5.5**  
**Consumption**  
*(seasonally adjusted)*



Source: Stats NZ, RBNZ estimates.

**Figure 5.6**  
**CPI inflation**  
*(annual)*



Source: Stats NZ, RBNZ estimates.

Note: Dashed lines show the baseline scenario from the November Statement.

# Chapter 6

## Appendices

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#### Appendices

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## Appendix 1: Statistical tables

TABLE 6.1

*Key baseline scenario variables*

		GDP growth Quarterly	CPI inflation Quarterly	CPI inflation Annual	TWI	OCR
2019	Mar	0.4	0.1	1.5	74.0	1.8
	Jun	0.4	0.6	1.7	72.6	1.6
	Sep	0.7	0.7	1.5	72.0	1.2
	Dec	0.1	0.5	1.9	71.3	1.0
2020	Mar	-1.2	0.8	2.5	70.9	0.9
	Jun	-11.0	-0.5	1.5	69.7	0.3
	Sep	14.0	0.7	1.4	72.0	0.3
	Dec	<b>0.0</b>	0.5	1.4	72.9	0.3
2021	Mar	<b>-0.3</b>	<b>1.0</b>	<b>1.7</b>	<b>74.8</b>	<b>0.3</b>
	Jun	<b>0.3</b>	<b>0.3</b>	<b>2.5</b>	<b>74.9</b>	
	Sep	<b>0.1</b>	<b>0.7</b>	<b>2.5</b>	<b>74.9</b>	
	Dec	<b>0.4</b>	<b>0.2</b>	<b>2.2</b>	<b>74.9</b>	
2022	Mar	<b>0.5</b>	<b>0.4</b>	<b>1.5</b>	<b>74.9</b>	
	Jun	<b>0.9</b>	<b>0.2</b>	<b>1.4</b>	<b>74.9</b>	
	Sep	<b>1.4</b>	<b>0.6</b>	<b>1.4</b>	<b>74.9</b>	
	Dec	<b>0.9</b>	<b>0.4</b>	<b>1.6</b>	<b>74.9</b>	
2023	Mar	<b>0.5</b>	<b>0.5</b>	<b>1.7</b>	<b>74.9</b>	
	Jun	<b>0.5</b>	<b>0.4</b>	<b>1.8</b>	<b>74.9</b>	
	Sep	<b>0.6</b>	<b>0.7</b>	<b>1.9</b>	<b>74.9</b>	
	Dec	<b>0.5</b>	<b>0.4</b>	<b>2.0</b>	<b>74.9</b>	
2024	Mar	<b>0.3</b>	<b>0.5</b>	<b>2.1</b>	<b>74.9</b>	



TABLE 6.2

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

	Jun	2019 Sep	Dec	Mar	Jun	2020 Sep	Dec	2021 Mar
<b>Inflation (annual rates)</b>								
CPI	1.7	1.5	1.9	2.5	1.5	1.4	1.4	
CPI non-tradables	2.8	3.2	3.1	3.4	3.1	2.6	2.8	
CPI tradables	0.1	-0.7	0.1	1.5	-0.6	-0.1	-0.3	
Sectoral factor model estimate of core inflation	1.7	1.7	1.8	1.7	1.7	1.7	1.8	
CPI trimmed mean (30 percent measure)	2.1	1.8	2.1	2.7	2.1	1.7	2.2	
CPI weighted median	2.3	2.3	2.3	2.8	2.4	2.2	2.7	
GDP deflator (expenditure)	1.8	2.3	3.6	3.8	2.6	1.5		
<b>Inflation expectations</b>								
ANZ Business Outlook – inflation one year ahead (quarterly average to date)	1.9	1.7	1.7	1.7	1.4	1.4	1.5	1.8
RBNZ Survey of Expectations – inflation 2 years ahead	2.0	1.9	1.8	1.9	1.2	1.4	1.6	1.9
RBNZ Survey of Expectations – inflation 5 years ahead	2.0	1.9	2.0	2.0	1.8	1.9	1.9	2.0
RBNZ Survey of Expectations – inflation 10 years ahead	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0
Long-run inflation expectations*	2.0	2.0	2.0	1.8	1.8	2.0	2.0	2.0
<b>Asset prices (annual percent changes)</b>								
Quarterly house price index (CoreLogic NZ)	1.6	2.9	4.5	7.7	6.8			
REINZ Farm Price Index (quarterly average)	4.4	1.1	-0.8	-12.5	-8.0	-3.7	-0.5	
NZX 50 (quarterly average)	16.9	18.6	25.7	21.1	6.4	8.6	13.2	17.0

\*Long-run expectations are extracted from a range of surveys using a Nelson-Siegel model. Source: ANZ Bank, Aon-Hewitt Consulting, Consensus Economics, RBNZ estimates.

TABLE 6.3

*Measures of labour market conditions**(seasonally adjusted, changes expressed in annual percent terms)*

	Jun	2019 Sep	Dec	Mar	2020 Jun	Sep	Dec
<b>Household Labour Force Survey</b>							
Unemployment rate	4.0	4.2	4.1	4.2	4.0	5.3	4.9
Underutilisation rate	11.0	10.4	10.1	10.5	12.0	13.2	11.9
Labour force participation rate	70.5	70.7	70.4	70.7	69.9	70.1	70.2
Employment rate (percentage of working-age population)	67.7	67.7	67.6	67.7	67.1	66.5	66.8
Employment growth	1.4	1.0	1.3	2.6	1.7	0.4	0.7
Average weekly hours worked	34.1	34.2	33.9	34.0	30.6	33.7	35.0
Number unemployed (thousand people)	112	117	116	121	114	151	141
Number employed (million people)	2.69	2.71	2.72	2.74	2.74	2.72	2.73
Labour force (million people)	2.80	2.82	2.83	2.86	2.85	2.87	2.87
Extended labour force (million people)	2.90	2.91	2.92	2.96	2.96	2.97	2.97
Working-age population (million people)	3.97	3.99	4.02	4.05	4.08	4.09	4.09
<b>Quarterly Employment Survey</b>							
Filled jobs growth	1.0	1.1	0.9	1.9	0.8	0.0	0.9
Average hourly earnings growth (private sector, ordinary time)	4.7	3.9	3.0	3.3	2.5	3.4	4.4
<b>Other data sources</b>							
Labour cost index growth, private sector	2.2	2.3	2.4	2.4	1.7	1.6	1.5
Labour cost index growth, private sector, unadjusted	3.8	3.8	3.7	3.6	2.8	2.6	2.4
Estimated net migration (published, thousands, quarterly)	11.5	16.1					
Change in All Vacancies Index	1.1	-1.6	-5.8	-14.3	-48.4	-20.4	-8.4

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

March year	2014	2015	2016	Actuals 2017	2018	2019	2020	2021	Baseline scenario		
									2022	2023	2024
<b>Final consumption expenditure</b>											
Private	3.9	3.3	4.2	6.5	4.9	4.4	2.8	-2.2	4.3	3.6	2.3
Public authority	2.1	3.4	2.3	2.2	3.4	3.7	6.1	5.0	2.1	1.6	1.3
<b>Total</b>	<b>3.5</b>	<b>3.3</b>	<b>3.7</b>	<b>5.5</b>	<b>4.6</b>	<b>4.2</b>	<b>3.6</b>	<b>-0.5</b>	<b>3.7</b>	<b>3.1</b>	<b>2.0</b>
<b>Gross fixed capital formation</b>											
Residential	15.2	8.3	7.1	8.8	-1.8	3.0	1.5	2.5	3.7	-1.9	1.4
Other	7.6	7.9	2.8	0.3	10.7	6.6	1.1	-7.1	9.6	6.5	5.6
<b>Total</b>	<b>9.4</b>	<b>8.0</b>	<b>3.9</b>	<b>2.5</b>	<b>7.3</b>	<b>5.7</b>	<b>1.2</b>	<b>-4.7</b>	<b>8.0</b>	<b>4.3</b>	<b>4.6</b>
Final domestic expenditure	4.8	4.4	3.8	4.8	5.2	4.6	3.0	-1.5	4.7	3.4	2.7
Stockbuilding*	-0.2	0.5	-0.3	0.1	0.2	-0.1	-0.5	-0.6	0.6	0.2	0.0
<b>Gross national expenditure</b>	<b>4.5</b>	<b>4.6</b>	<b>3.3</b>	<b>5.0</b>	<b>5.7</b>	<b>4.5</b>	<b>2.3</b>	<b>-2.2</b>	<b>5.6</b>	<b>3.6</b>	<b>2.7</b>
Exports of goods and services	0.1	4.7	6.6	1.7	3.6	3.2	-0.2	-15.9	1.0	12.9	5.9
Imports of goods and services	8.1	7.7	2.6	5.6	7.8	4.4	1.0	-20.0	11.4	12.9	6.3
<b>Expenditure on GDP</b>	<b>2.1</b>	<b>3.7</b>	<b>4.4</b>	<b>3.8</b>	<b>4.4</b>	<b>4.1</b>	<b>2.1</b>	<b>-0.1</b>	<b>3.0</b>	<b>3.1</b>	<b>2.3</b>
GDP (production)	2.7	3.8	3.7	3.7	3.6	3.2	1.6	-2.4	3.8	3.2	2.4
GDP (production, March qtr to March qtr)	3.5	3.8	4.1	3.2	3.6	2.9	0.0	1.2	1.4	3.8	1.8

\*Percentage point contribution to the growth rate of GDP.

TABLE 6.5

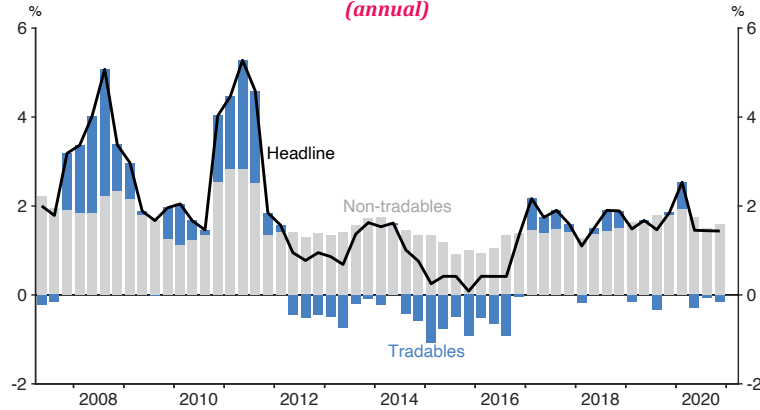
*Summary of baseline scenario**(annual percent change for March years unless specified otherwise)*

March year	Actuals							Baseline scenario			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Price measures</b>											
CPI	1.5	0.3	0.4	2.2	1.1	1.5	2.5	1.7	1.5	1.7	2.1
Labour costs	1.7	1.8	1.8	1.5	1.9	2.0	2.4	1.6	2.4	2.4	2.3
Export prices (in New Zealand dollars)	11.5	-9.2	-0.3	3.9	3.2	1.3	7.4	-6.4	0.3	1.0	1.7
Import prices (in New Zealand dollars)	-3.0	-3.4	1.2	0.7	1.9	4.3	2.5	-5.5	-1.8	0.5	0.6
<b>Monetary conditions</b>											
OCR (year average)	2.5	3.4	2.9	2.0	1.8	1.8	1.2	0.3			
TWI (year average)	77.6	79.3	72.6	76.5	75.6	73.4	71.7	72.4	74.9	74.9	74.9
<b>Output</b>											
GDP (production, annual average % change)	2.7	3.8	3.7	3.7	3.6	3.2	1.6	-2.4	3.8	3.2	2.4
Potential output (annual average % change)	2.6	3.1	3.2	3.3	3.1	3.0	2.4	-1.4	3.4	1.6	1.9
Output gap (% of potential GDP, year average)	-1.6	-0.9	-0.4	0.1	0.6	0.8	0.0	-1.0	-0.6	0.9	1.4
<b>Labour market</b>											
Total employment (seasonally adjusted)	4.0	3.6	2.3	5.9	2.9	1.4	2.6	-0.3	0.3	1.5	1.9
Unemployment rate (March qtr, seasonally adjusted)	5.6	5.5	5.3	4.9	4.4	4.2	4.2	5.0	5.1	4.8	4.6
Trend labour productivity	0.8	0.7	0.6	0.4	0.2	0.2	0.3	0.5	0.8	0.8	0.7

March year	Actuals							Baseline scenario			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Key balances</b>											
Government operating balance (% of GDP, year to June)	-1.2	0.2	0.7	1.5	1.9	2.4	-7.3	-6.0	-4.8	-3.0	
Current account balance (% of GDP)	-2.5	-3.5	-2.5	-2.7	-3.2	-3.9	-2.8	-1.3	-2.8	-3.2	-3.7
Terms of trade (SNA measure, annual average % change)	11.7	-0.3	-3.0	2.6	4.5	-2.5	2.0	-0.8	2.7	-0.2	0.9
Household saving rate (% of disposable income)	1.2	-0.3	0.0	0.3	-0.1	0.5	0.4	3.9	1.6	0.6	0.5
<b>World economy</b>											
Trading-partner GDP (annual average % change)	3.5	3.7	3.5	3.5	3.9	3.5	1.7	-1.3	4.8	4.5	3.2
Trading-partner CPI (TWI weighted)	2.3	1.0	1.2	1.9	1.9	1.4	2.4	0.7	1.7	2.0	2.2

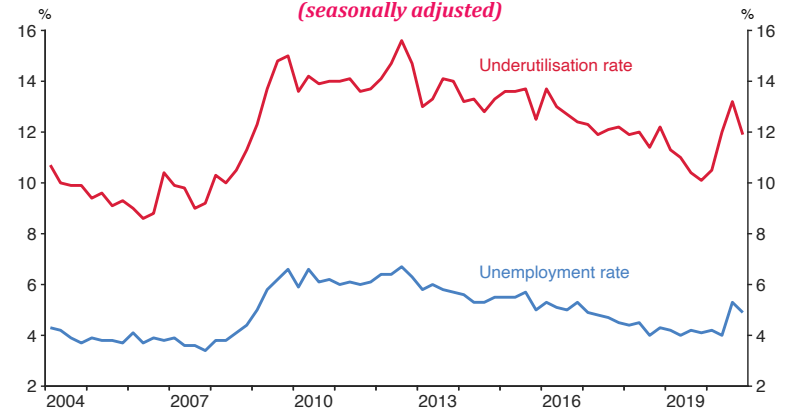
# Appendix 2: Chart pack

**Figure 6.1**  
Composition of CPI inflation  
(annual)



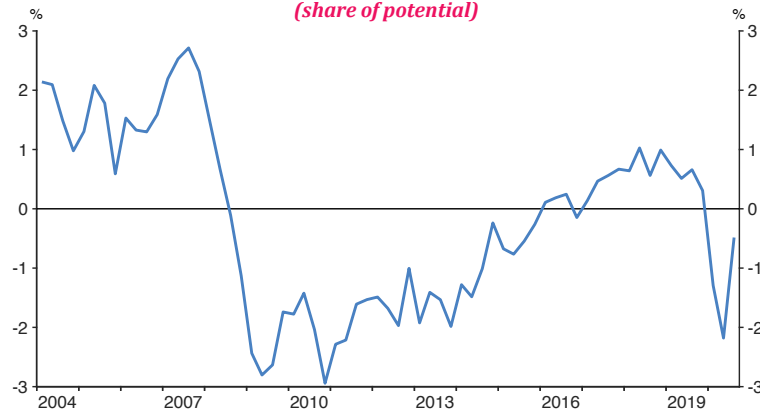
Source: Stats NZ, RBNZ estimates.

**Figure 6.3**  
Unemployment and underutilisation rates  
(seasonally adjusted)



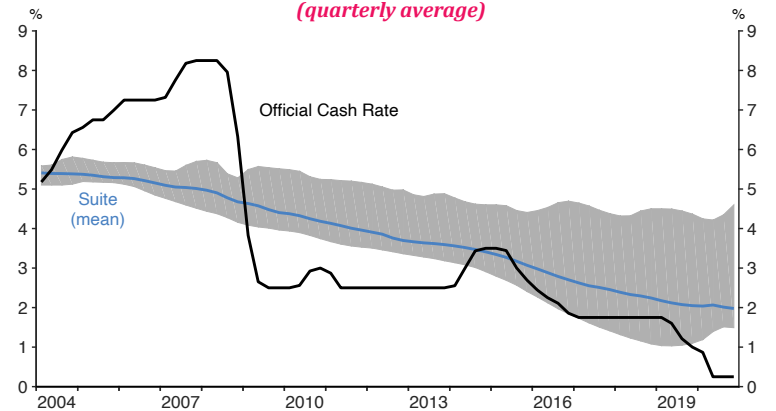
Source: Stats NZ.

**Figure 6.2**  
Output gap  
(share of potential)



Source: RBNZ estimates.

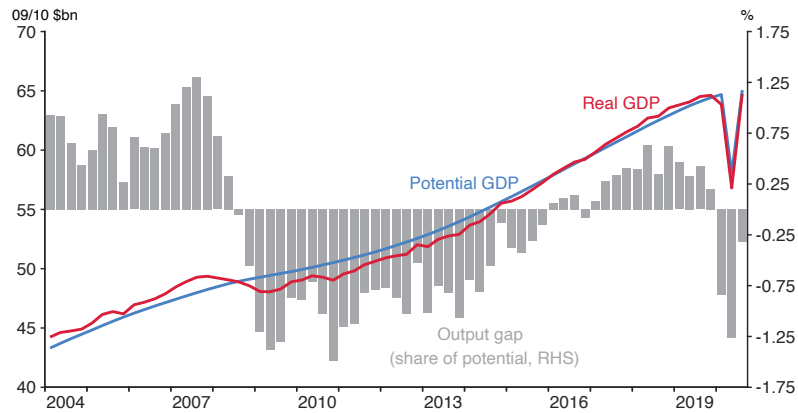
**Figure 6.4**  
OCR and neutral OCR indicator suite  
(quarterly average)



Source: RBNZ estimates.

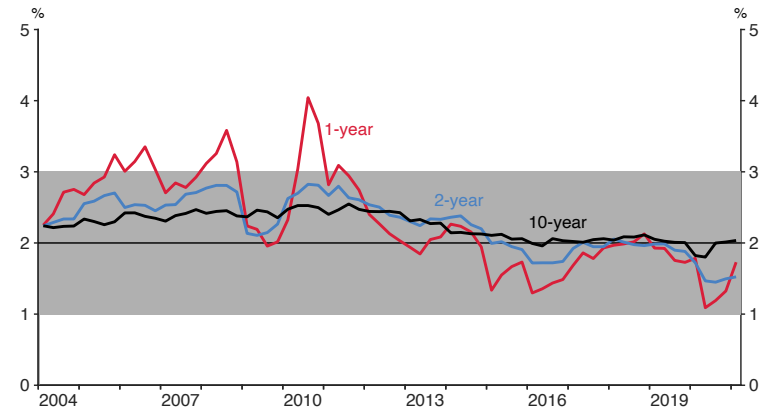
Note: Shaded area indicates the range between the maximum and minimum values from a suite of neutral OCR indicators.

**Figure 6.5**  
GDP and potential GDP



Source: Stats NZ, RBNZ estimates.

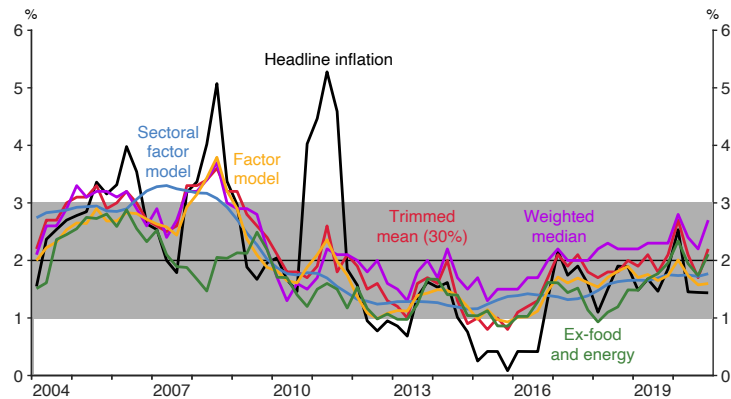
**Figure 6.7**  
Inflation expectations  
(annual)



Source: RBNZ estimates.

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

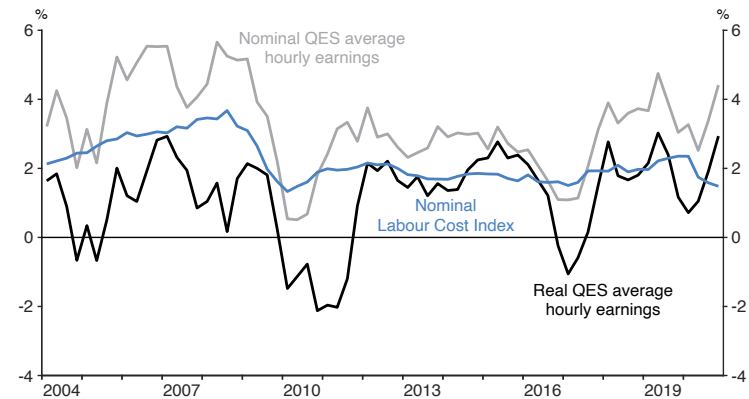
**Figure 6.6**  
Headline inflation and core inflation  
(annual)



Source: Stats NZ, RBNZ estimates.

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

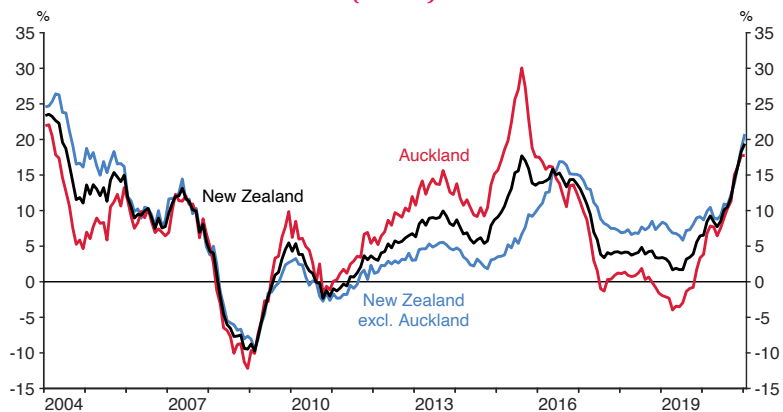
**Figure 6.8**  
Private sector wage growth  
(annual)



Source: Stats NZ, RBNZ estimates.

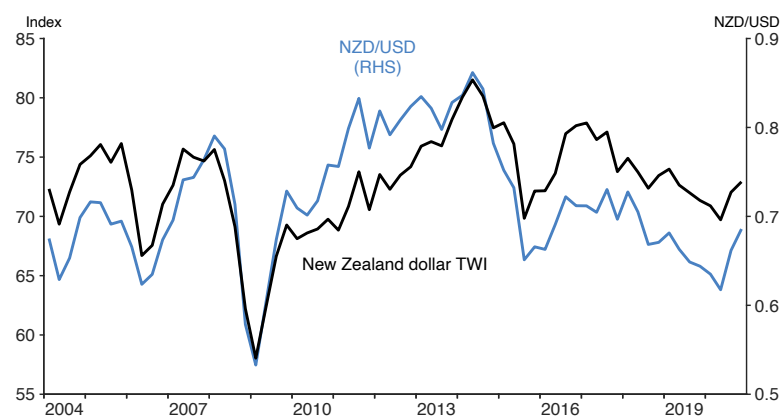
Note: Real QES average hourly earnings is deflated with headline CPI inflation.

**Figure 6.9**  
House price inflation  
(annual)



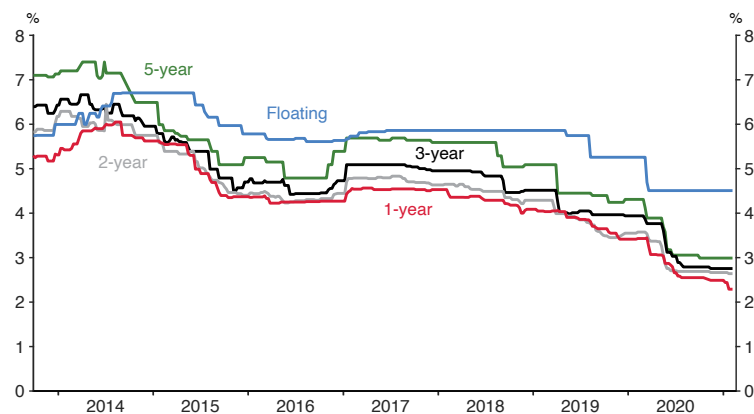
Source: REINZ.

**Figure 6.11**  
New Zealand dollar exchange rates



Source: Reuters, RBNZ estimates.

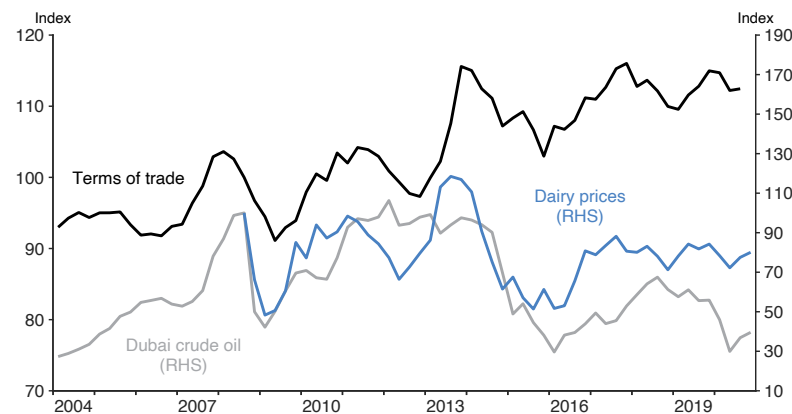
**Figure 6.10**  
Mortgage rates



Source: interest.co.nz, RBNZ estimates.

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

**Figure 6.12**  
Terms of trade, dairy and oil price indices



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