Monetary Policy Statement

August 2018

RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

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August 2018

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Policy assessment finalised on 8 August 2018.

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Policy Targets Agreement

Context

The Government's economic objective is to improve the wellbeing and living standards of New Zealanders through a sustainable, productive and inclusive economy. Our priority is to move towards a low carbon economy, with a strong diversified export base, that delivers decent jobs with higher wages and reduces inequality and poverty.

Monetary policy plays an important role in supporting the Government's economic objective. The Government expects monetary policy to be directed at achieving and maintaining stability in the general level of prices over the medium term and supporting maximum sustainable employment.

This agreement between the Minister of Finance and the Governor of the Reserve Bank of New Zealand (the Bank) is made under section 9 of the Reserve Bank of New Zealand Act 1989 (the Act). The Minister and the Governor agree as follows:

1 Monetary policy objective

a) Under Section 8 of the Act the Reserve Bank is required to conduct monetary policy with the goal of maintaining a stable general level of prices.

b) The conduct of monetary policy will maintain a stable general level of prices, and contribute to supporting maximum sustainable employment within the economy.

2 Policy target

a) The price stability target will be defined in terms of the All Groups Consumers Price Index (CPI), as published by Statistics New Zealand.

b) For the purpose of this agreement, the policy target shall be to keep future annual CPI inflation between 1 and 3 percent over the medium-term, with a focus on keeping future inflation near the 2 percent mid-point.

c) The Bank will implement a flexible inflation targeting regime. In particular the Bank shall, in pursuing the policy target:

   i. have regard to the efficiency and soundness of the financial system;

   ii. seek to avoid unnecessary instability in output, employment, interest rates, and the exchange rate; and

   iii. respond to events whose impact on inflation is expected to be temporary in a manner consistent with meeting the medium-term target.

3 *Transparency and accountability*

a) The Bank shall implement monetary policy in a transparent manner. In addition to the requirements of section 15 of the Act the Bank shall in its *Monetary Policy Statement* (MPS):

i. explain what measures it has taken into account in respect of meeting the requirements of section 2(c) and explain how these matters have been taken into account in its implementation of monetary policy; and

ii. when inflation outcomes, and/or expected inflation outcomes, are outside of the target range explain the reasons for this; and

iii. explain how current monetary policy decisions contribute to supporting maximum levels of sustainable employment within the economy.

b) The Bank shall be fully accountable for its judgements and actions in implementing monetary policy.

Hon Grant Robertson
Minister of Finance

Adrian Orr
Governor Designate
Reserve Bank of New Zealand

Dated at Wellington this 26th day of March 2018

Chapter 1
Policy assessment

Tena koutou katoa, welcome all.

The Official Cash Rate (OCR) remains at 1.75 percent. We expect to keep the OCR at this level through 2019 and into 2020, longer than we projected in our May *Statement*. The direction of our next OCR move could be up or down.

While recent economic growth has moderated, we expect it to pick up pace over the rest of this year and be maintained through 2019.

Robust global growth and a lower New Zealand dollar exchange rate will support export earnings. At home, capacity and labour constraints promote business investment, supported by low interest rates. Government spending and investment is also set to rise, while residential construction and household spending remain solid.

The labour market has tightened over the past year and employment is roughly around its maximum sustainable level. We expect the unemployment rate to decline modestly from its current level.

There are welcome early signs of core inflation rising. Inflation will increase towards 2 percent over the projection period as capacity pressures bite. This path may be bumpy however, with one-off price changes from global oil prices, a lower exchange rate, and announced petrol excise tax rises expected. We will look through this volatility as appropriate, and only respond to any persistent movements in inflation.

Risks remain to our central forecast. The recent moderation in growth could last longer. Low business confidence can affect employment and investment decisions. Conversely, there is a chance that inflation could increase faster if cost pressures can pass through into higher prices and impact inflation expectations.

We will keep the OCR at an expansionary level for a considerable period to contribute to maximising sustainable employment, and maintaining low and stable inflation.

Meitaki, thanks.

Adrian Orr

Governor

Chapter 2

Key policy judgements

- GDP growth has slowed over the past year. Fiscal and monetary stimulus, and higher net exports are expected to lift growth over the next two years, but the risks to the growth outlook are to the downside.
- The labour market has tightened over the past year. Employment is near its maximum sustainable level.
- Inflation remains below the 2 percent target mid-point, but there are early signs of inflationary pressure rising.
- Monetary policy remains stimulatory to support employment and ensure further increases in inflation towards 2 percent.

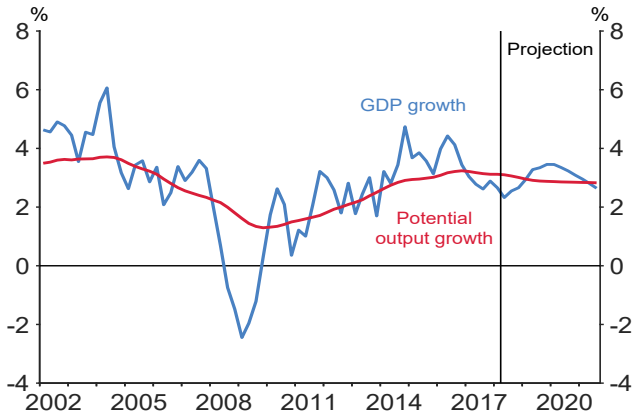
Drivers of growth

Economic growth has slowed recently. Annual GDP growth was 2.7 percent in the March 2018 quarter, down from over 4 percent in mid-2016 (figure 2.1). Business surveys also show that firms have experienced less growth in activity. We estimate that this slowdown in growth has reduced capacity pressure.

After contributing significantly to the economic expansion over several years, growth in residential investment has softened over the past year. Residential construction in Canterbury has fallen, and construction growth elsewhere has slowed. House price inflation has slowed since mid-2016, and is expected to remain low. Demand for housing has been dampened by tighter lending standards and uncertainty around government policy changes. Continuing softness in the housing market is expected to weigh on household spending over the projection.

Economic growth is expected to pick up to above trend in 2019. Fiscal and monetary stimulus underpin this growth outlook. A pick up in net exports is also expected to contribute to growth. Capacity pressure is expected to increase as growth rises.

Figure 2.1
GDP growth
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 2.2
Mortgage interest rates

Source: interest.co.nz.

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

Fiscal policy is expected to stimulate growth over the projection. Higher government spending, increased transfers to households, and the KiwiBuild housing programme are expected to support demand. However, KiwiBuild makes a smaller contribution to residential investment over the projection than assumed in the May *Statement*, consistent with *Budget* 2018.

Domestic financial conditions have become more supportive of growth over the past year. Central banks around the world have started to withdraw monetary stimulus. As a result, the New Zealand dollar trade-weighted index (TWI) has depreciated. In addition, fixed mortgage rates in New Zealand have eased since mid-2017, partly because short-term interest rates are expected to stay low for longer (figure 2.2).

Net exports are expected to contribute to the pick-up in growth, supported by above-average trading-partner growth. The lower exchange rate is expected to lift exports of services, and encourage substitution from imports towards domestically produced goods and services. Primary sector export volumes are expected to bounce back following weather-related falls over the past two quarters.

Increasing capacity pressure and high terms of trade provide businesses with the incentive to invest. Real labour costs are expected to increase, in part due to the increasing minimum wage. As such, firms are expected to rely more than previously on capital investment to expand output. While the outlook for business investment is generally positive, some short-term softness is expected. Firms' investment intentions have eased, possibly reflecting falling profitability.

The risks to the growth outlook are tilted to the downside. The cattle disease, *Mycoplasma bovis,* is assumed to have a small and short-lived

impact on agricultural production. If the disease spreads more widely than assumed, the implications would be more significant. Similarly, international trade tensions could impede global growth, which could weigh on growth in New Zealand (see box B). A tightening in global financial conditions is another downside risk to the outlook, as illustrated by a scenario in our May *Statement*.

Employment developments

The labour market has tightened over the past year (figure 2.3). Employment growth has been particularly strong in the services sectors. Likewise, population growth and rising participation have seen the labour force expand rapidly. The unemployment rate was 4.5 percent in the June 2018 quarter, down from around 5 percent at the end of 2016.

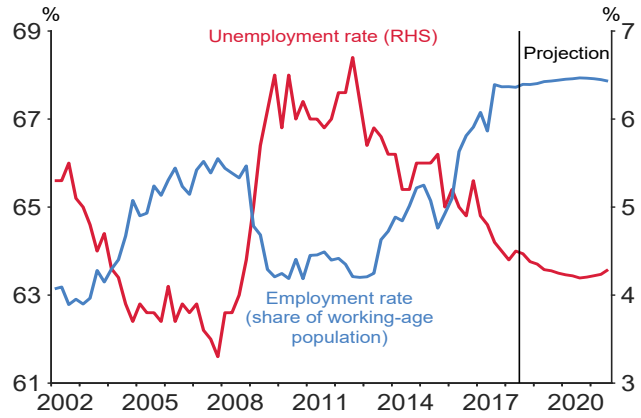
We estimate employment to be near its maximum sustainable level, although indicators suggest a range of possibilities (see chapter 3). For example, some indicators suggest employment is above a sustainable level, whereas others imply that there is spare capacity in the labour market.

The labour market is expected to tighten slightly more as GDP growth increases. Employment will likely remain within a broad range of indicators of maximum sustainable employment over the projection. A risk to this outlook is that GDP growth slows further, causing demand for labour to ease.

Inflation developments

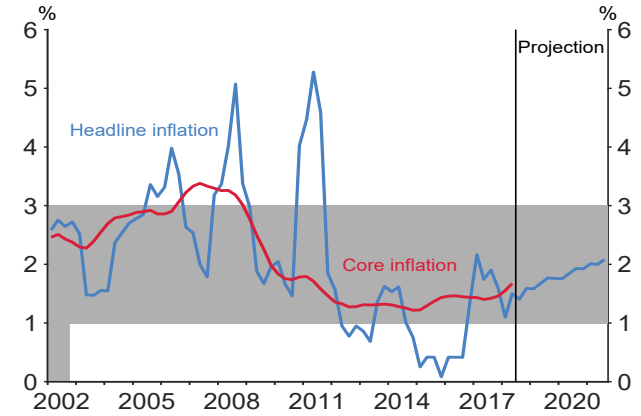
Inflation is inside the 1-3 percent target range. Annual CPI inflation was 1.5 percent in the June 2018 quarter, and measures of the underlying trend in inflation are at a similar level (figure 2.4).

Figure 2.3
Employment and unemployment rates
(s.a.)



Source: Stats NZ, RBNZ estimates.

Figure 2.4
CPI inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Note: Core inflation is the sectoral factor model measure.

However, there are early signs of rising inflationary pressure. A range of core inflation measures increased in the June 2018 quarter. For example, the sectoral factor model estimate of core inflation increased to 1.7 percent in the quarter, up from 1.4 percent a year ago.[1] This increase likely reflects the tightening in the labour market over the past year and increasing cost pressures.

Tradables inflation has been mostly positive since the start of 2017, after being negative for most of the previous five years. This pickup in tradables inflation partly reflects that global spare capacity has been absorbed. We expect annual tradables inflation to average around 0.5 percent over the second half of the projection, higher than we previously forecast, but still below its historical average. Higher oil prices and the depreciation in the New Zealand dollar have raised the outlook for import prices. In addition, announced increases in the national fuel excise tax are expected to continue to lift fuel prices.

Non-tradables and wage inflation remain below trend. Our analysis suggests that low inflation from 2012 to 2016 is continuing to affect price- and wage-setting behaviour. Non-tradables inflation is expected to increase, driven by growing capacity pressure and less subdued pricing behaviour. The upcoming minimum wage increases contribute to higher wage inflation, but are expected to be mostly absorbed in firms' margins. Rising non-tradables inflation contributes to higher CPI inflation in the latter part of the projection.

1 The sectoral factor model estimates inflation movements that are common across CPI components. For a general discussion of core inflation measures, see S. Ranchhod (2013) 'Measures of New Zealand core inflation', Reserve Bank of New Zealand *Bulletin* Vol.76, No.1. For a technical description of the sectoral factor model, see M. Kirker (2010) 'What drives core inflation? A dynamic factor model analysis of tradable and nontradable prices', Reserve Bank of New Zealand *Discussion Paper*, DP 2010/13.

The risks around this inflation outlook are roughly balanced. A further slowdown in GDP growth could limit increases in capacity pressure, and consequently domestic inflation may not rise as expected. Alternatively, wage pressures could be larger and could affect firms' pricing decisions by more than we have assumed.

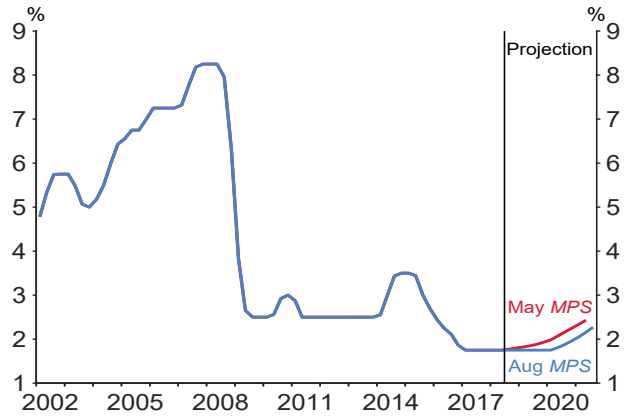
Monetary policy

The *Policy Targets Agreement* (PTA) states that the objectives for monetary policy are to keep future annual CPI inflation between 1 and 3 percent over the medium term, and to contribute to supporting maximum sustainable employment. In addition, the Bank is directed to avoid unnecessary instability in output, employment, the exchange rate, and interest rates, and to have regard to the efficiency and soundness of the financial system.

Employment is estimated to be around its maximum sustainable level and CPI inflation remains below the mid-point of our target range, necessitating continued supportive monetary policy. The decline in GDP growth over the past year suggests momentum in the economy may have eased. While growth is expected to pick up, there are a number of downside risks to this outlook. Reflecting a weaker outlook for capacity pressure, the projected path for the OCR is flat for longer than in the May *Statement* (figure 2.5).

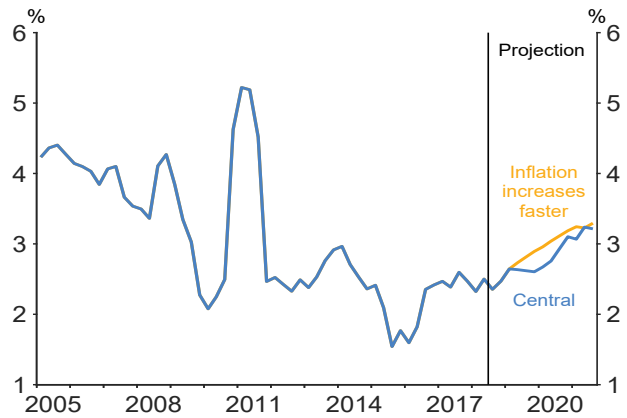
The labour market has tightened and core inflation has increased slightly, after being low for an extended period. However, with GDP growth declining, we expect only a gradual increase in inflation. Stimulatory monetary policy remains necessary to ensure inflation continues to rise towards the target mid-point.

Figure 2.5
Official Cash Rate



Source: RBNZ estimates.

Figure 2.6
Non-tradables inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Table 2.1 outlines several key judgements that support this monetary policy stance. It also shows the balance of risks around each judgement and how the OCR would need to respond if those risks eventuated.

Scenarios

While the outlook for the OCR has been broadly unchanged over the past year (see box A), recent developments suggest two possible scenarios that could shift the outlook for monetary policy. The scenarios show how monetary policy would respond either if inflation increased faster than projected due to wage and other cost pressures, or if GDP growth remained below trend.

Scenario 1: Inflation increases faster due to cost pressure

Stronger pass-through from higher wages and other costs could result in higher domestic inflation. In our central projection, firms' price-setting behaviour is assumed to remain subdued. However, increasing costs mean margins are being squeezed. There is a risk that firms could raise prices by more than we assume in response to these higher costs.

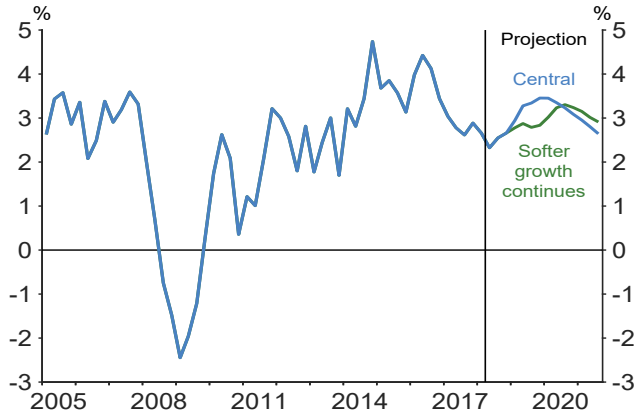
In this scenario, annual non-tradables inflation rises by around 0.3 percentage points more over 2019 than in the central projection (figure 2.6). The OCR begins to rise in the second half of 2019 in response to stronger inflationary pressure (figure 2.8). CPI inflation is higher until 2020. By 2021, the OCR is around 50 basis points higher, which reduces domestic demand, and inflation converges back to around 2 percent.

Scenario 2: GDP growth remains below trend

GDP growth has softened unexpectedly over the past year, despite improving global conditions, continuing strong population growth, and low interest rates. Growth is expected to recover in our central projection. However, with surveyed business confidence falling and continued softness in the housing market, GDP growth may not recover as expected.

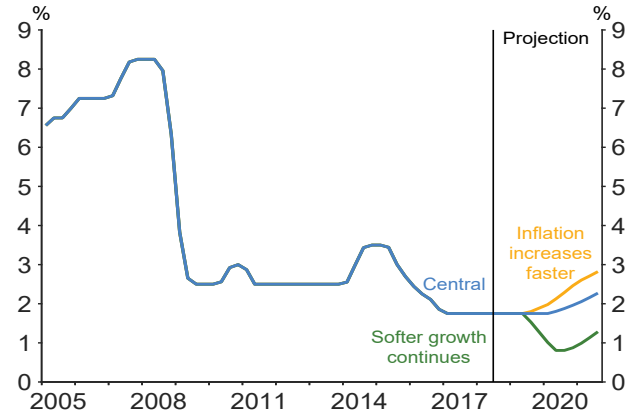
In this scenario, annual GDP growth stays below 3 percent over 2019 (figure 2.7). As it becomes clear that growth is not picking up as expected, the OCR would need to be reduced by around 100 basis points (figure 2.8). Weaker GDP growth sees employment fall relative to its maximum sustainable level and the unemployment rate tick up slightly. Weaker capacity pressure reduces CPI inflation by around 0.2 percentage points in 2020, relative to the central projection. By the end of the projection, the monetary policy response starts to boost growth, raising employment back to around its maximum sustainable level, and inflation to around 2 percent.

Figure 2.7
GDP growth
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 2.8
Official Cash Rate



Source: RBNZ estimates.

Table 2.1

Key judgements and risks

Overarching narrative	Key judgements	Risk to OCR[1]
Robust global growth continues	GDP growth in our major trading partners averages around 3.5% over the projection. Trade restrictions have a limited impact on the global growth outlook, but there are risks of a more adverse scenario.	⇩
	Central banks continue to withdraw monetary stimulus, leading overseas interest rates to increase relative to New Zealand. The New Zealand dollar TWI falls to around 72 over the projection, with risks to the downside.	⇧
Global inflationary pressure rises gradually	Inflationary pressure in our major trading partners edges up gradually.	⇧
	Import price inflation in world terms is slightly below its post-2000 average over the projection.	⇔
	Dubai oil prices fall from USD 75 per barrel to USD 65 per barrel. There is a risk they could be higher.	⇧
	Whole milk powder prices stay around USD 3000 per metric tonne.	⇔
New Zealand GDP growth is above trend, as fiscal and monetary stimulus support demand	GDP growth exceeds potential growth as temporary softness unwinds. Low business confidence does not translate to persistently lower growth.	⇩
	Annual house price inflation subsides from around 5% in 2018 to around 2% from 2019.	⇔
	Household consumption growth slows as house price inflation slows and net immigration declines.	⇔
	Annual net immigration falls from 50,000 in 2018 to 30,000 in 2020, reducing aggregate demand.	⇔
	Export volumes recover, with only a modest impact from *Mycoplasma bovis*.	⇩
	KiwiBuild adds to residential investment gradually from mid-2019. Government spending and increased transfers to households support GDP growth from the second half of 2018.	⇔
With little slack left, capacity pressure builds as demand growth outstrips supply	Employment is around its maximum sustainable level and the output gap is close to zero.	⇔
	Labour force participation remains around 71% of the working age population.	⇔
	The unemployment rate falls to 4.2% and the output gap reaches 0.6% of potential output.	⇩
Inflation rises gradually to the 2 percent target mid-point	Non-tradables inflation increases gradually, as capacity pressure increases and the dampening effect of past low inflation fades.	⇔
	Tradables inflation increases, but remains below average levels.	⇔
	Pass-through of higher petrol prices into other consumer prices is limited.	⇧
	Wage inflation rises from around 2% in 2018 to over 2.5% by 2021. Minimum wage changes are mostly absorbed in firms' margins and have a small impact on CPI inflation.	⇧

[1] Risk indicators refer to balance of risks to the OCR from each of the individual key judgements. ⇔ Balanced risks | ⇧ Upside risks | ⇩ Downside risks

Box A

Recent monetary policy decisions

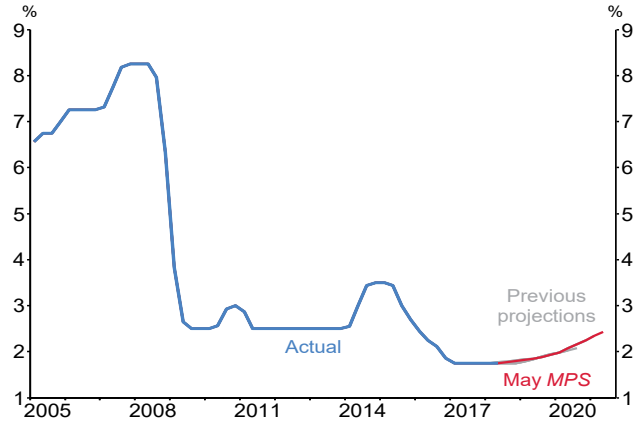
The Bank has held the OCR at 1.75 percent since late 2016, and has retained the view that monetary policy would remain accommodative for a considerable period. Through 2017 and the first half of 2018, the projected path for the OCR was broadly flat and stable (figure A.1). There was no clear reason to deviate from this stimulatory monetary policy stance, as the impacts of economic developments on the OCR outlook were offsetting.

Over 2017, GDP growth declined, in part because of lower house price inflation and slower growth in residential construction. As a result, capacity pressure did not increase as expected. Core inflation and wage inflation remained low.

However, while growth outcomes were surprisingly soft, the outlook for growth was supported by fiscal stimulus and improving global conditions. In the November 2017 *Statement*, the Bank incorporated a more stimulatory path for fiscal policy, reflecting the new Government's policies. Trading-partner growth increased and, by early 2018, there were signs of inflationary pressure building in several of our trading partners. New Zealand's terms of trade increased to a record high level.

On balance, the Bank maintained the view that stimulatory monetary policy remained necessary to see inflation increase to the 2 percent target mid-point. With the Bank maintaining a flat forward path for the OCR, fixed mortgage rates declined over the second half of 2017. In addition, as other central banks looked to increase their policy rates, the New Zealand dollar depreciated.

Figure A.1
Official Cash Rate



Source: RBNZ estimates.

Note: 'Previous projections' includes projections from the February 2017 *Statement* onwards.

Prior to the May 2018 *Statement*, the objectives for monetary policy were adjusted to include both keeping future annual CPI inflation between 1 and 3 percent over the medium term, and contributing to supporting maximum sustainable employment. In the May *Statement*, employment was thought to be around its maximum sustainable level, but inflation remained low. The Bank's judgement was that monetary policy needed to remain stimulatory to ensure inflation would continue to increase towards the target mid-point. The Bank also noted that the next move in the OCR could be up or down.

Chapter 3

Domestic activity and employment

- GDP growth slowed in the March 2018 quarter. We expect recent weakness in growth to persist in the near term.
- Fiscal and monetary stimulus, and higher net exports, are expected to support growth and drive an increase in capacity pressure over the forecast.
- The labour market has tightened over the past year. A range of indicators suggest that employment is near its maximum sustainable level.
- The level of employment is expected to increase further over the projection.

Domestic activity

GDP growth slowed in the March 2018 quarter, partly due to temporary factors. Over 2018, growth is expected to recover to some extent.

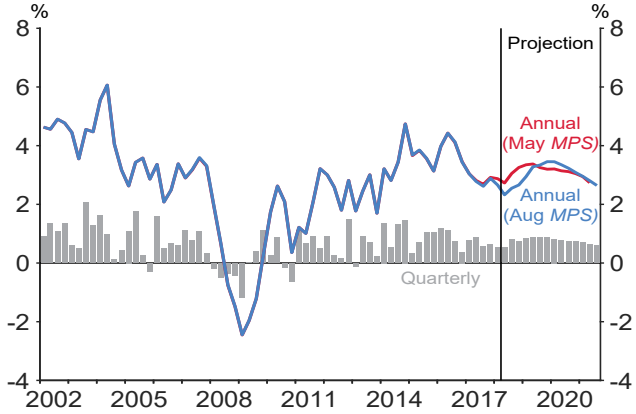
Over the medium term, growth is expected to increase. This is driven by fiscal policy, export growth, and supportive monetary policy settings. Higher growth is expected to increase the incentive for businesses to invest, reinforcing stronger growth. Risks to this medium term outlook are to the downside.

GDP increased by 0.5 percent in the March 2018 quarter (figure 3.1). This was lower than expected in the May *Statement*. Growth was held down by services, construction, and primary industry production.

Growth in activity is expected to pick up over the next year, supported by a bounce-back in household consumption. In the near term, consumption is expected to recover from a one-off decline in transport spending, with the Government's Families Package also providing support (figure 3.2).

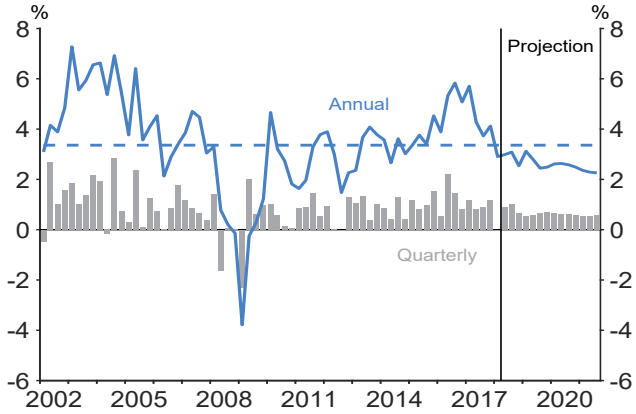
Some persistence in the recent weakness in GDP growth has been built into the near-term forecast. This is consistent with information from

Figure 3.1
GDP growth
(s.a.)



Source: Stats NZ, RBNZ estimates.

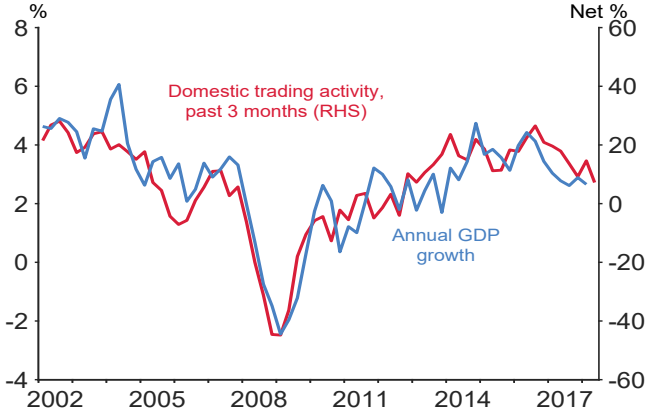
Figure 3.2
Consumption growth
(s.a.)



Source: Stats NZ, RBNZ estimates.

Note: The dashed line represents the average realised rate of growth since 2000.

Figure 3.3
Domestic trading activity and GDP growth
(s.a.)



Source: Stats NZ, NZIER, RBNZ estimates.

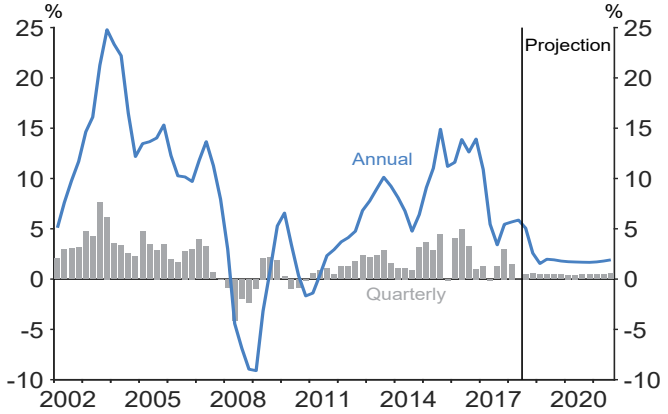
Note: Domestic trading activity measures the net percentage of firms that reported an increase in activity over the past three months.

recent business surveys (figure 3.3). Firms' employment intentions, investment intentions, and expected own activity all suggest slow growth in the near term.

GDP growth is also likely to be dampened by weak house price inflation (figure 3.4). In particular, weak house price inflation weighs on consumption. However, strong residential investment looks set to support growth in the near term, as dwelling consent issuance has been increasing over the past several months.

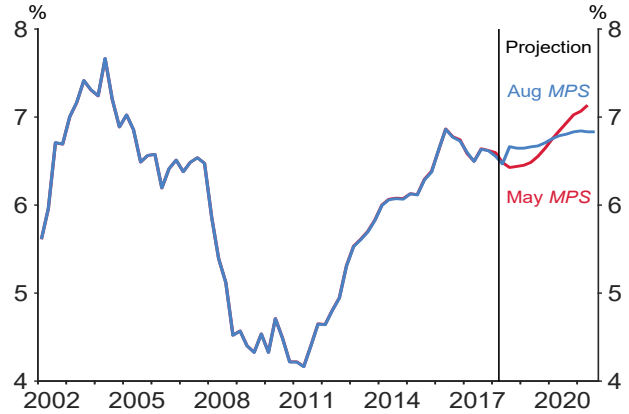
Over the medium term, growth is supported by monetary policy, fiscal policy, business investment, and net exports. Stimulatory monetary policy settings support household consumption and business investment. A weaker New Zealand dollar should increase net exports.

Figure 3.4
House price inflation
(s.a.)



Source: CoreLogic NZ, RBNZ estimates.

Figure 3.5
Residential investment
(share of potential output, s.a.)



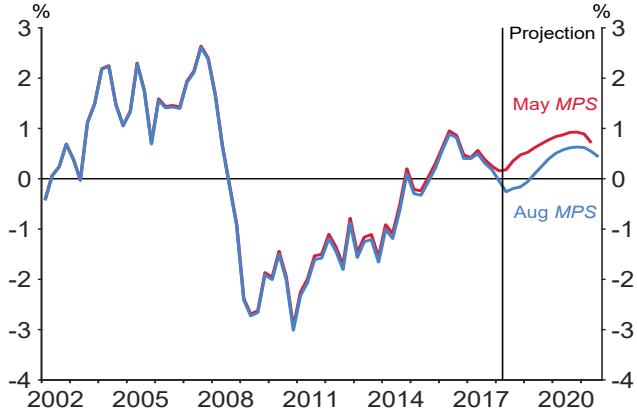
Source: Stats NZ, RBNZ estimates.

KiwiBuild is expected to start supporting residential investment towards the end of 2019 (figure 3.5). Following the release of *Budget* 2018, we have updated our KiwiBuild assumptions. As a result, the outlook for residential investment over the medium term is softer than in the May *Statement*.

Growth in export volumes is projected to recover from recent weather-related weakness. The impact on exports from the *Mycoplasma bovis*-related cattle cull is expected to be small. This export recovery, combined with the depreciation of the exchange rate since 2017, should contribute to strength in net exports and boost domestic activity. However, there is a risk that the recent exchange rate depreciation and the high terms of trade may be insufficient to boost growth to the level we are expecting.

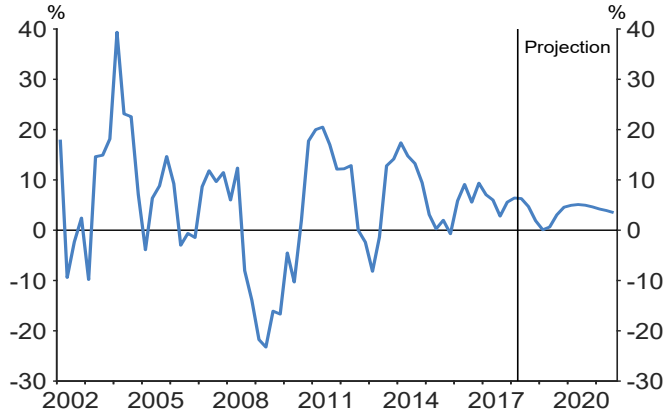
Capacity pressure has decreased over the past year, and we estimate that the output gap is currently around zero (figure 3.6). However,

Figure 3.6
Output gap
(share of potential output)



Source: RBNZ estimates.

Figure 3.7
Business investment growth
(annual)



Source: Stats NZ, RBNZ estimates.

capacity pressure is expected to build over the medium term as monetary and fiscal stimulus generate higher GDP growth.

Increasing capacity pressure is expected to generate growth in business investment over the medium term. Over the projection, higher GDP growth, combined with higher real labour costs, is expected to increase the incentive for businesses to invest in capital. This should result in business investment increasing more rapidly from 2019, further supporting GDP growth (figure 3.7).

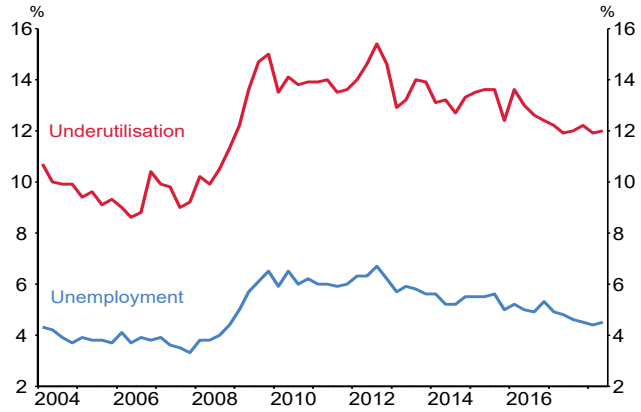
Recent falls in surveyed business confidence suggest there is a risk that business investment could be lower than we expect. Investment intentions fell in the June 2018 quarter. Measured profit growth has declined, and the *Quarterly Survey of Business Opinion* reports that the majority of firms are expecting profitability to deteriorate in the near term.

Lower confidence and lower profitability could result in firms delaying investment.

Labour market

The labour market has tightened over the past year, despite the slightly higher unemployment rate in the June 2018 quarter and the recent slowdown in GDP growth. Labour force growth slightly exceeded employment growth in the June quarter. The underutilisation rate has been around 12 percent for the past year (figure 3.8).

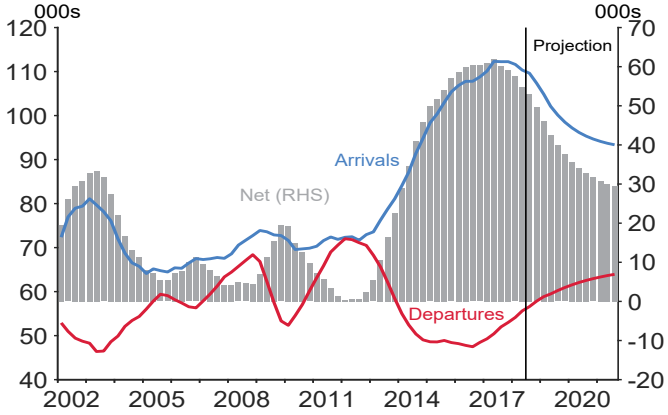
Figure 3.8
Unemployment and underutilisation rates
(s.a.)



Source: Stats NZ.

Note: Underutilisation is a share of the extended labour force, while unemployment is a share of the labour force.

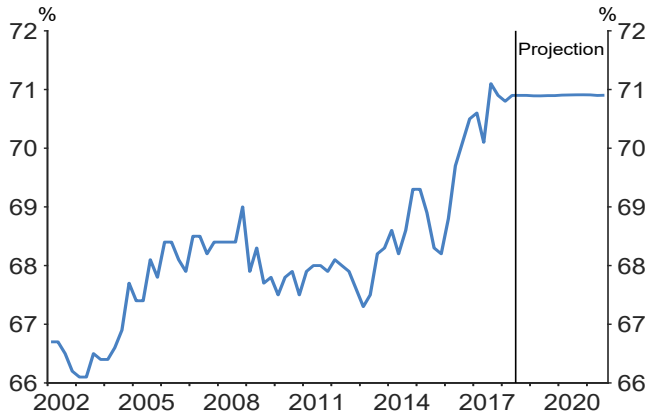
Figure 3.9
Overseas arrivals and departures
(quarterly, annual total)



Source: Stats NZ, RBNZ estimates.

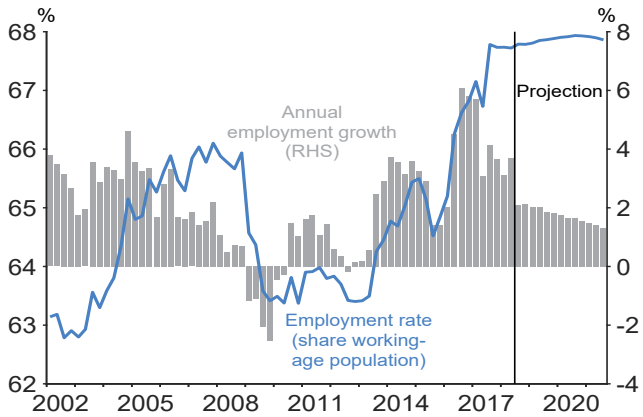
Note: The data shown are for permanent and long-term working-age arrivals and departures.

Figure 3.10
Labour force participation rate
(s.a.)



Source: Stats NZ, RBNZ estimates.

Figure 3.11
Employment
(s.a.)



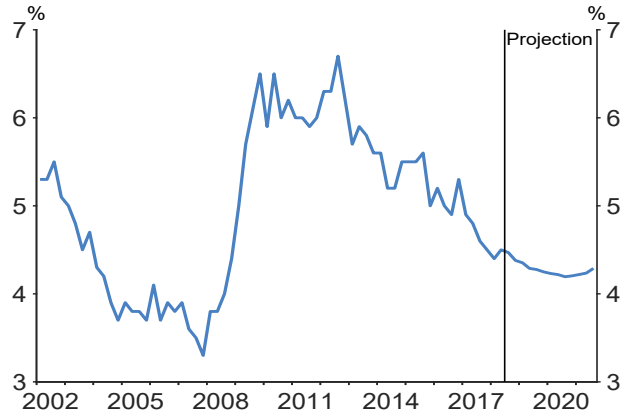
Source: Stats NZ, RBNZ estimates.

The labour market is projected to continue tightening over the forecast. Labour force growth is expected to moderate. Annual net immigration has declined over the past year, and is projected to fall to around 30,000 by the end of the forecast (figure 3.9). The labour force participation rate is assumed to stay at 71 percent over the projection (figure 3.10).

Above-trend GDP growth is expected to lead to employment growth exceeding labour-force growth over the projection (figure 3.11). The labour market therefore tightens further, with the unemployment rate falling to 4.2 percent by 2020 (figure 3.12).

Risks to the outlook for the labour market are balanced. On the downside, recent declines in GDP growth could flow through to the labour market, resulting in lower employment growth and higher unemployment. Conversely, the labour market could tighten faster if labour demand

Figure 3.12
Unemployment rate
(s.a.)



Source: Stats NZ, RBNZ estimates.

retains recent strength while labour force growth moderates. This could result in wage inflation high enough to push CPI inflation above the target mid-point.

Maximum sustainable employment

The Reserve Bank's approach to maximum sustainable employment

The PTA directs the Bank to contribute to supporting maximum sustainable employment (MSE). We interpret maximum sustainable employment as being the highest utilisation of labour resources that can be maintained over time. If employment is above its maximum sustainable level, this usually coincides with a positive output gap, which puts upwards pressure on inflation. If inflation rises above the target range, the Bank would need to raise interest rates to bring inflation back to target and employment down to a sustainable level.

The Bank aims to minimise deviations in employment from MSE. In the same way that monetary policy has little effect on potential output, it also cannot significantly affect the level of MSE. Our best contribution is therefore using monetary policy to stabilise employment around its maximum sustainable level.

Maximum sustainable employment – now, and over the forecast

The level of MSE is unobservable and estimates are very uncertain. Therefore the Bank examines a broad range of labour market indicators to form a view of where employment is relative to MSE. A range of labour market indicators show that employment fell below MSE after the global financial crisis (GFC). Since then the indicators show that the labour market has tightened, and that employment has been returning towards its maximum sustainable level.

Over the projection, the labour market is expected to tighten slightly further as GDP growth increases. The level of employment over the forecast is consistent with CPI inflation reaching the 2 percent target mid-point. This suggests that the amount of employment growth built into the forecast is sustainable.

Table 3.1 summarises some of the key labour market indicators we monitor, and what they currently imply for capacity pressure in the labour market. This list of indicators is not exhaustive, but it does support a broader understanding of labour market tightness.

Table 3.1

Summary of indicators of employment and maximum sustainable employment

Indicator type	Employment below MSE	Employment at MSE	Employment above MSE
Gaps	Unemployment rate gap (reduced-form model) Employment rate gap (filled jobs)	Unemployment rate gap (structural model)	Employment rate gap (total employment)
Unemployment		Range of NAIRU estimates Underemployment Medium-term unemployment Maori and Pacific unemployment Youth unemployment	
Business surveys			QSBO difficulty finding labour QSBO labour as limiting factor
Other	Job-finding rate Job-to-job flows		Job-separation rate Vacancy rate

Note: The job-finding rate is the proportion of unemployed people in the previous quarter who transitioned to employment in the current quarter. The job-separation rate is the proportion of employed people in the previous quarter who transitioned to unemployment in the current quarter. Job-to-job flows measures employed people who move from one job to another, without a period of unemployment. The vacancy rate is the number of vacancies divided by the number of unemployed people.

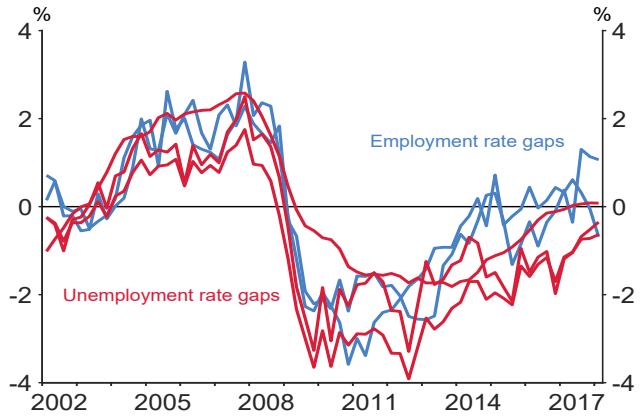
As shown in the first row of Table 3.1, the Bank has a suite of employment and unemployment rate gaps that are used to gauge capacity pressure in the labour market (figure 3.13). These metrics involve taking an observed series, such as the employment rate, and calculating the deviation of that rate from an unobserved trend or MSE level. On average, these indicators currently suggest that employment is near its maximum sustainable level.

Another indicator of labour market slack is the amount of cyclical unemployment in the economy. It is related to the economic cycle, and is not caused by structural factors or very short-term factors (for example people moving from one job to another). Cyclical unemployment can be roughly approximated by medium-duration unemployment of 1-12 months.[1] The medium-duration unemployment rate has declined since the GFC, and is close to its level in the early 2000s, when employment was likely around its maximum sustainable level (figure 3.14).

The job-finding rate is one of the indicators suggesting there is still slack left in the labour market. The job-finding rate is the proportion of unemployed people in the previous quarter who transitioned to

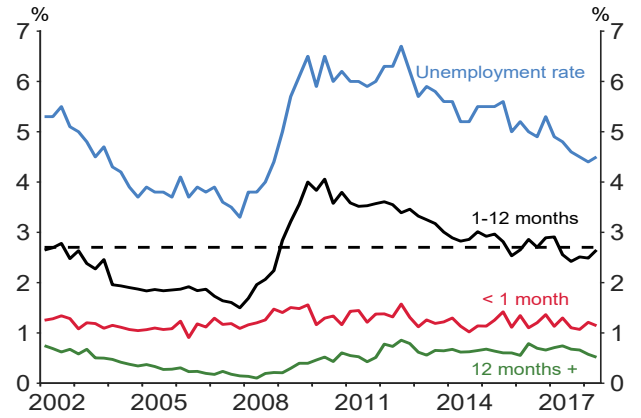
1 A. Ballantyne, D. De Voss, & D. Jacobs (2014) 'Unemployment and spare capacity in the labour market', Reserve Bank of Australia *Bulletin*, September quarter.

Figure 3.13
Suite of unemployment and employment rate gaps
(deviation from trend)



Source: Stats NZ, RBNZ estimates.

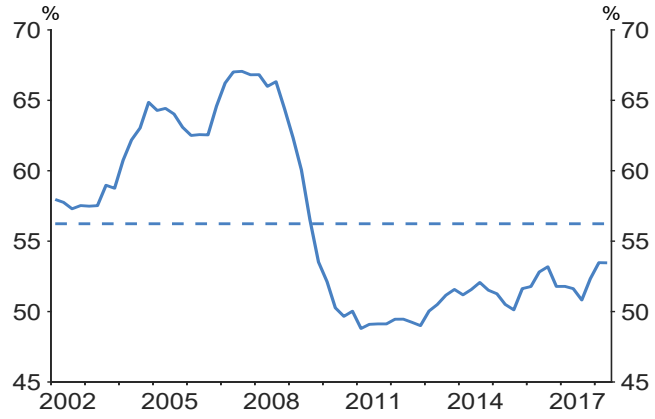
Figure 3.14
Unemployment rate by duration
(s.a.)



Source: Stats NZ, RBNZ estimate.

Note: The dashed line represents the average 1-12 month unemployment rate since 2000.

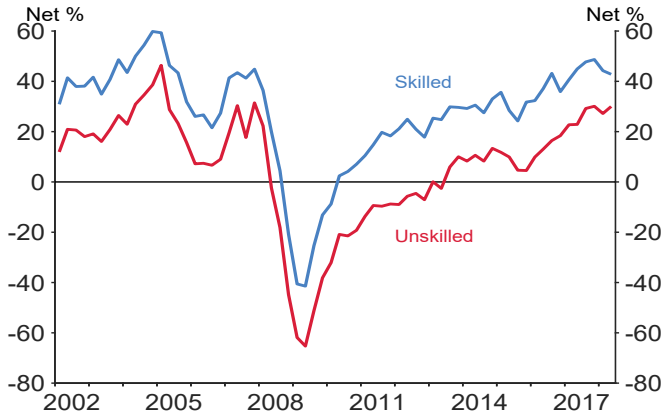
Figure 3.15
Job-finding rate
(four-quarter moving average)



Source: Stats NZ, RBNZ estimates.

Note: The dashed line represents the average job-finding rate since 2000.

Figure 3.16
Difficulty finding skilled and unskilled labour
(s.a.)



Source: NZIER, RBNZ estimates.

employment in the current quarter.[2] The finding rate is still low compared to both its pre-GFC level and its post-2000 average (figure 3.15). This indicates that it is still relatively difficult to move out of unemployment, and hence some slack might remain in the labour market.

Several indicators suggest that the labour market is quite tight, and that employment may be above MSE. QSBO measures of how difficult it is for firms to find skilled and unskilled labour suggest that employment is above MSE, as firms struggle to find suitable workers for the vacancies they need to fill (figure 3.16).

2 Calculated using the approach from J. Armstrong & O. Karagedikli (2017) 'The role of non-participants in labour-market dynamics', Reserve Bank of New Zealand *Analytical Note*, AN 2017/01.

Chapter 4
Prices and costs

- Annual CPI inflation increased to 1.5 percent in the June 2018 quarter, with non-tradables inflation slightly higher than expected. Annual CPI inflation is expected to average 1.6 percent over the next year.
- Measures of core inflation point to a rise in underlying inflationary pressure. This increase is consistent with tightening in the labour market over the past year.
- Increasing capacity pressure is expected to generate higher non-tradables inflation over the medium term. This increase leads annual CPI inflation to settle near the 2 percent target mid-point by 2020.

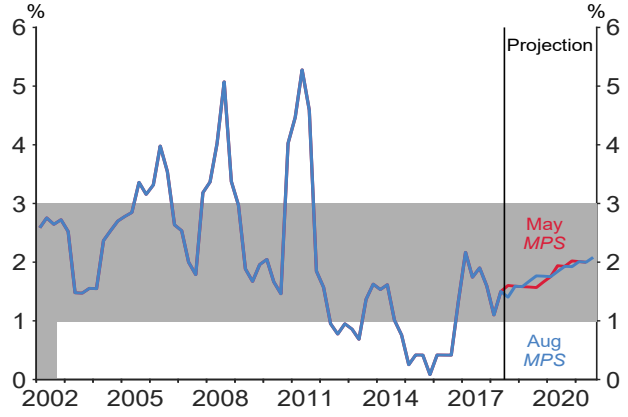
Consumer price inflation

Annual CPI inflation increased from 1.1 percent in the March 2018 quarter to 1.5 percent in the June quarter (figure 4.1). The rise in annual headline inflation reflected an increase in both tradables and non-tradables inflation.

All measures of core inflation increased in the June 2018 quarter. The increase in non-tradables inflation and strengthening core inflation signal an increase in domestic inflationary pressure.

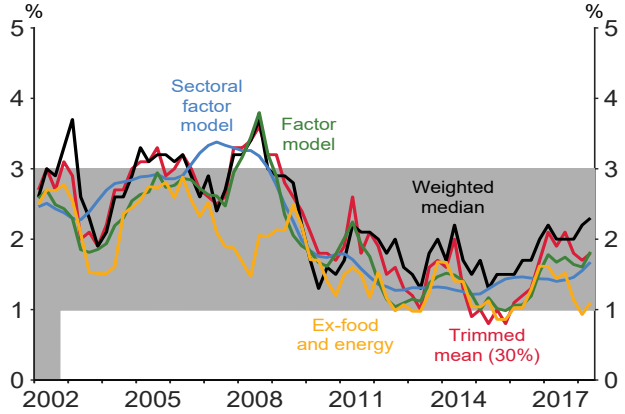
From late 2019, we project CPI inflation to increase, supported by non-tradables inflation. Tradables inflation is expected to increase, but remain below its historical average. A series of announced fuel excise duty increases is expected to add to tradables inflation over the projection.

Figure 4.1
CPI inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 4.2
Core inflation measures
(annual, excluding GST)



Source: Stats NZ, RBNZ estimates.

Underlying inflation and inflation expectations

To estimate the underlying trend in inflation, the Bank uses measures of core inflation that filter out temporary volatility in price movements. Core inflation measures used by the Bank include:

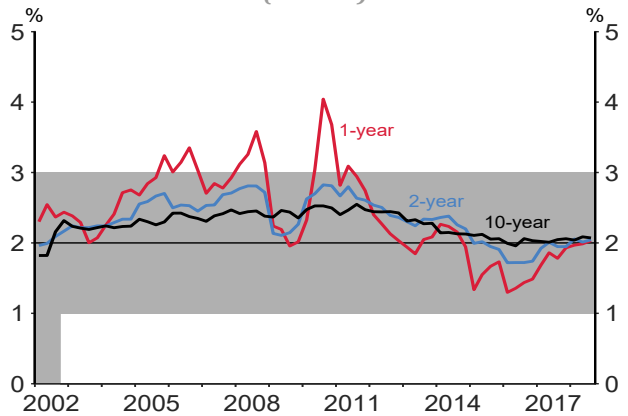
- exclusion measures that remove the impact of prices that are prone to large fluctuations, or change as a result of conditions unrelated to domestic demand (such as trimmed mean and ex-food and energy); and
- factor model measures that look at the variation among components of the CPI over time, putting lesser weight on those components that least reflect the general trend in the CPI.[1]

Although core inflation measures continue to point to subdued underlying inflationary pressure, most show a pick-up towards the target mid-point (figure 4.2). CPI excluding food and energy increased in the latest quarter but remains low following the introduction of fees-free tertiary education for first-year students at the start of 2018.

The increase in underlying inflation is consistent with the tightening in the labour market over the past year. Estimates of labour market slack

1 See S. Ranchhod (2013) 'Measures of New Zealand core inflation', Reserve Bank of New Zealand *Bulletin* Vol.76, No.1.

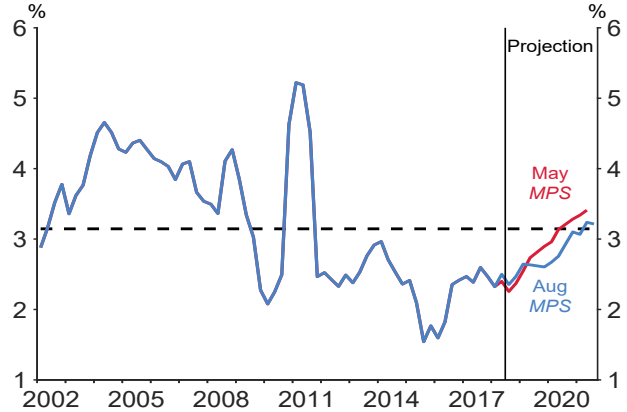
Figure 4.3
Inflation expectations
(annual)



Source: RBNZ estimates.

Note: Inflation expectation measures are estimates drawn at each time horizon from the RBNZ inflation expectations curve, based on surveys of businesses and professional forecasters at different horizons.

Figure 4.4
Non-tradables inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Note: The dashed line represents the post-2000 average of realised annual non-tradables inflation.

suggest that employment is now close to its maximum sustainable level (see chapter 3).

Long-term inflation expectations remain well anchored close to 2 percent (figure 4.3). Short-term inflation expectations have converged with longer-term expectations.

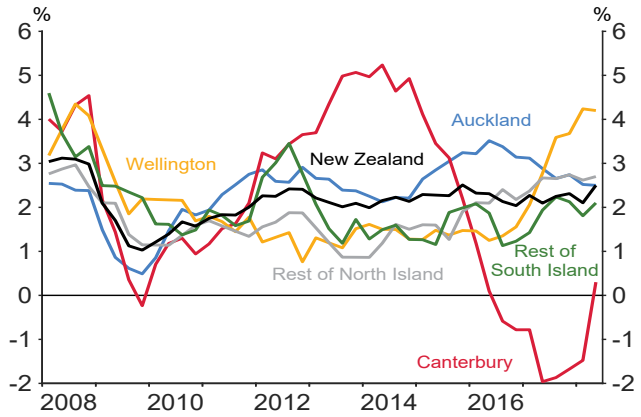
Domestic inflation and wages

Annual non-tradables inflation rose from 2.3 percent to 2.5 percent in the June 2018 quarter. Despite this increase, non-tradables inflation remains subdued by historical standards (figure 4.4). Firms appear to be placing weight on past low headline inflation when making pricing decisions.

Housing-related prices have continued to support non-tradables inflation. Annual rent inflation remains high across most regions (figure 4.5). CPI construction cost inflation remains elevated, but has eased from its peak in 2016. Builders' ability to pass higher input costs through to prices appears to be diminishing (figure 4.6), as residential construction activity has stabilised and house price inflation has slowed. This suggests a decline in margins, consistent with recent declines in surveyed builders' profitability.

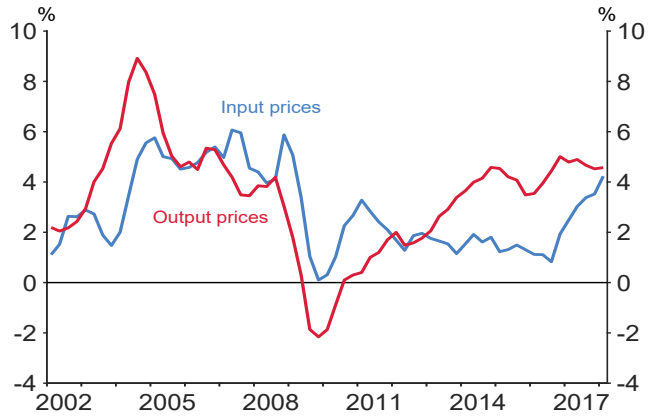
Wage inflation remains low relative to the levels seen prior to the GFC (figure 4.7). Subdued growth in wages partly reflects persistent economic slack. Low headline inflation between 2012 and 2016 has also been affecting wage-setting behaviour. Despite low nominal wage inflation, inflation-adjusted wages have been increasing at a historically normal

Figure 4.5
Rent inflation by region
(annual)



Source: Stats NZ.

Figure 4.6
Construction sector producer price inflation
(annual)



Source: Stats NZ.

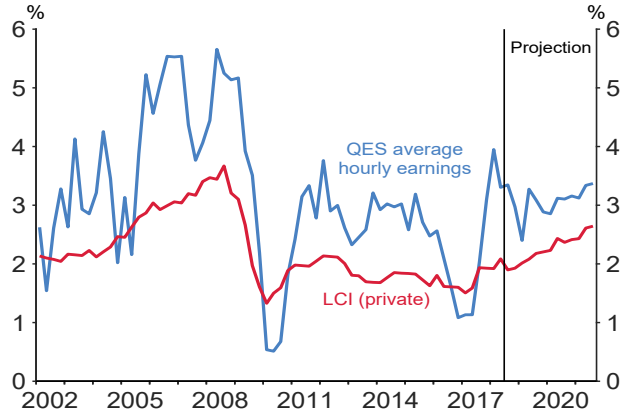
rate. Low headline inflation, partly because of low import prices, has maintained the purchasing power of nominal wages over recent years.

Nominal wage growth is expected to increase as capacity pressure builds and higher headline inflation affects wage negotiations. Our forecasts also incorporate the minimum wage increases announced by the Government. These increases add between 0.1 and 0.5 percentage points to annual labour cost inflation over the projection horizon. Recent public sector wage settlements and negotiations could add a smaller amount to measured wage inflation. We are continuing to monitor wage developments closely.

Non-tradables inflation is expected to increase over the medium term, as capacity pressure in the economy increases. The recent softness in GDP growth means that non-tradables inflation is expected to remain low, before increasing from 2020 (figure 4.4).

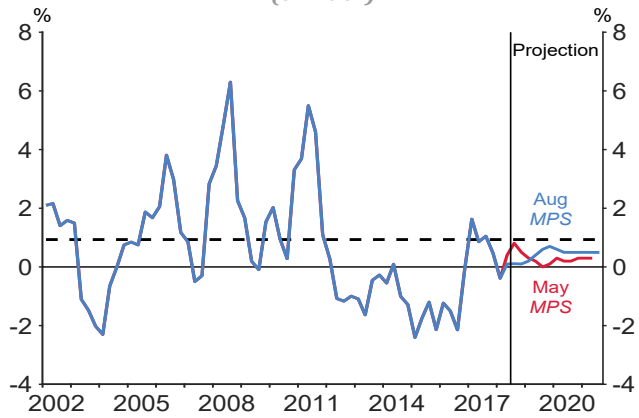
The risks to the non-tradables inflation outlook appear balanced over the medium term. Wages may increase by more than expected if minimum wage increases spill over into broader wage pressure. Firms may also increase prices more quickly if rising domestic labour and import costs (including fuel) erode margins. By contrast, capacity pressure might increase more slowly than anticipated if downside risks to the GDP outlook materialise. For example, export demand might decrease if global growth is lower than expected (see chapter 5).

Figure 4.7
Wage growth
(annual)



Source: Stats NZ, RBNZ estimates.

Figure 4.8
Tradables inflation
(annual)



Source: Stats NZ, RBNZ estimates.

Note: The dashed line represents the post-2000 average of realised annual tradables inflation.

Imported inflation and world prices

Annual tradables inflation increased from -0.4 percent in the March 2018 quarter to 0.1 percent in the June quarter (figure 4.8). Tradables inflation has largely been contributing positively to headline CPI inflation since the start of 2017. This contrasts with sustained downward pressure on CPI inflation from import prices between 2012 and 2016.

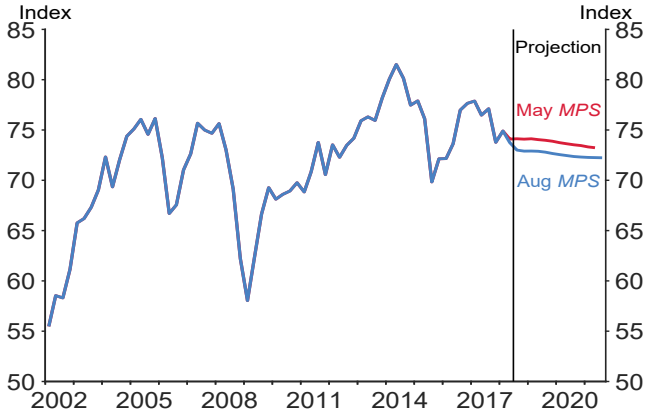
Higher fuel prices were a key contributor to the rise in tradables inflation since 2017 and in the June 2018 quarter. The Auckland regional fuel tax is expected to have increased fuel prices again in the September 2018 quarter.

Apart from fuel prices, tradables inflation remained negative in the first half of 2018. Tradables inflation excluding fuel is projected to remain subdued over the remainder of 2018, as the lagged impact of the strong New Zealand dollar continues to constrain tradables inflation.

Tradables inflation is expected to increase over the medium term, but remain below its historical average (figure 4.8). Global disinflationary forces are expected to fade as sustained global growth absorbs remaining spare capacity in the global economy and underpins global demand. The recent declines in the New Zealand dollar should also drive imported inflation prices higher from 2019 (figure 4.9).

Higher oil prices have been a key driver of higher tradables inflation. Oil price gains have outstripped increases in broader global commodity prices since mid-2017. Dubai oil prices are expected to decline to

Figure 4.9
New Zealand dollar TWI



Source: RBNZ estimates.

USD 65 per barrel over the medium term, compared to USD 55 per barrel in the May *Statement* (see chapter 5). If oil prices do not decline as assumed, fuel prices will contribute to higher tradables inflation over the projection.

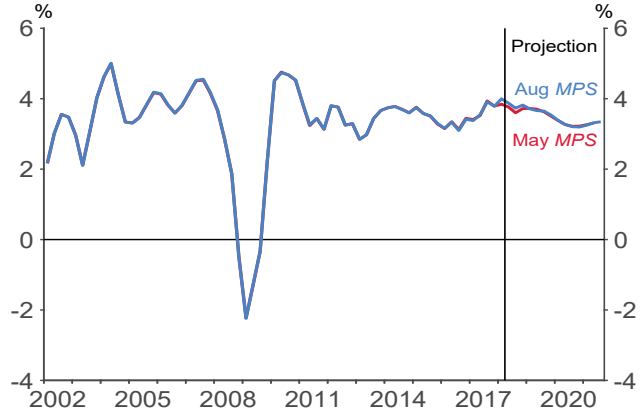
Announced increases in national fuel excise duty are also expected to continue to lift fuel prices and headline CPI over the projection horizon. Fuel excise increases add around 0.1 percentage points to annual CPI inflation for three years, starting in late 2018. The impact of fuel excise increases on inflation finishes shortly after the end of the forecast horizon, in the December 2021 quarter.

Chapter 5

International and financial markets developments

- Economic growth in New Zealand's trading partners is strong, but is expected to moderate. Downside risks to the outlook have increased since the May *Statement*.
- Inflation has increased in many trading partners and wage pressures are emerging.
- Trade tensions have increased. A further escalation could dampen global economic activity.
- Financial conditions in emerging markets have tightened as central banks in advanced economies have started to withdraw monetary policy stimulus.
- To date, New Zealand has been largely unaffected by the rise in trade tensions and tightening of financial conditions in emerging markets.

Figure 5.1
Trading-partner GDP growth
(annual)

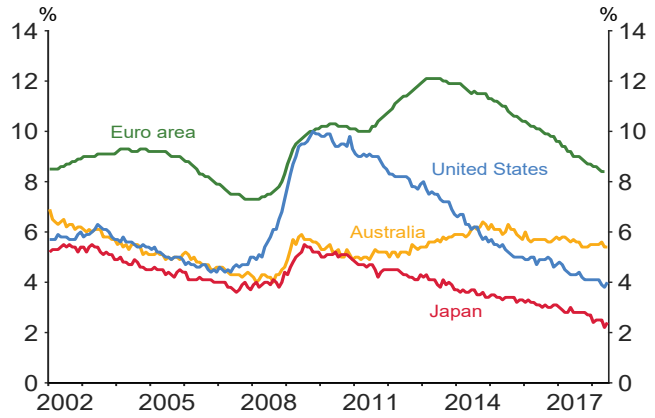


Source: Haver Analytics, Stats NZ, RBNZ estimates.

The global economy remains strong

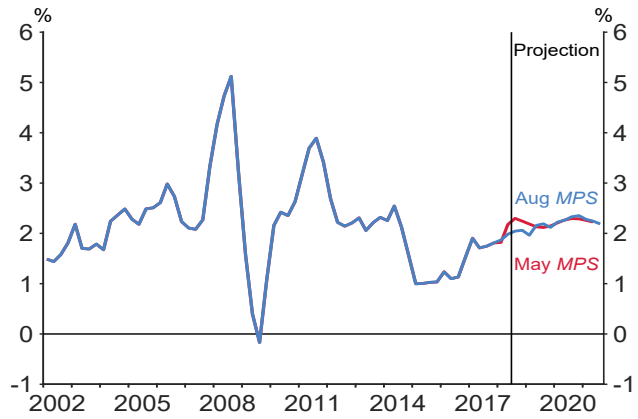
Economic activity in New Zealand's trading partners is growing at an above-average pace (figure 5.1). Growth has picked up over the past two years, supported by accommodative monetary policy settings and, in

Figure 5.2
Unemployment rates
(s.a.)



Source: Bloomberg.

Figure 5.3
Trading-partner inflation
(annual)



Source: Haver Analytics, Stats NZ, RBNZ estimates.

some cases, increased fiscal stimulus. However, growth is expected to moderate in the coming years.

As economic growth has strengthened, spare capacity has diminished. Labour markets have continued to tighten and unemployment rates in some economies are below levels that are considered sustainable (figure 5.2). As a result, wage pressures have started to emerge. Core inflation has also risen in some economies and is expected to rise more broadly as capacity pressures build.

Headline inflation has increased and is expected to rise further (figure 5.3). Much of the increase in inflation is due to the sharp rise in oil prices seen over the past year. This rise partly reflects increased demand for oil, as global economic activity has grown more quickly than expected. At the same time, growth in global oil production has been low, as rapid growth in the US production of shale oil has been offset by declines elsewhere. In particular, Venezuela's oil production has fallen sharply amid the country's ongoing economic and political turmoil. Additionally, the announcement that the United States will re-impose sanctions on Iranian oil exports is likely to cause a decline in Iran's oil production.

In this environment of strong economic growth and rising inflation, central banks in a number of countries have begun to unwind the stimulatory policy settings they put in place following the GFC. The Federal Reserve, Bank of England, and Bank of Canada have raised their policy rates and signalled further increases. The Federal Reserve has also begun to shrink the size of its balance sheet. The European Central Bank has slowed the pace of its net asset purchases and plans to finish these purchases by the end of the year.

In contrast, the People's Bank of China has recently eased its policy settings amid a slowdown in economic growth and increased uncertainty

arising from trade tensions. It has lowered banks' reserve requirement ratios and provided additional liquidity to the banking system through its medium-term lending facility. At the same time, the Chinese Government has increased fiscal stimulus.

Downside risks have increased

Despite the positive global economic environment, downside risks to the outlook have increased. In particular, there has been an escalation in trade tensions and signs of stress have appeared in some emerging market economies.

Trade tensions have intensified in recent months (see box B). The United States, China, and a number of other countries have imposed tariffs on a range of imported goods, and have threatened to impose more extensive tariffs. Although most analysts estimate that the tariffs introduced so far will have only a modest impact on global activity, an escalation in tensions could have a more material effect.

In emerging markets, financial conditions have started to tighten as a result of the ongoing withdrawal of monetary stimulus in advanced economies. Capital has flowed out of emerging markets, attracted by the increased returns available in advanced economies. This has resulted in higher interest rates, lower equity prices, and weaker exchange rates across emerging market economies. Central banks in some emerging market economies have responded to these capital outflows and the depreciation of their currencies by tightening their monetary policy settings. If financial conditions were to tighten further, this could weigh on economic activity.

To date, New Zealand has been largely unaffected by the rise in global trade tensions and the tightening of financial conditions in emerging market economies. Domestic interest rates and the exchange rate have declined a little over recent months.

If trade tensions escalate further, this could impact the New Zealand economy. Continued tightening of financial conditions in emerging market economies, particularly Asia, could also impact New Zealand.

Box B

The impact of a global trade war on New Zealand

An intensification of existing trade tensions is currently the biggest downside risk for global economic activity. The United States has implemented tariffs on USD 34 billion of imports from China, and this has been matched by China. Both countries have threatened further tariffs on a broader range of goods. In addition, the United States has implemented tariffs on steel and aluminium products from all countries, and has threatened to impose tariffs on imports of vehicles and automotive parts.

Higher tariffs can affect activity through both the demand side and supply side of an economy. Direct effects on growth can occur through lower trade, disrupted supply chains, higher import costs, and lower commodity prices. In addition, economic activity could be indirectly affected via higher uncertainty, which could lower business and consumer confidence and tighten financial conditions. Potential growth could also be reduced by lower investment, which could lower productivity growth and innovation.

The impact of higher tariffs on inflation is less clear. Initially, higher import prices would increase inflation, but in the medium term lower activity and a lower output gap could offset this.

The macroeconomic impact of a trade war is hard to estimate precisely. The trade impact depends on the scale of trade barriers imposed and how easily producers and consumers can switch to alternative products. The impact on GDP growth and inflation would also depend on the response of monetary policy. In turn, this would depend on how much demand fell, the degree of pass-through of higher tariffs to inflation, and whether inflation expectations rose.

The impact of the announced tariffs on New Zealand activity is expected to be limited. However, if the conflict escalates, the impact on New Zealand would be more significant. The main impact of a trade war on New Zealand will likely be through direct trade channels and uncertainty effects. Around 20 percent of New Zealand's exports go to China and around 10 percent go to the United States. There could be additional spillovers to New Zealand through other countries in Asia, which have close trading links with China. Lower commodity prices would weigh on New Zealand's export earnings and could suppress tradables inflation. The impact of global supply chain disruption on New Zealand is likely to be limited, as New Zealand is less integrated into supply chains than economies in Asia.

Chapter 6
Statistical appendix

Table 6.1
Key forecast variables

		GDP growth Quarterly	CPI inflation Quarterly	CPI inflation Annual	TWI	OCR
2016	Mar	1.2	0.2	0.4	72.2	2.4
	Jun	1.1	0.4	0.4	73.6	2.3
	Sep	0.7	0.3	0.4	77.0	2.1
	Dec	0.4	0.4	1.3	77.6	1.9
2017	Mar	0.8	1.0	2.2	77.9	1.8
	Jun	0.9	0.0	1.7	76.5	1.8
	Sep	0.6	0.5	1.9	77.1	1.8
	Dec	0.6	0.1	1.6	73.8	1.8
2018	Mar	0.5	0.5	1.1	74.9	1.8
	Jun	0.5	0.4	1.5	73.7	1.8
	Sep	0.8	0.4	1.4	73.0	1.8
	Dec	0.7	0.3	1.6	72.9	1.8
2019	Mar	0.8	0.5	1.6	72.9	1.8
	Jun	0.9	0.5	1.7	72.9	1.8
	Sep	0.9	0.5	1.8	72.8	1.8
	Dec	0.9	0.3	1.8	72.7	1.8
2020	Mar	0.8	0.5	1.8	72.5	1.8
	Jun	0.8	0.6	1.8	72.5	1.8
	Sep	0.7	0.6	1.9	72.4	1.9
	Dec	0.7	0.3	1.9	72.3	2.0
2021	Mar	0.7	0.6	2.0	72.3	2.1
	Jun	0.6	0.6	2.0	72.3	2.2
	Sep	0.6	0.7	2.1	72.2	2.3

Table 6.2
Measures of inflation, inflation expectations, and asset prices

	2016	2017				2018		
	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep
Inflation (annual rates)								
CPI	1.3	2.2	1.7	1.9	1.6	1.1	1.5	
CPI non-tradables	2.4	2.5	2.4	2.6	2.5	2.3	2.5	
CPI tradables	-0.1	1.6	0.9	1.0	0.5	-0.4	0.1	
Sectoral factor model estimate of core inflation	1.4	1.4	1.4	1.4	1.5	1.6	1.7	
CPI trimmed mean (30 percent)	1.7	2.1	1.9	2.1	1.8	1.7	1.8	
CPI weighted median	2.0	2.2	2.0	2.0	2.0	2.2	2.3	
GDP deflator (expenditure)	4.1	3.8	3.0	3.6	3.1	1.3		
Inflation expectations								
ANZ Business Outlook - inflation one year ahead (quarterly average to date)	1.5	1.8	2.0	1.9	2.2	2.1	2.2	2.2
RBNZ Survey of Expectations - inflation two years ahead	1.7	1.9	2.2	2.1	2.0	2.1	2.0	2.0
RBNZ Survey of Expectations - inflation five years ahead				2.1	2.1	2.1	2.1	2.2
RBNZ Survey of Expectations - inflation 10 years ahead				2.1	2.0	2.1	2.2	2.1
Long-run inflation expectations[1]	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1
Asset prices (annual percent changes)								
Quarterly house price index (CoreLogic NZ)	13.9	10.9	5.5	3.4				
REINZ Farm Price Index (quarterly average to date)	4.9	4.5	5.2	9.5	9.7	2.6	3.8	
NZX 50 (quarterly average to date)	15.8	12.8	7.6	6.6	17.5	17.5	16.8	15.8

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

Table 6.3
Measures of labour market conditions
(seasonally adjusted, changes expressed in annual percent terms)

	2016		2017			2018	
	Dec	Mar	Jun	Sep	Dec	Mar	Jun
Household Labour Force Survey							
Unemployment rate	5.3	4.9	4.8	4.6	4.5	4.4	4.5
Underutilisation rate	12.4	12.2	11.9	12.0	12.2	11.9	12.0
Labour force participation rate	70.5	70.6	70.1	71.1	70.9	70.8	70.9
Employment rate (percentage of working-age population)	66.8	67.2	66.7	67.8	67.7	67.7	67.7
Employment growth	5.8	5.7	3.1	4.1	3.7	3.1	3.7
Average weekly hours worked	33.9	33.3	33.7	33.9	33.6	33.9	34.2
Number unemployed (thousand people)	139	131	127	126	122	120	124
Number employed (million people)	2.51	2.54	2.54	2.59	2.60	2.62	2.63
Labour force (million people)	2.65	2.67	2.66	2.72	2.73	2.74	2.75
Extended labour force (million people)	2.75	2.77	2.76	2.82	2.82	2.84	2.86
Working-age population (million people)	3.76	3.78	3.80	3.82	3.84	3.87	3.89
Quarterly Employment Survey							
Filled jobs growth	3.2	2.5	3.0	2.5	1.8	1.2	1.2
Average hourly earnings growth (private sector, ordinary time)	1.1	1.1	1.1	2.0	3.1	3.9	3.3
Other data sources							
Labour cost index growth, private sector	1.6	1.5	1.6	1.9	1.9	1.9	2.1
Labour cost index growth, private sector, unadjusted	2.9	2.9	3.1	3.6	3.6	3.5	3.5
Net permanent and long-term working-age immigration (quarterly, thousand people)	15.3	15.4	16.1	13.4	14.3	13.8	13.2
Change in All Vacancies Index	15.6	13.7	9.9	6.7	5.9	6.5	7.5

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 which 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*.

Table 6.4
Composition of real GDP growth
(annual average percent change, seasonally adjusted, unless specified otherwise)

	Actuals								Projections		
March year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Final consumption expenditure											
Private	2.3	3.2	2.3	3.8	3.2	3.9	5.5	3.8	2.9	2.6	2.5
Public authority	1.9	1.7	-0.2	2.1	3.2	2.5	1.9	4.9	2.2	1.9	1.6
	2.2	2.9	1.7	3.4	3.2	3.6	4.6	4.0	2.8	2.4	2.3
Gross fixed capital formation											
Residential	1.7	3.0	17.6	15.1	8.2	7.6	9.5	0.7	3.5	4.3	4.7
Other	4.3	6.9	1.6	8.1	8.3	3.8	4.2	5.1	3.5	3.9	4.6
	3.7	6.0	5.0	9.8	8.2	4.7	5.5	3.9	3.5	4.0	4.6
Final domestic expenditure	2.5	3.5	2.4	4.7	4.3	3.8	4.9	4.0	2.9	2.8	2.9
Stockbuilding[1]	0.7	0.3	-0.3	-0.2	0.5	-0.3	-0.1	0.0	0.1	0.1	0.0
Gross national expenditure	3.3	4.0	2.0	4.5	4.6	3.3	4.8	4.2	2.9	2.9	2.9
Exports of goods and services	2.8	2.3	3.1	-0.1	4.2	5.8	0.7	3.8	3.0	4.3	3.2
Imports of goods and services	11.4	6.7	1.3	8.1	7.5	2.1	5.1	7.0	4.0	2.7	2.4
Expenditure on GDP	1.0	2.7	2.5	2.0	3.5	4.4	3.6	3.2	2.6	3.4	3.1
GDP (production)	1.6	2.3	2.2	2.6	3.7	3.6	3.8	2.7	2.6	3.4	3.2
GDP (production, March qtr to March qtr)	1.2	3.0	1.8	3.2	3.7	4.0	3.0	2.7	2.9	3.5	3.0

1 Percentage point contribution to the growth rate of GDP.

Table 6.5
Summary of economic projections
(annual percent change, unless specified otherwise)

	Actuals								Projections		
March year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Price measures											
CPI	4.5	1.6	0.9	1.5	0.3	0.4	2.2	1.1	1.6	1.8	2.0
Labour costs	2.0	2.1	1.8	1.7	1.8	1.8	1.5	1.9	2.0	2.2	2.4
Export prices (in New Zealand dollars)	7.9	-2.7	-4.9	11.5	-9.1	-0.3	4.1	3.3	2.5	0.9	1.7
Import prices (in New Zealand dollars)	3.4	-1.7	-4.0	-3.1	-3.4	1.1	0.5	1.9	3.8	0.9	0.7
Monetary conditions											
OCR (year average)	2.8	2.5	2.5	2.5	3.4	2.9	2.0	1.8	1.8	1.8	1.9
TWI (year average)	69.0	72.2	74.0	77.6	79.3	72.6	76.5	75.6	73.1	72.7	72.3
Output											
GDP (production, annual average % change)	1.6	2.3	2.2	2.6	3.7	3.6	3.8	2.7	2.6	3.4	3.2
Potential output (annual average % change)	1.4	1.7	2.1	2.5	2.9	3.0	3.2	3.1	3.0	2.9	2.9
Output gap (% of potential GDP, year average)	-2.2	-1.6	-1.4	-1.3	-0.5	0.1	0.6	0.2	-0.2	0.3	0.6
Labour market											
Total employment (seasonally adjusted)	1.6	0.6	0.2	3.7	3.2	2.0	5.7	3.1	1.9	1.7	1.5
Unemployment rate (March qtr, seasonally adjusted)	6.0	6.3	5.7	5.5	5.4	5.2	4.9	4.4	4.4	4.2	4.2
Trend labour productivity	1.1	1.0	0.8	0.5	0.2	0.0	-0.1	0.0	0.4	0.8	1.1
Key balances											
Government operating balance (% of GDP, year to June)	-8.9	-4.3	-2.0	-1.2	0.2	0.7	1.5	1.1	0.8	1.3	1.3
Current account balance (% of GDP)	-2.8	-3.2	-3.7	-2.5	-3.6	-2.7	-2.7	-2.8	-3.5	-3.1	-2.7
Terms of trade (SNA measure, annual average % change)	7.9	1.6	-4.3	11.7	-0.3	-3.0	2.7	4.6	-2.5	-0.7	0.7
Household saving rate (% of disposable income)	2.1	2.4	0.5	0.1	-1.5	-1.3	-2.8	-2.9	-2.0	-1.1	0.0
World economy											
Trading-partner GDP (annual average % change)	4.4	3.4	3.3	3.5	3.7	3.4	3.3	3.8	3.8	3.6	3.2
Trading-partner CPI (TWI weighted)	3.2	2.7	2.3	2.3	1.0	1.2	1.9	1.9	2.0	2.2	2.3