



Monetary Policy Statement

August 2016

Policy Targets Agreement

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. Price stability

- 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 Government's economic objective is to promote a growing, open and competitive economy as the best means of delivering permanently higher incomes and living standards for New Zealanders. Price stability plays an important part in supporting this objective.

2. Policy target

- a) In pursuing the objective of a stable general level of prices, the Bank shall monitor prices, including asset prices, as measured by a range of price indices. 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 CPI inflation outcomes between 1 per cent and 3 per cent on average over the medium term, with a focus on keeping future average inflation near the 2 per cent target midpoint.

3. Inflation variations around target

- a) For a variety of reasons, the actual annual rate of CPI inflation will vary around the medium-term trend of inflation, which is the focus of the policy target. Amongst these reasons, there is a range of events whose impact would normally be temporary. Such events include, for example, shifts in the aggregate price level as a result of exceptional movements in the prices of commodities traded in

world markets, changes in indirect taxes, significant government policy changes that directly affect prices, or a natural disaster affecting a major part of the economy.

- b) When disturbances of the kind described in clause 3(a) arise, the Bank will respond consistent with meeting its medium-term target.

4. Communication, implementation and accountability

- a) On occasions when the annual rate of inflation is outside the medium-term target range, or when such occasions are projected, the Bank shall explain in *Policy Statements* made under section 15 of the Act why such outcomes have occurred, or are projected to occur, and what measures it has taken, or proposes to take, to ensure that inflation outcomes remain consistent with the medium-term target.
- b) In pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner, have regard to the efficiency and soundness of the financial system, and seek to avoid unnecessary instability in output, interest rates and the exchange rate.
- c) The Bank shall be fully accountable for its judgements and actions in implementing monetary policy.



Hon Bill English

Minister of Finance



Graeme Wheeler

Governor Designate
Reserve Bank of New
Zealand

Dated at Wellington 20 September 2012

Monetary Policy Statement

August 2016

Projections finalised on 3 August 2016. Data finalised on 4 August 2016.
Policy assessment finalised on 10 August 2016.



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Chapter 1

Policy assessment



The Reserve Bank today reduced the Official Cash Rate (OCR) by 25 basis points to 2.0 percent.

Global growth is below trend despite being supported by unprecedented levels of monetary stimulus. Significant surplus capacity remains across many economies and, along with low commodity prices, is suppressing global inflation. Some central banks have eased policy further since the June Monetary Policy Statement, and long-term interest rates are at record lows. The prospects for global growth and commodity prices remain uncertain. Political risks are also heightened.

Weak global conditions and low interest rates relative to New Zealand are placing upward pressure on the New Zealand dollar exchange rate. The trade-weighted exchange rate is significantly higher than assumed in the June Statement. The high exchange rate is adding further pressure to the export and import-competing sectors and, together with low global inflation, is causing negative inflation in the tradables sector. This makes it difficult for the Bank to meet its inflation objective. A decline in the exchange rate is needed.

Domestic growth is expected to remain supported by strong inward migration, construction activity, tourism, and accommodative monetary policy. However, low dairy prices are depressing incomes in the dairy sector and reducing farm spending and investment. High net immigration is supporting strong growth in labour supply and limiting wage pressure.

House price inflation remains excessive and has become more broad-based across the regions, adding to concerns about financial stability. The Bank is consulting on stronger macro-prudential measures that should help to mitigate financial system risks arising from the rapid escalation in house prices.

Headline inflation is being held below the target band by continuing negative tradables inflation. Annual CPI inflation is expected to weaken in the September quarter, reflecting lower fuel prices and cuts in ACC levies. Annual inflation is expected to rise from the December quarter, reflecting the policy stimulus to date, the strength of the domestic economy, reduced drag from tradables inflation, and rising non-tradables inflation. Although long-term inflation expectations are well-anchored at 2 percent, the sustained weakness in headline inflation risks further declines in inflation expectations.

Monetary policy will continue to be accommodative. Our current projections and assumptions indicate that further policy easing will be required to ensure that future inflation settles near the middle of the target range. We will continue to watch closely the emerging economic data.

Graeme Wheeler

A handwritten signature in black ink, appearing to read 'G Wheeler'.

Governor

Chapter 2

Key policy judgements



- Weak global conditions continue to dampen inflationary pressure in New Zealand, particularly as the elevated exchange rate and low import prices depress tradables inflation.
- The prolonged period of negative tradables inflation is driving low headline inflation, and dragging on inflation expectations and the outlook for inflation.
- Monetary policy has provided significant stimulus to the economy in response to the weak inflation outlook. However, additional monetary stimulus is needed to help lower the exchange rate and to guard against further declines in inflation expectations.

Weak global conditions are suppressing inflationary pressure in New Zealand through a range of channels. Although global output is growing at around average rates, it remains fragile and is being supported by unprecedented monetary stimulus. Significant spare capacity remains, and increased supply in key commodity markets has contributed to falls in commodity prices over the past two years.

Relatively positive domestic growth prospects and low global interest rates have resulted in strong investor appetite for New Zealand dollar assets and an appreciation in the New Zealand dollar exchange rate since the beginning of the year. The New Zealand dollar trade-weighted index (TWI) is 6 percent higher than assumed in the June *Statement*. The elevated exchange rate is reducing the competitiveness of exporters and import-competing businesses, and weighing on tradables inflation.

Falling prices for New Zealand's key commodity exports have caused a significant decline in the terms of trade in recent years, despite declines in import prices. Low global prices for dairy products have reduced farm incomes and spending, and affected confidence, consumption, and investment more broadly.

Declines in global commodity prices, subdued global inflation, and the high exchange rate have translated into low import prices and

suppressed tradables inflation. Tradables inflation has been negative since 2012.

Since mid-2014, negative tradables inflation has been driven partly by sharp declines in oil prices. Falls across a range of commodity prices and continued global spare capacity have seen prices of New Zealand's other imports also decline over the past year.

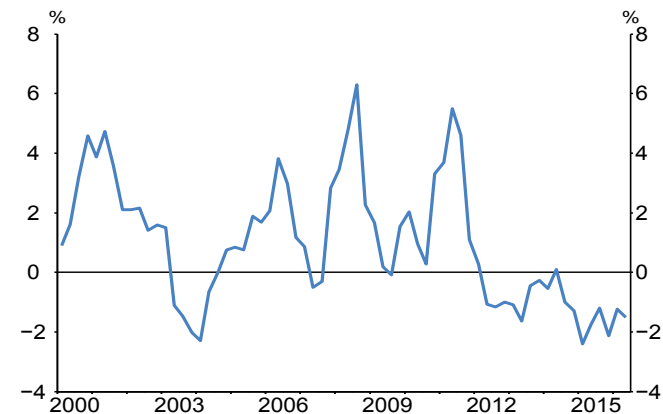
The current prolonged period of weakness in tradables inflation is unusual historically (figure 2.1). In the past, sharp movements in tradables inflation have tended to reflect transitory price movements, such as volatile swings in global commodity prices and the exchange rate. Consequently, monetary policy has typically been able to look through these temporary movements in prices, focusing instead on the medium-term trend in inflation.

Given the outlook for global inflation and policy rates, low tradables inflation appears likely to continue for some time. This unusual persistence in tradables inflation has contributed to low headline CPI inflation, which is in turn seeping into inflation expectations, and presents an ongoing challenge for monetary policy.

Inflation expectations seem to respond to the persistent component of observed headline inflation. Low headline inflation, driven in part by negative tradables inflation, has contributed to reduced inflation expectations. Headline inflation is expected to remain weak in the near term due to the appreciation of the TWI, renewed softness in fuel prices in recent weeks, and further reductions in ACC motor vehicle levies.

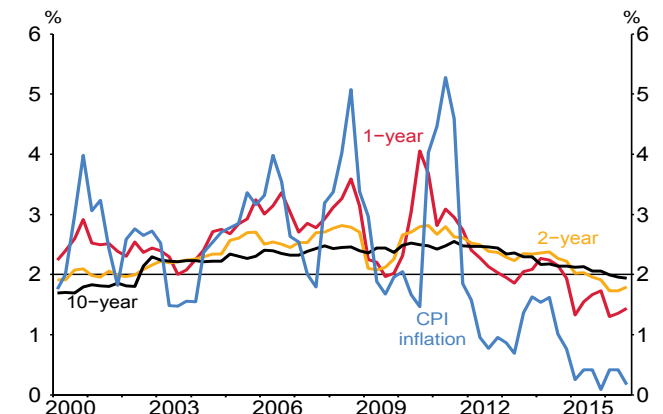
Short-term inflation expectations appear to have stabilised since March, but there remains a risk of further declines in expectations stemming from persistent low inflation (figure 2.2). A further sustained decline in inflation

Figure 2.1
Tradables inflation
(annual)



Source: Statistics New Zealand.

Figure 2.2
Inflation expectations
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Note: Inflation expectations measures are estimates drawn at each time horizon from the RBNZ inflation expectations curve.

expectations would be concerning. Dampened wage- and price-setting behaviour would weigh on future inflation, particularly over the time horizon relevant for monetary policy, and would make it difficult to meet the inflation target.

It is important to reduce the risk that long-term inflation expectations fall further and become unanchored from the target midpoint. The Bank judges that monetary policy will need to be more stimulatory than projected in June (figure 2.3).

Continued low interest rates are expected to provide significant stimulus to activity across the economy, increasing capacity pressure and inflation. GDP growth is forecast to be 3.4 percent in each of the next two years. As growth in productive capacity is forecast to be about 2.7 percent, this rate of GDP growth should see capacity pressure rise and contribute to an increase in non-tradables inflation.

Low interest rates reduce the required rate of return on investment and the cost of working capital, encouraging businesses to undertake investment they may not have done otherwise. In an environment of high net immigration and housing supply shortages, low interest rates stimulate residential investment. In light of this, the projected increase in capacity pressures reflects an increasing draw on resources – particularly from construction activity.

Low interest rates also contribute to housing demand and rising house prices, which have historically translated into increased private consumption through a wealth effect. While this wealth effect may be weaker in the current cycle, monetary stimulus is still expected to generate stronger consumption. As activity increases, employment, income, and confidence effects should also support household spending.

Figure 2.3
90-day interest rate



Source: RBNZ estimates.

The Policy Targets Agreement (PTA) mandates the Bank to keep future CPI inflation outcomes between 1 percent and 3 percent on average over the medium term, with a focus on keeping future average inflation near the 2 percent target midpoint. To move CPI inflation back within the target band, additional monetary stimulus is needed. Nevertheless, there is a risk that the additional monetary stimulus will intensify house price inflation, which is already at high levels in several regions. The recently proposed changes to macro-prudential policy should help to mitigate the risks to financial stability stemming from high house prices and rapid house price inflation.

This set of economic projections outlines the Bank's plan for interest rates to meet the requirements of the PTA. Our assessment of the outlook and the appropriate policy response depends on several judgements about how global conditions might evolve, and how the domestic economy responds in this environment. If the assumptions

underpinning these projections prove to be inconsistent with incoming data, the outlook for monetary policy will be revised. Two key assumptions are that:

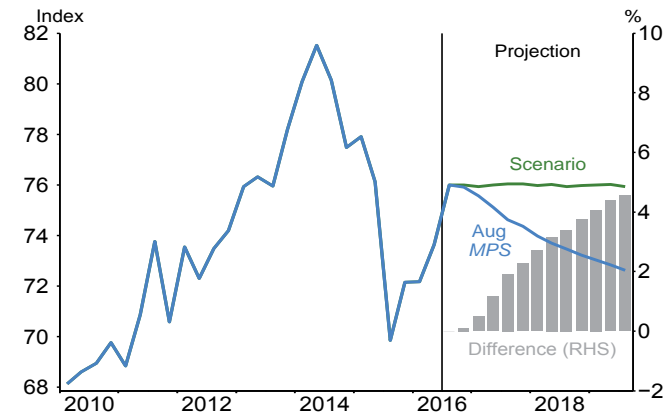
- global conditions improve, generating a modest depreciation in the New Zealand dollar exchange rate; and
- inflation expectations gradually increase and reduce their drag on headline inflation.

The exchange rate

The New Zealand dollar TWI is assumed to depreciate gradually to about 73, as global conditions improve and policy rates overseas increase, closing the differential between the return on New Zealand dollar and foreign currency assets. However, if the outlook for global growth and inflation remains weak, or deteriorates further, world interest rates may remain lower for longer than is currently anticipated, maintaining or increasing New Zealand's interest rate differential. This could cause the New Zealand dollar TWI to remain at elevated levels.

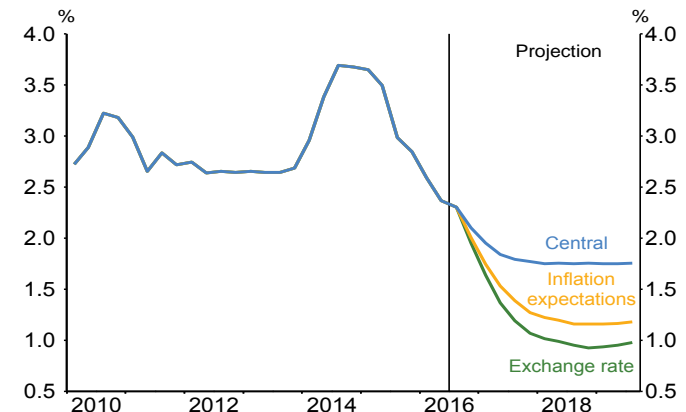
In the scenario presented in figure 2.4, the TWI is assumed to remain at its current level throughout the projection due to weaker global conditions. The higher exchange rate reduces the prices of imported goods and services, directly lowering tradables inflation. The higher exchange rate would also weigh on domestic activity through fewer exports, and substitution of expenditure from domestically-produced to imported goods. Additional monetary stimulus would be required to offset the dampening impact on inflation (figure 2.5).

Figure 2.4
New Zealand dollar TWI



Source: RBNZ estimates.

Figure 2.5
90-day interest rate



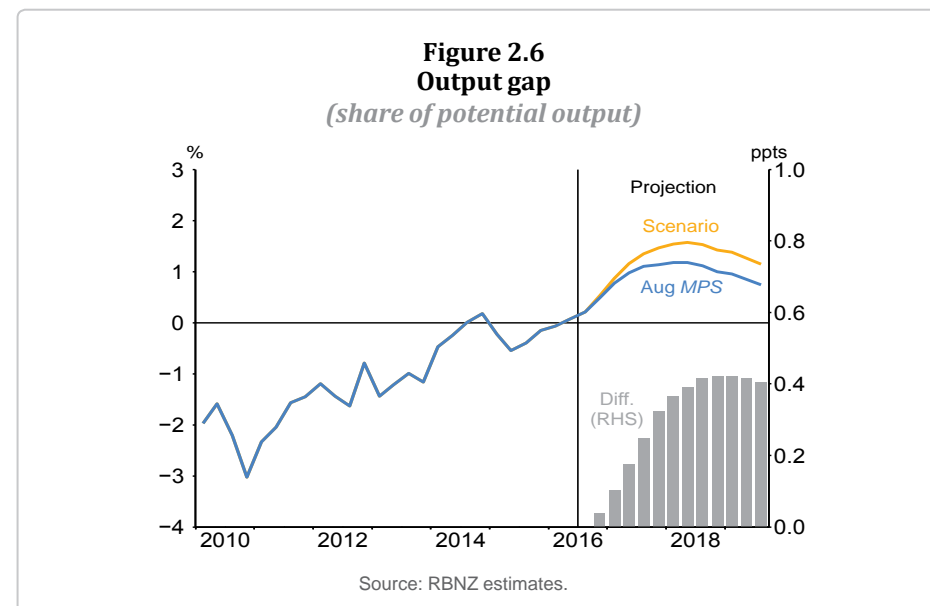
Source: RBNZ estimates.

Inflation expectations

Short-term inflation expectations have fallen below the midpoint of the target range following observed low headline inflation. Low inflation expectations affect future inflation by dampening wage- and price-setting behaviour, and by raising real interest rates, thereby reducing the stimulus to the economy for a given level of nominal interest rates. Short-term inflation expectations are assumed to gradually increase over the projection as headline inflation increases.

Inflation expectations appear well-anchored. Long-term inflation expectations continue to be close to 2 percent and are expected to remain around this level.

The main risk to this assumption is that inflation expectations decline further. Such a movement – particularly if long-term inflation expectations were also affected – would be concerning and potentially costly to reverse. If inflation expectations become unanchored, significantly lower policy rates would be required to generate a strong enough output gap (figure 2.6) and sufficient inflationary pressure to ensure inflation returns to target.



Box A

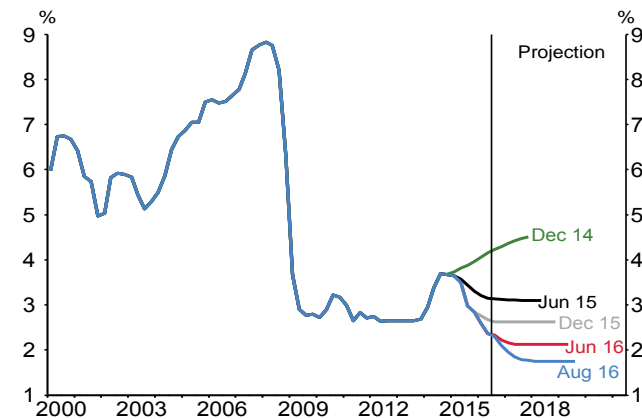
Recent monetary policy decisions

In recent years, global developments have been a dominant influence on domestic inflationary pressure, and monetary policy decisions. The Bank lowered the OCR by 100 basis points through 2015. Accounting for the projected forward path of interest rates, the downward revision was considerably larger – around 200 basis points – as the Bank moved from a tightening to an easing bias (figure A.1). Global economic conditions deteriorated, and the prices of New Zealand's key export commodities fell markedly. Despite import prices also declining, the terms of trade fell, dampening confidence, and weighing on consumption and investment. Weakness in global labour markets and relatively strong labour market conditions in New Zealand contributed to strong levels of net immigration, supporting rapid labour force growth and limiting the increase in capacity pressure.

In March 2016, the Bank cut the OCR by a further 25 basis points. Contributing to this decision was heightened volatility in financial markets and a sharp fall in short-term inflation expectations.

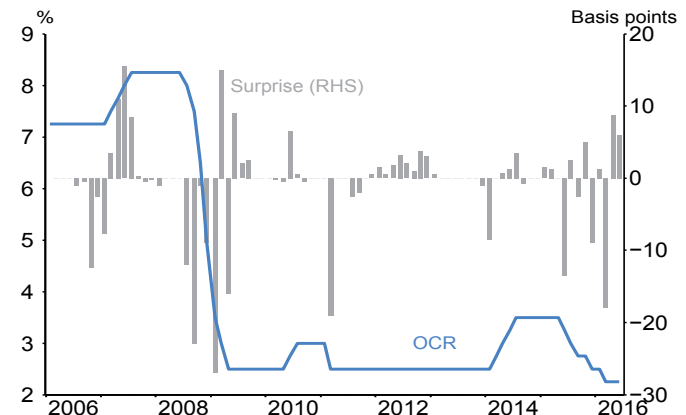
Inflation expectations have remained stable since March, volatility in financial markets has settled, and oil prices have increased from their January low. However, improved risk appetite in financial markets and a widening of New Zealand's interest rate differential contributed to an appreciation of the New Zealand dollar exchange rate. Domestically, house price strength reasserted itself following some slowing through the end of 2015, and broadened beyond Auckland. In response to these developments, the Bank held the OCR at 2.25 percent at both the April OCR Review and the June *Statement*, but retained its easing bias.

Figure A.1
90-day interest rate



Source: RBNZ estimates.

Figure A.2
OCR and surprise measure



Source: RBNZ estimates.

The forward path for interest rates presented by the Bank depends on a set of assumptions. As these assumptions are updated, the monetary policy stance can change. Central banks seek to be transparent in signalling changes in monetary policy stance, but a degree of surprise is not unusual around monetary policy decisions. This surprise element tends to be greater in times of higher-than-normal uncertainty, or when economic developments are evolving quickly.

Figure A.2 indicates that, in recent years, there has been a long period of relative stability in the OCR and therefore little surprise associated with monetary policy decisions. Over the past year, as uncertainty has increased and the global outlook has deteriorated, and as the Bank has sought to balance conflicting influences on the outlook for domestic inflation, the frequency and magnitude of surprises from monetary policy decisions have increased. This was also the case before and immediately after the Global Financial Crisis.

Table 2.1
Key forecast variables

| | | GDP growth Quarterly | CPI inflation Quarterly | CPI inflation Annual | TWI | 90-day bank bill rate |
|------|-----|---------------------------------|------------------------------------|---------------------------------|------------|----------------------------------|
| 2014 | Mar | 1.4 | 0.3 | 1.5 | 80.1 | 3.0 |
| | Jun | 0.9 | 0.3 | 1.6 | 81.5 | 3.4 |
| | Sep | 0.9 | 0.3 | 1.0 | 80.1 | 3.7 |
| | Dec | 0.9 | -0.2 | 0.8 | 77.5 | 3.7 |
| 2015 | Mar | 0.2 | -0.2 | 0.3 | 77.9 | 3.6 |
| | Jun | 0.3 | 0.4 | 0.4 | 76.1 | 3.5 |
| | Sep | 0.8 | 0.3 | 0.4 | 69.8 | 3.0 |
| | Dec | 0.9 | -0.5 | 0.1 | 72.1 | 2.8 |
| 2016 | Mar | 0.7 | 0.2 | 0.4 | 72.2 | 2.6 |
| | Jun | 0.8 | 0.4 | 0.4 | 73.6 | 2.4 |
| | Sep | 0.8 | 0.1 | 0.2 | 76.0 | 2.3 |
| | Dec | 0.9 | 0.3 | 1.0 | 75.9 | 2.1 |
| 2017 | Mar | 1.0 | 0.2 | 1.1 | 75.6 | 2.0 |
| | Jun | 0.9 | 0.6 | 1.2 | 75.1 | 1.8 |
| | Sep | 0.8 | 0.5 | 1.7 | 74.6 | 1.8 |
| | Dec | 0.7 | 0.2 | 1.6 | 74.4 | 1.8 |
| 2018 | Mar | 0.7 | 0.4 | 1.7 | 74.0 | 1.8 |
| | Jun | 0.6 | 0.6 | 1.8 | 73.7 | 1.8 |
| | Sep | 0.6 | 0.6 | 2.0 | 73.5 | 1.8 |
| | Dec | 0.5 | 0.3 | 2.0 | 73.2 | 1.8 |
| 2019 | Mar | 0.6 | 0.5 | 2.1 | 73.0 | 1.8 |
| | Jun | 0.5 | 0.6 | 2.1 | 72.8 | 1.8 |
| | Sep | 0.5 | 0.7 | 2.2 | 72.6 | 1.8 |

Chapter 3

International developments

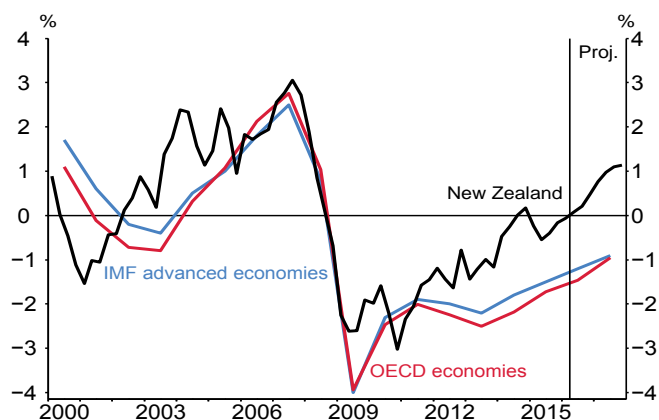


- Global economic activity has been subdued for some time, and output remains below potential in many economies.
- Internationally, inflation is low due to significant spare capacity in many factor and product markets, and large falls in commodity prices.
- Global activity is being supported by extraordinarily accommodative monetary policy, which is expected to be supplemented by more expansive fiscal policy in some countries. Global interest rates have fallen to historic lows since the June *Statement*.
- Subdued global conditions are suppressing inflation and activity in New Zealand, especially through low import prices and the elevated New Zealand dollar exchange rate.
- Downside risks to the global growth outlook remain substantial.

Global economic conditions are fragile, with output below potential in many economies. Inflation is low, and the prices of many commodities have fallen sharply in recent years. Activity is being supported by extraordinarily accommodative monetary policy and global interest rates have fallen to historic lows. The protracted slowdown in economic growth is creating structural challenges for the financial system and leaving financial markets vulnerable to periodic bouts of volatility. In addition, increased geopolitical tensions are creating further uncertainty about the outlook.

The subdued global environment is causing very low inflation in New Zealand. As discussed in chapter 4, low global inflation is suppressing the prices of New Zealand's imports, while low dairy prices are dampening activity in the dairy sector. Furthermore, New Zealand's relatively positive growth outlook is contributing to the prices of New Zealand dollar assets being inflated, in particular the value of the exchange rate. The effects of the global economy on the outlook for New Zealand are discussed further in chapter 5.

Figure 3.1
Advanced economy output gaps
(share of potential output)

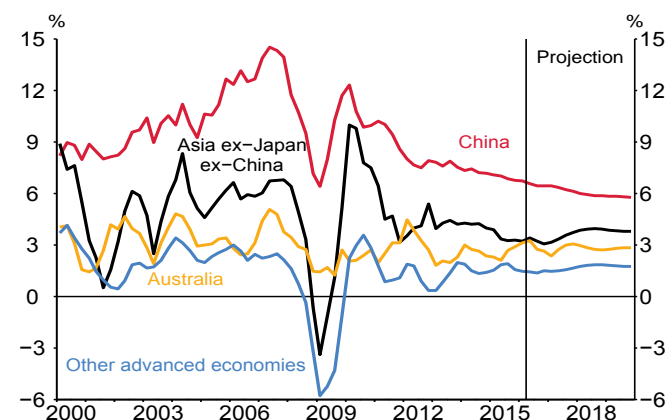


Source: Haver Analytics, RBNZ estimates.

Growth in advanced economies has been subdued since 2009. This can be attributed in part to high debt levels and weak demand. Some countries are also experiencing slowing growth in domestic demand due to an aging population. Although an aggressive global monetary policy response has increased activity and gradually eroded spare capacity, output gaps in advanced economies are negative and are expected to remain so over the forecast period (figure 3.1). In contrast, the New Zealand economy is operating near capacity. This divergence has created a tension between a weak global backdrop and relatively strong domestic conditions.

Growth is expected to be subdued in most of New Zealand's main trading partners in 2016, with only a modest improvement in 2017 (figure 3.2). Slowing world trade volumes are having a particular impact on trade-sensitive economies in Asia and commodity-exporting economies. In China, actions by policymakers are supporting the near-term growth

Figure 3.2
Trading-partner growth
(annual)



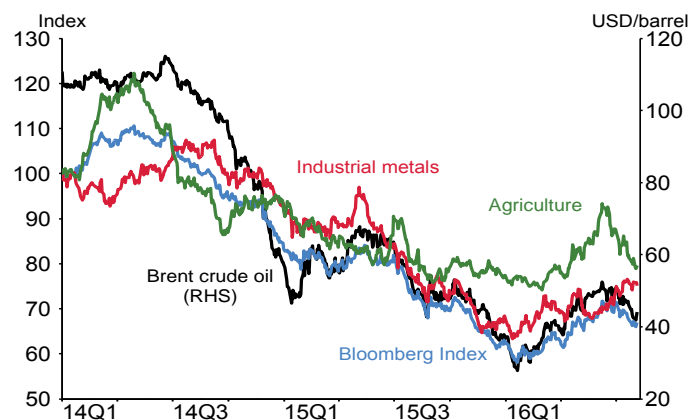
Source: Haver Analytics, RBNZ estimates.

Note: Asia ex-China ex-Japan includes Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan, Thailand, and the Philippines. Other advanced economies include Canada, the euro area, Japan, the United Kingdom, and the United States.

outlook. However, the underlying pace of China's growth appears to be moderating and significant risks remain around the economic outlook. The Australian economy is re-balancing away from mining investment, and growth is continuing at a moderate pace. Growth in the United Kingdom and the euro area are expected to be lower over the next two years following the United Kingdom referendum result to leave the European Union. The United States economy has made considerable progress in reducing spare capacity.

Global commodity prices have declined substantially over the past two years (figure 3.3). In many commodity markets, supply remains high despite low prices. Commodity prices troughed in January during a period of heightened concerns about the outlook for global demand. Prices are expected to remain low relative to levels seen in recent years.

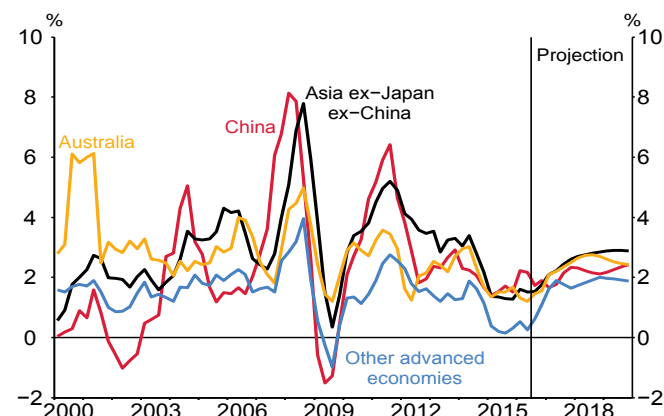
Figure 3.3
Commodity prices



Source: Bloomberg.

Note: The Bloomberg Index and sub-components have been indexed to 1 January 2014.

Figure 3.4
Trading-partner inflation
(annual)



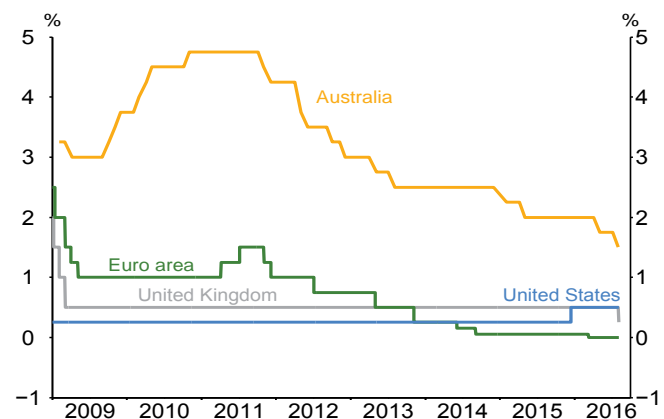
Source: Haver Analytics, RBNZ estimates.

Note: Asia ex-China ex-Japan includes Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan, Thailand, and the Philippines. Other advanced economies include Canada, the euro area, Japan, the United Kingdom, and the United States.

As a result of significant global spare capacity and low commodity prices, trading-partner inflation is very low (figure 3.4). Headline inflation is expected to increase over the next year as commodity prices gradually increase and spare capacity is gradually eroded. Nonetheless, underlying inflationary pressures are expected to remain benign.

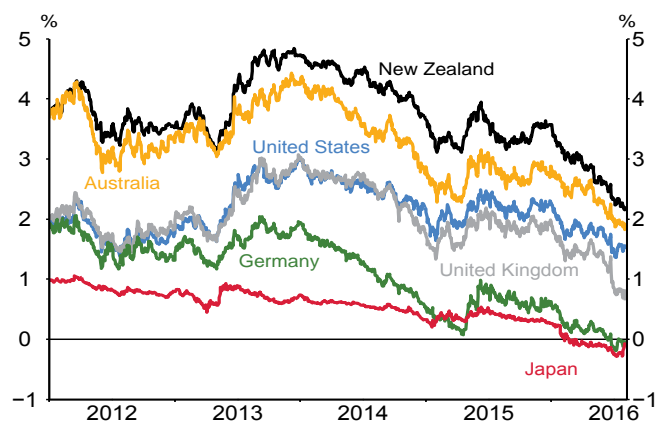
Global growth is being supported by extraordinarily accommodative monetary policy (figure 3.5). The Bank of England announced a large stimulus package in August, cutting its policy rate to a historic low and reviving its quantitative easing programme. The European Central Bank is expected to take further steps to ensure that its asset purchase programme continues to stimulate the euro area. The Reserve Bank of Australia reduced its policy rate to a historic low in August. The one major exception to the easing trend is the United States, where the Federal Reserve is slowly withdrawing stimulus, but is proceeding with caution.

Figure 3.5
Central bank policy rates



Source: Bloomberg.

Figure 3.6
10-year government bond yields



Source: Bloomberg.

Monetary policy may be approaching its limits of effectiveness in some economies, and therefore more expansive fiscal policy is expected. In Japan, a major new fiscal package has been announced, and some further monetary easing is anticipated.

Global interest rates have fallen to historically low levels since the June *Statement* (figure 3.6). This is due to heightened global uncertainty, downward revisions to the global growth outlook, and an expected increase in monetary policy stimulus. Long-term interest rates have become negative in many countries, such as Japan, Germany, and Switzerland. In New Zealand, long-term interest rates have fallen along with global rates, with the 10-year government bond yield reaching a historic low of 2.2 percent at the end of July.

Against the backdrop of a weak global economy and low interest rates, New Zealand dollar assets have proved attractive. This is reflected in a

Figure 3.7
New Zealand dollar TWI



Source: Bloomberg.

strong share market, falling bond yields, and a high New Zealand dollar exchange rate (figure 3.7). Since the June *Statement*, the New Zealand dollar TWI has appreciated about 4 percent and appears elevated in comparison to the level of New Zealand's export commodity prices, interest rate differentials, and relative economic activity.

Downside risks to the global growth outlook remain substantial. In many economies, policy makers are challenged by a lack of policy space should world growth slow further. The global financial system is being challenged by low growth and interest rates. The market value of some European banks has declined since June.

Geopolitical tensions are adding to global uncertainty. The United Kingdom referendum result to leave the European Union has created considerable uncertainty about political and economic outcomes.

Chapter 4

Current domestic conditions



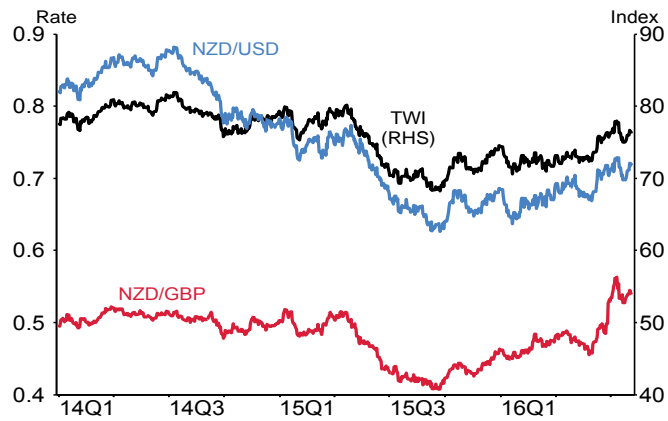
- Continued weak global economic conditions have led to persistently weak tradables inflation. Alongside below-average non-tradables inflation, this has seen headline CPI inflation remain below the 1 to 3 percent target range.
- GDP growth is about average, supported by low interest rates, high population growth, increasing residential investment, and strong tourist spending. However, low export commodity prices continue to drag on growth.
- Spare capacity is being absorbed, with the output gap having increased to about zero. In particular, capacity pressure is tightening in the construction sector.
- Short-term inflation expectations appear to have stabilised recently, but remain well below 2015 levels and the 2 percent target midpoint. Long-term inflation expectations remain near the target midpoint.

Imported inflation

Inflation has remained subdued in recent quarters, largely due to weak global conditions, as discussed in chapter 3. Excess capacity has led to low global inflation, directly reducing imported inflation. Central banks have adopted highly accommodative monetary policy to stimulate their economies, which has placed upward pressure on the New Zealand dollar exchange rate and dampened tradables inflation (figure 4.1).

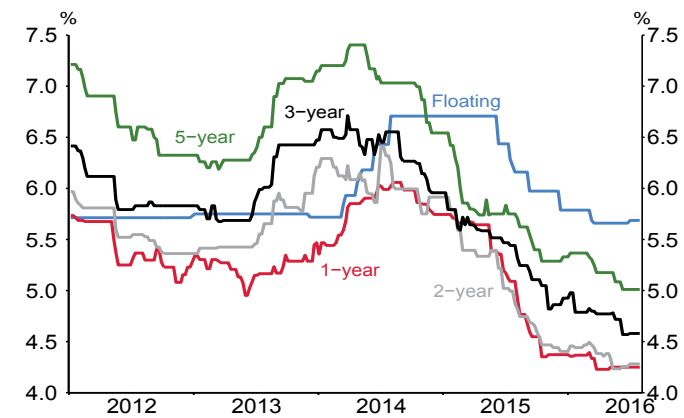
Annual tradables inflation has been negative since 2012, and declined to -1.5 percent in the June quarter (figure 4.2). Fuel prices have fallen 9 percent over the past year, and currently subtract about 0.4 percentage points from headline inflation. Fuel prices have softened again recently, and this is expected to further lower tradables inflation in the September quarter. Excluding the effects of vehicle fuel prices, which are typically highly volatile, annual tradables inflation currently sits at -0.6 percent.

Figure 4.1
New Zealand dollar exchange rates



Source: Thompson Reuters, RBNZ.

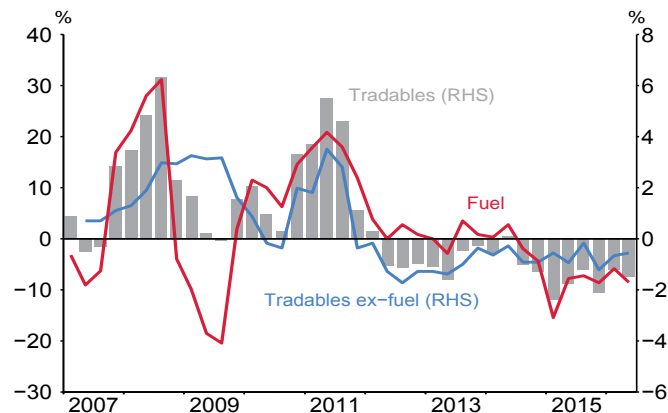
Figure 4.3
Mortgage interest rates



Source: interest.co.nz, RBNZ estimates.

Note: Each rate shown is the average rate on offer from four banks: ANZ, ASB, BNZ, and Westpac.

Figure 4.2
Components of tradables inflation
(annual)



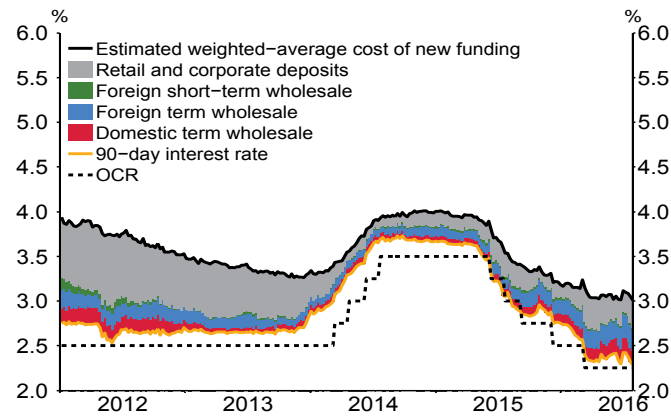
Source: Statistics New Zealand, RBNZ estimates.

Domestic financial conditions

In response to weak inflationary pressure, the Bank lowered the OCR and has maintained an easing bias. Along with lower global interest rates, this saw mortgage interest rates fall to record lows across all terms in early 2016 (figure 4.3). Mortgage interest rates have remained broadly stable in recent months.

Global funding markets have been relatively settled since March, despite uncertainty related to the health of some European banks and the United Kingdom referendum result to leave the European Union. Consistent with this, the wedge between the OCR and our estimate of bank funding costs has also been broadly stable since March (figure 4.4).

Figure 4.4
Banks' marginal funding costs



Source: Bloomberg, RBNZ estimates.

Nevertheless, funding spreads remain wider than in 2013. Heightened competition for stable sources of funding has seen interest rates on term deposits remain elevated relative to equivalent wholesale funding rates. For now, relative calm in markets has enabled banks to increase long-term wholesale funding. However, if financial market volatility picks up again, bank funding costs could increase and limit the pass-through of OCR cuts to mortgage rates.

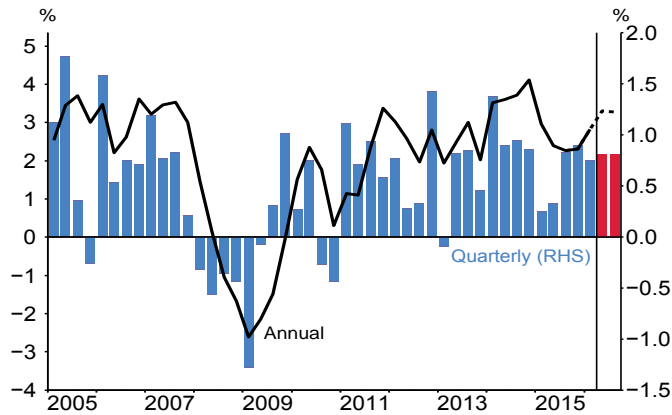
Output growth

Low interest rates have helped to support growth, with the economy expanding by 0.7 percent in the March quarter and 2.8 percent over the year to March (figure 4.5). Growth was buoyed by high population growth, increasing residential investment, and strong tourist spending. Low export prices have seen the primary sector continue to drag on growth. Recent indicators point toward strengthening growth, with GDP growth expected to be around 0.8 percent in each of the next two quarters.

Population growth is being driven by strong net immigration, due in part to weak global economic activity and relatively favourable New Zealand labour market conditions. Annual net permanent and long-term immigration continues to reach new highs, adding 1.7 percent to the working-age population in the year to June. Migration added 14,400 working-age people in the June quarter, down from a peak of 15,700 in the December quarter (figure 4.6). The decline was primarily driven by a fall in arrivals, particularly those from Asia and those on student visas (figure 4.7).

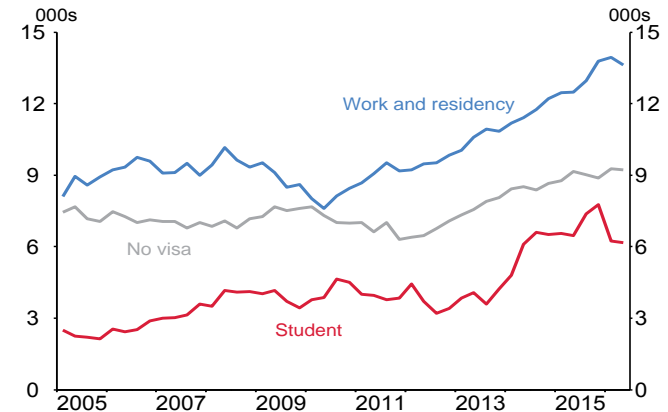
Low mortgage interest rates, strong migration, and housing shortages in parts of the country have placed continued upward pressure on house prices (figure 4.8). House price inflation slowed in Auckland following the introduction of tighter restrictions on loan-to-value ratios and changes to government policy in late 2015. Annual house price inflation in Auckland has stabilised at around 12 percent, but prices have increased by more than 6 percent over the June quarter. Outside Auckland and Canterbury, annual house price inflation has continued to increase since early 2015, reaching 18 percent in June.

Figure 4.5
GDP growth
(s.a.)



Source: Statistics New Zealand, RBNZ estimates.

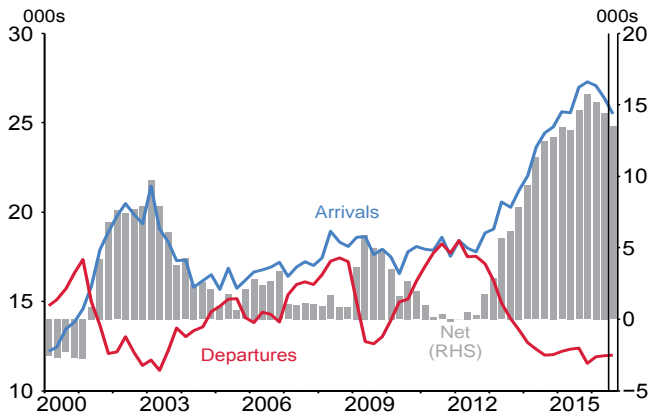
Figure 4.7
Migrant arrivals by visa type
(quarterly, s.a.)



Source: Statistics New Zealand, RBNZ estimates.

Note: The data shown are for permanent and long-term migration.

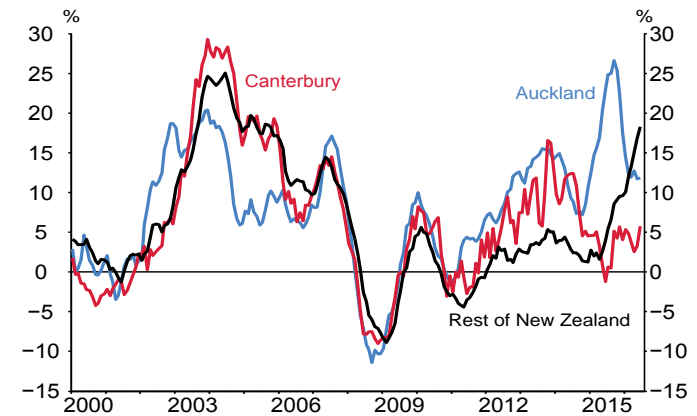
Figure 4.6
Migration
(quarterly, s.a.)



Source: Statistics New Zealand, RBNZ estimates.

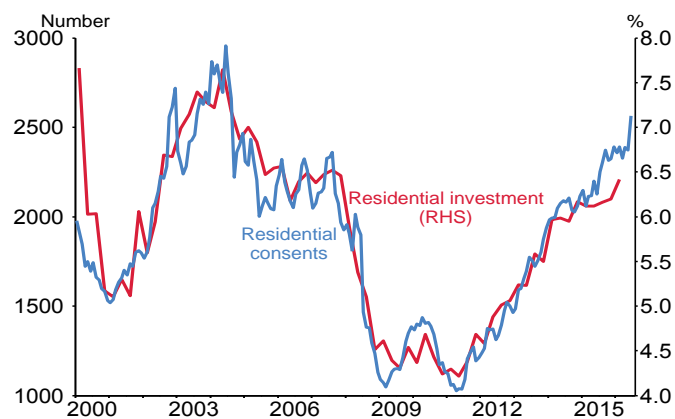
Note: The data shown are for permanent and long-term working-age migration.

Figure 4.8
House price inflation
(annual, 3-month moving average)



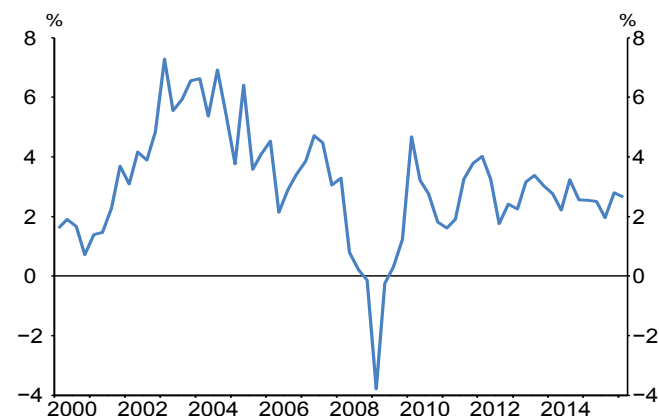
Source: REINZ, RBNZ estimates.

Figure 4.9
Residential investment and building consents
(investment as a share of potential output)



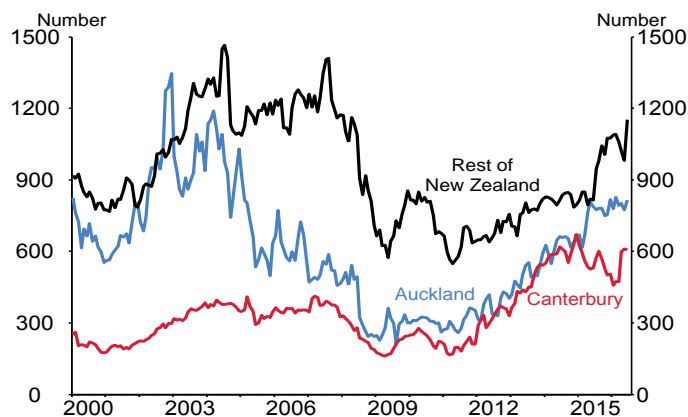
Source: Statistics New Zealand, RBNZ estimates.

Figure 4.11
Consumption growth
(annual)



Source: Statistics New Zealand.

Figure 4.10
Residential building consents by region
(3-month moving average, s.a.)

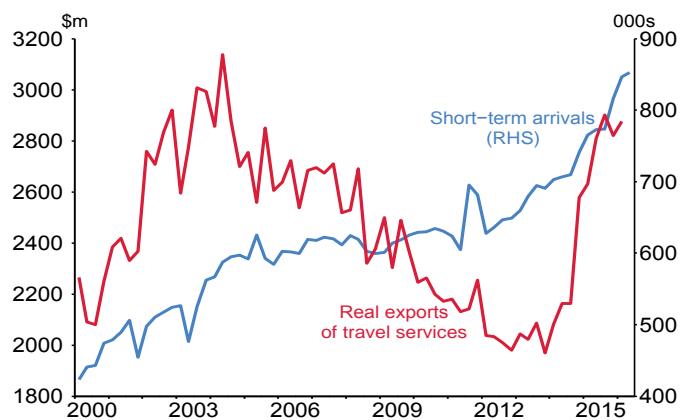


Source: Statistics New Zealand, RBNZ estimates.

Rising house prices, sustained high population growth, and low interest rates have supported residential investment, which increased by 4.2 percent in the March quarter. Strong consent issuance in recent months points towards further growth in residential investment over 2016 (figure 4.9). Outside of Auckland, strength in residential investment has been broad based, with building consents increasing across most regions in the June quarter (figure 4.10). Building consent issuance in Auckland may increase further if changes to the Auckland Unitary Plan permit more responsive supply. The central government recently announced a \$1 billion fund to assist housing infrastructure development by regional councils, which could boost construction further.

Market non-residential investment grew by 1.2 percent in the year to March. Market non-residential consent issuance has increased in Auckland over this period, but trended lower across the rest of New Zealand.

Figure 4.12
Short-term arrivals and real exports of travel services
(quarterly, s.a.)

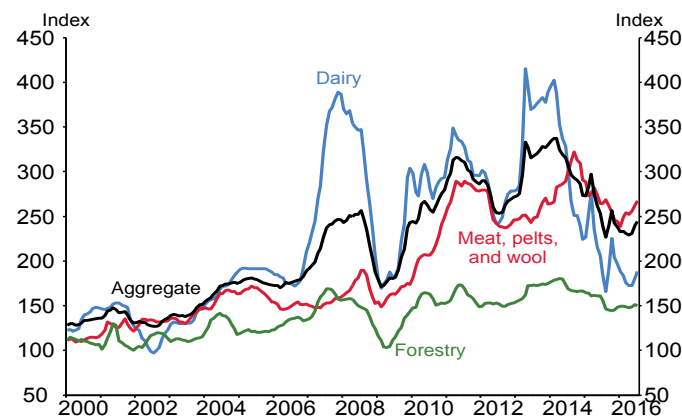


Source: Statistics New Zealand, RBNZ estimates.

Strong population growth has also supported domestic activity by increasing consumption. Nevertheless, consumption growth has only been around average in recent years (figure 4.11). This partly reflects that low export prices and weak consumer confidence have dragged on consumption, despite increasing household wealth and relatively strong growth in real labour incomes.

Strong tourist spending continues to support domestic growth. Visitor arrivals increased by 9 percent in the year to June (figure 4.12), reaching 3.3 million on an annual basis. Arrivals from most regions have increased in recent years, particularly from Asia and Australia. Average expenditure per visitor has declined over the past two quarters, but total visitor spending has remained stable at a high level. Tourist spending may come under pressure if the New Zealand dollar remains elevated.

Figure 4.13
Commodity prices
(SDR, s.a.)



Source: ANZ, RBNZ estimates.

Weak global conditions have resulted in international prices for New Zealand's commodity exports remaining low, dragging on GDP growth. In saying this, the ANZ commodity price index has shown some signs of improvement recently, increasing by 5 percent since January (figure 4.13). Increases were led by prices of meat, pelts, and wool, which were up 12 percent.

Dairy prices have also increased in recent months, but remain low relative to levels seen in recent years. Whole milk powder prices on the Global Dairy Trade platform are currently at USD 2,265 per tonne, still more than 50 percent below early-2014 levels. Low prices reflect both weak global dairy demand and continued elevated supply, particularly out of Europe (see box B).

In response to sustained low prices, dairy farmers have cut back on feed and maintenance expenditures. Reduced expenditure on feed is expected to weigh on milk production, while reduced spending on

repairs and maintenance will affect activity for rural service providers and retailers. This will likely suppress consumer spending in rural areas. Farm investment has also declined, and intentions to invest over the next 12 months remain well below average.

Low export prices also weigh on broader business confidence. This has contributed to business investment remaining flat over the past year. However, business confidence has improved more recently, and business investment is expected to increase by 6 percent through 2016.

Capacity pressure

Revisions to official labour market statistics saw the March quarter unemployment rate revised down by 0.5 percentage points.¹ The unemployment rate is estimated to have remained stable at 5.2 percent in the June quarter. Labour market conditions have improved over the past year, with estimated employment growth of 2.1 percent (figure 4.14). However, the associated tightening in capacity pressure has been slowed by strong population growth, which has contributed to estimated labour force growth of 1.7 percent.

Other indicators also suggest the output gap is gradually increasing. A wide range of indicators of capacity pressure lifted in the June Quarterly Survey of Business Opinion, across industries and regions. Capacity pressure is particularly tight in the construction industry, with an increasing share of firms reporting difficulty finding skilled labour. The

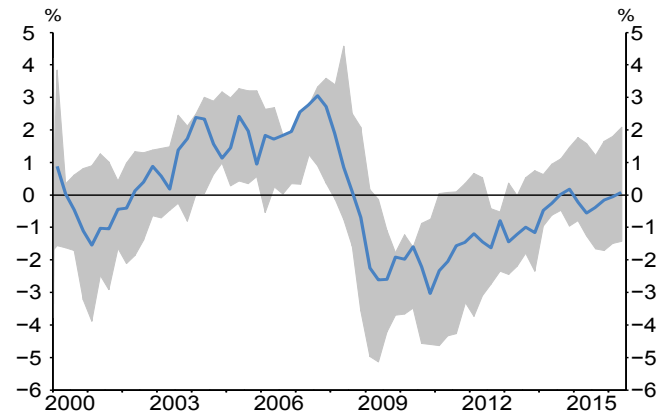
¹ These revisions are the result of the redevelopment of the Household Labour Force Survey. For more detail see http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/improving-labour-market-statistics/hlfs-revisions-key-labour-est.aspx

Figure 4.14
Labour force and employment growth
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Figure 4.15
Output gap and indicator range
(share of potential output)



Source: RBNZ estimates.

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

output gap is estimated to be currently about zero, near the middle of the range implied by a suite of indicators (figure 4.15).

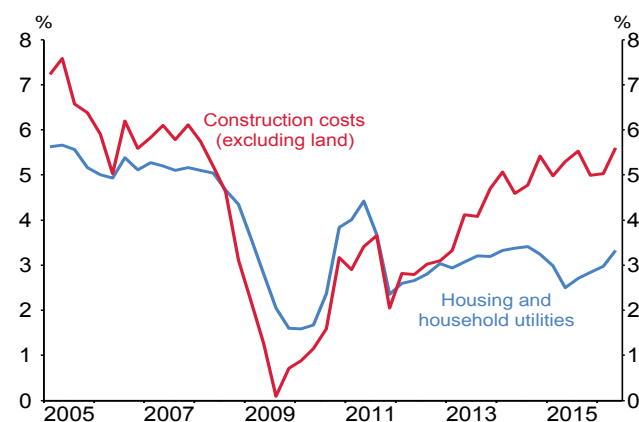
Pricing and inflation

Despite capacity pressure gradually increasing, non-tradables inflation remains below average. Annual non-tradables inflation increased to 1.8 percent in the June quarter, from 1.6 percent in the March quarter. Inflationary pressures were most pronounced for housing-related components (figure 4.16), which contributed 1.4 percentage points to non-tradables inflation and 0.8 percentage points to headline inflation. Construction costs increased by 5.6 percent nationwide and 7.6 percent in Auckland over the past year.

Annual non-tradables inflation continues to be dampened by price declines of specific components. For example, despite constituting only a small share of the non-tradables basket, a significant reduction in ACC motor vehicle levies in July 2015 is estimated to be currently subtracting 0.6 percentage points from annual non-tradables inflation. ACC motor vehicle levies were further reduced in July 2016, and this will detract from non-tradables inflation.

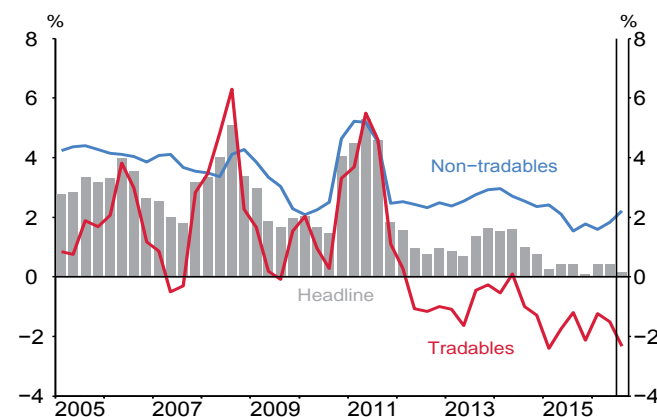
The combination of persistently negative tradables inflation and below-average non-tradables inflation has seen annual headline inflation remain low at 0.4 percent in the June 2016 quarter (figure 4.17). In the September quarter, annual CPI inflation is expected to decline to 0.2 percent, due to the recent fall in fuel prices.

Figure 4.16
Housing-related consumer price inflation
(annual)



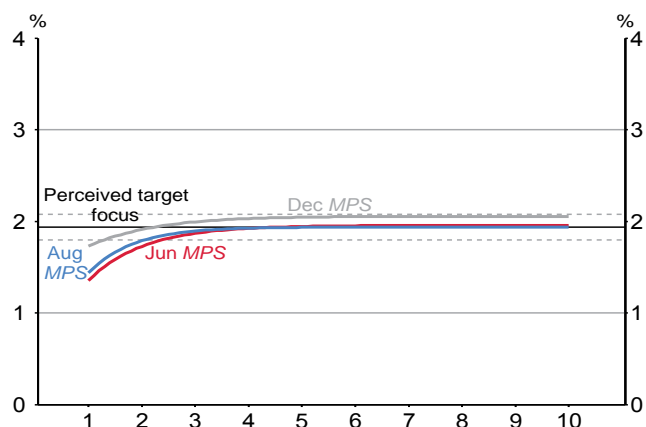
Source: Statistics New Zealand.

Figure 4.17
CPI inflation
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Figure 4.18
Inflation expectations curve
(annual, by number of years ahead)

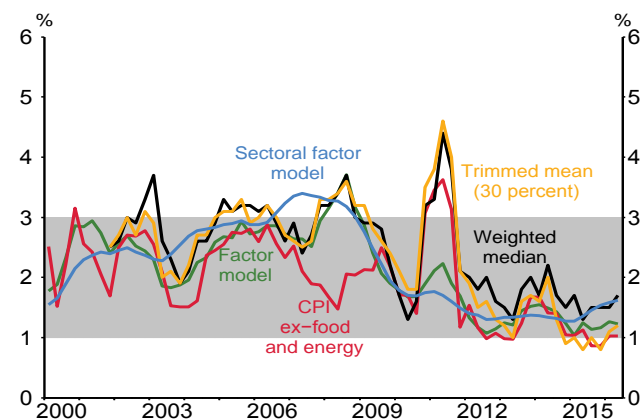


Source: ANZ Bank, Aon Hewitt, Consensus Economics, RBNZ estimates.

Note: The perceived target focus is where the inflation expectations curve trends towards in the long run. The dotted grey lines reflect a band that is close to the perceived target focus (calculated as ± 1 standard deviation of the perceived target focus since the 2012 PTA).

Weak headline inflation, driven in large part by negative tradables inflation, has contributed to a decline in short-term inflation expectations. While short-term inflation expectations have stabilised recently, they remain well below 2015 levels and below the 2 percent target midpoint (figure 4.18). Expectations falling further would be of concern given their influence on the wage- and price-setting behaviour of firms and businesses, and thereby inflation outcomes. Long-term inflation expectations have remained broadly stable, anchored near the 2 percent target midpoint.

Figure 4.19
Core inflation measures
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Given the significant influences of temporary and sector-specific price movements on headline CPI inflation, measures of core inflation can be useful in assessing the strength of underlying inflationary pressure. Based on the sectoral factor model, core inflation has trended higher since the start of 2015, to be at 1.6 percent in the June quarter (figure 4.19).² Given the uncertainty in estimating core inflation, the Bank also monitors a range of other measures. These all remained broadly stable or increased in the June quarter, and currently range from 1.0 to 1.7 percent.

² The Bank has, over recent years, paid the most attention to the sectoral factor model as a measure of core inflation. Given the uncertainty of measuring core inflation, the Bank does not rely on any single measure, and the measure that is used the most is under constant evaluation. For a discussion of the most recent evaluation, see Wong, B., and G. Kamber (forthcoming) 'Testing an Interpretation of Core Inflation Measures in New Zealand', Reserve Bank Analytical Note Series.

Box B

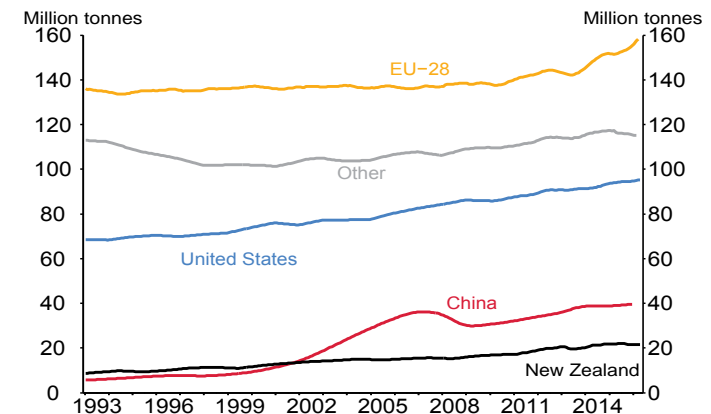
Global dairy supply developments

Global dairy prices have fallen substantially since their 2014 peak. While this partly reflects a range of demand-side factors, such as weak demand from China and Russia's import ban on European Union dairy products, increases in global supply have also been an important contributing factor. Global milk production has increased significantly since the early 1990s (figure B.1). This box provides an overview of developments in global dairy supply in recent years, and discusses their implications for our medium-term outlook.

Global production growth has been supported by a gradual increase in United States production, driven by a move to larger, more efficient farms. The mean number of cows per farm in the United States was 61 in 1992; this had increased to 144 by 2012. Over this time, average milk production per cow also increased. This occurred as government support for the industry was gradually removed, suggesting that the trend increase is sustainable.

Production growth throughout the 2000s was also supported by rapid growth in Chinese milk output. Between 2000 and 2008, Chinese milk production almost quadrupled, increasing by more than the equivalent of New Zealand's annual dairy output. This growth was primarily achieved by increasing cow numbers, although yield per cow also rose by about a third. While milk production stalled following the melamine contamination in 2008, it has since trended upward, and recent structural developments in the Chinese dairy industry suggest potential for significant future production growth.

Figure B.1
Global liquid milk production
(annual total)



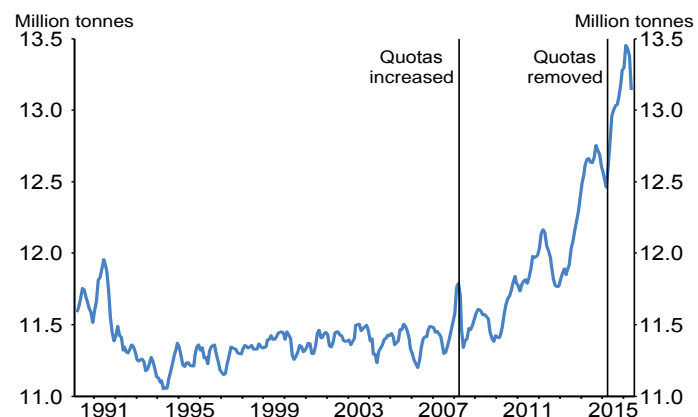
Source: CLAL, Eurostat, Haver Analytics, USDA, RBNZ estimates.

Note: Other includes Argentina, Australia, Belarus, Brazil, Chile, Japan, Russia, and Ukraine.

Since 2008, increases in global milk production have been driven to a large extent by Europe. European production had been constrained by quotas for several decades, but their relaxation and eventual removal has seen production surge more recently (figure B.2). Increases in milk production have been supported by continued growth in yield per cow, enabled by industry consolidation and specialisation, and a stabilisation in cow numbers. Industry consolidation is likely to continue, given the relatively small average size of European dairy farms at present. This would promote further efficiency gains and support dairy production in the future.

Given these trends, global production is likely to remain structurally higher than previously thought. While demand for dairy products is expected to be supported in the long term by growth in emerging

Figure B.2
European milk deliveries
(3-month moving average, s.a.)



Source: Eurostat, RBNZ estimates.

Note: Includes milk deliveries for countries that were not in the European Union for the whole period, to allow comparability.

markets, high global production is likely to weigh on prices in the medium term. These factors have led the Bank to revise down its medium-term assumption for whole milk powder prices from USD 3,300 per tonne to USD 3,000 per tonne (see chapter 5). This is consistent with recent downward revisions by external agencies, such as the OECD-FAO.

Table 4.1
Measures of inflation, inflation expectations, and asset prices

| | 2014 | | 2015 | | | | 2016 | |
|-----------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
| | Dec | Mar | Jun | Sep | Dec | Mar | Jun | Sep |
| Inflation (annual rates) | | | | | | | | |
| CPI | 0.8 | 0.3 | 0.4 | 0.4 | 0.1 | 0.4 | 0.4 | |
| CPI non-tradables | 2.4 | 2.4 | 2.1 | 1.5 | 1.8 | 1.6 | 1.8 | |
| CPI tradables | -1.3 | -2.4 | -1.8 | -1.2 | -2.1 | -1.2 | -1.5 | |
| Sectoral factor model estimate of core inflation | 1.3 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 | |
| CPI trimmed mean (30 percent) | 0.9 | 1.0 | 0.8 | 1.0 | 0.8 | 1.1 | 1.2 | |
| CPI weighted median | 1.5 | 1.7 | 1.3 | 1.5 | 1.5 | 1.5 | 1.7 | |
| GDP deflator (expenditure) | -2.2 | -0.8 | 0.5 | 0.8 | 0.3 | 1.2 | | |
| Inflation expectations | | | | | | | | |
| ANZ Business Outlook - inflation one year ahead (quarterly average to date) | 2.3 | 1.7 | 1.7 | 1.7 | 1.7 | 1.4 | 1.4 | 1.5 |
| RBNZ Survey of Expectations - inflation two years ahead | 2.1 | 1.8 | 1.9 | 1.9 | 1.9 | 1.6 | 1.6 | 1.7 |
| Aon Hewitt Economists' Survey - inflation four years ahead | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.0 | 1.9 | |
| Aon Hewitt Economists' Survey - inflation seven years ahead | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 | |
| Long-run inflation expectations ¹ | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 1.9 |
| Asset prices (annual percent changes) | | | | | | | | |
| Quarterly house price index (CoreLogic) | 6.4 | 9.0 | 11.1 | 14.9 | 11.2 | 11.0 | | |
| REINZ Farm Price Index (quarterly average to date) | 1.2 | 2.0 | 2.1 | -0.4 | -2.5 | 4.2 | -2.6 | |
| NZX 50 (quarterly average to date) | 12.6 | 16.5 | 12.6 | 11.4 | 10.8 | 9.1 | 18.4 | 21.1 |

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.

Chapter 5

The macroeconomic outlook



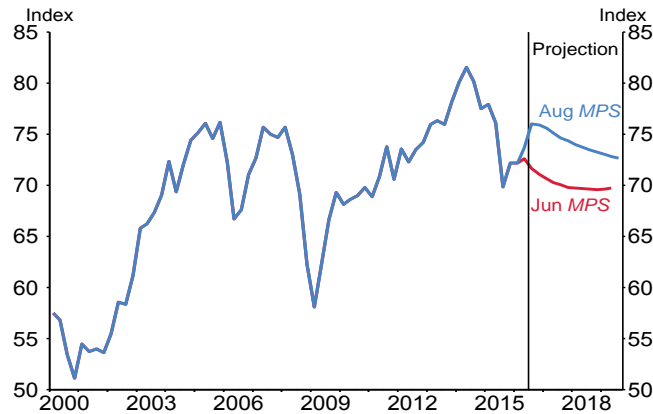
- Global conditions remain fragile and continue to weigh on the outlook for domestic inflationary pressures.
- Since the June *Statement*, an appreciation of the New Zealand dollar has dampened the outlook for inflationary pressure, and short-term inflation expectations remain low.
- A lower projected path for interest rates will help ensure that inflation settles near the middle of the target range.
- Low interest rates are expected to contribute to capacity pressures through several channels, such as residential investment, business investment, and consumption.

As discussed in chapter 3, the outlook for trading-partner growth remains fragile. Global commodity prices are lower than they were a few years ago, and inflation in most advanced economies is below central banks' targets. Consequently, central bank policy rates are historically low, and are expected to remain stimulatory.

Fragile global conditions and resultant weak inflationary pressures affect the New Zealand economy in several ways. Low global interest rates relative to those in New Zealand have contributed to continued strength in the New Zealand dollar TWI (figure 5.1). The TWI is currently around 6 percent higher than assumed in the June *Statement*. Over the medium term, the exchange rate is assumed to depreciate, reflecting a gradual improvement in global economic conditions, and a narrowing in interest rate differentials between New Zealand and other advanced economies.

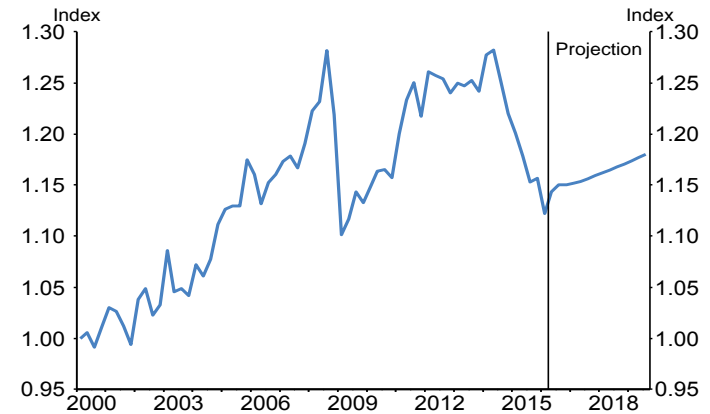
Weak global demand and ongoing strong supply in some markets are expected to weigh on the prices of New Zealand's commodity exports (figure 5.2). The medium-term outlook for dairy prices has been revised lower. Overall, export prices are expected to remain below their 2013-2014 average level and continue to dampen domestic incomes, confidence, and spending. Weak external demand, together with the higher exchange rate, continues to exert pressure on the agriculture

Figure 5.1
New Zealand dollar TWI



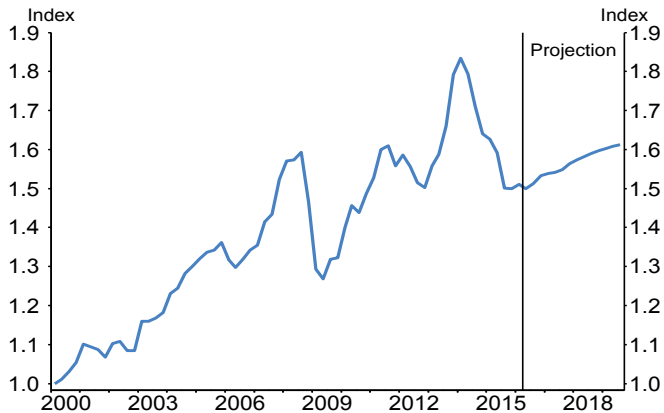
Source: RBNZ estimates.

Figure 5.3
Import prices
(world terms, s.a.)



Source: Statistics New Zealand, RBNZ estimates.

Figure 5.2
Export prices
(world terms, s.a.)



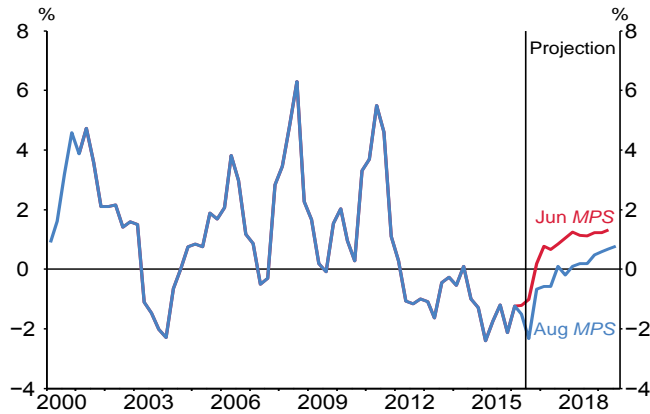
Source: Statistics New Zealand, RBNZ estimates.

sector and other export-dependent sectors, with flow-on effects to the wider economy.

Low commodity prices and continued low global inflation are also expected to hold down the prices of New Zealand's imports (figure 5.3). The price of Dubai crude oil is assumed to remain low in the second half of 2016, and increase only gradually to USD 55 per barrel by the end of the projection period.

Low import prices, in conjunction with the high exchange rate, imply continued low tradables inflation (figure 5.4). As discussed in chapter 4, tradables inflation is expected to remain depressed in the near term due to recent declines in fuel prices. Over the medium term, tradables inflation is expected to increase gradually, in part supported by the exchange rate depreciating from its current level.

Figure 5.4
Tradables inflation
(annual)



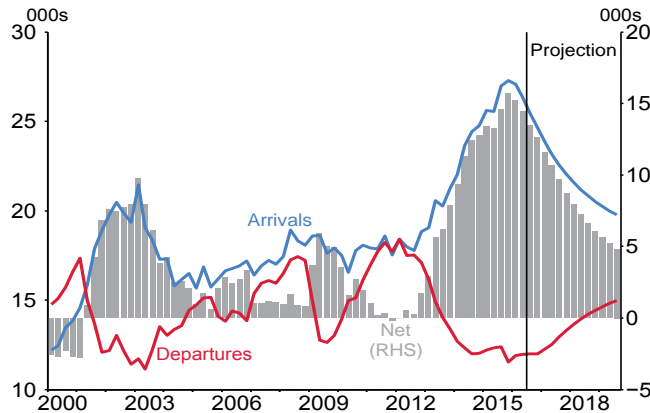
Source: Statistics New Zealand, RBNZ estimates.

Net immigration is projected to remain elevated, due to favourable labour market conditions in New Zealand relative to overseas, and will support domestic demand (figure 5.5). As noted in chapter 4, net immigration also adds to labour force growth and moderates wage inflation.

Survey measures of inflation expectations appear to have stabilised, but are at a lower level than in 2015. Low inflation expectations are expected to influence future inflation via wage- and price-setting behaviour and reduce the degree of real stimulus delivered to the economy for a given level of nominal interest rates. Inflation expectations are projected to recover gradually as CPI inflation increases towards the midpoint of the target band.

The 90-day interest rate has declined over the past 12 months and is projected to ease further (figure 5.6). This additional monetary policy stimulus is judged necessary to guard against further falls in inflation

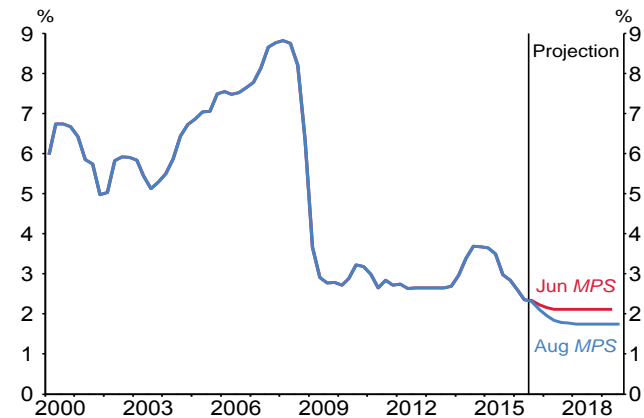
Figure 5.5
Migration
(quarterly, s.a.)



Source: Statistics New Zealand, RBNZ estimates.

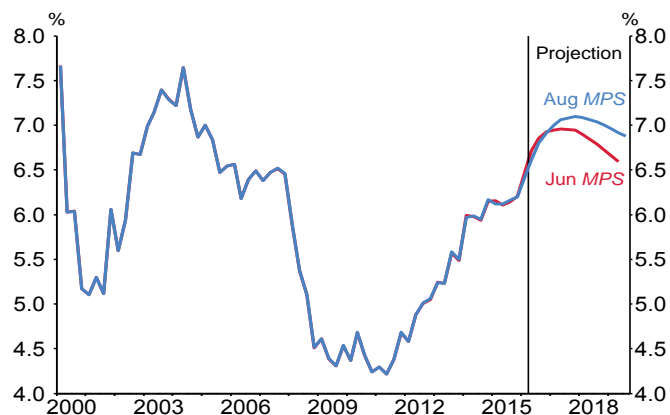
Note: The data shown are for permanent and long-term working-age migration.

Figure 5.6
90-day interest rate



Source: RBNZ estimates.

Figure 5.7
Residential investment
(share of potential output)



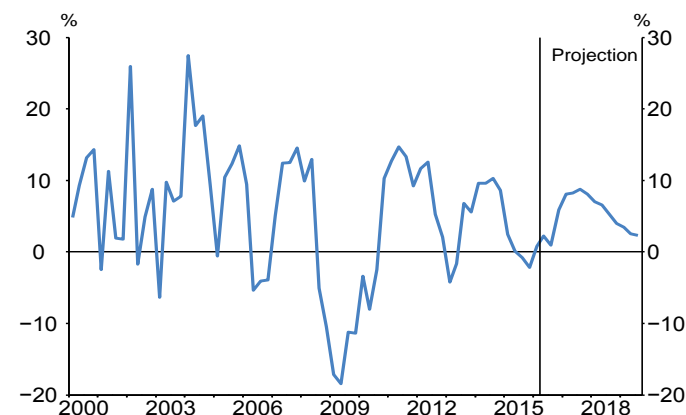
Source: Statistics New Zealand, RBNZ estimates.

expectations, and to ensure that future average inflation settles near the middle of the target range. This flows through to the broader economy through many channels.

Construction activity is an important source of output growth and capacity pressure over the projection. The increase in residential investment is expected to be larger and more sustained than in the June *Statement* (figure 5.7). This increase is underpinned by the existing housing shortage, strong population growth, high house prices, and low interest rates.

Non-residential construction is also projected to increase in response to lower interest rates. Furthermore, rising capacity pressure and improving business confidence are expected to support a recovery in business investment more widely, despite the subdued outlook for rural investment as a result of low commodity prices (figure 5.8).

Figure 5.8
Business investment growth
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Strong net immigration, low interest rates, and a shortage of housing in Auckland are expected to keep house price inflation elevated (figure 5.9). House price inflation moderates in the second half of the projection horizon as elevated residential construction begins to address the housing shortage, net immigration moderates, and affordability constraints begin to bind.

Consumption growth is expected to strengthen, supported by stimulatory interest rates, strong population growth, rising real wages, and increasing household wealth (figure 5.10). Subdued export prices may continue to dampen consumption, particularly in rural areas.

Given increasing domestic demand, capacity pressures are projected to increase (figure 5.11). The economy is projected to expand by 3.4 percent in each of the next two years. The rate of potential growth is expected to remain near 2.7 percent, supported by strong growth in

Figure 5.9
House price inflation
(annual)

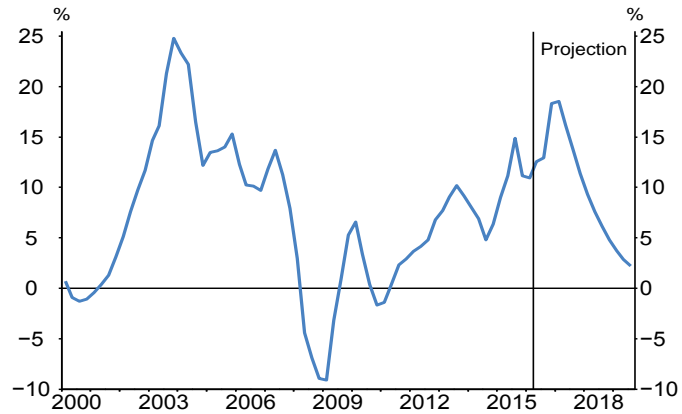


Figure 5.11
Output gap
(share of potential output)

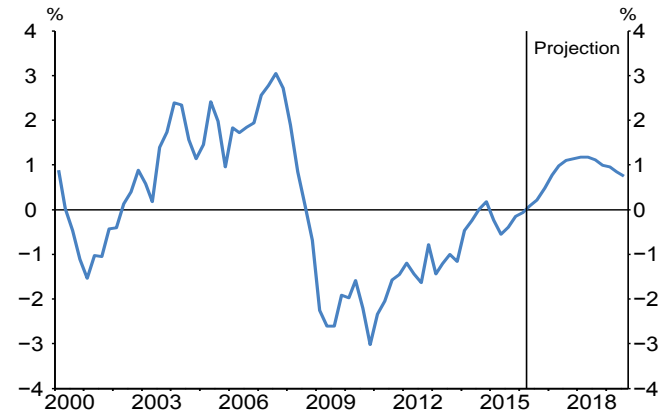


Figure 5.10
Consumption growth
(annual)

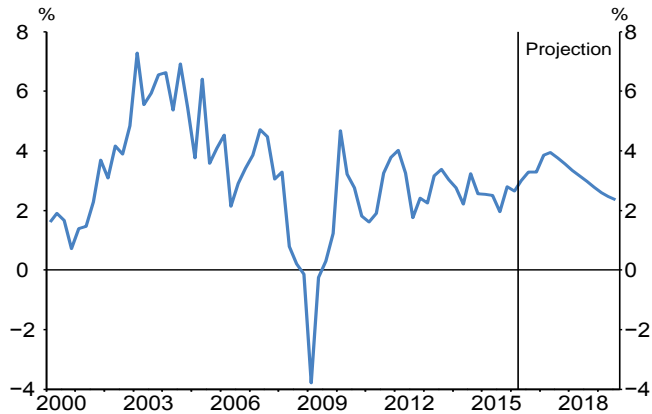


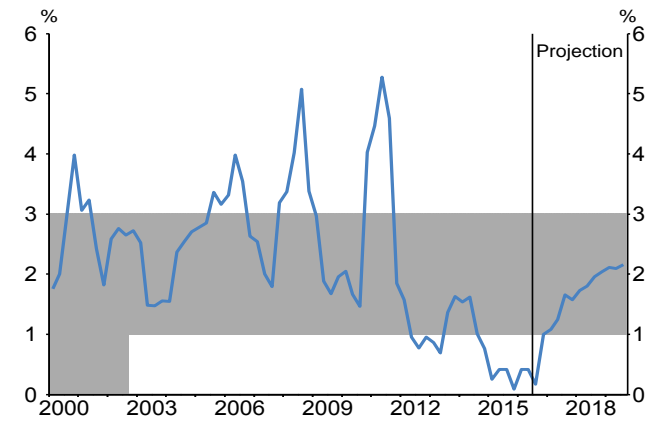
Figure 5.12
Non-tradables inflation
(annual)



labour supply. As capacity pressure increases, annual non-tradables inflation is expected to rise throughout the projection (figure 5.12).

Annual CPI inflation is projected to return to about the middle of the target range in mid-2018 (figure 5.13).

Figure 5.13
CPI inflation
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Table 5.1
Composition of real GDP growth
(annual average percent change, seasonally adjusted, unless specified otherwise)

| March year | Actuals | | | | | | | | Projections | | |
|------------------------------------------|---------|-------|------|------|------|------|------|------|-------------|------|------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Final consumption expenditure | | | | | | | | | | | |
| Private | -0.8 | 1.5 | 2.3 | 3.2 | 2.4 | 3.1 | 2.6 | 2.5 | 3.4 | 3.6 | 2.9 |
| Public authority | 3.9 | -0.5 | 1.9 | 1.7 | -0.1 | 2.3 | 2.3 | 1.8 | 1.8 | 1.7 | 0.8 |
| Total | 0.4 | 1.0 | 2.2 | 2.9 | 1.8 | 2.9 | 2.6 | 2.3 | 3.0 | 3.2 | 2.4 |
| Gross fixed capital formation | | | | | | | | | | | |
| Residential | -21.2 | -9.0 | 1.6 | 3.0 | 15.3 | 13.0 | 11.6 | 5.6 | 12.7 | 6.4 | 1.6 |
| Other | -2.3 | -10.5 | 4.3 | 6.8 | 3.0 | 5.5 | 9.0 | 1.3 | 4.0 | 7.1 | 3.2 |
| Total | -7.3 | -10.2 | 3.7 | 6.0 | 5.7 | 7.2 | 9.6 | 2.4 | 6.3 | 6.9 | 2.8 |
| Final domestic expenditure | -1.4 | -1.5 | 2.5 | 3.5 | 2.6 | 3.8 | 4.1 | 2.3 | 3.8 | 4.1 | 2.5 |
| Stockbuilding ¹ | -0.3 | -0.7 | 0.7 | 0.3 | -0.3 | 0.2 | 0.0 | -0.3 | 0.1 | 0.0 | 0.0 |
| Gross national expenditure | -1.8 | -1.9 | 3.3 | 4.0 | 2.2 | 4.0 | 4.2 | 2.1 | 3.7 | 4.1 | 2.5 |
| Exports of goods and services | -2.8 | 4.1 | 2.8 | 2.2 | 3.1 | -0.1 | 4.2 | 5.3 | 2.4 | 2.3 | 2.9 |
| Imports of goods and services | -3.6 | -9.2 | 11.4 | 6.7 | 1.3 | 8.1 | 7.4 | 2.0 | 4.1 | 4.5 | 2.6 |
| Expenditure on GDP | -1.5 | 1.9 | 1.0 | 2.7 | 2.7 | 1.6 | 3.2 | 3.1 | 3.2 | 3.4 | 2.6 |
| GDP (production) | -1.3 | -0.5 | 1.4 | 2.5 | 2.3 | 2.8 | 3.6 | 2.5 | 3.4 | 3.4 | 2.6 |
| GDP (production, March qtr to March qtr) | -2.6 | 1.5 | 1.1 | 3.0 | 1.9 | 3.5 | 3.0 | 2.8 | 3.5 | 3.1 | 2.3 |

¹ Percentage point contribution to the growth rate of GDP.

Table 5.2
Summary of economic projections
(annual percent change, unless specified otherwise)

| March year | Actuals | | | | | | | | Projections | | |
|-------------------------------------------------------|---------|-------|------|------|------|------|------|------|-------------|------|------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Price measures | | | | | | | | | | | |
| CPI | 3.0 | 2.0 | 4.5 | 1.6 | 0.9 | 1.5 | 0.3 | 0.4 | 1.1 | 1.7 | 2.1 |
| Labour costs | 3.1 | 1.3 | 2.0 | 2.1 | 1.8 | 1.7 | 1.8 | 1.8 | 1.7 | 1.9 | 2.0 |
| Export prices (in New Zealand dollars) | 7.2 | -7.6 | 7.8 | -2.7 | -4.9 | 11.6 | -8.9 | 0.3 | -2.7 | 4.5 | 3.2 |
| Import prices (in New Zealand dollars) | 17.4 | -11.1 | 3.4 | -1.7 | -4.0 | -3.1 | -3.4 | 0.9 | -2.0 | 3.0 | 2.3 |
| Monetary conditions | | | | | | | | | | | |
| 90-day rate (year average) | 6.7 | 2.8 | 3.1 | 2.7 | 2.6 | 2.7 | 3.6 | 3.0 | 2.2 | 1.8 | 1.8 |
| TWI (year average) | 65.6 | 66.6 | 69.0 | 72.2 | 74.0 | 77.6 | 79.3 | 72.6 | 75.3 | 74.5 | 73.3 |
| Output | | | | | | | | | | | |
| GDP (production, annual average % change) | -1.3 | -0.5 | 1.4 | 2.5 | 2.3 | 2.8 | 3.6 | 2.5 | 3.4 | 3.4 | 2.6 |
| Potential output (annual average % change) | 1.8 | 1.3 | 1.4 | 1.7 | 2.1 | 2.4 | 2.7 | 2.7 | 2.7 | 2.7 | 2.6 |
| Output gap (% of potential GDP, year average) | -0.5 | -2.3 | -2.3 | -1.6 | -1.3 | -1.0 | -0.1 | -0.3 | 0.4 | 1.1 | 1.1 |
| Labour market | | | | | | | | | | | |
| Total employment (seasonally adjusted) | -1.2 | -0.4 | 1.6 | 0.6 | 0.1 | 3.7 | 3.2 | 2.0 | 2.5 | 2.5 | 1.5 |
| Unemployment rate (March qtr, seasonally adjusted) | 5.0 | 5.9 | 6.0 | 6.3 | 5.7 | 5.5 | 5.4 | 5.2 | 4.8 | 4.4 | 4.5 |
| Trend labour productivity | 1.0 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 |
| Key balances | | | | | | | | | | | |
| Government operating balance (% of GDP, year to June) | -2.1 | -3.3 | -9.0 | -4.3 | -2.0 | -1.2 | 0.2 | 0.2 | 0.3 | 1.0 | 1.7 |
| Current account balance (% of GDP) | -7.0 | -1.5 | -2.8 | -3.2 | -3.6 | -2.5 | -3.4 | -3.0 | -3.2 | -3.4 | -3.0 |
| Terms of trade (SNA measure, annual average % change) | -1.9 | -4.5 | 7.9 | 1.6 | -4.3 | 11.7 | -0.3 | -3.1 | 0.0 | 1.6 | 1.3 |
| Household saving rate (% of disposable income) | -2.1 | 1.3 | 2.2 | 2.4 | 2.0 | 1.8 | -0.7 | -0.4 | -0.1 | 0.5 | 0.7 |
| World economy | | | | | | | | | | | |
| Trading-partner GDP (annual average % change) | 0.3 | 1.2 | 4.5 | 3.4 | 3.2 | 3.4 | 3.6 | 3.5 | 3.2 | 3.3 | 3.4 |
| Trading-partner CPI (TWI weighted) | 1.6 | 2.2 | 3.2 | 2.7 | 2.3 | 2.3 | 1.0 | 1.3 | 1.8 | 2.2 | 2.3 |