Monetary Policy Statement
November 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

November 2016

Policy assessment finalised on 9 November 2016.

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Chapter 1
Policy assessment

The Reserve Bank today reduced the Official Cash Rate (OCR) by 25 basis points to 1.75 percent.

Significant surplus capacity exists across the global economy despite improved economic indicators in some countries. Global inflation remains weak even though commodity prices have come off their lows. Political uncertainty remains heightened and market volatility is elevated.

Weak global conditions and low interest rates relative to New Zealand are keeping upward pressure on the New Zealand dollar exchange rate. The exchange rate remains higher than is sustainable for balanced economic growth and, together with low global inflation, continues to generate negative inflation in the tradables sector. A decline in the exchange rate is needed.

Domestic growth is being supported by strong population growth, construction activity, tourism, and accommodative monetary policy. Recent dairy auctions have been positive, but uncertainty remains around future outcomes. High net immigration is supporting growth in labour supply and limiting wage pressure.

House price inflation remains excessive and is posing concerns for financial stability. Although house price inflation has moderated in Auckland, it is uncertain whether this will be sustained given the continuing imbalance between supply and demand.

Headline inflation continues to be held below the target range by ongoing negative tradables inflation. Annual CPI inflation was weak in the September quarter, in part due to 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, and reduced drag from tradables inflation.

Monetary policy will continue to be accommodative. Our current projections and assumptions indicate that policy settings, including today’s easing, will see growth strong enough to have inflation settle near the middle of the target range. Numerous uncertainties remain, particularly in respect of the international outlook, and policy may need to adjust accordingly.

Graeme Wheeler
Governor
Chapter 2
Key policy judgements

- Weak global conditions continue to dampen inflationary pressure in New Zealand, particularly as low import prices and the high exchange rate suppress tradables inflation.

- Persistently negative tradables inflation is holding down headline inflation, flowing through to inflation expectations and reducing inflationary pressure.

- Monetary policy is providing stimulus to the economy and GDP growth has strengthened as expected.

- Continued monetary policy stimulus is needed to support strong GDP growth, generating an increase in non-tradables inflation over the medium term and guarding against further declines in inflation expectations.

Weak global conditions continue to have a disinflationary effect on New Zealand. Significant spare capacity exists across advanced economies, despite stimulatory monetary policy, and global inflation remains low. Prices have declined for a range of commodities in recent years. Despite some recovery, global commodity prices generally remain low relative to history.

The positive outlook for growth in New Zealand relative to other advanced economies, coupled with low global interest rates, has resulted in continued strong investor appetite for New Zealand dollar assets. This has supported an appreciation of the New Zealand dollar exchange rate. The high exchange rate, low commodity prices and subdued global inflation have translated directly into low prices for New Zealand’s imports, suppressing tradables inflation.

Global conditions have also transmitted through the domestic economy, limiting broader inflationary pressure. Declines in the prices for New Zealand’s key export commodities since 2014 have caused a sharp fall in the terms of trade, despite lower import prices. Low export prices, particularly in the dairy sector, have dampened confidence and overall business investment. While dairy prices have recently increased sharply, profitability remains low, and confidence in the dairy sector is likely to
remain subdued as there is significant uncertainty about the sustainability of these price increases.

Weakness in foreign labour markets relative to New Zealand continues to underpin high net immigration. While migration flows have increased demand for housing and other goods and services, the impact per migrant may have been smaller than in previous migration cycles. Migration has also added to the supply of labour in the economy, which has moderated some of the inflationary pressure associated with the boost to demand.

Annual CPI inflation was 0.4 percent in the September 2016 quarter. This low outturn reflected the factors outlined earlier that have been in play for at least the past two years. Low annual inflation in September was also a result of falls in petrol prices, reductions in ACC vehicle levies, and lower domestic and international airfares.

Low tradables inflation appears likely to continue for some time given the outlook for global inflation and policy rates, despite some recovery in global commodity prices. As discussed in the August Statement, the prolonged period of negative tradables inflation is unusual historically. Monetary policy is typically able to look through sharp and transitory movements in tradables inflation, focusing instead on the medium-term trend in inflation. The persistent weakness in tradables inflation since 2012 has contributed to low headline CPI inflation (figure 2.1). This has flowed through to declines in inflation expectations, presenting an ongoing challenge for monetary policy.

Inflation expectations seem to respond to the persistent component of observed headline inflation. As headline inflation remained low, due in
part to the persistent weakness in tradables inflation, short-term inflation expectations declined through 2015. Inflation expectations appear to have stabilised since March. Low inflation expectations dampen price- and wage-setting behaviour, weighing on future inflation, particularly over the time horizon relevant for monetary policy. As such, any further sustained falls in inflation expectations would be concerning.

The Policy Targets Agreement (PTA) directs 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 average inflation near the 2 percent target midpoint. To move CPI inflation back within the target range, and to reduce the risk that long-term inflation expectations become unanchored from the target midpoint, continued monetary stimulus is needed (figure 2.2). However, the Bank is flexible in its inflation targeting approach. The projected path for the OCR is one that supports strong but steady growth in the economy and provides for a gradual increase of inflation towards the target midpoint. More aggressive policy easing to drive inflation to the midpoint of the target range much sooner risks generating unnecessary volatility in output, interest rates and the exchange rate.

Low interest rates continue to stimulate the New Zealand economy. They are encouraging businesses to undertake investment they may not have done otherwise. In addition to strong population growth and housing shortages, low interest rates are also stimulating residential investment. Low mortgage rates are contributing to housing demand and rising house prices, which historically have been associated with increased consumption. Consumption per capita has been relatively muted so far through this cycle, but as wealth, employment, income, and confidence rise, household consumption is expected to strengthen.

GDP grew by 3.6 percent in the year to the June 2016 quarter, and near-term indicators suggest this pace of growth is likely to continue. Annual GDP growth is forecast to average around 3.8 percent over the next year. This strength has been a feature of the Bank’s projections for some time. Migration flows have increased the supply of labour and productive capacity in the economy. In this environment, rising capacity pressure requires strong rates of growth. This increase in capacity pressure will contribute to higher non-tradables inflation.

The economic projections outlined in this Statement set out the Bank’s plan for interest rates in order to meet the requirements of the PTA. There is always uncertainty around these projections – economic conditions can change suddenly, and economic relationships can evolve differently from in the past. Our assessment of the outlook and the appropriate policy response depend on a range of judgements. In the current environment, the key judgements in our projections relate to how global conditions might evolve, and how these global factors and domestic policy stimulus transmit through the domestic economy. These key judgements are described below. If the assumptions underpinning the projections prove to be inconsistent with incoming data, or if risks to the projections materialise, the outlook for monetary policy will be revised.

We have addressed a range of risks around these judgements in previous Statements. In doing so we acknowledge the uncertainty around specific assumptions and consider how alternative scenarios might alter policy settings. While the focus of key risks may change between Statements, we consider a wider set of uncertainties and risks around our central projections. Chapter 5 revisits the range of risk scenarios from previous Statements.
Global economic conditions

Global demand for commodities is assumed to increase, contributing to an expected gradual increase in the prices of New Zealand’s imports and exports. We assume that over the medium term the price of whole milk powder will tend towards USD 3,000 per tonne, and that the Dubai oil price will continue to gradually increase to around USD 60 per barrel.

The outlook for these commodity prices is uncertain. Dairy prices have increased sharply over recent months, but we assume some of these recent price gains are due to temporary factors and are likely to reverse. Should these increases be sustained, the outlook for export prices and domestic activity may be stronger than assumed.

As labour market conditions improve across advanced economies, we expect net immigration to decline from its current elevated level. Turning points in migration are difficult to forecast, and a stronger-than-assumed net inflow is plausible. For example, if labour market conditions in Australia do not improve as expected, net immigration could remain elevated. Alternatively, should the Australian labour market recovery gain pace, net immigration could decline more sharply than assumed.

We assume that the New Zealand dollar Trade-Weighted Index (TWI) depreciates over the projection to around 73. If world interest rates remain lower for longer than markets currently anticipate, or if investor appetite for New Zealand dollar assets increases, the New Zealand dollar exchange rate could remain higher through the projection, necessitating more-stimulatory monetary policy to offset the impact on inflation. In the case that a higher exchange rate is underpinned by a stronger outlook for the domestic economy, a monetary policy response may not be necessary, as the impact of the higher exchange rate would likely be offset by increasing domestic capacity pressure.

Domestic demand

The projected increase in domestic capacity pressure partly reflects an increasing draw on resources in the construction sector. Residential investment is projected to increase substantially over the next year and remain at a high level through the projection. However, there is uncertainty around the degree to which construction activity could be constrained by the availability of land, labour, materials, and finance. Different configurations of how constraints and demand pressures interact could result in different outcomes for both activity and inflation.

Low interest rates, high house prices, and improving income growth – in part reflecting increasing export prices – underpin a forecast of strengthening consumption growth. However, household spending is assumed to remain modest relative to increases in housing wealth. There are risks to both sides of the consumption outlook. Stronger-than-assumed export prices could boost confidence and incomes, increasing spending. Additionally, consumption could be stronger if house price inflation and low mortgage rates start to have more of an impact on spending than assumed. On the other hand, renewed weakness in commodity prices, or heightened concerns about global conditions or the sustainability of household debt, could weigh more heavily on spending.

Price-setting behaviour

Long-term inflation expectations appear to be well-anchored close to 2 percent and are expected to remain around this level. Short-term inflation expectations have fallen over the past year, reflecting recent low headline inflation. Low inflation expectations affect future inflation by dampening price- and wage-setting behaviour and, by raising real interest rates, reduce the degree of stimulus to the economy for a given level of nominal interest rates.
We assume inflation expectations continue to respond to observed inflation. Inflation expectations appear to have stabilised and, as headline inflation increases over the projection, short-term inflation expectations are expected to gradually increase. A risk to these projections is that inflation expectations decline further in light of recent low inflation outcomes – this risk would be particularly concerning if long-term inflation expectations were also affected. Alternatively, should households and businesses begin to set prices more in line with longer-term inflation expectations, the dampening effect of inflation expectations on future inflation could be less than assumed.

Box A

Recent monetary policy decisions

The Bank cut the OCR by 100 basis points through 2015 as the deterioration in global economic and financial market conditions was transmitted to the New Zealand economy via a range of channels and dampened inflationary pressure (figure A.1). Accounting for the projected forward path of interest rates, the downward revision in interest rates was around 200 basis points. Import prices declined markedly, but sharper falls in the prices of New Zealand’s key export commodities resulted in a fall in the terms of trade. The effect of this on incomes and confidence weighed on consumption and investment activity. Weakness in global labour markets relative to New Zealand contributed to high net immigration, supporting growth in the labour force.

Figure A.1
90-day interest rate

Source: RBNZ estimates.
Since 2015, global conditions have continued to suppress domestic inflationary pressure. The prolonged period of low headline inflation heightened the Bank’s concerns about observed declines in inflation expectations. A sharp fall in inflation expectations at the beginning of 2016, accompanied by a period of heightened volatility in financial markets and renewed concerns about the outlook for global growth, contributed to the Bank’s decision to cut the OCR by 25 basis points at the March Statement. As conditions stabilised through the middle of the year and the domestic economy showed signs of strengthening, the Bank subsequently held the OCR unchanged at 2.25 percent at the June Statement, but retained an easing bias.

Inflation expectations have remained stable since March, although inflation has remained low. In the August Statement, and in subsequent communications, the Bank acknowledged its expectation of weak annual CPI inflation in the September 2016 quarter. The reasons for this weakness were reasonably well anticipated – falling prices for petrol, reductions in ACC vehicle levies, and lower domestic and international airfares. Lowering interest rates would have done little to change these outturns, given the lagged effect of monetary policy.

In the August Statement the Bank acknowledged the unusual persistence in tradables inflation, which through its impact on headline inflation was contributing to low inflation expectations (figure A.2). In August, the Bank also judged that given the outlook for global inflation and policy rates, low tradables inflation was likely to continue for some time, raising a risk of further declines in inflation expectations. To support strong domestic growth and the return of inflation to target, and to reduce the risk of further sustained falls in inflation expectations, the Bank cut the OCR by 25 basis points in August and retained an easing bias.
### Table 2.1
**Key forecast variables**

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Chapter 3
International developments

• Global economic activity has been subdued for some time and spare capacity is only gradually being absorbed despite substantial monetary policy stimulus. Downside risks to the global growth outlook remain significant.

• Global inflation is low due to the decline in commodity prices and significant spare capacity in recent years.

• Since the August Statement, there has been some increase in global commodity prices, albeit from low levels. This increase is expected to contribute to a moderate improvement in global inflation prospects.

• Subdued global conditions are contributing to low inflation in New Zealand, particularly through low import prices and the elevated New Zealand dollar exchange rate.

Global economic slack remains significant. This is despite substantial monetary policy stimulus since the global financial crisis, with policy rates at record lows in many economies. Reflecting the significant spare capacity and the decline in commodity prices in recent years, global inflation remains low.

The subdued global environment is contributing to low inflation in New Zealand. As discussed in chapter 4, low global inflation is suppressing the prices of New Zealand’s imports. In addition, New Zealand’s relatively high interest rates compared to other advanced economies are contributing to strength in the New Zealand dollar. Chapter 5 further discusses the outlook for activity and inflation in New Zealand.

In advanced economies, domestic demand, and particularly investment, remains subdued. While spare capacity has reduced since 2009, output gaps remain negative (figure 3.1) and unemployment rates remain high in most economies. In emerging economies, growth rates vary across regions, with high growth in economies such as India, contrasting with recession in other economies such as Brazil. Globally, economies are continuing to adjust to the structural slowdown in China, lower commodity prices, weak growth in trade volumes, and declining population growth rates.
The International Monetary Fund (IMF) is forecasting global growth to increase over the projection while growth in New Zealand’s trading partners is expected to remain around current levels (figure 3.2). The increase in global growth is expected to be driven almost entirely by a recovery in stressed emerging market and developing economies, such as Brazil and Russia. These economies are not major trading partners for New Zealand. The strengthening in global growth also reflects the increasing weight of large market economies, such as China, that are growing faster than the world average. While not matched by increased trading-partner growth, the increase in global growth still has positive consequences for New Zealand.

Although global commodity prices remain at low levels, prices have increased since the beginning of 2016 (figure 3.3). Contributing to this increase is a gradual reduction in supply for certain commodities. Demand also appears to have stabilised somewhat, aided by fiscal stimulus in China. Increasing commodity prices are contributing to the improvement in growth prospects for commodity exporting economies and are expected to support higher global inflation in 2017.

Annual inflation in New Zealand’s trading-partner economies is low, at 1.1 percent in the September quarter (figure 3.4). Low inflation reflects significant declines in commodity prices and persistent spare capacity in many product and labour markets. In 2017, trading-partner inflation is expected to increase as the decline in oil prices falls out of annual inflation calculations across economies. In advanced economies, market-based measures of expected inflation have also increased, which may reflect a more balanced outlook for the risks around inflation.

Downside risks to the global economic outlook remain significant. The near-term risk of a sharp slowdown in growth in China has moderated from earlier in the year following the use of short-term policy measures to
promote growth. However, these measures raise the level of debt, which poses increased risks to the medium-term growth outlook for China. Elections in the United States and throughout Europe are also creating uncertainty about the outlook for global activity. In addition, increasing concerns around the benefits of global integration could result in increased inward-looking policies, negatively affecting global trade flows and global output.

Global growth is being supported by extraordinarily accommodative monetary policy (figure 3.5). Policy rates are at record lows across most advanced economies and are expected to remain stimulatory over coming years. In 2016, quantitative easing by central banks has been at its highest level since the global financial crisis. The degree of unconventional monetary policy is unlikely to increase further. Only one major central bank – the Federal Reserve in the United States – is
expected to raise its policy rate in the near term. The Federal Reserve is expected to increase its policy rate in December, but continue to withdraw stimulus only gradually from then on.

Globally, policy makers are acknowledging the financial stability risks from using additional monetary policy stimulus to further aid the economic recovery. Several international organisations, such as the IMF, are advocating greater use of fiscal policy and structural reforms to further stimulate activity. Some countries, including China, Japan, and Canada, are already using increased fiscal stimulus to support growth. Overall, these policies, if effectively designed and implemented, may increase productivity and potential growth.

Bond yields have increased from their historical lows over recent weeks (figure 3.6). This increase has been driven by some reduction in uncertainty around the global growth outlook, and the higher inflation outlook as commodity prices have risen. A possible shift in policy mix away from further monetary policy accommodation and the potential for increased use of fiscal policy have also contributed to the increase.

Global currency markets have been relatively stable since the August Statement. One exception is the British pound, which has continued to weaken significantly following the United Kingdom referendum result to leave the European Union. The United States dollar has appreciated modestly over this period as expectations have increased for a rise in the Federal Reserve policy rate before the end of 2016.
Chapter 4
Current domestic conditions

• Global excess capacity and the high New Zealand dollar exchange rate 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 strengthening, supported by low interest rates, high population growth, and strong tourist spending.

• Excess capacity is being eroded, with the output gap estimated to have increased to slightly above zero. Capacity pressure appears to be particularly tight in the construction sector.

• Short-term inflation expectations appear to have stabilised, but remain below 2015 levels and the 2 percent target midpoint. Long-term inflation expectations remain anchored at the target midpoint.

Imported inflation

Economic slack in the international environment has contributed to low inflation in New Zealand. Excess capacity and low commodity prices have suppressed inflation globally and led to declines in the prices of the goods New Zealand imports. In addition, the New Zealand dollar remains elevated (figure 4.1), in part supported by highly accommodative monetary policy in the rest of the world. Together, the strong dollar and low import prices dampen headline inflation in New Zealand, mainly through its tradables component.

Annual tradables inflation has been negative since 2012. Annual tradables inflation declined to -2.1 percent in the September 2016 quarter, from -1.5 percent in the June quarter. Reflecting sharp falls in global oil prices, domestic fuel prices declined by about 11 percent in the year to the September quarter. This is currently subtracting 1.3 percentage points from annual tradables inflation and 0.6 percentage points from annual headline inflation. However, the weakness in tradables inflation predates the prolonged fall in oil prices. Excluding fuel, tradables inflation has been negative since 2011 (figure 4.2).
Domestic financial conditions

In response to weak inflationary pressure, the OCR has been reduced over the past 18 months. Mortgage rates remain around record lows (figure 4.3).

However, the recent rise in offshore yields (see chapter 3) has caused an increase in wholesale interest rates in New Zealand. The 2-year swap rate, for example, is around 20 basis points above its level at the time of the August Statement. Higher wholesale rates suggest that banks may be under pressure to raise mortgage rates.

Bank funding costs remain elevated due to a continued widening in funding spreads. Term wholesale funding markets have remained settled,
but weaker domestic deposit growth is putting pressure on banks to compete more aggressively to retain deposits. As deposits constitute a large share of total bank funding, this is holding up the average cost of new funding for banks (figure 4.4). While the increase in funding pressures since the August Statement has been modest, it adds to already elevated funding spreads.

The RBNZ Credit Conditions Survey suggests that banks have tightened their lending standards over the past six months across each of the household, business, and agriculture sectors (figure 4.5). The tightening has been most notable in the commercial property sector, consistent with recent anecdotes that some property developers are finding it more difficult to access financing from banks (see box B).

**Domestic activity**

Monetary policy is providing stimulus to demand, supporting economic growth. Economic activity in the past year has been marginally stronger than the Bank’s projections (figure 4.6). The economy expanded by 0.9 percent in the June quarter, implying growth of 3.6 percent on an annual basis (figure 4.7). The strength in economic activity is underpinned by the construction and service sectors, supported by strong population growth and tourist spending. Quarterly GDP growth is expected to remain steady around current levels for the remainder of 2016. As GDP is forecast to grow at a faster rate than the economy’s productive capacity, the output gap is projected to rise, contributing to inflationary pressure.

Net immigration remains high, reflecting relatively favourable labour market conditions in New Zealand. On an annual basis, the net inflow of working-age migrants rose to a new peak of around 60,000 in September (figure 4.8). Net permanent and long-term immigration added
Figure 4.6
GDP growth outturns and RBNZ projections
(quarterly, s.a.)

Source: Statistics New Zealand, RBNZ estimates.
Note: This figure compares GDP growth for each quarter with the projection from the most recent Statement prior to the release of the data.

Figure 4.7
GDP growth
(s.a.)

Source: Statistics New Zealand, RBNZ estimates.

Figure 4.8
Migration
(annual)

Source: Statistics New Zealand, RBNZ estimates.
Note: The data shown are for permanent and long-term working-age migration.

Figure 4.9
Contributions to working-age population growth
(annual)

Source: Statistics New Zealand, RBNZ estimates.
1.7 percentage points to working-age population growth in the year to September (figure 4.9).

The combination of high population growth, low mortgage rates, and a shortage of housing in Auckland has continued to exert upward pressure on house prices. While the average house price in Auckland remains close to its historical peak, annual house price inflation has moderated recently (figure 4.10). This follows the announcement of further tightening of loan-to-value ratio restrictions in July 2016. Outside of Auckland and Canterbury, house price inflation reached a 10-year high in July, but has fallen slightly since.

Strong demand for housing and low interest rates continue to stimulate residential investment. Residential investment grew by around 6 percent in the June quarter, bringing growth over the first half of 2016 to 11 percent. Strong consent issuance in recent months suggests further
expansion in residential investment (figure 4.11). The strength in consent issuance has been broad-based across regions (figure 4.12). Strength in Auckland is likely to continue as the Auckland Unitary Plan becomes operative and relaxes some impediments to increasing housing supply.

Domestic economic activity has also been supported by increasing consumption (figure 4.13). In the June quarter, consumption grew by 1.9 percent, with the durable goods component increasing by around 3.5 percent. In addition to low interest rates and population growth, consumption has been stimulated by increasing household wealth and growth in real labour incomes. Consumer confidence has improved since the August Statement.

Strong tourist spending continues to support domestic growth. Short-term visitor arrivals reached a historical high in the September quarter (figure 4.14). Arrivals from most regions have increased in recent years, particularly from Asia. While average expenditure per visitor has declined over the first half of the year, total visitor spending has remained stable at a high level. However, tourist spending may come under pressure if the New Zealand dollar remains elevated.

Consistent with declines in global commodity prices, weak global demand contributed to sharp falls in international prices for New Zealand’s commodity exports through 2014-2015. While the ANZ commodity price index has increased by nearly 15 percent since January, it remains about 20 percent below its 2014 peak (figure 4.15).

Much of the recent improvement can be attributed to a rise in the prices of dairy and meat products. Dairy prices on the Global Dairy Trade platform have spiked higher recently, increasing by 44 percent since July to about USD 3,300 per tonne. Sharp movements in dairy prices are not unusual: they have historically been the most volatile of New Zealand’s...
commodity export prices. It is highly uncertain to what degree these price gains will be sustained.

In response to low dairy prices since 2014, dairy farmers have cut back significantly on feed, capital and maintenance expenditures. Low commodity export prices also tend to dampen broader business confidence. This, along with limited capacity pressure across the economy, has contributed to business investment remaining relatively flat since early 2015. However, alongside the more recent increases in commodity export prices, business confidence indicators are improving and business investment is expected to increase through the end of 2016.

Capacity pressure

The output gap is currently estimated to be slightly above zero (figure 4.16). This estimate is supported by a suite of indicators of capacity pressure, but is subject to considerable uncertainty. In the September Quarterly Survey of Business Opinion, a range of measures of capacity pressure increased, across industries and across regions. Capacity pressure is particularly tight in the construction industry, with an increasing share of firms reporting difficulty finding skilled and unskilled labour.

A broad range of indicators suggest that labour market conditions are tightening (figure 4.17). Employment growth has been strengthening. At the same time, strong population growth and a rising labour force
participation rate have contributed to significant growth in the labour force. As the increased labour force has largely been absorbed into employment, the unemployment rate has been stable around 5 percent over the past year, and in the September quarter decreased to 4.9 percent.

**Pricing and inflation**

Despite the tightening of capacity pressure since 2011, non-tradables inflation remains below average. Annual non-tradables inflation was 2.4 percent in the September quarter, up from 1.8 percent in the June quarter. Price increases are most pronounced for CPI components related to construction costs and housing (figure 4.18). This is consistent with tightening capacity pressure in the construction sector. In the September quarter, annual construction cost inflation increased to 6.3 percent at the national level and 7.9 percent in Auckland.

Annual non-tradables inflation continues to be dampened by price declines of specific components. ACC levies were reduced by 33 percent on average across motor vehicle categories from 1 July 2016.

The combination of below-average non-tradables inflation and persistently negative tradables inflation has resulted in annual headline inflation remaining low at 0.4 percent in the September quarter (figure 4.19). Headline inflation is expected to increase to the lower end of the target range in the December quarter, as the fuel price declines of late-2015 drop out of the annual calculation.
Headline inflation has averaged 2.1 percent since the Bank adopted the medium-term target range of 1 to 3 percent for annual headline inflation in September 2002. Over this period, annual headline inflation has been above the target range in 14 quarters and below the range in 13 quarters. Given the fluctuations typically observed in macroeconomic aggregates over the business cycle, it is not surprising that periods of above-target inflation have been counteracted by phases when inflation has been below target.

Weak headline inflation in recent years has exerted downward pressure on short-term inflation expectations. Short-term inflation expectations across a broad range of measures remained stable in the September quarter, but remain below 2015 levels and below the 2 percent target midpoint (figure 4.20). Long-term inflation expectations remain anchored near the 2 percent target midpoint.

---

Figure 4.19
CPI inflation
(annual)

Figure 4.20
Inflation expectations curve
(annual, by number of years ahead)

Figure 4.21
Core inflation measures
(annual)
Given the significant influences of temporary and sector-specific price movements on headline CPI inflation, the Bank uses a wide range of measures of core inflation to assess the strength of underlying inflationary pressures. The Bank’s sectoral factor model sits at 1.5 percent for the September quarter (figure 4.21). All measures of core inflation have increased since mid-2015 and currently range between 1.1 and 1.7 percent.

Box B

Summary of recent business visits

The Bank regularly meets a range of organisations to improve our industry knowledge and understanding of current economic conditions. We use this information to inform our economic projections. In our most recent round of business visits, we spoke with 40 organisations across New Zealand. Half of these organisations are in the construction industry, reflecting the important contribution that construction is currently making to overall economic growth, and reflecting our focus on understanding activity and capacity in the industry.

Construction activity has increased significantly in recent years. Contacts note that demand is very high and business sentiment in the industry is positive. Activity is expected to remain elevated for some time, but contacts suggest that the construction industry is operating close to full capacity and there may be little scope for activity to increase considerably from current levels.

As activity related to the Canterbury rebuild plateaus, the focus of the construction industry is shifting towards Auckland. However, contacts observe a sense of hesitation among construction firms to expand rapidly in Auckland given uncertainties around the outlook. While the Auckland Unitary Plan is generally viewed positively in terms of providing more certainty and alleviating current land shortages, there are concerns that other constraints will limit the boost to construction activity.

The construction industry is reportedly facing several constraints that may impede future activity, such as access to labour, materials, and funding. Most contacts are struggling to find labour to fill a wide range of positions. The labour shortage is reportedly most acute in Auckland,
where high living costs are deterring construction workers from relocating from Canterbury or immigrating from overseas.

Contacts note that it is also becoming increasingly difficult to access construction materials, with shortages becoming acute for some materials. This is leading to some construction firms facing long wait-times and cost increases.

There has recently been a tightening in credit availability in the construction industry, constraining some firms’ ability to increase activity. Contacts note that new and small firms, as well as apartment developers, have been impacted most severely. A lack of funding has led to some construction projects being deferred or cancelled, and contacts expect that credit conditions will continue to tighten. Changes to retentions policy and increased demand for bonding (the provision of liquid assets as assurance that work will be completed) are reportedly putting even more pressure on construction firms’ cash flow.1

The New Zealand construction industry is dominated by small construction firms. Contacts highlight that this fragmented industry structure could present a challenge to meeting future demand. The industry struggles to achieve large-scale construction and innovation is limited. These factors could impede high-density construction and intensification in Auckland. A move towards new procurement methods and prefabricated or modular housing is seen as a positive, and a necessary step forward. The entry of large international construction firms into the New Zealand market could further aid the industry in overcoming these challenges by increasing scale and introducing new technology.

In the economy more broadly, contacts are generally feeling positive about current conditions. They cite steady growth in a competitive environment. Contacts are optimistic about the future, with risks primarily seen as stemming from the fragile global environment. High levels of competition are compressing margins and firms are thinking strategically about how to ease this pressure. Despite low interest rates, there is a reluctance to increase debt. Contacts note that labour is becoming difficult to find, especially in Auckland and Queenstown where living costs are high.

The tourism industry is doing particularly well, supported by a high number of tourist arrivals. The World Masters Games and the Lions rugby tour in 2017, as well as new flying routes to the United States’ east coast, are expected to underpin strength in tourism. Contacts note that the primary industry fared better than anticipated over the past season and expectations are for conditions to improve.

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1 As of 31 March 2017, retention money withheld under commercial construction contracts is required to be held on trust, meaning firms cannot access it when cash flow is tight.
Table 4.1
Measures of inflation, inflation expectations, and asset prices

<table>
<thead>
<tr>
<th>Inflation (annual rates)</th>
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<th></th>
<th></th>
<th>2016</th>
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<th></th>
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<td>0.4</td>
<td>0.4</td>
<td>0.1</td>
<td>0.4</td>
<td>0.4</td>
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<td>1.6</td>
<td>1.8</td>
<td>2.4</td>
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<tr>
<td>CPI tradables</td>
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<td>-1.8</td>
<td>-1.2</td>
<td>-2.1</td>
<td>-1.2</td>
<td>-1.5</td>
<td>-2.1</td>
<td></td>
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<tr>
<td>Sectoral factor model estimate of core inflation</td>
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<td>1.3</td>
<td>1.4</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
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<td>CPI trimmed mean (30 percent)</td>
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<td>CPI weighted median</td>
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<td>GDP deflator (expenditure)</td>
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<td>ANZ Business Outlook - inflation one year ahead (quarterly average to date)</td>
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<td>1.7</td>
<td>1.7</td>
<td>1.4</td>
<td>1.4</td>
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<td>RBNZ Survey of Expectations - inflation two years ahead</td>
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<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.6</td>
<td>1.6</td>
<td>1.7</td>
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<td>2.1</td>
<td>2.0</td>
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<td>2.0</td>
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<td>2.1</td>
<td>2.0</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
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<table>
<thead>
<tr>
<th>Asset prices (annual percent changes)</th>
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<th></th>
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<td>Quarterly house price index (CoreLogic NZ)</td>
<td>9.1</td>
<td>11.0</td>
<td>14.9</td>
<td>11.2</td>
<td>11.6</td>
<td>13.4</td>
<td></td>
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<tr>
<td>REINZ Farm Price Index (quarterly average to date)</td>
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<td>2.1</td>
<td>-0.4</td>
<td>-2.5</td>
<td>4.2</td>
<td>-2.6</td>
<td>4.3</td>
<td></td>
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<tr>
<td>NZX 50 (quarterly average to date)</td>
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<td>12.6</td>
<td>11.4</td>
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<td>9.1</td>
<td>18.4</td>
<td>26.5</td>
<td>18.3</td>
</tr>
</tbody>
</table>

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

- Spare capacity in the global economy and the high exchange rate are expected to continue to dampen import prices. The outlook for tradables inflation remains subdued.

- Low inflation expectations are expected to continue to dampen headline inflation.

- Monetary policy is forecast to remain accommodative throughout the projection to ensure that future average inflation settles near the middle of the target range.

- Low interest rates are expected to continue to stimulate the domestic economy through a range of channels, increasing capacity pressure, and generating an increase in inflation.

As discussed in chapter 3, considerable slack remains in the global economy despite significant monetary policy stimulus. Inflation in advanced economies remains below central banks’ targets, and global commodity prices are at low levels, despite stabilising over 2016.

A weak global economy and low global interest rates relative to New Zealand interest rates have contributed to continued strength in the exchange rate (figure 5.1). The New Zealand dollar TWI is slightly higher than assumed in the August Statement. Over the medium term, the exchange rate is projected to depreciate gradually, reflecting an improvement in global economic conditions and a narrowing of interest rate differentials between New Zealand and other advanced economies.

Import prices are expected to increase gradually from low levels over the projection (figure 5.2). The Dubai oil price has risen since the beginning of 2016, and is assumed to increase to around USD 60 per barrel by the end of the projection.

Low import prices and the high exchange rate mean the medium-term outlook for tradables inflation remains subdued (figure 5.3). In the near term, the increase in fuel prices will increase tradables inflation. Over the medium term, tradables inflation is expected to increase gradually, supported by a depreciation of the exchange rate.
**Figure 5.1**
New Zealand dollar TWI

Source: RBNZ estimates.

**Figure 5.2**
Import prices
*world terms, s.a.*

Source: Statistics New Zealand, RBNZ estimates.

**Figure 5.3**
Tradables inflation
*(annual)*

Source: Statistics New Zealand, RBNZ estimates.

**Figure 5.4**
Official Cash Rate

Source: RBNZ estimates.
As noted in chapter 4, short-term inflation expectations remain low. Low inflation expectations reduce the outlook for inflationary pressure through two channels: a dampening impact on price- and wage-setting behaviour, and a reduction in the degree of real stimulus provided to the economy for a given level of nominal interest rates. Inflation expectations are projected to recover only gradually as CPI inflation increases towards the midpoint of the target range.

In response to weak inflationary pressure, and low inflation expectations, the Bank has lowered the Official Cash Rate considerably over the past 18 months (figure 5.4). This has provided significant monetary stimulus to the domestic economy. Mortgage rates are at historically low levels, supporting household borrowers. Monetary policy is projected to remain accommodative and support domestic activity, so that future average inflation settles near the middle of the target range.

Net immigration is projected to stay elevated in the near term (figure 5.5), as New Zealand’s labour market conditions remain favourable relative to the rest of the world. Net immigration is expected to moderate over the medium term, as foreign labour markets improve. Continued historically high net immigration is expected to increase domestic demand, and contribute to house price inflation. However, migrant inflows will also add to labour supply, having a moderating influence on wage growth.

Low interest rates, strong population growth, and a housing shortage in Auckland mean that house price inflation is expected to remain high in the near term, despite some softening in recent months (figure 5.6). House price inflation is forecast to moderate over the second half of the projection horizon as net immigration moderates, housing supply increases, and affordability constraints begin to bind.
Construction activity is a key contributor to capacity pressure over the projection. Residential investment is stronger than projected in the August Statement and is forecast to remain elevated (figure 5.7). Strong population growth and a housing shortage in Auckland, as well as high house prices, continue to underpin residential investment. The Auckland Unitary Plan is assumed to support residential investment over the medium term. However, the extent to which greater land availability will increase activity in Auckland is uncertain.

Consumption growth is forecast to strengthen in the near term, supported by low interest rates, high net immigration, and house price and income growth (figure 5.8). Consumption growth is expected to moderate from 2017, as migration and house price inflation start to slow.

Dairy prices have increased from a low level since the August Statement. There is uncertainty about the degree to which recent increases will be sustained – we assume some of this increase will be temporary. Abstracting from near-term volatility, we project dairy prices to trend towards a level consistent with a whole milk powder price of USD 3000 per tonne over the medium term. In line with these developments export prices are expected to increase (figure 5.9).

Business investment is projected to increase over the forecast horizon (figure 5.10). This is driven by strength in non-residential construction investment in response to high population growth and low interest rates. An increase in commodity prices and business confidence, and signs of rising capacity pressure in the economy, are also expected to support increasing business investment through the projection.

Overall, annual GDP growth is expected to average around 3.1 percent over the projection horizon, exceeding average potential growth of around 2.7 percent. The resulting rise in capacity pressure generates an
increase in non-tradables inflation throughout the projection, reaching 3.4 percent by 2018 (figures 5.11 and 5.12). Annual CPI inflation is expected to return to the bottom of the target range in the December 2016 quarter, and trend towards the midpoint of the target range over the medium term (figure 5.13).

**Risk analysis**

These projections represent the Bank’s central view of how the New Zealand economy is expected to evolve over the next few years. Given this view, the projected path for the OCR is consistent with future average inflation settling around the target midpoint.

However, as noted in chapter 2, the projections and the appropriate policy response depend on a range of judgements about how global conditions might evolve, and how these global factors and domestic
policy stimulus transmit through the domestic economy. If the judgements do not hold or unforeseen developments occur, the projections could change, with the outlook for monetary policy revised accordingly.

The Bank has illustrated a range of scenarios in Statements over the past 18 months, focusing on key risks that could alter the central projections (box C summarises the detail of the various scenarios). As the dominant global and domestic influences on our projections have remained broadly similar over the past year, these risks remain relevant and the scenarios remain informative.

We have considered the following externally focused risks to the New Zealand economy:

- A higher exchange rate due to increased investor preference for New Zealand dollar assets.
• Higher funding costs.
• Lower export prices for longer.
• Lower global commodity prices due to a global demand shock.
• Lower imported inflationary pressure.
• Persistently higher net immigration due to weakness in global activity.

The scenarios that focused on domestic conditions were:

• House price inflation remaining elevated for longer.
• Higher household consumption.
• Further declines in inflation expectations.

In addition to the ongoing global and domestic risks, the economy is occasionally affected by idiosyncratic shocks. An example that the Bank has previously considered is the wider economic effects of a drought that significantly reduces dairy production.

Figure 5.14 shows the set of interest rate paths implied by these scenarios, applied to the current central projection. Should these scenarios, or a combination of these scenarios materialise, the Bank will revise the path for the OCR appropriately, in either direction, to ensure inflation trends toward the midpoint of the target range over the medium term.

Box C

Summary of previous risk scenarios

A higher New Zealand dollar TWI

If investors’ preferences for New Zealand dollar assets increases despite a declining interest rate differential, the exchange rate could remain higher than assumed. A higher exchange rate would dampen import prices, and reduce tradables inflation. Furthermore, the higher exchange rate would weigh on the export and import-competing sectors, while lower import prices would lead to more imported consumption. Lower rates would be required to generate stronger domestic demand and return inflation to target.

Higher funding costs

Lower risk appetite in financial markets would translate into higher wholesale funding costs for banks as markets charge a higher price to compensate for the perceived risk of lending to them. Higher funding costs would result in mortgage interest rates rising relative to wholesale interest rates, with the spread between the floating mortgage rate and the OCR increasing. In such a scenario, the New Zealand dollar TWI could depreciate, partly due to investors moving funds to traditional safe-haven economies. In this environment, firms and households could become less confident about the economic outlook, reducing consumption and investment. Lower policy interest rates would be needed to prevent an increase in mortgage interest rates that would dampen domestic demand and inflationary pressure.
Lower export prices

A fall in global demand for dairy or a strengthening in global dairy production could see export prices fall back to low levels. Lower export prices would flow into the domestic economy through lower national incomes and a deterioration in confidence. Growth in consumption and business investment would weaken, reducing capacity pressure. While a weaker domestic outlook would typically lead to a depreciation of the exchange rate and higher tradables inflation in the near term, a weaker outlook for non-tradables inflation over the medium term may mean that additional monetary policy stimulus is required.

Lower global commodity prices

Deterioration in global growth prospects could see world commodity prices and inflation fall. This would imply lower imported inflation for New Zealand. It is likely in this environment that prices of New Zealand’s export commodities would also fall, reducing farm incomes and business confidence, reducing consumption and investment. The inflation impact would depend on the exchange rate response and the terms of trade impact of declines in both export and import prices.

Persistently higher net immigration

If foreign labour markets do not strengthen as assumed, net immigration could be higher than projected. Net immigration increases domestic demand, contributing to house price inflation and consumption. Higher net immigration would also increase labour supply and potential output. On net, higher net immigration would likely be positive for inflationary pressure.

House price inflation remains high for longer

Given strong population growth, a housing shortage in Auckland, and low interest rates, house price inflation could remain high for longer than assumed in the projection. Higher house price inflation would stimulate construction activity and, assuming historical relationships between house prices and household spending hold, consumption would increase. Stronger domestic demand and a higher output gap would generate higher non-tradables inflation and higher interest rates would be necessary.

Stronger consumption

Consumption has not grown as strongly as historical relationships with house prices might suggest. If this reflects an element of consumer caution which disappears as the economy continues to strengthen and consumers become more optimistic, household spending could increase more than assumed. Stronger consumption growth would add to capacity pressure, and generate higher non-tradables inflation. In this scenario, higher interest rates would be required.

Inflation expectations fall further

Inflation expectations are assumed to gradually increase over the projection as headline inflation increases. If inflation expectations were to fall further, pulling down long-term inflation expectations, significantly lower policy rates would be required to generate a stronger output gap and inflationary pressures to see inflation settle back around the target midpoint.
### Table 5.1
Composition of real GDP growth
(annual average percent change, seasonally adjusted, unless specified otherwise)

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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Private</td>
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<td>2.9</td>
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<td>2.9</td>
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¹ Percentage point contribution to the growth rate of GDP.
Table 5.2
Summary of economic projections
(annual percent change, unless specified otherwise)

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