Monetary Policy Statement

June 2015

RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

Reserve Bank of New Zealand
Monetary Policy Statement

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Monetary Policy Statement[1]

June 2015

Contents

[1] Projections finalised on 2 June 2015. Data finalised on 3 June 2015. Policy assessment finalised on 10 June 2015.

Chapter 1

Policy assessment

The Reserve Bank today reduced the Official Cash Rate (OCR) by 25 basis points to 3.25 percent.

Growth in the global economy remains moderate. Data on economic activity in the US, China and Australia has been mixed, although there has been some improvement in the euro area and Japan. Volatility in financial markets has increased.

The New Zealand economy is growing at an annual rate around three percent, supported by low interest rates, high net migration and construction activity, and the decline in fuel prices. However, the fall in export commodity prices that began in mid-2014 is proving more pronounced. The weaker prospects for dairy prices and the recent rises in petrol prices will slow income and demand growth and increase the risk that the return of inflation to the mid-point would be delayed.

Inflation has been low due to falling import prices and the strong growth in the economy's supply potential. Wage inflation and inflation expectations have been subdued.

With the fall in commodity prices and the expected weakening in demand, the exchange rate has declined from its recent peak in April, but remains overvalued. A further significant downward adjustment is justified. In light of the forecast deterioration in the current account balance, such an exchange rate adjustment is needed to put New Zealand's net external position on a more sustainable path.

House prices in Auckland continue to increase rapidly, and increased supply is needed to address this. The proposed LVR measures and the Government's tax initiatives planned for 1 October 2015 should ease the impact of investor activity.

A reduction in the OCR is appropriate given low inflationary pressures and the expected weakening in demand, and to ensure that medium term inflation converges towards the middle of the target range.

We expect further easing may be appropriate. This will depend on the emerging data.

Graeme Wheeler

Governor

Chapter 2
Key policy judgements

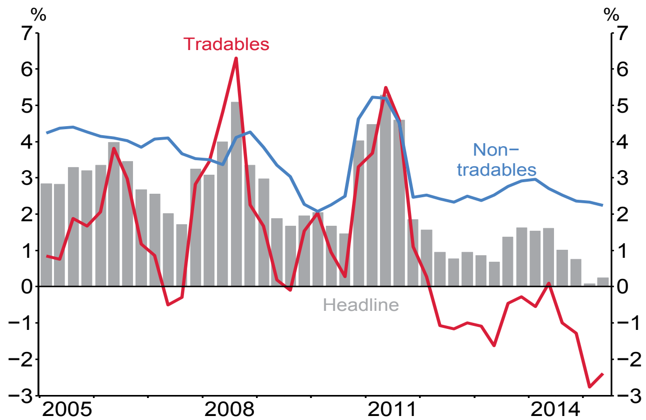
The New Zealand economy continues to expand, with GDP growth estimated at 3.2 percent in the year to June 2015. Headline inflation is near zero, reflecting low global inflation, unsustainable strength in the exchange rate, and a fall in world oil prices. At the same time, strong growth in the economy's supply potential has played an important part in this expansion, and has limited the increase in domestic inflationary pressures.

The March 2015 *Monetary Policy Statement* projected that inflation would approach the mid-point of the target range around mid-2017. Recent inflation indicators have been muted. The continued decline in the terms of trade (due mainly to weaker dairy prices and higher petrol prices) will slow income and demand growth and increase the risk that the return of inflation to the mid-point would be further delayed. The current projection assumes that the terms of trade will remain about 5 percent lower over the next three years than in the March *Statement*. This suggests that monetary policy needs to be more stimulatory to encourage the pick up in inflation.

Despite global growth being near its average, world prices for a range of commodities have fallen during the past year. The falls mainly reflect increased supply for commodities including crude oil, minerals, and food. Of particular relevance to New Zealand are international dairy prices, which have fallen markedly. The result has been a significant decline in our national income, as indicated by lower terms of trade. While farmers usually smooth their spending through income cycles, particularly for core expenditure such as grass management and animal health, a risk is that continued low international prices cause farm expenditure and spending in rural areas more generally to slow markedly.

Figure 2.1
CPI inflation

(annual)



Source: Statistics New Zealand.

The lower terms of trade are being experienced when New Zealand's headline and core inflation are already low. The CPI increased by only 0.1 percent in the year to the March quarter 2015 (figure 2.1). A fall in petrol prices directly lowered the headline rate by 0.8 percentage points in the quarter. Falling tradables prices more broadly have reduced headline inflation over the past three years. Behind the negative tradables inflation is the slow global economic recovery, which has caused world inflation to be low and helped to push the value of the New Zealand dollar to an unsustainably high level, further suppressing inflation.

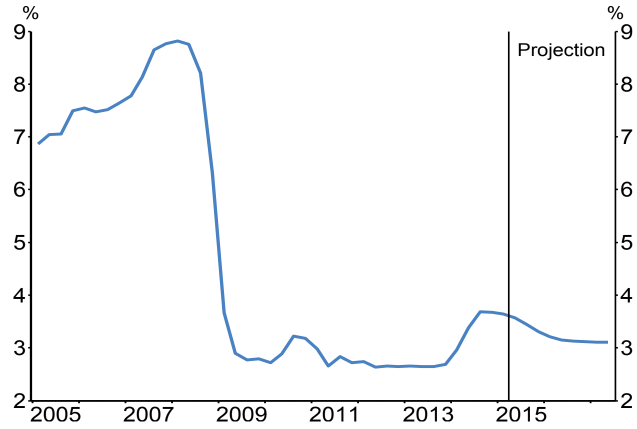
Annual non-tradables inflation is currently 2.3 percent and has been steady despite GDP growth averaging 2.7 percent over the past three years. Strong growth in the economy's supply potential has been an important factor moderating the flow through from output growth to domestic inflation. In particular, growth in labour supply has been driven by record net immigration and record-high labour force participation.

For some time the Reserve Bank has been looking carefully at New Zealand's mix of robust GDP growth, an unsustainably high exchange rate and low inflation. In response to low inflation, the Bank's projected profile of the Official Cash Rate (OCR) has been pared back significantly (see Box A). In the June 2014 *Monetary Policy Statement*, reflecting an environment of robust growth and signs that inflation was about to rise, the Bank predicted short-term interest rates would move above 5 percent in late 2016. That projection was consistent with steady, albeit slow, monetary policy tightening.

Since then, however, weaker inflation and inflationary pressures saw the increase in short-term interest rates eliminated from the projection by the March 2015 *Statement*. Behind the lower inflation and inflation outlook have been negative tradables inflation and steady non-tradables inflation. As noted above, the former is driven by global factors, including lower oil prices. The latter reflects strong growth in supply capacity, which means excess capacity is greater and the output gap lower than earlier projected.

The Reserve Bank expects inflation to increase from here. However, the recent sharp decline in the terms of trade means that monetary policy will need to be more stimulatory than previously assumed in encouraging inflation to return to target (figure 2.2). There is little evidence that export prices are about to recover. Global growth still depends on highly accommodative monetary settings, and the chance of a stronger pick-up seems limited. Furthermore, global commodity production – including for food – seems unlikely to fall in the near term.

Figure 2.2
90-day interest rate



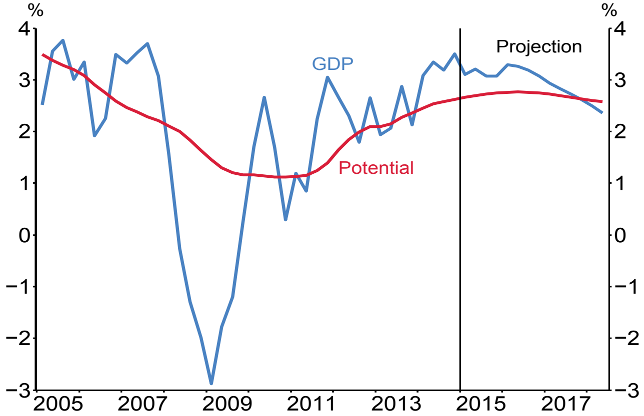
Source: RBNZ estimates.

While more monetary policy support will help inflation return to target, other factors will also play a role. Construction activity, both of houses and commercial buildings, is likely to continue to rise in Auckland and elsewhere. Furthermore, earthquake-related reconstruction in

Canterbury, while close to its peak, is likely to remain elevated for the next few years. In addition, the unemployment rate is projected to fall to around 5 percent and the tighter labour market is expected to lead to some increase in wage pressures.

Figure 2.3
Economic growth

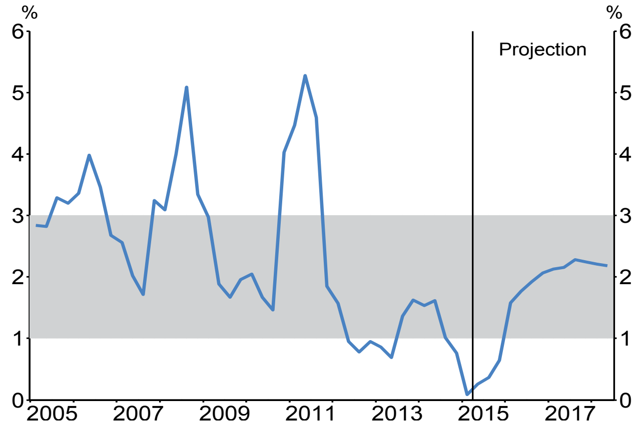
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Figure 2.4
CPI inflation

(annual)



Source: Statistics New Zealand, RBNZ estimates.

Tradables inflation is forecast to increase noticeably. This is partly due to increased fuel prices. As the dampening impact of previous falls in fuel prices drop out of the annual figure, and the impact of recent increases comes in, tradables inflation is expected to move quickly into positive territory.

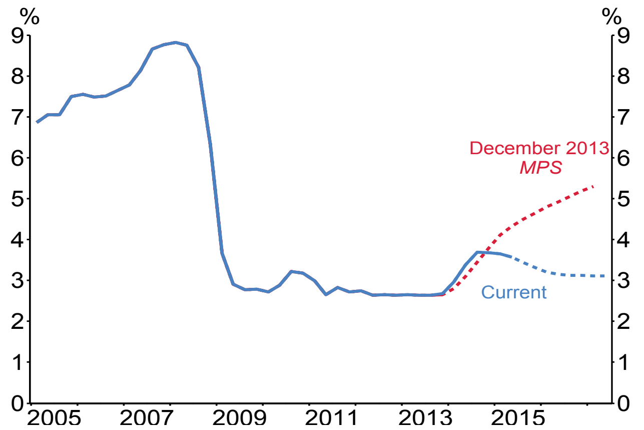
More importantly, tradables inflation is expected to be boosted by recent and continued exchange rate depreciation. Given the fall in the terms of trade, further depreciation in the New Zealand dollar is justified. Annual CPI inflation is projected to be within the 1 to 3 percent inflation target range in early 2016 (figure 2.4).

Box A

Recent monetary policy decisions

The monetary policy outlook has evolved over the past 18 months, with the projection for the 90-day rate falling by more than 200 basis points (figure A.1). This reflects in particular a sharp fall in the terms of trade since early-2014 and lower-than-expected inflationary pressures. The lower outlook for inflationary pressures and the policy interest rate have been reflected in falling interest rates on fixed-term mortgages over late-2014 and into 2015.

Figure A.1
90-day interest rate



Source: RBNZ.

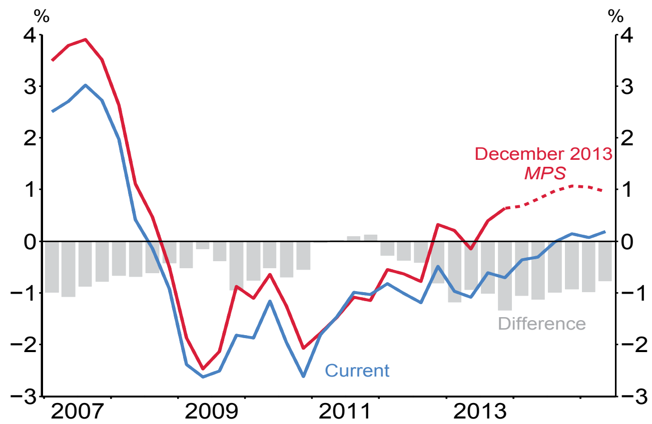
Note: Dotted lines indicate the projection period.

The December 2013 *Statement* projected interest rate increases over 2014 and beyond, reflecting the inflationary pressures that that were seen to be building. In early 2014, New Zealand's terms of trade were at a 40-year high, domestic demand was growing rapidly and a sizeable positive output gap was forecast. From March to July 2014, the Bank raised the OCR by 100 basis points to 3.5 percent before pausing for a period of assessment. In mid-2014, the Bank expected inflationary pressure and the OCR to increase further.

However, the OCR has remained at 3.5 percent since that time. Inflationary pressures turned out to be weaker than earlier projected, primarily because of low tradables inflation. Although the output gap had been rising, by the March 2015 *Statement* it was lower than previously estimated (figure A.2). Consequently, the Bank said at the April review that "it would be appropriate to lower the OCR if demand weakens, and wage and price-setting outcomes settle at levels lower than is consistent with the inflation target".

Figure A.2
Output gap

(percent of potential output)



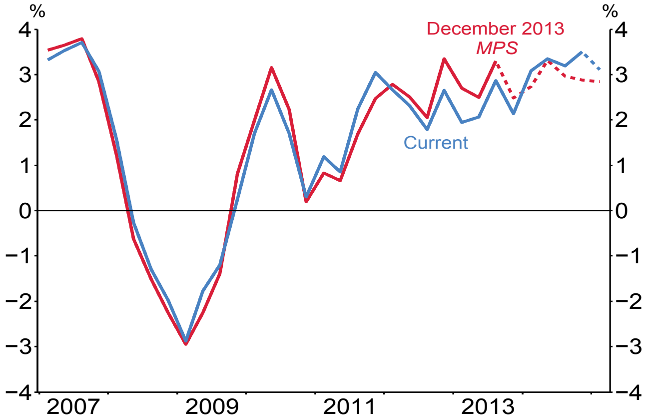
Source: RBNZ estimates

Note: Dotted lines indicate the projection period.

Estimates of the output gap were lowered over 2014 and into 2015 as supply capacity in the economy grew more quickly than anticipated. This was despite output growth being broadly in line with the December 2013 projection (figure A.3).

Figure A.3
GDP growth

(annual)

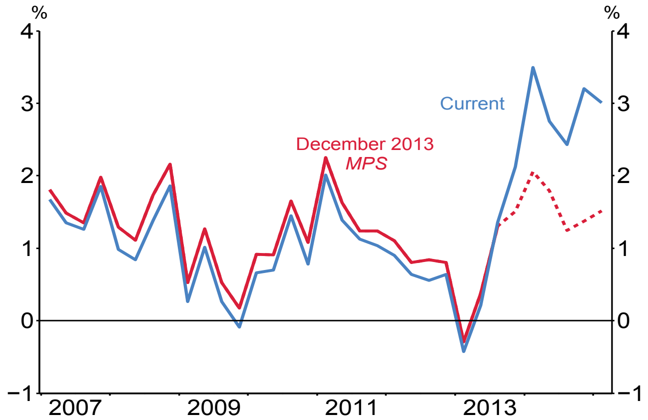


Source: Statistics New Zealand, RBNZ estimates.

Note: Dotted lines indicate the projection period.

Figure A.4
Growth in the labour force

(annual)



Source: Statistics New Zealand, RBNZ estimates.

Note: Dotted lines indicate the projection period.

Growth in the labour force has played an important part in the growth in supply capacity. Despite employment growth greater than 3 percent, the unemployment rate has been higher than expected, at 5.8 percent in the March quarter. This reflected stronger-than-expected labour force growth (figure A.4). Net immigration was much higher than expected, boosting the working age population, and labour force participation rose strongly to record rates.

Chapter 3
International developments

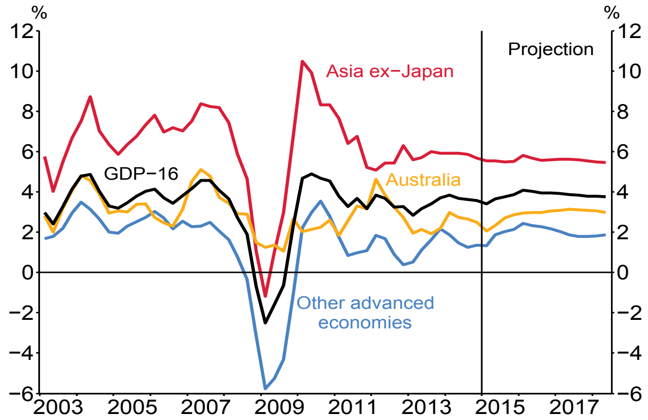
Economic growth in New Zealand's major trading partners slowed in the first quarter of 2015, but is expected to recover to a moderate pace over the remainder of the year. Trading partner inflation remains weak, reflecting slack in the global economy and previous declines in oil and other commodity prices. Global monetary policy remains very accommodative and conditions have eased further since the beginning of this year. This has contributed to low global bond yields, although there has been some recovery from the low levels seen in early April.

Trading partner developments

Although growth in major trading partners eased in the first quarter of 2015, it is expected to remain around its historic average over the three-year projection. This reflects the higher share of New Zealand's trade with faster-growing Asian economies than in the past. Growth in these economies is expected to remain at a high rate compared to most advanced economies, but below the rates of the mid-2000s (figure 3.1). Overall, growth in New Zealand's major trading partners continues to be supported by very accommodative monetary policy.

Figure 3.1
GDP growth

(annual)



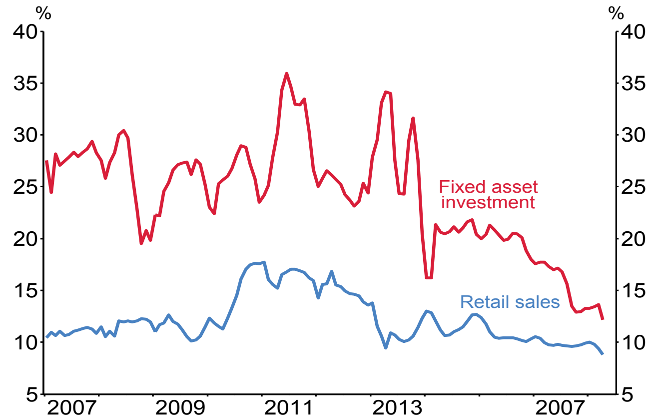
Source: Haver Analytics, RBNZ estimates, Statistics New Zealand.

Note: Asia ex-Japan includes China, Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan, Thailand, and the Philippines. Other advanced economies includes Canada, the euro area, Japan, the United Kingdom, and the United States. GDP-16 is an aggregate of 16 of New Zealand's major trading partner economies, weighted by merchandise export shares.

Annual growth in China slowed to 7 percent over the first quarter of 2015, down from 7.4 percent a year earlier. Continuing weakness in the property market has contributed to slower growth in industrial activity and construction. Residential property prices are stabilising, but the property market remains subdued. Weaker construction and increased spare capacity in the industrial sector have led to lower investment growth, and have weighed on global demand for hard commodities. Consumption growth continues to trend lower, with growth in real retail sales easing since the start of 2015 (figure 3.2).

Figure 3.2
Investment and retail sales growth in China

(annual, 3-month moving average)



Source: Haver Analytics, RBNZ estimates.

Note: Investment is in current prices, retail sales in real terms.

GDP growth in China is expected to remain near 7 percent over 2015, supported by accommodative monetary and fiscal policies. Over the latter part of the projection, growth is expected to ease slightly but remain within the 6 to 7 percent range. The Chinese authorities have taken a number of steps to support economic activity over the past year, and such measures have been stepped up in recent months. The People's Bank of China lowered reserve ratio requirements for banks by a larger-than-expected 100 basis points in April, and cut the benchmark lending and deposit rates by 25 basis points in May – the third reduction in the past six months. In addition, since late 2014 the Chinese authorities have announced plans for severalinfrastructure projects, and in early 2015 announced more targeted measures to support the property market.

There are several downside risks to the Chinese growth outlook. Uncertainty remains about the effectiveness of the policy-easing measures enacted so far. Growth in various activity indicators, including fixed asset investment and industrial production, remained subdued in

April. While the central authorities have scope to ease monetary and fiscal policies further, and more easing is expected to come, there is a risk that local governments have limited capacity to fund infrastructure investment. Subdued conditions in the property market could weaken local governments' revenue, and recent reforms might restrict the ability of local governments to raise debt.

Recovery has continued in the major advanced economies, although the speed of recovery has differed across regions. The prolonged and gradual nature of the recovery means that spare capacity remains in most advanced economies, and monetary policy settings remain highly stimulatory.

Annual GDP growth in Australia is below its historical average, at 2.3 percent for the March 2015 quarter. The falling terms of trade are weighing on national income, and weak domestic demand is being masked by strong growth in commodity export volumes. Mining investment continues to decline, and growth in non-mining business investment remains weak. However, the housing market remains strong. In response to below-trend growth and a benign inflation outlook, the Reserve Bank of Australia (RBA) cut the cash rate for a second time this year to a record low of 2 percent in May, but kept the policy rate unchanged in June. The median of analysts' forecasts is for the RBA to keep the cash rate unchanged this year.

Quarterly growth in the United States economy slowed in the March quarter to -0.2 percent from 0.5 percent in the December quarter of 2014. Much of this weakness is attributed to temporary factors, with industrial action across many ports and adverse weather affecting activity. Annual growth in the United States is now forecast to be 2.5 percent in 2015, slightly lower than expected at the time of the March *Statement*.

Labour market conditions in the United States have continued to improve this year. The unemployment rate declined to 5.4 percent in April, and some measures of wage inflation have increased since the beginning of 2015. Given the continued improvement in the labour market, the Federal Reserve is expected to begin raising the federal funds target rate – which has been 0 to 0.25 percent since December 2008 – by late 2015. Core CPI inflation rose 0.3 percent in April, providing some evidence of strengthening underlying inflation. The median of analysts' forecasts is for the first rate rise to occur in September, and market pricing has the first 25 basis point rate rise fully priced in by December this year. Market expectations of the first rate hike have been pushed back since the beginning of 2015, in part reflecting weaker-than-expected March quarter GDP and significant strengthening in the US dollar.

The gradual recovery in the euro area continues, with quarterly GDP growth increasing to 0.4 percent in the March 2015 quarter. Demand is being supported by low oil prices, a slower pace of fiscal consolidation than in recent years, and extremely accommodative monetary policy. The European Central Bank (ECB) has substantially increased monetary stimulus with the expansion of its quantitative easing programme from 9 March 2015. The expanded programme involves asset purchases of about EUR 60 billion per month – mainly through purchases of euro area government bonds. It is expected to continue until at least September 2016, supporting growth and inflation by lowering interest rates and the exchange rate, and boosting asset prices.

However, headwinds to growth in the euro area remain, including a slow pace of structural reform in some countries, continuing balance sheet repair in the financial sector, and high political and economic uncertainty. Annual GDP growth in the euro area is expected to increase only gradually, and remain below 2 percent over the projection.

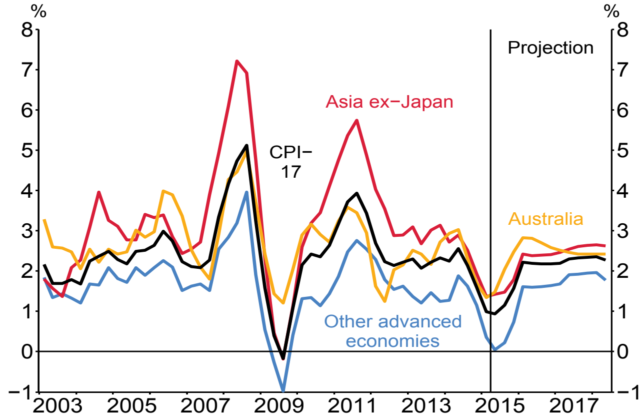
Economic activity in Japan continues to recover after a sharp decline in output following the consumption tax increase in April 2014. GDP growth is expected to remain modest in 2015 and 2016, supported by accommodative monetary and fiscal policies, the depreciation of the yen, and low oil prices.

Growth in New Zealand's other Asian trading partners has generally been moderate by their past standards. Monetary and fiscal policies remain supportive across the region, and are expected to support growth over the projection.

Inflation in New Zealand's trading partners declined over the second half of 2014 (figure 3.3). The decline in the price of fuel has been the main reason for the drop in inflation across countries. But measures of core inflation also remain low in most economies, mainly due to lingering spare capacity. Annual trading partner inflation is expected to remain low during 2015, but rise in 2016 as the effect of lower fuel prices wanes. Underlying inflation is likely to remain modest in most economies over the next three years as spare capacity is absorbed only gradually.

Figure 3.3
Inflation

(annual)



Source: Haver Analytics, RBNZ estimates.

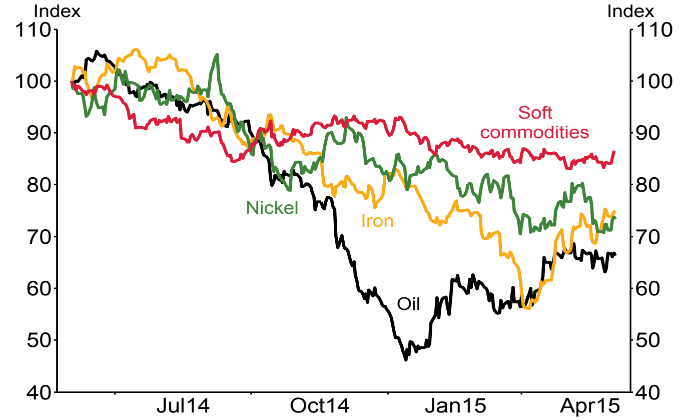
Note: Asia ex-Japan includes China, Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan, Thailand, the Philippines and Vietnam. Other advanced economies include Canada, the euro area, Japan, the United Kingdom, and the United States. CPI-17 is an aggregate of the 17 countries included in the TWI-17.

Commodity price developments

Oil prices have continued to recover since the March *Statement*. The price of Brent crude oil is now around $US 65 per barrel, about USD 15 higher than its January trough. The recovery in oil prices has been supported by slower growth in US oil production and indications that US oil inventories have peaked. While the prices of some other hard commodities, such as iron ore and copper, have increased since March, a variety of internationally-traded soft commodities have not had the same recovery (figure 3.4). The outlook for production of several food commodities has improved over the past year, placing downward pressure on prices.

Figure 3.4
Commodity prices

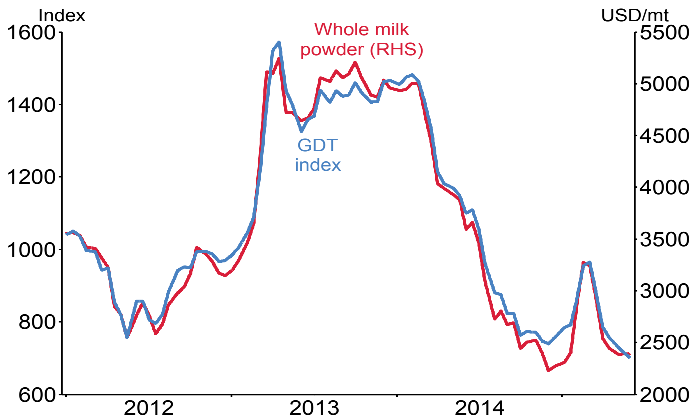
(2 June 2014 = 100)



Source: Bloomberg, RBNZ estimates.

Note: The soft commodities index is an index of high-frequency food commodity prices constructed from daily Bloomberg data, modelled on the International Monetary Fund's primary commodity price index. It includes: wheat, corn, barley, soybeans, soybean meal, soybean oil, palm oil, lean hogs, poultry, sugar, coffee, and cocoa. The index is weighted by global trade shares from the International Monetary Fund. The indices are in SDR terms.

Figure 3.5
Global dairy prices



Source: GlobalDairyTrade.

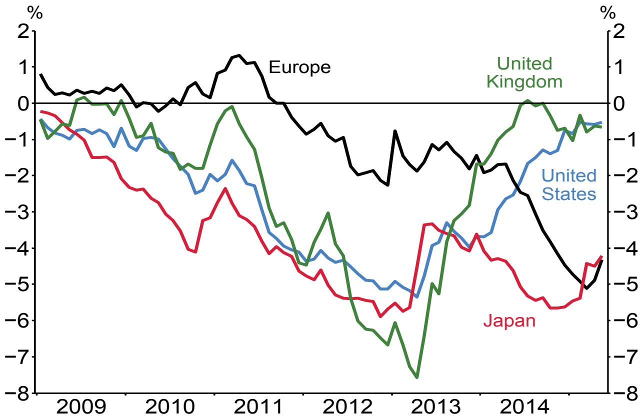
Prices for New Zealand's export commodities have also declined over the past year. Dairy prices have fallen substantially (figure 3.5), reflecting strong growth in global supply and a build-up of dairy inventories in China.

Dairy prices spiked higher at the start of 2015 as dry weather in New Zealand underpinned expectations of sustained slowing in global dairy supply. Prices subsequently reversed as weather improved. Whole milk powder prices are currently $US 2309 per metric tonne. Fonterra expects New Zealand milk production for the 2014/15 season to be 1.5 percent higher than the 2013/14 season – a significant increase from Fonterra's forecast at the time of the March *Statement* of a 3.3 percent fall. Dairy production in other major dairy exporters, such as Europe and the United States, remains high, even though growth has slowed over 2015. Growth in global dairy supply is expected to moderate further in coming months as current low prices are below many countries' average cost of production. The implications of lower dairy prices for the New Zealand economy are discussed further in chapters 4 and 5.

Global financial conditions

Global monetary conditions remain extremely accommodative (figure 3.6). Divergent outlooks for monetary policy, particularly between the euro area, Japan, and the United States, continue to underpin financial market trends. The ECB substantially increased its quantitative easing programme in March 2015, and the Bank of Japan continues to expand its balance sheet. While monetary policy in the United States remains stimulatory, conditions have tightened and the Federal Reserve is expected to begin raising its policy rate by late 2015. The expected timing of the first interest rate increase remains an important focus for market participants.

Figure 3.6
Shadow 90-day interest rates

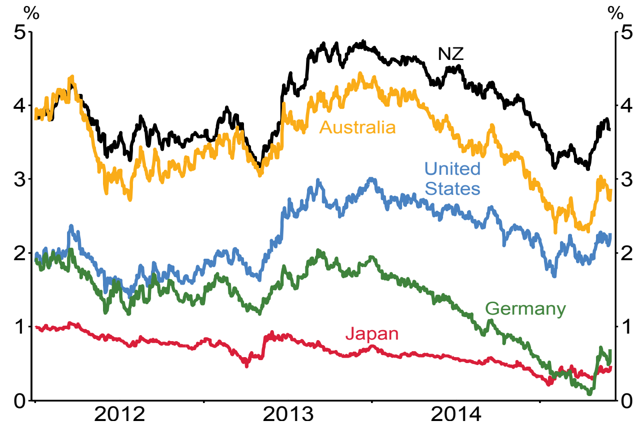


Source: RBNZ estimates. For updated data see: http://www.rbnz.govt.nz/research_and_publications/research_programme/additional_research/comparison-of-international-monetary-policy-measures.html

Note: The shadow interest rate is an estimate of the hypothetical short-term interest rate that would prevail if the zero lower bound was not binding on interest rates. In practice, negative values of the shadow interest rate indicate an overall stance of conventional and unconventional monetary policy that is more accommodative than a zero policy-rate setting alone, see Krippner, Leo (2015), "Zero Lower Bound Term Structure Modeling: A Practitioner's Guide", Palgrave Macmillian.

Government bond yields trended down through to April this year (figure 3.7), to record lows in many cases. The ECB's expanded quantitative easing programme, and negative policy rates in some other European countries, placed considerable downward pressure on European sovereign bond yields, and an increasing proportion of bonds trading at negative yields. Declining European bond yields caused investors to look elsewhere for better returns, placing downward pressure on global government bond yields including in New Zealand.

Figure 3.7
Government 10-year bond yields



Source: Reuters.

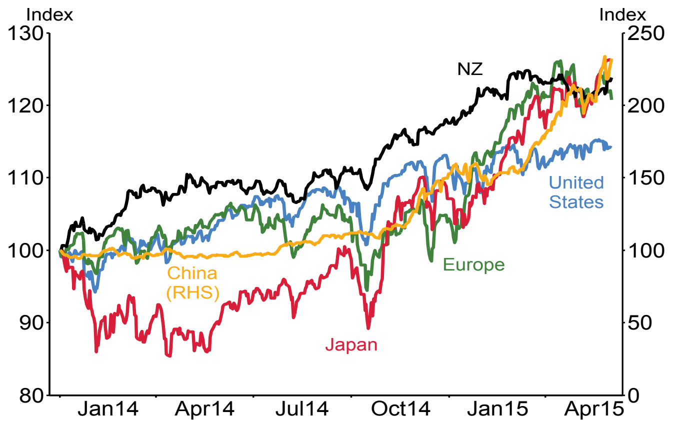
While the general trend has been for lower yields, a substantial change in sentiment towards bonds occurred in late April. Global bond yields spiked higher, led by movements in longer-term (10-year and 30-year) German bund yields. There was no obvious fundamental trigger for the move. Instead, the move has largely been attributed to portfolio repositioning as investors had taken a view that bond yields in the euro area would continue to move lower given the ECB's large asset purchase programme. Some of the rise in bond yields is also consistent with reduced concerns about disinflationary pressures in Europe, in part reflecting the rebound in oil prices over the past few months.

Concerns remain around Greece's ability to meet its upcoming debt obligations, and negotiations between Greece and its creditors continue. Spreads of other Southern European bond yields to German bund yields have widened slightly since March. However, spreads remain well contained, suggesting limited concern about any spillover of Greek debt issues to other markets. One explanation for the limited spillover to date may be that much of Greece's debt is now held by public sector entities, which means that market pricing may not be providing a true reflection of investor sentiment.

Stimulatory monetary policy in 2015 has contributed to strong gains in global equities (figure 3.8), as low bond yields encourage investors to turn to riskier assets. Growth in prices for European and Japanese equities has been particularly strong, with the STOXX Europe 600 index and Japan's Nikkei index both more than 15 percent higher since January. In the United States, the S&P 500 reached a record high in May. Total growth this year in the S&P 500 has been limited by the effect of the higher US dollar on projected company earnings, and expected monetary policy tightening by the Federal Reserve. China's Shanghai composite index has risen more than 40 percent this year and more than doubled in the past year, despite weakness in many economic indicators. The surge appears to reflect, in part, expectations (and recent follow through) of further policy easing by the Chinese authorities to support the economy.

Figure 3.8
Equity prices

(1 January 2014=100)



Source: Bloomberg.

Note: Indices shown are US S&P 500, Japan Nikkei 225, STOXX Europe 600, China Shanghai composite, and New Zealand NZX50. Indices are in local currency terms.

Divergent monetary policy trends, and therefore interest rate differentials, are a key factor driving recent trends in major currencies. Despite some recovery in the euro from the low reached in March, it has been one of the weakest major currencies this year as relatively low government bond yields have driven portfolio flows away from the region. Conversely, expectations of future monetary policy tightening by the Federal Reserve continue to support the US dollar. The US dollar lost some ground after reaching a 12-year high in early March as expectations for monetary tightening were pushed back. However, in May, the US dollar showed renewed strength as more positive data added weight to the view that the Federal Reserve would raise interest rates later this year.

Chapter 4
Current domestic conditions

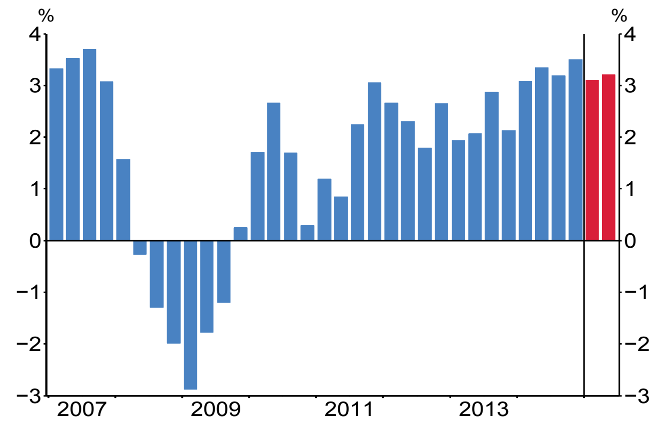
GDP growth has been strong over 2014 and the start of 2015, and inflation has remained low. Low inflation reflects falling prices in the traded sector as well as surprisingly strong growth in the economy's productive capacity, particularly in the labour market. This supply-side growth has meant that domestic pressure on resources and prices has been limited.

Output growth

The economy expanded by 3.5 percent in 2014, and is estimated to have grown at an annual rate of 3 percent over the first half of 2015 (figure 4.1).

Figure 4.1
GDP growth

(annual)



Source: Statistics New Zealand, RBNZ estimates.

GDP growth over much of 2014 was driven by the elevated terms of trade, increasing net immigration, and the Canterbury rebuild. The terms of trade reached a 40-year peak in the first quarter of 2014, with prices of New Zealand's commodity exports rising to record levels.

Strong economic growth increasingly drew on the economy's productive resources. The number of people employed in the economy increased by 74,000 in the year to March 2015, and businesses' capacity utilisation increased.

Despite this strong increase in output, inflation has been low. In large part, this reflects low tradables inflation due to the elevated exchange rate and low import prices.

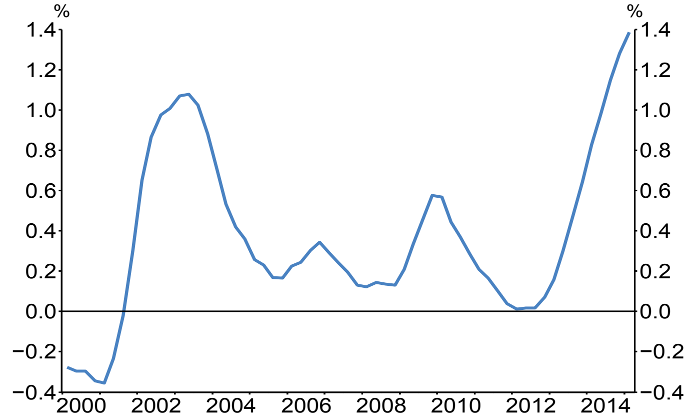
Strong growth in the economy's productive capacity has resulted in subdued domestic price and wage inflation. Supply growth is particularly evident in the labour market. Over the year to March 2015, the labour force increased by 73,000 people, or 3 percent – essentially matching the growth in employment. Half of the labour force growth has come from strong net immigration, one-third from increased labour force participation, and the remainder from natural population increase.

Net immigration remains strong. Net permanent and long-term (PLT) immigration of working-age people in the year to April 2015 was 50,000 people, or 1.4 percent of the working age population (figure 4.2).

The supply impulse of the current migration cycle is larger than in previous migration cycles, with more migrants participating in the labour force. This largely reflects the composition of migrant arrivals.

Figure 4.2
Net immigration

(share of the working-age population)



Source: Statistics New Zealand.

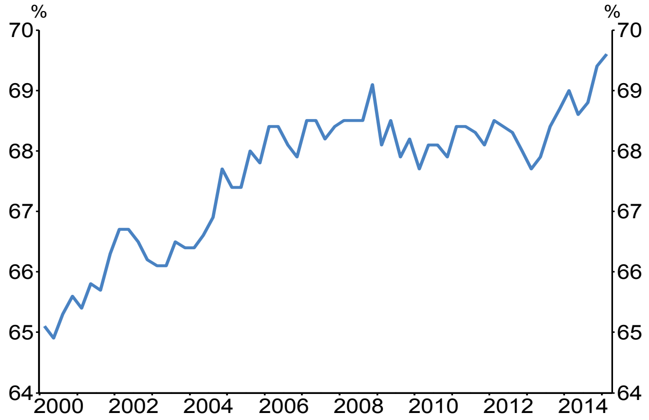
Note: The figures are for net permanent and long-term working age migration flows.

Firstly, PLT arrivals were boosted over 2013 and 2014 by construction workers on work visas. This has helped to limit construction wage inflation in Canterbury and the inflationary pressure associated with the rebuild.

Secondly, a significant number of arrivals over 2013 and 2014 came on student visas. Changes to New Zealand's immigration law in December 2013 mean that international students are now eligible to work part time while studying. These students are boosting the labour force.

The labour force is also growing due to higher labour force participation. Labour force participation increased in the March 2015 quarter to almost 70 percent of the working age population – its highest ever level (figure 4.3). Part of the increase is structural, with participation of females and older people in the workforce increasing. There is also a cyclical element, with evidence that strong employment growth is encouraging people to enter the work force.

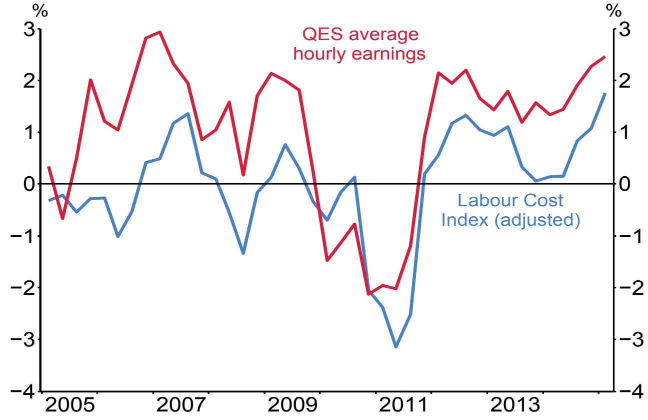
Figure 4.3
Labour force participation rate



Source: Statistics New Zealand.

Figure 4.4
Real wage growth

(annual)



Source: Statistics New Zealand.

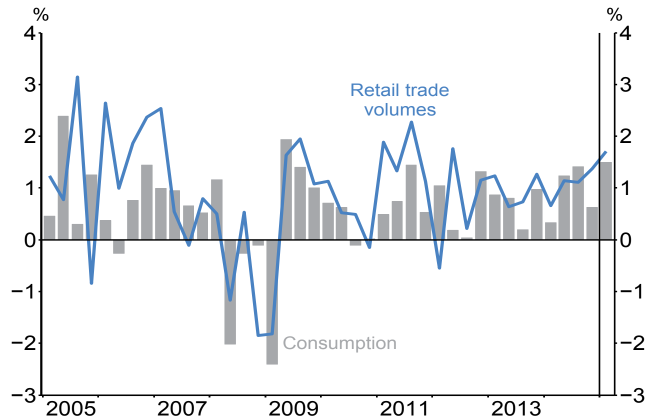
The net result of the strong labour force growth is that growth in aggregate demand has been accommodated through an increase in labour supply. Consistent with this, over recent years employment growth and household incomes have increased (figure 4.4), while the unemployment rate has fallen.

Strong employment and household income growth are flowing through to consumption spending. The Retail Trade Survey suggests that consumption spending increased by 1.5 percent in the March 2015 quarter (figure 4.5). This increase was partly due to lower petrol prices boosting real consumption. The subsequent rebound in petrol prices means that our estimate of the petrol-related gain in disposable income to the median household has fallen to about $200, half of what was assumed at the time of the March *Statement*.

At its current elevated level, the TWI is dampening the price of imports. As such, the import share of domestic spending remains high.

Figure 4.5
Consumption and retail trade growth

(quarterly, real, seasonally adjusted)



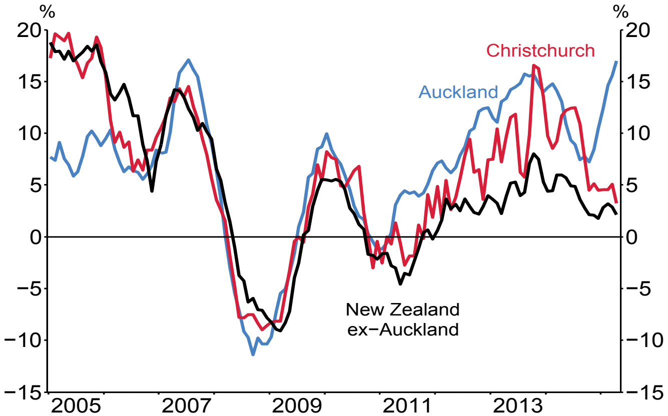
Source: Statistics New Zealand, RBNZ estimates.

The housing market continues to strengthen, due to growth in employment, elevated consumer confidence, strong population growth and falls in mortgage interest rates. The number of house sales increased by 18 percent in the year to April 2015. Indicators of tightness, such as days to sell, suggest that the housing market remains buoyant, particularly in Auckland.

Nationwide house price inflation (in 3-month moving average terms) was about 8 percent in the year to April 2015. House price inflation rose in Auckland to 17 percent, but eased in aggregate elsewhere in the country (figure 4.6).

Figure 4.6
House price inflation

(annual, 3 month moving average)



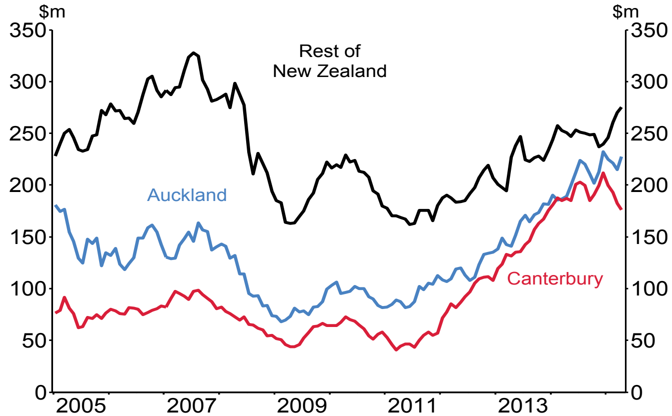
Source: REINZ.

Increasing house prices are providing an incentive to build. Investment in residential construction in the year to the June 2015 quarter is estimated to be about 10 percent higher than in the year to the June 2014 quarter.

Dwelling consent issuance growth flattened over the past year. Over 2015, consent issuance has fallen in Canterbury but increased in the rest of the country (figure 4.7). Continued growth in residential construction, despite the slowing in consents, suggests that non-consented work is offsetting some of the slow-down in consented work.

Figure 4.7
Value of residential consents

(3 month moving average, seasonally adjusted)



Source: Statistics New Zealand, RBNZ estimates.

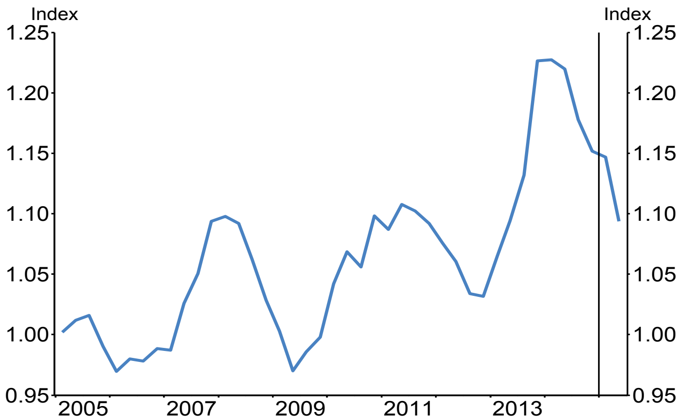
Low interest rates and elevated business confidence are also boosting non-residential construction. Non-residential construction in the year to the June 2015 quarter is estimated to be 7 percent higher than in the year to the June 2014 quarter, and consent issuance points to further strength over the rest of 2015.

Increasing demands on resources and high business confidence are contributing to strong business investment growth. Further, the high exchange rate and subdued global inflation are making imported capital goods cheaper. Business investment is estimated to have grown by about 6 percent over the first half of 2015, mainly due to transport investment and construction.

The drivers of economic growth over 2014 are starting to wane. As discussed in chapter 3, prices of New Zealand's export commodities have fallen significantly since their peaks in 2014, while the price of oil has increased in recent months. The net result is that the terms of trade are estimated to be about 11 percent lower than their March 2014 peak (figure 4.8). At their current level, the terms of trade are dragging on growth, rather than boosting it.

Figure 4.8
Terms of trade

(seasonally adjusted)



Source: Statistics New Zealand, RBNZ estimates.

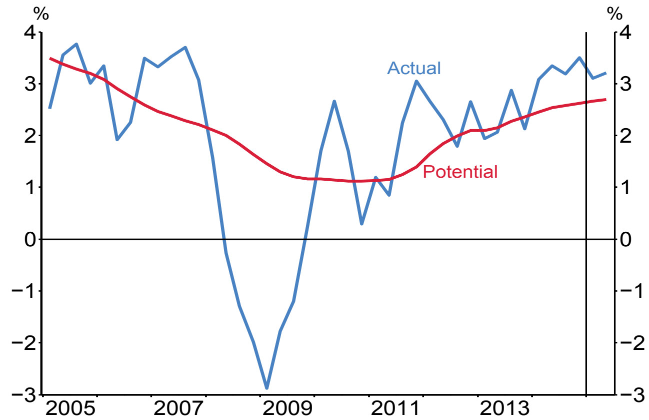
A key reason for the fall in the terms of trade has been the significant decline in international dairy prices. Relative to last season's record payout, farmers' incomes in the 2014/15 season are expected to be around $7 billion lower, representing a fall of about 3 percent of nominal GDP. Farmers typically smooth expenditure through price cycles, saving more during periods of high prices and borrowing during periods of low prices. As such, farmers' spending may not fall proportionately to the income decline. However, if the dairy payout is low in the 2015/16 season as well, farmers' spending could fall sharply. Moreover, there is a risk that lower cash flows may limit the ability of farmers to smooth their expenditure.

Capacity pressure

Strong growth over 2014 and 2015 means that output is estimated to have grown faster than potential output for the past six quarters (figure 4.9). The output gap has increased over the past 18 months and is currently about zero. Estimates of the output gap are always subject to considerable uncertainty. Our current estimate is within the range suggested by our suite of indicators (figure 4.10). Box A describes how the Bank has revised down its output gap estimate in recognition of stronger supply-side growth, particularly in the labour market.

Figure 4.9
Economic growth

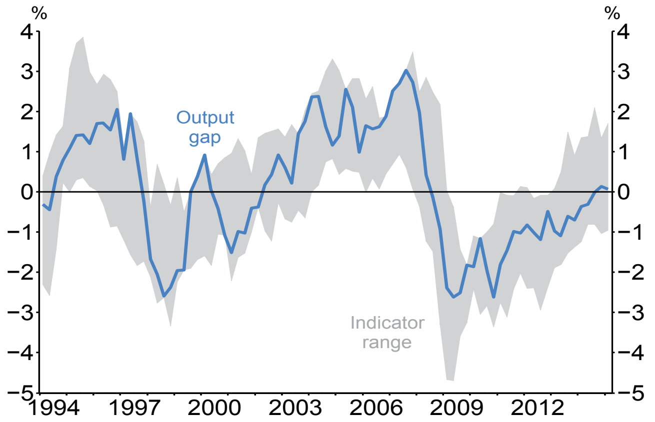
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Figure 4.10
Output gap and indicators

(percent of potential output)



Source: RBNZ estimates.

Pricing and inflation

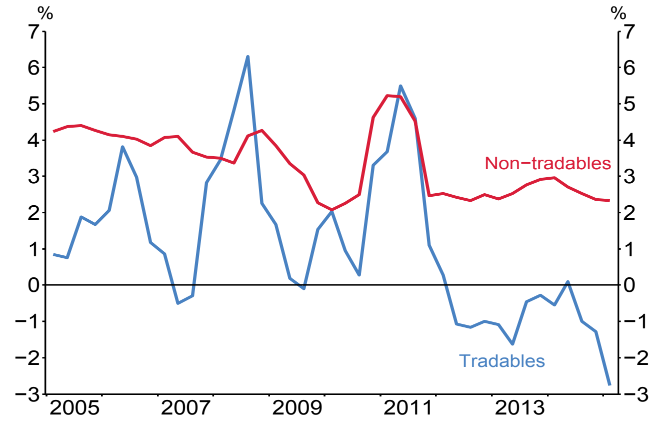
Annual CPI inflation was 0.1 percent in the first quarter of 2015, its lowest level since 1999. In the March quarter, annual tradables inflation was -2.8 percent, and annual non-tradables inflation was 2.3 percent (figure 4.11).

Headline CPI inflation has been affected by some temporary factors. Petrol prices fell sharply in the March quarter, but have increased more recently (figure 4.12). This rebound in prices is due to an increase in the price of oil, higher refiner margins, and a depreciation of the NZD against the USD. In addition, a decrease in ACC motor vehicle levies is expected to detract about 0.3 percentage points from CPI inflation in the September 2015 quarter.

Surveyed measures of inflation expectations have fallen since the end of 2014, and are now at a level that is more consistent with CPI inflation settling at 2 percent in the medium term (figure 4.13). Longer-term measures of inflation expectations remain anchored near the 2 percent midpoint of the Reserve Bank's target band.

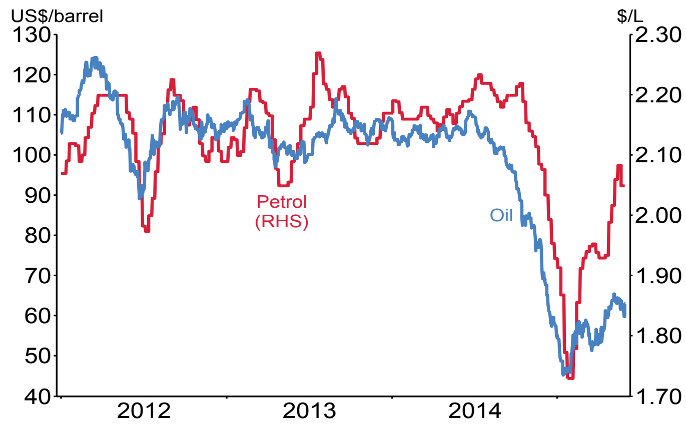
Figure 4.11
Inflation

(annual)



Source: Statistics New Zealand.

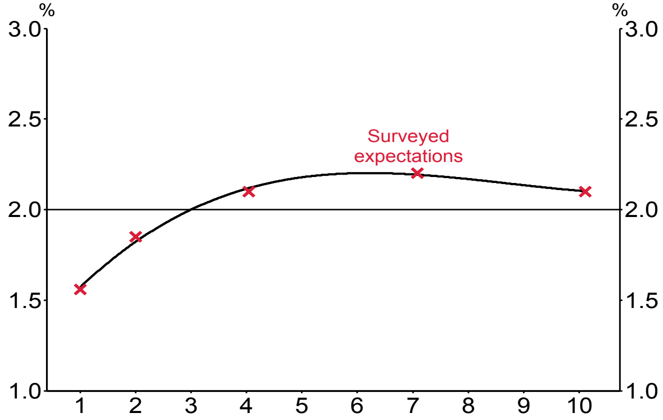
Figure 4.12
Dubai oil and domestic petrol prices



Source: Reuters, Ministry of Business, Innovation and Employment.

Figure 4.13
Inflation expectations and RBNZ forecast

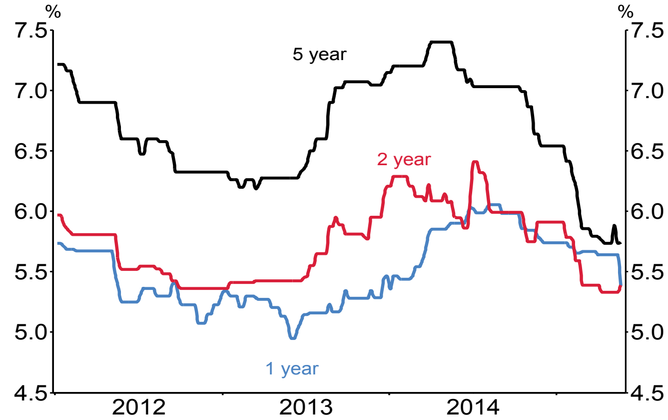
(annual, years ahead)



Source: ANZ Bank, Aon Consulting, Consensus Economics, RBNZ.

Note: The 1 year ahead expectation data point is a simple average of the RBNZ 1-year, Aon 1-year, and ANZ 1-year series. The 2 year ahead expectation data point is the RBNZ 2-year series. The 4 year ahead expectation data point is the Aon 4-year series. The 7 year ahead expectation data point is the Aon 7-year series. The 10 year ahead expectation data point is the Consensus 10-year series. The black line shows a conventional polynomial curve fitted through the expectations series.

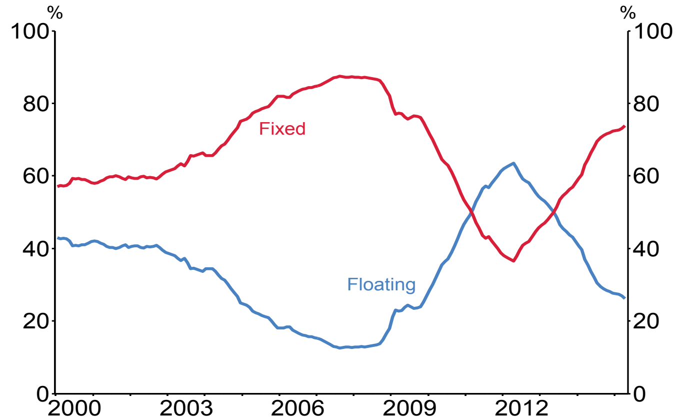
Figure 4.14
Average mortgage rates by term



Source: interest.co.nz, RBNZ estimates.

Note: Each rate is an average of the carded rates from four banks: ANZ, ASB, BNZ and Westpac.

Figure 4.15
Proportion of mortgages by term



Source: RBNZ.

Domestic financial market developments

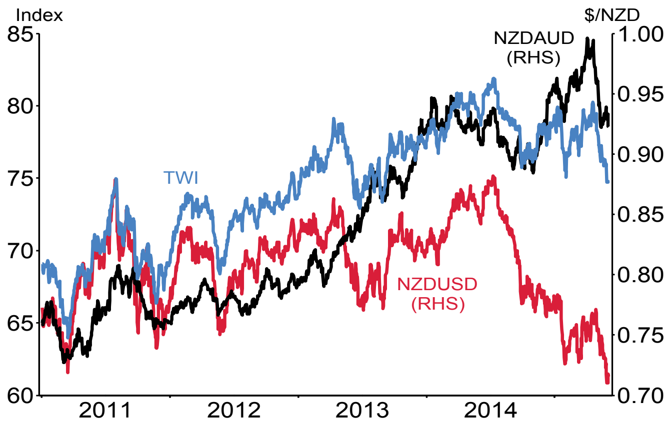
Fixed mortgage rates have declined substantially this year, and some mortgage rates, most notably at the one-year term, have eased further since the March *Statement,* despite the OCR remaining on hold since July 2014 (figure 4.14). Lower mortgage interest rates reflect an easing in global financial conditions this year and increasing expectations of a reduction in the OCR.

Borrowers continue to move away from floating-rate mortgages. The proportion of mortgages on floating rates has fallen to 26 percent in April from a high of 63 percent in 2012 (figure 4.15). One and two year fixed terms remain the most popular of the fixed-rate mortgages.

Since the March *Statement*, financial market expectations for a reduction in the OCR have increased. About 25 basis points of OCR cuts are now priced in by July 2015 and 50 basis points priced in over the next 12 months. Increasing expectations for an OCR cut have been driven by several factors, including the Reserve Bank's move towards a conditional easing bias in the April Review, further falls in dairy prices, and subdued nominal wage inflation data in the March quarter.

The New Zealand dollar TWI has fallen 3 percent since the March *Statement*. It is currently around 75, having traded as high as 80 over the past three months (figure 4.16). An important driver of the fall in the TWI has been the weaker terms of trade, which weigh on the outlook for growth in New Zealand relative to our trading partners. In addition, factors specific to some trading partners have reduced the respective cross rates.

Figure 4.16
New Zealand exchange rates



Source: Reuters.

The NZD-AUD exchange rate reached a post-float high of 0.9978 in early April, but has since fallen to around 0.93. The appreciation of the NZD-AUD exchange rate was driven by increased expectations of an OCR cut in New Zealand, while the market expects the RBA to maintain its current monetary policy stance for some time.

The US dollar has been supported by economic recovery in the United States and expectations of some tightening in monetary policy later this year. The NZD-USD exchange rate fell 4 percent over the quarter to around 0.71, its lowest rate since 2011. The New Zealand dollar has fallen by around 6 percent against the euro since the March *Statement*, as economic data in the euro area have improved.

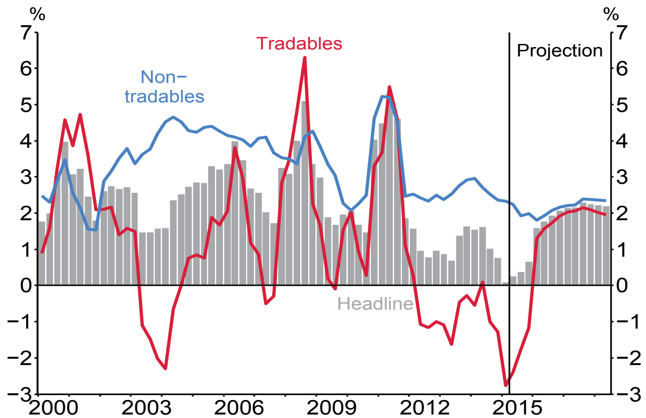
Chapter 5

The macroeconomic outlook

Annual CPI inflation is projected to return to the 1 to 3 percent target range in the March 2016 quarter, and increase to 2 percent in the second half of 2016 (figure 5.1). A key part of the projected increase in inflation comes from increasing tradables inflation as the exchange rate adjusts to weaker terms of trade and the temporary impact of lower oil prices dissipates. Non-tradables inflation is projected to increase only gradually over the forecast horizon.

Figure 5.1
CPI inflation

(annual)



Source: Statistics New Zealand, RBNZ estimates.

Tradables inflation outlook

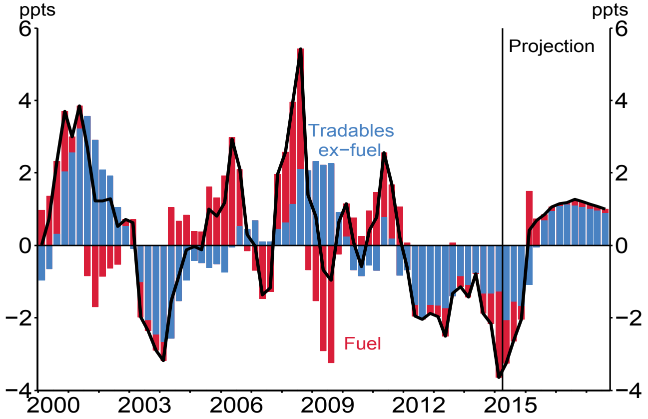
Tradables inflation is projected to increase sharply, from an annual rate of -2.8 percent in the March 2015 quarter to 1.3 percent in the March 2016 quarter. The projected turnaround in tradables inflation reflects two key factors: the dampening impact of previous falls in fuel prices dropping out of the annual figure, and a weaker exchange rate assumption consistent with the weaker outlook for the terms of trade.

Recent falls in fuel prices subtracted 0.8 percentage points from annual CPI inflation in the March 2015 quarter, mainly reflecting falls in oil prices. The unwind of this temporary influence of fuel prices on tradables inflation, together with more recent increases in fuel prices, adds 1.8 percentage points to annual tradables inflation in the March 2016 quarter (figure 5.2). The Dubai oil price is assumed to average $US 61 per barrel in the June 2015 quarter and to increase gradually over the projection (figure 5.3).

As discussed in chapter 3, international prices for New Zealand's exports have fallen further in early 2015. Global dairy prices have fallen substantially since February, reflecting stronger global supply and

Figure 5.2
Contributions to tradables inflation

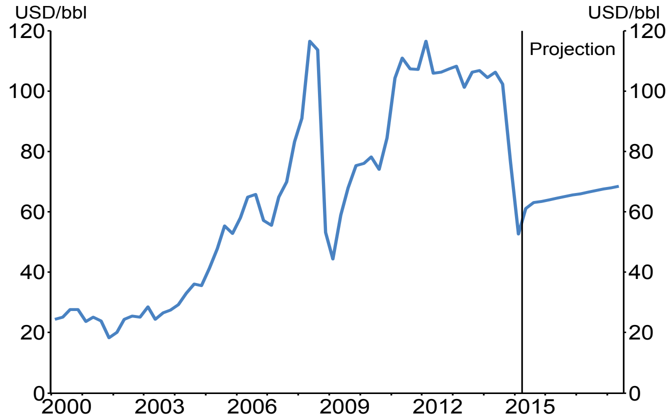
(annual, deviation from average, excluding GST)



Source: Statistics New Zealand, RBNZ estimates.

Note: Average since 1992. Approximation based on current CPI weights.

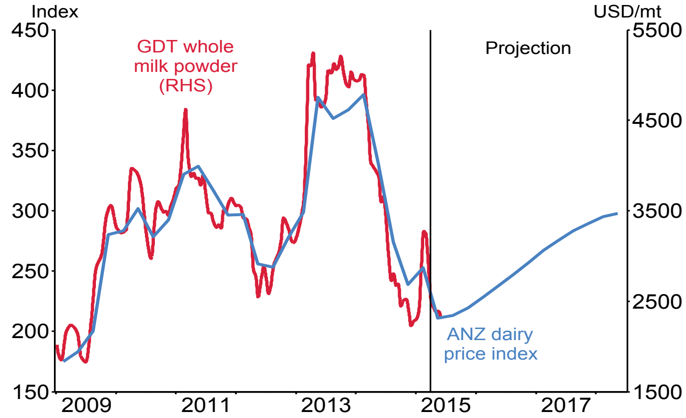
Figure 5.3
Dubai oil price



Source: Reuters, RBNZ estimates.

reduced dairy import demand from China. A combination of these factors are assumed to continue to weigh on prices over the medium term (figure 5.4). Forestry prices have also declined further, reflecting an inventory build-up in China, and are expected to recover slowly.

Figure 5.4
Global dairy prices
(seasonally adjusted)



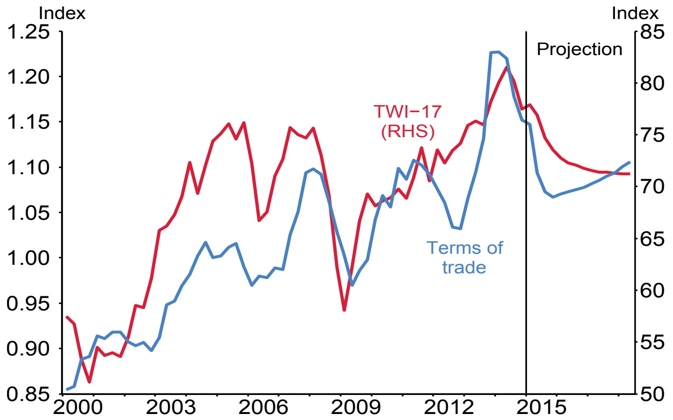
Source: GlobalDairyTrade, ANZ Bank, RBNZ estimates.

The subdued outlook for export prices and the increases in oil prices contribute to a significantly weaker outlook for New Zealand's terms of trade relative to the March *Statement*. The resulting loss of national income is expected to weigh on economic growth, and is associated with a depreciation in the New Zealand dollar TWI from an elevated level (figure 5.5). Yet the exchange rate remains at an unsustainable level. Reduced national income from lower export receipts, and strong investment, lead to a significant fall in the current account balance.

Depreciation in the exchange rate is projected to increase tradables inflation via the higher cost of imports. However, the exchange rate is prone to significant moves in response to domestic and international developments, and can substantially affect the outlook for tradables inflation.

Figure 5.5
TWI and terms of trade

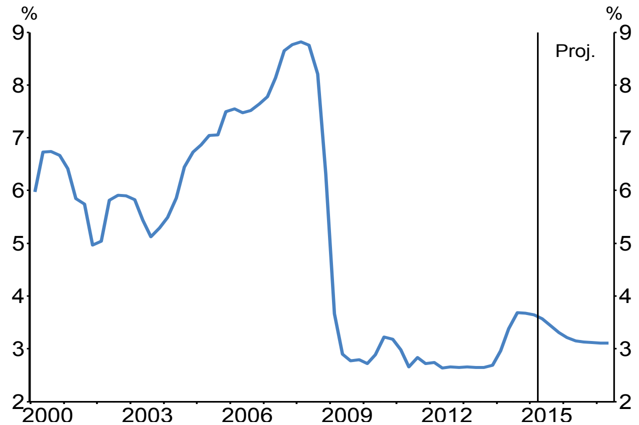
(seasonally adjusted)



Source: Statistics New Zealand, RBNZ estimates.

The outlook for the terms of trade is now substantially lower than in the March *Statement*. Consequently, additional monetary policy stimulus is required (figure 5.6) to ensure that inflation returns to the midpoint of the 1 to 3 percent target range over the medium term.

Figure 5.6
90-day interest rate



Source: RBNZ, RBNZ estimates.

Non-tradables inflation outlook

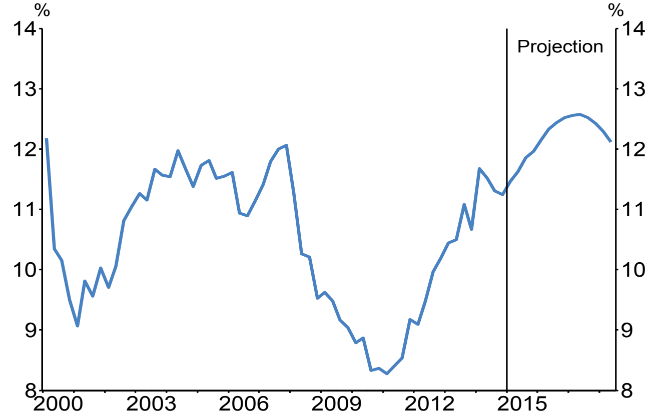
In contrast with tradables inflation, non-tradables inflation is projected to increase only gradually. This reflects GDP growth that only slightly exceeds potential growth, and stable inflation expectations.

Unchanged from the March *Statement*, the key drivers supporting domestic demand are increases in construction in both Canterbury and elsewhere, stimulatory monetary conditions, and strong net immigration. The positive impulse to GDP growth from construction and net immigration is projected to wane over the next three years. In addition, ongoing fiscal consolidation continues to detract from domestic demand.

Increasing construction contributes to GDP growth, although the impulse diminishes from 2016 onwards (figure 5.7). The housing shortage in Auckland, and associated high house prices, is a major driver of residential construction. Reconstruction investment in Canterbury is expected to increase over 2015, and to remain at an elevated level over the projection (figure 5.8), but its overall contribution to GDP growth is forecast to diminish.

Figure 5.7
Construction spending

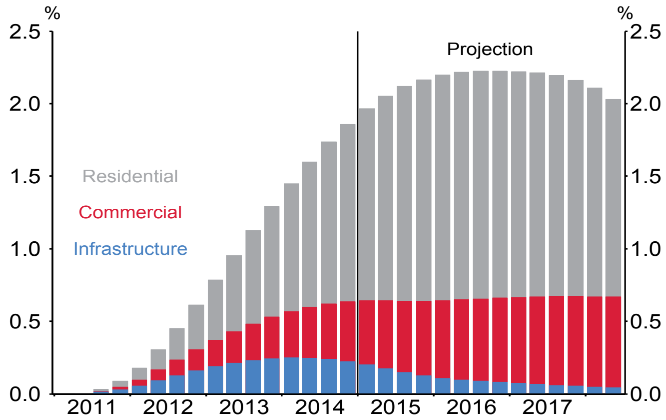
(seasonally adjusted, percent of potential output)



Source: Statistics New Zealand, RBNZ estimates.

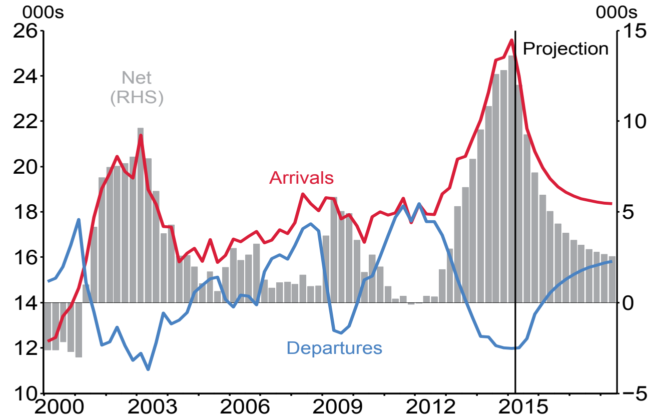
Figure 5.8
Canterbury rebuild

(seasonally adjusted, percent of potential output)



Source: Statistics New Zealand, RBNZ estimates.

Figure 5.9
Net migration

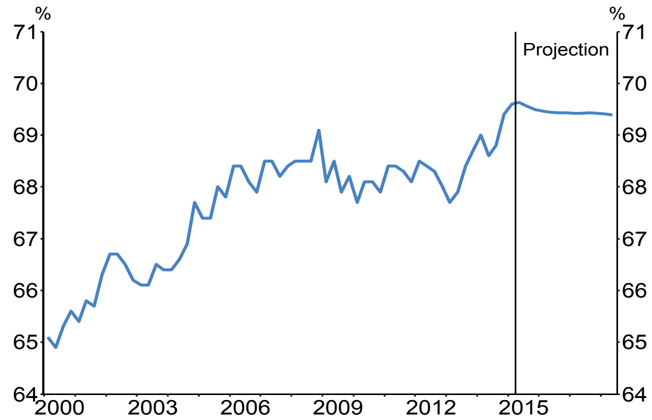


Source: Statistics New Zealand, RBNZ estimates.

Note: The figures are for net permanent and long-term working age migration flows.

Figure 5.10
Labour force participation rate

(seasonally adjusted, percent of working-age population)



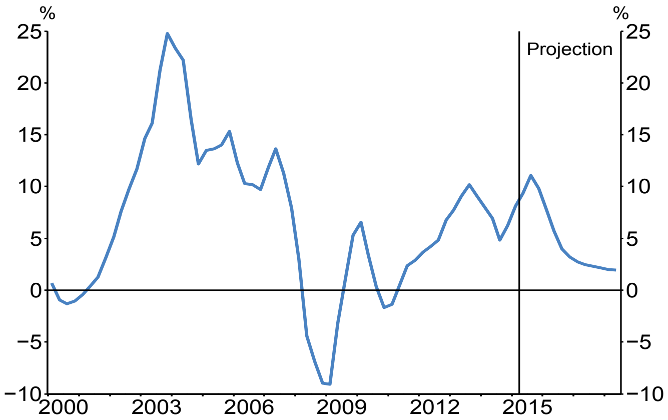
Source: Statistics New Zealand, RBNZ estimates.

Net immigration is projected to decline sharply over the coming year as departures increase and arrivals decline (figure 5.9). As outlined in chapter 4, net immigration has made a significant contribution to increased labour supply. In addition the participation rate is expected to remain around current elevated levels (figure 5.10). Box A in Chapter 2 discusses how the increase in labour supply has been a key factor in the Bank's reassessment of the output gap and subdued domestic inflationary pressure.

House price inflation is forecast to ease over the projection (figure 5.11), reflecting an increase in supply from higher residential construction and reduced net immigration. The recently announced policy changes relating to LVR speed limits and taxation on speculative housing investment are expected to further supress house price inflation in the first year of implementation. Changes to the LVR requirements are assumed to subtract around 1 percentage point from house price inflation. This reflects a 2 to 4 percentage point reduction in house price inflation in Auckland, partially offset by a 1 percentage point increase in the rest of the country.

Figure 5.11
House price inflation

(annual)

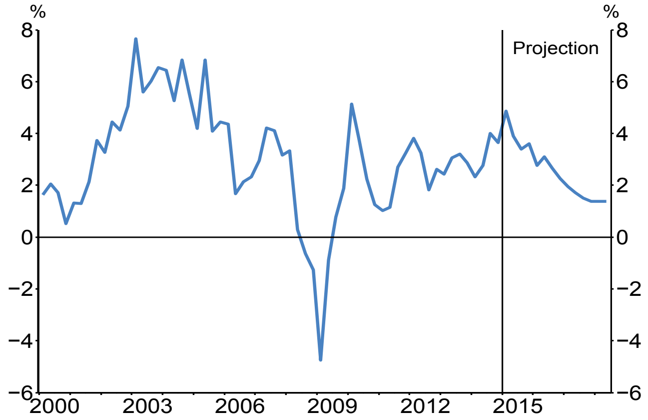


Source: CoreLogic, RBNZ estimates.

Increased labour supply has been met by robust job creation resulting in higher labour incomes, although nominal wage growth remains subdued. Combined growth in labour incomes and high house prices, together with stimulatory monetary policy, support household spending over the projection. Nevertheless, consumption growth is projected to ease (figure 5.12) as household purchasing power is eroded by the lower terms of trade, and as the impulse from net immigration, house prices and labour incomes fades.

Figure 5.12
Consumption growth

(annual)



Source: Statistics New Zealand, RBNZ estimates.

Box B

Risk assessment

The macroeconomic outlook described in this chapter represents the Bank's central view, based on a range of assumptions. For the most part, the projections assume that historical economic relationships continue to hold. However, each business cycle has characteristics that differ, and one of the challenges for central banks is to recognise and understand the implications of these differences for monetary policy. Issues that are relevant to this cycle include the level of the neutral interest rate, potential output, the evolution of price setting behaviour in the economy, and the strength and timing of the relationship between the output gap and inflation.

The neutral interest rate is an important concept in monetary policy. It represents the dividing line between where interest rates are stimulating or constraining economic activity. The Bank lowered its neutral nominal interest rate assumption following the global financial crisis.[1] Part of this change was to reflect the significant increase in bank funding costs due to the disruption in financial markets. Since then, these funding costs have been steadily declining. On the other hand, survey measures of inflation expectations have fallen to be closer to 2 percent from their historical average of 2.4 percent, which might suggest a lower nominal neutral interest rate.

The increase in the supply side of the economy has been much larger than in previous cycles (see box A, chapter 2). Consequently, the Bank's estimate of potential output has been revised steadily higher. In particular, there has been a strong increase in participation, providing a significant increase in labour inputs. The composition of migration is also contributing to greater labour force participation, resulting in a smaller net demand impulse from the current migration cycle. With higher potential output growth being driven by an increase in labour supply, there is an issue of how sustainable this increase will be, particularly as there have been limited signs of improvement in total factor productivity growth.

Longer term measures of inflation expectations have declined from elevated levels in the mid-2000s to be more consistent with the 2 percent midpoint of the target band. However, there is a risk that price setting behaviour in the economy changes in the current low inflation environment. Should low inflation become entrenched in price-setting behaviour, there would be a larger role for monetary policy to respond, to re-anchor inflation expectations in the economy.

Since the global financial crisis many policymakers have questioned whether the relationship between the output gap and inflation has weakened, and if the translation is now taking longer. Subdued non-tradables inflation in New Zealand makes this question pertinent. If this were the case then a positive output gap would exert less inflationary pressure, or more slowly, than we currently assess.

The uncertainties outlined above, some of which are discussed in more depth in a recent speech,[2] could have a material impact on the stance of monetary policy. The Bank will remain vigilant in assessing the evolution of these risks.

1 McDermott, J (2015) 'Shifting gear: why have neutral interest rates fallen?' A speech delivered to the New Zealand Institute of Chartered Accountants CFO and Financial Controllers Special Interest Group in Auckland

2 McDermott, J (2015) 'The Dragon Slain? Near-zero inflation in New Zealand' A speech delivered to the Waikato Chamber of Commerce and Industry, and Waikato branch of the Institute of Directors, in Hamilton.

Appendices

Appendix A[1]

Summary tables

Table A
Projections of GDP growth, CPI inflation and monetary conditions
(CPI and GDP are percent changes, GDP seasonally adjusted)

		GDP Quarterly	CPI Quarterly	CPI Annual	TWI	90-day bank bill rate
2013	Mar	0.1	0.4	0.9	75.9	2.7
	Jun	0.4	0.2	0.7	76.3	2.6
	Sep	1.1	0.9	1.4	75.9	2.6
	Dec	0.5	0.1	1.6	78.2	2.7
2014	Mar	1.0	0.3	1.5	80.1	3.0
	Jun	0.7	0.3	1.6	81.5	3.4
	Sep	0.9	0.3	1.0	80.1	3.7
	Dec	0.8	-0.2	0.8	77.5	3.7
2015	Mar	0.6	-0.3	0.1	77.9	3.6
	Jun	0.8	0.4	0.3	76.9	3.6
	Sep	0.8	0.4	0.3	74.7	3.4
	Dec	0.8	0.2	0.7	73.6	3.3
2016	Mar	0.8	0.6	1.6	72.8	3.2
	Jun	0.8	0.6	1.8	72.3	3.1
	Sep	0.8	0.6	1.9	72.0	3.1
	Dec	0.7	0.3	2.1	71.8	3.1
2017	Mar	0.7	0.7	2.1	71.5	3.1
	Jun	0.7	0.6	2.1	71.4	3.1

[1] Notes for these tables follow on pages 34 and 35.

Table B
Measures of inflation, inflationary pressures and asset prices

	2013 Sep	Dec	2014 Mar	Jun	Sep	Dec	2015 Mar	Jun
Inflation (annual rates)								
CPI	1.4	1.6	1.5	1.6	1.0	0.8	0.1	
CPI non-tradables	2.8	2.9	3.0	2.7	2.5	2.4	2.3	
CPI tradables	-0.5	-0.3	-0.6	0.1	-1.0	-1.3	-2.8	
Sectoral factor model estimate of core inflation	1.4	1.5	1.5	1.4	1.4	1.3	1.3	
CPI trimmed mean	1.4	1.6	1.5	1.7	1.3	1.0	0.6	
CPI weighted median	1.8	2.0	1.7	2.2	1.9	1.7	1.8	
GDP deflator (expenditure)	3.6	7.6	5.7	4.8	1.6	-1.7		
Inflation expectations								
RBNZ survey of expectations - two years ahead	2.4	2.3	2.3	2.4	2.2	2.1	1.8	1.9
ANZ Bank Business Outlook - one year ahead (quarterly average to date)	2.3	2.4	2.6	2.6	2.5	2.3	1.7	1.7
AON Hewitt Economist Survey - four years ahead	2.3	2.3	2.2	2.3	2.2	2.2	2.1	2.1
AON Hewitt Economist Survey - seven years ahead	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2
Pricing and costs (net balances)								
ANZ Business Outlook - Pricing intentions, next three months (quarterly average to date)	29.4	26.0	31.6	27.5	22.8	21.5	25.9	22.9
QSBO average selling prices, next three months	24.0	23.3	37.2	33.3	29.5	11.0	6.4	
QSBO average costs, past three months	20.6	21.3	19.2	19.6	21.6	24.0	17.7	
Asset prices (annual percentage changes)								
Quarterly house price index (CoreLogic)	10.2	9.1	8.0	6.9	4.8	6.2		
REINZ Farm Price Index (quarterly average to date)	10.8	5.7	9.0	15.3	3.7	1.2	2.0	0.6
NZX 50 (quarterly average to date)	26.7	20.6	16.5	14.6	12.7	12.7	16.6	12.9

Table C

Composition of real GDP growth

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

	Actuals							Projections			
March year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Final consumption expenditure											
Private	3.7	-1.6	1.7	2.1	2.7	2.5	2.9	3.8	3.4	2.5	1.5
Public authority	4.7	4.0	-0.5	2.0	1.5	-0.6	2.7	3.1	0.3	0.2	2.5
Total	4.0	-0.2	1.1	2.0	2.4	1.7	2.8	3.6	2.6	1.9	1.7
Gross fixed capital formation											
Residential	1.8	-21.2	-9.0	1.6	-0.2	17.8	16.7	13.2	10.8	8.4	1.9
Other	10.0	-2.6	-9.3	3.8	7.1	4.4	8.5	5.7	6.4	6.1	3.8
Total	7.7	-7.5	-9.2	3.3	5.5	7.1	10.4	7.5	7.5	6.7	3.3
Final domestic expenditure	4.8	-2.0	-1.2	2.3	3.1	2.9	4.5	4.6	3.8	3.1	2.1
Stockbuilding [1]	0.8	-0.3	-0.7	0.7	0.3	-0.4	0.2	-0.1	0.2	0.0	0.0
Gross national expenditure	5.6	-2.3	-1.6	3.0	3.5	2.4	4.8	4.4	4.1	3.1	2.1
Exports of goods and services	3.9	-2.8	4.1	2.8	2.3	3.1	0.2	3.6	1.2	2.6	3.4
Imports of goods and services	10.9	-3.6	-9.2	11.4	6.7	1.3	8.0	7.6	3.3	2.4	1.4
Expenditure on GDP	3.6	-2.1	2.3	0.7	2.2	2.9	2.4	3.2	3.5	3.2	2.7
GDP (production)	3.0	-1.6	-0.3	1.5	2.2	2.2	2.5	3.3	3.2	3.1	2.7
GDP (production, March qtr to March qtr)	1.6	-2.9	1.7	1.2	2.7	1.9	3.1	3.1	3.3	2.9	2.5

[1] Percentage point contribution to the growth rate of GDP.

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

	Actuals								Projections		
March year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Price measures											
CPI	3.4	3.0	2.0	4.5	1.6	0.9	1.5	0.1	1.6	2.1	2.2
Labour costs	3.5	3.1	1.3	2.0	2.1	1.8	1.7	1.8	1.9	2.0	2.2
Export prices (in New Zealand dollars)	11.3	7.2	-7.7	7.8	-2.8	-5.2	11.4	-9.9	2.2	4.7	4.3
Import prices (in New Zealand dollars)	0.1	17.4	-11.1	3.3	-1.8	-4.2	-3.3	-3.7	9.5	3.6	2.5
Monetary conditions											
90-day rate (year average)	8.6	6.7	2.8	3.1	2.7	2.6	2.7	3.6	3.4	3.1	3.1
TWI (year average)	75.2	65.6	66.6	69.0	72.2	74.0	77.6	79.3	74.5	71.9	71.3
Output											
GDP (production, annual average % change)	3.0	-1.6	-0.3	1.5	2.2	2.2	2.5	3.3	3.2	3.1	2.7
Potential output (annual average % change)	2.2	1.7	1.2	1.1	1.4	2.0	2.3	2.6	2.7	2.7	2.6
Output gap (% of potential GDP, year average)	2.6	-0.8	-2.2	-1.9	-1.1	-0.9	-0.7	0.0	0.4	0.7	0.8
Labour market											
Total employment (seasonally adjusted)	1.0	-1.1	-0.4	1.6	0.6	0.2	3.7	3.2	2.2	1.4	1.1
Unemployment rate (March qtr, seasonally adjusted)	3.8	5.2	6.2	6.6	6.8	6.3	6.0	5.8	5.3	5.1	5.0
Trend labour productivity	1.2	1.1	1.0	0.9	0.8	0.7	0.7	0.7	0.8	1.0	1.1
Key balances											
Government operating balance (% of GDP, year to June)	3.0	-2.1	-3.3	-9.1	-4.4	-2.1	-1.3	-0.3	-0.2	0.5	0.7
Current account balance (% of GDP)	-6.7	-7.2	-1.5	-2.8	-3.2	-3.8	-2.6	-3.8	-6.8	-6.9	-6.1
Terms of trade (SNA measure, annual average % change)	8.5	-1.9	-4.5	7.9	1.6	-4.3	11.6	0.4	-8.4	0.1	1.5
Household saving rate (% of disposable income)	-1.5	-1.3	0.9	2.7	1.5	2.3	2.1	3.2	2.3	2.7	3.4
World economy											
Trading partner GDP (annual average % change)	4.2	0.3	1.2	4.5	3.5	3.3	3.5	3.6	3.8	3.9	3.8
Trading partner CPI (TWI weighted, annual % change)	4.2	1.6	2.2	3.2	2.7	2.3	2.3	1.0	2.2	2.2	2.4

Notes and definitions

These forecasts were finalised using National Accounts data as at the quarterly June 2014 GDP release. Historical and forecast data shown in these tables do not incorporate the transition to SNA08 or annual data for the year to March 2014, published on 21 November.

CPI	Consumers Price Index.
Weighted median inflation	To calculate weighted median inflation, first the percentage changes in all components of the CPI are ranked. The weighted median is the rate of price change that half of all weighted price movements are below, and half are above.
Trimmed mean inflation	To calculate trimmed mean inflation, first percentage changes in all components of the CPI are ranked, then the price changes for a specified weight of the CPI are removed. The trimmed mean is the average of the remaining price changes.
Sectoral factor model estimate of core inflation	Estimates core inflation by up weighting those components of the CPI that most closely reflect the general trend in the CPI inflation and down weighting those that do not. The weightings evolve over time as the volatility of each component changes.
TWI	Nominal trade-weighted index of the exchange rate. Defined as a geometrically-weighted index of the New Zealand dollar bilateral exchange rates against the currencies of 17 major trading partners.
90-day bank bill rate	The interest yield on 90-day bank bills, quarter average.
World GDP	RBNZ definition. 16-country index, export weighted. Seasonally adjusted.
World CPI inflation	RBNZ definition. Five-country index, TWI weighted.
Import prices	Domestic currency import prices. System of National Accounts.
Export prices	Domestic currency export prices. System of National Accounts.
Terms of trade	Constructed using domestic currency export and import prices. System of National Accounts.
Private consumption	System of National Accounts.
Public authority consumption	System of National Accounts.
Residential investment	RBNZ definition. Private sector and government market sector residential investment. System of National Accounts.
Other investment	RBNZ definition. Total investment less residential investment.
Final domestic expenditure	RBNZ definition. The sum of total consumption and total investment. System of National Accounts.
Stockbuilding	Percentage point contribution to the growth of GDP by stocks. System of National Accounts.
Gross domestic income	The real purchasing power of domestic income, taking into account changes in the terms of trade. System of National Accounts.
Gross national expenditure	Final domestic expenditure plus stocks. System of National Accounts.
Exports of goods and services	System of National Accounts.
Imports of goods and services	System of National Accounts.
GDP (production)	Gross Domestic Product. System of National Accounts.
Potential output	RBNZ definition and estimate.
Output gap	RBNZ definition and estimate. The percentage difference between real GDP (production, seasonally adjusted) and potential output GDP.
Current account balance	Balance of Payments.
Total employment	Household Labour Force Survey.
Unemployment rate	Household Labour Force Survey.

Household saving rate	Household Income and Outlay Account.
Government operating balance	Operating balance before gains and losses. Historical and forecast data sourced from the Treasury and adjusted by the Reserve Bank.
Labour productivity	The series shown is the annual percentage change in a trend measure of labour productivity. Labour productivity is defined as GDP (production) divided by Household Labour Force Survey hours worked.
Labour cost	Private sector all salary and wage rates. Labour Cost Index.
Quarterly percent change	$(Quarter/Quarter_{-1} - 1)*100$
Annual percent change	$(Quarter/Quarter_{-4} - 1)*100$
Annual average percent change	$(Year/Year_{-1} - 1)*100$

Source: Unless otherwise specified, all data conform to Statistics New Zealand definitions, and are not seasonally adjusted.

Rounding: All projections data are rounded to one decimal place.

Appendix B
Companies and organisations contacted by Reserve Bank staff during the projection round

Adept Limited
Aecom New Zealand Limited
Air New Zealand Limited
Arthur Barnett Limited
Auckland Council
Barfoot and Thompson Limited
Calder Stewart Construction Ltd
Canterbury Development Corporation
Canterbury Earthquake Recovery Authority
Cemic Limited
Chemical Solutions Limited
Colliers International Real Estate Management Limited
CoreLogic NZ Limited
Countrywide Property Trust Limited
Donaghys Ltd
Dunedin City Council
Fisher and Paykel Healthcare Limited
Fletcher Building NZ Limited
Forlong and Maisey Limited
Gallagher Group Limited
GDP Electronics (New Zealand) Ltd
Hawkins Construction Limited
Jade Software Corporation (NZ) Limited
McIntosh Farm Machinery Limited
Mighty Ape Limited
New Zealand Manufacturers and Exporters Association
New Zealand Transport Agency
Ngai Tahu Property
Otago Chamber of Commerce
Polson Higgs Wealth Management Limited
Port Otago Limited
Precinct Properties New Zealand Limited
Quinovic Property Management Limited
Rheem New Zealand Limited
Rubicon
Scott Technology Limited
Skellerup Industries Limited
SKOPE Industries Limited
Spanbild New Zealand Ltd
SRX Global New Zealand Limited
Triode Limited
University of Otago Holdings Limited
Viridian Glass GP Limited
Wallace Corporation Limited
WYMA Engineering (NZ) Limited

Appendix C

Upcoming Reserve Bank *Monetary Policy Statements* and Official Cash Rate release dates

The following is the Reserve Bank's schedule for the release of *Monetary Policy Statements* (MPS) and Official Cash Rate (OCR) announcements. Please note that the Reserve Bank reserves the right to make changes, if required, due to unexpected developments. In that unlikely event, the markets and the media would be given as much warning as possible.

Announcements are made at 9.00am on the day concerned and are posted to the website shortly after.

2015	
23 July 2015	OCR
10 September 2015	OCR and *MPS* (webcast)
29 October 2015	OCR
10 December 2015	OCR and *MPS* (webcast)
2016	
28 January 2016	OCR
10 March 2016	OCR and *MPS* (webast)
28 April 2016	OCR
9 June 2016	OCR and *MPS* (webcast)

Appendix D

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