

# Monetary Policy Statement

June 2014<sup>1</sup>

This *Statement* is made pursuant to Section 15 of the Reserve Bank of New Zealand Act 1989.

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This document is also available on [www.rbnz.govt.nz](http://www.rbnz.govt.nz)

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<sup>1</sup> Projections finalised on 30 May 2014. Policy assessment finalised on 11 June 2014.

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# 1 Policy assessment

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

New Zealand's economic expansion has considerable momentum, with GDP estimated to have grown by around 4 percent in the year to June. Global financial conditions remain very accommodative and are reflected in low long-term interest rates and narrow risk spreads. Economic growth among New Zealand's trading partners is gradually improving and global inflation remains low.

Prices for New Zealand's export commodities remain historically high, but their recent falls will reduce farm incomes over the coming year. A continued acceleration in construction in Canterbury, and more broadly, is supporting growth, together with strong net immigration flows that are adding to housing and household demand. Business and consumer confidence remains buoyant, as do businesses' reported intentions to invest and to hire.

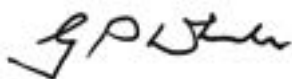
While house price inflation remains high, the housing market has moderated since late last year when restrictions were applied to high loan-to-value ratio mortgage lending and when mortgage interest rates began rising. Fiscal consolidation continues to moderate demand growth, though by less than previously assumed. The exchange rate has not yet adjusted to weakening commodity prices, but is expected to do so. The Bank does not believe the exchange rate is sustainable at current levels.

Headline inflation remains moderate and tradables inflation is expected to be low for some time. However, above-trend growth has been absorbing spare capacity and adding pressure to non-tradables inflation. These pressures are particularly evident in construction cost increases. Nevertheless, overall wage inflation remains moderate, reflecting recent low headline inflation, increased labour force participation and strong net immigration.

Inflationary pressures are expected to increase. In this environment, it is important that inflation expectations remain contained and that interest rates return to a more neutral level. The speed and extent to which the OCR will need to rise will depend on future economic and financial data, and its implications for inflationary pressures.

By increasing the OCR as needed to keep future average inflation near the 2 percent target mid-point, the Bank is seeking to ensure that the economic expansion can be sustained.

Graeme Wheeler



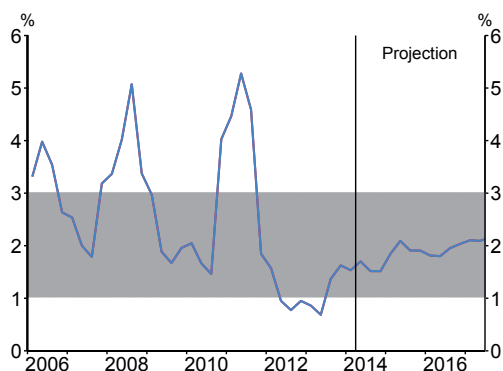
Governor

## 2 Key policy judgements

The New Zealand economy is estimated to have grown by 2 percent over the first half of 2014. Spending on construction continues to accelerate, net immigration flows have increased sharply over the past year, and high prices for New Zealand's commodity exports have led to strong growth in export incomes. These factors, together with an extended period of low interest rates, are supporting the continued recovery in domestic demand. Some offset is coming from the high exchange rate, which is a drag on tradables sector incomes, and continued fiscal consolidation.

Annual CPI inflation is expected to be 1.7 percent in the June quarter (figure 2.1). The high exchange rate and low global inflation have led to falling prices in the traded goods sector, but capacity pressure has been increasing and annual non-tradables inflation is 3 percent.

Figure 2.1  
CPI inflation  
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Low interest rates have played an important role in supporting GDP growth in the past few years, especially in the early stages of the recovery from the 2008/09 recession. More recently, growth has become more self-sustaining and very low interest rates are no longer appropriate given the rise in inflationary pressures. Consequently, the Bank expects to raise the OCR towards a more neutral level.

The projection for inflationary pressures, and so how far and how quickly interest rates will need to move,

depends on developments in several key economic drivers – in particular export prices, the exchange rate, net immigration, the housing market and construction. How households and businesses react to these drivers, and to increases in interest rates, will also be important. The Bank's judgements about these factors are discussed below.

### Export prices

New Zealand's commodity export prices have been very high over the past year and have combined with weak import price inflation to push the terms of trade to their highest level in more than 40 years, increasing New Zealand's purchasing power. While the projection assumes aggregate export prices will fall by 11 percent over 2014, leading to a 10 percent fall in the terms of trade, export prices and the terms of trade are projected to settle at a high level by past standards. This is expected to support domestic incomes and demand over the medium term.

While global meat prices have continued to increase over 2014, dairy prices have fallen further since the March *Statement*. The projected fall in export prices over 2014 incorporates a 27 percent fall in dairy prices, allowing for the sharp recent falls and the possibility of further decreases. It also incorporates falls in international prices for forestry products over coming months, in light of signs of weakening in China's construction sector.

Box C in chapter 4 explains the measurement of New Zealand's export prices, given their importance for incomes. Given the past tendency of export prices to move sharply, Box B in Chapter 2 looks at the implications of a larger than projected fall in commodity prices.

### The New Zealand dollar

The high New Zealand dollar trade-weighted index (TWI) reflects New Zealand's high export prices and relatively strong economic outlook. The exchange rate is weighing on tradables sector incomes and, together with low global inflation, is keeping tradables inflation low.

Our projection assumes that the TWI falls

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gradually, by about 7 percent over the next three years. This reflects an expectation that falls in commodity export prices will be reflected in the exchange rate. To date, the fall in the currency has been smaller than the drop in commodity prices would suggest. If the exchange rate remains strong, it is likely to be reflected in continued low or negative tradables inflation.

## Net immigration

Net immigration has picked up rapidly in the past year, reflecting New Zealand's relatively strong job market prospects. Net immigration is expected to remain an important boost to activity and inflationary pressures over the medium term, through its contribution to consumer demand and to demand for existing and new housing. Past experience suggests that over the short term net immigration's contribution to demand is greater than its contribution to supply capacity. Box D in chapter 4 discusses in more detail how net immigration affects demand and supply, and how the composition of flows in the current cycle might mean a slightly lesser increase in housing demand than in the past.

With the outlook for labour demand in Australia expected to improve, the projection assumes annual net inflows peak in mid-2014 at 37,000 working-age persons, and then ease steadily for three years. The projected net inflow adds about 70,000 people to the working age population over the projection, equivalent to an increase of around 2 percent.

Past experience, including stronger than expected inflows since the March *Statement*, shows how turning points in net immigration are difficult to predict, and highlights the risk that flows could continue to rise further and for longer than expected. Box B in this chapter looks at a scenario in which net flows hold up for longer than expected, resulting in a larger upswing in demand that comes through both the housing market and stronger spending. This scenario results in higher inflationary pressures that would require higher interest rates.

## The housing market and household demand

While net immigration is adding to housing demand, momentum in the housing market has eased since the middle of 2013. Annual house price inflation fell to 9 percent in the December quarter, following the introduction of restrictions on high loan-to-value ratio (LVR) mortgage lending and the beginning of mortgage rate increases. House price inflation is expected to continue moderating over the next three years as a result of projected interest rate increases, easing immigration and high household debt. Increased construction to address housing shortages in Auckland and Canterbury is also expected to slow house price inflation.

Annual average household consumption growth is expected to remain at a solid rate of about 3.5 percent over the next two years. Nonetheless, the rate of growth is modest compared with the mid-2000s cycle, reflecting weakening export incomes, rising interest rates and moderating house price inflation over the medium term. A source of uncertainty is how households will respond to rising interest rates, following an extended period of very low rates and with household debt remaining high. As chapter 3 discusses, the movement of mortgage borrowers from floating rate to fixed rate mortgages may help insulate some borrowers from rising interest rates.

## Construction

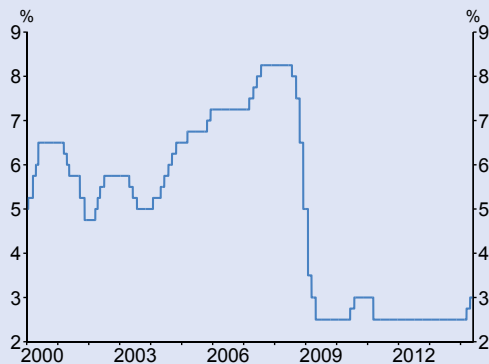
Construction work is expected to continue boosting GDP growth over the next two years, and then remain near its mid-2000s peak – about 10.5 percent of GDP – over the remainder of the projection. The rebuild in Canterbury is a major component, while growth in residential building is expected to continue to rise in Auckland to address the housing shortage. The large scale of work is assumed to continue drawing labour and capital from other sectors. Reflecting strong increases in activity, the annual rate of construction cost inflation climbed to 5.1 percent in March 2014, and will continue to be an important influence on the outlook for non-tradables inflation over coming years.

## Box A

### Review of recent monetary policy decisions and economic conditions

After an extended period at 2.5 percent, the OCR was increased to 2.75 percent at the March 2014 Monetary Policy Statement and then 3 percent at the April 2014 OCR review (figure A1). The long period for which the OCR was at 2.5 percent reflected a slow recovery from the recession of 2008/09, and the consequent weak inflationary pressures.

Figure A1  
Official Cash Rate



Source: RBNZ.

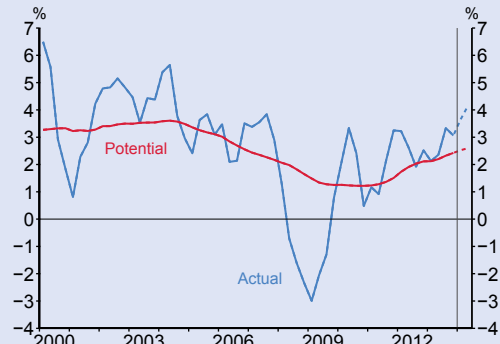
Interest rates have their greatest effect on inflation with a 12-18 month lag, so need to increase when pressures are building rather than when inflation has emerged. Doing so allows more-gradual movements in interest rates, reducing volatility in the economy.

The recent increases in the OCR have reflected an assessment that growth had been at or above the economy's estimated potential supply for some time (figure A2). Consequently, inflation was expected to rise even though inflation in the tradables sector was negative.

Tradables inflation remained weak in the March quarter out-turn, holding down headline CPI inflation. Non-tradables inflation has continued to pick up, and economic activity is running ahead of potential output. Current wage inflation appears low in that context.

Figure A2

Growth in GDP and estimated potential output  
(annual, dashed lines represent forecasts)



Source: Statistics New Zealand, RBNZ estimates.

Low wage inflation in part reflects low recent headline inflation, rising labour force participation, and lags between increased activity and wages. Wage inflation is expected to increase over the medium term. However, continued weakness could have implications for our assessment of the pricing environment and outlook, and so for the pace of interest rate increases required.

This document sets out projections for economic activity, inflation and the 90-day bank bill rate over a three year horizon. Consistent with the requirements of the Reserve Bank of New Zealand Act (1989), the Bank is mindful of how monetary policy will be formulated and implemented beyond this period. Many of the factors currently affecting the outlook for monetary policy – such as reconstruction in Canterbury and continuing changes in the composition of global demand – will affect the economic environment for an extended period. The precise stance of monetary policy over the coming five years will depend on such factors, as well as prevailing economic conditions. Over this period, the Bank will continue to conduct monetary policy with a view to keeping future average CPI inflation outcomes near 2 percent, as required by the Policy Targets Agreement.

## Inflation and monetary policy

Annual CPI inflation has increased over the past year, but remains below 2 percent as the high exchange rate and low global inflation weigh on tradables inflation. Nominal wage inflation has also been subdued. However, annual non-tradables inflation has increased over the past year to 3 percent, following increasing pressure on resources over the past 18 months. Measures of inflation expectations, while well below their 2011 peak, have increased over the past year. Strong output growth is expected to maintain pressure on resources over the medium term (figure 2.2c).

Given the increase in capacity pressure, and evidence that demand growth is no longer reliant on interest rate support, it is important for the OCR to be increased towards a more neutral level. This is consistent with inflation and inflation expectations settling near the 2 percent target midpoint over the medium term, and helps ensure the recovery continues at a sustainable pace.

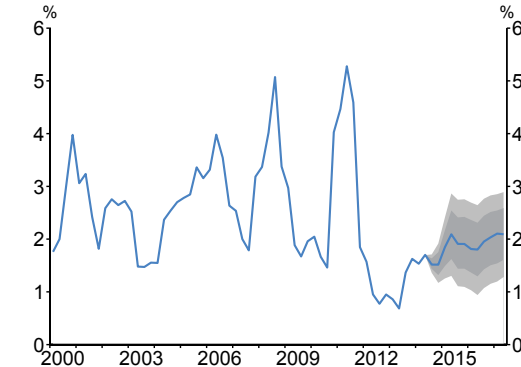
The discussion above sets out what we see as the most important drivers of the economic outlook – the terms of trade, the exchange rate, net immigration, the housing market and construction. It describes the view we have taken on how each of these drivers will develop over the next three years, and how these views underlie the central projection. Past experience shows that each of these drivers can be volatile, and so the discussion in this chapter also outlines the main risks we see around these judgements. The discussion in Box B in this chapter looks at two particular scenarios in which things could turn out differently, and describes the implications for the economy and monetary policy.

To explore more broadly how different judgements about the main drivers discussed in this chapter would lead to different paths for inflation, interest rates and output, figure 2.2 summarises the outcomes of running 1000 scenarios. Each scenario involves a different set of outcomes, based on the historical variation in these key drivers of the outlook. The bands illustrate the range of outcomes for inflation, the output gap and interest rates that would result from this collection of scenarios.

Figure 2.2

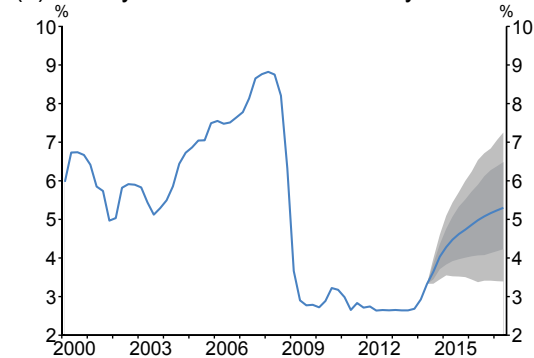
(a) CPI inflation uncertainty

(annual)



Source: Statistics New Zealand, RBNZ estimates.

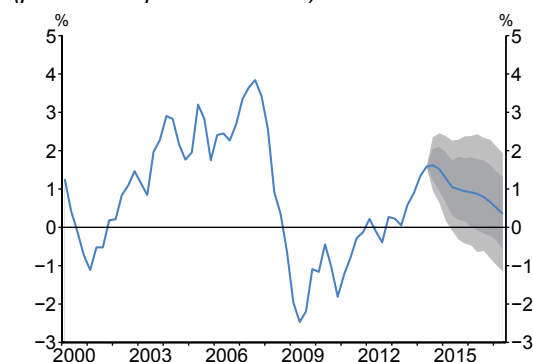
(b) 90-day interest rate uncertainty



Source: RBNZ estimates.

(c) Output gap uncertainty

(percent of potential GDP)



Source: Statistics New Zealand, RBNZ estimates.

Note: The exercise involves 1000 simulations based on shocks to key the drivers of the outlook discussed in this chapter. The size of the shocks is determined by the actual volatility experienced in these drivers over the period September 1992 to June 2014, and by their correlations with one another. The dark band shows the middle two thirds of outcomes of this collection of 1000 scenarios, while the light band shows the middle 90 percent of outcomes. For this exercise there is assumed to be no other source of uncertainty, such as revisions to historical data, changing economic relationships or other economic events that cause surprises. The technical method for generating fan charts is outlined on p36.

## Box B

### How external factors can affect monetary policy

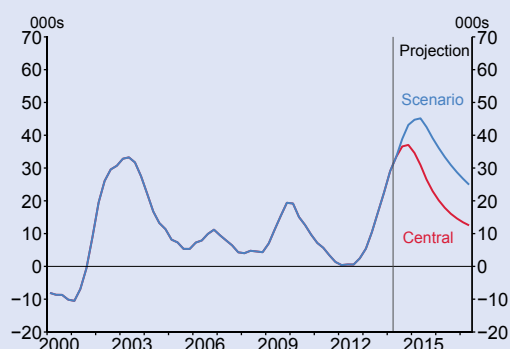
Global conditions can affect the New Zealand economy significantly. Global prices for our exports are one source of global influence, while net immigration reflects both international and domestic economic conditions. Both can be very difficult to predict, and this box considers the implications for monetary policy of some alternative outcomes to the central projection.

### Stronger net immigration inflows

The central projection assumes quarterly net immigration declines later this year as global economic conditions improve, particularly in Australia. However, there are risks in both directions. The scenario here is an upside one, with annual net immigration of working-age people peaking at 45,000 compared with 37,000 in the central projection (figure B1). Over the three-year projection horizon this results in a total net inflow of 113,000 persons compared with 70,000 persons in the central projection.

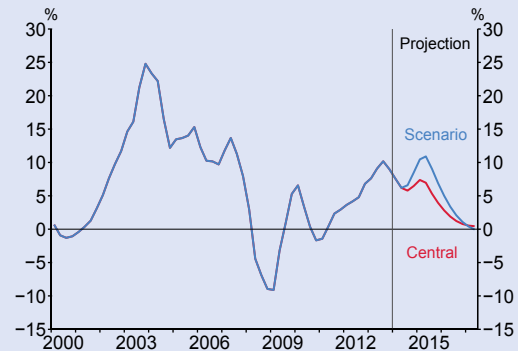
While stronger immigration increases the supply of labour resources and capacity in the economy over the medium term, the experience of past cycles suggests that over the short term the boost to domestic demand tends to dominate. Box D, chapter 4 discusses how net immigration affects demand and supply in the economy,

Figure B1  
Net permanent and long term immigration  
(working-age persons, annual total)



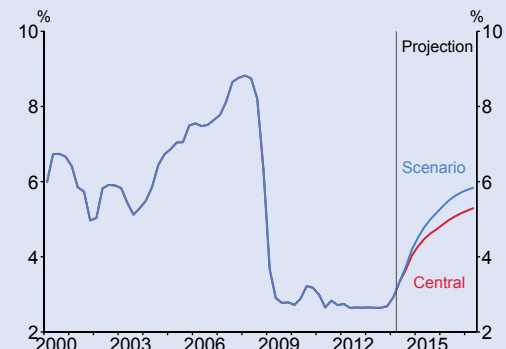
Source: Statistics New Zealand, RBNZ estimates.

Figure B2  
House price inflation  
(annual percent change)



Source: Property IQ, RBNZ estimates.

Figure B3  
90-day rate  
(stronger net immigration scenario)



Source: RBNZ estimates.

and ways in which this cycle could be different from previous ones.

In this scenario, increased housing demand encourages residential investment, but the new building occurs over a protracted period resulting in increased pressure on house prices in the interim. Annual house price inflation increases to 11 percent in 2015 – 4 percentage points higher than assumed in the central projection (figure B2). Consumption growth is also stronger.

Stronger domestic demand adds to pressure on domestic resources and non-tradables inflation. To keep CPI inflation contained, the outlook for the 90-day rate is higher than in the central projection (figure B3). A higher

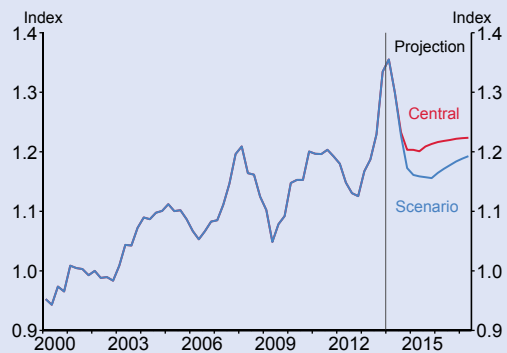
outlook for the 90-day rate results in a slightly higher New Zealand dollar, dampening activity in the tradables sector and providing a partial offset to stronger domestic demand.

### Weaker world export prices

In the central projection, aggregate export prices are expected to decline in 2014, driven by falling dairy prices. Beyond this, prices are expected to settle at a level that is still high by historical standards. This scenario considers the implications of a more pronounced decline in New Zealand's export prices resulting in lower terms of trade (figure B4). The resulting lower terms of trade reduce national income and domestic demand.

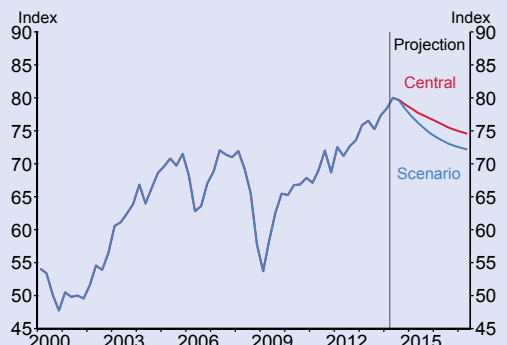
Weaker domestic demand leads to lower capacity pressures and non tradables inflation. The New Zealand dollar TWI is assumed to depreciate (figure B5). This acts as a shock absorber, providing some offset to weaker export incomes by supporting activity in the tradables sector. While the lower exchange rate leads to higher tradables sector inflation, the weaker outlook for demand and incomes means the 90-day rate track is lower than in the central projection (figure B6). An important feature of this scenario is that the exchange rate falls and acts as a shock absorber. If the exchange rate were to remain elevated while commodity prices fell, the 90-day rate track would need to be even lower than depicted here for inflation to settle at 2 percent.

Figure B4  
SNA terms of trade



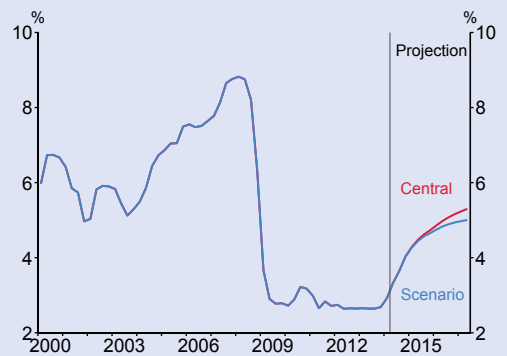
Source: Statistics New Zealand, RBNZ estimates.

Figure B5  
New Zealand dollar TWI



Source: RBNZ estimates.

Figure B6  
90-day rate  
(weaker world export prices scenario)



Source: RBNZ estimates.



### 3 Financial market developments

Financial market sentiment remains positive. Equity market indices have recorded new highs recently, global bond yields have been trending lower this year and volatility in a range of market prices has reached multi-year lows. Some factors behind these trends include a positive global economic outlook with little inflationary pressure, and expectations that easy global monetary policy will continue.

Since the March *Statement*, the New Zealand dollar has remained high, with the trade-weighted index averaging about 80. Pricing in the overnight indexed swaps (OIS) market suggests that expectations for the pace of increases in the OCR have dampened a little, with about 15 basis points less tightening priced in for the year ahead. New Zealand interest rates have been dragged lower by global trends, particularly at the longer end of the yield curve.

Marginal funding costs for local trading banks continue to trend down, driven by lower spreads of term deposit rates to wholesale rates. These lower costs and lower swap rates are enabling banks to reduce some of their fixed mortgage rates. The average two-year and three-year fixed mortgage rates for the four major trading banks are lower compared to March and the start of the year. Borrowers continue to steadily migrate from floating to fixed-rate mortgages.

#### International market developments

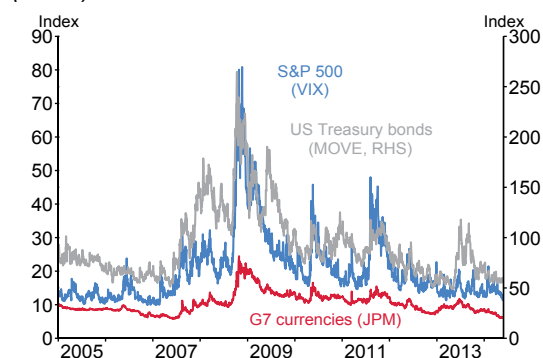
Since the March *Statement* financial market sentiment has remained positive, with a range of asset prices performing well. Equity prices continue to trend higher, albeit less quickly than last year, and fixed income markets have performed strongly. Credit spreads have continued to decline and global government bond yields are lower, surprising many market participants who began the year positioned for higher long-term interest rates.

The positive market environment reflects a gradual but steady increase in global growth, with signs that inflationary pressures remain well contained. The central banks in major economies continue to keep their policy rates at historically low levels, and indicate a desire

to keep rates low for some time yet.

One feature of financial markets over recent months has been the decline in implied volatility across a number of asset prices. Implied volatility is measured using options prices for various traded instruments. The VIX index, which measures implied volatility for the United States S&P 500 index, recently fell to levels not seen since 2007, pre-dating the Global Financial Crisis. Volatility has also been subdued in United States 10-year Treasury yields, and the lack of volatility has also been transmitted to currency markets (figure 3.1).

Figure 3.1  
Implied volatility indices  
(index)



Source: Bloomberg.

Low market volatility is typically associated with high levels of risk appetite. This is evident in global equity market indices, with some developed country benchmarks such as the United States S&P 500 reaching record highs in early 2014. Emerging market equity prices have also rebounded after a poor start to the year. Between mid-March and the end of May the MSCI emerging markets index rose more than 10 percent.

The macroeconomic environment of steady global growth and low global inflation is one likely factor behind low market volatility. Further, monetary policy has remained a key focus for financial markets with expectations that global monetary policy will remain stimulatory for some time. In the case of the United States and Japan, central bank buying of government bonds on a large scale has likely contributed to low bond market volatility in those

markets, with some spill-over effect on other asset classes. With major investment banks reducing their business in proprietary trading, some commentators point to regulatory factors as contributing to low volatility.

The United States Federal Reserve has continued to gradually scale back its purchases of Treasury bonds and mortgage-backed securities. Monthly purchases of those assets are down to USD 45 billion, compared with USD 85 billion before tapering began. The Federal Reserve Open Market Committee (FOMC) reiterated at the end of April that the current target range for the federal funds rate is likely to remain appropriate for a considerable time after the asset purchase programme ends. Based on current market pricing, the Federal Reserve will hold off raising its policy rate until around mid-2015.

Over recent months, pressure has been building on the European Central Bank (ECB) to deliver more policy stimulus. CPI inflation is tracking lower than the ECB expected and well below its target of maintaining inflation rates below, but close to, 2 percent. At its June meeting the ECB announced a range of measures to provide additional policy stimulus and support lending to the real economy. This included a negative deposit rate, making the ECB the first major central bank to charge commercial banks on their excess reserves.

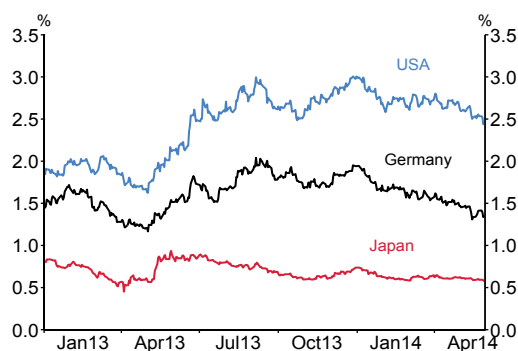
In China, authorities have tightened criteria around interbank lending and increased monitoring of default risk, while outlining principles for ongoing capital market reform. Stress tests undertaken by the People's Bank of China indicated that China's formal banking system is resilient to severe shocks. This provides some degree of comfort in light of perceived increased risks following a period of very strong credit growth. After depreciating sharply through February and early March, the renminbi has stabilised over the past two months. In mid-March, Chinese authorities widened the renminbi trading band – allowing it to fluctuate 2 percent each side of the daily reference rate set by the central bank.

## Financing and credit

Global bond rates rose in the fourth quarter last year and the market was positioned for that trend to

continue in 2014. Those expectations have not been met, with government bond rates actually trending lower. The yield on 10-year United States Treasury bonds began the year at 3.0 percent and was down to around 2.4 percent by the end of May, its lowest level since June last year (figure 3.2). Weaker economic momentum and the FOMC's consistent message that monetary policy tightening will not occur until well into the future may have been partly responsible for the decline in bond yields. However, the extent of the reduction in long-term bond rates is a puzzle to many market participants. Some analysts point to downwardly revised expectations of how high policy rates might need to go during the upswing as one reason bond yields have fallen, while others note the closure of losing short positions pushing yields down. Some point to lower net issuance of US Treasury bonds, as the government's fiscal position improves, as a contributing factor to lower yields.

Figure 3.2  
10-year government bond yields



Source: Reuters.

The fall in 10-year German yields has been even greater, from 1.95 percent at the beginning of the year to a low of 1.3 percent. Bonds of core European countries have benefited from safe-haven flows, as tension between Russia and the Ukraine escalated. Investors remained attracted to the high relative yield of some countries such as Italy and Spain, and 10-year government bond yields in these countries fell to record low levels of below 3 percent. Portugal's yields followed a similar path. The country announced a clean exit from its 2011 bail-out programme,

following a successful auction of bonds. Expectations of easier monetary policy by the ECB leading up to its June meeting helped support the European bond market.

Japanese bond yields have been in a much tighter range (about 0.6 to 0.7 percent), with the Bank of Japan continuing its large scale purchases of government bonds.

Corporate credit spreads have continued to narrow, with riskier assets showing the greatest spread contraction this year. The spread on Barclays Capital's global corporate bond index was down to 105 basis points at the end of May and the high yield spread was down to 377 basis points, down 14 and 34 basis points respectively for the year to date.

Ahead of the ECB's review of the quality of banks' assets later this year and the European Banking Authority's stress tests, European banks have been actively raising capital and equity raisings have reached a record high. In most cases, these have been met with strong demand. Euro area bank credit to non-financial corporates continues to decline by around 3 percent per annum, as banks focus on repairing their balance sheets.

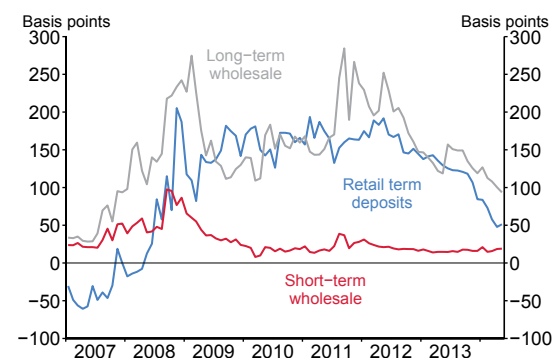
Lower global bond yields have dragged down rates in Australia and New Zealand. From the March *Statement* to the end of May, the yield on 10-year New Zealand government bonds fell by 35 basis points to 4.25 percent, while the fall in Australian yields was even greater, down 50 basis points to 3.7 percent. Anecdotal evidence suggests that global interest in New Zealand bonds has improved over the past couple of months, and this is reflected in the spread of New Zealand to United States 10-year government bond rates falling to around 170 basis points. Official Reserve Bank data on non-resident holdings of New Zealand government stock do not show this tendency, with estimated overseas holdings fairly steady over recent months to the end of April.

Issuance of New Zealand dollar-denominated debt by overseas entities (Kauris, Eurokiwis and Uridashis) was strong in the first quarter at about \$4.0 billion, but has dropped off significantly in the second quarter with about \$1.1 billion issued through to the end of May. Seasonally, the June quarter is weaker for issuance of these products, and conditions have been made less favourable for issuers

by a reduction in the NZD-USD five-year basis swap and New Zealand swap-bond spreads.

Local banks' funding costs continue to fall (figure 3.3). Deposit growth has remained high relative to credit growth, thereby covering much of the funding requirements for new loans. This has reduced the banks' incentives to pay higher rates for this source of funding. For example, despite rising six-month bank bill rates as the market anticipates increases in the OCR, the average six-month term deposit rate has remained steady for the past year. This shows up as a reduction of about 100 basis points in the term deposit funding spread over that time. Retail deposits make up more than half of total bank funding, and are a key driver of lower funding costs for banks.

Figure 3.3  
Indicative bank funding margins  
(spread to OCR)



Source: RBNZ estimates.

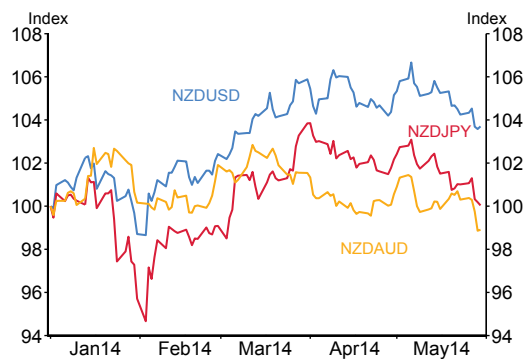
Highly favourable global funding conditions have also driven down funding spreads for long-term debt issuance. Banks have issued very little long-term debt over the past couple of months after being fairly active in the market in the first quarter. The credit default spread for Australian banks' five-year senior debt is a reasonable proxy for the trend in New Zealand banks' long-term wholesale funding costs. Since the beginning of the year, this spread has fallen by about 25 basis points to less than 60 basis points, its lowest level in about six years. Lower New Zealand dollar basis swap spreads have reduced the cost by a further 10-15 basis points for offshore issuance.

## Foreign exchange market

The New Zealand dollar TWI was on an appreciating trend in the month prior to the March *Statement* and that continued through to the end of March. Since then, the New Zealand dollar has traded in a tight range, with a modest downward bias. In early June the TWI was trading within half a percent of the level that prevailed just before the March *Statement*.

Over recent months, the Australian dollar has found increased support after dropping by 11 percent against the United States dollar between October and January. The NZD-AUD cross rate has weakened to reach, in early June, its lowest level for the year at just under AUD 0.91 (figure 3.4). The yen has found increased support over recent months as traders reduce their expectations of the chance of further monetary stimulus by the Bank of Japan.

Figure 3.4  
New Zealand dollar cross rates  
(1 January 2014 = 100)



Source: Reuters.

## Other domestic financial market developments

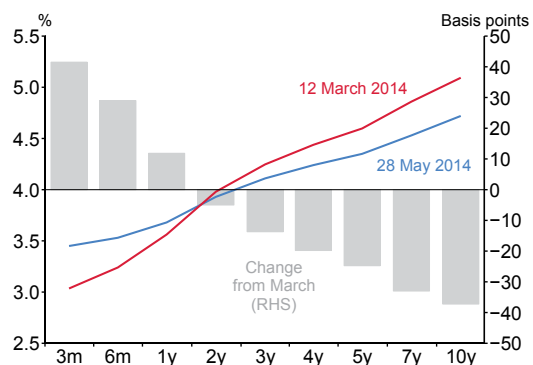
The upward trend in New Zealand equity prices continues, although the rate of increase has moderated over recent months. Between the end of February and the end of May the NZX50 index rose by 3.6 percent, broadly in line with world indices.

The OIS market suggests that the expected increase in the OCR has reduced somewhat since the March *Statement*. Just prior to the March *Statement*, the

market had priced in an OCR of 3.85 percent by March 2015. At the end of May that pricing had fallen to 3.70 percent. Market liaison suggests that overseas investors have been the dominant market participants in driving rates lower, more than offsetting the flows from domestic banks wanting to fund fixed rate mortgages that put upward pressure on rates.

Since the March *Statement* the yield curve has flattened (figure 3.5). The OCR was increased by 25 basis points at the time of the March *Statement* and again at the April OCR review. Expectations are for further increases in the policy rate, although the global trend towards lower interest rates has put significant downward pressure on rates for longer maturities. The three-month bank bill rate is up 42 basis points while the 10-year swap rate is down 37 basis points, a significant flattening.

Figure 3.5  
Wholesale bank bill and swap rates

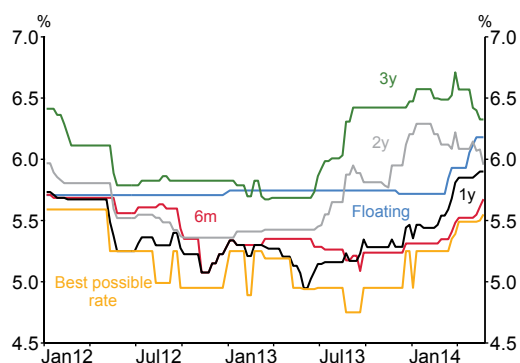


Source: Bloomberg.

As previously noted, banks' funding costs have fallen. Lower funding spreads mean that for any given level of the OCR or wholesale swap rate, banks can offer lower mortgage rates without affecting their profit margins. Over recent months, banks seeking to attract borrowers have been competing for two-year and three-year fixed rate mortgages as borrowers seek to fix rates in the face of expected interest rate rises. The combination of competition for borrowers and lower global rates (which have pulled down wholesale swap rates) has resulted in a reduction in average two- and three-year fixed mortgage rates offered by the major banks. Compared to the

beginning of the year, two- and three-year fixed mortgage rates are down about 15 basis points, in contrast to average rates for short terms, which are higher. The average floating mortgage rate, for example, is up 50 basis points.

**Figure 3.6**  
Average mortgage rates by term and the best possible rate



Source: interest.co.nz, RBNZ estimates.

While these figures are based on borrowers with an LVR ratio lower than 80 percent, the price of mortgages has also fallen for high-LVR borrowers. Some interest rate penalties for new high-LVR borrowers have been removed, so many high-LVR borrowers presently face lower interest rates compared to the beginning of the year.

Many borrowers have taken advantage of the lower two- and three-year fixed mortgage rates. Between the end of January and the end of April, the value of the stock of floating-rate mortgages fell by \$10.4 billion while the value of fixed-rate mortgages rose by \$9.7 billion, with \$5.5 billion of that fixed for two years or more (about 3 percent of outstanding mortgages). The tendency to switch mortgages from floating to fixed rates is not new – the trend to move to fixed rate mortgages began two years ago. Thus, estimates suggest the weighted average time before a mortgage faces re-pricing has roughly doubled from a low of 4.7 months in 2012 to 9.8 months as at the end of April.

## 4 Current economic conditions

The New Zealand economy has continued to strengthen, with real GDP in the June quarter estimated to be 4.2 percent higher than a year earlier. Growing demand means spare capacity has been absorbed and inflationary pressures are building in the non-tradables sector. The high exchange rate continues to dampen tradables sector inflation. Annual CPI inflation is expected to rise to 1.7 percent in the June quarter.

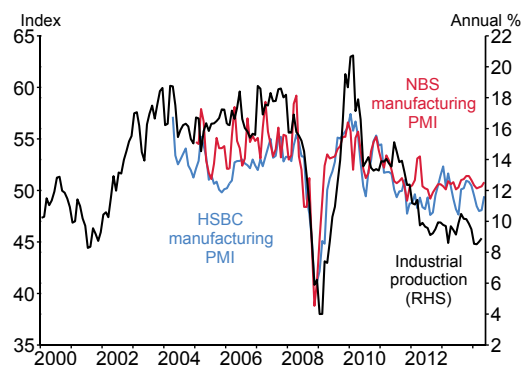
### External demand

Growth in New Zealand's trading partner economies continued at a moderate pace into 2014. Growth transitions are under way in Australia and China. Growth in major advanced economies has been gradually increasing with the help of considerable monetary stimulus. Spare capacity remains in most advanced economies, contributing to subdued global inflation.

GDP growth in China remains moderate by past standards, as the Government seeks to balance maintaining current economic momentum with structural reforms to improve the sustainability of growth in the future. GDP growth slowed to 7.4 percent in the year to March 2014, as the property market weakened and credit growth slowed. Authorities have taken a number of steps to support growth, including improving liquidity conditions and accelerating public investment, but have refrained from the large-scale stimulus measures employed in the past. Growth in industrial production and measures of sentiment in the manufacturing sector have improved in recent months (figure 4.1), suggesting policy measures may be having some effect.

The Australian economy is in a period of transition away from high investment in the resource sector towards more broad-based growth across sectors. Declining resource investment has begun to drag on growth (figure 4.2), although a significant increase in resource exports in recent quarters has partially offset this weakness. GDP expanded by 3.5 percent over the year to March 2014. Low interest rates are supporting the transition by stimulating housing market activity and household consumption. While business confidence has improved, business investment

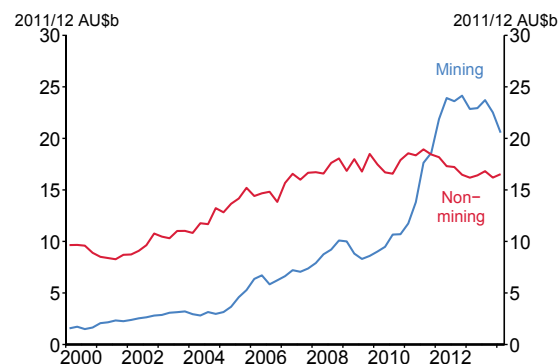
Figure 4.1  
China manufacturing PMIs and annual growth in industrial production



Source: Haver Analytics.

outside the resource sector remains weak. The labour market softened in 2013, but the unemployment rate has stabilised more recently at just below 6 percent, and there are signs that labour demand is now growing.

Figure 4.2  
Australian real capital expenditure



Source: Haver Analytics.

The recovery in major advanced economies now appears entrenched, although the overall pace of growth remains moderate relative to history. Monetary policy remains accommodative across these economies, and fiscal consolidation is becoming less of a drag on growth. In the euro area, while business and consumer confidence have improved over the past year, the labour market remains weak. In the United States, recent indicators of activity in the labour market and manufacturing sector

have recovered following weather-related weakness through the beginning of 2014. In Japan, strong growth of 2.7 percent in the year to March 2014 partly reflected domestic spending being pulled forward ahead of the sales tax increase on 1 April, with activity indicators weakening following the tax increase.

Slow growth in major advanced economies, along with slower growth in China, continues to weigh on export growth in New Zealand's other Asian trading partners. GDP growth across these trading partners has been mixed over the past year. GDP growth has strengthened in South Korea, Malaysia, Taiwan and Singapore. Capital outflows have generated policy challenges in some Asian economies, particularly in Indonesia where growth has slowed. Political disruption resulted in Thailand's GDP contracting in the first quarter of 2014.

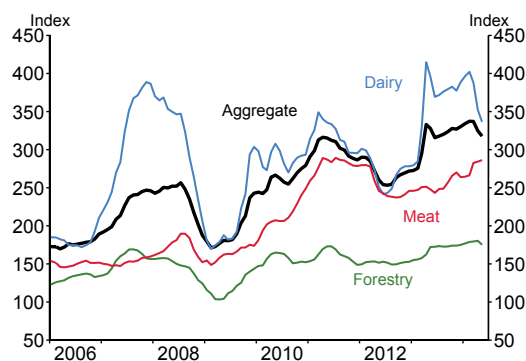
The continued recovery in trading partner economies has supported New Zealand's export volumes. Demand and prices for New Zealand's commodity exports have been strong, particularly reflecting growing incomes and urbanisation in China. Export commodity prices remain high relative to history, despite a large fall in dairy prices over the past four months (figure 4.3). As measured by the GlobalDairyTrade index, dairy prices have fallen by 26 percent from a peak in early February, reflecting increased global supply including a strong end to New Zealand's production season. While rising meat and forestry prices have partly offset the recent fall in dairy prices, there have recently been indications that forestry prices are falling as construction activity slows in China.

Combined with subdued global inflation that has contributed to weak import price inflation, strong export prices have resulted in very high terms of trade relative to history. Due to falling dairy prices, the terms of trade appear to have declined since their assumed peak in the March 2014 quarter. Box C on p 21 discusses in more detail how recent commodity price movements might influence the terms of trade.

The New Zealand dollar exchange rate has remained high since the March *Statement*. While this has partly reflected New Zealand's relatively strong economic outlook and high commodity prices, the exchange rate has

remained high in recent months despite large falls in dairy prices.

Figure 4.3  
Export commodity prices  
(world terms)



Source: ANZ Bank.

The high exchange rate continues to dampen exporters' incomes and reduce the competitiveness of the tradables sector. It is also lowering the domestic prices of imported goods, so dampening tradables inflation and supporting demand for imported consumer and investment goods.

Despite the high New Zealand dollar, tourism exports appear to be increasing. Visitor arrivals in the three months to April were up 4.5 percent on the same period a year earlier. Arrivals from China continue to increase, and visitor numbers from the European Union and the United States appear to be recovering. The greater proportion of arrivals from these higher-spend regions has contributed to a modest increase in the average spend per visitor, which had trended down over the past decade (figure 4.4, overleaf).

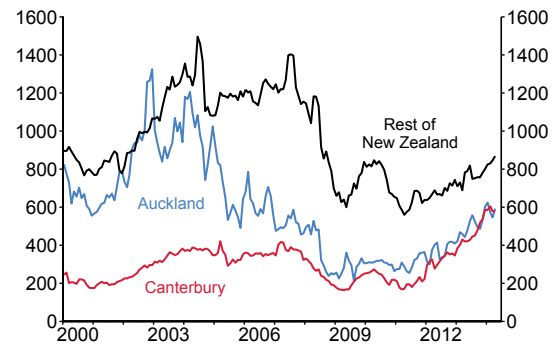


Figure 4.4  
Average spend per international visitor  
(seasonally adjusted)



Source: Statistics New Zealand, RBNZ estimates.

Figure 4.6  
New dwelling consent issuance  
(seasonally adjusted, 3 month moving average)



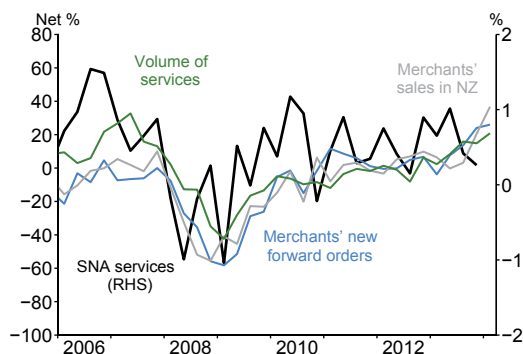
Source: Statistics New Zealand, RBNZ estimates.

### Domestic demand

Domestic growth has become more broad-based, as reflected in growing services sector output (figure 4.5), and increasing manufacturing output. Business and consumer sentiment remain high, with growth in business investment and household consumption reinforcing the pace of economic expansion.

Ex-primary manufacturing output in the December quarter was 4 percent higher than the previous year, after being broadly flat for the previous two years. Growth in 2013 was due to increased domestic sales while exports were fairly stable (figure 4.7). The Performance of Manufacturing Index remains at levels indicating expansion in the sector, underpinned by strength in new orders and production. In part, this reflects strong growth in construction sector activity, supporting demand for building materials from New Zealand's manufacturing sector.

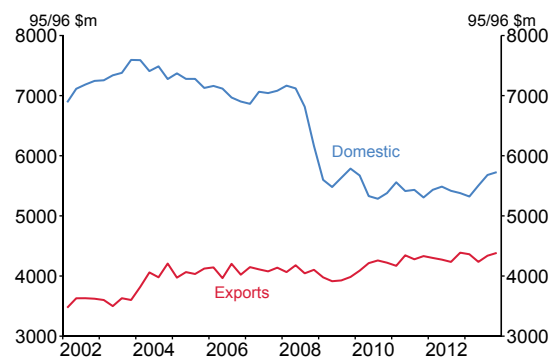
Figure 4.5  
QSBO indicators of service sector output and quarterly services sector GDP growth  
(seasonally adjusted)



Source: NZIER, Statistics New Zealand, RBNZ estimates.

Increasing construction has been a key factor supporting GDP for the past few years, and appeared to remain so in the first half of 2014. Residential consent issuance indicates strong growth in construction, underpinned by reconstruction in Canterbury and increasing residential investment in Auckland (figure 4.6).

Figure 4.7  
Manufacturing sales

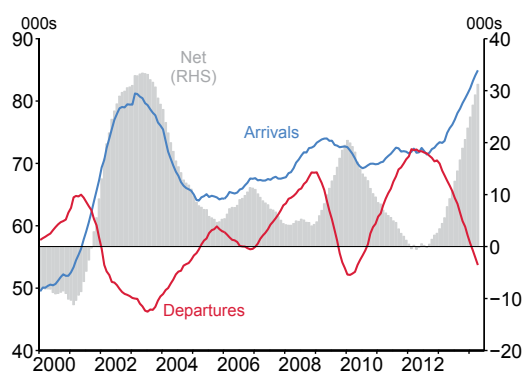


Source: Statistics New Zealand, RBNZ estimates.



Net immigration of working-age people rose to 31,000 in the year to April (figure 4.8), supporting growth in housing demand and wider domestic demand. As discussed in box D, p 24, the composition of migration flows suggests migration will also help alleviate skill shortages in the construction sector in Canterbury and elsewhere.

**Figure 4.8**  
Permanent and long-term working-age migration  
(annual)



Source: Statistics New Zealand, RBNZ estimates.

After strong house price inflation through much of 2013, momentum in the housing market has moderated. This moderation follows the introduction of LVR restrictions in October last year and increases in mortgage rates. Housing turnover has fallen considerably. The number of house sales in March was 11 percent lower than in September last year (figure 4.9). Sales fell a further 7 percent in April, though the decline in April was likely exaggerated by the unusual timing of Easter and ANZAC day holidays.

**Figure 4.9**  
House sales  
(monthly, seasonally adjusted)

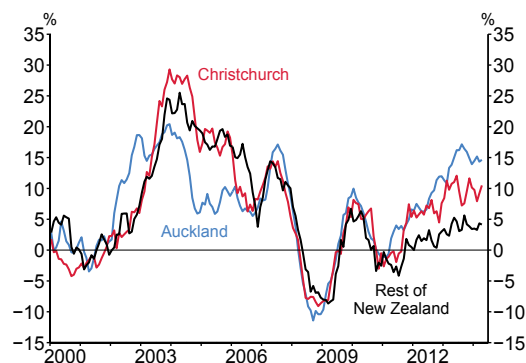


Source: REINZ, RBNZ estimates.

According to REINZ data, annual house price inflation eased to 8.6 percent in April from a peak of 9.8 percent in November last year. LVR restrictions have been a key factor dampening high house price inflation, and the Reserve Bank estimates that LVR restrictions have reduced annual house price inflation in the year to March 2014 by about 2.5 to 3.5 percentage points compared with what it might have been.

Despite recent falls, house price inflation in Auckland remains high at 14.6 percent. In Christchurch, annual house price inflation is 10.5 percent, and house price inflation in the rest of New Zealand is 4.1 percent (figure 4.10).

**Figure 4.10**  
Annual house price inflation by region  
(3 month moving average)

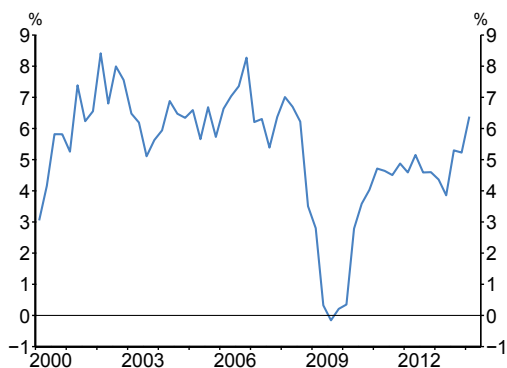


Source: REINZ, RBNZ estimates.

While the REINZ monthly index shows some increase in house price inflation in the past few months, there has been a disproportionately large drop in sales of lower priced houses, which may cause the REINZ data to overstate the degree of recent price increases. Further, past relationships would imply that the significant fall in house sales will have contributed to further easing in annual house price inflation over the first half of 2014.

Consumer sentiment measures have eased slightly in recent months but remain high, consistent with an improving labour market and strong growth in labour incomes (figure 4.11). Growth in incomes has also been supported by high export prices. In addition, the high exchange rate and low imported inflation are supporting households' purchasing power. Though quarterly growth in retail sales volumes softened to 0.7 percent in the March quarter, annual growth remained robust at 3.8 percent.

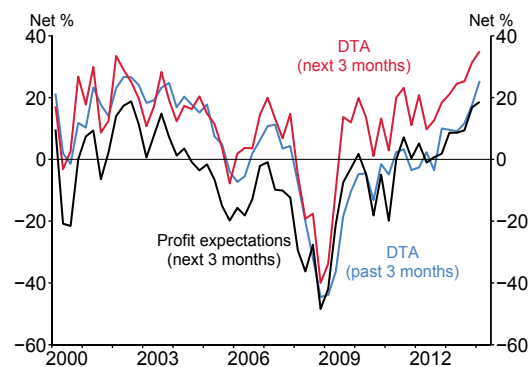
Figure 4.11  
Growth in QES total earnings  
(annual)



Source: Statistics New Zealand.

Conditions faced by businesses have improved, and survey measures of both business confidence and firms' own activity outlook have increased over the past year (figure 4.12). Reflecting increased demand and profit expectations, real market business investment looks to have continued increasing through the first half of the year after increasing by 11 percent in 2013.

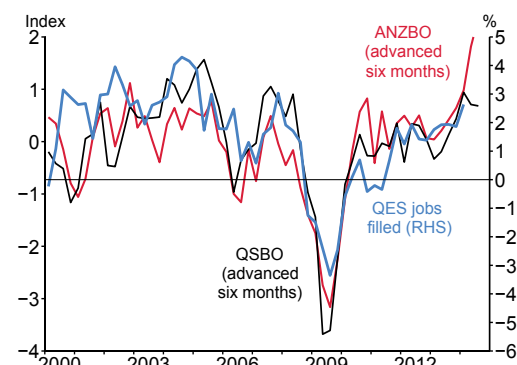
Figure 4.12  
QSBO domestic trading activity and profit expectations  
(seasonally adjusted)



Source: NZIER.

Labour demand is also growing strongly. The number of people employed in the March quarter was 3.7 percent higher than a year ago, and total labour hours increased at a similar rate. Survey measures of firms' hiring intentions indicate that robust growth in labour demand will continue through 2014 (figure 4.13).

Figure 4.13  
Annual growth in QES filled jobs and surveyed employment intentions  
(seasonally adjusted)



Source: ANZ Bank, NZIER, Statistics New Zealand, RBNZ estimates.

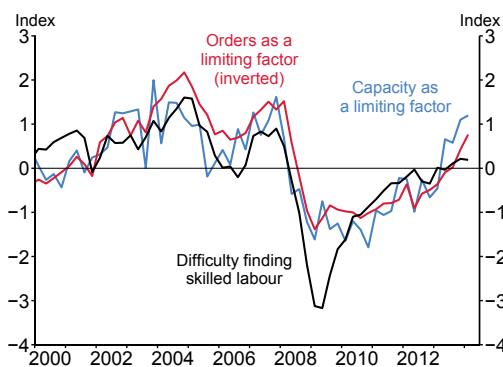
Fiscal consolidation continues to partly offset robust demand by households and businesses. Fiscal consolidation has been occurring through a combination of limited growth in government spending and increases in taxes on tobacco and petrol.

## Capacity pressure and inflation

Annual CPI inflation in the June quarter is expected to rise to 1.7 percent, driven by increasing non-tradables inflation. Annual tradables inflation has increased over the past year, but is estimated to remain negative at -0.1 percent in the June quarter. This reflects the high New Zealand dollar TWI and low global inflation, which have contributed to negative tradables inflation since early 2012.

Pressure on productive capacity has increased over the past year as GDP growth has continued to outpace estimated growth in the economy's supply capacity. Survey measures of capacity pressure from the QSBO have generally continued to increase over the past year (figure 4.14).

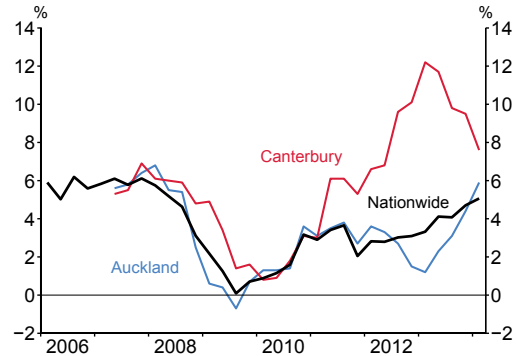
Figure 4.14  
QSBO survey measures of capacity  
(standardised)



Source: NZIER, RBNZ estimates.

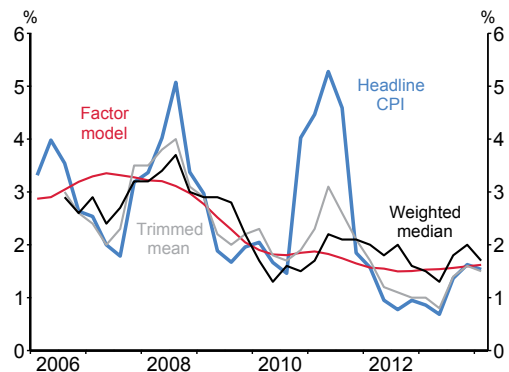
Increased pressure on capacity has resulted in increasing inflationary pressures over the past year. Non-tradables inflation is estimated to be 2.9 percent in the June quarter, reflecting continued strong growth in demand. An important contributor to non-tradables inflation has been increasing growth in construction costs. While the rate of construction cost inflation in Canterbury has been slowing since early 2013, the rate has been increasing in Auckland (figure 4.15). Increases in inflation have also been apparent outside the construction sector, with various measures of core inflation increasing gradually over the past year (figure 4.16).

Figure 4.15  
Construction cost inflation  
(annual)



Source: Statistics New Zealand.

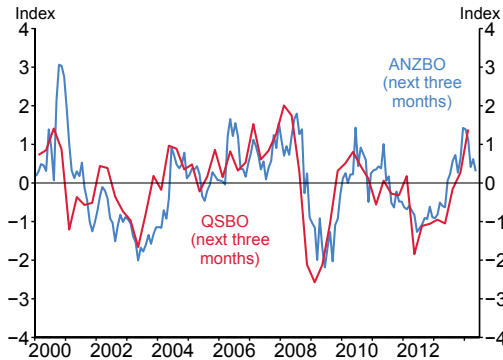
Figure 4.16  
Headline and selected core inflation measures  
(annual)



Source: Statistics New Zealand, RBNZ estimates.  
Note: Core inflation measures are adjusted for changes in GST.

While inflation has increased over the past year, the rise has been less than suggested by some indicators. In particular, firms' pricing intentions increased sharply through 2013 and, despite recent declines in the ANZBO measure, remain above average levels (figure 4.17, overleaf).

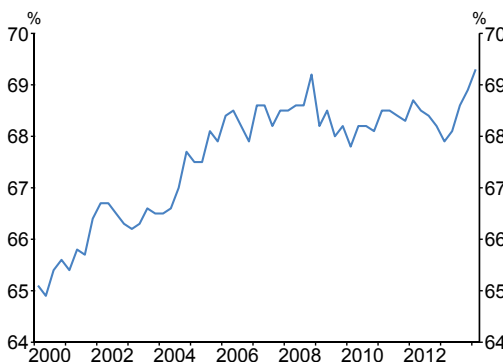
Figure 4.17  
Pricing intentions  
(seasonally adjusted, standardised)



Source: ANZ Bank, NZIER, RBNZ estimates.

While pressures on both physical capital and the labour market are increasing, the degree of pressure appears more modest in the labour market, limiting the increases in non-tradables inflation. The improvement in labour demand has encouraged people to enter the labour force. This, along with demographic changes and net immigration, is boosting labour supply. Increases in the labour force participation rate over the past year mean the unemployment rate has fallen less quickly – and skill shortages have increased less quickly – than might otherwise have been the case. The participation rate rose to 69.3 percent in the March quarter (figure 4.18), while 6 percent of the labour force was unemployed.

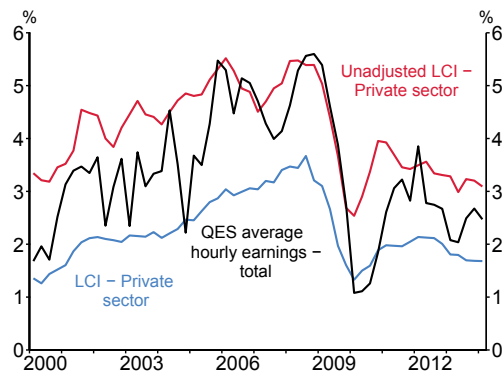
Figure 4.18  
Labour force participation rate  
(percent of working-age population, seasonally adjusted)



Source: Statistics New Zealand.

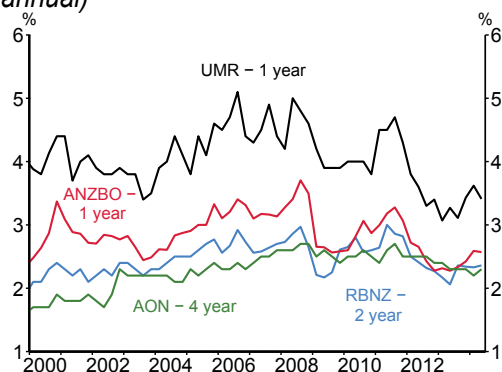
Wage growth has remained low, and eased across a range of measures in the March quarter (figure 4.19). In part, low wage inflation reflects the increase in labour force participation and the still elevated unemployment rate, and the lags between resource pressure and wage movements. Recent low headline inflation also appears to be contributing to low wage inflation. Although movements in inflation expectations have been mixed over the past year, they are generally lower than they were through the second half of the last decade (figure 4.20).

Figure 4.19  
Nominal wage inflation  
(annual)



Source: Statistics New Zealand.

Figure 4.20  
Inflation expectations  
(annual)



Source: ANZ Bank, AON Hewitt, RBNZ/UMR Research, RBNZ.

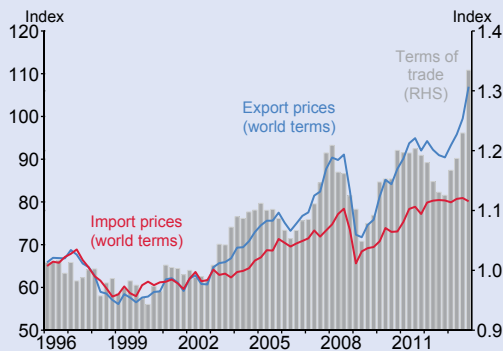
## Box C

### New Zealand's export prices

During 2013, New Zealand experienced its highest terms of trade in more than 40 years. The result has been a large boost to New Zealanders' real purchasing power. The terms of trade are measured as export prices relative to import prices, and for New Zealand it is movements in export prices that tend to drive cycles in the terms of trade (figure C1). Consequently, developments in New Zealand's export prices have a significant influence on the overall economic outlook.

Figure C1

### Composition of the terms of trade on an SNA basis



Source: Statistics New Zealand, RBNZ estimates.

### Measuring export prices

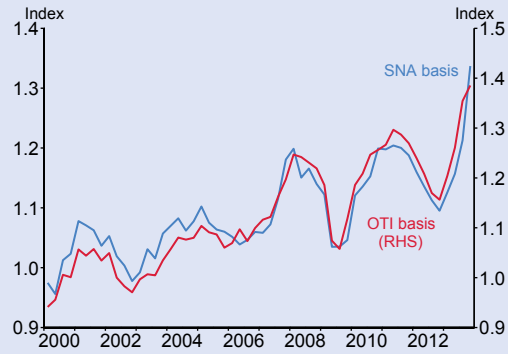
The Bank's forecasting framework incorporates the System of National Accounts (SNA) 'implicit' measures of export and import prices. These measures are implicit because they are export and import deflators (values relative to volumes), rather than explicit price indices that measure price changes based on fixed baskets of goods. The SNA measures capture all of New Zealand's international trade at the point in time when the good or service changes ownership.

The Bank's forecast uses these SNA measures because of their full coverage and because their implications for real income are consistent with other components of GDP. Alternative measures of export and import prices published by Statistics New Zealand are the Overseas Trade Indices (OTIs). These capture

transactions when goods physically cross the border, and in general move similarly to SNA prices (figure C2).

Figure C2

### Terms of trade (SNA and OTI measures)



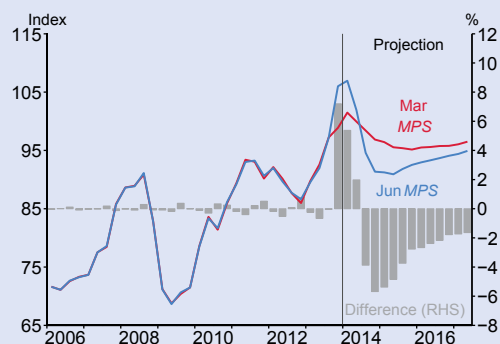
Source: Statistics New Zealand, RBNZ estimates.

Many other export price measures are available, and given their timeliness the Bank uses them as leading indicators of SNA export prices. Such measures include the ANZ and ASB Commodity Prices Indexes. Many other price measures are available for individual export goods, such as the prices for dairy goods traded on the GlobalDairyTrade (GDT) auction platform. These other export price measures capture only a sub-section of New Zealand's export goods, and so (by definition) they are less comprehensive in terms of national income than the SNA measure.

### Recent developments in export price measures

On an SNA basis, world export prices in the December quarter were almost 7 percent higher than the Bank had forecast at the time of the *March Statement* (figure C3, overleaf).

**Figure C3**  
SNA goods export price  
(world terms)

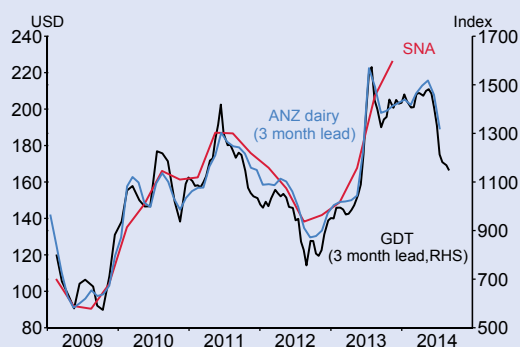


Source: Statistics New Zealand, RBNZ estimates.

While the different export price indicators move similarly to one another over time, measurement and compositional differences can result in large divergences over short periods. Indeed, the 9.1 percent quarterly increase in SNA world export prices in December was higher than what these other indicators had suggested.

Much of the increase in New Zealand's total export prices over 2013 was driven by increases in world prices for dairy, and it appears much of the surprise in the December out-turn was also accounted for by dairy. On an SNA basis, world dairy prices increased by more than 7 percent in the December 2013 quarter. In contrast, the ANZ dairy price index and the GDT index indicated that dairy prices would remain flat or fall slightly (figure C4).

**Figure C4**  
Dairy price indexes

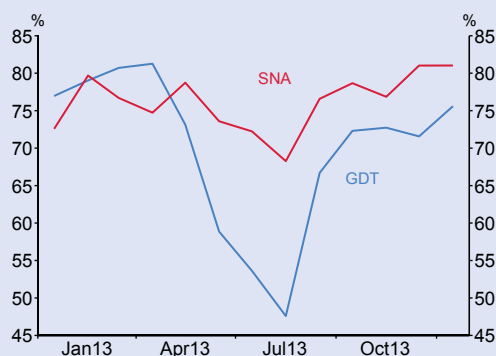


Source: ANZ Bank, GlobalDairyTrade, Statistics New Zealand, RBNZ estimates.

A number of compositional differences between the SNA measure of dairy prices and other measures may help to explain the divergence in the December quarter. The ANZ dairy price index has followed the GDT index closely over history (figure C4), so by looking at the composition of exports sold through the GDT platform we may be able to better understand why SNA export prices were stronger than the Bank expected, and whether this has any future implications.

Total volumes sold through the GDT platform generally account for less than a quarter of New Zealand's total dairy exports that are captured by SNA, and not all products sold on the GDT platform are from New Zealand. Further, whole milk powder – one of the higher-priced dairy commodities at the time<sup>2</sup> – made up a lower share of GDT exports than it did total dairy exports over the second half of 2013 (figure C5).

**Figure C5**  
Whole milk powder as a share of total dairy export volumes



Source: GlobalDairyTrade, Statistics New Zealand, RBNZ estimates.

Notes: Dairy products sold on the GDT platform are for delivery periods between 1 and 6 months later. The GDT volume data for each auction have been adjusted so that they correspond to the month of delivery. Merchandise Trade data have been used as a proxy for SNA export data. Although there are conceptual differences between these data, Merchandise Trade data have been used because sufficiently detailed SNA export data were not available.

<sup>2</sup> Whole milk powder prices were about US\$300/MT higher on average than skim milk powder prices over 2013.

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The difference between ANZ and SNA could also be partly explained by the fact that SNA measures the prices of export goods that changed ownership in the current period. In contrast, the ANZ measure weights price movements in world markets by the share of each commodity in New Zealand's total exports in the previous year – not by the volume of exports that have actually been sold in each month.

### **Outlook for SNA export prices**

While dairy prices remain high compared to history, they have fallen by 26 percent on the GDT auction platform since early February 2014. Dairy has a weight of 47 percent in the ANZ Commodity Price Index, so the aggregate index has also fallen in recent months.

An important assumption in the Bank's forecast is how the recent falls in dairy prices on the GDT platform translate into SNA goods export prices, and so to New Zealand export incomes.

The divergence between whole milk powder prices and other products has narrowed in 2014, meaning that the compositional effect seen in December is assumed to be temporary. Recent Merchandise Trade data suggest that dairy prices on an SNA basis will remain high in the March 2014 quarter. However, SNA export prices are assumed to fall in the June quarter, primarily accounted for by falls in dairy prices.

The Bank had already forecast a fall in dairy prices, and SNA export prices, in the March *Statement*. However, the recent falls in GDT prices were larger than expected. In addition to recent declines in forestry prices, these larger falls have resulted in a downwards revision of about 4 percent to the outlook for SNA export prices in world terms beyond the next quarter (figure C3).



## Box D

### The effects of net immigration on economic activity

Net immigration affects the economy through a number of channels, on both the demand side and supply side. Historically, the most significant effect has been through increased demand for housing. Increases in net immigration contribute to both house price inflation and construction activity. In the case of construction, this boost to demand can persist for some time after net immigration moderates. In addition, net immigration supports wider demand for goods and services, directly through increased population and indirectly through the contribution to house price inflation.

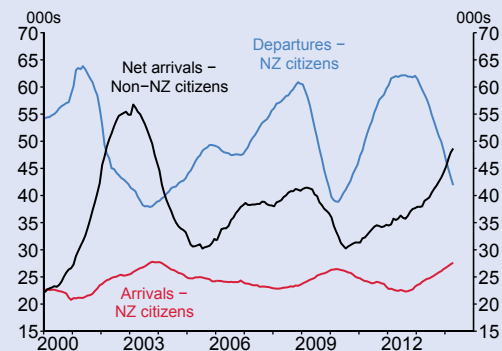
Over the coming years, an increase in net immigration is expected to be an important factor adding to aggregate demand. In the year to April, net immigration increased to an annual inflow of about 34,000 persons, including 31,000 of working age. This was up sharply from a net inflow of about 5,000 in the previous year. However, the effects of the recent increase in net immigration on demand pressures in the economy may be more modest than in previous cycles, as discussed below.

In part, the increase in net immigration over the past year was due to an increase in net arrivals of non-New Zealand citizens, up about 8,000 over the past year. However, the larger contributor to the increase in net immigration over the past year has been changes in migration flows of New Zealand citizens. The level of departures of New Zealand citizens has fallen by about 17,000 over the past year and is currently at low levels compared with history. At the same time there has been a more modest increase in the number of New Zealanders returning from off shore. These trends have been encouraged by New Zealand's relatively favourable economic performance, in particular, the improvement in employment prospects compared to Australia. Research by the Bank has found that a given reduction in departures from New Zealand has less of an effect on housing demand and house price inflation than an equally-sized increase in the number of people arriving

in New Zealand.<sup>1</sup>

It is also notable that the current composition of net immigration differs from the high levels in early 2000. During that period, there was a much larger increase in arrivals of non-New Zealand citizens, peaking at a net annual inflow of about 57,000 (figure D1).

Figure D1  
Immigration flows  
(annual, permanent and long term)



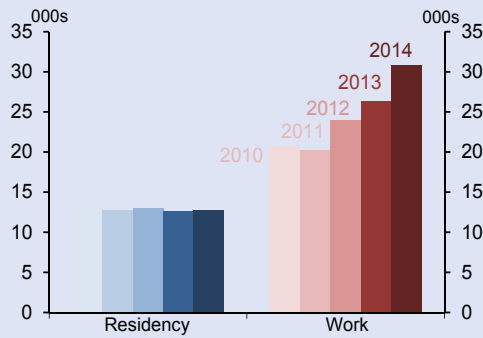
Source: Statistics New Zealand.

Increases in net immigration also add to the economy's productive capacity. With recent inflows concentrated among those aged in their 20s and 30s, and with entry requirements favouring skilled workers, most new migrants in this cycle are likely to enter the labour force. Indeed, the number of people arriving on temporary working visas increased by about 4,500 over the past year. In contrast, the numbers arriving under the residency category have remained stable (figure D2).

<sup>1</sup> See McDonald (2013) 'Migration and the housing market', AN2013/10.



Figure D2  
Permanent and long term arrivals by visa type  
(annual, year to April)

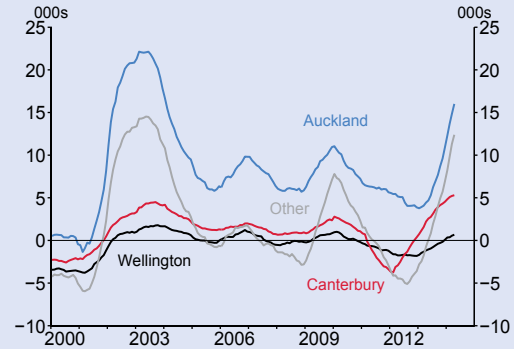


Source: Statistics New Zealand.

The increase in the labour supply due to net immigration helps address the need for skilled labour in the economy. This has been particularly important in Canterbury with reconstruction picking up at the same time as economic activity more generally is strengthening.

Labour inflows related to the Canterbury rebuild – which appear to be an important driver of the increase in net immigration – may have a different impact on housing demand than other in-flows. Housing needs for workers in Canterbury might, for example, be oriented more towards higher density forms of housing like flats or temporary housing. However, there has also been a pick-up in net immigration into other regions, particularly Auckland (figure D3).

Figure D3  
Net immigration by region  
(annual, permanent and long term)

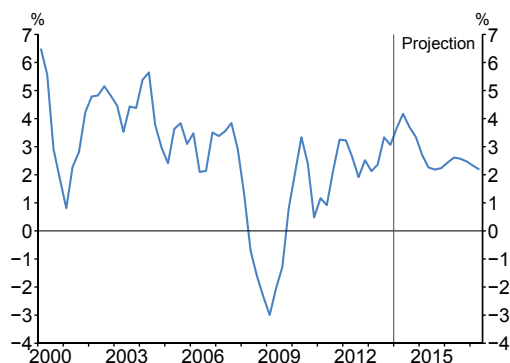


Source: Statistics New Zealand.

## 5 The macroeconomic outlook

The New Zealand economy is projected to grow 3.3 percent in the year to the December quarter 2014, before moderating further ahead (figure 5.1). Demand growth is becoming increasingly broad-based, and pressure on productive resources is expected to cause inflation to rise. Consequently, interest rates are projected to increase over the coming years to ensure that CPI inflation settles near 2 percent over the medium term.

Figure 5.1  
GDP growth  
(annual)



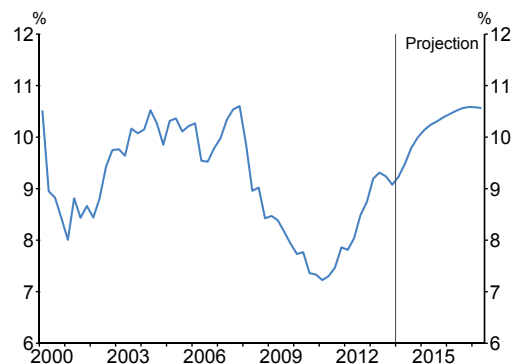
Source: Statistics New Zealand, RBNZ estimates.

### Activity outlook

Strong increases in construction spending will support robust domestic demand over coming years. Construction sector output is expected to increase over the next two years to around 10.5 percent of potential GDP – similar to the levels in the mid-2000s expansion – and remain around those levels for an extended period (figure 5.2).

Post-earthquake reconstruction in Canterbury is expected to continue for an extended period. The share of higher-value residential work in the rebuild is gradually increasing, and significant non-residential investment – much of which is related to central and local government projects – is planned. Outside Canterbury, the largest increases in residential building are expected to take place in Auckland with an estimated 10,000 new dwellings needed on average per year for the next 30 years to

Figure 5.2  
Construction expenditure  
(quarterly, seasonally adjusted, share of potential GDP)



Source: Statistics New Zealand, RBNZ estimates.

accommodate future population growth. The Auckland Housing Accord fast-tracks the consenting process for building in “Special Housing Areas”, and is expected to support growth in residential building over the next few years.

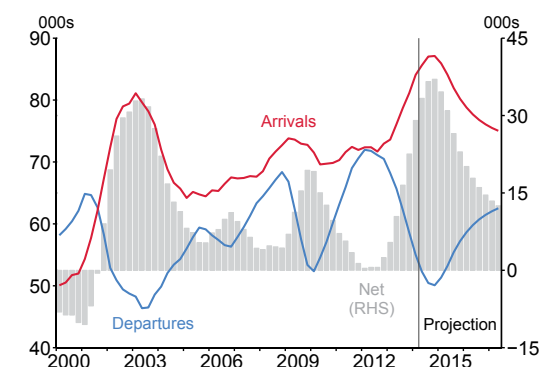
Strong construction work in Canterbury and Auckland is expected to result in an unusual construction cycle compared to history. Typically, the timing of construction cycles has been in sync with cycles in GDP. However, over coming years construction is expected to remain elevated as a share of GDP, drawing on resources from other sectors in which capacity pressures are moderating.

After rising to elevated levels over the past year, net immigration is projected to moderate over the coming years as conditions in other economies, particularly Australia, improve (figure 5.3). Over the coming three years, this will result in net immigration adding around 70,000 people to the economy (equivalent to around 2 percent of the working-age population); the largest migration cycle since the early 2000s.

The boost to the population from immigration is expected to be an important contributor to housing demand and consumer demand over the coming years. (As discussed in Box D in chapter 4, the composition of net immigration may mean the boost to demand is slightly

more modest than in previous cycles). Net immigration will also add to the economy's productive capacity through increases in the labour force.

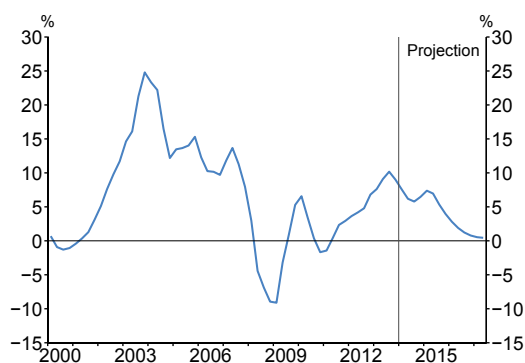
**Figure 5.3**  
Net permanent and long-term immigration  
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Strong net immigration and income growth will boost housing demand. However, over the coming years house price inflation is expected to moderate (figure 5.4) as housing construction alleviates supply shortages, mortgage interest rates increase gradually from current low levels, and the flow of net immigration is assumed to wane.

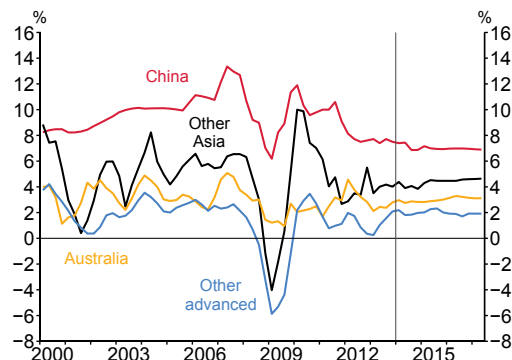
**Figure 5.4**  
House price inflation  
(annual)



Source: Property IQ, RBNZ estimates.

The economic recovery in our major trading partners is projected to continue, but growth is expected to remain modest compared to history (figure 5.5).

**Figure 5.5**  
GDP growth in selected trading partner economies  
(annual)



Source: Haver Analytics, RBNZ estimates.

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

In China, economic growth has slowed slightly over recent quarters, but remains high relative to our other trading partners. Chinese authorities are implementing an ambitious economic reform agenda. Successful reform will be vital for ensuring continued strong growth over the long term, but may cause growth to slow in the near term as the structure of the economy changes. We expect annual GDP growth of around 7 percent in the next few years. However, recent weakness in property market activity in China poses a risk of much weaker GDP growth. Including its direct and indirect linkages to other sectors of the economy, the property market comprises a large share of output in China. In recent months, property sales have declined, the pace of new construction has slowed, and house price inflation has fallen. If the property market weakens sharply, growth could slow further over the next few years. China's growing importance to the global economy and the Asian region in particular mean that a slowdown in growth could lead to a significant reduction in demand for New Zealand's exports.

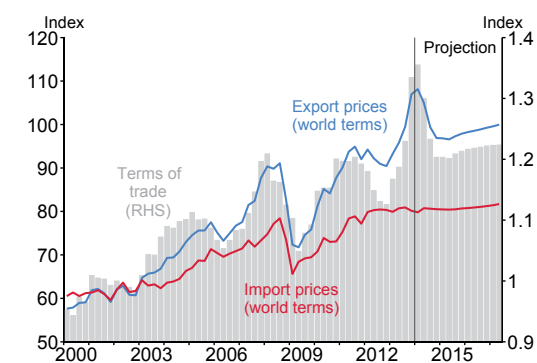
In Australia, resource investment is expected to continue declining from historically high levels, but there is considerable uncertainty about the pace of the decline. Increasing resource export volumes will continue

to contribute to GDP growth, but the drag from declining resource investment is expected to become more pronounced over the next year. Over time, strengthening household demand, supported by low interest rates, is expected to encourage an increase in business investment outside of the resource sector. The outlook for the labour market is uncertain, as indications of strengthening labour demand outside the resource sector may be offset by a decline in employment related to resource investment.

In major advanced economies, monetary policy is expected to remain supportive and the pace of fiscal consolidation is expected to slow. As economic recoveries continue and labour market conditions improve, growth in advanced economies is expected to become more self-sustaining. The ongoing recovery in advanced economies will provide support for external demand in our Asian trading partners.

Due to the modest pace of the global recovery, excess capacity in developed economies is likely to be absorbed only gradually. This will continue to dampen the prices of many internationally traded goods (figure 5.6), with the resulting softness in import price inflation boosting New Zealanders' real purchasing power.

Figure 5.6  
SNA terms of trade and components



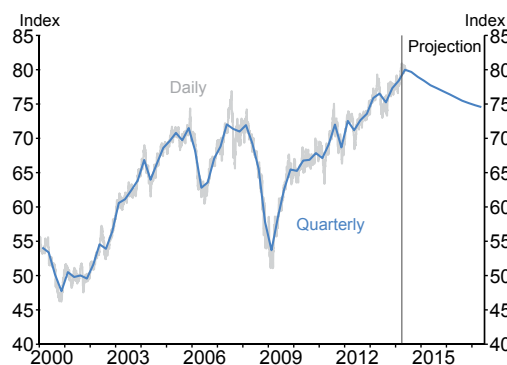
Source: Statistics New Zealand, RBNZ estimates.

As discussed in box C in chapter 4, it appears that aggregate prices for New Zealand's exports peaked in early 2014. Prices for dairy have fallen sharply since February. However, New Zealand is continuing to benefit from increasing trade with faster-growing economies in

Asia. Continuing growth in these economies' demand for our commodity exports is expected to continue supporting export prices and earnings. Combined with softness in global inflation, this strength in export prices is expected to result in the terms of trade remaining at historically elevated levels over the projection.

The New Zealand dollar TWI is assumed to depreciate only gradually over the projection (figure 5.7), reflecting that global demand is recovering and New Zealand's economic outlook remains relatively favourable. Commodity prices are also expected to remain high by past standards even after recent sharp falls. While the high New Zealand dollar will boost domestic purchasing power, it will continue to weigh on tradables sector competitiveness and export incomes.

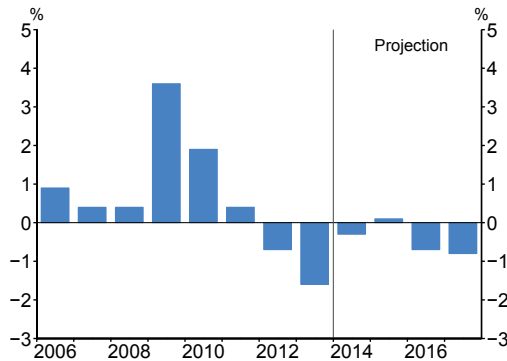
Figure 5.7  
New Zealand dollar TWI



Source: RBNZ estimates.

Consistent with *Budget Economic and Fiscal Update 2014*, fiscal consolidation is expected to continue weighing on GDP growth over the projection. Crown revenue is expected to increase with domestic activity and incomes, and through increases in indirect taxes (such as the tobacco excise tax), while core Crown expenses are expected to grow by around 1.2 percent per annum. These measures result in a cumulative fiscal impulse of around -2 percent of nominal GDP over the projection (figure 5.8). This is slightly less negative than in the *March Statement* due to a \$500 million upwards revision to the operating allowance each year from 2014/15.

Figure 5.8  
Fiscal impulse  
(share of nominal GDP, June year)



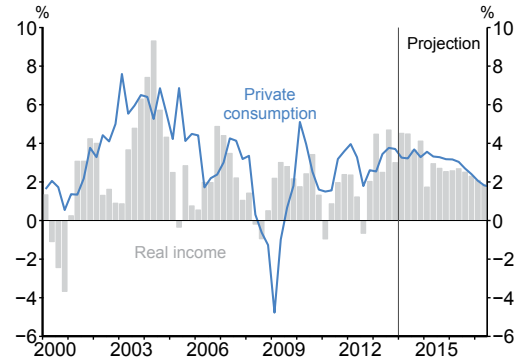
Source: The Treasury.

Robust economic growth over the coming years is expected to underpin continued growth in employment. At the same time, the economy's productive capacity is expected to be boosted by increases in the working-age population associated with net immigration and demographic changes. In addition, labour force participation is expected to remain elevated in response to improving employment prospects. Overall, employment growth is expected to be stronger than labour force growth, resulting in the unemployment rate declining to just over 5 percent.

Growth in employment will underpin robust increases in real labour incomes. Combined with the high New Zealand dollar and low import price inflation, this will result in real household spending growth of around 3 percent per annum over the coming two years (figure 5.9). Household spending growth does moderate over the latter part of the projection as income growth eases and interest rates rise to contain inflationary pressures.

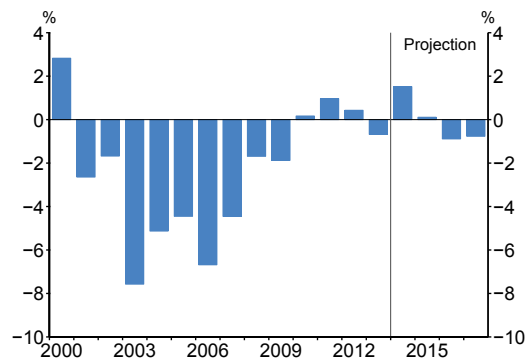
After being boosted in the March 2014 year by exceptionally-high export incomes, the household saving rate is expected to decline slightly over the coming year as GDP and income growth slow. However, the improvement in the household savings rate in recent years is expected to be maintained (figure 5.10)

Figure 5.9  
Private consumption and income growth  
(annual)



Source: Statistics New Zealand, RBNZ estimates.

Figure 5.10  
Household saving rate  
(March years, share of disposable income)



Source: Statistics New Zealand, RBNZ estimates.

## Capacity pressures and inflation

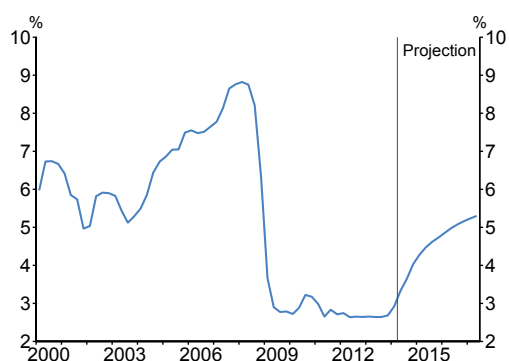
Consumer price inflation is projected to remain in the lower part of the target band over the remainder of 2014, largely because of the high New Zealand dollar and soft import price inflation.

Further ahead, demand growth is expected to result in continued inflationary pressures. Pressures are expected to be centred on the non-tradables sector, and are expected to be particularly acute in the construction sector.

To ensure that inflation settles around 2 percent over the medium term, the 90-day interest rate is projected to increase over the coming years (figure 5.11, overleaf). This results in a moderation in capacity pressures over

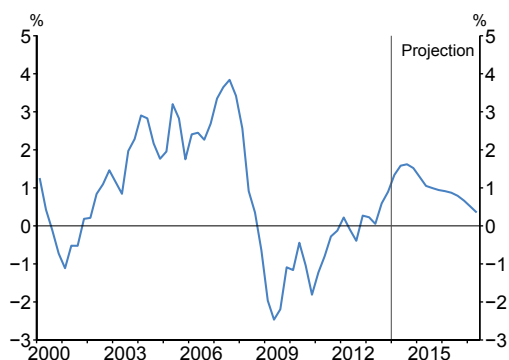
the latter part of the projection (figure 5.12). Underlying the increase in headline inflation, annual non-tradables inflation is expected to peak at 3.8 percent. Annual tradables inflation remains negative for much of the projection, due to the high New Zealand dollar and low imported inflation (figure 5.13).

Figure 5.11  
90-day interest rate



Source: RBNZ estimates.

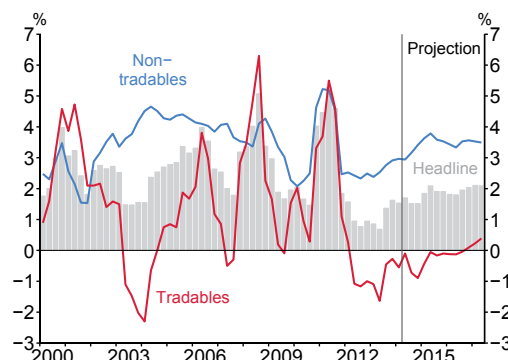
Figure 5.12  
Output gap  
(percent of potential GDP)



Source: RBNZ estimates.

As in the past, inflation is expected to be influenced over the projection by changes in some specific administered prices, indirect taxes and levies. Consistent with the Policy Targets Agreement, the projection anticipates that monetary policy does not try to offset the direct effect on headline inflation, but focuses on any implications for inflation expectations and medium-term inflation. This was the approach taken to recent changes to tobacco excise taxes and road user charges that temporarily added to headline inflation. More recently, *Budget Economic and Fiscal Update 2014* announced an expected reduction in ACC levies for motor vehicles that in the projection is assumed to reduce annual headline inflation by around 0.25 percentage points in the September 2015 quarter.

Figure 5.13  
CPI inflation and components  
(annual)



Source: Statistics New Zealand, RBNZ estimates.

# Appendix A<sup>1</sup>

## 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
2006	Mar	1.3	0.6	3.3	68.2	7.5
	Jun	0.7	1.5	4.0	62.8	7.5
	Sep	0.4	0.7	3.5	63.6	7.5
	Dec	1.0	-0.2	2.6	67.0	7.6
2007	Mar	1.2	0.5	2.5	68.8	7.8
	Jun	0.8	1.0	2.0	72.0	8.1
	Sep	0.7	0.5	1.8	71.4	8.7
	Dec	0.1	1.2	3.2	71.0	8.8
2008	Mar	-0.4	0.7	3.4	71.9	8.8
	Jun	-1.2	1.6	4.0	69.3	8.8
	Sep	-0.2	1.5	5.1	65.5	8.2
	Dec	-0.7	-0.5	3.4	57.8	6.3
2009	Mar	-1.0	0.3	3.0	53.7	3.7
	Jun	-0.2	0.6	1.9	58.4	2.9
	Sep	0.6	1.3	1.7	62.6	2.8
	Dec	1.4	-0.2	2.0	65.5	2.8
2010	Mar	0.2	0.4	2.0	65.3	2.7
	Jun	1.0	0.2	1.7	66.8	2.9
	Sep	-0.3	1.1	1.5	66.9	3.2
	Dec	-0.5	2.3	4.0	67.8	3.2
2011	Mar	0.9	0.8	4.5	67.1	3.0
	Jun	0.8	1.0	5.3	69.1	2.7
	Sep	0.9	0.4	4.6	72.0	2.8
	Dec	0.6	-0.3	1.8	68.7	2.7
2012	Mar	0.9	0.5	1.6	72.5	2.7
	Jun	0.2	0.3	1.0	71.2	2.6
	Sep	0.2	0.3	0.8	72.6	2.7
	Dec	1.2	-0.2	0.9	73.6	2.6
2013	Mar	0.5	0.4	0.9	75.9	2.7
	Jun	0.4	0.2	0.7	76.5	2.6
	Sep	1.2	0.9	1.4	75.2	2.6
	Dec	0.9	0.1	1.6	77.3	2.7
2014	Mar	1.1	0.3	1.5	78.4	2.9
	Jun	0.9	0.3	1.7	80.0	3.3
	Sep	0.7	0.8	1.5	79.7	3.6
	Dec	0.6	0.1	1.5	79.0	4.0
2015	Mar	0.5	0.7	1.8	78.4	4.3
	Jun	0.5	0.6	2.1	77.7	4.5
	Sep	0.6	0.6	1.9	77.3	4.6
	Dec	0.6	0.1	1.9	76.9	4.7
2016	Mar	0.7	0.6	1.8	76.4	4.9
	Jun	0.6	0.6	1.8	75.9	5.0
	Sep	0.6	0.7	2.0	75.5	5.1
	Dec	0.5	0.2	2.0	75.1	5.2
2017	Mar	0.5	0.6	2.1	74.8	5.2
	Jun	0.5	0.6	2.1	74.6	5.3

<sup>1</sup> Notes for these tables follow on pages 35 and 36.

Table B

## Measures of inflation, inflationary pressures and asset prices

	2012		2013		2014	
	Sep	Dec	Mar	Jun	Sep	Dec
<b>Inflation (annual rates)</b>						
CPI	0.8	0.9	0.9	0.7	1.4	1.6
CPI non-tradables	2.3	2.5	2.4	2.5	2.8	2.9
CPI tradables	-1.2	-1.0	-1.1	-1.6	-0.5	-0.3
Sectoral factor model estimate of core inflation ex-GST	1.5	1.5	1.5	1.5	1.6	1.6
CPI trimmed mean (of annual price change) ex-GST	1.1	1.0	1.0	0.8	1.4	1.6
CPI weighted median (of annual price change) ex-GST	2.0	1.6	1.5	1.3	1.8	2.0
GDP deflator (derivd from expenditure data)	-1.1	-2.2	0.1	0.2	3.2	7.0
PPI - Input prices	0.3	-0.5	0.0	0.0	3.3	2.8
PPI - Output prices	-0.6	-0.8	0.1	0.8	4.1	3.8
<b>Inflation expectations</b>						
RBNZ survey of expectations - inflation one-year-ahead	2.0	1.8	1.7	1.5	1.9	1.9
RBNZ survey of expectations - inflation two-years-ahead	2.3	2.3	2.2	2.1	2.4	2.3
ANZ Bank Business Outlook - inflation one-year-ahead (quarterly average to date)	2.4	2.3	2.3	2.3	2.3	2.4
AON Hewitt Economist Survey - inflation one-year-ahead	2.0	2.0	1.9	1.8	2.0	2.0
AON Hewitt Economist Survey - inflation four-years-ahead	2.5	2.4	2.4	2.3	2.3	2.3
<b>Pricing and costs (net balances)</b>						
ANZ Bank Business Outlook - Pricing intentions, next 3 months (quarterly average to date)	16.9	15.5	20.3	22.2	29.4	26.0
QSBO Average selling prices, next three months (Economy wide)	13.2	8.7	10.7	18.1	24.0	23.3
QSBO Average costs, past three months (Economy wide)	24.1	20.7	16.5	18.5	21.0	22.1
<b>Asset prices (annual percentage changes)</b>						
Quarterly house price index (Property IQ)	4.8	6.8	7.6	9.1	10.2	9.0
REINZ Farm Price Index (quarterly average to date)	-1.6	3.8	-6.5	-1.8	10.8	5.7
NZX50 (quarterly average to date)	8.4	21.0	26.9	28.9	26.7	20.6
						14.7



Table C

## Composition of real GDP growth

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

March year	Actuals									Projections							
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017						
Final consumption expenditure																	
Private	2.3	3.7	-1.6	1.6	2.4	3.1	2.6	3.5	3.4	3.2	2.5						
Public authority	3.6	4.8	4.5	-0.1	2.0	0.2	-0.6	1.5	0.6	1.3	1.8						
Total	2.6	4.0	-0.3	1.2	2.3	2.4	1.9	3.1	2.8	2.8	2.4						
Gross fixed capital formation																	
Residential	-2.1	1.8	-21.3	-8.6	0.3	-0.5	19.4	14.2	16.1	11.1	4.8						
Other	-2.9	8.8	-4.6	-9.7	2.1	5.4	5.1	9.9	9.0	3.5	3.9						
Total	-2.7	7.4	-7.8	-9.5	1.8	4.4	7.3	10.7	10.2	4.9	4.1						
Final domestic expenditure	1.2	4.8	-2.2	-1.3	2.2	2.9	3.1	4.8	4.6	3.4	2.8						
Stockbuilding <sup>1</sup>	-1.1	1.1	-0.5	-1.1	1.1	0.5	-0.4	0.0	0.2	0.1	-0.0						
Gross national expenditure	0.1	6.0	-2.4	-2.3	3.4	3.7	2.1	5.2	4.7	3.4	2.8						
Exports of goods and services	3.8	3.7	-2.7	4.0	2.9	2.7	2.6	0.4	2.4	2.1	3.0						
Imports of goods and services	-1.6	10.8	-4.0	-8.9	11.4	6.6	1.2	7.8	6.0	5.1	3.7						
Expenditure on GDP	1.8	3.5	-1.9	2.2	0.7	2.3	2.6	2.6	3.5	2.3	2.5						
GDP (production)	2.8	2.9	-1.9	-0.1	1.8	2.4	2.3	3.1	3.5	2.3	2.5						
GDP (production, March qtr to March qtr)	3.4	1.3	-3.0	2.1	1.2	3.2	2.1	3.7	2.7	2.4	2.3						

<sup>1</sup> Percentage point contribution to the growth rate of GDP.

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

March year	Actuals							Projections				
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<b>Price measures</b>												
CPI	2.5	3.4	3.0	2.0	4.5	1.6	0.9	1.5	1.8	1.8	2.1	
Labour costs	3.0	3.5	3.1	1.3	2.0	2.1	1.8	1.7	1.7	2.1	2.2	
Export prices (in New Zealand dollars)	2.3	11.5	7.2	-7.6	7.8	-3.2	-5.4	12.2	-10.5	4.1	3.5	
Import prices (in New Zealand dollars)	0.6	0.1	17.6	-11.2	3.4	-1.9	-4.3	-3.3	0.8	3.0	2.9	
<b>Monetary conditions</b>												
90-day rate (year average)	7.6	8.6	6.7	2.8	3.1	2.7	2.6	2.7	3.8	4.7	5.1	
TWI (year average)	65.6	71.6	61.6	62.9	67.1	70.6	73.3	76.9	79.3	77.1	75.3	
<b>Output</b>												
GDP (production, annual average % change)	2.8	2.9	-1.9	-0.1	1.8	2.4	2.3	3.1	3.5	2.3	2.5	
Potential output (annual average % change)	2.6	2.2	1.7	1.3	1.2	1.5	2.0	2.4	2.7	2.8	2.8	
Output gap (% of potential GDP, year average)	2.7	3.4	-0.3	-1.7	-1.1	-0.2	0.0	0.7	1.5	1.0	0.7	
<b>Labour market</b>												
Total employment (seasonally adjusted)	2.0	1.3	-0.9	-0.2	1.8	1.0	0.4	3.7	2.1	1.5	1.2	
Unemployment rate (March qtr, seasonally adjusted)	3.9	3.8	5.2	6.2	6.7	6.8	6.2	6.0	5.3	5.2	5.1	
Trend labour productivity	1.1	1.0	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	
<b>Key balances</b>												
Government operating balance (% of GDP, year to June)	3.4	3.1	-2.1	-3.3	-9.2	-4.5	-2.1	-0.9	-0.1	0.4	1.0	
Current account balance (% of GDP)	-6.9	-6.8	-7.1	-1.5	-2.8	-3.1	-3.9	-2.5	-4.3	-5.9	-6.1	
Terms of trade (SNA measure, annual average % change)	-1.6	8.8	-2.4	-4.1	7.7	1.5	-4.2	11.7	-3.3	-2.0	0.9	
Household saving rate (% of disposable income)	-4.5	-1.7	-1.9	0.2	1.0	0.4	-0.7	1.5	0.1	-0.9	-0.8	
<b>World economy</b>												
Trading partner GDP (annual average % change)	3.8	4.2	0.3	1.1	4.4	3.5	3.2	3.6	3.8	4.2	4.2	
Trading partner CPI (TWI weighted, annual % change)	1.9	3.3	0.9	1.7	2.2	2.2	1.6	1.6	2.0	2.0	1.9	

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## Notes and definitions

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 Australia, Japan, the United States, the United Kingdom, and the euro area.
90-day bank bill rate	The interest yield on 90-day bank bills.
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 - 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.

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Unemployment rate	Household Labour Force Survey.
Household saving rate	Household Income and Outlay Account.
Government operating balance	Operating balance before gains and losses. Source: The Treasury, 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	$(\text{Quarter}/\text{Quarter}_{-1} - 1) * 100$
Annual percent change	$(\text{Quarter}/\text{Quarter}_{-4} - 1) * 100$
Annual average percent change	$(\text{Year}/\text{Year}_{-1} - 1) * 100$

### Fan charts in figure 2.2

The fan charts in Figure 2.2 represents the uncertainty about the outlook for inflation, interest rates and the output gap due to incorrectly assessing the size of the factors that drive the projection. This represents only one of three different types of uncertainty that can cause projection to be incorrect. Forecast errors could be due to: firstly, incorrectly identifying the current drivers of the economy (e.g. failing to forecast the Canterbury earthquake); secondly, incorrectly characterising the impact these drivers will have on the economy (e.g. underestimating the inflationary impact from the Canterbury rebuild); thirdly, failing to anticipate data revisions; and finally, incorrectly assessing the magnitudes of the drivers (e.g. underestimating the amount of rebuild spending to occur). By summarising only the final one of these sources, the fans understate the 'true' uncertainty around the projections.

The procedure used to produce the fans around the central projection involved varying the importance of the drivers of the economic outlook. Of the all drivers that could potentially be used to shape our forecasts, only those we judge to be most relevant at the current time have been used. These drivers are terms of trade, the exchange rate, net immigration, the housing market and construction.

For different assumed outturns of the drivers over the forecast horizon, a different scenario for the New Zealand economy will result. The fans summarise a collection of a 1000 such scenarios. The shocks to each driver in each scenario were randomly selected from a normal distribution based on the standard deviations and correlations of the shocks identified by the forecasting model. These standard deviations and correlations were estimated over the period September quarter of 1992 and the June quarter of 2014. The dark grey fans cover 68% of the possible outcomes for each variable shown and the light grey fans cover 90% of the possible outcomes.

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.

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## Appendix B

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

Arthur Barnett Ltd	Macpac Ltd
ASB Bank Ltd	Macrennie Commercial Construction Ltd
Auckland Chamber of Commerce	Motor Trade Finances Ltd
Auckland City Council	NALCO Ltd
Augusta Capital Ltd	Naylor Love Construction Ltd
Barfoot and Thompson Ltd	The Neil Group Ltd
Bellingham Wallace Ltd	New Zealand Council of Trade Unions
Canterbury Development Corporation	The Otago Chamber of Commerce Inc.
CBRE New Zealand	Polson Higgs Ltd
CERA	Port Otago Ltd
Christchurch International Airport Ltd	PricewaterhouseCoopers Ltd
Colliers International New Zealand Ltd	Progressive Enterprises Ltd
Colliers International New Zealand Ltd - Christchurch Real Estate Management Office	Rabobank Ltd
Contact Energy Ltd	Ray White (Real Estate) Ltd
Countrywide Property Trust Ltd	Recruitment & Consulting Services Association
Delta Ltd	Remax Ltd
Downer Ltd	RR Fisher & Co Ltd
Dunedin City Holdings Ltd	Scott Technology Ltd
Fisher & Paykel Appliances Ltd	Silver Fern Farms Ltd
Freshmax New Zealand Ltd	SKYCITY Entertainment Group Ltd
Ganellen Ltd	Southern Response Earthquake Services Ltd
Hancocks Ltd	Stonewood Homes Ltd
Harris Home Fires Ltd	Synlait Milk Ltd
Heartland Bank Ltd	Tecpak Industries Ltd
Juken New Zealand Ltd	Tonkin & Taylor Ltd
Kirkcaldie & Stains Ltd	Villa Maria Estate Ltd
Mace Group Head Office Ltd	Warren and Mahoney Ltd
	Wellington Employers' Chamber of Commerce
	Windsor Engineering Group Ltd

## Appendix C

### The Official Cash Rate chronology

Date	Percentage	Date	Percentage
17 March 1999	4.50	29 January 2004	5.25
21 April 1999	4.50	11 March 2004	5.25
19 May 1999	4.50	29 April 2004	5.50
30 June 1999	4.50	10 June 2004	5.75
18 August 1999	4.50	29 July 2004	6.00
29 September 1999	4.50	9 September 2004	6.25
17 November 1999	5.00	28 October 2004	6.50
19 January 2000	5.25	9 December 2004	6.50
15 March 2000	5.75	27 January 2005	6.50
19 April 2000	6.00	10 March 2005	6.75
17 May 2000	6.50	28 April 2005	6.75
5 July 2000	6.50	9 June 2005	6.75
16 August 2000	6.50	28 July 2005	6.75
4 October 2000	6.50	15 September 2005	6.75
6 December 2000	6.50	27 October 2005	7.00
24 January 2001	6.50	8 December 2005	7.25
14 March 2001	6.25	26 January 2006	7.25
19 April 2001	6.00	9 March 2006	7.25
16 May 2001	5.75	27 April 2006	7.25
4 July 2001	5.75	8 June 2006	7.25
15 August 2001	5.75	27 July 2006	7.25
19 September 2001	5.25	14 September 2006	7.25
3 October 2001	5.25	26 October 2006	7.25
14 November 2001	4.75	7 December 2006	7.25
23 January 2002	4.75	25 January 2007	7.25
20 March 2002	5.00	8 March 2007	7.50
17 April 2002	5.25	26 April 2007	7.75
15 May 2002	5.50	7 June 2007	8.00
3 July 2002	5.75	26 July 2007	8.25
14 August 2002	5.75	13 September 2007	8.25
2 October 2002	5.75	25 October 2007	8.25
20 November 2002	5.75	6 December 2007	8.25
23 January 2003	5.75	24 January 2008	8.25
6 March 2003	5.75	6 March 2008	8.25
24 April 2003	5.50	24 April 2008	8.25
5 June 2003	5.25	5 June 2008	8.25
24 July 2003	5.00	24 July 2008	8.00
4 September 2003	5.00	11 September 2008	7.50
23 October 2003	5.00	23 October 2008	6.50
4 December 2003	5.00	4 December 2008	5.00

Date	Percentage	Date	Percentage
29 January 2009	3.50	27 October 2011	2.50
12 March 2009	3.00	8 December 2011	2.50
30 April 2009	2.50	26 January 2012	2.50
11 June 2009	2.50	8 March 2012	2.50
30 July 2009	2.50	26 April 2012	2.50
10 September 2009	2.50	14 June 2012	2.50
29 October 2009	2.50	26 July 2012	2.50
10 December 2009	2.50	13 September 2012	2.50
28 January 2010	2.50	25 October 2012	2.50
11 March 2010	2.50	6 December 2012	2.50
29 April 2010	2.50	31 January 2013	2.50
10 June 2010	2.75	14 March 2013	2.50
29 July 2010	3.00	24 April 2013	2.50
16 September 2010	3.00	13 June 2013	2.50
28 October 2010	3.00	25 July 2013	2.50
9 December 2010	3.00	12 September 2013	2.50
27 January 2011	3.00	31 October 2013	2.50
10 March 2011	2.50	12 December 2013	2.50
28 April 2011	2.50	30 January 2014	2.50
9 June 2011	2.50	13 March 2014	2.75
28 July 2011	2.50	24 April 2014	3.00
15 September 2011	2.50		

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## Appendix D

# 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* 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.

### 2014

24 July 2014	OCR announcement
11 September 2014	<i>Monetary Policy Statement</i> and OCR announcement (media conference and webcast)
30 October 2014	OCR announcement
11 December 2014	<i>Monetary Policy Statement</i> and OCR announcement (media conference and webcast)

### 2015

29 January 2015	OCR announcement
12 March 2015	<i>Monetary Policy Statement</i> and OCR announcement (media conference and webcast)
30 April 2015	OCR announcement
11 June 2015	<i>Monetary Policy Statement</i> and OCR announcement (media conference and webcast)



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# Appendix E

## 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.

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#### 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