

---

# Monetary Policy Statement<sup>1</sup>

May 2002

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

## Contents

1.	Policy assessment	2
2.	Overview and key policy judgements	3
3.	The current economic situation	9
4.	The macro-economic outlook	20

## Appendices

1.	Summary tables	27
2.	Chronology	32
3.	Companies and organisations contacted by RBNZ during the projection round	33
4.	Reserve Bank statements on monetary policy	34
5.	The Official Cash Rate chronology	36
6.	Policy Targets Agreement	37

This document is available on the Reserve Bank's website (<http://www.rbnz.govt.nz>).

ISSN 1170-4829

<sup>1</sup> Projections finalised on 26 April 2002. Policy assessment finalised on 14 May 2002.

---

# 1 Policy assessment

The Reserve Bank has decided to increase the Official Cash Rate from 5.25 per cent to 5.5 per cent.

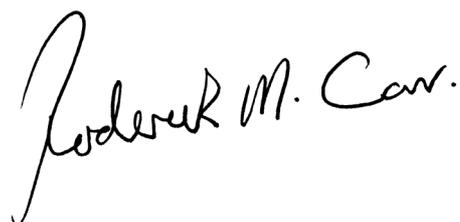
Demand conditions no longer warrant the degree of interest rate stimulus that seemed necessary late last year. The economy's ability to meet increasing demand without pressure on costs, margins and therefore prices appears limited. Core inflation is still at the upper end of the 0 to 3 per cent target band, leaving little headroom for price pressures to accelerate from here on.

Pressures on resources look likely to be maintained in the foreseeable future. New Zealand's population is expanding rapidly with the sharp turnaround in net migration. Migration is contributing more to strong household spending, residential construction and housing market activity than it is to the availability of labour. And a recovery in global demand – although fragile in some respects – is now underway with *Consensus Forecasts* rather more optimistic than earlier in the year.

The influences on inflation are not all operating in the same direction. The exchange rate has been rising and international prices for some key exports, such as dairy products, have fallen sharply. These factors, if sustained, will reduce domestic activity to some degree and help to dampen inflation pressures in due course.

On-balance, in the absence of some further withdrawal of monetary stimulus, these factors together would place additional pressure on the economy's already-stretched resources, producing a rise in inflation pressures. Accordingly, today's decision is a further step in the process of reducing the interest rate stimulus that we put in place last year, when the outlook for the economy looked decidedly weaker.

At this point, it appears likely that further increases in interest rates will be required over the year ahead, possibly to a greater extent than we projected in March. However, as discussed further in this *Statement*, the outlook is always subject to uncertainty. We will continue to monitor the range of influences on the inflation outlook and make the necessary policy adjustments.



Rod Carr  
Acting Governor

## 2 Overview and key policy judgements

In March we began to edge interest rates upwards, as it became increasingly apparent that the economy would come through the global downturn relatively unscathed. Over the previous year interest rates were adjusted down on the expectation that New Zealand would probably be affected by global weakness, even if not to the historically-normal extent because of a supportive exchange rate. With growing evidence of average to above-average use of the nation's resources over the tail end of 2001 and into 2002, the grounds for positioning interest rates to stimulate the economy became less obvious.

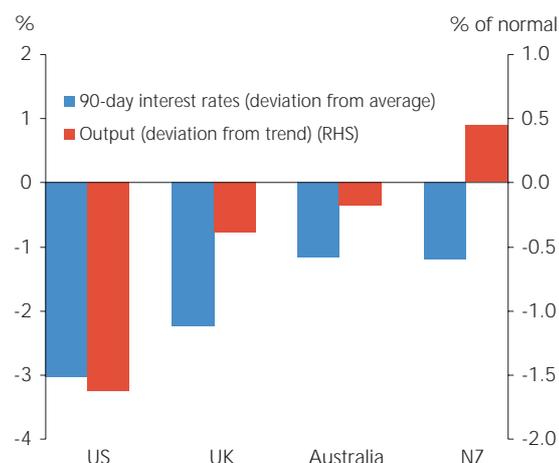
Over recent months there has clearly been a rebound in business and consumer confidence and domestic spending has gathered momentum. The economy has been able to "cruise through the global turbulence reasonably smoothly" as the OECD has put it in their latest survey.<sup>2</sup> Relevant factors in addition to a strongly supportive exchange rate include the fact that one of our key trading partners – Australia – has also performed robustly (also helped by a supportive exchange rate). Neither New Zealand nor Australia are large-scale suppliers to the world's technology sector, and so they were less affected by the technology-related slowdown than were other economies such as Taiwan and Singapore. Additionally, possibly partly as a consequence of unsettling events in the northern hemisphere, more people than usual have recently decided that New Zealand is a good place to work and study. The associated large upswing in net migration has significantly boosted activity here.

As a consequence of being relatively unaffected to date by the global malaise, our interest rate settings have needed to be less stimulatory than elsewhere. They have also meant that we now have fewer under-utilised resources available to accommodate an acceleration of growth without inflationary pressure than do other economies (see Figure 1). Accordingly, as signs have emerged that the global economy has turned the corner towards faster rather than slower growth, we have increased interest rates earlier than have many other central banks.

That is the big-picture backdrop to the current situation. What of the current situation? For the most part it is not very different from that which motivated the cautious withdrawal

<sup>2</sup> OECD Economic Survey of New Zealand, May 2002, p27. The Survey is available on [www.oecd.org](http://www.oecd.org).

**Figure 1**  
**Comparative cyclical positions<sup>3</sup>**



of interest rate stimulus in March and again at the April review. With recent data further confirming that the world economy has passed a turning point, and that the income gains enjoyed by our pastoral and tourism export sectors over the last two years are increasingly feeding activity in the major cities, monetary stimulus seems even less needed.

Today's increase in the Official Cash Rate is designed to take interest rates to a point that is less obviously stimulatory, though interest rates are not yet contractionary. But as depicted in the projection presented in Chapter 4 of this *Statement*, there are elements of the current outlook that suggest that monetary policy settings will at some point need to start slowing the rate of growth in demand. Monetary policy only needs to apply modest restraint in the current projection, as we assume that inflation pressures will partly be offset by a drawn out after-effect from recent global weakness, coupled with recent and prospective exchange rate appreciation.

Whether that scenario plays out, and the resulting interest rate track eventuates, depends on a range of factors. This chapter provides an overview of these factors and the inevitable uncertainties that surround them, and discusses how they have influenced today's policy decision. Later chapters go into more detail on the current economic situation and provide a baseline projection that might best be described as one of the more plausible among a set of plausible contenders.

<sup>3</sup> Source: Reuters, RBNZ calculations. Interest rates expressed relative to 10-year averages. Output deviation from trend made comparing total output as at 2001Q4 with estimates of trend output using an HP filter.

---

## The current economic situation

Indications from a wide range of data suggest that the economy continued to perform robustly through the first and into the second quarters of 2002. We expect GDP to be recorded as being around 3½ per cent higher in the March quarter than it was a year previously. As it happens, 3½ per cent would also be the average growth rate of the New Zealand economy over the three years to March 2002, albeit with the composition of growth changing through the period.

In trend terms, it appears that the New Zealand economy can sustain a growth rate of between 2½ and 3 per cent per annum without producing especially low or especially high degrees of pressure on resources. (Box 3 in Chapter 4 explains this point more fully.) Over the period since the Asian crisis, the pace of expansion of the economy's capacity has generally been at the lower end of this range, primarily attributable to relatively slow growth of the labour force because of net outward migration (until the middle of 2001).

The net result of three years of output growth faster than capacity growth is the reversal of the under-utilisation of resources (capital and labour) that resulted from the Asian crisis. A number of indicators from business surveys and statistical estimates of the economy's output gap<sup>4</sup> all suggest that the economy now has average to above-average pressure on resources, in marked contrast to some of our trading partners.

The existence of a moderate amount of stress on the economy's resource base has implications for inflation going forward. If monetary conditions remain stimulatory, unless pressure on resources is relieved by some other factor, after a time the degree of stress will increase and inflation will start to accelerate. In view of the fact that inflation has been running close to the top end of our target range, upward pressure on the inflation rate at this point would be a source of concern. Although recent inflation outcomes have partly been a consequence of special factors — see Chapter 3 — in the past twelve quarters there are only three in which the

annualised rate of change in the CPI has been below 2 per cent (and only one below 1½ per cent). Signs of upward movement in pricing intentions and slowness of surveyed inflation expectations to fall back reinforce a case for concern.

## The outlook

The outlook for the economy, and for the degree of inflationary pressure, needs to be assessed against this background. Chapter 4 of this *Statement* describes an outlook that rests on assumptions about several important factors:

- Net migration, which has turned around very sharply over the last 18 months (to a monthly net inflow of around 3,500 people from a net outflow of around 300 previously) is assumed to slow noticeably by the end of 2002. Nonetheless, there is a substantial economic boost to net aggregate demand in the pipeline.
- Trading partner growth has re-accelerated. But because it is early days in the recovery, and because of lags, we will still feel the effects of the previous slowdown for some time.
- The exchange rate has recently appreciated sharply, and shows signs of continuing on an upward path. This appreciation will take much of the domestic gloss off the coming upswing in global demand, just as earlier exchange rate depreciation took much of the sting out of the recent downswing.
- Because future momentum of the global economy is no longer contractionary but modestly upwards, prices for key New Zealand exports (such as dairy products) will probably not continue to fall for as long or by as much as we had previously allowed.
- Drawing the last three points together, export incomes will be lower in the period ahead. Reduced incomes, even if still high by historical standards, will reverse the momentum of consumption expenditure, offsetting the boost to spending that comes from net immigration.
- The momentum of consumption expenditure will also be modestly affected by large-scale debt accumulation experienced by households in recent years.

Overall, moderating consumption growth, which is a feature of our projection, would probably be insufficient by itself to

---

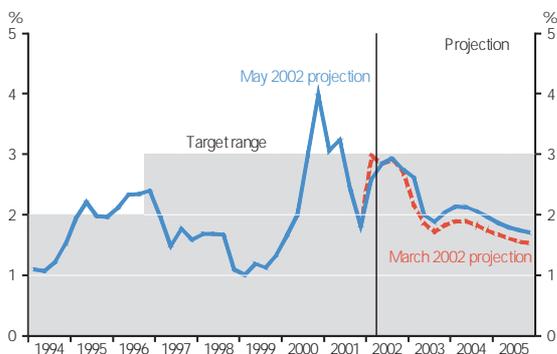
<sup>4</sup> The difference between actual GDP and potential or trend GDP. The output gap captures the degree of intensity with which the economy is using its resources (with a positive output gap suggesting above-average utilisation of resources).

ease pressure on the economy's productive capacity. Hence, without further withdrawal of monetary policy stimulus, inflationary pressures would remain. The scenario depicted in Chapter 4 therefore allows for further interest rate increases, sufficient to keep inflation under control and indeed to reduce it below 2 per cent by 2004. (Figure 2 shows the interest rate track resulting from the projection contained in this *Statement*, compared with the track presented in the *March Statement*. Figure 3 shows the corresponding inflation tracks). As usual, there are many unknowns in this picture, and judgements have to be made in relation to a number of issues. A selection of the more important issues that we considered in reaching the policy decision is discussed next.

**Figure 2**  
**90-day interest rates<sup>5</sup>**



**Figure 3**  
**Consumer price inflation<sup>6</sup>**  
*(annual percentage change)*



<sup>5</sup> Source: RBNZ

<sup>6</sup> The measure shown is annual underlying inflation until the September quarter 1997, annual CPIX inflation from the December 1997 quarter until the June 1999 quarter, and annual CPI inflation thereafter (adjusted to exclude interest and section prices from the September 1999 quarter to the June 2000 quarter).

## Key issues

### The effect of migration on the outlook

New Zealand's population is heading rapidly towards 4 million, having risen nearly 1½ per cent in the year to March 2002 alone. Net migration accounted for almost half of this increase. Net migration looks likely to provide an even greater contribution to population growth over the March 2003 year.

Factoring this development into the outlook is not straightforward. Our baseline view is that this round of migration will add more to demand than to the economy's capacity to produce, given the significant proportion who are school and university age students coming to New Zealand to study. These students may engage in some part time work, but for the greater part, they spend money here that has been earned offshore.

However, international migration patterns often follow the relative economic cycles of New Zealand and competitor labour markets. Thus, as the New Zealand labour market has tightened relative to labour markets that compete for New Zealanders' skills, there has been a swing to inflow. As the international recovery gains momentum, the current net inflow of those seeking work may soften or reverse. We allow for some of this, but it is very difficult to know how much one should allow.

Even if the inflow follows the pattern assumed in the projections, it is difficult to judge the scale of the impact. For instance, in relation to residential investment, we have allowed for a lift in housing needs. But, as discussed in Chapter 4, there is a wide range of plausible estimates that might be associated with a given migration inflow. Composition as well as quantity of migration flows may matter a lot.

### The pace of the global recovery

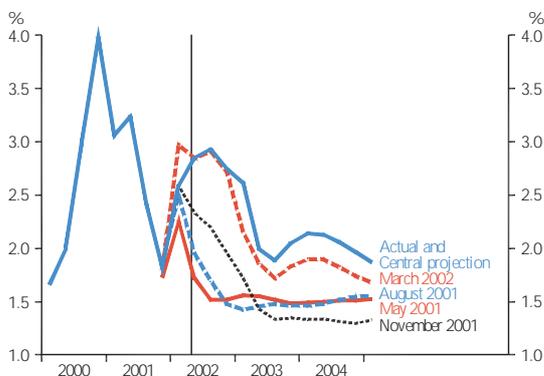
Our normal approach with respect to gauging future foreign demand for New Zealand goods and services is to use *Consensus Forecasts*. Currently, they predict a mild recovery of those parts of the world economy most relevant for us, a recovery sufficient to use up existing slack in trading partner economies but not much more than that.

There are good reasons why the forecasters who contribute to *Consensus Forecasts* are being cautious about the likely pace of recovery, not the least being the continuing sense of

over-valuation of key equity markets, imbalances within several international firms' financial positions, and the scale of debt accumulation by OECD households. Some paths to resolution of these factors could easily stop the emergent recovery in its tracks. But forecasters typically underestimate the pace of recoveries (and underestimate the pace of slowdowns). Does that typical behaviour mean that we should factor in a faster pace of recovery? Not necessarily. This recovery episode does seem to have a degree of fragility about it, as evidenced by the nervous performance of global equity markets in recent weeks.

Accordingly, it seems reasonable to stay with the assumption of modest recovery of world demand for our products and services, but recognise that the situation could readily swing in either direction. The appropriate response to this two-sided uncertainty is, we believe, to stand ready to respond to surprise developments.

**Figure 4**  
CPI inflation projection<sup>7</sup>



**The short term outlook for inflation and petrol prices**

For some time we have been projecting the rate of inflation to drop from the relatively high rates recorded over the last couple of years to something closer to the middle of the inflation target range. That drop, which we originally thought would occur over the course of 2002, now looks likely to be delayed until 2003 (see Figure 4 for details).

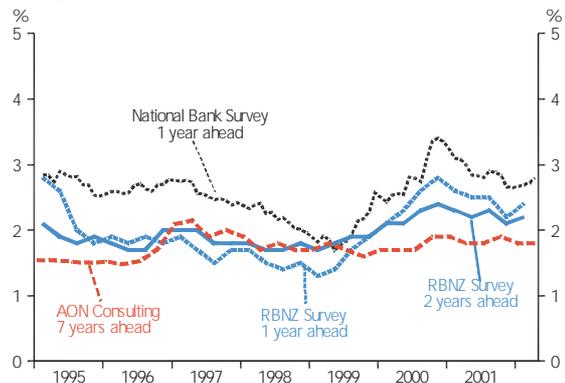
Our projection has inflation running sufficiently close to 3 per cent over the middle part of this year to make a move

outside the 0 to 3 per cent target range a material risk. The implications of this for the proper course of monetary policy are complex. Normally, it would be appropriate largely to ignore or "look through" recent or near-term inflation developments, on the grounds that they mostly reflect past events rather than the future. Policy actions today cannot affect inflation outcomes for months ahead, let alone in the past.

An exception to the normal response is when recent developments have effects that are expected to linger a year or more ahead — effects that monetary policy actions taken today can influence. One route for such lingering effects is through the disturbance of the inflation expectations (or, put more generally, inflation "norms" or "understandings") that influence the actions of price and wage setters, savers and investors. To the extent that price and wage setters look to past experience in order to help develop their expectations or understanding, recent history may matter. In the current context, recording an inflation rate of well above 2 per cent for the year ahead would make for three years in succession of inflation in that territory, which may be sufficiently long to begin to affect people's understanding of the "normal" inflation rate.

In the projection we have allowed for some effect of recent history on expectations and consequently on wage and price setting behaviour. We have also allowed that effect partly to be offset by the idea that people foresee the prospect that inflation will fall back over 2003 and beyond. In other words,

**Figure 5**  
Expectations of inflation<sup>8</sup>



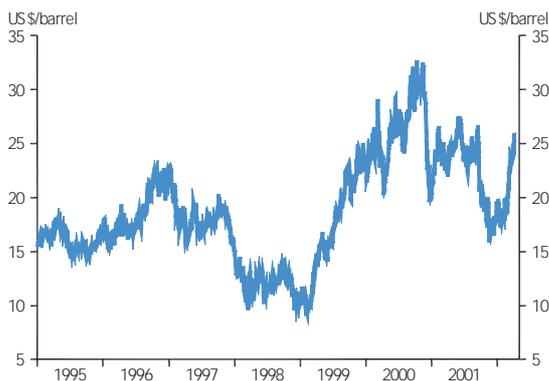
<sup>8</sup> Source: National Bank of New Zealand, RBNZ, AON Consulting New Zealand Ltd.

<sup>7</sup> Source: Statistics New Zealand, RBNZ calculation.

people are assumed to regard the recent elongated lift in inflation as temporary. We continue to believe that inflation expectations are fundamentally anchored (see Figure 5 for some alternative measures), although the anchor chain is in danger of becoming somewhat stretched.

The advent of higher oil prices (Figure 6) — part of the reason for inflation holding up over 2002 — adds an awkward dimension to the question of whether we are right to treat inflation pressures and expectations this way. An oil price shock is the classic “supply shock” that causes prices to move in one direction but economic activity to move in the opposite direction. Seeking to offset the price effect, to keep inflation stable, could unnecessarily exaggerate the effect of the oil price shock on economic activity.

**Figure 6**  
**Oil Prices<sup>9</sup>**



For this reason, the *Policy Targets Agreement* directs us to ignore a jump in inflation caused by events such as higher oil prices, so long as that jump promises to be transitory. The awkwardness is that any event that pushes inflation back over 3 per cent, or keeps inflation close to 3 per cent, is somewhat more likely to affect inflation expectations in the current context, given the recent history of inflation. As a result, we cannot be as sure that an oil-price related jump would have only transitory implications for inflation.

However, to date international oil prices are not dramatically higher, and the effect on New Zealand petrol prices has been moderated by the rise in the exchange rate.

### Allowing for exchange rate developments

One of the reasons why inflation has been high in the inflation target range recently has been the lagged effect of past exchange rate depreciation on consumer prices. That pass-through seems to have taken longer to occur than was the case in earlier episodes, leading us to believe (perhaps erroneously) that inflation is no longer very sensitive to exchange rate developments.

Since early March, the exchange rate has appreciated by nearly 4 per cent (on a trade-weighted basis), faster than assumed in the *March Statement*. On the basis of our (admittedly limited) understanding of the reasons for the recent faster-than-expected appreciation, it seems that the chances of being surprised again by a faster pace of appreciation are greater than the chances of being surprised on the other side. Were this to happen, in principle interest rates would not need to rise as much as depicted in order to have inflation fall back towards the centre of the target range.

Should we allow for this possibility in setting the Official Cash Rate today? Our view is that there is insufficient certainty around the likely path of the exchange rate to warrant taking the potential for faster-than-assumed appreciation into account today. But, as we revisit the appropriate setting of the Official Cash Rate over the next few months, such an outcome for the exchange rate would in all probability affect our assessment of the amount of interest rate adjustment required to keep inflation on target.

### The overall balance of risks

The normal caution of forecasters implies that the projected recovery in world demand and the effect of migration on local demand are both factors that could generate more inflation pressure than we have allowed for. However, in our view these risks are balanced by risks associated with several elements of fragility in the global scene, and the potential for a faster-than-assumed exchange rate appreciation.

As to the implications of the prolonged period of inflation above 2 per cent, we have allowed for inflation expectations to be affected to some extent. Whether too much or too little allowance has been made will only be able to be judged in the future — and imperfectly even then. As the *Policy Targets Agreement* requires, we are focused on preventing transitory

<sup>9</sup> Source: Bloomberg.

---

inflation events from becoming persistent. But in view of the uncertain outlook, we are not approaching this task with undue haste. As the inflation projection indicates, we are taking a calculated risk that a cautious withdrawal of monetary stimulus will be sufficient to keep inflation under control in the medium term.

# 3 The current economic situation

## Introduction

The data since our last *Statement* in March have confirmed strong domestic demand conditions in the last quarter of 2001, with consumer spending, residential construction and business investment activity all showing significant increases over the quarter. Indicators for the March quarter, along with information gleaned from our business contacts, suggest that domestic spending has remained robust. Export volumes in the December quarter proved softer than we had expected, although much of that weakness is expected to have been reversed subsequently. Overall, despite a slightly weaker-than-expected increase in December quarter GDP, it appears that pressure on the economy's productive resources has been maintained over recent months, with capacity utilisation remaining at above-average levels in the March quarter. There have also been indications that labour market conditions are tightening again, although recent wage data have been softer than expected.

Financial market developments have mirrored the interpretation that stronger economic conditions are evident in recent data. Over the past few months, there has been an appreciation of the New Zealand dollar (Figure 7) taking it to its highest levels since mid-2000. The trade-weighted index (TWI) has appreciated by around 2 per cent since March, with gains against all currencies in the TWI basket other than the Australian dollar, which has also strengthened over this period. Both New Zealand and Australia have had relatively strong domestic economies and perceptions of solid growth prospects. Expectations of a tightening in monetary policy in

both countries — to a greater extent over the near-term than in some other countries — seems to be underpinning both the New Zealand and Australian dollars at present.

Indeed, financial markets in New Zealand have revised up expectations of future monetary policy interest rates in light of the recent economic data. In general, markets — and market analysts — now expect an additional 100 basis points of monetary policy tightening this year, over and above the 50 points of tightening undertaken up till April.

## Domestic demand

December quarter GDP, released in late March, confirmed that domestic demand has experienced little setback from the negative confidence effects of 11 September. On the contrary, there was a sharp increase in household consumption — especially of durable goods such as motor vehicles and household appliances — and residential construction activity surged. Business investment spending also increased sharply, consistent with a prior build-up in inventories of imported capital goods.

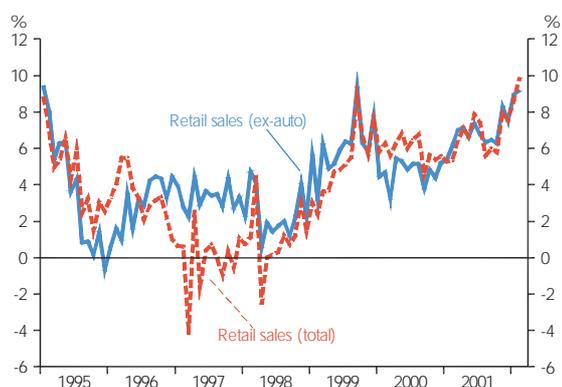
The strength in household sector demand continued in the March quarter. Retail sales (Figure 8) recorded further, substantial increases in both January and February, running more than 9 per cent ahead of the same time last year. Although automotive sales were strong, ahead of new safety regulations on used imports taking effect on 1 April, the growth in sales was evident over a range of store-types and

**Figure 7**  
TWI<sup>10</sup>



<sup>10</sup> Source: RBNZ.

**Figure 8**  
Retail sales<sup>11</sup>  
(annual percentage change)



<sup>11</sup> Source: Statistics New Zealand.

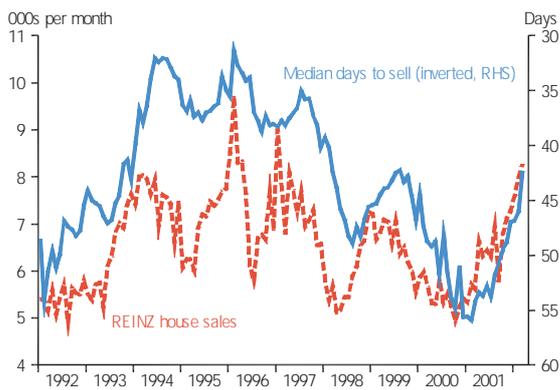
regions. In general, our business contacts corroborate the picture of more buoyant domestic demand and many have noted ongoing strength in their domestic markets.

The momentum in household spending coincides with a further sharp lift in house sales and residential construction (Figures 9 and 10), especially in the Auckland region. The number of house sales has continued to increase over 2002, indicating a substantial increase in demand. A recent fall in the median number of days to sell suggests that the excess supply of dwellings evident over the past two years is being depleted and that the market is now tightening. This is despite a sharp lift in residential building activity in late 2001, which building consent data suggest is being sustained. So far, house prices appear to have risen only modestly, but current market

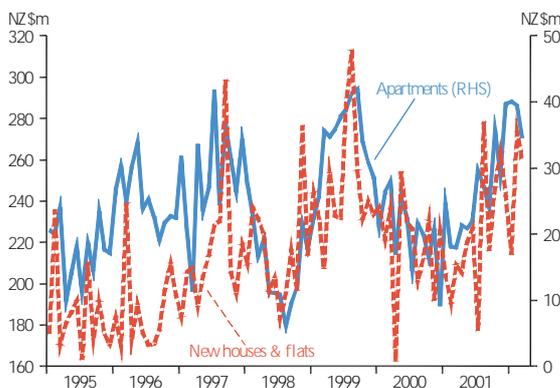
conditions are consistent with further increases over the months ahead. The stronger market conditions have not been limited to home ownership: the demand for rental accommodation is also purported to have increased sharply over the past few months. This appears to be the case in Auckland, where some market participants note little surplus stock is available.

Several factors help explain the overall strength in household sector demand. Survey measures of consumer confidence recorded a further increase over the March quarter and are now back to the levels that prevailed prior to 11 September. The good fortune enjoyed by the agricultural sector over the past couple of seasons, which has seen a sharp lift in incomes, is continuing to feed demand in many rural areas, despite some uncertainty about the outlook for the sector over the coming season. That in turn has helped to support activity in the wider economy, providing a further positive spin-off for demand. And the sharp rise in population brought about by the turnaround in net migration (Figure 11) over the past six months is also acting to boost consumption spending and housing demand.

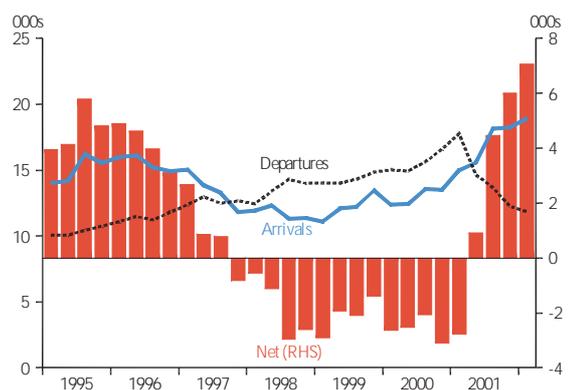
**Figure 9**  
**House sales<sup>12</sup>**  
*(seasonally adjusted)*



**Figure 10**  
**Residential building consents-values<sup>13</sup>**



**Figure 11**  
**Net migration - working age<sup>14</sup>**  
*(seasonally adjusted)*



Household demand for credit, at least for housing purposes, has recently shown a mild acceleration, but growth rates remain rather lower than over most of the past decade. To date, the acceleration in credit has proven considerably more modest than has typically been the case during previous upturns in housing market activity. This may be due to higher

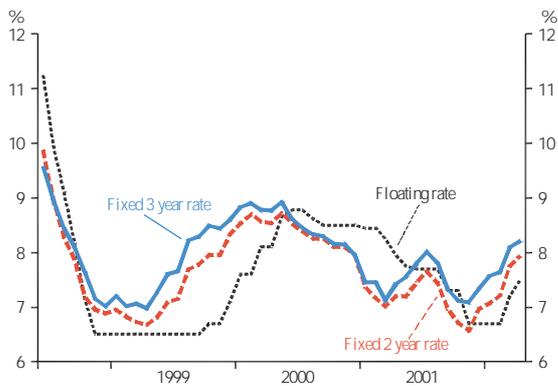
<sup>12</sup> Source: Real Estate Institute of New Zealand.

<sup>13</sup> Source: Statistics New Zealand.

<sup>14</sup> Source: Statistics New Zealand.

average debt levels (relative to incomes) in the household sector following strong growth in borrowing during the 1990s. It is possible that a greater than normal proportion of recent housing market activity has been funded through transfers of migrant wealth, including from New Zealanders returning from overseas. A lift in interest rates over recent months could also be exerting some restraint on credit demand. Both floating and fixed term interest rates have risen in 2002 (Figure 12), with the higher fixed term interest rates reflecting steeper yield curves in international markets and expectations of further tightening in domestic monetary policy.

**Figure 12**  
Mortgage lending rates<sup>15</sup>

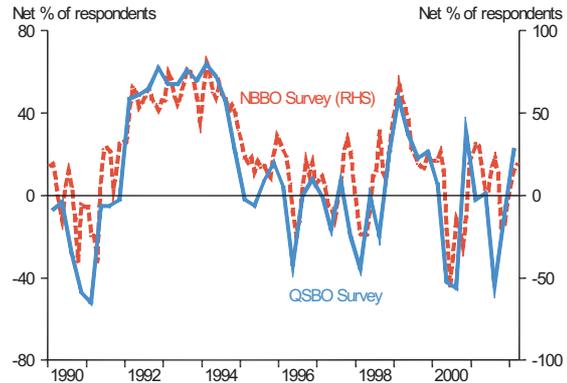


The latest developments in business investment are not easy to interpret, partly due to the volatility in recent statistics. Growth in some components of business investment — such as plant and machinery — has been modest over the past year. Following 11 September, our projections allowed for a sharp fall in investment activity brought about by the shock to business confidence that followed the events of that day. However, imports of capital goods showed strength late in 2001, suggesting that investment activity was proving more robust than our projections allowed for. Subsequently, the December quarter GDP statistics confirmed a sharp rise in investment activity over the quarter (although growth in total business investment for the year as a whole was modest).

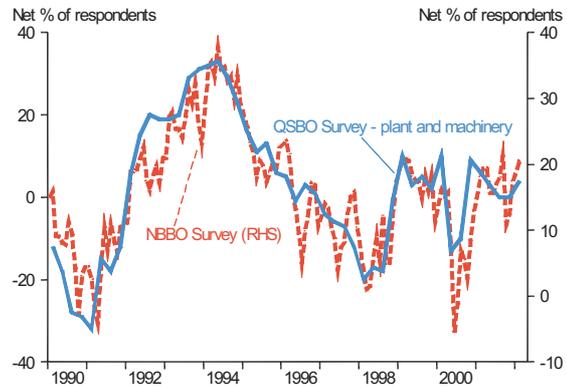
More recently, although the March quarter New Zealand Institute of Economic Research *Quarterly Survey of Business Opinion (QSBO)* revealed a sharp lift in business confidence (Figure 13), higher capacity utilisation and generally positive

<sup>15</sup> Source: RBNZ.

**Figure 13**  
Business confidence<sup>16</sup>



**Figure 14**  
Investment intentions<sup>17</sup>



expectations of future demand, year-ahead investment intentions showed only a modest rise across most sectors (Figure 14). In addition, the latest import data show that imports of capital goods have fallen back somewhat after their recent strength.

Feedback from our business contacts continues to highlight a relatively cautious attitude toward commitment to future investment. Meanwhile, while our latest discussions with most businesses suggest that few are planning to scale back their investment spending over the year ahead, most were not looking to increase spending substantially. Few businesses we talked to believed interest rates at current or expected levels were a major constraint on investment. However, some firms cited uncertainty about the outlook for the New Zealand dollar (given its recent rise) and prospects for the global

<sup>16</sup> Source: New Zealand Institute of Economic Research, National Bank of New Zealand.

<sup>17</sup> Source: New Zealand Institute of Economic Research, National Bank of New Zealand.

## Box 1: The Housing market and monetary policy

Recent evidence confirming a sharp pick-up in activity in the housing market re-raises questions about the significance of the housing market for monetary policy.

Changes in the cost of housing do have a significant direct bearing on measured CPI inflation, with housing items comprising around 23 per cent of the total CPI regimen. Faster rates of increase in housing costs, which may follow stronger activity in the housing and construction markets, will therefore inevitably have an influence on the Bank's view of inflation pressures.

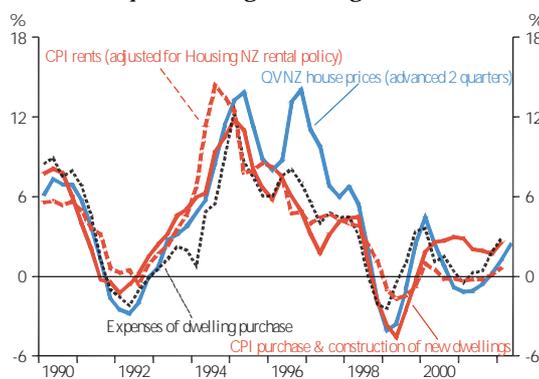
Contrary to popular understanding, neither existing house nor section prices are included in the CPI in New Zealand.<sup>18</sup> A rise in house prices *per se* does not directly add to the CPI in the same way as it did during the 1970s and 1980s, when existing house prices were included as a component within the broader index.

However, the prices of housing-related items that are included in the CPI tend to move with house prices over time. Such items include the "expenses of dwelling purchase" (which includes professional and real estate services), the "purchase and construction of new dwellings," and "dwelling rentals" items (Figure 15).<sup>19</sup> The first of these items is closely related to the price of housing, partly because real estate agents' fees are often proportional to the sale price of houses. There is also a relationship between the purchase and construction cost of new dwellings and existing house prices. If existing house prices rise sharply, then relatively more people will tend to build or renovate houses than purchase existing houses. This is likely to place increased pressure on resources, and thus on prices, in the construction sector. At the same time, a rise in house prices or in the general demand for housing would likely be accompanied by a rise in the demand for rental

<sup>18</sup> Existing house prices were dropped from the CPI regimen in 1993. Section prices were dropped from the regimen in 1999.

<sup>19</sup> Rented dwellings, purchase and construction of new dwellings, and expenses of dwelling purchase account for 17.8 per cent (by expenditure weight).

Figure 15  
House price inflation<sup>20</sup>  
(annual percentage change)



housing. This, too, would add to the rate of increase in the CPI.

In principle, movements in any of these items have no more relevance to monetary policy than, say, a sharp rise in car or food prices. Each will add something to measured inflation, but they do not of themselves require specific monetary policy action: they are one part of a wider inflation picture. However, trends in the housing market and in house prices may have special relevance to monetary policy to the extent that they may be especially symptomatic of — or connected with — more generalised inflation pressures in the economy.

A strong housing market and rapid consumption and residential investment growth often go hand in hand. Increases in wealth, income, confidence, access to credit or the sharp growth in the population that can typically drive housing sector upturns, may result in stronger demand throughout the economy as a whole as well as the residential construction sector. The momentum in housing demand tends to drive a rise in demand for "durable" items in the CPI, such as appliances and furniture, as people furnish and equip their new houses. These pressures can be mutually reinforcing: a rise in house prices may lead to perceptions of an increase in wealth and in turn further raise the general level of demand for goods and services. Partly for these reasons, some international economists have suggested that policymakers should give greater prominence to house price developments when setting

<sup>20</sup> Source: Statistics New Zealand, Quotable Value New Zealand, RBNZ calculations.

monetary policy, given their potential implications for inflation more generally. However, there is ongoing debate on this issue.

Monetary policy judgements ultimately hinge on the outlook for persistent inflation pressures, as determined by the balance of pressure on the economy's resources and inflation expectations. Although house prices have picked up recently

in New Zealand, the increases to date have been fairly modest — more modest in fact than in many other countries, including the US, Australia and the United Kingdom. Interest rates have increased earlier than in these countries, reflecting judgements around the degree of pressure on productive resources, rather than particular concerns about the housing market as such.

economy, as well as uncertainty about the sustainability of the rebound in domestic demand, as factors causing them to hold off committing to new investment at this stage.

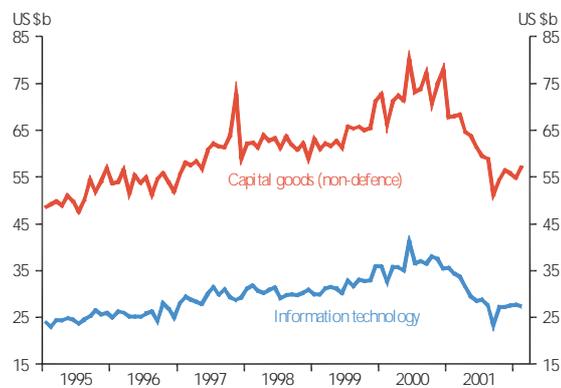
## External developments

The global economy slowed markedly during 2001, resulting in weaker external demand conditions for many New Zealand exporters. Growth in exports, especially of some manufactured goods, was correspondingly slower and there was downward pressure on the prices received for some primary products. In general, the economic data relating to the international economy over recent months have been positive and continue to suggest a moderate acceleration in global growth over the coming year. However, questions continue to surround the recovery's pace and durability, and a new risk coming from the recent unrest in the Middle East could pose a possible setback to growth via its impact on oil prices and business confidence.

In the US, GDP for the final quarter of 2001 proved stronger than expected, suggesting that the downturn has been less pronounced than had originally been feared. First quarter GDP for 2002 was in line with expectations, with a large increase in activity brought about by inventory re-building. Although unemployment has just reached an 8 year high, leading indications of activity in the manufacturing sector are consistent with a manufacturing sector recovery in the near future (yet to fully materialise in higher sales and orders). New orders of capital goods have increased and orders of technology products have started to turn the corner after last year's sharp fall (Figure 16).

Economic conditions remain subdued in the Eurozone, where a recovery appears to be lagging that of the United States. However, forward indicators are also suggestive of a recovery.

**Figure 16**  
**A turn-around in United States capital expenditure? New orders (manufacturing) data.<sup>21</sup>**  
*(seasonally adjusted)*



In particular, business and consumer confidence have improved — albeit from a low level — especially in France and Germany.

The outlook for Japan remains fragile, with ongoing structural problems, and most economic data remain weak. There have been some promising signs — the decline in industrial production has slowed, exports appear to be improving and some manufacturing indicators have strengthened — but there are few grounds for expecting a marked improvement in activity over the year ahead.

Elsewhere in Asia, signs of economic recovery have been more convincing. Export growth has strengthened in a number of countries, including Hong Kong, Malaysia, Korea and Singapore with new orders for technology products having turned the corner. Exports are, however, yet to return to year-ago levels in several countries, highlighting the early nature of the recovery so far.

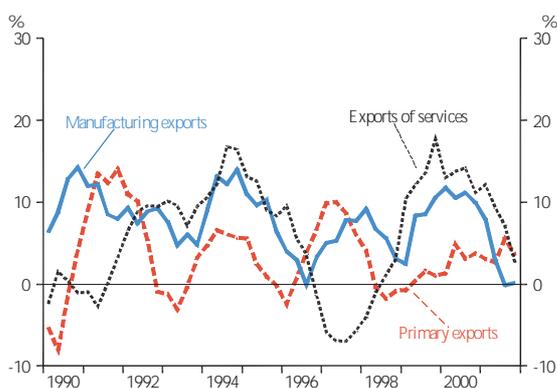
<sup>21</sup> Source: Datastream.

Of considerable relevance to us, Australia's economy also continues to show encouraging data. Retail sales have also been relatively buoyant and the unemployment rate has fallen. The housing market has remained remarkably strong — partly due to the extension of the government subsidies to first home buyers. Over the past year, there has been significant house price inflation in Sydney and Melbourne. Although housing construction is likely to fall away in due course, other capital expenditure looks likely to accelerate, with some large-scale non-residential investment projects in the pipeline and some relatively encouraging indicators for business investment.

## Tradables sector activity

Against this international background, export volumes in the December quarter were weaker than we thought when preparing our March projections (Figure 17). The exports of services produced by the tourism sector underwent a larger fall than we had estimated based on the sharp dip in visitor arrivals following 11 September. In addition, primary sector exports were lower than we had expected, with stocks being accumulated in the face of weaker international prices and with lower export production in the meat sector as farmers sought to hold stock on farm for pasture management reasons and/or because climatic conditions have increased the time taken to finish stock. Encouragingly, there was some renewed growth in exports of manufactured goods, which had been under pressure over much of 2001 (notwithstanding the favourable exchange rate).

**Figure 17**  
Export volume growth by sector<sup>22</sup>  
(annual average percentage change)



<sup>22</sup> Source: Statistics New Zealand.

Data on export volumes for the March and June quarters are expected to show a reversal of much of this weakness in aggregate export volumes. As noted in the last *Statement*, visitor arrivals have posted a sharp rebound after dipping in October and November, pointing to an offsetting rise in the exports of services in the March quarter. Primary exports are also likely to increase over the coming months as accumulated stocks are exported. Meanwhile, merchandise trade data suggest that exports of non-commodity manufactured goods are continuing to show growth after increasing in the December quarter. Indeed, manufacturers' expectations for future export sales increased sharply in the *QSO*, suggesting a lift in manufactured exports in the June quarter.

World prices for our commodity exports fell sharply in the December quarter (Figure 18), as dairy prices plummeted following the increase in dairy industry subsidies in both Europe and the United States. However, aggregate world commodity prices may have stabilised in the March quarter. Although there was a further fall in dairy prices, prices for most other commodities remained resilient with increases occurring for beef and lamb.

**Figure 18**  
Prices of New Zealand commodity exports<sup>23</sup>



However, while world prices are showing signs of resilience, the impact on export earnings may be adversely impacted by the rise in the New Zealand dollar that has been occurring in recent months. Although there was little net movement in the ANZ World Commodity Price Index between December and March (with the fall in dairy prices offset by strength in

<sup>23</sup> Source: ANZ Banking Group Ltd.

other commodities), the New Zealand dollar index fell by nearly 4 per cent, reflecting the stronger exchange rate.

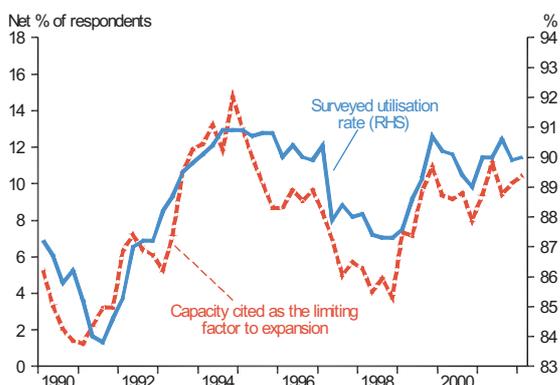
Our March *Statement* noted a fall in import penetration over the past three years, suggesting a larger proportion of demand was being met through domestic production. That trend appeared likely to be connected with the large depreciation of the real exchange rate over the period. Import demand has picked up recently — consistent with strong domestic demand, but also with some reversal of the drop in penetration noted in the previous *Statement*. While data on March quarter import volumes are not yet available, it appears that imports of consumption goods and motor vehicles have been particularly strong — the latter occurring ahead of new safety regulations that took effect in April.

## The balance of pressure on resources

In determining the impact of economic developments on the inflation outlook, we attempt to gauge the degree of pressure on the economy's productive resources. Several indicators of the degree of pressure are available, such as direct indicators of capacity utilisation (Figure 19) and the labour market (Figure 20). We also employ a variety of methodologies including 'output gap' estimates, which are attained by comparing actual output with its trend or estimated 'potential' level.

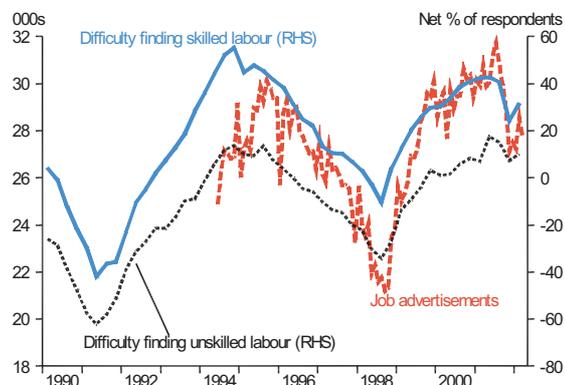
Recent *Statements* have concluded that the economy's productive resources have, if anything, been a little stretched

**Figure 19**  
Indicators of capacity utilisation<sup>24</sup>



<sup>24</sup> Source: New Zealand Institute of Economic Research.

**Figure 20**  
Indicators of labour market tightness<sup>25</sup>  
(seasonally adjusted)



over recent times. That assessment follows strong growth in activity over much of 2001, indications that capacity utilisation has been at relatively high levels, and a range of indicators pointing to a tight labour market. The latest indicators suggest that this pressure on productive resources has been maintained.

On balance, our current output gap estimates are little changed since the March *Statement* and remain in positive territory. Although December quarter GDP was weaker than anticipated in the March projections, for reasons already explained we are likely to see a higher GDP outcome for the March quarter than we thought in March.

The direct indicators of resource usage tend to confirm the picture of a similar intensity of resource usage over recent months. Several indicators from the *QSBO* and the National Bank's *Business Outlook* suggest, if anything, a renewed tightening in both capacity utilisation and the labour market since late last year. The percentage of firms in the *QSBO* reporting that capacity was the main factor limiting an expansion in output also increased in the March quarter as did the proportion citing labour as the main constraint on expansion. An increased proportion of firms also noted increased difficulty in finding both skilled and unskilled labour. However, some of our business contacts in the main urban areas have noted that recent higher net inflows of professionals from overseas (including returning New

<sup>25</sup> Source: ANZ Banking Group Ltd., New Zealand Institute of Economic Research.

**Table 1**  
**CPI, CPI derivative series and other price measures**  
**Annual percentage changes**

	2000			2001			2002	
	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Mar
CPI	3.0	4.0	3.1	3.2	2.4	1.8	2.6	2.6
Food	1.8	3.6	4.8	6.0	6.6	6.7	5.3	5.3
Housing	2.0	2.3	-0.5	-0.6	-0.6	-0.7	2.3	2.3
Household operations	-0.4	1.4	2.0	2.2	2.5	1.4	1.5	1.5
Apparel	-0.2	0.7	1.4	1.5	2.1	2.0	1.2	1.2
Transportation	7.2	7.0	4.1	5.5	1.0	-1.4	0.6	0.6
Tobacco and alcohol	8.7	9.2	9.6	6.8	3.7	3.5	3.3	3.3
Personal and health care	3.1	4.3	5.6	4.4	4.5	4.3	3.7	3.7
Recreation and education	2.5	3.6	1.9	2.0	2.2	1.5	2.1	2.1
Credit services	-1.1	2.2	-0.4	-6.9	-7.7	-8.5	-5.9	-5.9
<b>Derivatives and analytical series</b>								
CPI ex food, petrol and government charges	2.3	3.2	3.7	3.5	3.0	2.7	2.4	2.4
CPI non-tradables	2.0	2.4	1.2	1.0	0.9	0.9	2.6	2.6
CPI tradables	4.1	5.4	4.9	5.2	3.8	2.5	2.5	2.5
CPI weighted median (of annual price change)	1.7	2.6	2.8	2.4	3.0	2.7	2.6	2.6
CPI trimmed mean (of annual price change)	2.3	3.4	2.8	3.1	2.4	1.9	2.5	2.5
Merchandise import prices (excluding petrol)	13.2	16.7	5.6	5.5	1.2	-4.5	n/a	n/a
Private consumption deflator	2.7	3.6	2.5	2.9	1.7	0.7	n/a	n/a
GDP deflator (derived from expenditure data)	2.7	4.7	5.6	6.1	4.3	3.6	n/a	n/a

Zealanders and those deciding to stay rather than travel abroad) have increased the pool of suitable candidates for some jobs.

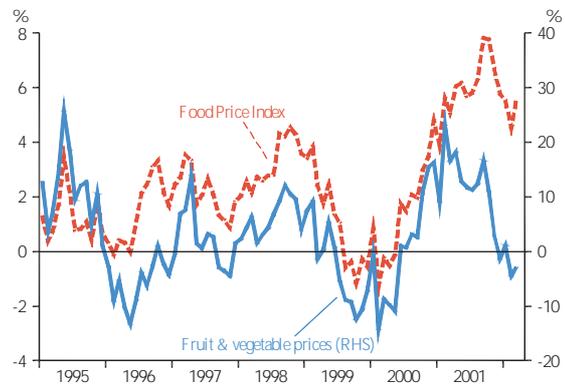
## Inflation developments

When setting monetary policy, we are primarily concerned about *core* or *persistent* inflation pressures — that part of inflation that is within the influence of monetary policy and worth policy responding to because the disturbances won't go away by themselves. Developments in persistent inflation largely reflect the balance of pressures on resources in the economy as well as inflation expectations. Forming a view on persistent inflation and disentangling the more temporary influences is therefore an important task. Precise estimates are not possible, but we currently believe core inflation to be running somewhere around 2½ per cent. If this assessment is correct, then there is limited 'headroom' for an acceleration in core inflation pressures — this would risk actual CPI inflation outcomes moving above the 0 to 3 per cent target band for a sustained period. The risks of actual inflation moving outside the target band due to transitory influences are rather greater than would be the case if core inflation was running between 1 and 2 per cent.

The usual transitory influences on inflation have been no less prominent over recent times. Annual headline CPI inflation was 2.6 per cent in the year to March 2002 (see Table 1), down from 3.1 per cent in the previous March year, with the 0.6 per cent increase in the CPI during the March quarter being a little less than we had projected in our March *Statement*. This lower increase was due primarily to a more rapid reversal of January's climate-related spike in fruit and vegetable prices than we had envisaged (Figure 21). However, other components of food prices continued to add to inflation over the quarter.

In addition, the construction cost of new dwellings increased sharply in the March quarter and private rentals also picked up, consistent with the increased activity in the housing sector noted earlier in this Chapter. Other significant upward contributions to inflation over the quarter came from increases in excise taxes on tobacco, increases in petrol prices and higher health insurance premiums. The main downward influences

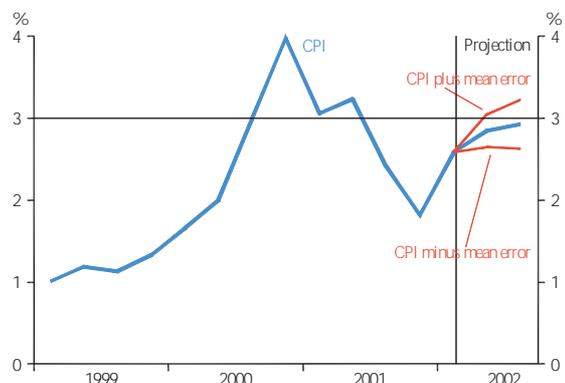
**Figure 21**  
Food price inflation<sup>26</sup>  
(annual percentage change)



on prices during the quarter came from lower apparel, and appliances and furnishings prices.

At this stage, we forecast CPI inflation in the June quarter to be around 1.1 per cent, resulting in an annual inflation rate of 2.9 per cent — marginally higher than our March projection. The higher quarterly projection reflects further contributions from petrol price rises, electricity and insurance costs, with less of a negative impact from falls in fresh fruit and vegetable prices (which have already largely occurred). Based on our analysis of standard errors around our one and two quarter ahead CPI inflation forecasts, there is a material risk that annual CPI inflation could move above 3 per cent in either of these quarters (Figure 22).

**Figure 22**  
Near-term CPI inflation  
forecast<sup>27</sup>  
(annual percentage change)



<sup>26</sup> Source: Statistics New Zealand.

<sup>27</sup> Source: Statistics New Zealand, RBNZ calculations.

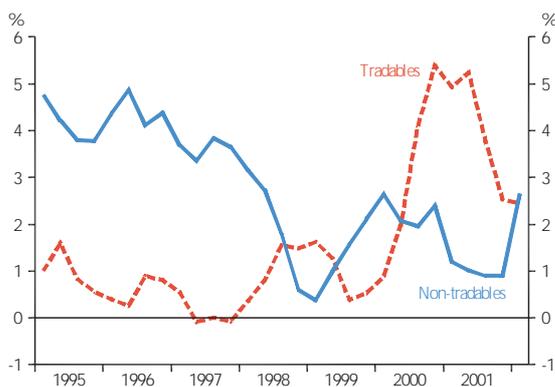
How do these 'headline' CPI inflation developments relate to the more important persistent inflation developments? While no single indicator adequately summarises shifts in core inflation pressures, looking at several indicators can offer some insights. Possibilities include the non-tradables inflation rate (Figure 23) and the weighted median and trimmed mean of annual price changes (Figure 24). The non-tradables inflation rate excludes most imported goods and services prices and prices of other products directly influenced by international trading conditions, and can help to provide a read on 'domestically-generated' inflation pressures. The weighted

median and trimmed mean represent alternative means of filtering transitory items from the CPI inflation measure and give an idea of the underlying trend in inflation (although they will still reflect movements in the prices of tradable goods to some degree).

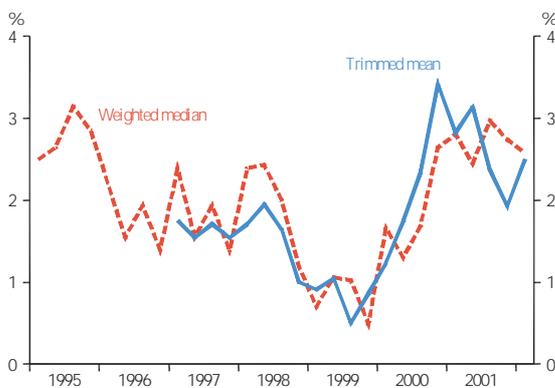
Each of these indicators is currently running at an annual rate of — or slightly above — 2.5 per cent. Moreover, quarterly movements in the non-tradables series have generally accelerated over the past few quarters, mainly reflecting increases in the construction costs of new dwellings, as well as higher energy (electricity and gas) prices, but also consistent with above-average pressure on resources. The trimmed mean and weighted median of annual changes in the CPI have each eased a little over the past year. However, the decline in each of these series is likely to reflect the passing through of most of the exchange rate driven price increases caused by the depreciation of the exchange rate over 1999.

An alternative perspective of the underlying trend in inflation may also be gleaned from a measure of CPI inflation that directly excludes known volatile items and administered charges, which are not directly amenable to monetary policy. One such measure — the CPI adjusted to exclude food, petrol and administered charges (Figure 25) — rose by 2.5 per cent in the year to March (similar to the movement displayed by the other three measures discussed above), down from a peak of around 3.6 per cent a year earlier. The decline in the annual rate of increase in this measure is again likely to reflect the dissipation of exchange rate related pressures on prices.

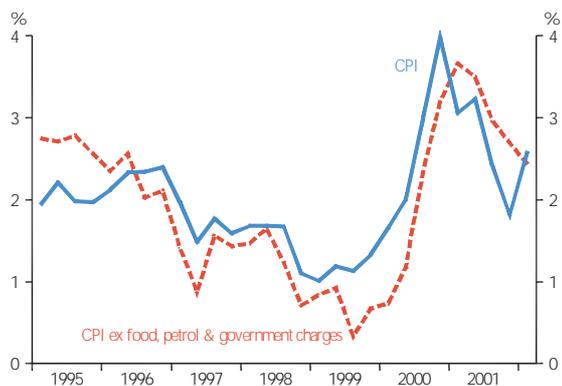
**Figure 23**  
CPI inflation — tradables and non-tradables<sup>28</sup>  
(annual percentage change)



**Figure 24**  
CPI inflation — statistical measures<sup>29</sup>  
(annual percentage change)



**Figure 25**  
'CPI-ex' inflation<sup>30</sup>  
(annual percentage change)



<sup>28</sup> Source: Statistics New Zealand, RBNZ calculations.

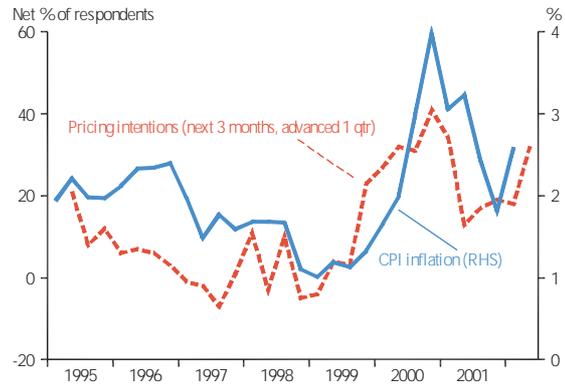
<sup>29</sup> Source: Statistics New Zealand, RBNZ calculations.

<sup>30</sup> Source: Statistics New Zealand, RBNZ calculations.

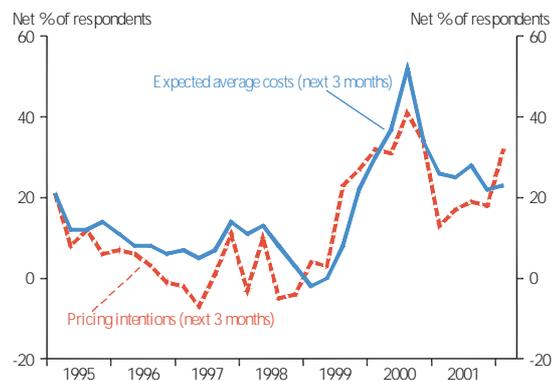
Some wage data for the March quarter (received after our projections were finalised) were softer than we expected, with private sector average hourly earnings rising 0.6 per cent for the quarter and by 2.4 per cent for the year to March. This series is volatile, although movements over the previous two quarters were also modest. The softening in labour market conditions that occurred late last year (which has since begun to reverse) may have been a factor behind the result, although this would imply a relatively short lag by historical standards. However, the alternative Labour Cost measure of private sector wages — which measures a fixed quantity of job-types — increased by 0.5 per cent for the quarter and by 2 per cent for the year, in line with expectations. This latter measure of wages has edged up over the past 12 months. At this stage, given these differences, it appears too early to conclude that wage movements are trending higher or lower.

The main development in forward indicators of inflation received since our last *Statement* has been a sharp increase in pricing intentions recorded in the March *QSBO*, an imperfect predictor of CPI inflation (Figure 26). Although cost expectations were unchanged (Figure 27), there was a sharp lift in the net proportion of respondents expecting to raise prices over the next three months. A fall in pricing intentions among manufacturers was more than offset by a large rise in the Services and Financial Services groups. Part of that increase may reflect expectations of higher interest rates over the next 12 months — which would represent a boost to the prices of this latter group. However, pricing intentions in the Building and Merchants sectors also rose slightly and are at historically high levels. This may indicate an intention to try to rebuild margins or pass on recent cost increases to consumers given current stronger demand conditions.

**Figure 26**  
**Pricing intentions<sup>31</sup>**



**Figure 27**  
**Pricing intentions and cost expectations<sup>32</sup>**



<sup>31</sup> Source: New Zealand Institute of Economic Research, Statistics New Zealand.

<sup>32</sup> Source: New Zealand Institute of Economic Research.

## 4 The macro-economic outlook

The preceding chapter described an economy that has experienced very solid growth in domestic demand over the past six months, reflecting, among other things, strong population growth, the accumulated effects of several years of solid income gains and interest rates that remain low by historical standards. Exports have recently been subdued — with volumes held back by difficult international trading conditions and climatic influences — but the *production* of exports has been stronger than might first appear, and a lift in export volumes seems likely in the near-term. Domestic demand is proving much stronger than we thought in March and the economy continues to face pressure on its productive resources at a time when core inflation remains at a level consistent with inflation outcomes toward the higher end of the 0 to 3 per cent target band.

Looking forward, our updated projections reflect an assessment that the current fast growth in population is contributing more to demand than it is to the economy's capacity to meet that demand (via its effects on the labour supply). In these projections, a weaker external sector provides a counter to the strong domestic demand conditions. For the moment, growth in export volumes is comparatively subdued, reflecting the current state of the global cycle. Although world activity is projected to pick up, the recent fall in export commodity prices and the assumption of further appreciation in the New Zealand dollar each exert some negative influence on export sector activity over the projection period.

These dampening influences look likely to be insufficient to prevent a rise in inflation pressures in the absence of a further

monetary policy response. Accordingly, our projections show a track for interest rates over the next 18 months that is higher than in our March *Statement* (Figure 2). Box 2 explains the use of a projections methodology that allows for monetary policy adjustments. Monetary policy settings, which at present are probably on the 'stimulatory' side of neutral, gradually move to a position where they begin exerting some restraint on aggregate demand. That withdrawal of stimulus, in turn, prevents a rise in persistent inflation pressures and returns inflation gradually toward the midpoint of the 0 to 3 per cent target band by the end of the forecast horizon.

While this chapter describes an outlook for the economy and monetary policy in relatively definitive terms, Chapter 2 illustrated the conditionality of policy projections on a range of issues and uncertainties about which judgements are made. The prospect of stronger or weaker outcomes than that presented must be borne in mind. While these projections are in many ways a steady progression from the outlook presented in March, the revisions to the policy outlook even over this short period serve as a reminder of the extent to which the economic outlook is subject to change.

### The world economy

*Consensus* forecasts for growth in New Zealand's main trading partners, on which we base the outlook for global activity in our projections, have been revised up quite substantially since we prepared our March projections (Table 2). Growth forecasts for our 14 main export partners over calendar 2002 have been revised up for most countries, with the most substantial increases being for Australia, the United States

**Table 2**  
**Forecasts of export partner growth\***  
*(calendar year, annual average percentage change)*

Country	1999	2000	2001e	2002f	2003f
Australia	4.8	3.1	2.4	3.9	3.9
United States	4.1	4.1	1.2	2.6	3.5
Japan	0.7	2.2	-0.4	-1.1	1.1
Canada	5.1	4.4	1.5	2.7	3.6
Europe-4**	2.0	3.1	1.9	1.6	2.7
Asia ex-Japan***	6.7	8.6	1.8	4.5	5.7
14 country index	3.8	4.2	1.4	2.6	3.6

\* Source: Consensus Economics Inc.

\*\* Includes Germany, France, Italy, and the United Kingdom

\*\*\* Includes China, Hong Kong, Malaysia, Singapore, South Korea, and Taiwan

## Box 2 Forecasting methodology

In contrast to the approach often taken by other official forecasters, our projections are not based on a 'constant' monetary policy setting (i.e. a given level of short-term interest rates). Instead, we make projections for monetary conditions that are consistent with annual CPI inflation outcomes reverting close to 1½ per cent over the next two years or so, given our view of the other various influences on activity, and resource utilisation.

In essence, we are asking the question: how much might monetary policy need to change — and in what direction — in order to keep inflation well anchored within the target band?

This approach can sometimes lead to confusion — readers occasionally remark that monetary policy actions seem unnecessary since the Bank's own projections show inflation remaining comfortably within the target band, whereas it

is precisely because of the assumed monetary policy actions that inflation remains within the target band. Thus, although our assessment of underlying demand pressures may alter through time, much of the variation tends to show up in the projected interest rate profile rather than in the interest-rate sensitive components of demand (such as consumer spending). We may take the view, for example, that the drivers of consumption spending are stronger than previously thought, but to the extent that the higher demand pressures are reflected in a higher forward interest rate track, the projected consumption growth path may only increase modestly.

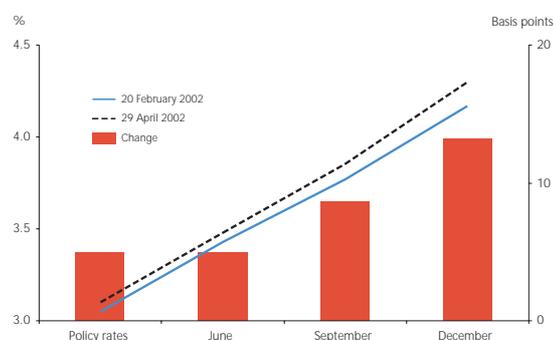
Readers therefore need to bear in mind that our projections for economic activity and inflation are essentially how we project the economy to evolve *incorporating* the effects of monetary policy adjustments along the way, rather than allowing monetary policy to 'stand back'.

and some non-Japan Asian economies such as Malaysia, Singapore and Taiwan. Forecasts have also lifted slightly for growth during 2003. These forecasts suggest that levels of spare capacity currently evident in these countries after last year's sharp slowdown in activity will gradually be depleted over the next two years.

While the continuing uncertainties around the global economic cycle were noted in Chapter 2, world financial markets have also become increasingly confident that some form of global economic recovery is underway. The generally positive flow of economic data over the past couple of months has led to a further steepening in yield curves (Figure 28) as markets have anticipated an earlier and more aggressive tightening in monetary policy in most countries than was the case several months ago, although there is significant variation in the expected course of monetary policy across countries.

Not all financial market indicators reflect the optimism shown by *Consensus* forecasts, however. While equity markets have recovered from the lows seen earlier in February following the collapse of Enron, and resulting concerns over US corporate balance sheets, equity prices are not accelerating.

Figure 28  
Future interest rates<sup>33</sup>



Most major equity indices remain materially lower than a year ago; past cyclical upturns in the global economy would normally have been associated with a recovery in equity markets at this point. At the same time, it can be argued that equities remain significantly overvalued (on traditional criteria) across many of the major markets.

Moreover, the risk premium on corporate bonds in the United States — which has been very high over the past couple of

<sup>33</sup> Source: Bloomberg. Calculated as the average of future rates for the US, UK, Canada, Australia and the Euro area.

years — remains consistent with high default rates in the corporate sector. These risk premiums would normally be expected to fall alongside a recovery in general economic activity.

## Tradables sector activity

As in March, we expect that developments in the external sector will provide a mild braking effect on the wider economy over the next twelve months. Aggregate export earnings are expected to fall slightly over the coming year, reflecting recent (and further) falls in export prices that have occurred for some categories of primary exports (mainly dairy products). This fall in earnings occurs despite ongoing growth in export volumes.

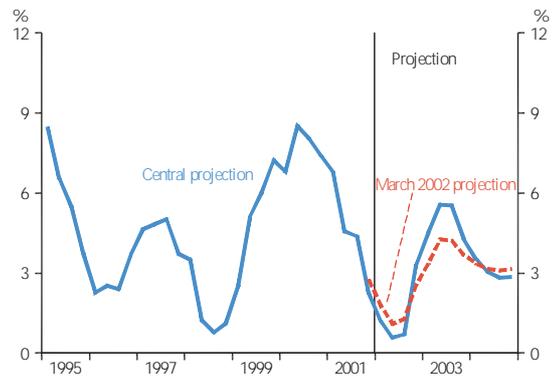
However, the extent to which export earnings fall in these projections is a little less than in the March *Statement*, despite the higher exchange rate factored into these projections. Although commodity export prices fell sharply late last year — spearheaded by the sharp fall in international dairy prices — market prices for many products have been relatively stable in recent months, with prices for some products starting to lift. A more robust international demand environment should in general work to the advantage of export commodity prices as the traditional relationship between global industrial production and commodity prices asserts itself. While our projections allow for some further fall in average commodity prices over the months ahead, the sharp dip in prices that we allowed for in our November projections (and which we retained in March) has therefore been moderated. We have not, however, allowed for any effects arising from the just-announced intention to expand subsidies for US farmers. This anti-free trade measure could hurt New Zealand commodity exporters even though the subsidies are focussed on grain and cotton producers.

Our projections continue to employ, as a technical assumption, a gradual appreciation of the New Zealand dollar. This time around, the exchange rate reaches a slightly higher level than in the March *Statement* (reflecting the rise in the exchange rate that has occurred over the past few months). Although world export prices are a bit higher than in the March projections, the stronger exchange rate largely offsets that. On average, we forecast New Zealand dollar export prices

will register a decline during 2003 and a gradual recovery in the outer years given stronger prices in international markets.

Despite weak export volumes recorded in the December quarter of 2001, we believe the immediate outlook for export activity is a little stronger than we previously thought (Figure 29). Growth in export volumes is expected to recover during 2002 as recently-accumulated agricultural stocks are sold and the resulting downstream processing adds to activity. Further out, the outlook for primary export activity remains reasonably robust, given the assumption of no major climate-related disruptions to production.

**Figure 29**  
Export volume growth<sup>34</sup>  
(annual average percentage change)



Our projections for primary exports are based on discussions and information supplied by the major export agencies and companies. Over the next three years, higher dairy, meat, forestry and horticultural production are expected to make a solid contribution to export volumes. Production of these products and the corresponding export volumes are, of course, heavily climate dependent, but demand conditions in individual markets also play a role, as does the pattern of recent investment activity within particular industries. In this regard, a more optimistic outlook for key export partner activity has seen upward revisions to forestry exports relative to our previous projections, while dairy production is expected to be stronger, reflecting the latest estimates of herd expansion and ongoing dairy conversions.

The stronger outlook for global demand, as implied by *Consensus* forecasts, is expected to help underpin growth in

<sup>34</sup> Source: Statistics New Zealand, RBNZ calculations.

non-agricultural export volumes going forward. The exchange rate is still at levels that appear likely to be providing some degree of stimulus to export activity. However, throughout the forecast horizon, the stimulus to exports is expected to reduce as the exchange rate moves higher.

On the import side, we allow for import prices to be boosted in the very near-term by the recent spike in world oil prices. However, we have based our outlook on *Consensus Forecasts*, which have oil prices falling back relatively sharply over the remainder of this year. Allowing for this, together with a stronger track for the New Zealand dollar, produces an outlook for New Zealand dollar import prices over the projection period that is a little lower than in March. Indeed, import price inflation is projected to be rather lower than 'domestic' inflation throughout the forecast period.

In these projections, imports as a share of expenditures are a little higher than in the March *Statement*. The stronger near-term outlook for domestic spending initially underpins import demand. Although growth in domestic spending slows (as monetary policy and other influences take effect), the assumption of a stronger exchange rate means a slightly larger proportion of spending is met through foreign production relative to the outlook presented in March.

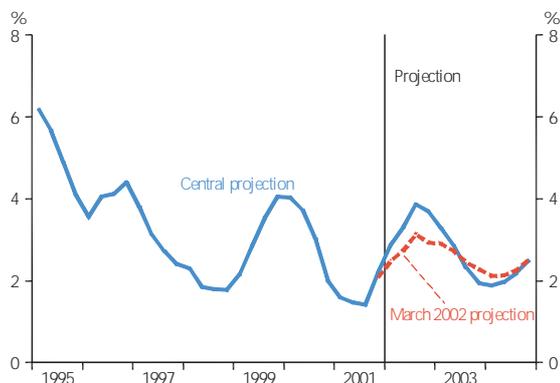
## Domestic spending

Although the outlook for the external sector activity is a little stronger than in our March projections, the projected fall in aggregate export earnings over the year ahead is likely to impart some moderating influence on domestic activity.

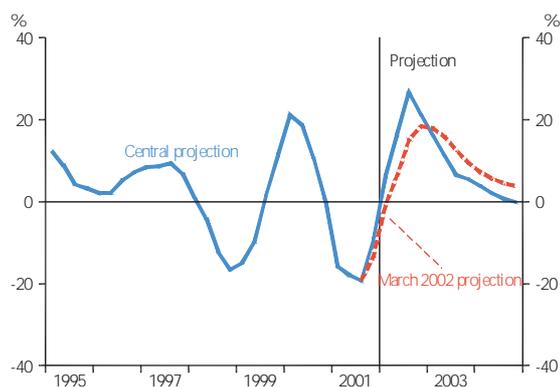
Offsetting this in part, a number of other key drivers of domestic demand are proving stronger than we thought. The rapid growth in population brought about by the turnaround in net migration is fuelling consumption demand (Figure 30) and residential investment (Figure 31), both of which are expected to be stronger over the next two years than we projected in March.

In view of recent outcomes, we have incorporated a stronger outlook for net migration during 2002 than in March. We have continued to assume that these inflows contribute more to aggregate demand than they do to supply (via a boost to the labour force). On plausible assumptions, a boost in

**Figure 30**  
**Consumption growth<sup>35</sup>**  
*(annual average percentage change)*



**Figure 31**  
**Residential investment growth<sup>36</sup>**  
*(annual average percentage change)*



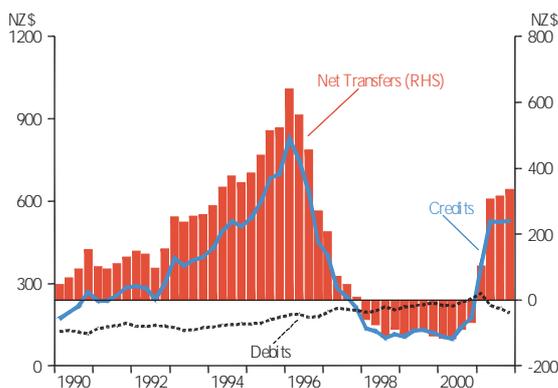
population of the magnitude currently being seen in New Zealand could boost demand for dwellings by an amount equivalent to 1 to 2 per cent of GDP (in terms of the investment involved), although our projections do not assume an impact this large. We have tempered our forecasts of housing demand and consumption in light of the high student component in recent migration flows, although current housing market trends and the strength in recent retail spending suggest that a stronger cycle in aggregate demand cannot be ruled out. The evidence suggests that some incoming migrants, including returning New Zealanders and

<sup>35</sup> Source: Statistics New Zealand, RBNZ calculations.

<sup>36</sup> Source: Statistics New Zealand, RBNZ calculations.

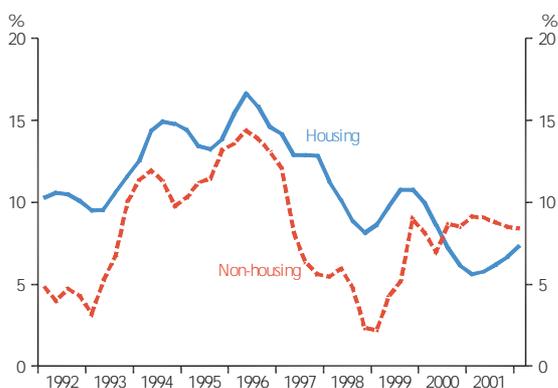
some students, may be bringing substantial wealth to New Zealand, which could act to support stronger demand than we have allowed for (Figure 32).

**Figure 32**  
**Migrants' transfers<sup>37</sup>**  
*(seasonally adjusted)*



A recent acceleration in household credit growth — although mild thus far — points to the possibility that households opt to smooth any slowdown in the rate of income growth over the coming year via greater recourse to credit (Figure 33). Household debt-to-income ratios rose sharply in the 1990s, but have levelled off over the past couple of years with credit demand growing more in line with incomes. Recent projections have assumed that households remain reluctant to accumulate debt more quickly than underlying income growth. In view of the strength of consumption recently, and the prospect of somewhat faster growth of wealth in

**Figure 33**  
**Household credit growth<sup>38</sup>**  
*(annual percentage change)*



<sup>37</sup> Source: Statistics New Zealand.

<sup>38</sup> Source: RBNZ.

the form of housing, we have relaxed that assumption slightly in these projections. This contributes to a slightly stronger profile for household demand than would otherwise be the case.

Our projected track for growth in business investment spending remains relatively modest given the kinds of considerations discussed in the preceding chapter. As a share of GDP, business investment has been relatively high in recent years and a modest investment growth path still implies a relatively strong commitment to investment. However, more rapid growth in investment is certainly plausible, given strong domestic demand and business confidence, rapid population growth and recent high rates of capacity utilisation in the economy. A stronger investment outlook than we have allowed for would eventually reduce longer-term inflation pressures — by boosting the economy's productive capacity — although it would add to inflation pressures in the meantime.

## Fiscal policy

Our projections of the fiscal position — and the contribution of the government's fiscal operations to economic activity — are based on the Treasury's latest forecasts prepared for the December *Economic and Fiscal Update*. No attempt has been made to anticipate any new fiscal initiatives that may be included in this year's Budget. We believe that there will be sufficient opportunity to respond to forecast and actual changes in the fiscal position as data becomes available.

The operating balance is projected to remain in surplus throughout the projection period, with the surpluses reaching 2.8 per cent of GDP in the 2003/04 fiscal year. This is a marginally stronger outlook than in the March *Statement*, directly reflecting the outlook of more robust private sector spending (which increases projections for revenue while reducing some cyclically-sensitive government expenditures). When the government's capital expenditures, which are not included in the operating balance, are taken into account, fiscal policy appears to have been providing some stimulus to the economy in the current financial year. On the assumptions made here, fiscal policy has a neutral to slightly contractionary effect on activity in the outer years of the projections.

### Box 3 Productive Capacity

In an environment of general price stability, a primary driver of inflation developments is how much pressure demand puts on the economy's capacity to supply without incurring extra costs. When the economy is operating below its normal capacity to supply, with machines standing idle and the number of people unemployed rising, prices tend to fall. When demand is strong relative to normal capacity, with firms working additional hours and having difficulty recruiting staff to produce the goods and services that their customers are demanding, costs and/or margins and therefore prices tend to rise.

Hence a judgement on how fast the economy's productive capacity is evolving needs to be made in order to understand the inflationary pressures developing. There is no number set in stone for this. How much the economy can produce without straining its resources tends to vary over time, including with the business cycle. Currently we think the long-term trend rate of growth is somewhere in the region of 2½ to 3 percent per annum, with cyclical variation.

A useful way to look at the evolution of the economy's supply capacity is through the inputs used to produce goods and services — the workforce, investment, and new technologies. Given the strong inflows of migrants during the mid-1990s and the strong investment surge that followed, we think the economy's growth potential was closer to 4 percent per annum (figure 34). Towards the

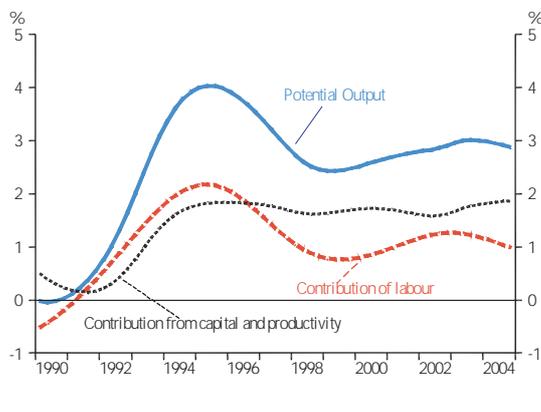
end of the 1990s these inflows of migrants dropped off (in fact we had a net outflow of people from New Zealand), and investment returned to less elevated heights, and the economy's ability to grow without inflation accordingly fell to nearer 2½ per cent. The recent pick-up in net migration means the rate may have increased to be nearer 3 per cent.

Considerable resources are devoted to trying to assess the economy's sustainable, non-inflationary growth rate and how it varies through time. Naturally, there is an assortment of econometric techniques that use official data on the whole economy to learn the "potential" growth rate, as it is often called. We also use a range of other indicators. Some focus on the inputs used to produce goods and services, such as measures of how comprehensively firms are using their plant and machinery or how hard it is for businesses to recruit staff, while others focus on the cost pressures facing firms and the pricing intentions of those firms.

We also go beyond looking at data and undertake a substantial programme of business visits across the country. We are able to hear first-hand about the pressures that businesses in a variety of industries are facing and how they see conditions evolving over the next few months. Because these visits are ongoing, they provide clues as to where to look if there are signs that we may have misjudged the rate of growth that the economy can achieve without straining resources. A misjudgement in our assessment of the economy's potential growth rate would also show up in the inflation rate and other indicators.

Periods such as the Asian crisis, when the economy grew below its "potential" growth rate, result in low utilisation of resources. All else equal, to avoid deflationary pressures developing, the economy would subsequently need to grow at a rate above potential for a while to return resource use to more normal levels. In periods where the economy grows faster than its capacity to meet that demand without extra cost, to reduce the strain on resources it should subsequently grow more slowly than its productive capacity.

**Figure 34**  
**Estimated potential output<sup>39</sup>**  
*(annual percentage change)*



<sup>39</sup> Source: RBNZ calculations.

---

## Inflationary pressure and the monetary policy response

Our assessment of the influences on economic growth over the next few years is that they are probably somewhat stronger than we estimated in the March *Statement*. Further upward pressure on demand is expected to come from strong population growth and a cyclical recovery in the global economy, among other sources. In the absence of further increases in interest rates — if we continued to stimulate economic activity — those demand pressures would probably outstrip growth in the economy's productive capacity. Although a rising exchange rate is expected to dampen these demand pressures to some degree, a rise in core or persistent inflation pressures would probably result. Accordingly, we have built further interest rate increases into this projection.

The resulting projected path of inflation is shown in Figure 3 of this *Statement*. As already discussed, annual CPI inflation outcomes over the next two quarters look set to remain close to 3 per cent. Thereafter, inflation is projected to revert toward the mid-point of the 0 to 3 per cent band over the next few years, as temporary influences drop out and less stimulatory monetary policy settings and the rise in the exchange rate take effect.

The inflation profile sports a relatively pronounced dip over the latter part of 2003. This dip reflects the anticipated direct impact on consumer prices of the recent (and assumed future) appreciation of the exchange rate. This dip in inflation is expected to play a role in lowering persistent inflation pressures by keeping inflation expectations lower than would otherwise be the case.

As noted in Chapter 2, there is a significant question mark around the likely impact of the exchange rate on prices over this period. The actual path of the exchange rate is obviously one source of uncertainty, but the extent to which distributors and retailers may choose to rebuild margins in response to weaker import prices is also unclear — it may be more or less than we have allowed for. To the extent the direct effect of the higher exchange rate on consumer prices does not occur as projected, the path of inflation expectations (as well as inflation) may differ from that assumed in our projections. As a result, the path for monetary policy may be different to that projected here.

The medium term wage outlook underlying these projections is similar to that in the March *Statement*. Despite some recent indications that wage pressures may be proving more modest than expected, in these projections the labour market is pictured to remain relatively tight, notwithstanding the boost to labour supply arising from net migration. Particularly strong demand conditions in some sectors, such as residential construction, also support the view of slightly stronger future growth in labour costs. Indeed, higher construction costs have been evident in recent CPI inflation outcomes. However, overall our wage assumptions remain moderate and therefore do not rate as a major driver of inflation. The notable absence of a cost-plus mentality in product markets — which may have been a feature in the past — implies a greater tendency for firms to absorb specific labour cost pressures where they occur, and we allow for this.

# Appendix 1<sup>1</sup>

## Summary tables

Table A

### CPI inflation projections and monetary conditions

(CPI is in percentage changes)

		CPI*	CPI**	TWI	90-day bank bill rate
		Quarterly	Annual		
1996	Mar.	0.6	2.1	64.2	8.7
	Jun.	0.8	2.3	64.6	9.7
	Sep.	0.3	2.3	65.6	10.0
	Dec.	0.6	2.4	67.1	8.9
1997	Mar.	0.2	2.0	68.4	7.5
	Jun.	0.3	1.5	68.0	7.2
	Sep.	0.6	1.8	64.8	8.1
	Dec.	0.5	1.6	63.9	7.9
1998	Mar.	0.3	1.7	61.2	9.0
	Jun.	0.3	1.7	58.5	9.1
	Sep.	0.6	1.7	57.1	6.8
	Dec.	-0.1	1.1	56.0	4.6
1999	Mar.	0.2	1.0	57.6	4.5
	Jun.	0.5	1.2	59.1	4.7
	Sep.	0.4	1.1	56.7	4.8
	Dec.	0.2	1.3	54.4	5.4
2000	Mar.	0.7	1.7	54.1	6.0
	Jun.	0.7	2.0	53.4	6.7
	Sep.	1.4	3.0	50.1	6.7
	Dec.	1.2	4.0	47.7	6.7
2001	Mar.	-0.2	3.1	50.5	6.4
	Jun.	0.9	3.2	49.8	5.9
	Sep.	0.6	2.4	50.0	5.7
	Dec.	0.6	1.8	49.6	5.0
2002	First Half Average	$\frac{3}{4}$	$2\frac{3}{4}$	$52\frac{1}{4}$	$5\frac{1}{2}$
	Second Half Average	$\frac{1}{2}$	$2\frac{3}{4}$	$53\frac{1}{2}$	$6\frac{1}{2}$
2003	First Half Average	$\frac{1}{2}$	$2\frac{1}{4}$	$54\frac{3}{4}$	7
	Second Half Average	$\frac{1}{2}$	2	$55\frac{3}{4}$	7
2004	First Half Average	$\frac{1}{2}$	$2\frac{1}{4}$	$56\frac{1}{2}$	$6\frac{3}{4}$
	Second Half Average	$\frac{1}{2}$	2	$57\frac{1}{4}$	$6\frac{1}{2}$

#### Quarterly projections

2001	Sep.	0.6	2.4
	Dec.	0.6	1.8
2002	Mar.	0.6	2.6
	Jun.	1.1	2.8
	Sep.	0.7	2.9

<sup>(1)</sup> Notes for these tables follow on page 30.

\* This series is quarterly underlying inflation until the September quarter 1997, quarterly CPIX inflation from the December 1997 quarter until the June 1999 quarter, and quarterly CPI inflation thereafter.

\*\* This series is annual underlying inflation until the September quarter 1997, annual CPIX inflation from the December 1997 quarter until the June 1999 quarter, and annual CPI inflation thereafter (adjusted by Statistics New Zealand to exclude interest and section prices from the September 1999 quarter to the June 2000 quarter).

**Table B**

**Composition of real GDP growth**

(Annual average percentage change, unless specified otherwise)

March year	Actuals							Projections			
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Final consumption expenditure											
Private	3.6	3.8	2.3	2.2	4.0	1.6	3	3 <sup>1</sup> / <sub>4</sub>	2	2 <sup>3</sup> / <sub>4</sub>	
Public authority	4.9	1.7	8.2	-1.1	4.9	-2.2	1 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	
Total	3.9	3.3	3.7	1.4	4.2	0.7	2 <sup>3</sup> / <sub>4</sub>	3	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	
Gross fixed capital formation											
Market sector:											
Residential	0.8	6.1	2.1	-15.1	21.8	-15.9	6 <sup>1</sup> / <sub>4</sub>	17	4 <sup>3</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>4</sub>	
Business	15.9	4.2	-3.3	2.7	0.8	7.3	10 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>4</sub>	4	3 <sup>1</sup> / <sub>4</sub>	
Non-market government sector	7.5	29.6	8.5	-13.5	8.1	-4.2	5	5 <sup>1</sup> / <sub>4</sub>	2	3 <sup>1</sup> / <sub>4</sub>	
Total	10.8	6.8	-0.7	-3.8	6.5	-0.1	8 3/4	5 <sup>1</sup> / <sub>2</sub>	4	2 <sup>1</sup> / <sub>4</sub>	
Final domestic expenditure	5.3	4.1	2.7	0.3	4.7	0.5	4	3 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	
Stockbuilding <sup>(1)</sup>	-0.1	-0.4	0.0	-0.6	1.4	-0.4	-1 <sup>1</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	0	
Gross national expenditure	5.1	3.6	2.6	-0.4	6.1	0.1	3 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>4</sub>	3	2 <sup>1</sup> / <sub>4</sub>	
Exports of goods and services	2.3	4.6	3.5	2.5	6.8	6.8	1 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	3	
Imports of goods and services	6.9	6.6	2.8	2.2	11.2	0.4	3 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	
Expenditure on GDP	3.7	3.1	2.8	-0.3	4.8	2.1	3	3 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	
GDP (production)	4.1	3.1	1.9	0.4	4.7	2.7	3	2 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	
GDP (production, March qtr to March qtr)	4.1	1.8	0.4	2.7	5.6	1.0	3 <sup>3</sup> / <sub>4</sub>	3	2 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	
Potential output	4.0	3.6	3.0	2.5	2.5	2.6	2 <sup>3</sup> / <sub>4</sub>	3	3	3	
Output gap (% of potential GDP, year average)	1.9	1.3	0.3	-1.8	0.3	0.3	3 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>4</sub>	

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

**Table C**  
**Summary of economic projections**

(Annual percentage change, unless specified otherwise)

March year	Actuals					Projections				
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Price measures</b>										
CPI*	2.1	2.0	1.7	1.0	1.7	3.1	2.6	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>4</sub>
Wages	3.6	4.0	2.6	2.7	1.9	3.1	3	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>	3
Import prices (in New Zealand dollars)	-1.3	-4.6	2.9	2.7	11.2	7.4	-2 <sup>1</sup> / <sub>2</sub>	-1 <sup>3</sup> / <sub>4</sub>	1	1 <sup>1</sup> / <sub>4</sub>
Export prices (in New Zealand dollars)	-3.5	-6.3	4.8	-1.1	9.6	20.1	-6 <sup>1</sup> / <sub>4</sub>	-6 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>4</sub>
<b>Monetary conditions</b>										
90-day rate (year average)	8.8	9.0	8.0	6.2	5.2	6.6	5.4	6 <sup>1</sup> / <sub>2</sub>	7	6 <sup>1</sup> / <sub>2</sub>
TWI (year average)	62.2	66.4	64.4	57.3	56.1	50.4	50.3	53 <sup>1</sup> / <sub>2</sub>	55 <sup>3</sup> / <sub>4</sub>	57 <sup>1</sup> / <sub>4</sub>
<b>Output</b>										
GDP (production, annual average % change)	4.1	3.1	1.9	0.4	4.7	2.7	3	2 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>
GDP (production, March qtr to March qtr)	4.1	1.8	0.4	2.7	5.6	1.0	3 <sup>3</sup> / <sub>4</sub>	3	2 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>
Output gap (% of potential GDP, year average)	1.9	1.3	0.3	-1.8	0.3	0.3	3 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>4</sub>
<b>Labour market</b>										
Total employment	4.4	1.2	0.0	0.6	1.4	2.3	2 <sup>1</sup> / <sub>4</sub>	2	1 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>
Unemployment rate (March qtr, s.a.)	6.2	6.5	7.2	7.2	6.4	5.4	5 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>2</sub>
Labour productivity (annual average % change)	-0.2	1.4	1.9	0.6	2.3	1.3	1 <sup>1</sup> / <sub>2</sub>	1	1 <sup>1</sup> / <sub>2</sub>	1
<b>Key balances</b>										
Government operating balance (% of GDP, year to June)	3.5	1.9	2.5	1.7	1.4	1.2	1 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>
Current account balance (% of GDP, year to March)	-5.4	-6.2	-5.6	-4.3	-7.0	-4.8	-3 <sup>1</sup> / <sub>2</sub>	-5	-4 <sup>3</sup> / <sub>4</sub>	-4 <sup>1</sup> / <sub>4</sub>
Terms of trade (annual average % change)	-2.2	-0.8	-0.6	-0.5	-0.1	3.6	3 <sup>3</sup> / <sub>4</sub>	-6 <sup>1</sup> / <sub>4</sub>	-1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>
Household savings rate (% of disposable income, year to March)	-3.5	-2.5	-4.6	-4.2	-5.2	-3.7	-3 <sup>1</sup> / <sub>4</sub>	-5 <sup>3</sup> / <sub>4</sub>	-4	-3 <sup>3</sup> / <sub>4</sub>
<b>World economy</b>										
World GDP (annual average % change)	3.9	4.1	3.4	1.9	4.5	3.5	1 <sup>1</sup> / <sub>4</sub>	3	3 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>
World CPI inflation	2.6	2.2	2.4	0.9	2.0	2.9	1	1 <sup>3</sup> / <sub>4</sub>	2	2 <sup>1</sup> / <sub>4</sub>

s.a = seasonally adjusted

\* This series is annual CPIX inflation until the June 1999 quarter, and annual CPI inflation thereafter (adjusted by Statistics New Zealand to exclude interest and section prices from the September 1999 quarter to the June 2000 quarter).

Notes for this table are in Appendix 5

---

# Notes to the tables

CPI	Consumers Price Index. Quarterly projections rounded to 1 decimal place.
TWI	RBNZ. 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.
90-day bank bill rate	RBNZ. Defined as the interest yield on 90-day bank bills. Forecasts rounded to the nearest quarter per cent.
World GDP	Reserve Bank definition. 14-country index, export weighted. Projections based on <i>Consensus Forecasts</i> . Seasonally adjusted.
World CPI inflation	RBNZ definition and estimate: TWI trading partners' CPI inflation (euro-zone proxied by Germany), weighted by TWI weights. Projections based on <i>Consensus Forecasts</i> .
Import prices	Domestic currency import prices. <i>Overseas Trade Indexes</i> .
Export prices	Domestic currency export prices. <i>Overseas Trade Indexes</i> .
Terms of trade	Constructed using domestic-currency export and import prices. <i>Overseas Trade Indexes</i> .
Private consumption	<i>System of National Accounts</i> .
Public authority consumption	<i>System of National Accounts</i> .
Residential investment	RBNZ definition: Private sector and government market sector residential investment. <i>System of National Accounts</i> .
Business investment	RBNZ definition: Total investment less the sum of non-market investment and residential investment. <i>System of National Accounts</i> .
Non-market investment	RBNZ definition: The <i>System of National Accounts</i> annual nominal government non-market/market investment ratio is interpolated into quarterly data. This ratio is used to split quarterly expenditure GDP Government Investment into market and non-market components.
Final domestic expenditure	RBNZ definition: The sum of total consumption and total investment. <i>System of National Accounts</i> .
Stockbuilding	Percentage point contribution to the growth of GDP by stocks. <i>System of National Accounts</i> .
Gross national expenditure	Final domestic expenditure plus stocks. <i>System of National Accounts</i> .
Exports of goods and services	<i>System of National Accounts</i> .
Imports of goods and services	<i>System of National Accounts</i> .
GDP (production)	<i>System of National Accounts</i> .
Potential output	RBNZ definition and estimate. Refer to: Conway, P. and B. Hunt, (1997), 'Estimating Potential Output: a semi-structural approach', <i>Reserve Bank of New Zealand Discussion Paper, G97/9</i> .
Output gap	RBNZ definition and estimate: The percentage difference between real GDP (production, seasonally adjusted) and potential output GDP.
Current account balance	<i>Balance of Payments</i> .

---

Total employment	<i>Household Labour Force Survey.</i>
Unemployment rate	<i>Household Labour Force Survey.</i>
Household savings rate	<i>Household Income and Outlay Accounts.</i>
Government operating balance	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Labour productivity	Defined as GDP (production) divided by HLFS hours worked. This series is smoothed by taking a four-quarter moving average.
Wages	Private sector ordinary time average hourly earnings. <i>Quarterly Employment Survey.</i>
Quarterly percentage change	$(\text{Quarter}/\text{Quarter}_{-1} - 1) * 100$
Annual percentage change	$(\text{Quarter}/\text{Quarter}_{-4} - 1) * 100$
Annual average percentage change	$(\text{Year}/\text{Year}_{-1} - 1) * 100$

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

Rounding: Unless otherwise specified, all forecast data is rounded to the nearest quarter per cent.

---

# Appendix 2

## Chronology

Listed below are recent events of particular relevance to monetary policy and inflation.

2002

- |          |   |
|----------|---|
| 20 March | The Reserve Bank released its thirty-third <i>Monetary Policy Statement</i> , increasing the Official Cash Rate from 4.75 per cent to 5 per cent. The news release accompanying the <i>Statement</i> is reproduced in Appendix 4. |
| 28 March | Production GDP figures were released showing that the New Zealand economy grew by 0.6 per cent in the December quarter of 2001.   |
| 16 April | CPI statistics were released for the March quarter showing that the CPI increased by 0.6 per cent over the quarter, and by 2.6 per cent over the year to March 2002.  |
| 17 April | At the intra-quarter review, the Reserve Bank increased the Official Cash Rate from 5 per cent to 5.25 per cent. The accompanying news release is reproduced in Appendix 4.   |

---

# Appendix 3

## Companies and organisations contacted by RBNZ staff during the projection round

Affco New Zealand Limited	Medallion Foods Limited
Amcor Kiwi Packaging (Christchurch)	Moller Textiles Ltd
ANZ Banking Group (New Zealand) Ltd	National Bank of New Zealand Ltd
Arnotts NZ Limited	Naylor Love Properties Ltd
Auckland Regional Chamber of Commerce and Industry	Pacific Retail Group
Auckland University of Technology	PDL Industries Ltd
Baycorp Advantage	Port of Napier Ltd
Bay of Plenty Times	Port of Tauranga Ltd
Bank of New Zealand	PricewaterhouseCoopers
BDT Limited	Priority One
Bluebird Foods Limited	Pyne Gould Guinness Reid Farmers Ltd
Canterbury Employers' Chamber of Commerce	Pyne Gould Corporation
Canterbury Manufacturers' Association	Radfords Ltd
Clorox New Zealand Limited	Richmond Ltd
Comalco New Zealand Ltd	Sanitarium Health Food Company
Crown Institute of Studies	South Pacific Tyres Ltd
Cullen Investments Limited	Tait Electronics Ltd
DB Breweries Limited	Tamahine Holdings Ltd
Display Point Ltd	Tecpac Industries Ltd
Donaghys Industries Ltd	Topsco International NZ Ltd
Dunedin City Marketing & Development	Tourism Auckland
Farmers Trading Company Ltd	Turners & Growers Fresh Ltd
Farmlands Trading Society	Trio Group Ltd
Foodstuffs (South Island) Ltd	Vodafone New Zealand Ltd
GL Bowron & Co Ltd	Weldwell New Zealand
Glengarry Hancocks	Westpac Banking Corporation (New Zealand Division)
Grasshopper Properties (NZ) Ltd	Work and Income New Zealand (Auckland North)
Hawkes Bay Chamber of Commerce Incorporated	- plus a number of government departments, economic research agencies, and industry organisations.
Hubbards Foods Ltd	
Independent Liquor (NZ) Ltd	
Independent Newspapers Ltd	
J Ballantyne & Company Ltd	
Krone (NZ) Technique Ltd	
Lichfield International Ltd	
Mainstreet Tauranga Inc.	
Mastertrade Ltd	

---

# Appendix 4

## Reserve Bank statements on monetary policy

### OCR increased to 5 per cent

*20 March 2002*

The Reserve Bank today increased the Official Cash Rate from 4.75 per cent to 5 per cent.

Reserve Bank Governor Don Brash recalled "In the last few months of 2001, the OCR was reduced by 100 basis points because we were concerned about the deflationary risks arising from a very weak world economy.

"Since our last Statement, the New Zealand economy has been stronger than we expected. Indeed, the economy is already operating at close to full capacity, and indications are that pressures will grow further in the absence of some increase in interest rates.

"Both consumer and business confidence have bounced back to pre-11 September levels. After a brief pause in October, retail spending has been strong. Visitor arrivals have recovered quickly. Turnover in the housing market has been high, and residential investment has surged. In recent months there has been a sharp turnaround in net migration.

"The risks to the global economy also look less threatening. Economic activity in the United States has picked up more quickly than most observers expected late last year, and the Australian economy looks robust.

"Nevertheless, the global economy is still not particularly strong. It seems likely that on average our trading partners will grow only moderately this year, and significant risks remain. The Japanese economy continues to have major difficulties, the US recovery could stumble over the high level of debt already accumulated, and global equity markets remain vulnerable to further weakness.

"Even after today's decision, monetary conditions remain stimulatory. Today's increase in the OCR simply represents some withdrawal of monetary stimulus, much of which was put in place as insurance against risks which have now receded. At the moment it seems likely that there will need to be some further reduction in monetary stimulus over the months ahead," Dr Brash concluded.

### Official Cash Rate increased to 5.25 per cent

*17 April 2002*

The Reserve Bank today raised the Official Cash Rate from 5.0 per cent to 5.25 per cent.

The Bank's Governor, Don Brash, commented that "Since the Bank's latest comprehensive review of the outlook for inflation last month, things have on balance evolved very much as expected at that time.

"It is clear from December quarter GDP data that domestic demand has been growing strongly, and most information for the March quarter points in the same direction. Retail spending has been very strong, and house sales suggest a buoyant residential property market. Both business and consumer confidence continue to be high.

"The world economy too, though not nearly as buoyant on average as the New Zealand economy, appears to be continuing a gradual recovery.

"All in all, and given the outlook for inflation, a further moderate adjustment in the Official Cash Rate seems appropriate," Dr Brash concluded.

---

## **Brash resigns**

*26 April 2002*

Reserve Bank Governor Don Brash today announced his resignation from the Bank, to take effect immediately.

Dr Brash said "I have been invited to seek nomination for the National Party as a candidate in the upcoming General Election, and I have decided to accept that invitation. I wish to stress that this decision is not motivated by any tension with the Minister of Finance or the Government.

"Working at the Bank has been a very great privilege. Now I am seeking to serve New Zealand in another way."

Dr Brash will hold a press conference at 11.00 am this morning at Turnbull House, in Bowen Street, Wellington.

## **RBNZ: business as usual**

*26 April 2002*

Reserve Bank Deputy Chief Executive Rod Carr today said the Reserve Bank was continuing to carry out its normal functions like any other working day, this following Dr Brash's resignation this morning.

Dr Carr commented: "The Reserve Bank is carrying out its duties as normal. The Reserve Bank of New Zealand Act 1989 provides that the Deputy Chief Executive acts as the Governor for up to 28 days or until a person is appointed as Acting Governor or Governor.

"Next week, the Bank's Board of Directors will meet to consider their recommendation to the Treasurer as to the person who should assume the role of Acting Governor until a permanent Governor is appointed, and to begin the process for the appointment of a new Governor.

"Under section 40 of the Act, a Governor is appointed "by the Minister (the Treasurer) on the recommendation of the Board".

"A Policy Targets Agreement will need to be agreed between the new Governor and the Treasurer. Until then the current PTA still applies.

"In the meantime, the Reserve Bank remains committed to carry out its statutory functions in the normal way," Dr Carr concluded.

---

## Appendix 5

# The Official Cash Rate chronology

Date	Change in OCR (basis points)	OCR rate (per cent)
17 March 1999	OCR introduced	4.50
21 April 1999	No change	4.50
19 May 1999	No change	4.50
30 June 1999	No change	4.50
18 August 1999	No change	4.50
29 September 1999	No change	4.50
17 November 1999	+ 50	5.00
19 January 2000	+ 25	5.25
15 March 2000	+ 50	5.75
19 April 2000	+ 25	6.00
17 May 2000	+ 50	6.50
5 July 2000	No change	6.50
16 August 2000	No change	6.50
4 October 2000	No change	6.50
6 December 2000	No change	6.50
24 January 2001	No change	6.50
14 March 2001	- 25	6.25
19 April 2001	- 25	6.00
16 May 2001	- 25	5.75
4 July 2001	No change	5.75
15 August 2001	No change	5.75
19 September 2001	-50	5.25
3 October 2001	No change	5.25
14 November 2001	-50	4.75
23 January 2002	No change	4.75
20 March 2002	+25	5.00
17 April 2002	+25	5.25

---

# Appendix 6

## Policy Targets Agreement

This agreement between the Treasurer and the Governor of the Reserve Bank of New Zealand (the Bank) is made under sections 9 (1) and 9 (4) of the Reserve Bank of New Zealand Act 1989 (the Act), and shall apply for the balance of the Governor's present term, expiring on 31 August 2003. It replaces that signed on 15 December 1997.

In terms of section 9 of the Act, the Treasurer and the Governor agree as follows:

### 1. Price stability

Consistent with section 8 of the Act and with the provisions of this agreement, the Bank shall formulate and implement monetary policy with the intention of maintaining a stable general level of prices, so that monetary policy can make its maximum contribution to sustainable economic growth, employment and development opportunities within the New Zealand economy.

### 2. Policy target

- a) In pursuing the objective of a stable general level of prices, the Bank shall monitor 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 12-monthly increases in the CPI of between 0 and 3 per cent.<sup>1</sup>

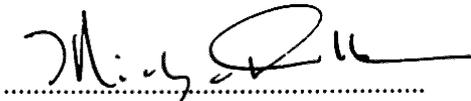
### 3. Unusual events

- a) There is a range of events that can have a significant temporary impact on inflation as measured by the CPI, and mask the underlying trend in prices which is the proper focus of monetary policy. These events may even lead to inflation outcomes outside the target range. Such disturbances 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 shall react in a manner which prevents general inflationary pressures emerging.

### 4. Implementation and accountability

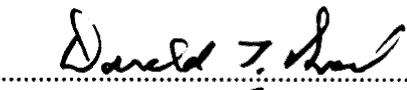
- a) The Bank shall constantly and diligently strive to meet the policy target established by this agreement.
- b) It is acknowledged that, on occasions, there will be inflation outcomes outside the target range. On those occasions, or when such occasions are projected, the Bank shall explain in Policy 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 comes back within that range.

- 
- c) In pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner and shall seek to avoid unnecessary instability in output, interest rates and the exchange rate.
- d) The Bank shall be fully accountable for its judgments and actions in implementing monetary policy.



.....

Hon Michael Cullen  
Treasurer



.....

Donald T Brash  
Governor  
Reserve Bank of New Zealand

DATED at Wellington, this 16th day of December 1999

<sup>1</sup> Statistics New Zealand introduced a revised CPI regime from the September quarter, 1999. Until the June quarter 2000, 12-monthly increases in the CPI will be calculated by comparing the new CPI series with the old CPI series adjusted by removing the impact of changes in interest rates and section prices. This adjustment is calculated by Statistics New Zealand. (Refer to the RBNZ's November 1999 *Monetary Policy Statement*, p 8, for details.)



