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

September 2003

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

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

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<sup>1</sup> Projections finalised on 22 August 2003. Policy assessment finalised on 3 September 2003.

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# 1 Policy assessment

The Reserve Bank has decided to leave the Official Cash Rate unchanged at 5 per cent.

New Zealand has enjoyed an extended period of strong economic growth. Signs that growth is slowing, which will reduce inflationary pressures, have led us to cut the OCR on several occasions this year, adding stimulus to the economy.

Our latest assessment is that the economy is continuing to cool, although not as sharply as previously thought. Exports remain under pressure, due to the higher exchange rate and a relatively slow global recovery. But domestic activity is stronger than expected with sentiment improving now that events such as SARS and the electricity shortages have dissipated. Ongoing population growth has been fuelling a sharp rise in residential and construction activity throughout the country and has supported household spending. While population growth looks likely to slow, sharp increases in property prices and a backlog of demand in the construction sector have the potential to maintain inflation pressure in the domestic economy for some time yet.

Current monetary policy settings are consistent with medium-term inflation remaining comfortably within the target range, with the risks to inflation balanced. Although imported inflation is currently weak due to the higher exchange rate, inflation pressures remain robust across a range of domestic industries, especially housing and construction.

Looking forward, there is a possibility that the current strength in the domestic economy proves stronger and more enduring than we are anticipating. Conversely, further appreciation of the exchange rate could potentially exert an even greater braking effect on the external sector. We will closely monitor the balance of pressures across these two sectors and their implications for the medium term inflation outlook as we update our policy outlook over the months ahead.



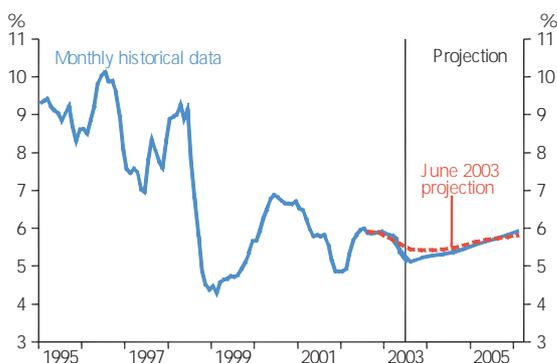
Alan Bollard  
Governor

## 2 Overview and key policy judgements

### Overview

New Zealand's extended period of above-average growth appears to be ending a little more slowly than previously anticipated. Economic activity up to the middle of the year has been only lightly dented by the feared combination of a mini electricity crisis, SARS-related tourism setbacks, and a bout of business and consumer pessimism. Boosts to residential investment and consumption spending from exceptionally strong migration have kept activity buoyant, despite deteriorating conditions for exporters who are facing an appreciated exchange rate. However, the boost coming from migration is expected to weaken, and recent exchange rate appreciation will continue to make life difficult for the tradables sector. The one to three year outlook for the overall economy is for a period of steady growth between 2½ and 3 per cent – around the longer-term average.

Figure 1  
90 day interest rates

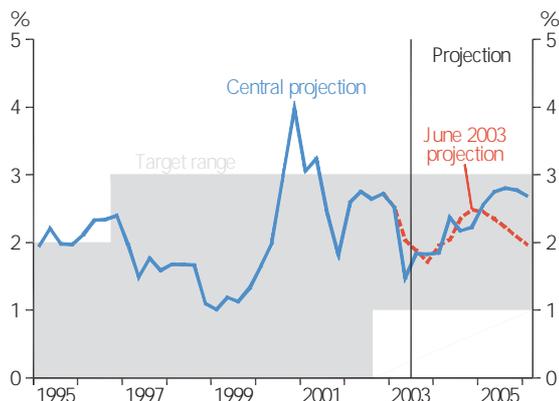


Source: RBNZ.

With strong net immigration adding to the labour force, steady investment rates, and the possibility that New Zealand's trend productivity growth rate has been nudging higher, productive capacity has been expanding unusually rapidly recently. Net immigration has also added to demand but New Zealand has been able to move through the extended above-trend growth period with relatively limited domestic inflation pressures emerging. The expected deceleration to more normal rates of output growth will progressively ease those domestic inflation pressures, particularly while productive capacity continues to expand rapidly. But a delayed easing of the growth rate implies a slower reduction in domestic inflation pressures.

That slow pull-back in domestic inflation pressure means that inflation could go higher than previously projected, in

Figure 2  
Consumer price inflation



Source: RBNZ. See p 34 for series definition.

the absence of offsetting events or policy action. The projections described in Chapter 4 of this *Statement* depict a path for inflation that has a higher peak than was projected in our June *Statement* (see also figure 2) – although the peak would still leave medium-term inflation comfortably within the *Policy Targets Agreement's* inflation target range. Even though the extent of the higher peak may be overstated on account of the technical treatment of the exchange rate (see Chapter 4), at the margin it does raise some policy issues. These are discussed in more detail later in this Chapter. In brief, the existence of additional inflation pressure associated with a slower abatement of current economic strength makes the medium-term outlook for inflation, and hence interest rates, no longer clearly skewed to the downside. We remain fairly sure that overall economic momentum is decelerating, and that there is headroom within the inflation target range for leaning against a too-rapid deceleration. But the amount of headroom available within the inflation target has become quite small.

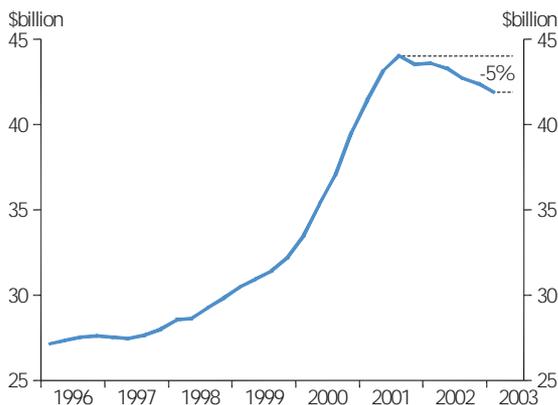
### Two economies

A divergence between economic conditions in the internationally-exposed "tradables" sector of the economy, and conditions in the domestic economy, has been developing for some time. Two years ago, the divergence favoured the tradables sector, with exceptionally strong income growth being experienced by many exporters, especially in the dairy sector. The situation is now reversed. Export incomes are 5 per cent down from their peak in New Zealand dollar terms,

and are still falling (see figure 3). Yet urban New Zealand is showing strength in the areas of retail spending and especially the residential property market.

The bulk of the reversal is explained by two things: exceptionally strong net immigration, which is yet to slow, and exchange rate appreciation.

**Figure 3**  
Export incomes off their peak  
(annual total)



Source: Statistics New Zealand.

Greatly increased immigration flows into New Zealand, combined with fewer people leaving, have helped lift New Zealand's population by around 1<sup>1</sup>/<sub>4</sub> per cent per annum over the last two years. Outside of migration flows associated with conflicts and disasters, that is a rarely observed scale of addition to normal population growth. Crude reckoning suggests that the contribution of that migration flow to the economy's growth rate has been as much as 1<sup>1</sup>/<sub>2</sub> to 2 per cent per annum over those two years, as arriving migrants spend more than the average person while they settle in, and initially contribute less to the workforce and production. Much of the additional demand associated with migration is focussed in the domestic economy, particularly housing and – with some delays – construction associated with infrastructure investment (e.g. language schools). In the process, life for tradable sector producers is made more difficult at the margin. Stronger growth directly and indirectly attracts foreign capital and supports the exchange rate, and resources that might otherwise be employed more cheaply in the tradables sector are used for the production of non-tradable goods and services.

In the meantime, the record upswing in the value of the New Zealand dollar experienced though 2002 has continued, but at a gentler pace, in 2003 (figure 4). Partly a function of

**Figure 4**  
Continuing exchange rate appreciation



Source: RBNZ.

US dollar depreciation, partly a function of excessive depreciation in 1999 and 2000, partly a function of our comparatively healthy economic growth rate, and (related to the last point) partly also a function of our comparatively high interest rates, appreciation has now pushed the New Zealand dollar about 10 per cent above its 10 year trend.

This appreciation brought to a halt and then reversed the very substantial upswing in exporters' incomes that was the initial reason for New Zealand not following its trading partners into near-recession in the first years of this decade. Although the bulk of the export income gains recorded through 2000 and 2001 are still intact (figure 3 above), in many instances exporters have yet to feel the full effects of last year's appreciation. Many exported goods and services are contracted for in prices that are directly fixed in New Zealand dollars, or indirectly fixed through foreign exchange "hedges". For some exporters, reductions in the costs of imported productive inputs will have delayed the effects of exchange rate appreciation. And for a minority of exporters, reductions in the costs of productive inputs will have been large enough to improve profitability. Overall though, appreciation has and will continue to have a significant adverse effect on the profitability of exporting and the production of substitutes for imports.

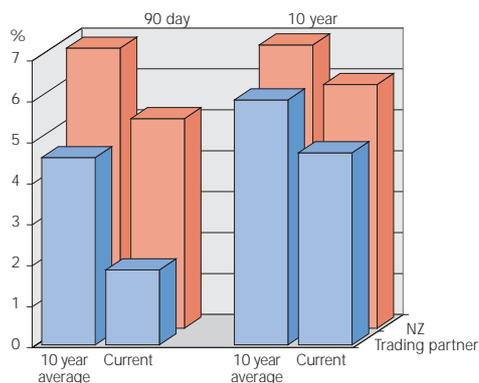
To date, buoyancy associated with immigration has outweighed the negative impulse from exchange rate appreciation. This has left New Zealand's productive resources stretched, as indicated by high measured capacity utilisation, reported shortages of labour, and above-normal domestic inflation. Three months ago we assessed that we were at, or

had passed, a turning point where the negative influences were beginning to dominate the positive ones. Although the turning point is not as sharp as previously expected, our overall assessment remains the same: economic growth is in the process of slowing to more normal rates.

## Monetary policy in a divergent two-economy setting

Monetary policy has, as required by the *Policy Targets Agreement*, been responding to the upward pressure on inflation associated with intensive resource utilisation. New Zealand interest rates are currently comparatively high by global standards – more so than usual, because global interest rates are unusually low (figure 5). But interest rates have

Figure 5  
New Zealand and trading partner interest rates



Source RBNZ. Averaged over a 10 year period. Trading partner interest rate is a weighted average of US and Australian interest rates.

simultaneously been *low* by New Zealand's own historical standards.<sup>1</sup>

The juxtaposition of high interest rates by global standards and low interest rates by domestic standards amplifies the divergent trends of the tradables and domestic sectors. The former – international interest rate differentials – is a factor

in exchange rate appreciation. The latter – cheap borrowing rates in the eyes of most New Zealanders – is a factor in a buoyant residential property market and strong consumption spending. Reductions in interest rates might help alleviate exchange rate appreciation to some extent, but at the expense of further stimulating the residential property market and consumption spending.

This inability to do the right thing by all sectors in the economy simultaneously is not a new issue for monetary policy. In such situations, the *Policy Targets Agreement* guides us to focus primarily on controlling the overall, economy-wide rate of inflation. Subject to achieving the required measure of inflation control, the *Agreement* directs policy towards actions that help stabilise the paths of the economy, the exchange rate, and interest rates. As the exchange rate has been the least stable, it is natural to look to policy actions that help prevent further exchange rate appreciation. Unfortunately, experience and economic research suggests that reducing interest rates could well stimulate the property sector more than it would limit further exchange rate appreciation. And such an outcome could in turn amplify the current relatively mild property-related inflation pressures to a point that required strong policy measures to reassert control, ultimately at the expense of more exchange rate appreciation. On some readings, this was indeed the character of the mid-1990s economic cycle, which saw the real exchange rate appreciate to a peak some 30 per cent above its average.

## The residential property boom

As described in detail in Chapter 3 of this *Statement*, the current level of activity in the residential property market is unprecedented on several dimensions. To date much of that activity, whether it be sales and purchases or the construction of new homes and apartments, has been driven by the needs of new (or returning) migrants, and New Zealanders looking for a more urban lifestyle. Unsurprisingly, many returning New Zealanders, and others, are particularly attracted to our non-metropolitan locations with coastal and lakefront property prices increasing sharply. Again unsurprisingly, indicators of pressure are strongest in those areas.

<sup>1</sup> Assessing the appropriate historical average or trend to use as a reference point for interest rates is not straightforward. Yet it is required for monetary policy analysis, since one has to know whether a given interest rate setting will add or subtract to economic activity. Box 4 in Chapter 4 summarises the results of various alternative approaches to assessing the reference point.

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To date, the flow through of elevated activity into inflation in the Consumers Price Index has been fairly muted. But there are recent indications of a speculative dynamic starting to contribute to housing market activity. Advertisements for property investment seminars, many with exaggerated claims about the sustainability of recent capital gains, are rife. And our discussions with business and community leaders around the country indicate a heightened interest in property market investment. In addition, construction activity has been hot, the industry's capacity has been stretched, and costs have clearly started to accelerate.

How much account should monetary policy take of the residential property market? After all, as those adversely affected by exchange rate appreciation are quick to point out, interest rates that look low by domestic standards can look exceptionally attractive to international investors.

Under current conditions, it is appropriate to take residential property market developments into account when setting interest rates. There are circumstances in which one can envisage that a structural adjustment within the economy – such as the absorption of a new wave of migrants – might produce temporary price pressures that can safely be ignored. The essential characteristics of such circumstances are the *temporary* and *isolated* nature of price pressures. Our reading of the indicators suggests that neither condition is clearly fulfilled.

As Chapter 3 of this *Statement* shows, housing-related price pressures are part of a more generalised upswing in domestic inflation associated with the intensity of resource utilisation of the last few years. It is also relevant that accelerated property market activity, buoyant house prices, and strong residential construction are being observed around the country – it is not just an Auckland phenomenon, despite Auckland being the main destination of migrants.

More generally, an extended period of property market buoyancy coupled with a substantial degree of house price inflation can have spill-over effects throughout the economy. Housing and home-ownership developments affect all New Zealanders, to greater or lesser degree. Higher house prices influence people's sense of their need to save and their ability to spend, affecting consumption. Higher housing costs and accompanying higher rents reduce the real (purchasing power) value of people's incomes, motivating upwards pressure on tradespeople's charge-out rates and employees' wages. And

higher house price inflation causes diversion of financial capital from other investment opportunities, and diversion of effort from other value-generating activities. Both diversions can harm the productive capacity of the New Zealand economy. For these reasons, as our counterparts in the UK and Australia in particular are fully aware, central banks need to be cautious about arguments to ignore property price cycles, the more so that the cycle starts to develop a speculative component.

## Current and near-future monetary policy settings

Through 2003, our baseline view has been shaped by the expectation of a deceleration in overall economic momentum. By the middle of the year, indicators suggested that the tipping point had arrived, confirming our anticipatory decision to start easing interest rates. Latest indicators continue to show a similar picture, albeit one with a reduced pace of deceleration. Latest indicators therefore suggest the potential for inflation to rise a little higher from its current rate in the middle of the target range, before it subsequently settles back as the deceleration in economic momentum eventually dominates the picture.

The slight shift up in the projected inflation peak compared to our June projection is in itself little cause for concern. Average inflation over the one-to-three year future is still comfortably consistent with the *PTA's* requirement to keep "future CPI inflation outcomes between 1 per cent and 3 per cent on average over the medium term". Moreover, given the expected deceleration in activity and the significant possibility of further exchange rate appreciation, there are arguments in favour of edging interest rates lower.

At the same time, there is a risk that speculative activity could become an increasingly prominent feature of the property market. Separate from any concern about the undesirability of booms and busts in key asset markets, if inflation does track close to the top of the inflation target range, there would be little headroom available to accommodate sustained additional price pressures emanating from the property and construction sectors. With interest rates being a moderately powerful shaper of property market activity, there are arguments against a tendency towards lowering interest rates.

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As always around points of inflexion in the pace of economic activity, there is considerable uncertainty as to how things will play out, even in the absence of new shocks. We clearly do not want to amplify that uncertainty by interest rate actions that turn out to be unnecessary. The *Policy Targets Agreement* provides us with room to wait and watch. We intend to use that room to help ensure that interest rate actions are well-matched to the evolving situation.

## 3 Current economic situation

### Overview

The New Zealand economy has shown significant strength over the past year, with GDP estimated to have increased by around 4 per cent in the year to June. Growth has been dominated by strong domestic spending, particularly household consumption and residential investment, with a weaker contribution from net exports and business investment. The underlying pace of growth appears to be slowing gradually, but this is so far less evident within industries serving the domestic sector.

At the time of our June *Statement*, we reduced the Official Cash Rate (OCR) by 25 basis points from 5.50 per cent to 5.25 per cent, and noted that there might be scope for a further modest reduction in the OCR, provided the evidence continued to point to reduced medium-term inflation pressures. This easing was in response to evidence suggesting slowing economic activity and inflation in some parts of the economy, particularly the export sector. At our interim review in July, we reduced the OCR by a further 25 basis points to 5.0 per cent, bringing total OCR reductions this year to 75 basis points.

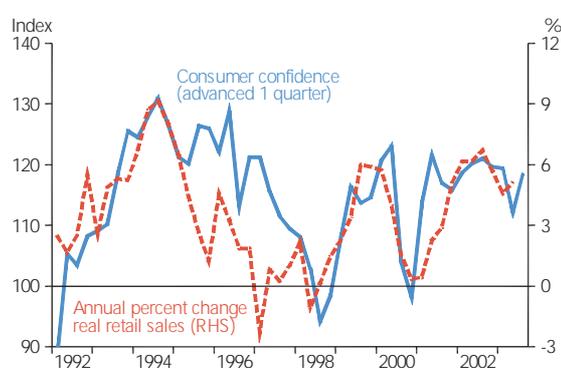
Our June *Statement* outlined a number of temporary influences that we thought were likely to create volatility in growth during 2003 and lead to weaker activity than would otherwise be the case. However, the effects of the electricity shortages, the outbreak of SARS, and dry conditions in some agricultural regions have turned out to be more moderate than we had expected. Consumer confidence has recovered previously lost ground while business confidence continues to improve. These trends are consistent with growth over the June quarter having been stronger than envisaged in our June projections.

### Domestic demand

Domestic demand grew rapidly throughout 2002, and this strength has continued into the first half of 2003. Strong primary sector incomes in 2000 and 2001 stimulated regional economies, which increased demand in urban economies with a lag. With the export sector softening over the past year or so, strong population growth boosted by high net immigration has been the key source of stimulus to domestic demand.

Strong population growth has stimulated consumer spending and residential construction activity. Retail sales have shown solid growth over the past year, particularly for durable goods, such as furniture and appliances. That growth continued in the March and June quarters. Car sales have been particularly strong, and used car vehicle registrations have shown considerable strength in 2003. There is little solid statistical evidence as yet that the fall in rural incomes from their highs in 2001 has substantially reduced household spending in the regions, although some of our retail contacts report that sales have softened in rural areas.

Figure 6  
Consumer confidence and retail sales



Source: Statistics New Zealand, Westpac McDermott Miller.

Growth in retail spending, measured in terms of the growth in nominal sales, appears to be slowing down gradually, although weak prices brought about by the higher New Zealand dollar have enabled consumers to sustain relatively high rates of growth in 'real' expenditures. Consumer confidence remains at relatively high levels, and has recovered quickly from a sharp decline earlier this year (figure 6). Some of the concerns that are likely to have been behind the fall in confidence – such as SARS, the electricity crisis and the Iraq war – appear to have abated.

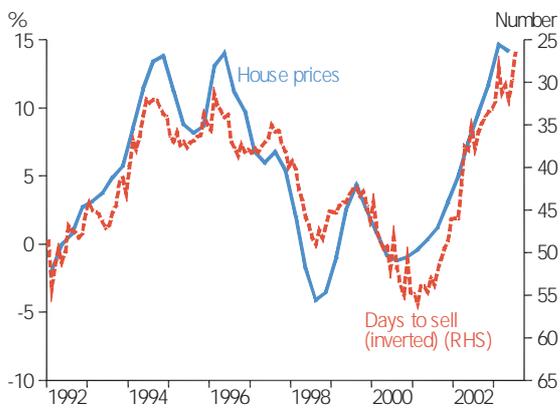
In addition, household income growth has been relatively strong, boosted by growth in wages and continued employment growth in the first half of this year. Further growth in household incomes will have provided some counter to the dip in confidence and helped to support spending.

Although growth in retail spending appears to be slowing gradually, housing and construction sector activity remains buoyant. The key driver has been strong population growth

which has placed pressure on the existing supply of dwellings and encouraged significant new building activity.

The strong demand for houses has resulted in a shortage of listings in some areas, and houses are selling quickly. This has placed upward pressure on house prices (figure 7). However, as the drivers of housing demand moderate, and as supply catches up, we expect to see a reduction in house price inflation. Box 1 discusses the housing sector in more depth, and compares the current housing cycle with the mid-1990s cycle.

**Figure 7**  
Median days to sell and house price inflation



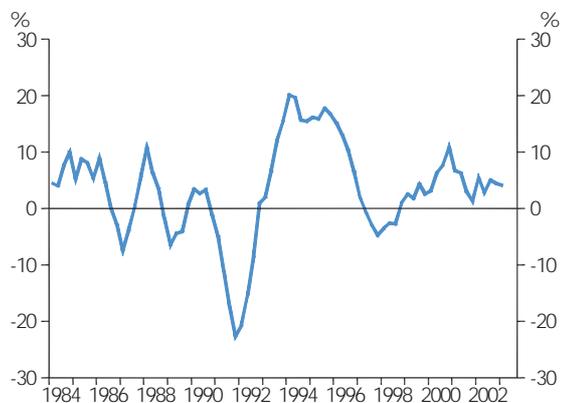
Source: Quotable Value New Zealand, Real Estate Institute of New Zealand

Business investment has made a smaller contribution to the strength in domestic demand. Despite businesses reporting significant capacity constraints, growth in business investment has remained relatively muted. Annual average investment growth has hovered around 5 per cent for the past few years, in contrast to the double-digit growth rates observed in the early-mid 1990s cycle.

However, over the last few decades, periods of double-digit investment growth rates have usually been preceded by periods of significant disinvestment, and the fast growth has been a 'catch-up' (figure 8). In times when the cyclical downturn in investment has been modest, the corresponding pickup has also been modest (a more stable cycle). The most recent investment cycle can be characterised as being of the stable variety. Furthermore, throughout the recent economic cycle, investment as a share of GDP has been maintained at cyclically high levels.

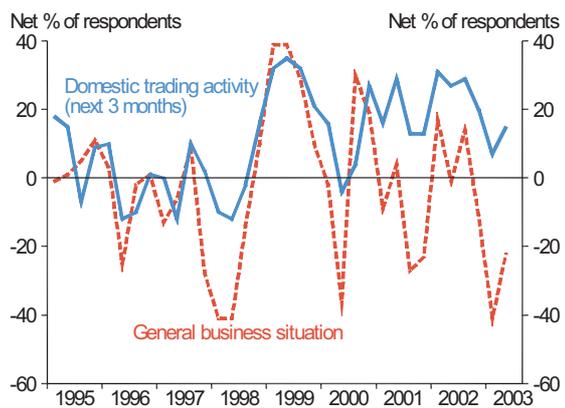
Recently, there have been some strong indicators of near-term business investment. Imports of some capital goods have been strong, and consents for some non-residential buildings have picked up. This is despite firms' confidence about the general economy and their own activity outlook falling sharply earlier this year, reflecting concerns around the SARS outbreak, electricity shortages, and the Iraqi conflict (and related oil price hikes). Confidence has begun to recover, although the level of confidence remains relatively low, suggesting that firms continue to be cautious (figure 9).

**Figure 8**  
Business investment growth  
(annual average percentage change)



Source: Statistics New Zealand.

**Figure 9**  
Business confidence



Source: New Zealand Institute of Economic Research.

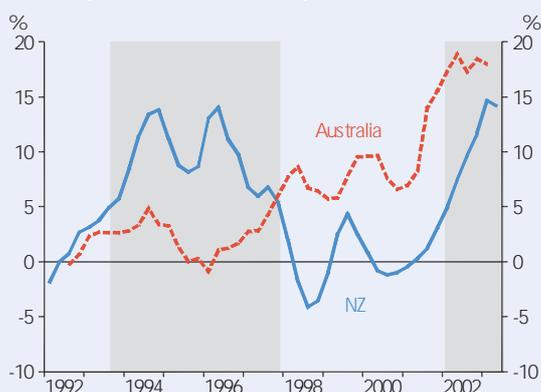
(continued on p. 13)

## BOX 1

### A graphical presentation of the housing market cycle

New Zealand's housing sector has experienced a strong cyclical upswing over the past 18 months with house sales and new housing construction both lifting to record high levels. Inflation pressures within the housing sector – as captured by house prices, rentals, and the costs of constructing new houses – have started to accelerate, although not to the extent recently seen in some other countries such as Australia (figure 10). This box reviews recent trends in the housing sector, drawing comparisons with the previous cycle in the mid-1990s.

**Figure 10**  
House price inflation compared with Australia



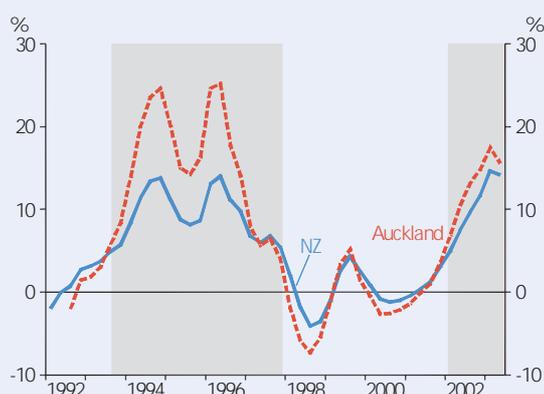
Source: Quotable Value New Zealand, Datastream.

A distinguishing feature of the current housing cycle is its wide geographical spread. The previous housing cycle was heavily concentrated around the Auckland region. The latest upswing in activity has been seen throughout the country — both house sales and house prices have exhibited substantial increases in other parts of the country as well as Auckland (figure 11 and 12). A number of factors may be at work including the boost to incomes in the export sector until about 18 months ago (spread across provincial New Zealand), greater 'international' participation in the housing market, and higher demand from returning New Zealanders not necessarily wanting to settle in Auckland.

As in the 1990s, strong population growth driven by net immigration and rising incomes buoyed by ongoing employment growth have been important factors driving additional demand for housing. Overall, growth in

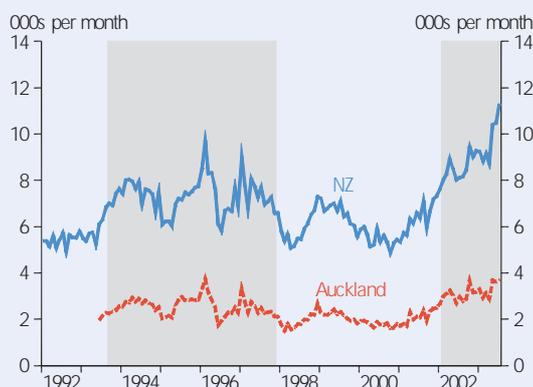
household incomes has been slightly below that seen in the mid-1990s, but growth in the population has been considerably stronger.

**Figure 11**  
House price inflation in New Zealand and Auckland



Source: Quotable Value New Zealand.

**Figure 12**  
House sales

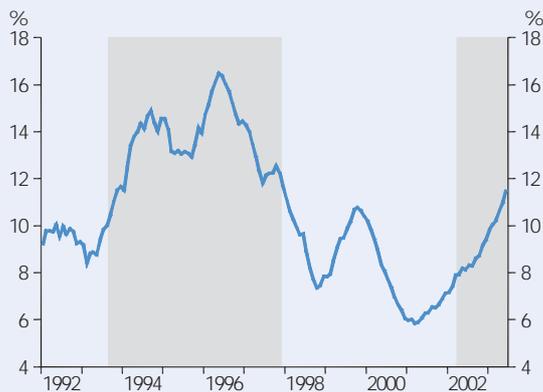


Source: Real Estate Institute of New Zealand.

Strong net immigration – including that due to New Zealanders returning from a period overseas – has resulted in a substantial increase in migrant transfers, helping to fund the additional demand for housing. More recently, household credit growth has also accelerated, suggesting increased participation from existing residents in the housing cycle (figure 13). Debt to income ratios, which earlier began to level out, have started to rise more quickly again (figure 14) indicating an increased willingness on the part of households to take on new debt. As Chapter 2 noted, some of this activity could be speculative in nature with participants

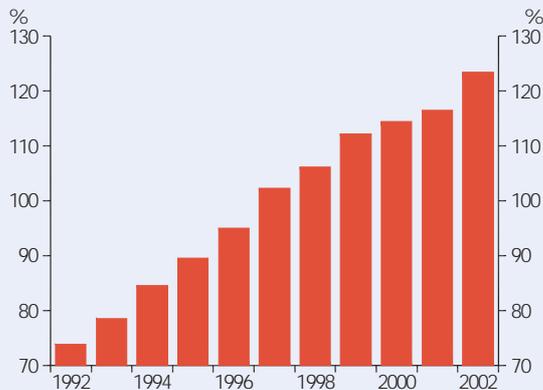
motivated by the prospect of capital gain. The data here are limited, but it is certainly possible that New Zealanders have been drawn into the market at a time when returns on other investments have been perceived as lack-lustre and nominal interest rates are low. Capital gains are not necessarily sustainable, as was evidenced in the late 1990s.

**Figure 13**  
Household credit growth  
(annual percentage change)



Source: RBNZ.

**Figure 14**  
Household indebtedness  
(debt as a percentage of disposable income)



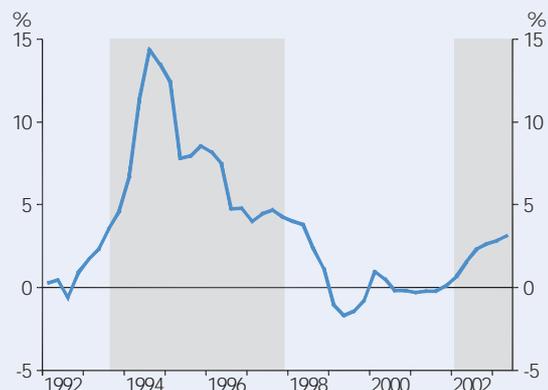
Source: RBNZ.

The data are consistent with there having been a shift from owner-occupied housing stock to a somewhat larger proportion of housing stock owned as rental property over recent years.<sup>2</sup> This shift is likely to reflect a range of demographic factors and implies an increased number of New Zealanders now own rental properties. Rents have been steadily rising lately, with strong demand for properties,

<sup>2</sup> As suggested by the 5-yearly Census and Household Expenditure Survey, and data from Tenancy Bond Services.

but the increases have so far been lower than in the last cycle, and have lagged house price inflation (figure 15).

**Figure 15**  
Rents  
(annual percentage change – adjusted for Housing New Zealand's shift to income-related rents)

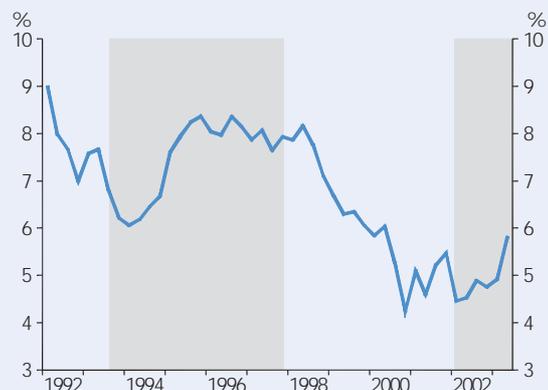


Source: Statistics New Zealand, RBNZ.

How do the costs of financing housing compare with the previous cycle? CPI-adjusted mortgage interest rates are at lower levels than at the beginning of the last housing cycle (figure 16). However, there is some evidence (see box 4, Chapter 4) that the level at which real interest rates begin to exert constraint on borrowers (as opposed to stimulating activity) has declined over the past decade, meaning that the lower interest rates are not necessarily providing proportionately greater stimulus to the housing market.

Turning to the construction of new housing, new

**Figure 16**  
Real mortgage interest rates  
(floating rate less current inflation rate)



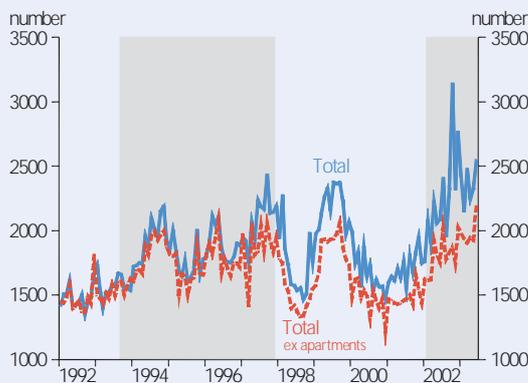
Source: RBNZ.

residential building has increased substantially to meet higher demand. Dwelling consents surged late last year, reflecting substantial new apartment work in Auckland. Although consents for apartments have declined to more usual levels, consents for new houses have continued to increase, suggesting significant activity remains in the pipeline (figures 17 and 18).

To date, the costs of constructing a new house have

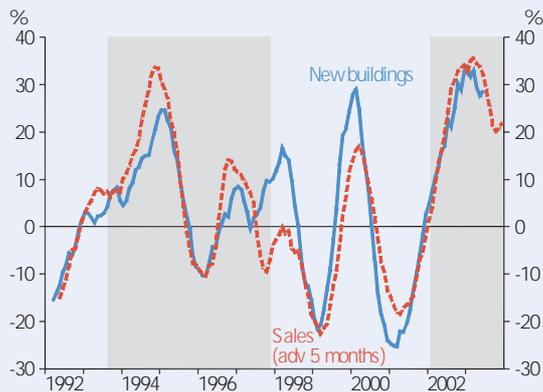
not grown as quickly as they did during the last cycle. Caution needs to be applied, however, in drawing comparisons, in that timber prices rose unusually sharply in 1993 due to international factors not featured in the current cycle. With labour shortages and reported utilisation rates of construction companies at an all-time high, it appears that the construction sector is relatively stretched. This may prolong the duration of the building cycle and could well create additional cost pressure in the interim (figure 19).

**Figure 17**  
Dwelling consents  
(per month)



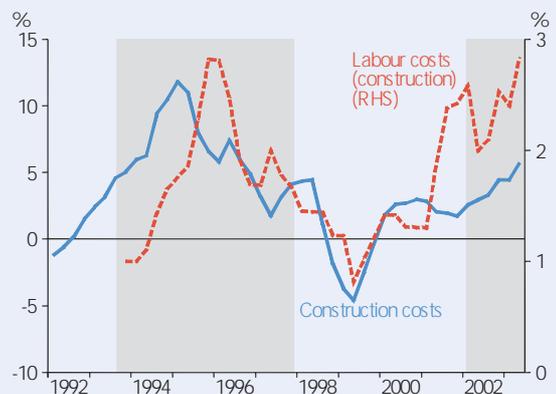
Source: Statistics New Zealand.

**Figure 18**  
House sales and new residential buildings  
(annual percentage change of annual total)



Source: Real Estate Institute of New Zealand, Statistics New Zealand.

**Figure 19**  
Construction costs and labour costs  
(annual percentage change)



Source: Statistics New Zealand.

## External developments

The economies of New Zealand's main trading partners began to recover in 2002, following the sharp slowdown in 2001. Unlike previous recoveries, which have typically seen a sharp rebound following a sharp fall, this recovery has been particularly patchy. For the past year, there have been concerns raised about its durability and strength, and *Consensus Forecasts* for our main trading partners have continually been revised down as the anticipated recovery has been pushed further into the future.

A key to the ongoing weakness in the global economy has been continued weakness in the US economy. Business investment in the US has been weak since the downturn in 2001, although consumer spending has remained strong, supported by low interest rates and rising house prices. This is despite the substantial declines in equity wealth, rising unemployment and falling consumer confidence. More recently, some renewed optimism around the US economy has been evident. GDP in the second quarter was better than expected, and the latest data on the US economy appears to be confirming the long-anticipated rebound for the second half of this year. Indicators for both the manufacturing and non-manufacturing sectors are improving, there are signs that business investment is picking up, and leading indicators, such as the OECD leading indicator, suggest that the US economy has turned the corner (figure 20).

Nevertheless, uncertainty about the sustainability of the US recovery remains. There is continued concern around imbalances in the US economy, such as the growing current

account deficit. The labour market remains weak, and there is a risk that ongoing labour market weakness could further reduce consumer confidence, although the tax cuts in the third quarter should support near term consumption.

Many European economies remain weak. Italy and Germany are technically in recession, with negative quarterly growth in the first two quarters of this year, and France recorded negative growth in the second quarter.

However, there are tentative signs that things in Europe have stabilised. The monthly IFO index of German business sentiment posted its fourth consecutive rise in August, and activity in the manufacturing sector appears to be improving. The euro has fallen from its highs against the US dollar, and the European Central Bank lowered interest rates by 50 basis points in June.

Nevertheless, prospects for solid growth in Europe remain subdued. Significant structural issues remain, and although some reforms are underway, the progress of these is expected to be slow. Any renewed euro appreciation may hinder the European recovery.

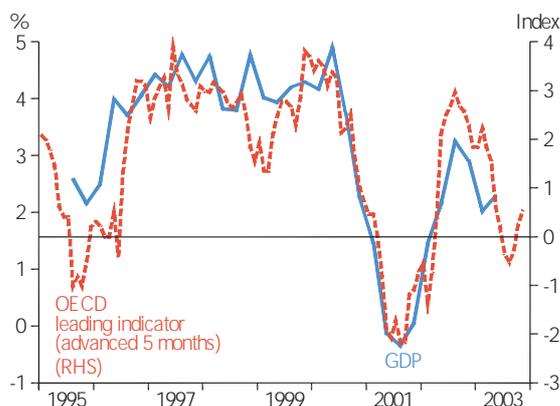
There are signs of improvement across a range of sectors in the UK economy, which continues to look stronger than continental Europe. Purchasing Managers' Index (PMI) indicators for services, manufacturing and construction have picked up, and retail sales and industrial production have improved. All of this suggests that the UK economy may be set to pick up in the second half of the year.

In Japan, increases in leading indicators and some sentiment measures have generated some expectation of a modest upswing, although this will continue to be very dependent on a global upturn. Second quarter GDP was stronger than anticipated, with some strength in domestic demand and capital spending.

Economies in the rest of Asia were significantly affected by the outbreak of SARS earlier this year. This prompted substantial monetary and fiscal stimulus in a number of Asian countries in an attempt to boost domestic demand. The growth outlook in this region remains closely linked to the US cycle, and the associated prospects for an export-led recovery. In this regard, accelerated exports of industrial inputs from the Asian region is encouraging.

The Australian economy continues to perform well. The domestic non-farm sector remains strong: recent retail sales exceeded expectations, consumer and business sentiment

Figure 20  
US GDP growth and OECD leading indicator



Source: Datastream, OECD.

remain positive, and the manufacturing PMI entered positive territory in June. The housing sector remains strong, reflected in rising house prices, and building approvals for houses have increased. The labour market may have softened a little recently, with employment numbers falling in July, but the unemployment rate has been fairly stable and most of the job losses have been concentrated in part-time employment.

## Financial market developments

For most of last year, international financial markets were focused on downside risks to the world economic outlook. Reflecting this, long-term interest rates and equity prices were falling to new historical lows, while credit spreads were widening.

More recently, reduced pessimism around the outlook for the global economy has seen markets take a more optimistic tone, as data has tended to be more promising, corporate earnings have staged a modest recovery, and comments from Fed Chairman Greenspan have been more upbeat. This reduction in pessimism is reflected in rising long-term interest rates (although these remain low by historical standards), increasing equity prices and narrowing credit spreads.

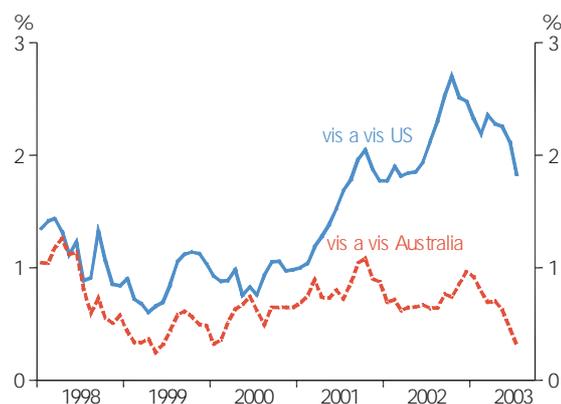
Equity markets around the world have rebounded strongly this year, largely because corporate earnings have been better than expected. In the March and June quarters earnings have been at least equal to expectations, following numerous quarters where they disappointed. The recovery in earnings was broad-based in the June quarter – 86 per cent of S&P500 firms have reported earnings that have met or exceeded their expectations. For the rest of 2003, the corporate sector is expected to improve, and both third- and fourth-quarter profit forecasts have been revised upward modestly. Most of the major European, UK, and US equity markets are up by about 5-10 per cent, while Asian equity markets have shown even more growth, up 10-15 per cent so far this year.

The continued narrowing of credit spreads also suggests a more optimistic outlook. High-yield spreads, which have historically had a reasonably close relationship with GDP growth, have narrowed in the past six months. Given that credit spreads impact on the affordability of capital

expenditure, narrowing credit spreads should be supportive of business investment.

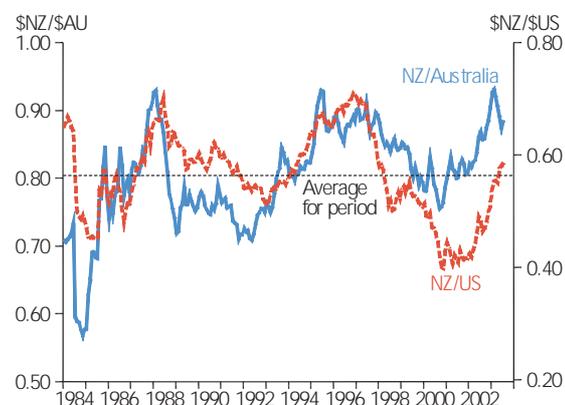
Long-term interest rates in New Zealand have picked up in the last few months, reflecting increases in offshore interest rates. However, the increases here have been smaller than overseas, meaning that our long-term interest rate differentials have narrowed from the historically wide levels reached late last year (figure 21). Short-term interest rates have also picked up, as stronger-than-expected domestic data and a more positive global outlook have led markets to pare back their expectations for interest rate cuts over the remainder of this year.

Figure 21  
NZ-US and NZ-Australia 10-year interest rate differentials



Source: RBNZ.

Figure 22  
Exchange rates with Australia and the US



Source: RBNZ.

The dominant trend in global currency markets in the past year, and a key driver of the appreciation of our TWI, has been the broad-based weakness of the US dollar. Coming from a period where it was widely believed to be over-valued, the US TWI is now around 20 per cent lower than when it peaked in 2002.

The US dollar has recovered a little ground recently, as markets have become more optimistic on the US outlook. It is not clear whether this optimism will lead to a sustained recovery in the US dollar, or whether structural imbalances such as the large current account deficit will lead the US dollar to depreciate in the medium-term. Analysts' forecasts for the exchange rate remain conservative, and recent *Consensus Forecasts* suggest that on average, forecasters are still predicting a modest depreciation of the US dollar over the next year.

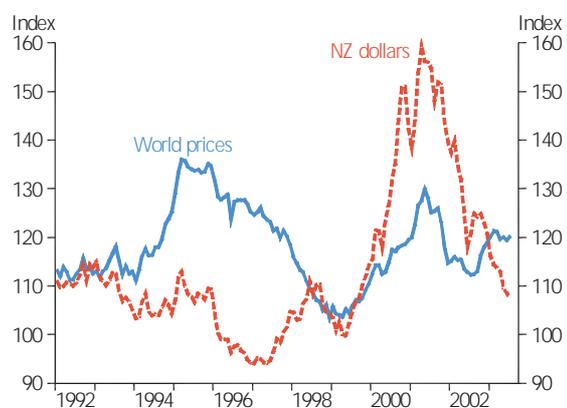
Over the past year, the currencies combining both a stable growth outlook and relatively high interest rates have appreciated the most. Both of these factors are relevant to the New Zealand dollar. Since January 2002 the New Zealand TWI has appreciated more than 20 per cent. The New Zealand dollar is close to its highest levels against the US dollar since 1997/98, although it is at lower levels against the Australian dollar than those seen at the beginning of 2003 (figure 22).

## Tradables sector activity

Over the past two years the tradables sector has shifted from providing substantial stimulus to demand, to imparting an overall braking effect. The volume of exports produced by the sector continues to show moderate growth but export prices, which have an important impact on demand through their influence on incomes, have declined substantially. Exchange rate hedging – either through the direct use of exchange rate cover or through natural hedges created by offsetting movements in import prices – have helped moderate a drop in incomes for some producers, and those in niche markets may have some ability to sustain returns. Nevertheless, New Zealand's trade statistics confirm a substantial drop in export revenues over the past year. Lower prices for some exporters, such as some operators in the forestry industry, have been well publicised and have been a factor behind further rationalisation in this industry.

Commodity prices have declined significantly from their peak in 2001. World prices for New Zealand's key exports fell substantially in 2002, with dairy export prices recording a particularly large fall. World export prices partially recovered in the latter half of the year, and have been relatively stable during the first half of 2003. However, continuing appreciation of the New Zealand dollar has led to further declines in the prices received by New Zealand's primary exporters across most export categories (figure 23).

Figure 23  
World commodity prices

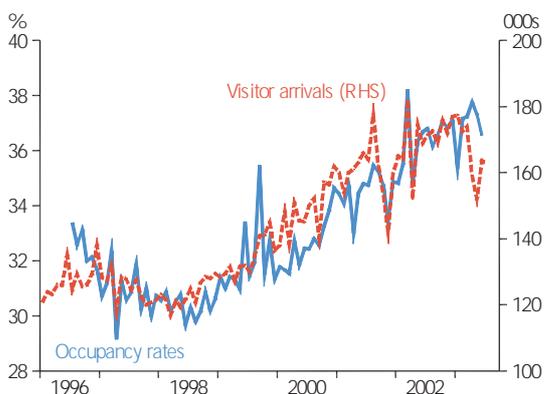


Source: ANZ Banking Group Ltd.

Although export prices have fallen markedly, the volume of exports has continued to expand. Export volume growth is slowing, but the decline has been less than might otherwise be expected, given sustained weakness in the global economy. In some cases, overseas demand for New Zealand's exports has benefited from 'hot-spots' of activity in some trading partners. Demand for some timber and wool products, in particular, has benefited from the strong housing market activity in Australia.

Dry conditions in parts of the country have affected the timing of production for some agricultural products. Early slaughtering by farmers led to strong export volumes of beef and lamb earlier this year, but this has been followed by lower export volumes in recent months. A late start to the season is expected to have delayed exports of apples and kiwifruit from the start of the year, and a strong increase is expected in the June quarter. Dairy export volumes recorded impressive growth during 2002, and although dairy exports have weakened, they remain at historically high levels.

Figure 24  
Occupancy rates and short-term visitor arrivals

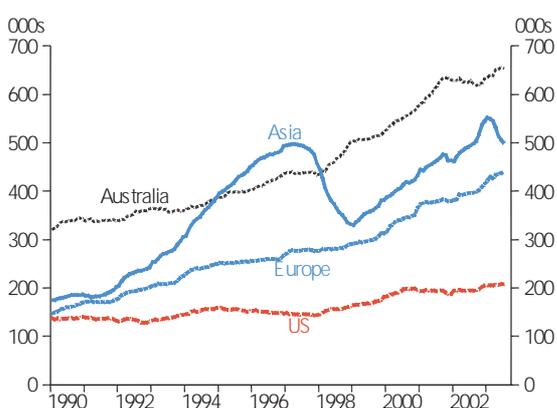


Source: Statistics New Zealand.

In aggregate, non-commodity manufactured export volumes have recorded reasonably strong growth in 2003, following a dip in the second half of last year. Exports of machinery and transport equipment have been particularly strong, highlighting the ability of some players to continue to expand markets despite a rising exchange rate and continued weakness in trading partner economies.

Tourism has made a significant contribution to growth in exports of services over the past year driven by strong visitor arrivals, particularly from Europe and the UK. Visitor arrivals recorded a sharp fall following the outbreak of SARS earlier this year, with a substantial decline in arrivals from Asian countries outweighing an increase in arrivals from Australia and the UK. However, overall arrivals have begun to recover, and occupancy rates have remained relatively high (figure 24). Nevertheless, the composition of visitor arrivals continues to show reduced arrivals from Asia (figure 25).

Figure 25  
Visitor arrivals  
(000s per year)



Source: Statistics New Zealand.

While overall export volume growth has weakened, import volumes, which can be seen as a barometer for domestic demand, have remained strong. Import volumes recorded strong growth over 2002, with strong imports of consumer durables, driven by migration and the buoyant housing and construction markets.

After softening earlier this year, import volumes picked up again in the June quarter, with strong imports of intermediate and capital goods, as well as ongoing strength in consumption goods. Imports of passenger motor vehicles have been particularly strong recently. This suggests that domestic demand remains relatively robust. Strong imports of capital goods suggest that business investment may be relatively strong over the next few quarters.

The switch to imported goods away from domestically-produced goods is likely to increase as the price of imported goods falls. The continued appreciation of the exchange rate has seen import prices fall steadily over the past year, and is likely to have contributed to the strength in import volumes. However, import prices have declined to a lesser extent than export prices, with our terms of trade declining considerably from the highs in 2001. The large decline in export values over the past year has been behind a widening in the current account deficit from the lows achieved a year or so ago.

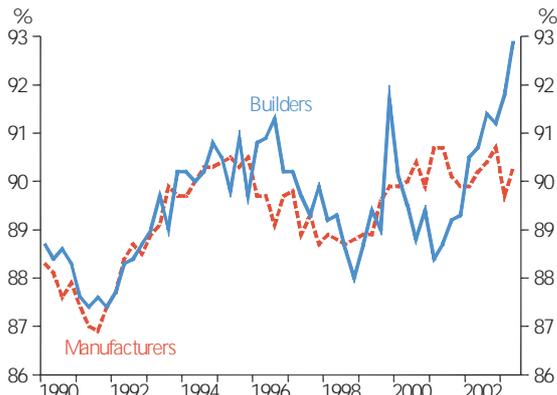
## Cyclical position of the economy

Strong growth in the economy over the past year has put increasing pressure on productive resources. Firms have expanded production to meet growing demand, and this has increased their utilisation of capital and demand for labour.

Throughout the past year, firms have increasingly reported little scope to expand production without increasing unit costs. Capacity utilisation, as measured by the NZIER's Quarterly Survey of Business Opinion (QSBO), has been strong for some time. In our June *Statement*, we saw some indications that cyclical pressures may have peaked, consistent with evidence that momentum in the economy is slowing. This still appears to be the case in some sectors. Capacity constraints in the manufacturing sector, in particular, appear to have eased. However, capacity constraints in the building sector have

continued to increase, reaching record highs in June, reflecting the intense pressures in the construction sector (figure 26). Builders and other tradespeople report backlogs of work that are likely to see activity sustained at high levels over the coming months.

**Figure 26**  
Capacity utilisation  
(seasonally adjusted)

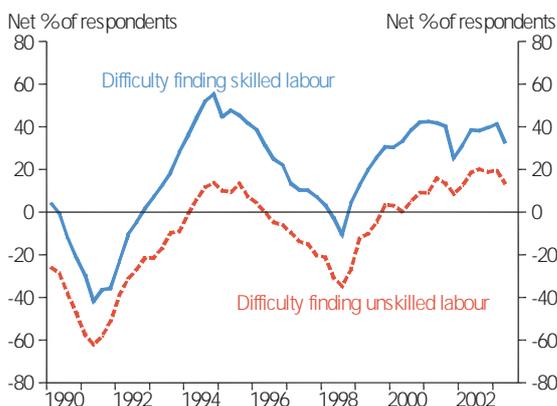


Source: RBNZ estimates based on NZIER's Quarterly Survey of Business Opinion data.

Strong growth has also put pressure on the labour market, with various indicators suggesting that conditions have been tight for some time. Employment growth has been strong and the unemployment rate has fallen to 4.7 per cent, the lowest since 1987. For some time, firms have reported difficulty finding skilled and unskilled workers.

Nevertheless, some indicators of the labour market hint at a degree of moderation in resource pressure. QSBO indicators of skilled and unskilled labour shortages have eased slightly in the June quarter (figure 27).

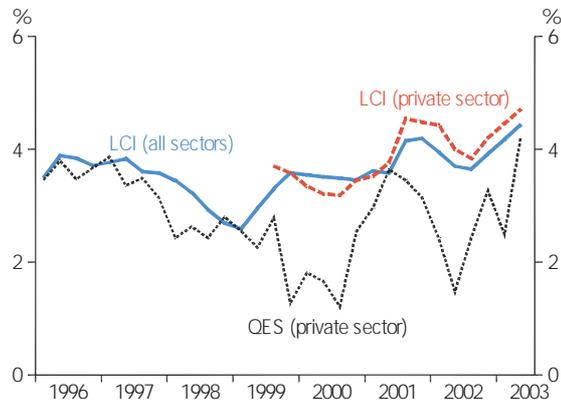
**Figure 27**  
Skill shortages



Source: New Zealand Institute of Economic Research.

There is some indication that tight labour market conditions are beginning to feed through into higher wages, following a period of relatively muted wage growth. The Labour Cost Index (LCI) for the private sector, which measures salary and wage rates for a fixed quantity and quality of labour, has been slowly increasing over the past 12 months and is around cyclical highs (although this measure displays little volatility over the cycle). The LCI prior to adjustments for productivity, which shows considerably more variance, has recorded a larger increase (figure 28).

**Figure 28**  
Unadjusted LCI and hourly earnings  
(annual percentage change, LCI series shown exclude productivity adjustments)



Source: Statistics New Zealand.

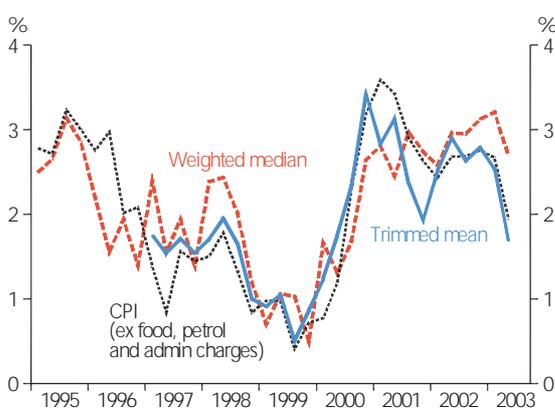
Wages, as measured by the Quarterly Employment Survey's average hourly earnings series, have also been increasing, with a particularly sharp increase in the three months to May. This measure of wage movements has been relatively volatile recently, reflecting compositional changes in the labour force.

Typically, interpretation of wage data is difficult given divergences in the various measures available. However, recent trends are consistent with wage increases having edged up over the past year or two, as would be consistent with ongoing tightness in the labour market. Whether this will have implications for price inflation is not clear – our assessment is that in recent years, wages have tended to follow rather than lead price inflation. Nevertheless, higher wage growth over a sustained period of time would have the potential to exert pressure on price inflation at some point, by increasing production costs.

## Inflation developments

CPI inflation averaged more than 2½ per cent during 2002, but has declined during 2003 and is now around 1½ per cent.<sup>3</sup> The various 'trend' measures of inflation that we monitor – such as the weighted median of annual changes, the trimmed mean and the CPI excluding food, petrol and administration charges – bear out this fall in inflation. All have fallen sharply over the past quarter (figure 29).

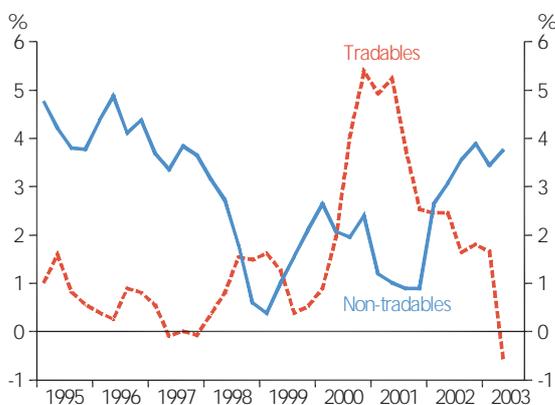
**Figure 29**  
Indicators of core inflation  
(calculated from annual percentage changes)



Source: RBNZ.

CPI inflation is currently being affected by two contrasting forces: falling inflation for tradable goods reflecting the appreciation in the exchange rate, and very strong non-tradables inflation reflecting strong resource pressures in the domestic economy (figure 30).

**Figure 30**  
Tradables and non-tradables inflation  
(annual percentage change)



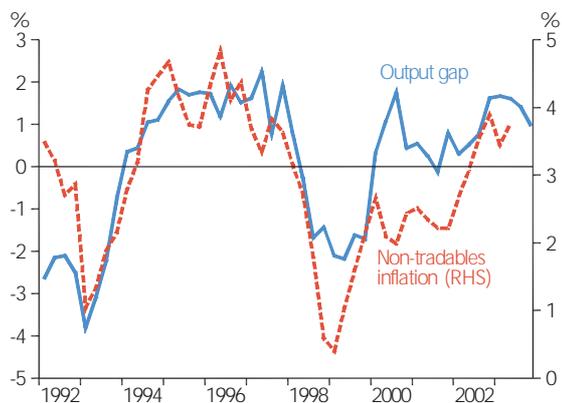
Source: RBNZ.

<sup>3</sup> Our expectation for the September quarter CPI is for a 0.8 per cent rise, taking the annual inflation rate to 1.8 per cent.

The fall in headline inflation during 2003 is largely attributable to the appreciation of the New Zealand dollar. This has caused inflation in tradable goods to decline sharply over the past two years, with a negative annual inflation rate for them in the June quarter. The sharp fall in tradables inflation mostly reflects the direct effect of the higher New Zealand dollar, which reduces the price of imported goods. Various factors which affected aviation also contributed to exceptionally low inflation in that sector.

While prices of tradable goods have been falling, inflation of non-tradable goods and services has remained strong. Non-tradables inflation is influenced by the pressure on domestic resources, and as such tends to reflect the more persistent component of inflation. Over the past year strong domestic demand, intense utilisation of capital, and tight labour market conditions have led to a relatively strong increase in non-tradables inflation (figure 31).

**Figure 31**  
Cyclical position and non-tradables inflation<sup>4</sup>

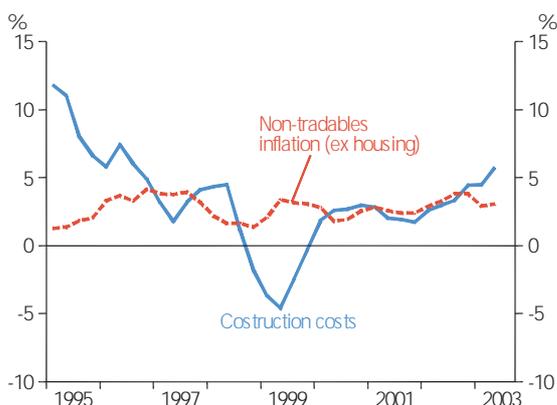


Source: RBNZ.

Part of the strength in non-tradables inflation is attributable to increases in construction costs and other housing-related components such as real estate agents' fees. However, even excluding housing-related components, non-tradables inflation remains high (figure 32). This reflects the strength in many areas of the domestic economy over the past year.

<sup>4</sup> The output gap is an aggregate measure of the state of the business cycle that shows the pressure that current economic activity is exerting on resources. A positive output gap, such as that seen over the past year, indicates that resources are being heavily used, suggesting increasing pressure on inflation. Non-tradables inflation has been adjusted for Housing New Zealand's shift to income-related rents.

**Figure 32**  
Non-tradables inflation



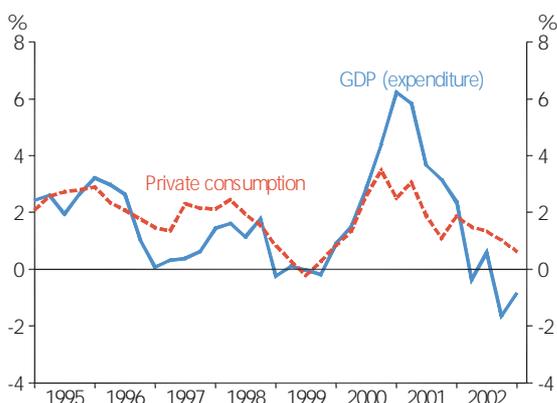
Source: Statistics New Zealand, RBNZ.

In our June *Statement*, we noted that the fall in non-tradables inflation in the March quarter seemed very early to be a turning point given the normal lags between changes in capacity utilisation and domestic inflation. Non-tradables inflation subsequently increased in the June quarter, which confirms that non-tradables inflation remains strong, and may not have peaked yet.

Non-CPI-based inflation indicators give a somewhat weaker picture of inflation pressures than the CPI (figure 33). The GDP deflator, which is one of the broadest measures of prices in the economy, fell by 0.9 per cent in the year to March 2003. However, this weakness appears to have been heavily influenced by the sharp fall in export prices over 2001 and 2002, and masks higher domestic inflation.

The private consumption deflator, which measures similar goods and services as the CPI, is also very weak, increasing

**Figure 33**  
National accounts deflators  
(annual percentage change)

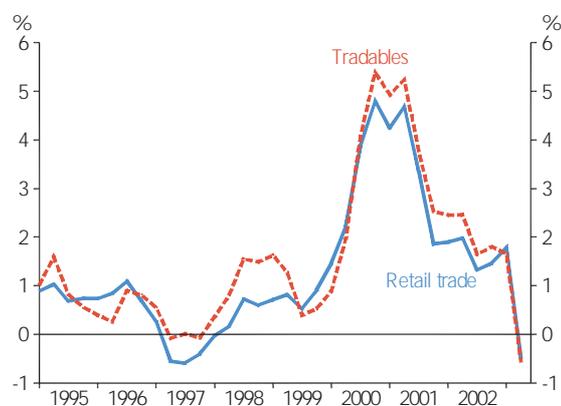


Source: Statistics New Zealand.

just 0.4 per cent in the year to March 2003. Inflation measured by the private consumption deflator has been significantly lower than the corresponding rate of CPI inflation over the past year or so. As we have noted previously, Statistics New Zealand has stated that the methodologies used to construct the deflator are currently under review with some problems identified. Until these issues are resolved, there do not appear to be strong grounds for believing the consumption deflator in New Zealand is providing a useful alternative measure of inflation to the CPI.

The retail trade deflator, which measures a subset of goods included in the consumption deflator, has also been weak, recording a sharp fall in the June quarter. Because a large proportion of retail trade consists of imported goods, the retail trade deflator tends to be strongly influenced by the exchange rate. The series is very closely related to the tradables components of the CPI (figure 34).

**Figure 34**  
Retail trade deflator and tradables inflation  
(annual percentage change)

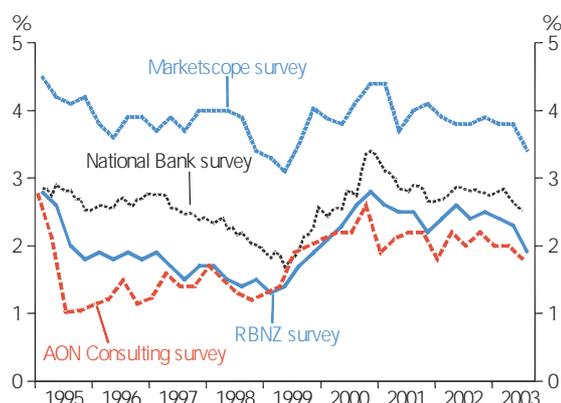


Source: Statistics New Zealand, RBNZ.

There is some evidence that the decline in consumer price inflation has reduced inflation expectations (figure 35). Survey measures such as the Marketscope survey (covering households), the RBNZ survey of expectations, the National Bank survey of pricing intentions and AON Consulting survey (all covering business or professional audiences) have edged down recently. The fall in surveyed inflation expectations in the September quarter is likely to reflect weak CPI inflation in the June quarter, and the effect of the higher New Zealand

dollar in reducing tradable prices. According to the RBNZ survey, inflation in 2 years time is expected to be higher than inflation in 1 years time, for the first time since late 1999. Despite the recent fall in inflation expectations, all of these measures remain above the lows seen in 1999, when CPI inflation was very low.

Figure 35  
Expected inflation in 1 years time



Source: AON Consulting, National Bank of New Zealand, RBNZ.

Table 1  
CPI and other price measures  
*Annual percentage changes*

|  | 2001<br>Dec | 2002<br>Mar | Jun  | Sep  | Dec  | 2003<br>Mar | Jun  |
|--|-------------|-------------|------|------|------|-------------|------|
| CPI  | 1.8         | 2.6         | 2.8  | 2.6  | 2.7  | 2.5         | 1.5  |
| Food   | 6.7         | 5.3         | 4.1  | 2.3  | 0.9  | -0.2        | 0.0  |
| Housing                                      | -0.7        | 2.3         | 2.8  | 3.0  | 4.0  | 4.0         | 4.7  |
| Household operations                         | 1.4         | 1.5         | 2.7  | 2.9  | 2.7  | 1.9         | 1.1  |
| Apparel                                      | 2.0         | 1.2         | 1.7  | 1.2  | 0.7  | 0.8         | -0.6 |
| Transportation                               | -1.4        | 0.6         | 0.9  | 1.2  | 3.3  | 4.3         | -1.7 |
| Tobacco and alcohol                          | 3.5         | 3.3         | 3.8  | 3.6  | 3.6  | 3.1         | 2.7  |
| Personal and health                          | 4.3         | 3.7         | 4.1  | 4.5  | 4.2  | 3.8         | 3.5  |
| Recreation and education                     | 1.5         | 2.1         | 2.5  | 2.3  | 2.5  | 2.7         | 2.1  |
| Credit services                              | 8.5         | -5.9        | 0.0  | 2.3  | 1.9  | -2.0        | 0.7  |
| <b>Derivatives and analytical series</b>     |             |             |      |      |      |             |      |
| CPI ex food, petrol and government charges   | 2.6         | 2.4         | 2.7  | 2.7  | 2.8  | 2.7         | 1.9  |
| CPI non-tradables                            | 0.9         | 2.6         | 3.1  | 3.6  | 3.9  | 3.4         | 3.8  |
| CPI tradables                                | 2.5         | 2.5         | 2.5  | 1.6  | 1.8  | 1.7         | -0.6 |
| CPI weighted median (of annual price change) | 2.7         | 2.6         | 3.0  | 3.0  | 3.1  | 3.2         | 2.7  |
| CPI trimmed mean (of annual price change)    | 1.9         | 2.5         | 2.9  | 2.6  | 2.8  | 2.5         | 1.7  |
| Merchandise import prices (excluding petrol) | -4.4        | 0.1         | -4.6 | -4.9 | -8.8 | -12.1       | n/a  |
| PPI - Inputs                                 | 1.8         | 2.8         | 1.5  | -2.1 | -1.4 | -1.3        | -2.0 |
| PPI - Outputs                                | 2.6         | 3.1         | 2.3  | -0.1 | -0.1 | -0.4        | -0.6 |
| Private consumption deflator                 | 1.1         | 1.9         | 1.5  | 1.3  | 1.0  | 0.6         | n/a  |
| GDP deflator (derived from expenditure data) | 3.2         | 2.4         | -0.4 | 0.6  | -1.6 | -0.8        | n/a  |
| Retail trade deflator                        | 1.9         | 1.9         | 2.0  | 1.3  | 1.5  | 1.8         | -0.5 |

## 4 The macroeconomic outlook

### Introduction

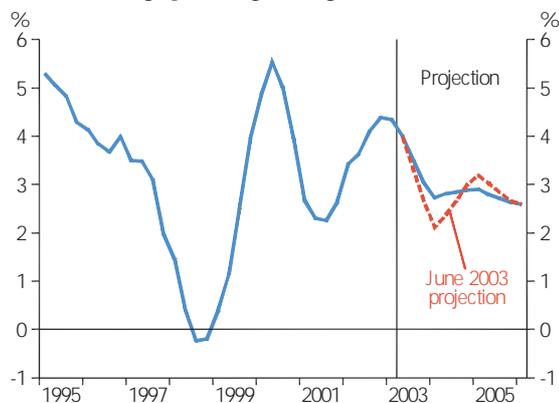
This chapter – and the accompanying tables in the Appendix – provide an updated projection of economic conditions and the policy outlook. This central scenario is a useful way of articulating, in broad terms, how we think the major forces impacting on the economy might evolve over the next year or so, and what they might mean for monetary policy over that time. However, as with all projections, there is a range of risks and uncertainties which need to be borne in mind – the actual path of the economy could well differ from that shown here.

In June, our projections reflected a slightly more accommodative stance for monetary policy than might otherwise have been the case, with policy settings consistent with projected inflation rates of up to 2½ per cent in the outer years of the projections, within the upper half of the 1 to 3 per cent target range. This approach recognised the fragility evident in business and consumer confidence, the potential for further exchange rate appreciation than assumed in the projections and ongoing uncertainty around the timing and strength of global recovery. In essence, it recognised a greater probability that actual inflation outturns could prove weaker than in the central projection.

Some of the specific near-term risks to growth have dissipated over recent months, and recent domestic activity has been stronger than we envisaged. Our starting point assessment of the degree of ‘stretch’ in the economy is consequently a little stronger than we thought in June. However, we continue to project a slowing in growth over the year ahead and many of the uncertainties around the drivers of that slowdown that characterised the projections in June remain relevant. Of particular note is the exchange rate which, despite having risen further than we assumed in June, could continue to display greater strength than in the projections presented here and consequently place greater downward pressure on activity and inflation. Despite some recent optimism around the outlook for the US economy, *Consensus Forecasts* of trading partner growth still point to a relatively protracted recovery over the next two years, highlighting the possibility of further setbacks to growth. Moreover, as Box 3 outlines, there remains uncertainty over the degree to which growth in the population may slow over the next few years.

These sorts of influences work against projecting significant monetary policy change in the near future. Consequently, the 90 day interest rate track is projected to remain relatively flat over the next few quarters before rising gently to around the 6 per cent mark by early 2006. This represents a very similar outlook to that published in June. Inflation is projected to edge up from recent levels, partly reflecting our exchange rate assumption, and peaks at a slightly higher rate during 2005 than in the June projections before easing back later in the projection horizon.

Figure 36  
GDP growth  
(annual average percentage changes)



Source: Statistics New Zealand, RBNZ calculations.

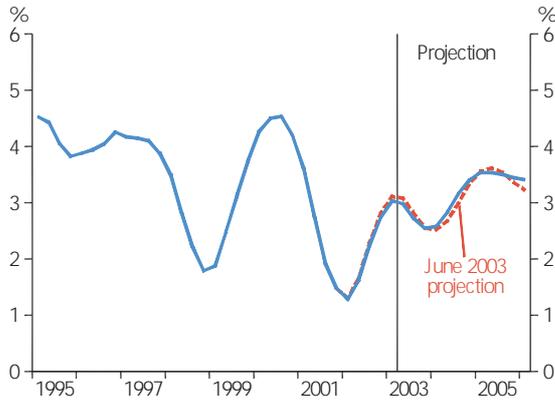
The inflation outlook is based on a slowing in GDP growth over the coming year from its recent strong pace (figure 36). Throughout the projection horizon, the activity profile across sectors remains uneven – export sector performance remains under pressure, with activity levels in the domestic sector rather stronger, with further expansion in some components such as residential investment.

### The world economy

In establishing the outlook for New Zealand's main trading partners, we make use of forecasts and analyses of individual country prospects made by forecasters in the countries in question. Our primary focus is on understanding the channels through which the international economy is likely to influence activity and prices in New Zealand as well as the risks and uncertainties around the growth outlook. However, *Consensus Forecasts*, which are a structured survey of the

main forecasters in the various countries, provide a useful benchmark for the growth outlook in our 14 main trading partners (figure 37).

**Figure 37**  
Trading partner growth  
(annual average percentage changes)



Source: Consensus Economics Inc, RBNZ calculations.

Chapter 3 described the more optimistic tone to economic prospects for some key trading partner economies in recent months – most notably the US – following some more encouraging data. But it also noted continued weakness in some countries, such as those within Europe and among some Asian economies. In aggregate, *Consensus Forecasts* portray an outlook for trading partner growth in 2003 that is marginally stronger than in the June projections, but the outlook remains one of a relatively protracted recovery in growth over the next two years (see Table 2).

Our current assessment is that the risks to this outlook are fairly balanced at present. Whilst we recognise a possibility that the growth outlook for trading partners could start to turn up more quickly over the months ahead, further setbacks to a recovery in some countries certainly cannot be ruled out.

## Tradables sector activity and prices

A key factor shaping our view of the economy over 2003 has been the expectation of a further decline in export incomes over the next 12 months as the higher exchange rate and ongoing effects of the weak global demand cycle continue to dampen export prices and demand. Chapter 3 noted that this decline is already clearly underway, although its impact on aggregate activity has been offset to a degree by continued strength elsewhere in the economy.

Projected developments in the tradables sector depend crucially on assumptions made about the exchange rate. In the June *Statement*, we adopted an approach whereby the trade-weighted exchange rate was assumed to remain at its current value over the following three quarters before returning gradually towards its longer run equilibrium. This was a departure from previous practice in that we did not assume that the depreciation took place immediately. The modified mechanical assumption was intended to help capture our assessment that the risks to the near-term exchange rate outlook remained skewed toward the upside,

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

|                   | 2001 | 2002 | 2003f | 2004f |
|-------------------|------|------|-------|-------|
| Country           |      |      |       |       |
| Australia         | 2.7  | 3.6  | 2.7   | 3.6   |
| United States     | 0.3  | 2.4  | 2.3   | 3.7   |
| Japan**           | 0.4  | 0.2  | 1.8   | 0.9   |
| Canada            | 1.9  | 3.3  | 2.1   | 3.0   |
| Europe-4***       | 1.8  | 1.2  | 1.0   | 2.0   |
| Asia ex-Japan**** | 1.8  | 5.0  | 4.1   | 5.6   |
| 14 country index  | 1.5  | 2.7  | 2.5   | 3.4   |

\* Source: Consensus Economics Inc.

\*\* The forecast for Japan has been adjusted to take account of the stronger than expected GDP outturn for Q2 (released since the August Consensus Forecasts were published).

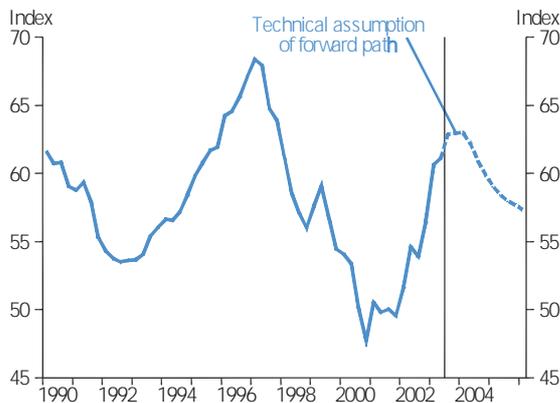
\*\*\* Includes Germany, France, Italy, and the United Kingdom.

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

but did not purport to be a 'forecast' as such. In these projections we have continued that approach with the TWI assumed to remain at its recently attained level (an estimated average for the September quarter of around 62.9) until the first quarter of 2004, before falling back gradually to levels assumed in the June Statement (figure 38). This represents a higher starting point for the exchange rate than in the June projections and consequently the exchange rate has a stronger braking effect on export volumes than in those projections and exerts greater downward pressure on export prices.

Aggregate export volumes are expected to post moderate growth over the next three years, but at a slightly reduced pace to that seen recently (figure 39). Our recent analysis of the impact of the exchange rate on the growth of export volumes suggests that the impact is relatively muted (see box 2) and we reflect that evidence in these projections. This is not to suggest that the exchange rate is unimportant to the wellbeing of the export sector – however, it would appear that the most powerful and direct effects are likely to occur through the influence on export prices and incomes rather than changes in volumes.

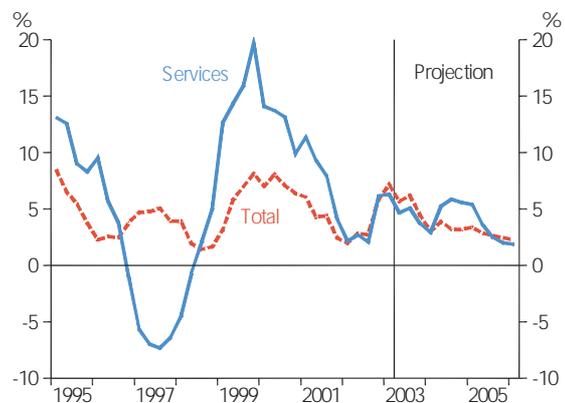
**Figure 38**  
Trade weighted exchange rate



Source: RBNZ.

Our primary sector export forecasts rely heavily on the advice of the various primary sector agencies and companies. Their views on primary sector prospects take into account detailed factors like climatic conditions, stocks and productivity, as well as particular market conditions. The dry conditions experienced over the summer of 2002/03 resulted in the early slaughtering of stock in early 2003, and milk production was also affected in some regions. Current views

**Figure 39**  
Projected export volume growth  
(annual average % changes)



Source: Statistics New Zealand, RBNZ calculations.

suggest some lingering impacts from the dry conditions on meat production over the coming season, but the outlook is for modest growth in volumes of meat and dairy exports over the next 3 years. Forestry export volumes are expected to remain constrained in the near-term by soft global demand and the impact of the high New Zealand dollar, which has led some players to exit the industry.

Growth in exports of manufactured goods is also expected to be slightly weaker than in the June projections. Production was temporarily affected by the recent electricity price increases associated with the hydro-shortages, but these impacts appear likely to dissipate over the next quarter or so. However, the higher exchange rate is expected to constrain overall manufactured export performance.

We have seen a recovery in the exports of services from the SARS-related downturn earlier in the year, with the fall in visitor arrivals reversing relatively quickly. Looking ahead, projected growth rates over the next few years are expected to be similar to those assumed in the June projections, albeit somewhat weaker than have been achieved over recent years.

Over the projection period, the outlook for export prices, measured in domestic currency, is expected to be dominated primarily by the exchange rate. The recent rise in the exchange rate will have the effect of reducing export prices in 2003/04, although our assumption that the exchange rate returns gradually toward its long run average means that prices lift gradually in the outer years. The outlook of a continued, but

*(continued on p. 25)*

## Box 2

### The impact of the exchange rate on export volumes

When tracing the influence of the export sector on aggregate economic activity and inflationary pressures, two key channels are relevant. The production of exports (i.e. export volumes) contributes directly to activity, while changes in export prices can have a powerful impact on activity via exporters' incomes.

Recent Reserve Bank research has focused on the effects of cyclical variations in the real (or inflation-adjusted) exchange rate on economic activity. Our latest estimates suggest that a persistent 5 percentage point appreciation in the real exchange rate would reduce aggregate export volumes by around 1<sup>1</sup>/<sub>4</sub> per cent relative to their trend, with the peak effect occurring after approximately 18 months. This represents a reasonably muted response compared to estimates for some countries but is consistent with factors such as climate and biological constraints dominating export production from season to season, given the preponderance of primary production in New Zealand's total exports.

The work also suggested significant variation in the response across different export industries. This is evidenced by the large differences regularly observed in sectoral export volume growth rates (see figure 40).

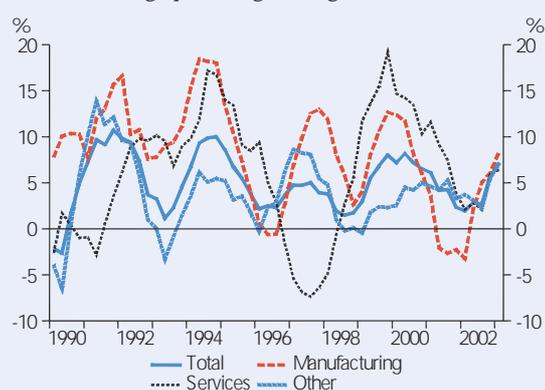
- Services export volumes (which include inbound tourism) are more cyclical and appear to be more sensitive to the real TWI exchange rate than other sectors. The peak volume response occurs with a lag of approximately 18 months.
- Manufacturing exports appear to be influenced by the real NZD/AUD and NZD/USD bilateral exchange rates, with the maximum impact on volumes occurring after 12-15 months.
- For individual agricultural exports, the degree of exchange rate sensitivity varies considerably, with factors such as climate also likely to be influential.

The relatively muted response of aggregate export production to real exchange rate fluctuations should not be taken to imply that the exchange rate is of little importance to the export sector. However, it does appear that its dominant influence may occur through prices rather than

volumes. Fluctuations in domestic currency export prices and incomes due to exchange rate movements appear to have a significant (and larger) impact on the wellbeing of the sector and hence on the wider economy.

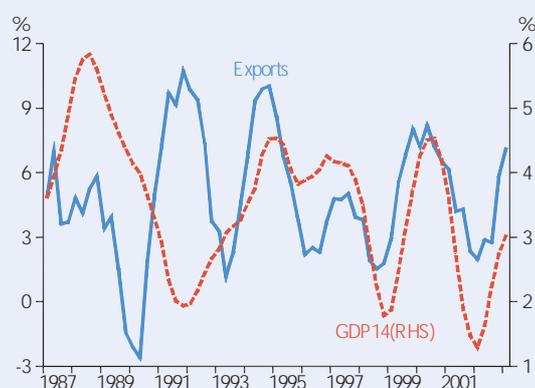
Our work also examined the impact of global demand on export volumes. The latest estimates suggest that a 1 per cent increase in world output (as proxied by growth in our 14 major trading partners - figure 41) increases exports by around 1<sup>1</sup>/<sub>2</sub> per cent relative to trend, partly through a favourable impact on the terms of trade (which rise by around 3 per cent). This estimate represents a slightly weaker effect than suggested by previous work.

Figure 40  
Export volumes by sector  
(annual average percentage change)



Source: Statistics New Zealand

Figure 41 Export volumes and trading partner growth<sup>5</sup>  
(annual average percentage change)



Source: Consensus Economics Inc, RBNZ.

<sup>5</sup> Trading partner growth represented by growth in New Zealand's 14 largest export partners (GDP-14).

gradual recovery in the global demand cycle is not expected to produce significant increases in world prices until later in the projection horizon. Domestic currency export prices are therefore projected to remain well below the peaks achieved during 2000. Consequently, export sector incomes remain more constrained than in recent years, providing an ongoing brake on the pace of expansion elsewhere in the economy.

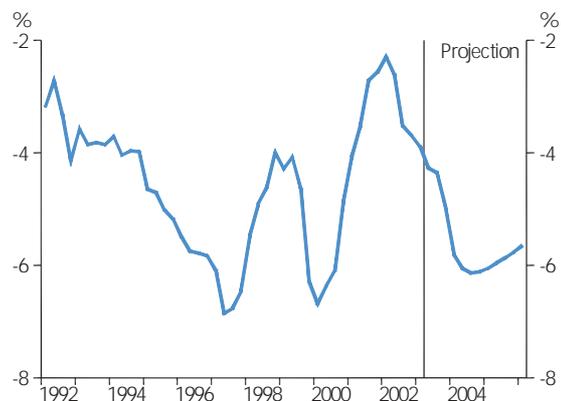
In the near-term, import demand is projected to be stronger than in our June forecasts, with domestic demand stronger during 2003 than we thought might be the case in June. As noted in chapter 3, some of the negative confidence effects that we had assumed might operate to constrain activity during the year no longer appear as likely. The higher assumed exchange rate is also expected to shift the balance in favour of higher import demand, growth of which is projected to outstrip underlying growth in GDP. However, by the end of the projection period, with the exchange rate back to similar levels assumed in June and economic activity growing at a similar pace, imports are projected to grow broadly in line with GDP as a whole.

Our outlook for export and import activity is consistent with a further widening in New Zealand's current account deficit over the coming year to a peak of around 6 per cent of GDP in 2004. The recent sharp decline in the terms of trade, combined with growth in import volumes that outpaces that of exports, shrinks the surplus on the goods and services account. Later in the projection period, the current account deficit (figure 42) begins to shrink, reflecting more moderate rates of economic growth and our assumption of a lower exchange rate, which provides some boost to export revenues.

## Domestic spending

We now expect domestic demand to be stronger in the near-term than in the June projections. As noted in Chapter 3, the negative confidence effects that we thought might be operating on consumption expenditures during 2003 appear likely to have been milder than we allowed for in June with the sharp dip in consumer confidence proving relatively short-lived. The recent continued strong growth in population is expected to add further fuel to residential building activity and consumption demand in the near-term, but we assume a slowing in population growth throughout the projection horizon, which gradually removes that stimulus to demand

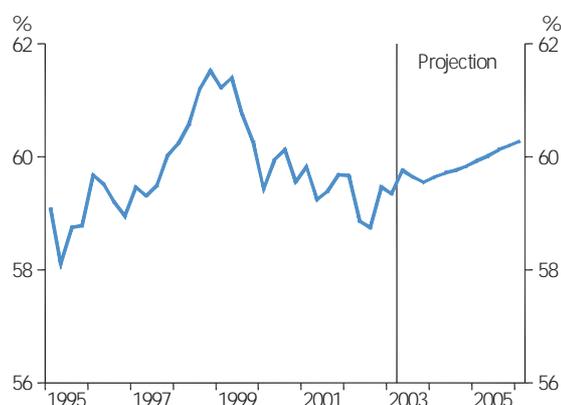
**Figure 42**  
Current account  
(% of GDP)



Source: Statistics New Zealand, RBNZ calculations.

(see box 3). Consumption has lifted relative to GDP over the past two years and is expected to mildly outpace GDP growth over the projection period (figure 43).

**Figure 43**  
Real consumption  
(% of GDP)



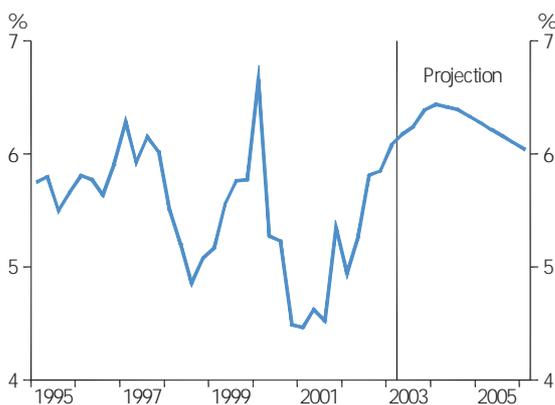
Source: Statistics New Zealand, RBNZ calculations.

The path of interest rates in these projections is very similar to that in the June projections. Interest rates, which are currently providing some stimulus to the economy, edge up marginally later in the projection period as the exchange rate falls and the global recovery gains some momentum. Nevertheless, interest rates remain at levels that are likely to have a broadly neutral effect on domestic demand.

The residential investment cycle incorporated in these projections is relatively long and more so than in June, with

activity levels projected to hold up at cyclical highs through the next 2 years (figure 44). There are two factors underpinning that outlook. First, we are assuming further substantial growth in the population, albeit at weaker rates than have been seen recently. Second, there are widespread reports of significant capacity constraints in the construction sector, supported by a continued increase in QSBO builders' capacity utilisation (to all-time highs) and ongoing labour supply constraints. These factors suggest there are limits to which residential investment activity can lift in the near-term to meet demand. Instead, we have allowed for a more prolonged residential investment cycle.

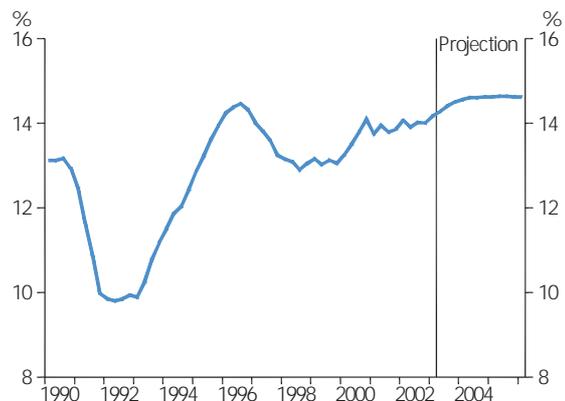
**Figure 44**  
Residential investment cycle  
(% of GDP)



Source: Statistics New Zealand, RBNZ calculations.

On the business investment front, business surveys show that business confidence has recovered much of its lost ground seen earlier in 2003, and firms' expectations of their own activity over the next 12 months have improved quite markedly. These trends suggest any confidence-related setback to investment activity may be weaker than we previously allowed for. Meanwhile, import data are consistent with a further near-term lift in investment activity. Further out in the projection horizon, with export activity and incomes constrained and domestic demand projected to be slowing, growth in investment spending is projected to grow broadly in line with GDP. However, as we discussed in June, this profile would continue to leave the investment-to-GDP ratio at a relatively high level following its climb during the 1990s (figure 45).

**Figure 45**  
Business investment  
(% of GDP)



Source: Statistics New Zealand, RBNZ calculations. Ratio of annual totals.

The risks to domestic spending continue to lie in both directions. Potentially, wealth effects from a buoyant housing market could underpin higher rates of household spending whilst the pursuit of capital gain could result in additional speculative residential building activity. Importantly, we have not allowed for such effects in these projections over and above the extra demand created from growth in incomes and the assumed rise in population.

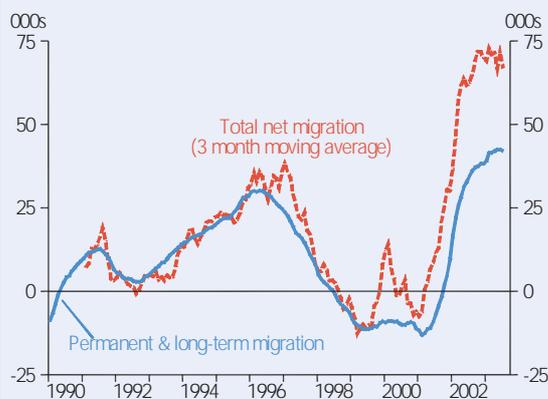
Conversely, the stronger exchange rate and its downstream impact on export revenues could cause a sharper or more prolonged downturn. The risks around net migration – particularly in the outer years of the projections – are such that they could cause a significant change in the outlook from that presented here. For example, a rapid recovery in resident departures at some stage over the next few years has the potential to cause a sharp slowdown in population growth. Such a development could occur if, for example, external labour markets were to show a marked upturn.

### Box 3

#### Migration

Net immigration has shown a remarkable turnaround over the last few years. Permanent and long-term (PLT) migration switched from a net outflow of 10,000 per year in early 2001, to a net inflow of more than 40,000 per year in mid-2003. And these numbers do not tell the full story about the population gain. Over the past few years, there has been a build-up in those visiting New Zealand for short periods, such as English language students and those coming here on work permits for periods of less than a year. In addition, those who apply and are granted residence onshore, having arrived in New Zealand on a temporary basis, are generally not captured by the PLT statistics. A more accurate estimate of the total net inflow is to take the difference between total arrivals and departures from New Zealand, which suggests the net inflow was closer to 70,000 over the year to June 2003 (figure 46).

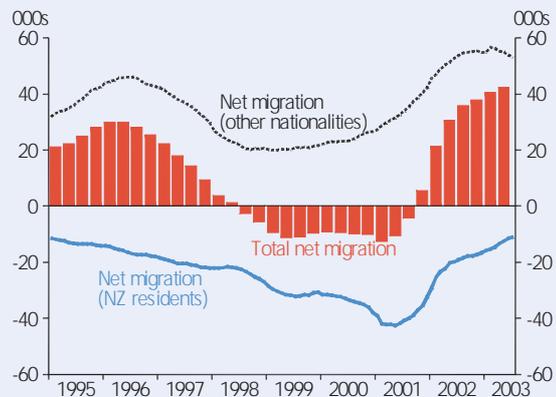
**Figure 46**  
Net migration  
(000s per year)



Source: Statistics New Zealand.

The surge in net immigration reflects increasing arrivals from Asia, including foreign students, and a smaller net outflow of New Zealand citizens. The extent to which these trends will continue is difficult to predict. Although the net inflow of foreigners appears to have peaked, a continued reduction in the net outflow of New Zealand citizens has seen net immigration flows continue to strengthen (figure 47).

**Figure 47**  
Permanent and long-term migration  
(000s per year)



Source: Statistics New Zealand.

The outlook for net immigration may be affected by recent policy changes, which affect skilled migrants seeking residence in New Zealand. The policy changes involve the establishment of a Skilled Migrant Category to replace the previous General Skills Category. Under the new system, those applying under this category will need to gain an 'invitation' by registering an expression of interest. The invitation to apply will be offered to those meeting character, health and English language requirements, but will also put particular weight on employability. This is intended to allow better matching of skills with the underlying demand for skills and occupations in the labour market.

The policy changes are not intended to change the number of migrants, and the immigration programme has been maintained at 45,000 approvals for the June 2004 year. Following the announcement of the policy changes, interest in migrating to New Zealand is still said to be strong, and there is unlikely to be a sharp fall in the number of approvals in the near future. Nevertheless, it is possible that the policy change will encourage more migrants to apply from onshore, where it is easier to obtain a job offer. This may result in a fall in measured PLT migration, with a growing differential between total and PLT net immigration.

In the last few months, arrivals of foreign students appear to have eased, following exceptional growth over the last few years. The slowdown has largely been among Asian students staying for short periods, particularly those attending English language schools. It is likely that the flow

of short-term students has been disrupted by the SARS virus and may have been affected by the higher exchange rate.

There is tentative evidence that the number of PLT arrivals may have peaked, with arrivals tailing off over recent months. However, a large factor contributing to strong net immigration has been a steady fall in departures, with departures of New Zealand citizens down since early 2001. This may reflect a number of factors, such as Australian policy changes in 2001 that introduced tighter eligibility criteria for New Zealanders receiving social welfare in Australia, as well as fewer New Zealanders departing for other parts of the world due to security concerns following the terrorist attacks of September 11, 2001. The relative

performance of the labour market in New Zealand compared with that of a number of popular destination countries may also have been keeping New Zealanders at home. To the extent that these factors have resulted in New Zealanders delaying their 'OE', there is a risk that departures may show a sharp turnaround at some stage. However, it is difficult to predict when departures may pick up.

Overall, it is likely that net immigration has peaked, although it is unlikely to fall away sharply any time soon. Beyond 2003/04, a recovery in the global economy and a build up in the number of prospective departures should see a gradual decline in net immigration.

## Fiscal policy

Our projections of the fiscal position and the contributions of the Government's fiscal operations to economic activity are based on the May Budget, which projected a stable outlook for fiscal policy. Our assessment is that the projected gradual rise in the operating surplus (after taking into account the effect of the economic cycle), combined with projected capital spending, is likely to have a broadly neutral effect on the profile of economic growth over the projection period. The May Budget noted the possibility of additional fiscal expenditure over the next few years (which we noted in the June *Statement*), but there have been no further announcements on that score nor any attempt to anticipate such spending in these projections.

## Inflation and monetary policy

Our June projections featured an accommodating stance for monetary policy whereby inflation settled at around 2.3 per cent by the end of the projection period, still comfortably within the 1 to 3 per cent target range. The adoption of that stance reflected a judgement around the particular risks facing the economy, uncertainty over the near-term path of factors such as the exchange rate, global economy and migration and a desire to adopt policy settings that would help avoid an unnecessarily sharp downturn in activity.

These projections continue to mirror this policy approach. Based on an unchanged outlook for policy settings in the near-term, inflation is projected to remain within the target range over the next three years, but at a slightly higher average level than in the June *Statement* reflecting the stronger near-term growth performance of the economy. Later in the projection period, as the exchange rate depreciates and the global recovery strengthens, 90 day interest rates begin to edge up as policy returns toward more neutral settings. Our exchange rate assumption – whereby the exchange rate depreciates relatively quickly from 2004 – may overstate this peak. Inflation is projected to be around 2½ per cent by the first half of 2006 (see figures 1 and 2, Chapter 2).

Within this broad picture, the recent strength of the exchange rate constrains tradables sector inflation in the near-term. We now expect non-tradables inflation to prove stronger over the coming year than in the June *Statement*, reflecting higher levels of domestic activity than in those projections. Indeed, non-tradables inflation is projected to outpace tradables inflation throughout most of the next three years.

As noted in Chapter 2, these projections of activity and inflation embody a slightly higher estimate of the economy's sustainable rate of growth than previously. We assess that the productive capacity of the economy has expanded at a relatively fast rate over the past two years, primarily due to rapid growth in the working age population. The influence

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of improved technology (total factor productivity, or TFP) is more difficult to estimate, but appears to have been at least as strong as in recent history, with some estimates suggesting a slight increase in the contribution to trend growth. The growth rate of productive capacity is expected to slow over the next two years as the rate of growth in the labour force slows, but we have adopted an assumption of slightly faster TFP growth over the later years of the projection period. It reflects a possibility that, as in the recent history of the United States and Australia, technological improvements are likely

to allow the New Zealand economy to sustain growth with a little less inflation than history might suggest.

Since we have assumed that the slightly higher growth in potential output is matched by slightly faster growth in the components of actual activity, this assumption has had no impact on our projected policy path. We will continue to update our views on the economy's potential to sustain non-inflationary growth by examining the data as they come to hand.

#### Box 4

##### Assessing a reference point for interest rates

It was suggested in Chapter 2 that from the perspective of international investors, New Zealand interest rates are currently comparatively high. But from a domestic perspective, they are currently a little lower than average.

In conducting monetary policy, we have to take a position on just how much stimulus current interest rate settings are adding to/subtracting from the economy. In order to boost the pace of activity in a sluggish economy that is producing unhelpful disinflation, interest rates need to be set below the “neutral” level that would neither add to nor subtract from the economy. And vice versa for an economy that is overheating. So what is the appropriate benchmark for judging when interest rates are “high” or “low”? What is neutral?

Two things are worth highlighting at the outset. It is the *level* of interest rates relative to their neutral level that is important. While *changes* in interest rates usually get the most media attention, interest rates that are left unchanged at high levels will continue to encourage people not to borrow and to save instead. Likewise, interest rates that are left unchanged at low levels will continue to encourage people to borrow to spend, and to reduce savings.

Secondly, people's expectations of inflation matter. A high expected rate of inflation makes future debt repayments appear cheaper in purchasing power terms, and reduces the expected purchasing power of savings. To compensate, interest rates adjust to offset the expected inflation effect. What matters for the question of assessing whether interest rates are high or low is the inflation expectations-adjusted, or “real” interest rate.

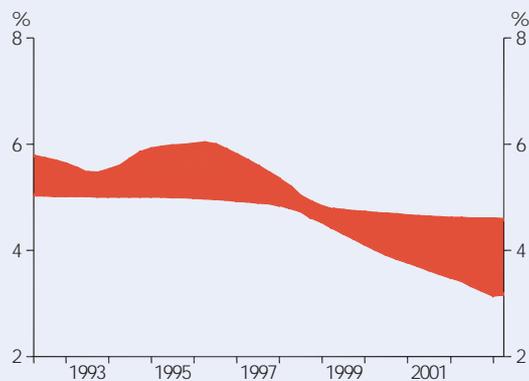
There are many different ways in which the neutral level of real interest rates can be assessed. Each is very imperfect, as one might expect given the fact that we are inherently trying to summarise in one number the attitudes and preferences of all New Zealanders – and foreigners (who lend to us, and borrow from us) as well!

The two main approaches to making this assessment are as follows. One can start from the idea that economies cycle, and so long as inflation is neither trending up nor down, interest rates must have been cycling around their neutral level. So under conditions of broadly stable inflation

over an extended time period, the average or trend interest rate provides a basis for assessment. Alternatively, one can try to identify some underlying factors which determine cross-country differences between trend interest rates. This allows researchers to estimate country-specific premia around a common world neutral interest rate which is driven by factors common to all market economies.

Recent work at the Bank, to be reported in our *Bulletin*, has produced a range of estimates of the neutral real short-

Figure 48  
Envelope of 14 empirical estimates of the neutral real short term interest rate



Source: RBNZ.

term rate using variants on these two approaches. The shaded area in figure 48 shows that range. Several features are worth noting. First, the range of estimates is wide, as expected. Second, the range has been falling. The full explanation is not easily found, although we think it is relevant that similar trends are observed internationally, trends that are probably associated with the move to low and stable inflation rates, reduced macro-economic volatility, and reduced government indebtedness.

Third, the current estimates are centred a little below 4 per cent, which is a higher rate than would be found for most other countries. Again, the full explanation for such a gap is not easily found, although we believe that New Zealand's comparatively high foreign indebtedness, smallness (hence lack of liquidity in various financial markets), and relatively limited diversification (hence relatively high economic volatility, including exchange rate volatility) are all relevant.

If one were to use a central estimate of the neutral real short-term interest rate of around  $3\frac{3}{4}$  per cent and make an allowance for expected inflation of between  $1\frac{1}{2}$  per cent (the latest measured rate) and  $2\frac{3}{4}$  per cent (the peak rate in our projections), neutral interest rates would be between about  $5\frac{1}{4}$  per cent and  $6\frac{1}{2}$  per cent. (An estimate of the neutral real rate 1 per cent either side of  $3\frac{3}{4}$  per cent would add or subtract 1 per cent to these numbers). In this light, current nominal interest rates are probably mildly stimulatory at best. Of course, when assessing whether such a position is appropriate, one needs to take into account the overall state of monetary conditions (including the exchange rate) and the economy.

Finally, it is worth explaining why a single reference or neutral interest rate is being adduced, despite the point made at the outset that domestic and international parties could react differently to any given level of interest rates. Essentially, because there are few barriers to participation by New Zealanders in international financial markets, or by foreigners here, both domestic and foreign residents are operating within the same New Zealand dollar financial market. The neutral interest rate being used as a benchmark for whether current interest rates are stimulatory or contractionary is the rate that balances the interests of all participants in the market, on average over time. If, for

example, New Zealanders collectively find a given level of interest rates attractive for borrowing but foreigners regard that same level as insufficiently high to warrant the risk of lending to New Zealanders in New Zealand dollars, interest rates will tend to rise towards the point that balances these interests. In the process, in this example, interest rates would become less stimulatory, and the exchange rate would appreciate.

At the moment, interest rates in New Zealand appear to be high enough to attract foreigners to lend in New Zealand dollars, and low enough to attract New Zealanders to borrow. Total net foreign indebtedness of New Zealanders is again rising at a time when the exchange rate has been rising. The willingness of foreigners to lend more at *current* interest rates is a reflection of the fact that alternative fixed interest investment opportunities around the world are currently offering low rates of return, as global interest rates are cyclically low, creating a larger gap between New Zealand and foreign interest rates than is normally the case. That gap is not permanent. However, as reflected by the comparatively high trend or average (or neutral) interest rate around which New Zealand interest rates cycle, foreigners generally need an interest rate inducement to take on the perceived risk of lending in New Zealand dollars rather than lending in other currencies.

# Appendix 1<sup>1</sup>

## Summary tables

Table A

### CPI inflation projections and monetary conditions

(CPI is in percentage changes)

|      |                     | CPI*<br>Quarterly | CPI**<br>Annual | TWI             | 90-day<br>bank bill rate |
|------|---------------------|-------------------|-----------------|-----------------|--------------------------|
| 1997 | Jun.                | 0.2               | 1.5             | 68.0            | 7.2                      |
|      | Sep.                | 0.3               | 1.8             | 64.8            | 8.1                      |
|      | Dec.                | 0.6               | 1.6             | 63.9            | 7.9                      |
| 1998 | Mar.                | 0.5               | 1.7             | 61.2            | 9.0                      |
|      | Jun.                | 0.3               | 1.7             | 58.5            | 9.1                      |
|      | Sep.                | 0.3               | 1.7             | 57.1            | 6.8                      |
| 1999 | Dec.                | 0.6               | 1.1             | 56.0            | 4.6                      |
|      | Mar.                | -0.1              | 1.0             | 57.6            | 4.5                      |
|      | Jun.                | 0.2               | 1.2             | 59.1            | 4.7                      |
| 2000 | Sep.                | 0.5               | 1.1             | 56.7            | 4.8                      |
|      | Dec.                | 0.4               | 1.3             | 54.4            | 5.4                      |
|      | Mar.                | 0.2               | 1.7             | 54.1            | 6.0                      |
| 2001 | Jun.                | 0.7               | 2.0             | 53.4            | 6.7                      |
|      | Sep.                | 0.7               | 3.0             | 50.1            | 6.7                      |
|      | Dec.                | 1.4               | 4.0             | 47.7            | 6.7                      |
| 2002 | Mar.                | 1.2               | 3.1             | 50.5            | 6.4                      |
|      | Jun.                | 0.9               | 3.2             | 49.8            | 5.9                      |
|      | Sep.                | 0.6               | 2.4             | 50.0            | 5.7                      |
| 2003 | Dec.                | 0.6               | 1.8             | 49.6            | 5.0                      |
|      | Mar.                | 0.6               | 2.6             | 51.6            | 5.0                      |
|      | Jun.                | 1.0               | 2.8             | 54.6            | 5.8                      |
| 2004 | Sep.                | 0.5               | 2.6             | 53.9            | 5.9                      |
|      | Dec.                | 0.6               | 2.7             | 56.4            | 5.9                      |
|      | Mar.                | 0.4               | 2.5             | 60.6            | 5.8                      |
| 2005 | Jun.                | 0.0               | 1.5             | 61.1            | 5.4                      |
|      | Second Half Average | $\frac{3}{4}$     | $1\frac{3}{4}$  | 63              | $5\frac{1}{4}$           |
|      | First Half Average  | $\frac{1}{2}$     | 2               | $62\frac{1}{2}$ | $5\frac{1}{4}$           |
| 2005 | Second Half Average | $\frac{3}{4}$     | $2\frac{1}{4}$  | $60\frac{1}{2}$ | $5\frac{1}{2}$           |
|      | First Half Average  | $\frac{3}{4}$     | $2\frac{3}{4}$  | $58\frac{3}{4}$ | $5\frac{1}{2}$           |
|      | Second Half Average | $\frac{3}{4}$     | $2\frac{3}{4}$  | $57\frac{3}{4}$ | $5\frac{3}{4}$           |

#### Quarterly projections

|      |      |     |     |
|------|------|-----|-----|
| 2002 | Dec. | 0.6 | 2.7 |
| 2003 | Mar. | 0.4 | 2.5 |
|      | Jun. | 0.0 | 1.5 |
|      | Sep. | 0.8 | 1.8 |
|      | Dec. | 0.6 | 1.8 |

<sup>(1)</sup> Notes for these tables follow on page 35

\* This series is quarterly underlying inflation until the September quarter 1997, quarterly CPI inflation, excluding credit services, 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 CPI inflation, excluding credit services, 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 |              |              |              |
|---|------------|------------|-------------|------------|------------|------------|-------------|--------------|--------------|--------------|
|   | 1997       | 1998       | 1999        | 2000       | 2001       | 2002       | 2003        | 2004         | 2005         | 2006         |
| Final consumption expenditure                 |            |            |             |            |            |            |             |              |              |              |
| Private                                       | 4.5        | 2.2        | 2.5         | 3.8        | 1.7        | 2.8        | 3.8         | 3 1/2        | 3            | 3 1/4        |
| Public authority                              | 1.4        | 8.8        | -2.1        | 7.3        | -2.1       | 3.9        | 5.1         | 2 1/4        | 3/4          | 1 1/4        |
| Total   | 3.8        | 3.7        | 1.4         | 4.6        | 0.8        | 3.1        | 4.1         | 3 1/4        | 2 1/2        | 2 3/4        |
| Gross fixed capital formation                 |            |            |             |            |            |            |             |              |              |              |
| Market sector:                                |            |            |             |            |            |            |             |              |              |              |
| Residential                                   | 4.9        | 3.0        | -14.0       | 22.8       | -15.7      | 3.3        | 23.3        | 13 1/2       | 4 1/2        | - 1/2        |
| Business                                      | 3.1        | -4.0       | 2.2         | 3.1        | 6.8        | 5.3        | 4.2         | 6 1/4        | 3 1/4        | 3            |
| Non-market government sector                  | 28.7       | 8.6        | -15.9       | 10.6       | -6.5       | 4.4        | 3.6         | 5            | 4 3/4        | 0            |
| Total   | 5.7        | -0.9       | -4.1        | 8.6        | -0.6       | 4.7        | 8.5         | 8            | 3 3/4        | 1 3/4        |
| Final domestic expenditure                    | 4.2        | 2.7        | 0.2         | 5.4        | 0.5        | 3.4        | 5.0         | 4 1/4        | 2 3/4        | 2 1/2        |
| Stockbuilding (1)                             | -0.4       | -0.1       | -0.5        | 1.2        | -0.4       | 0.3        | -0.4        | - 1/4        | 1/2          | 0            |
| <b>Gross national expenditure</b>             | <b>3.7</b> | <b>2.5</b> | <b>-0.2</b> | <b>6.6</b> | <b>0.1</b> | <b>3.7</b> | <b>4.5</b>  | <b>4</b>     | <b>3 1/2</b> | <b>2 1/2</b> |
| Exports of goods and services                 | 4.7        | 3.9        | 3.1         | 7.0        | 6.1        | 2.0        | 7.2         | 3            | 3 1/4        | 2 1/4        |
| Imports of goods and services                 | 6.5        | 2.6        | 2.1         | 11.5       | -0.4       | 2.4        | 9.4         | 7 1/4        | 4 3/4        | 2 1/4        |
| <b>Expenditure on GDP</b>                     | <b>3.2</b> | <b>2.9</b> | <b>0.1</b>  | <b>5.2</b> | <b>2.2</b> | <b>3.5</b> | <b>3.9</b>  | <b>2 1/2</b> | <b>2 3/4</b> | <b>2 1/2</b> |
| <b>GDP (production)</b>                       | <b>3.5</b> | <b>1.5</b> | <b>0.4</b>  | <b>4.9</b> | <b>2.7</b> | <b>3.4</b> | <b>4.3</b>  | <b>2 3/4</b> | <b>3</b>     | <b>2 1/2</b> |
| GDP (production, March qtr to March qtr)      | 2.1        | 0.1        | 2.4         | 6.1        | 1.0        | 4.1        | 4.0         | 2 3/4        | 2 3/4        | 2 3/4        |
| Potential output                              | 3.6        | 2.9        | 2.4         | 2.5        | 2.8        | 3.1        | 3.3         | 3 1/2        | 3 1/2        | 3 1/4        |
| Output gap (% of potential GDP, year average) | 1.5        | 0.2        | -1.8        | 0.4        | 0.3        | 0.6        | 1.6         | 1            | 1/2          | - 1/4        |

(1) 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 |        |        |        |        |
|---|---------|------|------|------|------|-------------|--------|--------|--------|--------|
|   | 1997    | 1998 | 1999 | 2000 | 2001 | 2002        | 2003   | 2004   | 2005   | 2006   |
| <b>Price measures</b>                                 |         |      |      |      |      |             |        |        |        |        |
| CPI*  | 2.0     | 1.7  | 1.0  | 1.7  | 3.1  | 2.6         | 2.5    | 1 3/4  | 2 1/2  | 2 3/4  |
| Labour costs  | 2.0     | 1.9  | 1.6  | 1.4  | 1.6  | 2.1         | 2.2    | 2      | 2      | 2      |
| Import prices (in New Zealand dollars)                | -4.6    | 2.9  | 2.7  | 11.2 | 7.4  | -2.9        | -9.3   | -1 3/4 | 5 3/4  | 4 1/4  |
| Export prices (in New Zealand dollars)                | -6.3    | 4.2  | -0.6 | 9.9  | 20.6 | -3.5        | -15.2  | -7     | 7 1/2  | 4 3/4  |
| <b>Monetary conditions</b>                            |         |      |      |      |      |             |        |        |        |        |
| 90-day rate (year average)                            | 9.0     | 8.0  | 6.2  | 5.2  | 6.6  | 5.4         | 5.9    | 5 1/4  | 5 1/2  | 5 3/4  |
| TWI (year average)                                    | 66.4    | 64.4 | 57.3 | 56.1 | 50.4 | 50.3        | 56.4   | 62 1/2 | 60 1/2 | 57 3/4 |
| <b>Output</b>   |         |      |      |      |      |             |        |        |        |        |
| GDP (production, annual average % change)             | 3.5     | 1.5  | 0.4  | 4.9  | 2.7  | 3.4         | 4.3    | 2 3/4  | 3      | 2 1/2  |
| GDP (production, March qtr to March qtr)              | 2.1     | 0.1  | 2.4  | 6.1  | 1.0  | 4.1         | 4.0    | 2 3/4  | 2 3/4  | 2 3/4  |
| Output gap (% of potential GDP, year average)         | 1.5     | 0.2  | -1.8 | 0.4  | 0.3  | 0.6         | 1.6    | 1      | 1/2    | - 1/4  |
| <b>Labour market</b>                                  |         |      |      |      |      |             |        |        |        |        |
| Total employment                                      | 1.2     | 0.0  | 0.6  | 1.4  | 2.3  | 3.5         | 1.5    | 2      | 2      | 1 1/4  |
| Unemployment rate (March qtr, s.a.)                   | 6.5     | 7.2  | 7.2  | 6.4  | 5.4  | 5.3         | 5.0    | 5      | 5      | 5      |
| Trend labour productivity (annual % change)           | 1.0     | 1.3  | 1.5  | 1.5  | 1.5  | 1.4         | 1.2    | 1 1/4  | 1 1/4  | 1 1/2  |
| <b>Key balances</b>                                   |         |      |      |      |      |             |        |        |        |        |
| Government operating balance (% of GDP, year to June) | 1.9     | 2.5  | 1.7  | 1.3  | 1.2  | 1.9         | 1      | 2 3/4  | 3 1/2  | 3 3/4  |
| Current account balance (% of GDP, year to March)     | -6.1    | -5.5 | -4.3 | -6.7 | -4.1 | -2.3        | -3.9   | -5 3/4 | -6     | -5 3/4 |
| Terms of trade (annual average % change)              | -0.8    | -1.0 | -0.4 | -0.2 | 4.4  | 4.1         | -6.1   | -4 1/4 | - 1/2  | 1 1/4  |
| Household savings rate                                | -3.0    | -4.0 | -4.8 | -0.8 | -4.4 | -3.7        | -4 1/4 | -7     | -6     | -5 1/2 |
| (% of disposable income, year to March)               |         |      |      |      |      |             |        |        |        |        |
| <b>World economy</b>                                  |         |      |      |      |      |             |        |        |        |        |
| World GDP (annual average % change)                   | 4.2     | 3.5  | 1.9  | 4.3  | 3.6  | 1.3         | 3.0    | 2 1/2  | 3 1/2  | 3 1/2  |
| World CPI inflation                                   | 2.3     | 2.3  | 0.9  | 1.9  | 2.6  | 1.3         | 2.0    | 3/4    | 1 3/4  | 2      |

s.a. = seasonally adjusted

\* This series is annual CPI inflation, excluding credit services, 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).

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## 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</i> , G97/9.   |
| 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> .   |

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|                                  |  |
|----------------------------------|--|
| 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              | The series shown is the annual percentage change in a trend measure of labour productivity. Labour productivity is defined as GDP (production) divided by HLFS hours worked. |
| Wages                            | Private sector all salary and wage rates. <i>Labour Cost Index.</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 projection data are rounded to the nearest quarter per cent.

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## Appendix 2

### Chronology

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

2003

- 5 June                      The Reserve Bank released its thirty-eighth *Monetary Policy Statement*, decreasing the Official Cash Rate from 5.5 per cent to 5.25 percent. The news release accompanying the *Statement* is reproduced in Appendix 4.
- 27 June                      Production GDP figures were released showing that the New Zealand economy grew by 0.6 per cent in the March quarter of 2003.
- 15 July                      CPI statistics were released for the June quarter of 2003, showing that the CPI increased by 0.0 per cent over the quarter, and by 1.5 per cent in the year to June 2003.
- 24 July                      At the intra-quarter review, the Reserve Bank cut the Official Cash Rate from 5.25 per cent to 5.0 per cent. The accompanying news release is reproduced in Appendix 4.

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## Appendix 3

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

|   |                                       |
|---|---------------------------------------|
| Arthur D Riley & Co Ltd                 | Sealord Group Ltd                     |
| Barfoot & Thompson Ltd                  | Shengli New Zealand Ltd               |
| Bell-Booth Ltd                          | South Pacific NZ Tyres Ltd            |
| Canterbury Manufacturers' Association   | The Fletcher Construction Company Ltd |
| Cleland Construction Ltd                | The Warehouse Ltd                     |
| Click-Clack Industries Ltd              | United Fisheries Ltd                  |
| Egmont Seeds Company Ltd                | Vision Manawatu Ltd                   |
| Exclusive Furniture Ltd                 | Wanganui Gas Ltd                      |
| Farmers Mutual Group Ltd                | Wanganui Newspapers Ltd               |
| Financial Services Federation (Inc)     | Westgate Transport Ltd                |
| Fonterra Co-operative Group Ltd         | Willgraeme Products Limited           |
| Fresha Fisheries Ltd                    | WK Backhouse Ltd                      |
| Gamma Natural Products Ltd              | Work & Income (North Region)          |
| Gibbons Holdings Ltd                    |                                       |
| Holcim (New Zealand) Ltd                |                                       |
| Hooker Bros Holdings Ltd                |                                       |
| James Crisp Ltd                         |                                       |
| Jaydex International Limited            |                                       |
| Kraus & Naimer (NZ) Ltd                 |                                       |
| Lowes Industries Christchurch Ltd       |                                       |
| LWR Industries Ltd                      |                                       |
| Macpac Wildersness Equipment Ltd        |                                       |
| Methanex New Zealand Limited            |                                       |
| Methven Ltd                             |                                       |
| MWI Meat & Wool Innovation Ltd          |                                       |
| Naylor Love Ltd                         |                                       |
| Nelson Pine Industries Ltd              |                                       |
| Nelson Regional Chamber of Commerce Inc |                                       |
| New Zealand Food (1992) Group Ltd       |                                       |
| NZ Timber Industry Federation           |                                       |
| NZ Wool Service International           |                                       |
| Pacific Helmets Ltd                     |                                       |
| Philips New Zealand Limited             |                                       |
| Pipes NZ Ltd                            |                                       |
| Port of Nelson Ltd                      |                                       |
| Ports of Auckland Ltd                   |                                       |
| Prepared Foods Limited                  |                                       |
| Real Estate Institute of New Zealand    |                                       |
| Sanford Limited                         |                                       |

In addition to our formal meetings with the organisations listed above, contact was also made with banks and other organisations for feedback on business conditions and particular issues relevant to our policy deliberations.

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## Appendix 4

### Reserve Bank statements on monetary policy

#### OCR reduced to 5.25 per cent

*5 June 2003*

The Reserve Bank has decided to cut the Official Cash Rate by 25 basis points to 5.25 per cent. Speaking at the release of the Reserve Bank's June 2003 *Monetary Policy Statement*, Reserve Bank Governor Alan Bollard said "Reducing the OCR is an appropriate response to a softening in inflation pressures and provides some protection for the economy against downside influences.

"The evidence has become clearer that growth is beginning to slow following a period of strength. This slowdown mainly reflects the rapid appreciation of the exchange rate over the past 18 months, leaving the export sector more exposed to the soft world economy. We are projecting further slowing but expect domestic activity to remain reasonably robust with rapid growth in the population supporting demand. However, businesses are less assured about future trading prospects and confidence measures have fallen away. With confidence fragile, the impact of events such as SARS and dry weather on activity could be amplified.

"The reformulated Policy Targets Agreement requires us to target inflation with a medium term focus and to avoid unnecessary instability in output, the exchange rate and interest rates. This OCR decision is intended to help prevent an unnecessarily sharp downturn, while delivering inflation that remains comfortably within the target range over the next few years. Influencing our decision is increased certainty that the economy has started to turn down, and the presence of downside risks - foreign and local - whose effects may be exaggerated by fragile confidence. In addition, CPI inflation is expected to receive extra downward pressure over the year ahead as a direct result of the higher exchange rate, but this effect will be temporary.

"Our current projections of the economy incorporate a further modest reduction in the OCR. Any such further reduction will be contingent on further evidence that medium term CPI inflation pressures are abating as our projections assume. We will take our cues from the activity and inflation data as they come to hand," Dr Bollard concluded.

#### OCR reduced to 5.0 per cent

*24 July 2003*

The Reserve Bank today reduced the Official Cash Rate by 25 basis points to 5.0 per cent. Governor Alan Bollard said "In June we noted that there might be scope for a further modest reduction in the OCR, provided the evidence continued to point to reduced medium-term inflation pressures. On balance, a further reduction seems appropriate today.

"Looking forward, the evidence continues to suggest slowing economic activity and inflation in some parts of the economy, as we have been forecasting. This is most notable in the export sector, parts of which are now being significantly affected by the rise in the exchange rate over the past 18 months. Although in recent weeks the exchange rate has dropped slightly, it remains volatile, and there is still potential for it to appreciate further in the months ahead. This will depend partly on the international economy, which is fragile but has shown some brighter signs recently. If export sector activity continues to soften significantly, then further reductions in the OCR may be required.

"However, some of the downside risks to activity that we identified in June, such as those connected with SARS, climate and the electricity shortages, seem to be abating. Activity in a number of domestic industries, such as housing and construction, remains robust throughout much of the country.

"Housing activity has been boosted by the rapid growth in population and other demographic effects and is now strong. This in itself is no bad thing, but the Bank must be wary of any implications for CPI inflation. We note that housing sector inflation is already quite strong and some investors have unrealistic expectations about this.

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"The June quarter CPI was weaker than we expected. However some of that was due to temporary factors like SARS and will not necessarily be sustained.

"Monetary policy has to contend with the offsetting effects of relatively robust domestic activity and inflation and the weaker activity and inflation being experienced within the tradable sector. We will pay close attention to the net effect of these forces in deciding whether there will be room for a further OCR cut in the September *Monetary Policy Statement*."

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## Appendix 5

### The Official Cash Rate chronology

| Date              | Change in OCR<br>(basis points) | OCR<br>(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              |
| 15 May 2002       | + 25                            | 5.50              |
| 3 July 2002       | + 25                            | 5.75              |
| 14 August 2002    | No change                       | 5.75              |
| 2 October 2002    | No change                       | 5.75              |
| 20 November 2002  | No change                       | 5.75              |
| 23 January 2003   | No change                       | 5.75              |
| 6 March 2003      | No change                       | 5.75              |
| 24 April 2003     | -25                             | 5.50              |
| 5 June 2003       | -25                             | 5.25              |
| 24 July 2003      | -25                             | 5.00              |

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## Appendix 6

# Policy Targets Agreement

This agreement between the Minister of Finance and the Governor of the Reserve Bank of New Zealand (the Bank) is made under section 9 of the Reserve Bank of New Zealand Act 1989 (the Act). The Minister and the Governor agree as follows:

### 1. Price stability

- a) Under Section 8 of the Act the Reserve Bank is required to conduct monetary policy with the goal of maintaining a stable general level of prices
- b) The objective of the Government's economic policy is to promote sustainable and balanced economic development in order to create full employment, higher real incomes and a more equitable distribution of incomes. Price stability plays an important part in supporting the achievement of wider economic and social objectives.

### 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 to keep future CPI inflation outcomes between 1 per cent and 3 per cent on average over the medium term.

### 3. Inflation variations around target

- a) For a variety of reasons, the actual annual rate of CPI inflation will vary around the medium-term trend of inflation, which is the focus of the policy target. Amongst these reasons, there is a range of events whose impact would normally be temporary. Such events include, for example, shifts in the aggregate price level as a result of exceptional movements in the prices of commodities traded in world markets, changes in indirect taxes, significant government policy changes that directly affect prices, or a natural disaster affecting a major part of the economy.
- b) When disturbances of the kind described in clause 3(a) arise, the Bank will respond consistent with meeting its medium-term target.

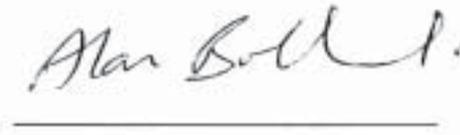
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4. Communication, implementation and accountability

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



Hon Dr Michael Cullen  
Minister of Finance



Dr Alan E Bollard  
Governor Designate  
Reserve Bank of New Zealand

Dated at Wellington this 17<sup>th</sup> day of September 2002

