
Monetary Policy Statement¹

August 2001

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

Contents

1.	Overview and policy assessment	2
2.	The current economic situation	5
3.	The macroeconomic outlook	17
4.	Policy issues	26

Appendices

1.	Chronology	29
2.	Companies and organisations contacted by RBNZ during the projection round	30
3.	Reserve Bank statements on monetary policy	31
4.	Summary tables	33
5.	Notes to the tables	35
6.	The Official Cash Rate chronology	37
7.	Policy Targets Agreement	38

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

ISSN 1170-4829

¹ Projections finalised on 27 July 2001. Policy assessment finalised on 14 August 2001.

1 Overview and policy assessment

The Reserve Bank has again decided to leave the Official Cash Rate unchanged at 5.75 per cent.

At present, the outlook for inflation remains largely unchanged from that in our May *Monetary Policy Statement*. For the last year, the CPI has been at or above the top of the 0 to 3 per cent target range, in large part because of the impact of the sharp rise in international oil prices, the increase in taxes on cigarettes and tobacco, and the depreciation of the exchange rate over the last year or so. But on present assumptions inflation in the year to September should reduce to 2.4 per cent, and in the year to December to about 2 per cent. Beyond that, after a brief spike in the year to March 2002 as the very low inflation in the March quarter of 2001 falls out of the 12 monthly total, the CPI should track back to somewhere near the middle of our target. The "underlying trend in prices", which the Policy Targets Agreement makes clear should be the proper focus of monetary policy, can not be directly measured, but reasonable estimates suggest that so far it remains well within the target range.

But, in saying that, we are conscious of some risks to that relatively benign assessment. Inflation could turn out to be more persistent than currently seems likely for a number of reasons.

- First, after a year of relatively slow growth, we have assessed that demand and potential supply are roughly in balance at present, implying that there is neither upward nor downward pressure on "the underlying trend in prices". That still seems a good assessment, but there are an increasing number of indicators suggesting that the economy may in fact be operating slightly above full capacity.
- Second, we have assessed that inflation expectations are, and will remain, well anchored within the inflation target. But clearly the longer that headline inflation remains close to the top of or above the target, the greater the risk that inflation expectations will become disturbed, with adverse consequences for wage- and price-setting behaviour. This point takes on particular significance in view of the possibility of further "one-off" price shocks, such as might arise from the present shortage of electricity-generating capacity.
- Third, our judgement about the way in which inflation is likely to evolve assumes that, consistent with past experience, the currently-weak world trading environment will soon result in quite a sharp fall in the world prices of our commodity exports, with resultant disinflationary effect on New Zealand. But we have assumed such a fall each time we have reviewed the inflation outlook in recent

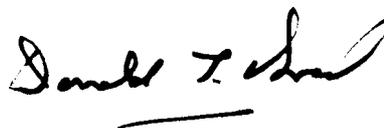
months, and each time we have been surprised by continuing strength in those prices. That strength may continue despite a generally weak world environment, with the result that inflation may turn out somewhat higher than now projected.

- Fourth, we have assumed that the exchange rate will gradually appreciate in the months ahead, producing some downwards pressure on New Zealand prices. But we have assumed some appreciation in the past also, and to date the exchange rate has shown little tendency to rise, despite being under-valued by virtually every measure. If the exchange rate were not to appreciate to the extent projected, inflation would for this reason too probably turn out to be a little higher than projected.

With businesses confident about the outlook for their own activity, rural sector incomes at their highest level in many years, employment intentions at near-record levels, and strong signs of a pick-up in both confidence and activity in residential construction – previously one of the most sluggish parts of the economy – we have no reason to date to regret the relatively cautious manner in which we have reduced the Official Cash Rate in recent months.

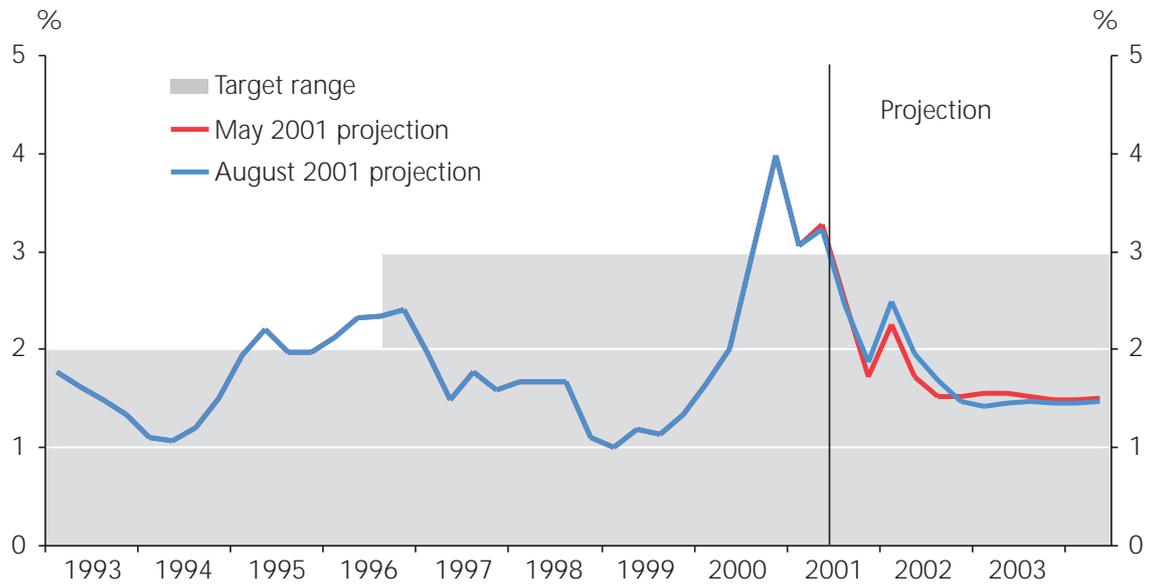
Indeed, the current situation would point to an early increase in the Official Cash Rate were it not for the risk that the international environment will turn out to be even weaker than assumed. *Consensus* forecasts still suggest a recovery in world growth next year, but the flow of economic indicators from the United States, Japan, non-Japan Asia and Europe makes a deeper and more prolonged slowdown seem quite likely. Almost every day brings new reports of major corporations laying off thousands of staff and announcing sharp reductions in earnings. At this stage, only Australia among our major trading partners appears to be relatively immune to the international slowdown. If the international environment were to turn out substantially weaker than our projections have allowed, there seems little doubt that the disinflationary pressures on New Zealand coming from overseas would intensify. As a result, inflation could fall into the bottom half of our target range and this would necessitate further easing of monetary policy.

But that is for the future. For the moment, leaving the Official Cash Rate unchanged seems appropriate.



Donald T. Brash
Governor

Figure 1
Consumer price inflation²
(annual percentage change)



² The target measure shown is annual underlying inflation until the September quarter 1997, annual CPIX inflation from the December 1997 quarter until the June 1999 quarter, and annual CPI inflation thereafter (adjusted to exclude interest and section prices from the September 1999 quarter to the June 2000 quarter).

Table 1

Summary of economic projections

(Annual percentage change, unless specified otherwise)

March year	Actuals		Projections		
	2000	2001	2002	2003	2004
Price measures					
CPI*	1.7	3.1	2 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Wages	1.9	3.1	4	3 ¹ / ₂	3
Import prices (in New Zealand dollars)	11.2	7.9	-2	-2	0
Export prices (in New Zealand dollars)	9.6	20.0	-7 ¹ / ₂	-1	1 ¹ / ₂
Monetary conditions					
90-day bank bill rate (year average)	5.2	6.6	5 ³ / ₄	6	6 ¹ / ₄
TWI (year average)	56.1	50.4	50	52	54
Output					
GDP (production, annual average % change)	4.6	2.5	2 ¹ / ₂	3	2 ¹ / ₂
GDP (production, March qtr to March qtr)	5.6	0.8	3	3	2 ¹ / ₂
Output gap (% of potential GDP, year average)	0.3	0.2	0	1 ¹ / ₂	0
Labour market					
Total employment	1.4	2.3	1 ¹ / ₂	2	2
Unemployment rate (March qtr, s.a.)	6.4	5.4	5 ¹ / ₂	5	5
Labour productivity (annual average % change)	2.2	1.1	0	1 ¹ / ₂	1
Key balances					
Government operating balance (% of GDP, year to June)	1.4	1 ¹ / ₂	1 ¹ / ₂	2	2 ¹ / ₂
Current account balance (% of GDP, year to March)	-7.1	-4.8	-3 ¹ / ₂	-4	-3 ¹ / ₂
Terms of trade (annual average % change)	-0.1	3.5	3	-4	1 ¹ / ₂
Household savings rate (% of disposable income, year to March)	-4.2	-3 ¹ / ₂	-2 ¹ / ₂	-3	-2
World economy					
World GDP (annual average % change)	4.5	3.7	2	3 ¹ / ₂	3 ¹ / ₂
World CPI inflation	1.9	2.9	2	1 ¹ / ₂	2
Quarterly projections					
	Dec-00	Mar-01	Jun-01	Sep-01	Dec-01
CPI (quarterly percentage change)	1.2	-0.2	0.9	0.6	0.6
CPI (annual percentage change)	4.0	3.1	3.2	2.4	1.9

e = estimate

s.a. = seasonally adjusted

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

Notes for this table are in Appendix 5.

2 The current economic situation

Introduction

The overall pace of activity in the New Zealand economy decelerated over calendar 2000 and into the early part of 2001, but has since strengthened noticeably. By the time the numbers are available for the June 2001 year, the level of GDP is likely to measure around 2 per cent higher than a year earlier, but with a momentum consistent with an annual growth rate of around 3 per cent.

The slowdown in calendar 2000 and early 2001 was more exaggerated than we were expecting. The deterioration in the international trading environment, especially the downturn in Australia in the second half of calendar 2000, seems to have impacted more than was originally appreciated, and this global deterioration more than offset the stimulus being produced by the depreciating exchange rate. Also, business investment in the first part of 2001 was weaker than we had allowed for, a weakening that we think is partly an echo of the confidence slump experienced in mid-2000.

As it became increasingly obvious that the heat was coming out of the world economy, and that inflation pressures in New Zealand were likely to reduce as a result, we moved first to remove our tightening bias and then to cut interest rates. The Official Cash Rate was brought down in three steps between March 2001 and May 2001, from 6.5 per cent (where it had been since May 2000) to 5.75 per cent. But these interest rate reductions were more cautious than those seen in many of our trading partners, and less than would normally be associated with the scale of contraction in global demand growth.

The reluctance to cut interest rates more deeply primarily reflected our assessment that the economy would ride through the external downturn in a relatively robust state, because the exchange rate had been very low for some time, and because some key export prices seemed to be holding up.

We believe that our cautious approach to cutting rates was warranted. The low exchange rate/robust export prices combination that was expected to cushion the external blow has become more prominent, and there are clear signs of the expected cushioning in the latest data. Despite the more exaggerated slowing of growth than our previous central

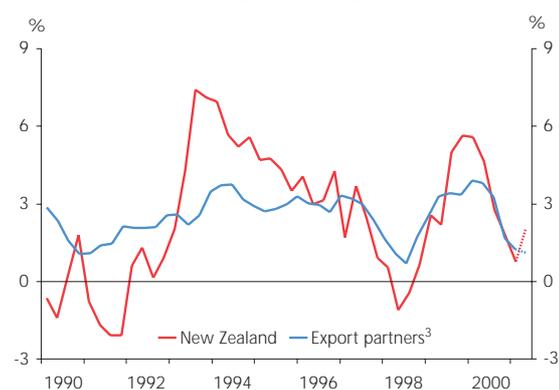
projections had allowed for, it does not appear that core inflation pressures have subsided commensurately.

Most of the implications of these developments for our policy view relate to the future path of inflation, which is the topic of the next chapter. In the meantime, the rest of this chapter describes the current state of play in more detail.

Developments in external demand and export prices

The growth rates of our 14 most significant export partners peaked in the middle of last year. New Zealand's growth cycle seems to coincide reasonably closely with that of our trading partners, especially recently (figure 2). This concurrence raises interesting questions, given that trading partner growth is expected to slow further (see chapter 3), and given our view that the impact on New Zealand of the slowing in world demand will be cushioned.

Figure 2
New Zealand and export partner growth
(annual percentage change of real GDP)



One of the key channels through which a reduction in world demand normally affects New Zealand is through weaker foreign currency prices for our products. As can be seen in figure 3, export prices for key commodities, as measured by the ANZ commodity price index, continued to climb well after the peak of the growth cycle had passed. While continuing

³ 14 country export-weighted average. Source: RBNZ.

commodity price strength at the onset of a global slowdown is not unheard of, the extent of the recent strength in world prices for key New Zealand commodity exports is big relative to the scale of the fall in global growth. Figure 4 shows the progressive updating of our assumptions for world prices for New Zealand exports over the last four forecast rounds as we have been surprised by out-turns.

Figure 3
Export partner growth and ANZ commodity prices⁴

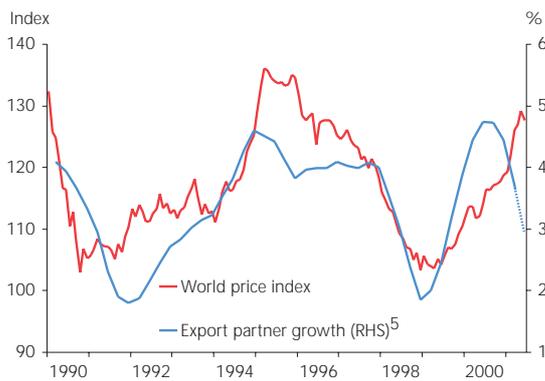
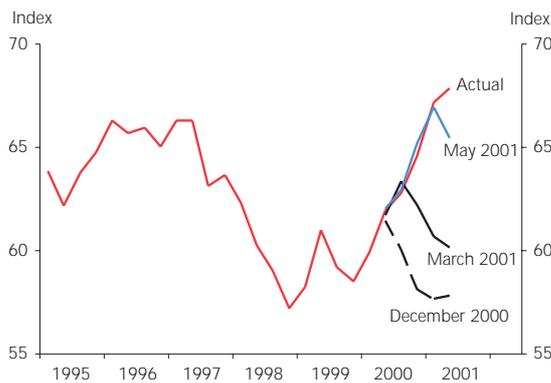


Figure 4
World export price index forecasts
(from successive Monetary Policy Statements)



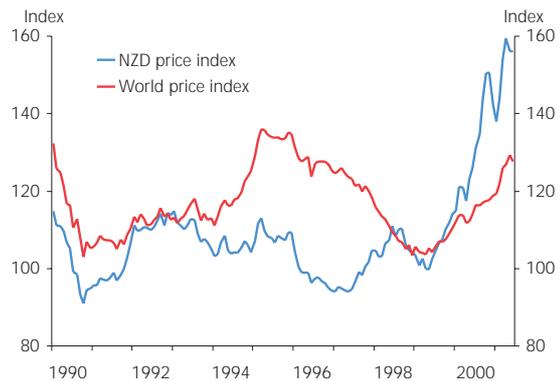
To make sense of why New Zealand's commodity prices are behaving this way, one needs to disaggregate them. It turns out that the ongoing strength in world prices for our commodities is attributable largely to lamb and dairy prices. Box 1 discusses developments in international dairy prices more fully.

⁴ Source: ANZ, RBNZ.

⁵ 14 country export-weighted index of world GDP, annual average percentage change.

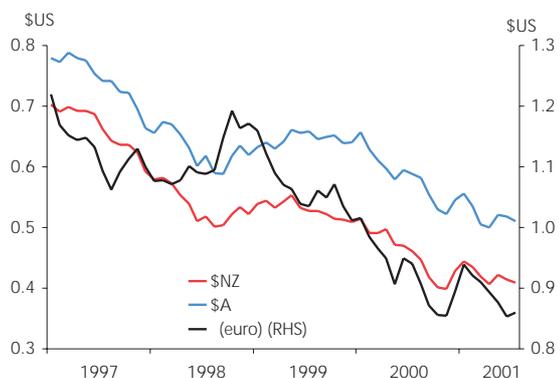
In addition, the exchange rate has been low for some time. It is the combination of ongoing strength in world prices for key New Zealand commodities and the low exchange rate that is cushioning the New Zealand economy against the effects of the global downturn. Figure 5 illustrates this point by comparing world and New Zealand dollar prices for our commodity exports.

Figure 5
ANZ commodity prices⁶



It is hard to explain why the exchange rate is as low as it is. Any plausible explanation needs to take account of the parallel weakness of the Australian dollar and the euro. All three currencies have depreciated significantly against the US dollar over the last two years (figure 6). Because the slowdown in world growth originated in the United States and has been most prominent in that country, the strength of the US dollar is hard to explain on the basis of growth or interest rate differentials.

Figure 6
Exchange rates against the US dollar⁷



⁶ Source: ANZ.

⁷ Source: Bloomberg.

Box 1

The role of dairy products in the strength of New Zealand commodity prices

An unusual feature of economic developments over the last year or so has been the continued strength of New Zealand commodity prices in the face of a world slowdown. Past experience suggests that we should have already seen an easing in the world price of New Zealand commodities. This is illustrated in figure 3, which compares world commodity prices as measured by the ANZ commodity price index with GDP 14 growth.

Dairy products are a key part of the reason for this strength. Dairy products account for around 20 per cent of New Zealand's goods exports, and around 6 per cent of GDP. Increases in international dairy prices were a key driver of the 11.5 per cent annual increase in the ANZ commodity price world index to June this year, and most of the growth through the latter half of last year. International dairy markets are not like conventional commodity markets. Export price formation is heavily influenced by the export subsidy practices of other major producers and by other non-market (government) influences. There are many factors behind the strong dairy prices enjoyed by New Zealand over the last 12 months, some of a temporary nature and others that we would expect to be longer lasting. Factors at work in international dairy markets over the last year include the following:

Short-term factors

- Drought curtailed production in Australia. (Australia provides around 15 per cent of dairy products traded on international markets; New Zealand provides more than 30 per cent.)
- The BSE and foot and mouth disease outbreaks have helped switch European consumers from meat to cheese as an alternative source of protein, boosting consumption in Europe.

Medium-term factors

- China's consumption of dairy products has been

increasing over the last few years. Although China is developing a domestic dairy industry, the demand for dairy imports is likely to continue to increase.

- Consumption of butter and particularly cheese has been growing strongly in the US. This is an underlying trend, but has also been boosted by population growth and strong general economic performance. This has resulted in US domestic prices for butter and cheese that were so high that it was worthwhile for New Zealand to export over its quota to the US, despite the large tariffs that apply to exports above the quota. Even with the tariffs, exporting to the US was more profitable than selling elsewhere.
- The oil-for-food "smart" sanctions against Iraq have led to Iraq consuming an extra 100,000 tonnes of whole milk powder a year over the past three or four years. There is some uncertainty concerning the permanence of this development.

Long-term factors

- Subsidised export volumes out of both the EU and the US have declined over the last few years.
- The level of subsidies paid to EU exporters has been reduced.⁸ Exporters who receive export subsidies are able to sell their goods on international markets at a lower price than other exporters, thus forcing prices down. Consequently, when subsidies are reduced, prices increase.

This list of influences on international dairy markets is by no means exhaustive, but it should illustrate the complexity of the issues that drive international dairy prices. The longer-term factors are most important as they may give some clue as to whether we can expect any of the recent gains to dairy prices to be permanent.

⁸ The EU has chosen to reduce dairy subsidies recently because the euro-price European exporters have been receiving has been strong due to the weakness of their currency, thus offsetting the impact of the decline in subsidies. It is also more politically palatable to reduce subsidies when prices are strong.

The GATT Uruguay round

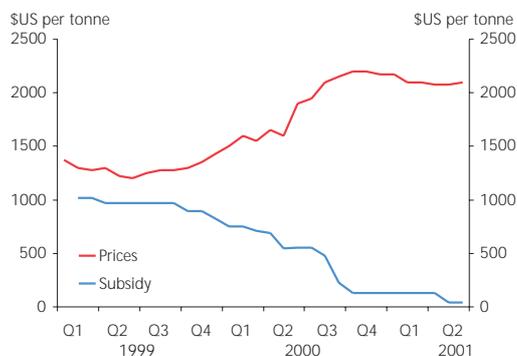
The Uruguay round trade talks, which drew to a close in 1993, were very comprehensive, covering issues such as trade in agriculture and textiles, voluntary export restraints and trading rules for new areas such as trade in services and intellectual property. In New Zealand, agriculture, and particularly the dairy industry, stood to benefit the most from the Uruguay round agreements. The *long-term factors* listed above are ongoing moves towards fulfilling the commitments made in the Uruguay round.

Among other things, the Uruguay round called for developed countries to cut the *volume* of their subsidised exports by 21 per cent from 1986-1990 levels, and to cut the *value* of their export subsidy expenditure by 36 per cent. The cuts were to be made over a six year period beginning in 1995 and were expected to raise dairy prices over this period.

The US has wound back volumes of subsidised exports of skim milk powder over the last few years and is exporting at a level consistent with its obligations under the GATT Uruguay agreement. The Europeans have also fulfilled this part of their obligations under the GATT Uruguay agreement.

The value of European milk powder subsidies has decreased steadily since the beginning of 1999 – subsidies

Figure 7
Skim milk powder prices and European skim milk powder subsidies⁹



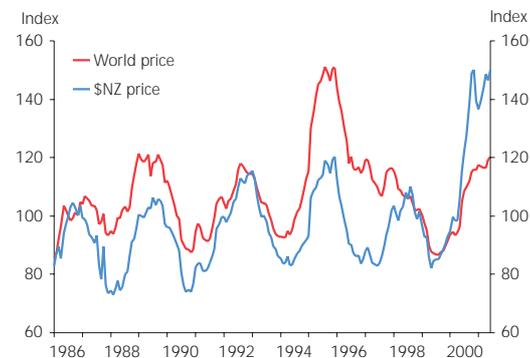
⁹ Source: The New Zealand Dairy Board.

for whole milk powder have fallen 58 per cent, and there is now no subsidy for skim milk powder. In June this year the subsidies for butter and cheese were reduced by 12 and 15 per cent respectively. Figure 7 shows how skim milk powder prices and skim milk powder price subsidies have moved over the last 2½ years.

The weight of the various influences on international dairy trade suggests a fairly stable situation at present. Having said that, it is easier to imagine developments that would lead dairy prices to weaken, rather than increase.

Figure 8 shows that world dairy prices, although they have been increasing steadily since the middle of 1999, are still nowhere near the levels seen in 1995/96. Because of the weakness of the New Zealand dollar over the last year or so, however, New Zealand dollar prices have been at all-time highs.

Figure 8
World and \$NZ dairy prices¹⁰



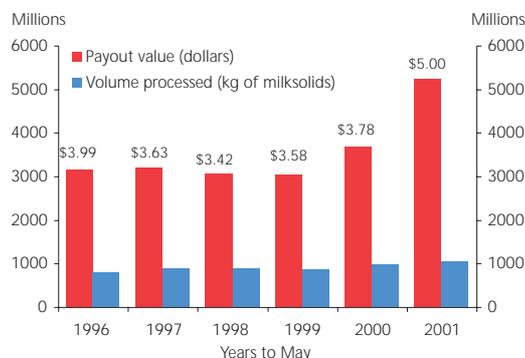
What does this mean for dairy incomes?

Figure 9 shows the value of the payout made by the dairy companies each year along with the volume of milksolids processed. The payout in dollars per kg of milksolids that farmers received is shown at the top of the bars. Due to both stronger volumes and particularly prices, dairy farmers' incomes were dramatically higher in the 2000/01 season than in previous seasons.

¹⁰ Source: ANZ.

At this stage, indicators point to a strong 2001/02 season also. First, as already discussed, prices look reasonably stable, although further price developments are more likely to be negative rather than positive. Second, the Dairy Board has a policy of hedging 50 per cent of its foreign exchange transactions on a rolling 12 month basis. This means that its average conversion rate for the 2001/02 season should be considerably lower than for the 2000/01 season. Turning to volumes, the Ministry of Agriculture and Forestry (MAF) report that most farmers are budgeting on levels of production in the 2001/02 season similar to or greater than the 2000/01 season. As always, the weather remains a significant risk to any volume projections. Taking these two factors into consideration, MAF has forecast an average dairy company payout of \$4.98 for the 2001/02 season.

Figure 9
Milksolids processed and Dairy Board payout¹¹

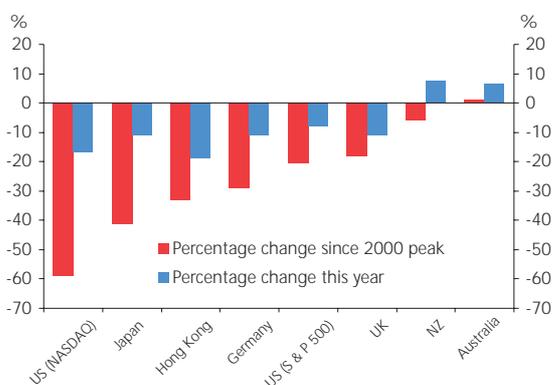


¹¹ Source: The New Zealand Dairy Board.

More recently, the exchange rate has continued to drift inside the range seen since late last year. Within this range, variations in the currency have been driven primarily by movements in the US dollar, which has generally continued to be strong. In recent weeks there have been only tentative signs that the surprising strength of the US dollar may be fading. US dollar weakness may become more evident if markets start

to believe that a recovery in US asset markets will be significantly delayed (see figure 10, which shows how much world equity prices have fallen over recent months).

Figure 10
Movements in equity markets¹²
(to 6 August 2001)



¹² Source: Bloomberg.

The export sector's response

Income growth in parts of the export sector has been very strong over the last year or two. This has been especially so for agricultural exporters, with dairy farmers in particular experiencing quite exceptional income growth (see figure 9).

Figure 11 shows the growth of export values across different classes of exports. Export volume growth rates (figure 12) have been much more modest. Rather, the strong growth in export values primarily reflects the joint impact of increased world prices (on average) and the exchange rate depreciation.

Modest rather than very strong export volume growth is explained by a number of factors. Most obviously, the growth of external demand has weakened. As argued in previous *Statements*, the stimulatory power of the historically low exchange rate has probably been moderated by a fall in the

Figure 11
Export values
(1999Q2 = 100, seasonally adjusted)

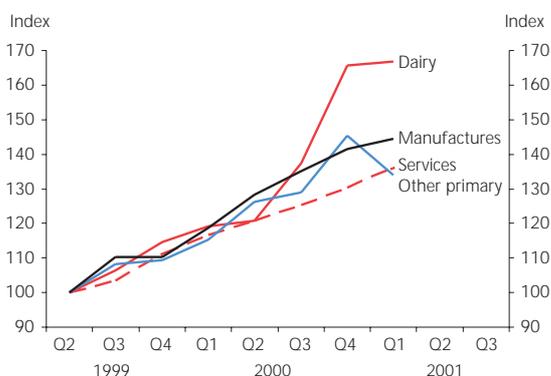
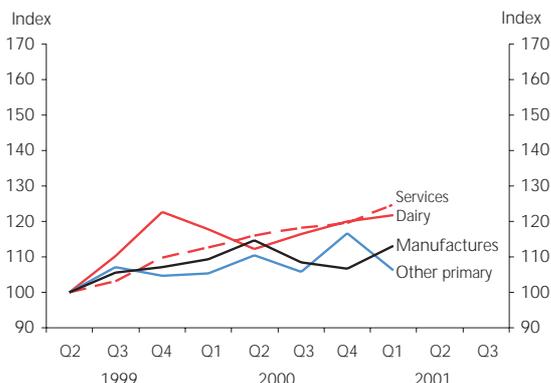


Figure 12
Export volumes
(1999Q2 = 100, seasonally adjusted)



equilibrium real exchange rate. Exporters' willingness to respond to the exchange rate may have been blunted by a sense that the exchange rate is likely to rebound quickly. Pessimism about the worth of basing an exporting business in New Zealand rather than, say, Australia also seems to have grown in recent years.

The modest growth observed in export volumes may also reflect a delayed response to higher export prices, and the possibility that those higher prices may have been offset by higher production costs. These additional explanations are more evident in a dis-aggregated context. Our business contacts suggest that many companies source inputs from countries with strong exchange rates (e.g. the United States) and then sell into countries with weak exchange rates (e.g. Australia). Further, some sectors that could potentially respond quickly (such as manufacturers with established Australian distribution channels) may face relatively weak price

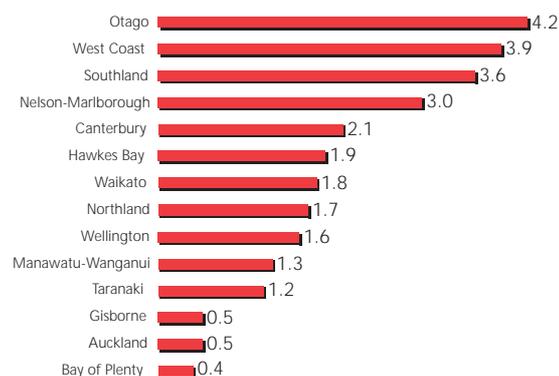
incentives, whereas some sectors where export profitability is very strong (such as dairy) face biological or other constraints that slow the production response.

Domestic activity

Of considerable interest is the speed and extent to which strong income gains in parts of the export sector are generating additional spending in the domestic economy. Our recent *Monetary Policy Statements* have presumed that there would be such an effect, perhaps muted by a new-found caution about the risks of further debt acquisition on the part of both businesses and households, and by concerns in the agricultural sector about the future impact of recent drought conditions.

There are indeed signs that strong export sector incomes are impacting on domestic economic activity. The regional activity indicators shown in figure 13 reflect the relative strength of agricultural exporting regions as compared with the urban regional economies. However, the picture has been quite mixed.

Figure 13
Regional growth¹³
(year to March 2001)



Business investment growth over the year to March 2001 (around 7 per cent) outstripped overall output growth (around 2 per cent), but the pace of investment growth slowed sharply in the second half of that year. Although the contraction of business investment in the March 2001 quarter was very large, it was probably temporary, as indicated by capital goods imports and other useful indicators of investment (see figures 14 and 15).

¹³ Source: National Bank of New Zealand.

Figure 14
Plant and machinery investment and imports of capital goods
(seasonally adjusted, quarterly percentage change)

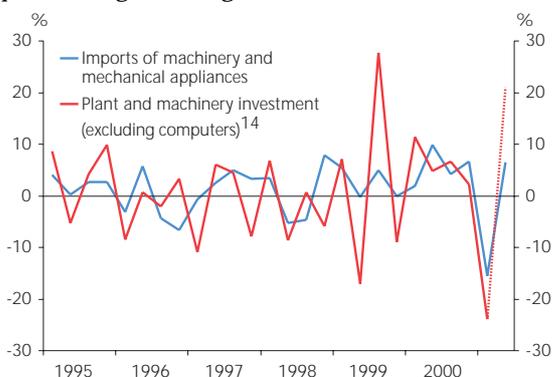
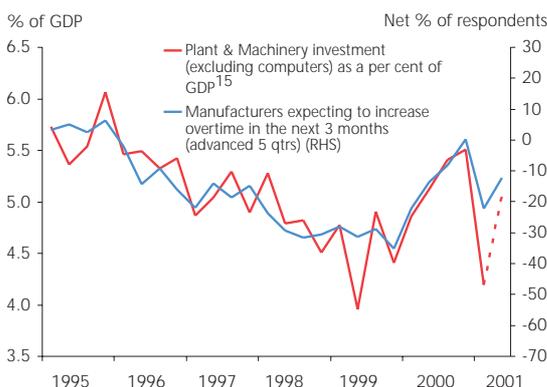


Figure 15
Plant and machinery investment Indicator
(seasonally adjusted)



Turning to household spending, consumption growth has remained relatively robust, although its pace also slowed somewhat through 2000 and into the first part of 2001. We estimate, based on early indications from retail trade and consumer confidence data, that consumption growth is probably now running at an annual rate of around 2½ per cent. For the year to March 2001 household real disposable income growth grew at around 2 per cent. This growth in disposable income has been sufficient to support steady consumption growth without further dis-saving.

Households' spending on building new houses has, on the other hand, been notably weak over the last year, reflecting both an overhang of building in the mid- to late-1990s and the absence of real capital gains from housing for around four years. More recently, there have been signs that activity in the market for existing houses has been picking up and that residential construction activity is about to rise (figure 16). Such an upturn in residential construction activity would be consistent with growing real disposable incomes, relatively low interest rates, low and falling unemployment rates that provide a sense of job security (figure 20), and a cessation of net outward migration (figure 17).

Figure 16
House sales and building consents¹⁶
(seasonally adjusted)

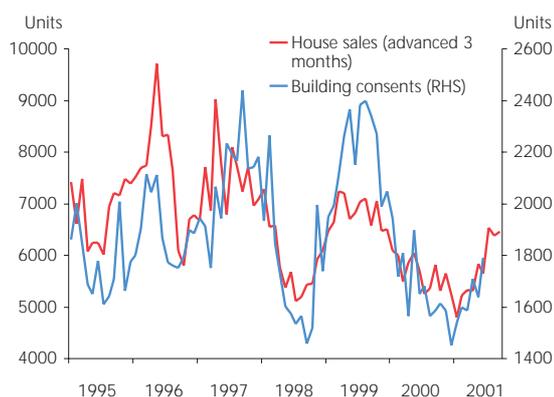
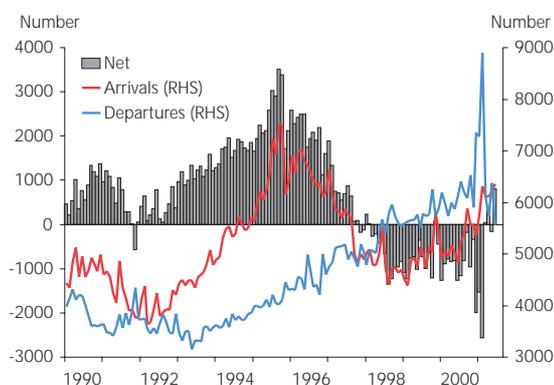


Figure 17
Monthly migration flows
(permanent and long term, seasonally adjusted)



¹⁴ 2001Q2 is an RBNZ estimate.

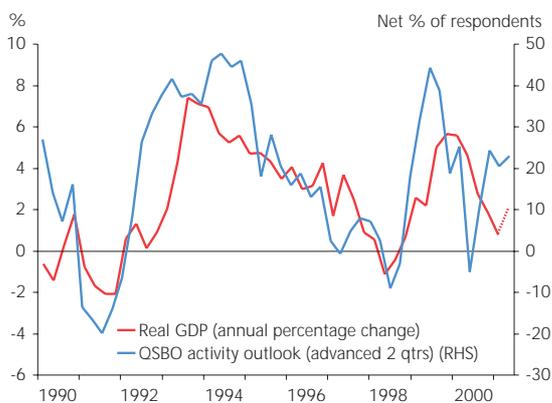
¹⁵ 2001Q2 is an RBNZ estimate.

¹⁶ Source: Real Estate Institute of New Zealand, Statistics New Zealand.

The balance of pressure on resources

Over the first half of 2001, the economy probably expanded by around 0.8 per cent, whereas in May we had expected the expansion to be around 1.2 per cent. Most of the weakness was concentrated in the March quarter, and there is an increasing number of indicators that suggest a faster pace of expansion is already underway (see figure 18 for an illustration).

Figure 18
GDP growth and activity expectations¹⁷



Nonetheless, with output growth having slowed over the year to March 2001, any existing pressure on New Zealand's productive capacity should also have eased. Our statistical measure of aggregate pressure on resources – obtained by comparing the level of current output with its trend – captures this to some extent. We estimate the current “output gap” to be slightly negative when measured this way, somewhat lower than a year ago.

The relatively small decline in the output gap implies that the growth rate of productive capacity has also been quite modest over the recent period. Developments in the components of productive capacity – the capital stock, the labour force, and their combined productivity – tend to support that view. Slowing investment growth translates into a slowing pace of growth of the capital stock. Recent refinements by *Statistics New Zealand* to the measurement of real investment also suggest that the stock of real capital has not been growing at the pace previously estimated. Net outwards migration, as we have experienced over the past three years, typically translates into slower growth of the labour force. Also, to

¹⁷ Source: Statistics New Zealand, New Zealand Institute of Economic Research.

the extent that labour productivity developments give a guide to total factor productivity developments, overall productivity growth has been quite weak.

This view of a relatively (though probably temporarily) slow pace of expansion of productive capacity is also supported by other indicators of pressure on resources. The majority of these indicators suggest that such pressure is at present greater than normal, despite the slow measured growth in the March quarter. Most survey indicators of capacity utilisation and capacity constraints on expansion have been above average for some time (figure 19).

Figure 19
Indicators of capacity¹⁸

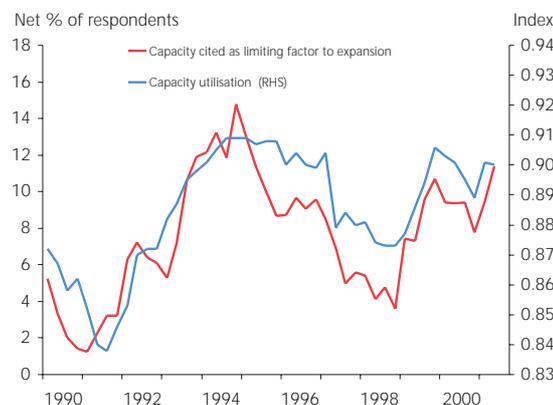
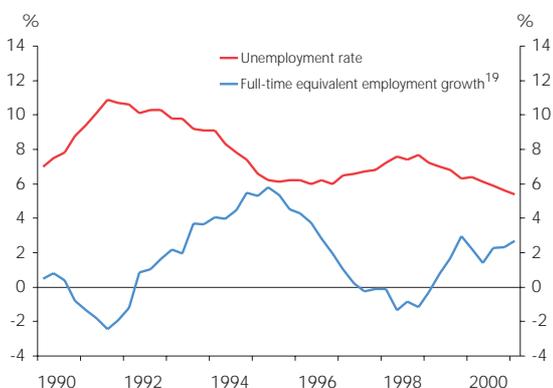


Figure 20
Employment growth and unemployment rate
(Unemployment rate: seasonally adjusted, Full-time equivalent employment growth: annual percentage change)



¹⁸ Source: New Zealand Institute of Economic Research.

¹⁹ As measured by the Household Labour Force Survey.

Labour market data also shows a picture of above-normal stress on productive capacity. The unemployment rate is already lower than it has been for nearly thirteen years (figure 20), and several indicators show that obtaining sufficient staff, both skilled and unskilled, has become more difficult over the last year or so (figure 21).

Finally, it is possible to combine various series from the Quarterly Survey of Business Opinion (QSBO) into leading indicators that correlate reasonably well with estimates of the amount of spare capacity (relative to normal) in the economy. Figure

Figure 21
Indicators of labour market tightness²⁰

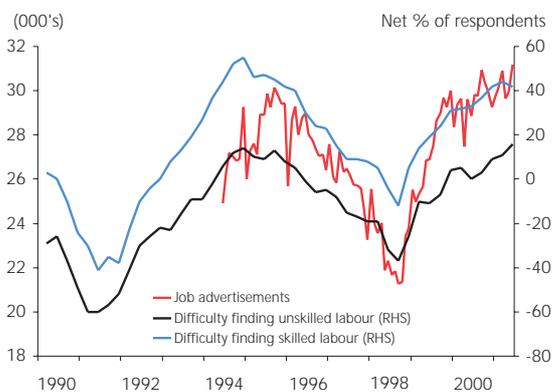
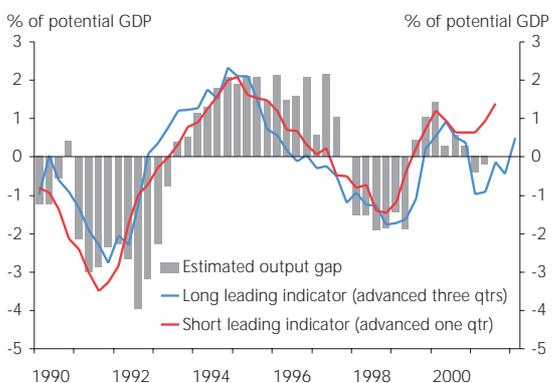


Figure 22
Leading indicators of the output gap²¹
(indicators drawn from QSBO surveys)



²⁰ Source: ANZ, New Zealand Institute of Economic Research.

²¹ Source: RBNZ, New Zealand Institute of Economic Research.

22 shows two such leading indicators that differ mainly in that only the “long” indicator incorporates information about expected construction activity. The indicator that captures the weakness of the construction sector supports the mildly negative reading of our statistical indicator of the “output gap”.

Inflation developments

For some time, we have been forecasting that annual CPI inflation would rise to a peak of around 4 per cent, before falling back well into the 0 to 3 per cent inflation target range over 2001. The key features of this inflation spike and subsequent decline have been due to:

- specific temporary factors (on the up side a tobacco excise tax increase and higher petrol prices²² and on the down side lower Housing New Zealand rents); and
- the depreciation of the exchange rate up to the end of 2000, some of which would pass through into higher CPI inflation with a lag (before abating as an influence on CPI inflation as the depreciation unwound).

Relatively little of this spike in headline inflation has, in our view, been connected with the more persistent components of the inflation process that are to do with developments in either inflation expectations or the cyclical state of pressure on productive resources. To date inflation outcomes appear to have been largely consistent with our projections.

CPI inflation for the year to June 2001 was measured at 3.2 per cent, very close to that projected in our *May Statement*. To some extent, one can distinguish within the CPI index the influence of the two types of transitory influence on CPI inflation highlighted in the bullet points above. First, as can be seen from the data in table 1, the influence of higher tobacco taxes, higher petrol prices and lower rents offset each other over the year to June. Had those events never occurred, annual inflation would still have measured 3.2 per cent. Having said that, the June 2001 quarter CPI outcome was heavily

²² The underlying shock is to international oil prices. By measuring the effect of that shock by way of petrol prices in New Zealand, we are underestimating the total impact on prices in New Zealand by missing indirect effects. However, this is offset by the fact that petrol prices include a component of exchange rate pass-through.

Table 1

CPI, CPI derivative series, and other price measures²³
(Annual percentage change)

	2000				2001	
	Mar	Jun	Sep	Dec	Mar	Jun
CPI	1.7	2.0	3.0	4.0	3.1	3.2
CPI excluding petrol	1.2	1.3	2.1	3.3	2.9	3.0
CPI excluding cigarettes	1.8	1.7	2.4	3.4	2.4	2.8
CPI excluding rents, petrol, and cigarettes	1.2	1.0	1.4	2.7	2.8	3.2
CPI non-tradables	2.6	2.1	2.0	2.4	1.2	1.0
CPI tradables	0.9	2.0	4.1	5.4	4.9	5.2
CPI weighted median (of annual price change)	1.7	1.3	1.7	2.6	2.8	2.5
CPI trimmed mean (of annual price change)	1.2	1.8	2.3	3.4	2.8	3.1
Tradables excluding petrol and tobacco	-0.4	-0.1	1.0	2.9	3.5	4.2
Non-tradables excluding rents	2.6	2.1	2.0	2.4	2.4	2.3
PPI: inputs	4.9	5.5	8.0	10.2	7.8	n/a
PPI: outputs	3.3	3.9	5.6	6.8	5.7	n/a
Merchandise import prices (excluding petrol)	5.3	8.3	13.2	16.9	6.1	n/a
Consumption deflator	0.8	1.3	2.4	3.3	2.1	n/a
GDP deflator (derived from expenditure GDP data)	1.2	1.8	2.8	4.7	5.2	n/a

influenced by increases in petrol prices and international airfares, which together accounted for 0.5 percentage points of the 0.9 per cent overall increase.

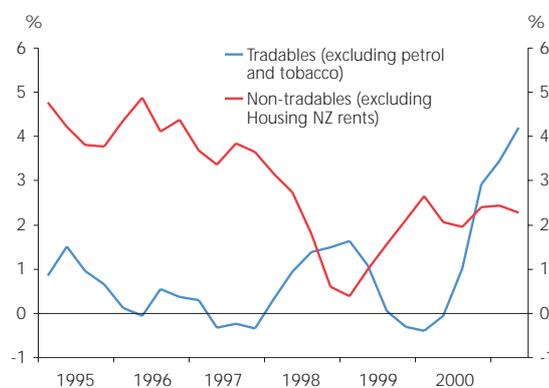
Second, the effect of past depreciation of the exchange rate in pushing inflation up over this period is also evident in table 1. CPI tradables inflation, excluding the petrol and tobacco groups, measured over 4 per cent for the year to June 2001. A little of that (around 0.4 percentage points) was attributable to higher fresh fruit and vegetable prices, which are classed as tradable goods even though their pricing is heavily affected by local growing conditions. In contrast, non-tradables inflation, excluding rents, was around half the pace of tradables inflation (see also figure 23).

It is not straightforward to assess how valid our view is that relatively little of the recent inflation profile has been associated with persistent components of the inflation process. There is no direct measure of "persistent inflation" (although we present some model-based estimates of that concept in chapter 3). At best, we can examine inflation measures that cast indirect light on the issue.

Of these measures, some suggest that persistent inflation is running higher than would be consistent with the mid-point of our inflation target range, and some suggest that it is comfortably close to the mid-point.

²³ Source: Statistics New Zealand, RBNZ.

Figure 23
CPI tradables and non-tradables inflation excluding special factors²⁴
(annual percentage change)



First, *CPI non-tradables* inflation is a measure often associated with the concept of persistent inflation. In principle, non-tradables inflation should reflect the combined influence of the state of pressure on productive capacity and inflation expectations.²⁵

²⁴ Source: RBNZ.

²⁵ In contrast, *tradables* inflation disproportionately captures transitory components of the inflation process. With well-anchored inflation expectations, the direct pass-through of exchange rate changes into inflation should prove as transitory as the exchange rate changes themselves.

CPI non-tradables (excluding rents) appears to be sitting in the upper half of the inflation target range. However, allowing for the fact that the trend of non-tradables inflation is typically higher than the trend of tradables inflation – to the tune of around one percentage point on average over the last 10 years – this measure only mildly suggests above-normal persistent inflation.

Second, *weighted median* and *trimmed mean* measures of CPI are also used as guides to the central tendency of inflation, which are often thought to be associated with persistent inflation. These measures of inflation indicate that prices increased by 2½ to 3 per cent over the year to June 2001. How much we take from this depends on how well we believe these measures filter out components of inflation that will turn out to be transitory, and therefore do not warrant a policy response. Because there are lots of tradable goods in the CPI regimen, median and trimmed mean measures will also be affected by direct exchange rate pass-through, which we expect to be mostly transitory in nature.

Third, the *GDP deflator* is another indicator that may cast light on persistent inflation. It measures developments in the price of goods and services produced in New Zealand, and by construction leaves out the price of imported goods and services. To get closer to a domestic, non-tradable concept of inflation, we can adjust the GDP deflator to remove export prices. Although measures based on the GDP deflator may be an imperfect, the export-price-adjusted indicator does not suggest the presence of significant persistent inflation.

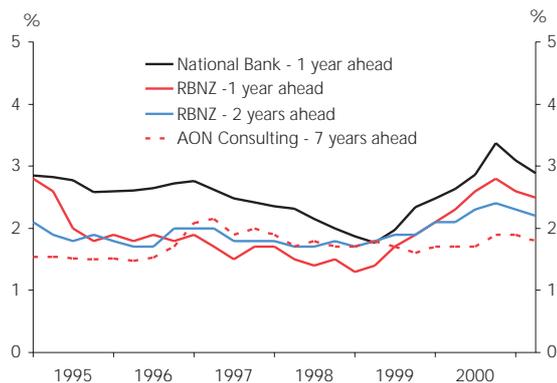
Fourth, survey indicators of *expected selling prices and expected costs* have shown a significant spike up, in parallel with the spike in actual inflation (figure 24). However, these indicators have recently dropped sharply, consistent with the inflation profile that we have been predicting, and consistent with the idea that the inflation spike is mostly transitory.

Fifth, *surveyed inflation expectations* also spiked up but have begun to retrace. Of considerable importance, the longer the time horizon over which respondents were asked about expected inflation, the less their expectations have been disturbed by the recent inflation spike (figure 25).

Figure 24
Expected selling prices and expected costs²⁶
(net percentage expecting increase)



Figure 25
Inflation expectations²⁷
(annual percentage change)

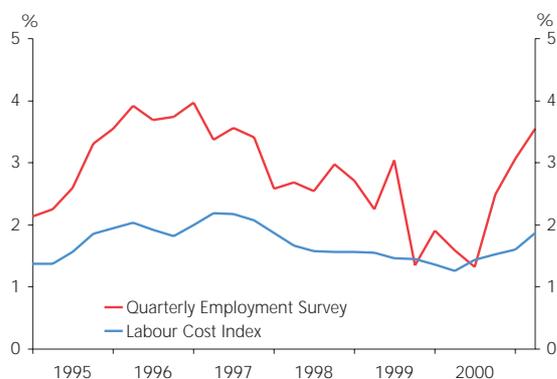


Finally, *wage inflation* is also a source of information on inflation expectations and the persistent element of the inflation process. Wage growth tends to follow developments in both the labour market and in inflation. Consistent with normal lags, wage inflation has recently accelerated (figure 26). It is impossible to tell how much of this acceleration is to do with the tightening of the labour market over the last 18 months or more, and how much is to do with a catch-up of real wages following the recent inflation spike. In our view, a mix of both influences is likely.

²⁶ Source: New Zealand Institute of Economic Research.

²⁷ Source: National Bank of New Zealand, RBNZ, AON Consulting New Zealand Ltd.

Figure 26
Private sector wage growth
(annual percentage change)

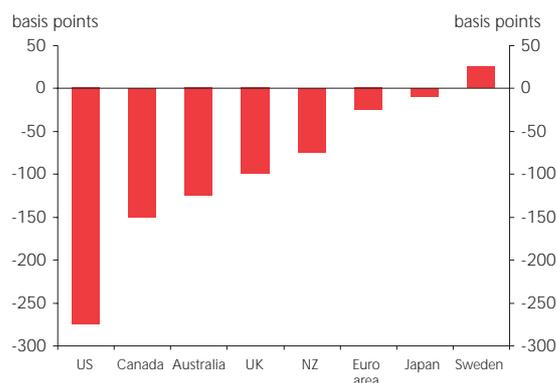


Interest rate expectations

The Official Cash Rate (OCR) is a key influence on short-term market interest rates in New Zealand, and is set in response to emerging inflation pressures that will impact on inflation in one to two years time. Not surprisingly, therefore, financial markets make their own assessments of emerging inflation pressures, in order to anticipate the likely path of the OCR.

Figure 27 shows that reductions in the OCR this year have been roughly in line with changes to official interest rates in

Figure 27
Changes in official interest rates
this year²⁸



²⁸ Source: Bloomberg.

Australia, the UK and the Euro area. The changes to US official rates have been greater, with very significant reductions in the federal funds rate. At the other end of the spectrum, some central banks have even raised official cash rates.

Looking ahead, expectations for the OCR have been generally steady in recent months. Markets have fluctuated between expecting no change and expecting one more 25 basis point cut in the OCR in the near term. Further into the future, markets have been anticipating a tightening in policy – perhaps as soon as the first quarter of 2002.

This stability in local interest rate expectations is at odds with trends in the major economies. There, early optimism of a near-term recovery in growth and the possibility of monetary tightening has given way to weaker economic indicators, weaker equity markets and consequently the view that there is further easing to come. In contrast there are signs that New Zealand's surprising weakness in the first quarter did not last into the second quarter of 2001. This has underpinned interest rate expectations in New Zealand in the face of falling interest rates elsewhere. Also relevant have been indications of a strong rebound in Australia's growth prospects, which have reversed Australian market interest rate expectations from another easing to the possibility of a tightening.

In general, the market's perception of the balance of risks has become more even. Previously, markets perceived significant risks that growth in the major world economies would weaken further, resulting in easier policy here. Markets now appreciate that these risks must be balanced against the possibility that the effects of a stimulatory exchange rate and good export prices will show through in stronger domestic growth, supported by stronger growth in Australia – a significant trading partner.

3 The macroeconomic outlook

Chapter 2 reviewed the current position of the economy in the light of events over the last year or so. In summary, it described an economy that probably lost some growth momentum during that period, but which has been cushioned from the deteriorating world economy by a low exchange rate and favourable prices for some key exports. Most recent indicators are pointing to renewed expansion and increasing pressure on resources.

On the inflation front, the inflation spike to 4 per cent was described as having reverted towards the target range as expected. This is consistent with the persistent components of inflation remaining comfortably within the target range. However, the return of headline inflation to within the target range is yet to come.

In this chapter we reassess the future. We set out our "central" view of how the economy will evolve going forward, and the key judgements on which that view is based. Our central view is represented by the projection set out in the tables in Appendix 4. The key issues and judgements revolve around:

- the likely course from here of the slowdown in the world economy, and the transmission of that slowdown to the New Zealand economy;
- whether the recent indicators of an increase in household consumption and residential investment will be confirmed by the aggregate data, and how robust that recovery will be;
- the outlook for business investment;

- the prospects for expansion in the economy's capacity to produce, which, in turn, will be determined by growth in the capital stock, in the labour force, and in how productively those resources are used; and
- how much of the spike in inflation, to the 3 to 4 percent levels that we have seen since the second half of 2000, will feed through into wages and salaries and firms' price-setting behaviours.

The world economy

We have followed our usual practice of basing our view of world economic prospects on the *Consensus* forecasts for GDP growth for our 14 most important export partners. The *Consensus* forecasts used in our projections are those released in July, and are summarised in table 2.

Over recent months, a feature of the *Consensus* forecasts, which are updated monthly, has been a marking down of the growth outlook for most of the 14 countries, especially for the 2001 calendar year (figure 28). This was again evident in the July *Consensus* forecasts. Although the *Consensus* forecasts reflect a degree of confidence that our trading partners' economies will recover next year, it is significant that in July the growth prospects for 2002 were also marked down, and by nearly as much as were those for 2001. Moreover, data on trading partner GDP outcomes that have become available since the July *Consensus* was compiled have generally come in weaker than expected. Second quarter growth in the United States was only 0.7 per cent (annualised), Ja-

Table 2
Export partner growth
(calendar year, annual average percentage change)

Country	Weight	1999	2000	2001f	2002f
Australia	27.0	4.7	3.8	2.4	4.1
United States	18.5	4.2	5.0	1.6	2.9
Japan	17.1	0.8	1.5	-0.1	0.8
Canada	1.8	5.1	4.4	2.3	3.2
Europe-4 ²⁹	14.8	2.1	3.1	2.1	2.5
Asia ex-Japan ³⁰	20.9	6.9	8.6	3.7	5.5
14 country index	100.0	3.9	4.4	2.1	3.4

²⁹ Includes Germany, France, Italy and the United Kingdom.

³⁰ Includes China, Hong Kong, Malaysia, Singapore, South Korea and Taiwan. Note that we have changed the

composition of the GDP14 index to better reflect recent trade patterns. The index now excludes Indonesia and Thailand, and includes Canada and Singapore.

Figure 28
Consensus forecasts for export partner growth³¹
(annual average percentage change)

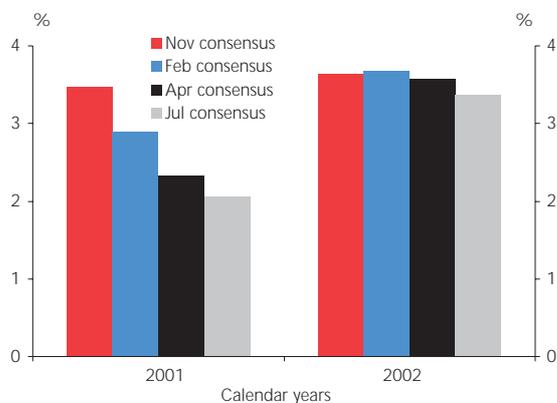
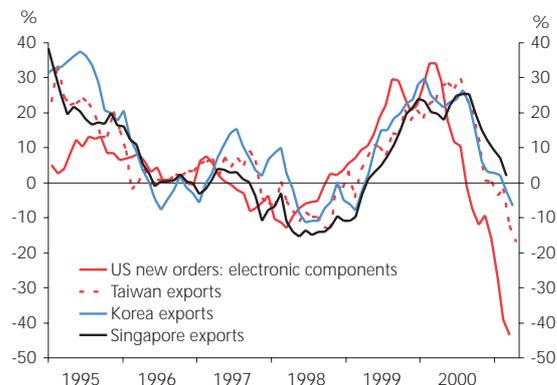


Figure 29
US new orders for electronic equipment and exports from selected Asian countries³²
(3 month moving average, annual percentage change)



pan remains weak, and Singapore's economy contracted by 6 per cent over the first two quarters of calendar 2001.

The current Singaporean position can be attributed very substantially to a sharp contraction in its exports of information technology goods and other electronic goods, particularly to the United States. It seems likely that other countries in the East-Asian region, which are also highly dependent on exporting IT hardware and electronics goods to the US, are being similarly affected.

On the positive side, Australia, our single largest trading partner, has bounced back from the sharp slowdown in growth experienced in late 2000. It is now apparent that, to a significant degree, the slow-down in the Australian economy in the second half of 2000 was the result of a post-Olympics lull, and a timing effect associated with the introduction of GST. In particular a considerable amount of residential construction was brought forward ahead of the GST start date of 1 July 2000. With those effects now worked through, and with a low Australian dollar providing solid support to net export growth, the Australian economy is moving back to a growth rate of about 4 per cent.

Nevertheless, we see the overall external outlook relevant to New Zealand as being a little less favourable than that described in our last *Statement*. It now appears that the slow-down will be somewhat more prolonged than had previously been envisaged. To the extent that this prospect is now being factored into the *Consensus* forecasts, by way of marking down 2002 world growth, it is also factored into our projection.

In our projection we have also assumed that the normal relationship between world growth and the international price of New Zealand's exports will reassert itself; in the year to March 2002 we expect the weighted average of those prices to fall by over 10 per cent. In adopting this assumption, we have been conscious that in the last three projections we have similarly assumed that the world price of New Zealand's exports would fall, only to find on each occasion that prices continued to rise (as depicted in figure 4 in chapter 2). It is possible that a substantial part of the recent rise in commodity export prices may be more permanent than we are allowing for in our central view. That is a risk to be borne in mind – a favourable "risk" for growth and incomes, albeit an upside risk for inflation.

Domestic activity

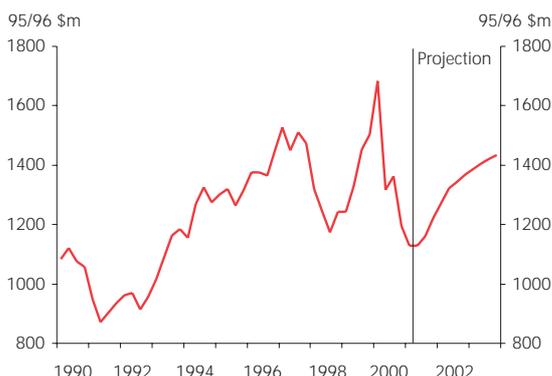
A central issue here concerns whether the indications of growth in household consumption and in residential investment seen in recent months will be confirmed by the aggregate data, and sustained through the projection period. Our view is that they will be, with private consumption in the year to March 2002 being projected at nearly 3 per

³¹ Source: *Consensus* forecasts.

³² Source: Datastream.

cent higher than in the preceding March year. Residential investment expenditure, having fallen by over 15 per cent in the year to March 2001, is expected to stabilise in the year to March 2002 and pick up steadily thereafter (figure 30).

Figure 30
Residential investment
(seasonally adjusted)



Underlying this assessment of the outlook for household consumption and investment spending are a number of factors:

- A projected increase in total real wage and salary income, arising in part from growth in the labour force as well as growth in real wage and salary rates.
- The recent significant increase in entrepreneurial income, attributable in large part to increased farm incomes. Even though we are allowing for some fallback in those incomes from the present, exceptional, levels, they are expected to remain high in relation to historical averages. Signs are also emerging that the higher rural sector incomes are flowing into increased consumption and residential investment, and we expect that momentum to build over the next year or two.
- The lagged effect of the fall in interest rates since we started lowering the OCR in March this year.

The projected increase in real disposable income from business sources warrants some elaboration, given that the aggregate subsumes a number of different influences.

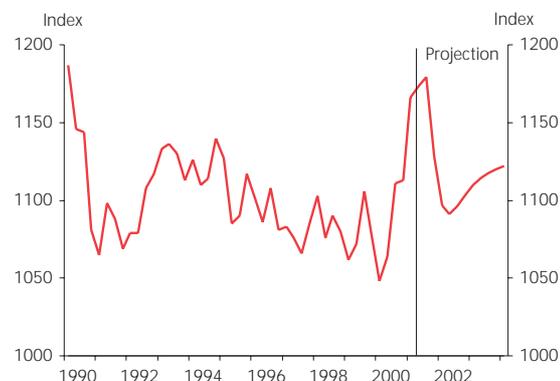
As already mentioned, we expect farm sector incomes to fall somewhat from their present exceptional levels. This reflects our assumption that the world prices for our major primary commodities will fall, and that the exchange rate will appreciate somewhat (although the impact of an exchange rate

appreciation may be delayed, owing to a significant proportion of next season's production having been hedged at current exchange rates). We are also allowing for some production set-backs in the rural sector due to continuing effects from last summer's drought.

We expect business sector incomes in the period ahead to continue to show the same sort of mixed fortunes experienced in recent months. On the whole, firms that are predominantly exporting should continue to fare well, notwithstanding the slowing world economy, while those with significant import content in their production and cost structures will likely experience continued pressure on margins. This judgement is based on an expectation that even if the New Zealand dollar appreciates somewhat (as is assumed), New Zealand export firms will still remain quite competitive, and import firms will remain under some pressure.

Looking at the picture from another angle, these exchange rate effects on business incomes – which, in addition to making New Zealand firms more competitive internationally, shift income between the tradable and non-tradable sectors of the economy – are supplemented by developments in the terms of trade. For an extended period, New Zealand's terms of trade have been relatively, even unusually, stable. But since early 2000 there has been a noticeable improvement, largely on account of the world prices for key New Zealand commodity exports having moved favourably out of line with commodity prices more generally (figure 31).

Figure 31
Terms of trade

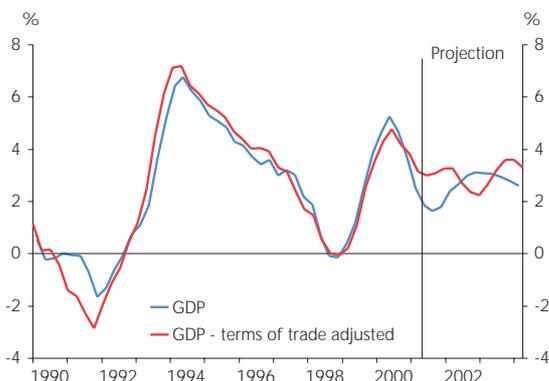


In essence, a lift in the terms of trade means that what we produce buys more. This is illustrated in figure 32, which

shows GDP growth adjusted for the terms of trade, compared with the unadjusted volume measure of GDP. While we do not expect all of the recent gain in the terms of trade to be permanent, the gain we have seen is expected to provide a material boost to real income, and should support economic activity, for at least the next twelve months.

The outlook for business investment is somewhat complicated. As discussed in chapter 2, we think that investment bounced back from the first quarter 2001 trough. We also expect on-going investment growth, in line with the normal relationship with investment. Investment growth is also suggested by the fact that current indicators of capacity utilisation are at quite high levels, and that business confidence is holding up at better-than-average levels.

Figure 32
Terms of trade adjusted GDP growth³³
(annual average percentage change)



The investment growth we are projecting over the medium term is moderate rather than strong. There are a number of factors that are weighing against a stronger investment profile. These include:

- The uncertain world economic outlook.
- The low exchange rate. Where expanding productive capacity means having to import capital goods, the depreciated exchange rate means that firms are faced with high up-front investment costs. Even for exporters who also benefit from the low exchange rate, there will be

uncertainty about whether the exchange rate will remain attractive in later years.

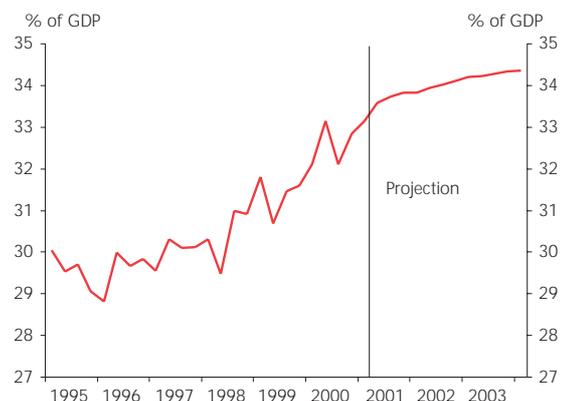
- The surge in telecommunications and IT investment of recent years, which has made a material contribution to the level of investment in New Zealand, is expected to ebb, as it has in other countries.

Net exports

Export volume growth is expected to be sustained over the projection period at around 3½ to 5½ per cent per annum, with the more rapid growth occurring earlier in the period and tailing off toward the end. However, throughout, export growth remains faster than GDP growth, thus causing the export share of GDP to rise (beyond the increase that has occurred over the last several years; see figure 33). Our assumption that the exchange rate will remain competitive, albeit perhaps not as competitive as at present, lies behind this outlook.

However, in line with the pick-up in domestic activity just discussed, we are also projecting a recovery in import growth, from the presently subdued rate. This means that in the later years of the projection period, there is little if any contribution to GDP growth from *net* exports. The overall picture is of an economy that is becoming more open, rather than one in which net exports remain the *dominant* driver of growth. Over the medium term, we see the economy's expansion as being more balanced, with contributions from both the domestic and external sectors.

Figure 33
Exports as a share of GDP

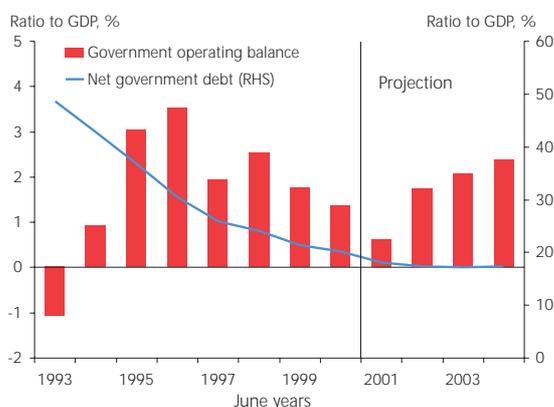


³³ Source: RBNZ

Fiscal policy

Another, largely exogenous, driver of the macro economy is the fiscal position. As usual, we have based our fiscal projections on the Treasury's latest forecasts (those prepared for the 2001 Budget), adjusted for our different macroeconomic outlook. The Government's operating balance is projected to remain in surplus throughout the projection period, with those surpluses gradually increasing (figure 34). At face value, this suggests a mildly contractionary influence on the macro economy from fiscal policy.

Figure 34
Government operating balance and net Government debt³⁴



However, account also needs to be taken of the Government's net capital outlays (which are not included in the operating balance) in assessing the overall impact of fiscal policy. With around \$2 billion per annum allowed for capital expenditures that command resources, the overall stance of fiscal policy is better assessed as broadly neutral rather than mildly contractionary.

Productive capacity

The outlook described so far has the economy growing more rapidly during the next year or two than it has during the past twelve months. What that means for monetary policy depends on whether the higher level of activity can be sustained without inflation pressures emerging.

Our methodology is such that our projection represents a macro-economic outlook that is consistent with maintenance of medium-term (one to two year ahead) price stability, and indicates the monetary policy track that is consistent with achieving that outcome. Our projection of a mild tightening in monetary conditions is consistent with growth in economic activity over the projection period being a little higher than the economy's sustainable capacity to produce. Over the projection period, we are expecting growth in the labour force to average about 1½ per cent per annum, and output per labour force member (labour productivity) to increase by about 1 per cent per annum. That makes for potential growth of about 2½ per cent per annum, compared with GDP growth closer to 3 per cent per annum (on average).

Embedded in this view is an expectation that the capital stock will expand, but not rapidly (consistent with the moderate profile we have adopted for investment growth). We also project that the recent turnaround from net emigration to net immigration (figure 17 in chapter 2) will be sustained, and assume further increases in labour force participation. Taken together, these make a material contribution to labour force growth.

Inflation

Perhaps the most critical judgement incorporated into the projection in this *Statement* concerns the limited allowance we are making for spillover from the recent CPI spike into firms' pricing behaviour and wage and salary settlements. A possible concern is that those who have experienced an adverse relative price change (consumers of oil-based items, and of imported items more generally) will seek to raise their own prices (wages and salaries in the case of employees, and nominal profit margins in the case of firms) to restore their real incomes. If these things were to occur, the result would be a rise in prices across the board – generalised inflation.

The evidence discussed in chapter 2 suggests that so far there has been little spillover from the specific shocks that have occurred into more generalised movements in prices. But the jury is still out, and the possibility of inflation pressure mounting from this source remains.

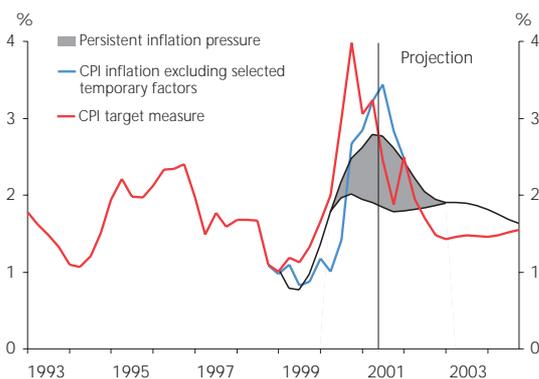
In the May *Statement*, we introduced a chart that illustrated the nature of the judgements that are involved on this issue,

³⁴ Historical source: Treasury. Adjusted by the RBNZ over the projection period.

and we update that chart here (figure 35). The red line shows the historic and projected path for CPI inflation. The blue line shows CPI inflation adjusted for three specific price shocks in the historical data: shocks to petrol prices, tobacco taxes (in the June and September quarters of 2000), and state house rents (in the March quarter of 2001). This can be thought of as a “top down” approach to assessing “persistent” inflation pressures.

The shaded grey area reflects an alternative, “bottom up”, approach to assessing persistent inflation pressure. That area represents a range of possible paths for what can be thought of as persistent inflation, depending on how firms and wage

Figure 35
Decomposition of inflation projection³⁵
(annual percentage change)



earners react to inflation pressures. The persistent inflation shown is a notional measure that has been derived by using the Bank’s macroeconomic model, within which inflation pressures are generated by the cyclical pressures and by the spillover of actual CPI outcomes into inflation expectations.

The upper edge of the grey area shows a path for persistent inflation on the basis that the already-recorded spike in the CPI *will* influence subsequent wage- and price-setting behaviour to some degree. And the lower bound shows the path of persistent inflation pressure on the assumption that CPI outcomes, including the spike, are by-gones and are of no consequence for on-going wage- and price-setting behaviour. Thus, the lower bound of the grey area corresponds with a view that core or persistent inflation can be gauged

solely from the output gap, and that all price shocks are by-gones, whether they be oil, state house rental, exchange rate, or other price shocks.

A feature of figure 35 is that all the inflation measures are shown as converging back towards 1½ per cent – with the same monetary policy. This highlights an important feature of the projection, namely that even if there is some flow-through to expectations (the upper part of the grey area), those expectations are modified by subsequent events which prevent a higher inflation dynamic from developing. The subsequent events that generate this result in our model are the assumed fall in the international price of our commodity exports, and our working assumption that the exchange rate will appreciate.

Correspondingly, our central track for interest rates in the projection, which is mildly upwards, reflects monetary policy responding primarily to emerging excess demand in relation to the economy’s production potential, rather than to rising inflation expectations that feed into a persistent inflation dynamic. However, clearly there are risks associated with that judgement.

The present electricity shortage represents another risk to future CPI outcomes. A background discussion on the electricity shortage is provided in box 2. It suffices to note here that increased electricity prices could contribute to higher CPI inflation either as the result of increases in the electricity tariff for households, or via increased prices for consumer goods and services that have a significant electricity input. Moreover, if the electricity shortage is prolonged, the pricing pressures that are currently confined mainly to the wholesale spot market and commercial users would probably flow through to term contract prices, and would increase the likelihood of an impact on the CPI. As a contingency, we have allowed for a 4 per cent increase in the price of electricity for residential consumers in each of the September and December quarters. No explicit allowance has been made for a reversion of consumer electricity prices to normal, on the grounds that such a reversion could be sufficiently spread out so as to be insignificant in any one period.

³⁵ Source: RBNZ.

Box 2 Electricity sector – risks and issues

Recent cold and dry weather, following a dry summer, has resulted in low river flows in the South Island hydro catchment area and has also increased electricity consumption. These conditions have resulted in hydro dam catchment lakes falling below normal seasonal levels. Given New Zealand's dependence on hydro-generated electricity (60 per cent of total generation), there is now less electricity generation capacity relative to demand.

Figure 36
Hydro storage levels³⁶
(month average, New Zealand-wide generating capacity)

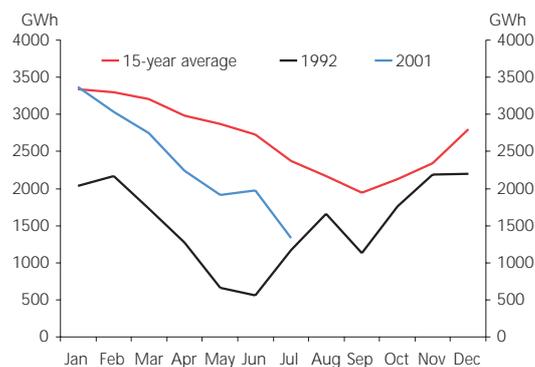
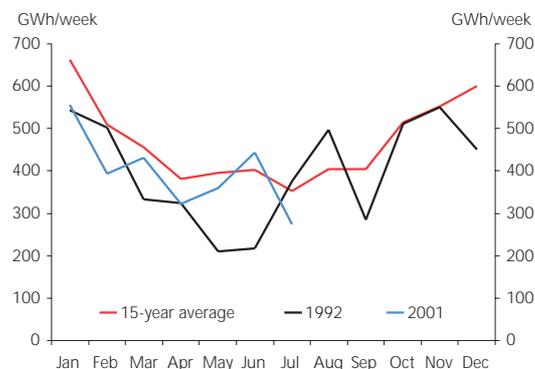


Figure 37
Hydro inflows³⁷
(month average, New Zealand-wide generating capacity)



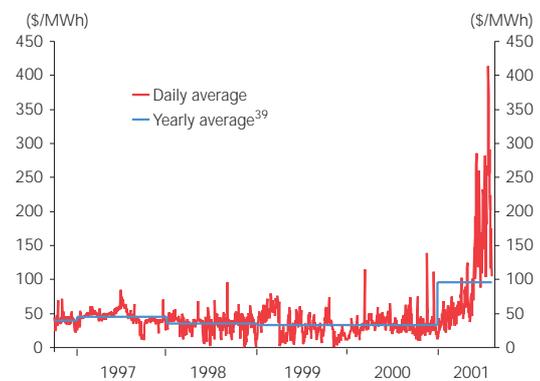
³⁶ Source: The Marketplace Company Limited. Storage is measured as generating capacity equivalent.

³⁷ Source: The Marketplace Company Limited. Inflows are measured as generating capacity equivalent per week.

The last year in which electricity shortages were experienced was 1992. On that occasion, shortages in hydro generating capacity resulted in shortages in electricity supply, and eventually voluntary power cuts. Since then, a wholesale market for electricity has been established. Shortages in supply are now reflected in increased prices – and the wholesale price of electricity has increased significantly over the last eight weeks or so.

The wholesale electricity market is structured as follows. Electricity generators can sell their supply in one of two ways. They can either contract bilaterally with a particular major user (or electricity retailer), or sell into a market-based pool, namely the New Zealand Electricity Market (NZEM). Approximately 25 per cent of all generator sales are contracted bilaterally, with the remainder being traded through the NZEM wholesale pool.

Figure 38
Wholesale electricity spot price³⁸



Bilateral contracts specify both the quantity to be supplied and the price. In these contracts, the price is mostly fixed, but a proportion of supply may be referenced to a current average NZEM pool price.

Although spot prices in the NZEM pool change constantly in response to supply and demand fluctuations, it is estimated that about 80 per cent of all electricity sourced

³⁸ Source: The Marketplace Company Limited. Daily average is New Zealand Electricity Market Haywards reference price, 1 October 1996 - 8 August 2001.

³⁹ 2001 average is for the year to 8 August 2001.

through the pool is covered by hedge contracts of varying lengths. The balance is traded at spot market prices, and it is these prices that have recently been pushed to high levels.

As hedge and term contracts run out, contract holders are faced with either having to buy electricity at the high spot price, or having to enter into new hedge contracts at higher prices than previously. (New hedge contract prices are being driven up by the risk that the current shortage will last for some weeks or months.)

Hence, both large industrial users and the electricity retailing companies, which mostly on-sell to households and to commercial users, have been facing increased costs of supply, with the extent and timing of the increase depending on how extensively they have been hedged.

These increases in price have resulted in a number of responses: the generating companies and Transpower (which operates the national transmission grid) have agreed to operate beyond normal security thresholds; some large users have curtailed production to reduce electricity consumption (particularly of supply sourced from the spot market at the current very high prices); and an electricity conservation campaign has been launched.

The retail electricity companies, to date, have mostly absorbed the increased cost, rather than passing it on to consumers. This reflects a high level of competition in this market. Also, some of the retail distributors, particularly those which are part of a wider group that also generates electricity, have been well placed to hold their prices. These companies, in effect, are paying the increased price to themselves, or in other words, have a "natural hedge".

So, how might the electricity shortage affect the economy? There are five possible effects we can identify.

First, to the extent that higher wholesale prices are passed on by electricity retailers to households, these will show up as price increases in the CPI. However, as mentioned, the retail distributors to date have mostly refrained from implementing price increases to households.

Second, while we may not see a large direct pass-through from increased wholesale prices into households' electrici-

ty bills, indirect price increases may occur if producers or retailers of consumer goods increase their prices as a result of increased electricity input costs. For example, a supermarket with lighting and refrigeration as a significant proportion of its costs may put up the price of milk and ice-cream to cover the cost increase. This would also be reflected in the CPI, but probably not immediately.

Third, a decrease in hydro-electricity generation and an increase in thermal generation reduces measured production GDP, a 'value-added' concept. This is because gas and coal, the inputs into thermal-electricity generation, may have to be withdrawn from alternative uses, to boost the production of electricity. A costless input, water, is being substituted for costly ones, coal and gas.

Fourth, as noted above, increased electricity prices are causing some companies to curtail production (e.g. Comalco and Pan Pac Forest Products). This could be to avoid buying electricity on the spot market, or in response to opportunities to "sell-back" electricity (that had been contracted earlier at a fixed price) at a price closer to the current spot price. When these opportunities exist, companies may bring forward annual maintenance (shut down) schedules, effectively selling electricity in place of production of their commodities. Of course, once wholesale electricity prices return to more normal levels, production can be expected to resume.

Fifth, the electricity situation could adversely impact on consumer and business confidence, which may have flow-on effects on GDP growth.

With the electricity market now in place, this year's low river flows have resulted in an early signal (in the form of wholesale price increases in May/June) that a potential problem with electricity supply could occur later in the year. Because of this signal, the potential electricity shortage situation has been noted and responded to relatively early, perhaps earlier than in 1992.

Whether the responses to date will curtail demand enough to take pressure off the wholesale electricity prices and avoid increased prices at the consumer end of the market will depend very much on the weather and river flow patterns over the next month or two. If there is no

improvement in the present situation, the electricity shortage may cause some increases in components of the CPI, and some contractions in components of GDP.

For comparative purposes, the shortage in 1992 has been

assessed as having temporarily reduced GDP by 0.6 per cent.

However, owing to the absence of a market for electricity and hence an absence of a price response, there was little impact on the CPI.

4 Policy issues

Over the past 18 months or so, our *Monetary Policy Statements* have dwelt on some common themes with respect to the path of the New Zealand economy, the associated inflation dynamic, and the appropriate stance of monetary policy.

In general, what we have described is a two-speed economy, with the export sector performing strongly, while the domestic, urban, economy has been somewhat subdued. But that description gives a greater sense of uniformity of performance than is warranted. Within each of these sectors, parts are doing very well and parts are doing poorly.

In successive *Statements*, we have had to draw out, from an array of often-contradictory information about diverse sectoral performances, a picture of average performance on which to base monetary policy. That aggregate picture has been of an economy that was expected to expand, on average, at a pace matching or slightly exceeding its medium-term growth potential. The starting point for each *Statement* was a position of neither significant surplus capacity nor significant stress on capacity. One of the main policy judgements at each point over that period has related to how quickly that available surplus capacity would be exhausted, giving rise to mounting inflationary pressures.

From late 1999, on the basis of a broad-based recovery in the international economy from the Asian crisis period, we judged it likely that inflation pressures would emerge within our policy horizon, and on that basis raised the OCR from 4.5 to 6.5 per cent in five steps.

This year, the sharp shift in sentiment regarding the international economy has been the primary driver of our decisions to scale back the OCR to its current level of 5.75 per cent. Our response through 2001 has been cautious. But even now, as we review our stance, that caution seems well justified.

Why so?

Our reading of the pressure being placed on the nation's resources, both currently but more importantly over the next year or two, is that New Zealand is likely to be pushing against some key capacity limits (see chapters 2 and 3). Indeed, what may be emerging is the pattern expected for some time, in which the strength in the pastoral and tourism sectors finally spills over into the domestic economy and gives rise to broader-based growth. The question to be answered is just how readily

that broader-based growth can be accommodated without generating equally broad-based inflationary pressures.

Another important consideration in our policy judgements of late has been the sharp spike in headline CPI relating to petrol prices, the tobacco tax and the exchange rate (on the upside) and government decisions affecting public sector housing rentals (on the downside). It is fully consistent with the wording and intent of our Policy Targets Agreement to "look through" these temporary price shocks and to steer our policy settings with reference to the "persistent" or underlying inflation trend. But as chapters 2 and 3 discuss, identifying the persistent inflation trend is by no means straightforward. Of particular concern is the risk that the public's inflationary expectations may be disturbed by the spike in headline CPI – this being the path by which the short-term inflation spike would become more deeply embedded in the persistent inflation dynamic. Thus far, the headline CPI spike appears to be passing much as expected. But it would be imprudent to assume away completely the risk of some disturbance to on-going price setting behaviour.

Finally, we have been conscious throughout of the volatility in both the international environment and our own data flow. Quarter-to-quarter data outcomes have often been both surprising and contradictory in their messages. In that environment, it is necessary to "look through" the immediate data release while trying to discern the longer-term trends.

For example, we can look at recent GDP outcomes and see that recorded growth has slowed from over 5 per cent for the year to March 2000, to less than 1 per cent in the year to March 2001. On that basis, should we conclude that New Zealand is actually moving "in sync" with other OECD economies and therefore in need of further monetary easing?

To reach that conclusion would be to ignore the noisy and volatile characteristic of New Zealand data. The growth result for the year to March 2000 certainly exaggerated (on the upside) the trend strength of the economy then, just as there is good reason to think that the more recent output data exaggerate the extent of the slowdown over the past few quarters. As noted earlier in this *Statement*, we have recently seen increasing evidence of reasonable and growing robustness in a broad range of domestic activity indicators. In short, while the economy has clearly slowed over the past

year or so, we don't think that slowdown is as pronounced as the raw GDP numbers alone might suggest.

As usual in determining an appropriate policy stance, we need to explore the risks around our central forecast.

An obvious downside risk – for both activity and inflation – is found in the international environment. There has been sobering news of late from almost all corners: US, European and Japanese corporate earnings, industrial production, forward orders and job layoffs; emerging market concerns focussed especially on Argentina and Turkey, triggering a renewed bout of investor risk aversion; and a global trade contraction led by sharp declines in exports from Asia, especially of IT and electronics equipment. In this picture, importantly for New Zealand's fortunes, Australia can be seen as the standout performer.

Box 3 explores the possible policy consequences of this sobering international news. The alternative scenario presented in the box is based on the same "weak world" scenario that we have presented in recent *Statements*, whereby the slowing in world growth cumulates to something as deep as experienced in the Asian crisis, but which lasts longer. In this scenario, not only is there a contraction in world demand for our exports, but our export prices also drop by more than we have allowed for in our central projection (though prices remain, on average, higher than during the Asian crisis). Were this scenario to eventuate, all other things equal, a cut in interest rates would be required to prevent inflation from significantly undershooting the centre of the target range.

Of course, there is, as usual, another side to the monetary policy story. Chapters 2 and 3 have suggested why New Zealand has, so far, been less affected by the slowdown in trading partner activity than we might have expected. The story relies in part on exchange rate stimulus, and in part on some specific factors supporting New Zealand's commodity prices in the face of a weaker world economy. Those chapters have also pointed to some indicators suggesting existing pressure on New Zealand's productive capacity, beyond that we have allowed for in our central projection.

In constructing our central scenario, we have consciously embodied a number of judgements and assumptions that, collectively, could be seen as an unduly optimistic view of

future inflation pressures. These judgements pose an upside risk to inflation at present. The key judgements in that category include:

- The benign assessment of the degree of pressure on capacity.
- An assumption of a sharp fall in export prices through the second half of 2001 and into 2002.
- That the obvious margin pressures being faced by local companies will not be relieved through widespread price increases.
- That despite unemployment reaching 13 year lows, and despite widespread reports of labour shortages, increased wage growth will not feed into increased output prices.
- That despite the spike in headline CPI, there is quite limited disturbance to the public's ongoing inflationary expectations.
- That the response of export volumes to the low level of the exchange rate continues to be quite muted.
- That the exchange rate will appreciate mildly but steadily throughout the forecast period.

What this adds up to is a quite deliberate balancing of the risks on our part. Relying solely on observed historical relationships could readily have driven us to a track requiring a more immediate monetary policy tightening than embodied in this *Statement*. But the evidence thus far encourages us to accept the skew to the upside of future inflation risks, which come from adopting the above assumptions and judgements that the economy now behaves differently. Equally importantly, we are very conscious of downside risks arising from the global economy at present.

A final point on our treatment of inflation risks. As noted, we have seen a series of "one-off" price shocks over recent quarters which produced a distinct spike to the headline CPI profile and took the CPI to a peak of 4 per cent. As this document records, we believe that the "persistent" inflation elements have been relatively well behaved in the face of this spike. Thus we have chosen not to direct monetary policy to returning headline inflation back to the middle of the inflation target as fast as possible.

We believe that our policy judgements throughout have been taken in a manner consistent with the requirements of the Policy Targets Agreement. "Looking through" identifiable and clearly temporary price shocks is a sensible strategy for monetary policy. But that strategy becomes more questionable when the series of identifiable price shocks is prolonged. We are mindful that the longer that headline CPI remains outside the target band, the greater the risk that the econo-

my's wage and price-setting behaviour – in other words, inflation expectations – are disturbed.

Our task will become considerably more awkward if, in the near future, we were to be confronted with another of these one-off price shocks. Developments in the electricity market provide one obvious candidate for a further price shock and deserve careful monitoring.

Box 3 Alternative Scenario

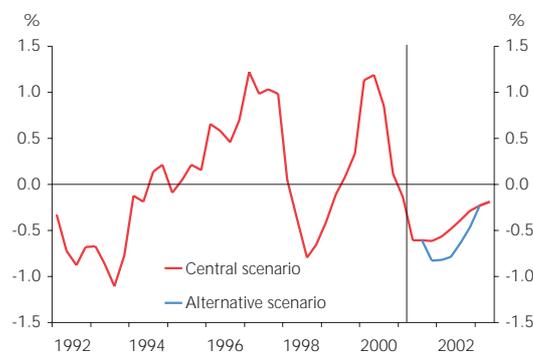
Since we first presented an alternative scenario of slower world growth in the March 2001 *Statement*, world growth has indeed slowed faster than our central scenarios previously assumed. But *Consensus* forecasts continue to suggest that growth in our export partners will rebound quite quickly over 2002. Given the risk that the slowdown will, in fact, turn out to be more protracted, we have again included a weak-world alternative scenario, similar in magnitude to the scenarios included in the March and May *Statements*.

Figure 39 illustrates that the world output gap in the alternative scenario troughs at roughly the same level as it did

during the Asian crisis, but remains more negative for longer.

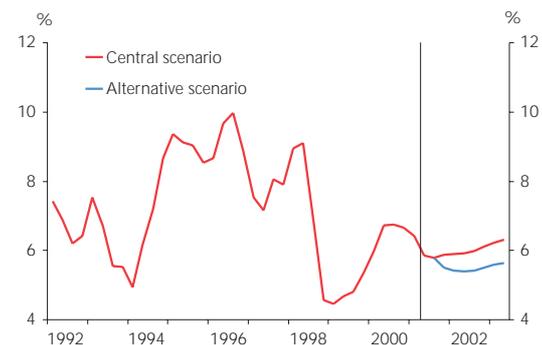
The slowdown in world growth is also assumed to be accompanied by a more significant fall in the prices of New Zealand's exports than in the central scenario. The implications of this scenario are that export growth would be slower and demand for New Zealand resources would be reduced. As a result there would be less inflationary pressure during the projection period, allowing a more accommodating monetary policy stance. Figure 40 shows that interest rates at the trough would be roughly 75 basis points lower than in the central scenario.

Figure 39
World output gap⁴⁰
(percentage of world potential output)



⁴⁰ Source: RBNZ.

Figure 40
Nominal 90 day interest rate⁴¹



⁴¹ Source: RBNZ.

Appendix 1

Chronology

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

2001

- 16 May The Reserve Bank released its thirtieth *Monetary Policy Statement*, reducing the Official Cash Rate from 6.00 per cent to 5.75 per cent. The news release accompanying the *Statement* is reproduced in Appendix 3.
- 29 June Production GDP figures were released showing that the New Zealand economy experienced no growth in the March 2001 quarter.
- 4 July At the intra-quarter review, the Reserve Bank left the Official Cash Rate unchanged at 5.75 per cent. The accompanying news release is reproduced in Appendix 3.
- 16 July CPI statistics were released for the June 2001 quarter showing that the CPI increased by 0.9 per cent over the quarter, and 3.2 per cent over the year to June 2001.

Appendix 2

Companies and organisations contacted by RBNZ staff during the projection round

3M New Zealand Ltd	Mainzeal Property and Construction
Ace Real Estate Limited	The Marketplace Company Limited
Affco Holdings Limited	McVicar Timber Group Ltd
Amcor Cartons Australasia	Meat & Wool Economic Service of New Zealand
Astra Print Ltd	Mitre 10 (New Zealand) Limited
Aucom Electronics Ltd	Morgan Furniture Ltd
Barfoot & Thompson Ltd	Nelson Pine Industries Ltd
Baycorp Holdings Ltd	Nelson Regional Chamber of Commerce Inc.
BHP New Zealand Steel Limited	Meat New Zealand
BJ Cocksedge & Co Limited	No Suits Ltd
Canterbury Employers' Chamber of Commerce	New Zealand Council of Trade Unions
Canterbury Leather International Ltd	The New Zealand Dairy Board
Canterbury Manufacturers' Association Incorporated	New Zealand Dairy Group of Companies
Clear Communications Ltd	The New Zealand King Salmon Co. Limited
Click-Clack Industries Limited	Port Nelson Limited
Computerland New Zealand	Prepared Foods Limited
Criterion Group Limited	Rembrandt Suits Limited
CWF Hamilton & Co Ltd	Richina Pacific Limited
Danaflex Packaging Corporation Limited	Scott Technology Ltd
Ecolab Ltd	Sealord Group Ltd
Employers & Manufacturers Association (Northern) Inc.	Snowy Peak Ltd
Farmers Mutual Group	Steelfort Engineering Co. Ltd
Fletcher Building Limited	Talbot Plastics Limited
Fosroc Ltd	Tourism Auckland
Gough Technology	Tourism Nelson Tasman Ltd
Greens Industries Ltd	Unilever Australasia Ltd
Hallensteins Glasson Holdings Ltd	Vision Manawatu
H.G. Livingstone Ltd	Waikato Federated Farmers
Lanwood Industries Ltd	The Warehouse Group Limited
LV Martin & Son Limited	Wyatt & Wilson Print Ltd
Mace Engineering Ltd	

Appendix 3

Reserve Bank statements on monetary policy

The following are reports or texts of official statements on monetary policy issues made by the Bank during the period under review in this *Monetary Policy Statement*.

OCR reduced to 5.75 per cent

16 May 2001

The Reserve Bank today reduced the Official Cash Rate (OCR) from 6.00 per cent to 5.75 per cent.

Commenting on the decision, Reserve Bank Governor Don Brash said: "Today's decision to reduce the OCR by 25 basis points reflects the balance of tensions between contradictory influences on the future path of inflation in New Zealand.

"Overseas, the economies of many of our major trading partners, and particularly Australia, the United States, Japan, and non-Japan Asia, have grown quite slowly in recent months.

"At home, business and consumer confidence have fallen, and investment spending has slowed. There is no sign of any widespread increase in asset prices, with the exception of the prices of some rural land, and growth in money and credit remains relatively weak. The drought may reduce next season's agricultural production, tempering growth in income and spending in the rural economy.

"However, there are other factors relevant to the inflation outlook which are pointing in the other direction. Specifically, the current dip in the international economy is still expected to be reversed next year. As well, the world prices of some of our major commodity exports have so far been particularly strong despite the recent weakness in our trading partners' growth rates.

"In addition, the low exchange rate is providing useful insulation against the slowing world economy. Unemployment is currently near 13-year lows, with many reports of employers having difficulty finding staff. Similarly, some measures of capacity utilisation suggest little scope to increase output substantially without an increase in inflation.

"At this stage, if events unfold as described then we see inflation settling back near the middle of our target range with something close to the current interest rate settings. However, other outcomes that are less benign - in either direction - can be easily envisaged, which would require more vigorous monetary policy responses. Thus it is prudent to adjust policy cautiously, as we observe the evolving balance of those influences," Dr Brash concluded.

NZ interest rates for NZ conditions, says Brash

21 May 2001

Reserve Bank Governor Don Brash today answered critics who have claimed that the Bank's recent interest rate cut was too timid, given a larger interest rate cut by the US central bank the same morning.

Speaking to the Rotary Club of Auckland, Dr Brash said: "Just because other central banks have eased monetary policy substantially, the Reserve Bank of New Zealand is not necessarily remiss in taking a somewhat different course. Why? Simply because every national economy is unique. Monetary policy is not a race, with every central bank trying to get to the finishing line first. It is about adjusting interest rates to influence demand within a specific economy to ensure price stability in that economy. What is right for one country might well be entirely wrong for another.

“ So while *of course* it is important that we in New Zealand are aware of what other central banks are doing - because their actions may say something about their economies which could be relevant to inflationary pressures within New Zealand - matching the decisions of other central banks point for point will often make no sense at all.”

Dr Brash went on to say that three factors had led the Reserve Bank to conclude that monetary policy in New Zealand required interest rates slightly higher than in some other advanced countries, these being that the world economy seemed likely to grow somewhat faster next year, the world slowdown so far had not reduced world prices of many of New Zealand's exports and the low New Zealand dollar was continuing to stimulate the economy.

“ New Zealand's economy is not the Australian, or the American, or indeed any other economy. In the March *Monetary Policy Statement*, I mentioned that the New Zealand economy was ‘favourably out of sync’ with the rest of the world. Actually, we are often out of sync with the rest of the world, either favourably or unfavourably. New Zealand's economic fortunes depend to a significant extent on a relatively narrow range of exported goods and services, and so we often face relatively sharp slow-downs and, on the flip-side, relatively fast accelerations. That is the nature of our economy. For the Reserve Bank, that inevitably means trying to steer a course through these short-term vicissitudes, a course appropriate to the inflationary pressures in the New Zealand economy, whatever the Federal Reserve and other central banks are doing,” Dr Brash concluded.

OCR unchanged at 5.75 per cent

4 July 2001

The Reserve Bank today left the Official Cash Rate unchanged at 5.75 per cent.

Reserve Bank Governor Don Brash commented: “ Inflation pressures since the OCR was reduced to 5.75 per cent in May are largely unchanged.

“ The world economy is weak. The short-term outlook for most of our trading partners is deteriorating, although there are better signs in Australia. However, offsetting these factors, most export prices remain high, partly because of the low exchange rate.

“ Investment in New Zealand has been relatively weak, but consumer spending has remained relatively robust. Overall, inflationary pressures don't seem to have changed much. In the May 2001 *Monetary Policy Statement*, we thought these pressures were roughly neutral.

“ Many inflation measures are still higher than is consistent with our target, but most of the recent signs suggest inflation will fall back into the target range over the next year or so.

“ There are, however, risks. March GDP growth was slightly weaker than expected, although previous quarters were revised up, reducing the impact of the March number. The fact that export volumes have not responded strongly to the low dollar and high world prices may mean that the global slowdown is having more impact than previously thought. Whether these downside risks warrant a further cut in the OCR will be re-examined in the August *Monetary Policy Statement*,” Dr Brash concluded.

Appendix 4¹

Summary tables

Table A
CPI inflation projections and monetary conditions
 (CPI is in percentage changes)

		CPI* Annual	TWI	90-day bank bill rate
1995	Mar.	1.9	59.8	9.4
	Jun.	2.2	60.8	9.1
	Sep.	2.0	61.7	9.0
	Dec.	2.0	61.9	8.5
1996	Mar.	2.1	64.2	8.7
	Jun.	2.3	64.6	9.7
	Sep.	2.3	65.6	10.0
	Dec.	2.4	67.1	8.9
1997	Mar.	2.0	68.4	7.5
	Jun.	1.5	68.0	7.2
	Sep.	1.8	64.8	8.1
	Dec.	1.6	63.9	7.9
1998	Mar.	1.7	61.2	9.0
	Jun.	1.7	58.5	9.1
	Sep.	1.7	57.1	6.8
	Dec.	1.1	56.0	4.6
1999	Mar.	1.0	57.6	4.5
	Jun.	1.2	59.1	4.7
	Sep.	1.1	56.7	4.8
	Dec.	1.3	54.4	5.4
2000	Mar.	1.7	54.1	6.0
	Jun.	2.0	53.4	6.7
	Sep.	3.0	50.1	6.7
	Dec.	4.0	47.7	6.7
2001	Mar.	3.1	50.5	6.4
	Jun.	3.2	49.8	5.9
2002	Second Half Average	2 ¹ / ₄	50	5 ³ / ₄
	First Half Average	2 ¹ / ₄	51	6
2003	Second Half Average	1 ¹ / ₂	52	6
	First Half Average	1 ¹ / ₂	53	6 ¹ / ₄
	Second Half Average	1 ¹ / ₂	54	6 ¹ / ₄

⁽¹⁾ Notes for these tables are in Appendix 5.

* This series is annual underlying inflation until the September quarter 1997, annual CPIX inflation from the December 1997 quarter until the June 1999 quarter, and annual CPI inflation thereafter (adjusted by SNZ 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			
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004				
Final consumption expenditure														
Private	6.2	3.6	3.8	2.1	1.8	3.3	1.3	3	3	2				
Public authority	0.9	4.9	1.7	7.9	-1.1	4.4	-2.5	1½	2½	4				
Total	5.0	3.9	3.3	3.4	1.1	3.6	0.4	2½	2½	2½				
Gross fixed capital formation														
Market sector:														
Residential	12.5	0.8	6.1	2.1	-15.1	21.8	-15.9	-3½	14	51½				
Business	16.1	15.9	4.2	-3.6	2.8	0.4	7.6	3	7½	4				
Non-market government sector	24.9	7.6	29.7	8.2	-14.2	6.8	-5.2	5½	2½	2				
Total	15.8	10.9	6.8	-0.9	-3.9	6.1	-0.1	1½	8½	4				
Final domestic expenditure	7.0	5.3	4.1	2.4	0.0	4.1	0.3	2½	4	2½				
Stockbuilding ⁽¹⁾	-0.1	-0.1	-0.4	0.0	-0.6	1.3	-0.3	0	0	0				
Gross national expenditure	6.8	5.1	3.6	2.4	-0.5	5.4	0.0	2	4	3				
Exports of goods and services	8.5	2.3	4.7	3.5	2.5	6.8	6.8	5½	4	3½				
Imports of goods and services	14.4	6.9	6.6	2.8	2.2	11.2	0.3	2½	5	4½				
Expenditure on GDP	5.1	3.7	3.1	2.6	-0.4	4.1	2.0	3	3½	2½				
GDP (production)	5.3	4.1	3.0	1.9	0.4	4.6	2.5	2½	3	2½				
GDP (production, March qtr to March qtr)	4.7	4.0	1.7	0.5	2.6	5.6	0.8	3	3	2½				
Potential output	3.8	4.0	3.5	2.9	2.5	2.5	2.6	2½	2½	3				
Output gap														
(% of potential GDP, year average)	1.8	1.9	1.4	0.4	-1.7	0.3	0.2	0	½	0				

e = estimate

⁽¹⁾ Percentage point contribution to the growth rate of GDP.

Appendix 5

Notes to the tables

CPI	Consumers Price Index
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. Forecasts rounded to the nearest whole number.
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> .
Total employment	<i>Household Labour Force Survey</i> .

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

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

Rounding: Unless otherwise specified, all forecast data is rounded to the nearest half.

Appendix 6

The Official Cash Rate chronology

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

Appendix 7

Policy Targets Agreement

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

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

1. Price stability

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

2. Policy target

- a) In pursuing the objective of a stable general level of prices, the Bank shall monitor prices as measured by a range of price indices. The price stability target will be defined in terms of the All Groups Consumers Price Index (CPI), as published by Statistics New Zealand.
- b) For the purpose of this agreement, the policy target shall be 12-monthly increases in the CPI of between 0 and 3 per cent.¹

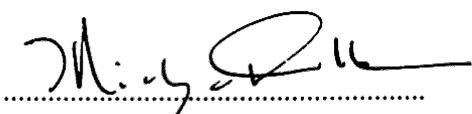
3. Unusual events

- a) There is a range of events that can have a significant temporary impact on inflation as measured by the CPI, and mask the underlying trend in prices which is the proper focus of monetary policy. These events may even lead to inflation outcomes outside the target range. Such disturbances include, for example, shifts in the aggregate price level as a result of exceptional movements in the prices of commodities traded in world markets, changes in indirect taxes, significant government policy changes that directly affect prices, or a natural disaster affecting a major part of the economy.
- b) When disturbances of the kind described in clause 3 (a) arise, the Bank shall react in a manner which prevents general inflationary pressures emerging.

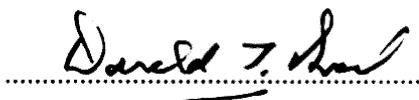
4. Implementation and accountability

- a) The Bank shall constantly and diligently strive to meet the policy target established by this agreement.
- b) It is acknowledged that, on occasions, there will be inflation outcomes outside the target range. On those occasions, or when such occasions are projected, the Bank shall explain in Policy Statements made under section 15 of the Act why such outcomes have occurred, or are projected to occur, and what measures it has taken, or proposes to take, to ensure that inflation comes back within that range.

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



Hon Michael Cullen
Treasurer



Donald T Brash
Governor
Reserve Bank of New Zealand

DATED at Wellington, this 16th day of December 1999

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