
Monetary Policy Statement¹

August 2000

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

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¹ Projections finalised on 2 August 2000. Policy assessment finalised on 15 August 2000.

1 Overview and policy assessment

The Reserve Bank has again decided to leave the Official Cash Rate unchanged at 6.5 per cent.

When the Bank finalised its last *Monetary Policy Statement*, early in May, most indicators pointed to a continuation of reasonably robust growth throughout this year. To be sure, there was some evidence that growth in retail spending was slowing from the rapid growth of 1999, and the housing market was clearly sluggish. But businesses' confidence in prospects for their own activity was high, levels of capacity utilization were high, consumer confidence was high, tourist arrivals were running at a rate some 18 per cent above the same month in 1999, the growth in our major trading partners was strong, and monetary conditions were providing a supportive environment. There were also widespread anecdotes, especially from some of the provincial areas, of difficulty in finding workers.

Back then, we estimated that growth in the March quarter had slowed in comparison to the very rapid growth of the two preceding quarters, but projected growth to pick up to about 1 per cent per quarter through the balance of the year. On this basis, we saw a gradual increase in interest rates as being appropriate to keep inflation under control over the next few years.

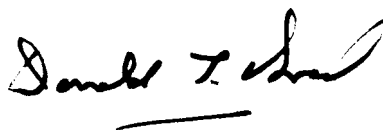
Since that *Statement* was finalised, a lot of things have changed. It seems very likely that, because of an unexpectedly rapid further increase in international oil prices, a substantial increase in excise tax on cigarettes, and a significantly lower exchange rate than assumed in our May projection, CPI inflation will increase quite markedly over the next few months, and may well come close to the top of our 0 to 3 per cent target band by the end of this year. On the other hand, while growth in the March quarter turned out to be a little stronger than we had assumed, it now seems clear that growth slowed very sharply in the June quarter, and may well have been negative. Business confidence has fallen sharply, as indeed has consumer confidence. Changes in labour legislation and other policy announcements have collectively created considerable uncertainty, and appear to have led to some deferment of new investment and employment. Even the September quarter now seems likely to record only modest growth.

As a result, pressure on the economy's capacity seems likely to be less over the next few quarters than previously expected, and as a consequence the medium-term pressures on inflation less than expected also, notwithstanding the imminent short-term blip in inflation.

There is considerable uncertainty about where the economy goes from here. One school of thought suggests that, given continuing growth in our major trading partners, moderate interest rates, and an exchange rate which is close to historical lows, economic activity and business confidence will bounce back strongly before long. Given the near-term increase in the CPI, the risk that employees will seek wage compensation for that increase in the CPI, and the considerable squeeze on margins being experienced in many parts of the economy, this view of the world sees the prospect of significant inflationary pressures next year, and a need for the Bank to keep increasing interest rates.

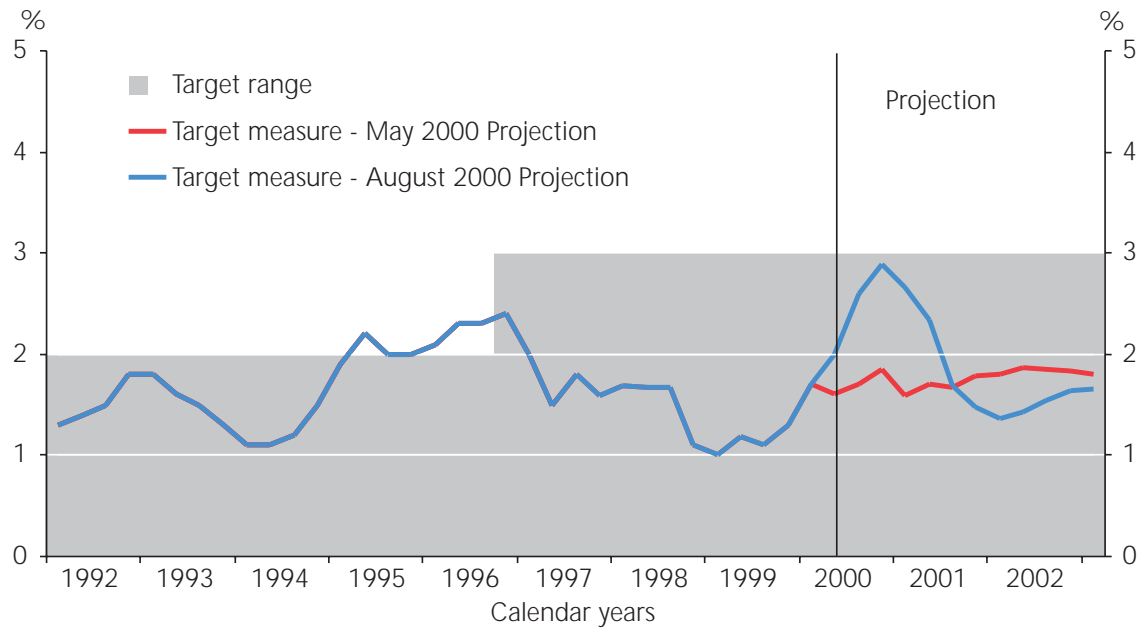
Another school of thought suggests that business confidence may take a considerable time to recover fully, and any significant slowdown in major markets such as Australia and the United States could exacerbate an already difficult situation. This view of the world suggests that there is no risk of inflation accelerating next year, and so no need to increase interest rates further – and indeed potentially a need to reduce interest rates, to prevent inflation falling towards the bottom of the target range.

Clearly, the data on economic activity in a small economy such as ours tend to be “noisy”, and the Bank needs to steer through that noise as best it can. Given the uncertainty about the outlook, leaving the Official Cash Rate unchanged seems the prudent thing to do right now.



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		
	1999	2000e	2001	2002	2003
Price measures					
CPI*	1.0	1.7	2.7	1.4	1.7
Wages	2.7	1.5	3.3	3.8	3.0
Import prices (in New Zealand dollars)	2.7	11.2	-0.6	-3.6	-1.7
Export prices (in New Zealand dollars)	-1.1	9.7	0.6	-3.3	-1.5
Monetary conditions					
Nominal MCI (year average)	-50	-275	-425	-150	0
90-day rate (year average)	6.2	5.2	6.8	7.1	7.1
TWI (year average)	57.3	56.1	52.7	55.3	57.0
Output					
GDP (production, annual average % change)	0.0	4.4	3.1	3.4	2.9
GDP (production, March qtr to March qtr)	1.8	5.6	2.0	3.4	2.9
Output gap (% of potential GDP, year average)	-1.9	-0.1	0.3	1.0	0.8
Key balances					
Government operating balance (% of GDP, year to June)	1.8	0.8	0.9	1.7	2.4
Current account balance (% of GDP, year to March)	-5.8	-8.2	-6.1	-5.6	-6.0
Terms of trade (annual average % change)	-0.5	-0.1	-1.8	0.6	0.4
Unemployment rate (March qtr s.a.)	7.2	6.4	6.1	5.7	5.7
Household savings rate (% of disposable income, year to March)	-1.4	-0.7	-1.2	-1.1	-1.1
World economy					
World GDP (annual average % change)	1.1	4.1	4.0	3.4	3.5
World CPI inflation	0.9	2.0	1.8	1.9	2.0
Quarterly projections					
	Dec-99	Mar-00	Jun-00	Sep-00	Dec-00
(quarterly percentage change, unless specified otherwise)					
CPI	0.2	0.7	0.7	1.0	0.5
CPI (annual percentage change)*	1.3	1.7	2.0	2.6	2.9
GDP (production, s.a.)	2.3	0.8	-0.2	0.5	0.7

s.a. = seasonally adjusted

e = estimate

* This series is annual CPIX 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 4.

2 Recent developments and current economic situation

At the time of the *May Statement*, we anticipated reasonably good economic prospects for the New Zealand economy over the next two or three years. Although some slowing in growth was expected to have occurred over the March quarter, trading partner growth was continuing at high rates and monetary conditions were at stimulatory levels, which we anticipated would support firm demand growth over the medium term. We saw a further rise in interest rates as appropriate to restrain the modest upward pressure on inflation that looked likely to develop.

Since May, a range of indicators suggest that overall spending may now be somewhat weaker over the near term than we thought, but inflation will be noticeably higher. In particular, business confidence and firms' expectations for their own output and activity have fallen sharply, and although showing tentative signs of recovering, remain weak. At the same time, unexpected further increases in petrol prices, and the increase in excise tax on cigarettes, will push the CPI up sharply over the next few quarters. For reasons that are probably related, at least in part, to the factors which have caused the decline in confidence, the exchange rate has fallen around 5 per cent, rather than appreciating a little as assumed in the *May Statement*.

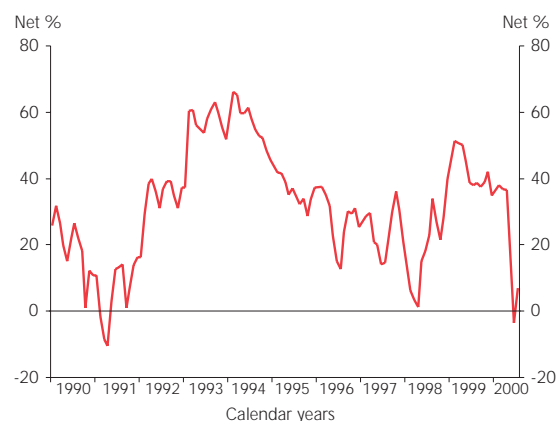
This chapter elaborates on these events, and discusses our assessment of the current state of activity and inflation in the economy. From this updated starting point, Chapter 3 presents our updated medium-term projection for growth, inflation and monetary conditions. In Chapter 4, we discuss some of the more important policy issues that we have had to grapple with in arriving at the OCR decision announced with this *Statement*.

Indicators of spending

Particularly when they move substantially, business confidence measures can be useful indicators of very recent economic developments that have not yet been revealed in more tangible measures of activity, such as retail spending, building consents, and merchandise imports and exports. In this light, the sharp fall in firms' expectations for their own output and

activity since May is significant. Although very latest data tentatively suggest that some recovery in own-activity expectations may be underway, the level of these expectations remains well below that which would be consistent with our

Figure 2
Businesses' expectations of their own output³



May outlook (Figure 2).

This situation raises two questions for monetary policy:

- what is the drop in own-activity expectations telling us that is not already evident in more tangible indicators; and
- how long will the weakness in expectations persist?

Indicators of household expenditure certainly suggest that consumer spending growth has slowed this year compared to last year. Real retail spending over the first half of 2000 grew at an annual rate of less than 2 per cent, sharply down from the almost 7 per cent rate last year (Figure 3, overleaf). Turnover in the housing market and the rate of issue of new dwelling consents remain sluggish. Consumer confidence has fallen as markedly as business confidence, and household borrowing growth, although still higher than growth in household disposable income, is at its lowest level for some years (Figure 4, overleaf).

³ Source: National Bank of New Zealand. "Net %" means net percentage expecting increased output over the next 12 months.

Figure 3
Quarterly real retail sales
excluding automotive components
(seasonally adjusted)

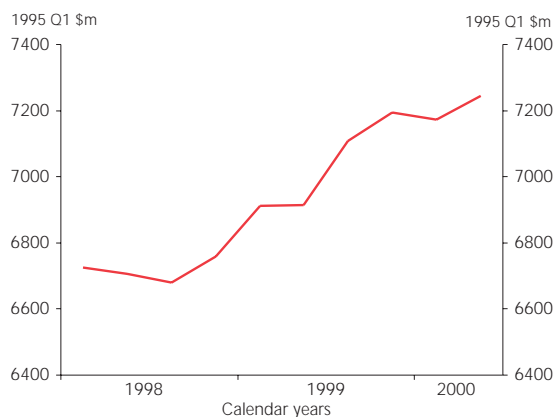
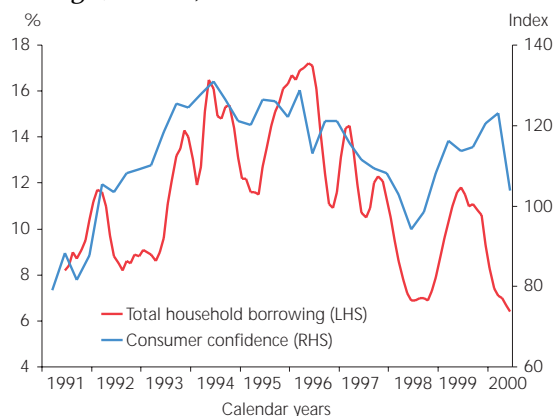


Figure 4
Household borrowing growth and
consumer confidence⁴
(annualised 3-monthly percentage
change; index)



However, against these more-or-less uniform indications of weakness in household expenditure, indicators of external demand continue to show strength, consistent with ongoing strong trading partner growth and the low exchange rate. Merchandise exports and tourist expenditure continue to grow strongly. The low exchange rate is contributing to increased farm profitability, which has also benefited from better-than-average production conditions this season.

Although recent rises in interest rates, and the impact on disposable income of such things as petrol and cigarette price

increases, have probably contributed to the weak confidence and slower household spending growth, on balance we view the sharp fall in consumer confidence and firms' own-activity expectations as too large to be explained by these factors alone. It seems that a substantial part of the recent weakening is yet to be revealed in tangible indicators.

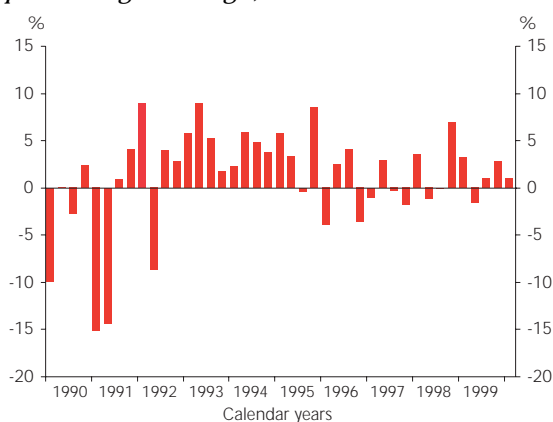
Our discussions with the business community suggest that a large part of the weakening in confidence is due to uncertainty and apprehension about the effects on the business environment of imminent changes to labour market regulation and other government policy measures, and to some degree about the future path of interest rates and the exchange rate. This apprehension has reportedly led to some deferment of new investment and employment. Whereas in May the near-term outlook for investment appeared quite positive, the sharp downturn in business confidence and widespread reports of reluctance to commit to expansion suggest that that outlook is now considerably weaker. This weakness in business investment, and perhaps some deferral of household expenditure while weak confidence persists, will contribute to the gap between domestic expenditure growth and export growth over the near term.

On balance, we do not think that business confidence and own-activity expectations will remain long at their current, very low, levels. The low level of confidence seems out of step with the continuing strength in trading partner growth and the stimulus from the weak exchange rate, 'fundamentals' which seem likely to reassert themselves in time. Further, to the extent that the weak confidence is driven by uncertainty over the final shape of government policy initiatives, resolution of the uncertainty once those initiatives have been put in place may also lead to some recovery in confidence and less nervousness about expansion.

Having said all this, the near-term path of domestic spending is one of the key uncertainties surrounding the Bank's policy assessment for this *Statement*. Business investment in particular is one of the most volatile and hard-to-predict components of GDP (Figure 5, opposite). The tension between weak business confidence and strong 'fundamentals' could well resolve itself in the form of a quick recovery of business investment, as firms bring deferred projects back on stream. Our business contacts report that such new

⁴ Sources: RBNZ, WestpacTrust McDermott Miller. Consumer confidence index is the net percentage reporting optimism about the economy, plus 100.

Figure 5
Real business investment
(seasonally adjusted quarterly percentage change)

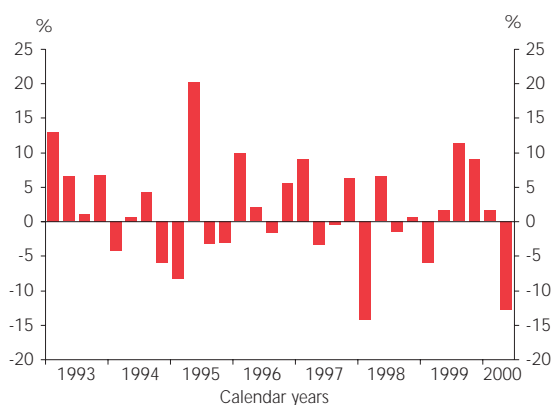


investment opportunities are available, but are not being exploited for the time being.

Drawing all this information together, our updated estimates suggest that GDP is likely to grow around $\frac{1}{2}$ per cent over the June and September quarters combined. This revised near-term growth outlook is considerably weaker than our expectation in May, when we anticipated growth closer to 2 per cent over the two quarters.

Indeed, we see GDP growth for the June quarter as most likely to be negative, with only mildly positive growth indicated for the September quarter. It should be noted, though, that the dip in activity estimated to have occurred in the June quarter includes the effect of two special factors that will not have lasting effect.

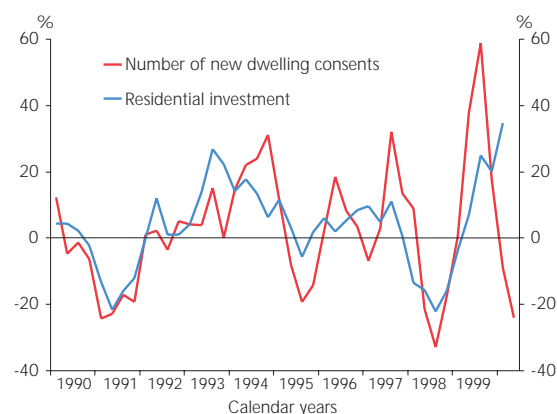
Figure 6
Milkfat production⁵
(seasonally adjusted quarterly percentage change)



⁵ Dairy Board budget/forecast for the June month.

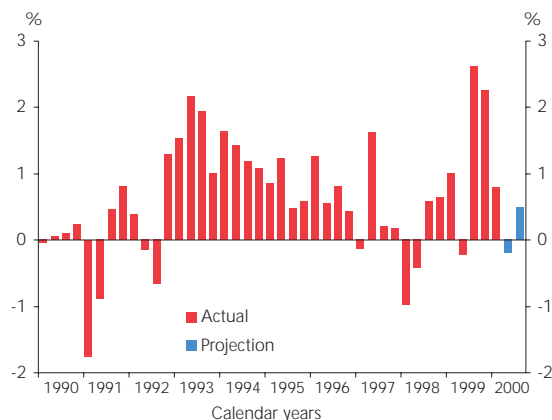
First, milkfat production for the June quarter was down substantially on the previous quarter on a seasonally adjusted basis (Figure 6), due to an earlier drying-off of dairy cows than usual at the end of last season. As noted, production conditions in the pastoral sector overall are currently very favourable, and we do not see this dip in dairy production in the June quarter as indicating weakness on a trend basis. The dip is reminiscent of the fluctuation in growth over the June and September quarters of 1999, when stock slaughter in the June quarter was delayed until the September quarter as farmers took advantage of good grass growth. At that time, our assessment was that the underlying trend in activity was stronger than suggested by the growth figure for the June 1999 quarter. We see things similarly this time.

Figure 7
Dwelling consents and real residential investment
(annual percentage change)



The second special factor about the June quarter, and to a lesser extent the September quarter, is the impact of a sharp fall in residential construction, some of which reflects 'lumpy' activity in that sector. March quarter GDP showed a very strong rise in residential investment, reflecting a large number of consents for new dwellings issued in 1999. The rate of issue of new dwelling consents fell quickly at the end of last year to its current low levels. Given this context, the high level of residential investment seen in the March quarter is not expected to persist, and we anticipate that it will fall quite sharply over the June and September quarters to a level more consistent with the low rate of issue of consents (Figure 7).

Figure 8
Production GDP
(seasonally adjusted quarterly percentage change)



To summarise, our updated estimates of growth over the June and September quarters are substantially weaker than forecast in the May *Statement*, with part of the difference due to the dip in dairy production and downward correction in residential investment, two sector-specific factors which will temporarily exacerbate the weakness. However, even abstracting from those factors, it seems clear that general spending growth over the two quarters is likely to be substantially more subdued than expected in May, as reflected in, and reflecting, the widespread slump in confidence.

The economy's cyclical position

As explained in the May *Statement*, one key indicator of future inflationary pressure is the extent to which producers are able to satisfy current demand without increasing their selling prices. This degree of pressure on the economy's supply capacity is often summarised by the "output gap" – a measure of overall demand relative to an estimated or assumed overall level of supply. The output gap can also be thought of as an indicator of the economy's cyclical position – whether economic activity is running 'hot', 'cold', or somewhere in between. Importantly, the output gap is an aggregate concept, which does not take account of differences in the 'temperature' of the various sectors that make up the economy.

At present, there are quite stark differences in temperature across the economy, which are masked by aggregation. It is

plainly evident in both the indicators of activity and our discussions with businesses that exporting and tourism industries are generally doing very well, while many of those focused on domestic markets are under pressure. This pattern of relative performance is unsurprising in the current circumstances, given the low level of the exchange rate and robust trading partner growth on the one hand, and recent rises in interest rates and some reduction in disposable incomes on the other.

It is also what one would expect when the macroeconomic environment features a large current account deficit that is viewed as unsustainable by financial markets. Reduction of the deficit requires relatively strong exports, and relatively subdued domestic expenditure (in other words, increased saving), and a process of resources shifting from domestically-focused industries towards export-focused industries.

Monetary policy is unable to deliver a particular balance of performance across different sectors. Rather, the Bank is charged with assessing and managing overall inflationary pressure in the economy, which requires some sort of assessment of the cyclical position of the economy overall – hence the use of the output gap as a convenient device in this regard.

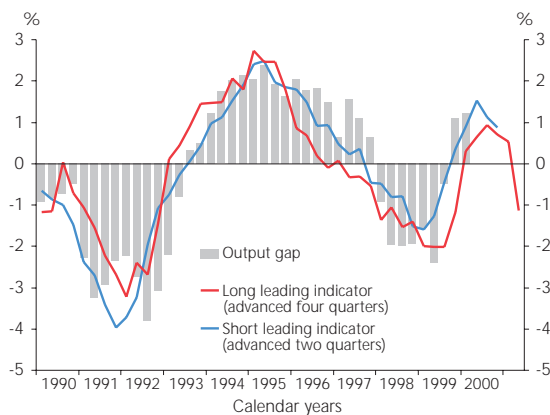
With these interpretational caveats in mind, we think that the output gap is close to zero currently, given all the information discussed above. In other words, on average across the whole economy, we see little overall pressure in either direction on the components of inflation that are likely to be sustained into the medium term.

This assessment of the output gap places it below, or less positive than, our May forecast for the current time. It is also below the approximately 1 per cent positive output gap we estimate to have prevailed in the December 1999 and March 2000 quarters. This assessment incorporates the 0.8 per cent growth in GDP in the March quarter (which turned out close to expectation), and the other indicators of the output gap for those periods.

Our assessment that the economy has returned to a more-or-less neutral cyclical position corresponds to our view that near-term demand growth will be quite weak, and most likely below the growth in the supply capacity of the econo-

my for a time. It is also consistent with the range of indicators of the economy's cyclical position that we monitor, including capacity utilisation and other survey measures. These indicators have fallen sharply in the June quarter, with some suggesting that the output gap may even turn negative over the near term (Figure 9). A close-to-neutral cyclical position is also consistent with the lack of obvious direction in asset prices (including house prices).

Figure 9
Indicators of the economy's cyclical position⁶



Given the absence of current cyclical pressures on future inflation – in contrast to some other influences on near-term inflation to be discussed shortly – our medium-term demand growth projection is crucial for the policy assessment and decision. Should demand growth pick up strongly from here, the output gap will turn positive and put upward pressure on inflation; if demand growth instead slackens off, the output gap will turn negative and put downward pressure on inflation. We discuss the medium-term projection in Chapter 3. Before turning to the near-term inflation outlook, however, we describe developments in financial markets since May, including the sharp fall in the exchange rate (the interpretation of which is one of the key issues for the medium-term projection).

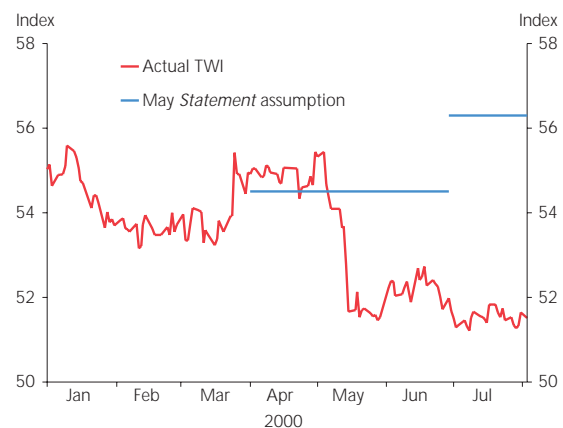
⁶ Source: RBNZ. The short-leading indicator shown in Figure 9 is the average of the standardised QSBO items “Economy-wide overtime worked: past 3 months”, “Economy-wide difficulty in finding unskilled labour”, and “Manufacturers and builders capacity utilisation”. The long-leading indicator is the average of the standardised QSBO items “Economy-wide profitability: past 3 months”, “Economy-wide overtime worked: next 3 months”, “Economy-wide new investment: plant & machinery”, and “Builders new orders: past 3 months”.

Financial markets and current monetary conditions

The exchange rate fell sharply in the days following the release of the *May Statement*, and has remained low since then. At the time of writing, the exchange rate on a TWI basis was 51.4, around 5 per cent below its level immediately before the *May Statement* and almost 9 per cent below the level we had assumed for the second half of this year in that *Statement*.

Earlier in the year, when the New Zealand dollar and most other currencies fell against a strengthening US dollar, the TWI had been relatively stable. By contrast, the late-May weakening was specific to the New Zealand dollar, and took the TWI to new all-time lows (Figure 10).

Figure 10
TWI⁷



A number of factors appear to have contributed to the downward pressure on the exchange rate.

At a ‘big picture’ level, the same factors that explain the marked fall in business confidence probably explain the bulk of the fall in the exchange rate. Specifically, by mid-May there was increasing uncertainty here and abroad about the shape and implications of various Government policies, and the beginnings of a sense that economic growth was easing. As we now know, business and consumer confidence was by then already falling quite sharply, although the surveys that would capture this fall had not yet been compiled or reported.

⁷ Source: RBNZ.

In the background, there was the continuing large current account deficit, and some doubts about the speed with which the trade balance would respond to the stimulatory exchange rate. Also, most commentators and investors had for some months expected that the exchange rate would rise, or at least not fall further, and positioned themselves accordingly. For example, many exporters had acquired most of the 'cover' (purchasing NZ dollars) they needed for months ahead. Against that backdrop, anything that triggered a fall in the exchange rate met little resistance: there were few willing or 'natural' buyers in those circumstances.

Although the exchange rate fell immediately following the release of the *May Statement*, it is not exactly clear what role the *Statement* played. Both the rise in the OCR and the interest rate and exchange rate projections in the *Statement* appeared to have been fully expected by markets. But, in hindsight, it may be the case that the Bank's increase in the OCR, and foreshadowing of further rises, crystallised an emerging sense that future monetary policy might not need to be as firm as had appeared likely only a few days previously.

A key question for monetary policy is whether this relatively benign view of future monetary policy settings – and the related exchange rate fall – is justified in light of the current outlook for inflationary pressure in New Zealand, given everything else that has happened since May. To the extent that the exchange rate fall turned out to be too large given the change in other drivers of medium-term inflation pressure, for example, some increase in interest rates would be necessary to keep the medium-term inflation outlook consistent with price stability.

Markets initially reacted to the exchange rate fall with higher short-term interest rates, in expectation that the Bank would respond with at least some rise in the OCR over the months ahead (for example, at the July OCR review). However, this reaction was short-lived, and as the confidence surveys and other indicators of weakening domestic activity were published, market expectations of future monetary policy moves were revised down sharply. These revised expectations effectively brought forward interest rates into line with the lower exchange rate. Whereas in late May, markets had been expecting a further increase in the OCR of 100 basis points by

March 2001, at the time of writing, markets expected only a further 50 basis points by next March.

As we will discuss in the next chapter, our central projection is that there is little net change to medium-term inflation pressure, taking the fall in the exchange rate and the weakening in near-term growth prospects together – the one offsetting the other. But this central expectation is subject to a high degree of risk, since the two events are substantial shifts relative to our May expectations, and since assessing their overall impact on the outlook is not straightforward.

Uncertainty exists not only around the outlook for growth and inflation in New Zealand, but also around those for our major trading partners. As Chapter 3 discusses, the *Consensus* outlook for our trading partners remains one of growth cooling gradually from current high levels, with inflation well under control. However, in spite of many indicators of demand in the US and Australia suggesting slowing growth, actual GDP figures for both countries have continued to surprise in strength. The continuing robustness of the world economy remains evident in buoyant commodity prices, with increased confidence in the performance of the US economy in particular reflected in reduced equity market volatility and swap spreads compared to levels prevalent in May.

Nonetheless, in both countries only modest further monetary policy tightenings are now expected, with the recent tightening in Australia taking many by surprise (Figure 11, opposite). In the US in particular, official interest rates are now quite high by historic standards. By contrast, New Zealand short-term interest rates are relatively low – and are expected to remain so – again by historic standards. Current and expected differentials between New Zealand and US short-term interest rates remain close to zero, in contrast to the large differentials in New Zealand's favour prevalent in the mid-90's (Figure 12, opposite). To the extent that the differentials remain fairly narrow, any cyclical recovery in the exchange rate over the medium term is likely to be relatively gradual and muted compared to the experience in the previous cyclical upswing.

Although borrowing growth continues to slow, suggesting some impact from the rise in interest rates since late last year, the slowdown is probably also being driven by the general slowing in domestic demand growth, the lack of increase in

Figure 11
Forward interest rates in the US
and Australia⁸

(90 day rates on bank bills to be delivered in the month shown)

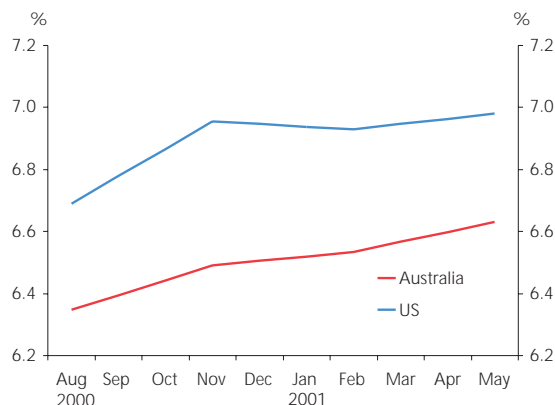
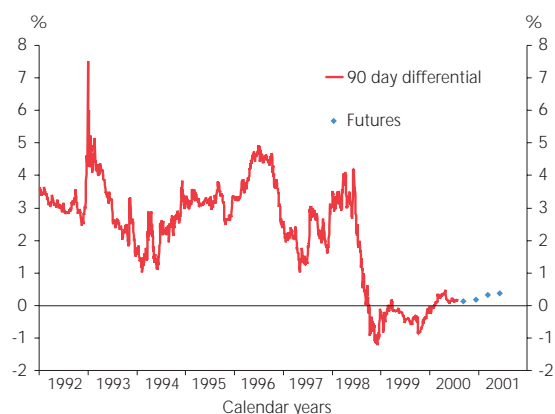


Figure 12
90-day interest rate differential,
NZ minus US⁹



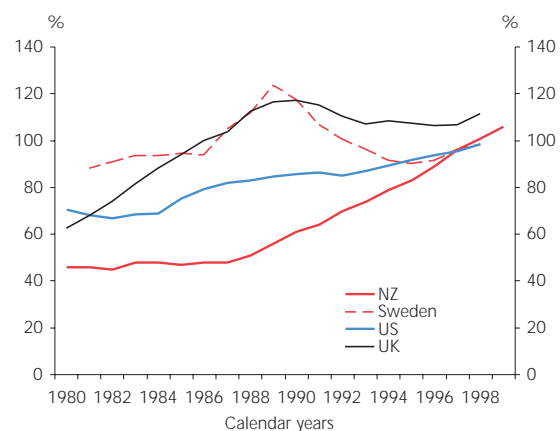
the net wealth position of households as house prices remain static at best, and the fact that households may be reaching a saturation point in terms of their debt-to-disposable-income ratios. This ratio seems to have stabilised at around 100 per cent in a number of comparable OECD countries (Figure 13), and is currently near that level in New Zealand.

The substantial fall in the exchange rate has led overall monetary conditions to become more stimulatory than in May. Most of the stimulus to demand comes from the exchange rate, as in our assessment interest rates are currently providing little impetus to demand in either direction.

⁸ Source: Bloomberg.

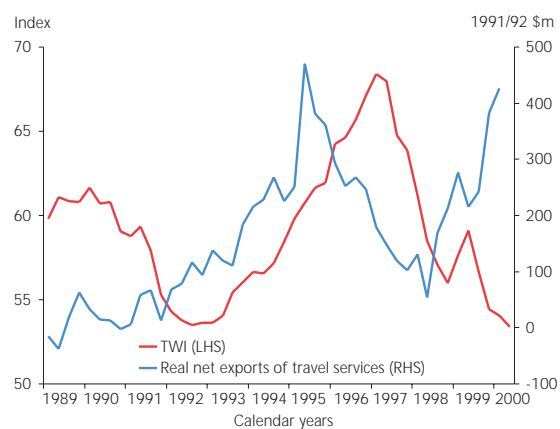
⁹ Source: Bloomberg.

Figure 13
Debt-to-disposable-income
ratios, selected OECD countries¹⁰



But the question of the degree to which the economy is responding to the weak exchange rate remains vexed, and is a key judgement colouring our assessment of the outlook for medium-term inflationary pressure. External competitiveness effects from the exchange rate are readily apparent in the real expenditure by tourists in New Zealand compared to that by New Zealanders overseas (Figure 14). However, business contacts in exporting industries continue to report that, although the low exchange rate is boosting their profitability levels, they remain reluctant to expand into offshore markets, partly as a result of a concern that the exchange

Figure 14
TWI and real net exports of
travel services¹¹



¹⁰ Source: OECD, RBNZ. For New Zealand, financial data is as at December, but disposable income figures are for the year to March of the following year (estimated for year to March 2000). All other data are as at December (debt) or calendar years (disposable income).

¹¹ Source: RBNZ, Statistics New Zealand.

rate may not remain at current low levels, partly due to the apprehension about the business environment discussed earlier, and partly reflecting the fact that competition in offshore markets remains tough even in the face of the stimulatory exchange rate. We discuss this issue further in Chapter 4.

CPI and indicators of inflation

The CPI increased by 0.7 per cent in the June quarter, and by 2.0 per cent for the year to June. Although this result was higher than we expected in May, the difference relative to forecast was almost entirely due to a further sharp and unexpected rise in international oil prices, and the increase in excise tax on cigarettes.

These two events have led our measure of inflation in the prices of goods and services that are traded internationally to begin rising quite quickly. Over the near term, some further increase in tradeables inflation is likely, as the effects of rises in petrol prices at the pump and the cigarette excise tax increase have not yet been fully recorded in the CPI. Additionally, some of the effects of the fall in the exchange rate have yet to pass through. Considerable uncertainty surrounds the magnitude and dynamics of the exchange rate pass-through, whose behaviour we have noted as something of a puzzle for some time. This issue and its implications for policy are discussed further in Chapter 4.

Given the increase in fuel prices, transport costs and the further depreciation of the exchange rate, cost pressures throughout the economy are becoming increasingly prevalent (Figure 15). The prices of a wide array of imported consumer, intermediate and capital goods have recently increased sharply (Figure 16), primarily reflecting the exchange rate depreciation.

In some cases, and on certain lines, businesses have been able to pass these cost increases on to customers via price increases. Judging by survey responses, a substantial proportion of other businesses are also facing cost increases and are planning to raise their own prices in response. Clearly, the outlook for business costs, and the manner in which pricing behaviour responds, will have important implications for inflationary pressure over the next few quarters.

Figure 15
QSBO average cost experience,
past 3 months¹²

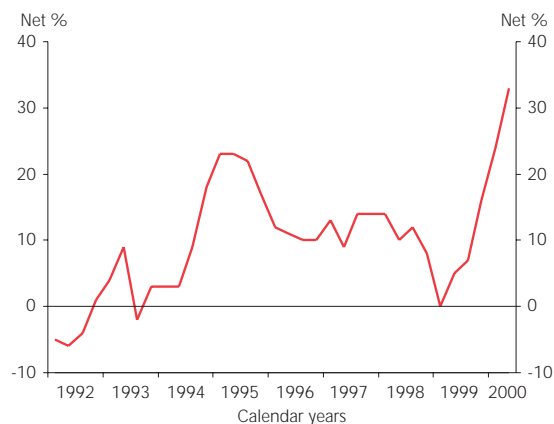
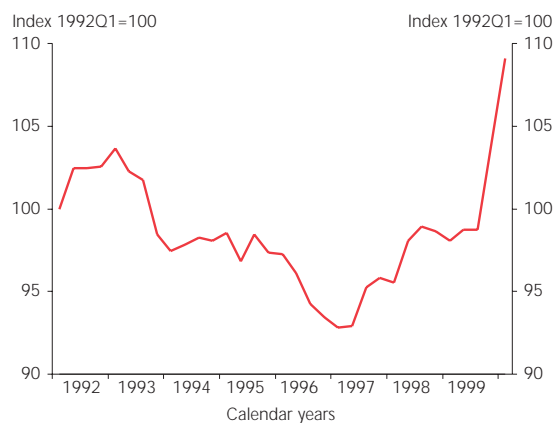


Figure 16
New Zealand dollar import prices



Because competitive pressures matter for whether intentions to recover margins through price increases are realised, the risk of the emergence of cost-push inflation is related to the risk of widespread excess demand emerging in the economy. On our current projections for demand growth, it seems likely that competitive pressure will keep the pass-through of costs fairly muted.

In the same vein, the prospect of CPI inflation rising quickly over the near term towards, or perhaps even through, the 3 per cent 'ceiling' of the Bank's inflation target range raises the issue of this temporary increase in inflation spilling over into more persistent generalised inflation, via inflation expectations, compensatory wage rises, or other forms of implicit or explicit 'indexation'.

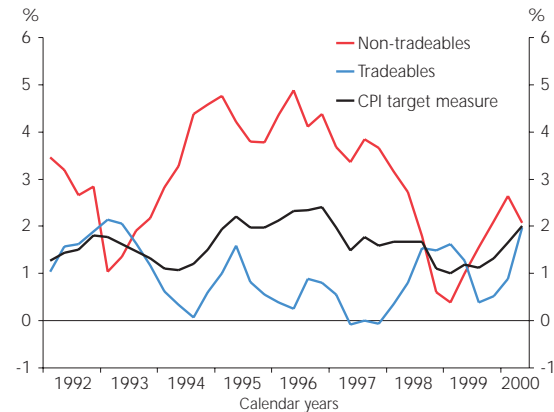
¹² Source: NZIER. "Net %" is the percentage reporting increased costs over the past 3 months less that reporting decreased costs.

Our monetary policy settings will not be adjusted in response to the near-term rise in CPI inflation itself, since it is almost wholly explained by the rapid and substantial rise in international oil prices and the Government's decision to increase excise tax on cigarettes. Neither of these events in themselves have either the persistent or demand-related characteristics that make for an ongoing threat to the inflation target. Nor could the near-term trajectory of inflation be much affected by monetary policy actions now, given the lags between monetary policy actions and their effect. However, we are bound to respond to, and prevent, any persistent generalised inflation effects that might follow after the near-term rise.

At this stage, we do not expect material second-round effects to follow from the CPI 'blip', because those effects are unlikely to be supported in the environment of fairly modest growth and demand pressure that we now anticipate over the projection period. However, the risk of second-round effects would probably increase if the economic environment turned out instead to be one of substantial excess demand.

Consistent with our sense that the inflation blip now underway is likely to be temporary and unrelated to demand pressures, measures of inflation that appear to be more closely correlated with the state of overall demand pressure are tracking in a manner that one would expect given that the economy's cyclical position seems about neutral currently. "Non-tradeables" inflation is currently running at around 2 per cent per annum, having picked up over the last few quarters as the disinflationary pressures associated with the negative output gap in 1998-99 have disappeared. But some retracement of non-tradeables inflation is likely to occur over

Figure 17
Tradeables and non-tradeables inflation¹³
(annual percentage change)



the next couple of quarters, as some of the recent movement in non-tradeables inflation is related to increased purchase and construction costs for new dwellings (which are a large part of the CPI by weight).

The rise in construction costs reflects the burst of housebuilding activity around the beginning of this year (and also some increase in the cost of tradeable building materials such as timber). As discussed earlier, some correction in residential investment is very likely over the near term, and we expect construction cost inflation correspondingly to fall back to low levels shortly. Low construction cost inflation is to be expected given the current trend of falling house prices (Figure 18, overleaf). As non-tradeables inflation conceptually is closely related to the state of general inflation pressure, we will be watching the data in this area carefully.

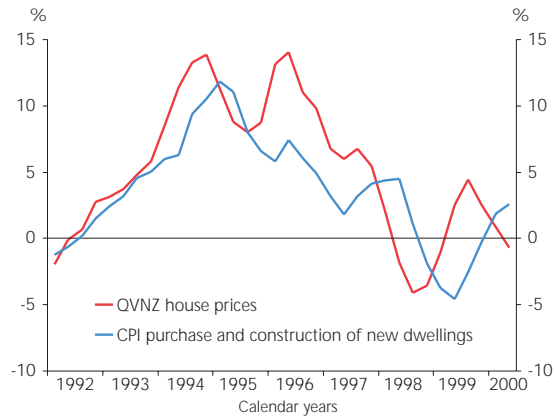
Other inflation measures that tend to reflect demand pressure show the gradual pick-up in the June quarter that we

Table 2
Derivative series of the CPI
(quarterly percentage change)

	CPI	Tradeables	Non-tradeables	Weighted Median	Trimmed Mean
Jun-99	0.5	0.0	0.9	0.1	0.2
Sep-99	0.4	0.0	0.8	0.3	0.3
Dec-99	0.2	0.3	0.2	0.1	0.2
Mar-00	0.7	0.6	0.7	0.5	0.7
Jun-00	0.7	1.1	0.4	0.2	0.5

¹³ Source: RBNZ; Statistics New Zealand.

Figure 18
House price and construction
cost inflation¹⁴
(annual percentage change)



anticipated in the May *Statement* (Table 2, previous page), but collectively remain below the peak reached in the mid-90's, when there was clear excess demand pressure in the economy.

¹⁴ Source: Quotable Value New Zealand, Statistics New Zealand.

3 Medium-term macroeconomic outlook

This chapter presents our central projection for growth, inflation and monetary conditions for the period to March 2003. More strongly than usual, we emphasise that the projection is a conditional one: the projected path for interest rates depends on the projection for inflationary pressure, which itself depends on a variety of assumptions and judgements regarding the evolution of the economy from its current position as described in the previous chapter.

Adopting different assumptions or reaching different judgements would imply different interest rate projections. Going forward, as new information bearing on the assumptions leads us to reassess our view, the interest rate projection and the OCR setting itself will be adjusted accordingly.

As already highlighted, two key judgements salient for this projection are (1) the magnitude and duration of any effects on demand growth flowing from the recent sharp fall in confidence; and (2) the degree of stimulus due to the low level of the exchange rate. However, in addition to these events characterising the particular circumstances facing us currently, we have also had to arrive at other important judgements regarding, for example, the outlook for trading partner economies, the relationship between demand pressure and inflation, and the effects on domestic demand of the rise in interest rates since late last year.

Our central projection is a best-estimate, in light of what we know currently, and in light of 'reasonable', rather than radical, assumptions. However, reality rarely conforms exactly to assumption, and surprises occur – in both directions, with little suggesting which direction in advance. Moreover, there can be surprises that individually seem unremarkable, but collectively add up to something more eventful.

It is fairly easy, at this point, to imagine alternative scenarios in which interest rates either rise more quickly than suggested in our central projection, or instead start falling, corresponding to views of rapidly increasing upward inflation pressure on the one hand, or the emergence of downward inflation pressure on the other. These alternative scenarios are discussed further in Chapter 4. Our central projection shows a path between these two scenarios, with a very small further increase in interest rates over the projection period as a whole. We now project a peak in interest rates of just over 7 per cent over the next three years, 25 basis points or so below the peak projected in May. By happenstance rather than design, this peak in interest rates is similar to that expected for the US and Australia.

This projection for interest rates is the result of our assessment that, without a further small increase, inflation would rise persistently over the medium term, as the strong

Table 3
Trading-partner growth forecasts
(annual average percentage change, calendar years)

Country	1998	1999	2000f	2001f
Australia	4.8	4.4	4.3	3.4
United States	4.3	4.1	4.8	3.1
Japan	-2.5	0.2	1.5	1.6
United Kingdom	2.2	2.1	3.0	2.6
Germany	2.2	1.5	2.9	2.9
Italy	1.5	1.4	2.9	2.9
France	3.2	2.9	3.7	3.3
China	7.8	7.1	7.7	7.7
Hong Kong	-5.1	3.0	7.8	4.3
Indonesia	-13.0	0.3	3.8	4.5
Malaysia	-7.6	5.6	7.7	6.6
South Korea	-6.7	10.7	8.5	5.9
Taiwan	4.6	5.7	6.8	6.0
Thailand	-10.2	4.2	5.4	5.3
<i>14-country index</i>	<i>0.9</i>	<i>3.5</i>	<i>4.3</i>	<i>3.5</i>

f = forecast

external demand environment came to dominate the current pessimistic mood, and to drive economic activity in New Zealand beyond its non-inflationary supply capacity.

The background of strong trading-partner growth and a stimulatory exchange rate has been present for some quarters. Our trading-partner growth forecasts for this *Statement* are based on *Consensus* forecasts published in July (Table 3), previous page.

International forecasters continue to expect Australian and US growth to slow gradually from current high levels, which have been maintained for a remarkably long time. Despite the long period of strong growth, little persistent rise in inflation is expected for those countries (abstracting from the effects of the introduction of GST in Australia) and, as already noted, only relatively moderate further rises in interest rates are expected for the remainder of this cycle.

Likewise, the economies of continental Europe and the UK are expected to grow robustly. Indicators of the outlook for the Japanese economy still presage a return to some modest growth over the next two years. Although there have been some concerns expressed recently about the risk of structural reform efforts and the recovery faltering in the Asian 'crisis' countries, *Consensus* forecasters on balance continue to forecast the continuation of growth at robust levels.

Overall, the trading-partner outlook remains a very positive element in the environment for New Zealand growth. Strong trading-partner growth is seen on the whole as continuing, without serious inflation problems emerging that might cause it to become more sharply curtailed. Even the adverse effects of the doubling of international oil prices over the past year (Figure 19) have been largely shrugged off, though admittedly international forecasts currently appear to be predicated on some retracement of oil prices to lower levels.

Continuing strong growth in New Zealand exports over the next year or so, bolstered by the still-low exchange rate, is the main contributor to projected overall growth over this period. Further out, as trading-partner growth is projected to slow somewhat and the exchange rate is assumed to appreciate gradually towards equilibrium, we project export growth to slow towards a more 'normal' rate (Figure 20).

The main components of exports expected to respond to the strong external environment are manufactured goods and

Figure 19
Dubai oil price¹⁵

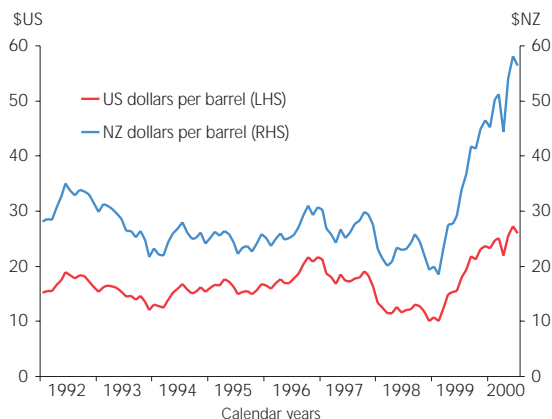
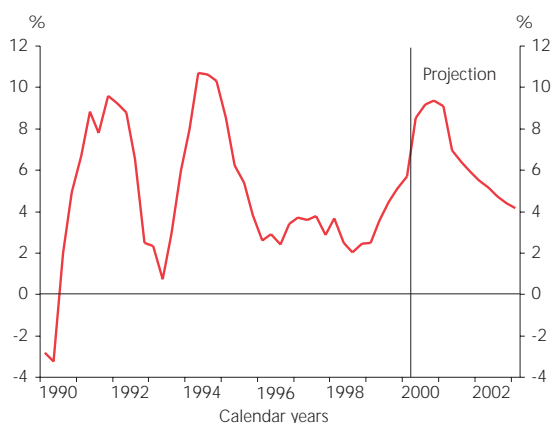


Figure 20
Real exports of goods and services
(annual average percentage change)



tourism. Pastoral exports, however, will continue to add to overall export growth. Exports of meat and dairy products have grown steadily over the past year or so as production has recovered from low levels caused by drought during the previous two seasons. This season has in fact seen better-than-average weather, which has generally produced good grass growth and left the pastoral sector in a strong position for the coming season.

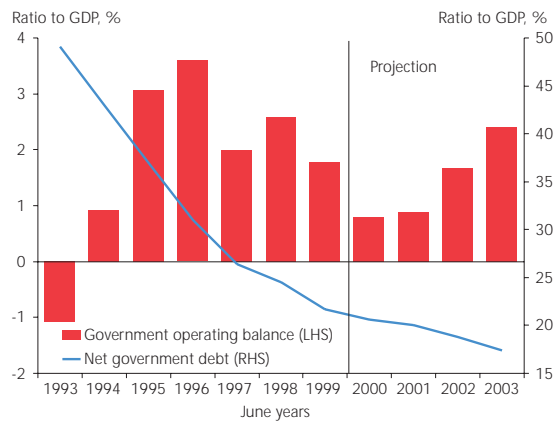
Very rapid increases in pastoral production are of course unlikely to persist, especially as more 'normal' weather conditions return and the rebuilding of livestock levels continues. Over the longer term, higher stock levels, investment by farmers in land improvements, continuing shifts in land use, and investment by dairy and meat-processing companies in plant and machinery, will support ongoing growth in pastoral produc-

¹⁵ Source: Bloomberg.

tivity and output. However, over the timeframe of relevance for monetary policy, we expect variations in pastoral production and exports to continue to be driven by variations in the weather.

Based on the Treasury's forecasts of the effect of Government policy on fiscal outcomes prepared for the *Budget*, together with our macroeconomic projections, we anticipate that the net effect of fiscal policy on demand growth will be close to neutral, if not slightly contractionary, over the projection period. On these assumptions, the government operating surplus is expected to rise gradually through the

Figure 21
Government operating balance and net government debt¹⁶



projection period (Figure 21).

The Government has set itself stringent fiscal parameters governing new spending initiatives. Monetary policy needs to be mindful of the risk of unexpected changes in fiscal stance that have implications for demand and inflationary pressure. However, the established practice of signalling major new fiscal initiatives well in advance, in the form of *Budget Policy Statements*, means that monetary policy will under most circumstances have time to respond to changes in fiscal stimulus.

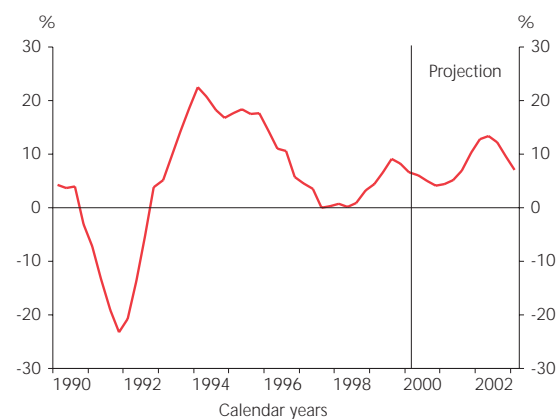
As the influence of strong external demand (given a more-or-less neutral effect from fiscal policy) progressively dominates the current sentiment of uncertainty and pessimism about the business environment, business investment growth is expected to pick up strongly. However, the projected recovery

of investment spending does not occur until the second half of the projection period, as the pause in investment reflecting the deferral of new investment projects is likely to last for a while yet (Figure 22). As noted, business contacts suggest that the strong external environment is presenting growth opportunities (as it should), and we anticipate that those opportunities will be acted upon as confidence picks up.

This is especially the case given that the exchange rate has continued to fall over the last few months. Concerns that increased profitability of exporting would quickly be eroded by exchange rate appreciation are likely to have diminished, leaving potential investors in export capacity more comfortable about the outlook.

Until the pace of growth recovers, however, there will probably be a period of fairly modest employment growth. This, coupled with current net emigration, weak house prices and limited wealth gains, suggests that household expenditure growth will remain subdued over the coming year. Further out, we anticipate that the resumption of generalised economic growth and associated employment and income increases will lift household spending. Indeed, we project a fairly large cycle in residential investment over the next two to three years, showing the effect of the downward correction in housebuilding currently underway, followed by some growth in dwelling investment as immigration and consumer sentiment turn more positive. This cyclical recovery in housing market activity should be reflected in house prices beginning to rise mildly, with that rise itself bolstering the pick-up in household expenditure.

Figure 22
Business investment
(annual average percentage change)



¹⁶ Source: NZ Treasury.

Imports growth is expected largely to follow domestic expenditure growth, with some continued increase in the import penetration ratio in line with the trend evident for more than a decade. This imports track is not, in our projection, very sensitive to the exchange rate, reflecting New Zealand's experience through the 1990's and earlier when import penetration trended upwards in a remarkably steady fashion.

These projections for expenditure growth add up to an outlook for GDP growth that has growth tracking at around a 3 per cent annual rate through the period. (*Annual average* growth over the next few quarters will turn out rather higher than this level, because of the influence of the very strong quarterly growth rates already recorded for the second half of 1999.)

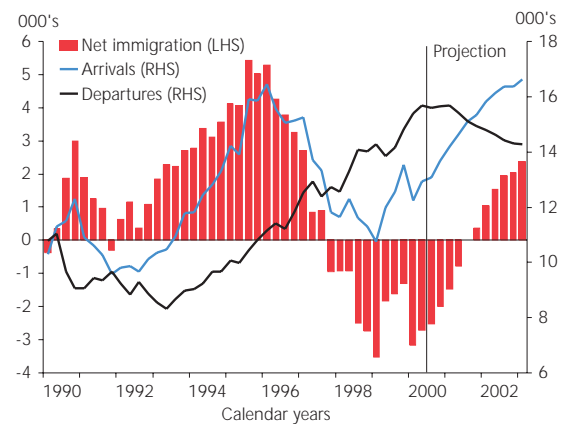
The combination of projected strength in exports and relative weakness in domestic expenditure means that the current account deficit will diminish. This is expected to occur steadily, though at a somewhat slower rate than we thought in May, due to a deterioration in the terms of trade since then (itself due to the unexpected further increase in international oil prices). The current account deficit is anticipated to fall to between 5½ and 6 per cent of GDP by the end of 2001.

Demand growth of around 3 per cent per annum is slightly above our projection for the growth of supply capacity through the period. Capacity growth is expected to pick up a little through the projection period, in line with the delayed pick-up in business investment growth and an expectation that a return to net immigration (from a state of net emigration currently) will boost the labour force (Figure 23).

This outlook for demand and productive capacity, given the economy's currently more-or-less neutral cyclical position, suggests a mild degree of excess demand will emerge over the second half of the projection period. We expect this mild excess demand pressure to lead 'core' domestic inflation to rise very gradually through the period.

Annual CPI inflation is projected to follow a much more cyclical profile than domestic inflation, tracking close to 3 per cent over the end of 2000 and the first half of 2001, before falling quickly to around 1½ per cent by the end of 2001. The brief rise in annual CPI inflation reflects the increase in

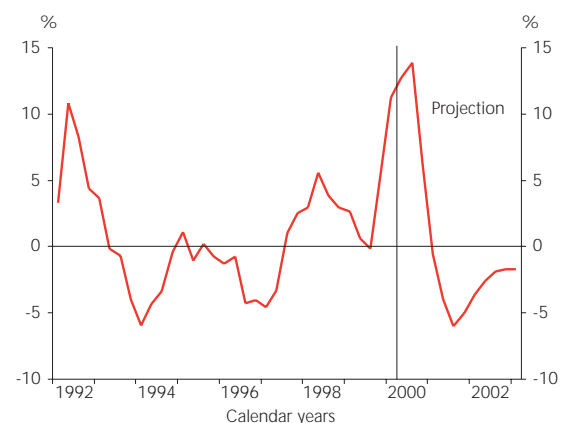
Figure 23
Net immigration, long-term arrivals and departures



petrol and cigarette prices noted above, with the subsequent fall partly due to those effects 'dropping out' and partly due to a projected fall in import prices in line with the assumed exchange rate appreciation and a gradual fall in international oil prices (Figure 24). We expect CPI inflation to begin rising mildly thereafter, in line with the rise in domestic inflation.

As noted, this view of the inflation outlook assumes a small further rise in interest rates over 2001. That interest rate projection is itself conditional on assumptions about the other influences on demand and inflation, including the effects of the current low exchange rate and the assumed gradual appreciation from here. With the exchange rate at cyclical lows, our assumed appreciation is reasonably substantial over the period (though not nearly as substantial as the appreciation seen in the mid-90's). The TWI exchange rate is assumed to reach around 57 by the end of 2002, about 10 per cent

Figure 24
New Zealand dollar import prices (annual percentage change)



higher than its current level – and similar to its level around the beginning of 1999.

The discussion in Chapter 2 about the current circumstances and perceptions in financial markets may make such an assumed appreciation seem unlikely in the absence of concrete evidence of a strong cyclical upturn in New Zealand. Lack of exchange rate appreciation, or indeed further exchange rate weakness, is a key risk to our central projection. Our assumed gradual appreciation through the projection period is consistent with surveyed expectations of market analysts, but they, like us, have seen their expectations of near-term appreciations of the exchange rate disappointed on the downside for several successive quarters. However, the longer the exchange rate persists at its current levels, the more likely it is

that the ongoing stimulus to exporting and import-competing sectors will lead to rapid expansion and accompanying growth in domestic expenditure – exactly the cyclical upturn that would support exchange rate appreciation.

With the exchange rate persisting at cyclical lows, its return to a cyclical average or ‘neutral’ exchange rate level is unlikely to be gradual, and will certainly be difficult to predict with accurate timing. A further difficulty in assessing the outlook for the exchange rate and its effect on the economy is that the neutral exchange rate level is highly uncertain. This issue is an important one for the Bank’s policy assessment, and we discuss it further in the next chapter.

4 Policy issues

As discussed at length in the preceding chapters, much has happened since May. The question confronting monetary policy now is the degree to which these recent events alter the longer-term prospects we anticipated in May, and what the appropriate policy response to that altered outlook should be.

This chapter places recent economic developments in the context of the economy's evolution over the past year or so, emphasising the need for perspective. We then illustrate the different paths for the economy that might reasonably be expected to unfold from this point, and discuss where our chosen central projection and policy decision sit against that background. Finally, we elaborate on our treatment of exchange rate movements in our policy assessment – this being a key element both in our overall interpretation of recent developments, and in the likely track for the economy from here.

A bumpy road

New Zealand monetary policy decisions often involve the need to glean underlying trends hidden within a mass of conflicting and volatile data. The past year or so highlights that proposition starkly, even putting aside the events since May. Quarterly growth has ranged from –0.2 per cent in the June quarter of 1999, to +2.6 per cent in the following quarter. It could well register a small negative again in the June 2000 quarter. According to the NZIER survey, business confidence has ranged from a net 21 per cent in the December quarter of 1999 expecting improved business conditions, to a net 42 per cent in the June 2000 quarter expecting a deterioration. Residential building consents were up by 65 per cent over the year to September 1999, but fell by 29 per cent in the year to April 2000.

Obviously, such volatility makes it difficult to pick settings for monetary policy now that will be correct for the year or more ahead when today's actions will have their effect. But some themes are available to us.

Despite volatile quarter-to-quarter data, monetary policy since early 1999 has been operating on the basis of an underlying growth path somewhere in the region of 3 to 4 per cent per annum, or $\frac{3}{4}$ to 1 per cent per quarter. This rate is probably

at or a little above our long-term non-inflationary growth potential. We have 'looked through' the small negative GDP result in June 1999, and discounted the contribution to the very strong growth of the September and December quarters of 1999 arising from the weather-related, but temporary, surge in agricultural production. We have watched developments relevant for domestic expenditure, noting the sluggish real estate market, slowing credit growth and continuing net emigration.

In particular, we have closely monitored measures of prices, taking some comfort from developments generally consistent with our inflation target, even as measures of capacity utilisation approached levels that, historically, have presaged increased pricing pressures. Similarly, we have noted that pass-through from the falling exchange rate to consumer prices has continued to be muted. But there have been some signs, particularly in measures of inflation expectations and capacity utilisation, that the inflation environment may be becoming less benign. Those signs have been reinforced, over the past year or so, by a persistent upgrading of expectations of the growth of our trading partners.

The judgements reached in observing this flow of data shape our assessments of evolving medium-term inflation pressures. On the basis of these assessments, we have moved the OCR from what was a clearly stimulatory 4.5 per cent, to the current 6.5 per cent. The current level of the OCR can be seen, fairly broadly, as in the region of 'neutral' – neither stimulatory nor restraining for demand. To repeat the metaphor of past *Statements*, we have eased off the monetary accelerator, without yet reaching for the brake pedal. Even with the considerable luxury of hindsight, the movement in the OCR since November 1999 seems well justified.

A dichotomous economy, and divergent scenarios

As we look forward from this point, we are conscious that there is ample scope for alternative views on future prospects. Since May, the 'shocks' and surprises have been significant. Business confidence in New Zealand has slumped, and the further rise in oil prices and higher excise tax on cigarettes will, by themselves, lift the headline CPI by a full

percentage point or more above the track we projected in May.

Against that, the outlook for the international economy remains unusually strong, the agricultural sector in New Zealand is enjoying excellent growing conditions, and exporters generally have had the benefit of a very competitive exchange rate.

In short, the New Zealand economy has become as dichotomous as it was in the mid-1990's, but in the opposite direction. This time it is the rural sector and exporters who are enjoying a period of relative prosperity, while urban New Zealand is struggling with flat or declining house prices, increased interest costs on bigger mortgages, increased petrol prices, and the higher tax rate on earnings over \$60,000 per annum.

Given this background, we can imagine, on the one hand, a plausible scenario for activity and inflation pressures that would necessitate substantial further monetary policy tightening, and on the other, an equally plausible scenario that features monetary easing.

The higher inflation/tighter monetary policy scenario could readily flow from several sources. For example, the recent sharp fall in business confidence could prove to be very short-lived and of no lasting consequence for firm behaviour. In particular, investment intentions might revert quickly to the stronger pattern evident earlier this year. The external sector drivers could prove to be more stimulatory than we assume in our central track, spilling over quite quickly into stronger domestic demand, just as they did in the early 1990's. In this environment, existing cost pressures might be passed through quickly and fully into price increases, and the assumption that the near-term blip in the CPI does not provoke a more generalised inflation cycle might prove optimistic. Greater vulnerability to inflation might be exacerbated by a move back to rapidly increasing asset prices, perhaps associated with a quick turnaround in net migration flows to strong net immigration.

Should reality turn out to be closest to this first scenario, we would probably discover that interest rates are still some way from the level necessary to maintain price stability over the medium term, the more so if the exchange rate remained low. Moreover, if inflationary expectations were to rise in that environment, monetary policy in the future would have

to work even harder. Under such a scenario, we could imagine the top of the interest rate cycle resembling that of the mid-1990's.

By contrast, the lower inflation/easier monetary policy scenario would attribute much greater significance to the recent confidence shock. The confidence surveys could turn out to be early indicators of a sustained weakening in demand. In that event, we might expect investment and employment decisions to be scaled back and perhaps to remain at lower levels for an extended period. The increase in interest rates over the first half of 2000 could turn out to be impacting more than previously thought, in an environment where more debt is being carried by households and house prices are falling. It may also be the case that we have overestimated the stimulus from the exchange rate, if 'structural' reductions in the relative competitiveness of New Zealand exporting and import-competing industries have lowered the 'equilibrium' exchange rate – an issue we discuss shortly.

This second scenario would probably imply the need for interest rates to fall from current levels over the next year or two.

Having considered these divergent scenarios in our assessment for this *Statement*, we have based policy on a central track that does not strongly emphasise one scenario over the other. The central projection embodies a continuation of underlying or trend growth at or slightly above potential. We expect a fairly prompt recovery of business confidence, but given the likelihood that the June and September quarter GDP numbers will be weak, we now see the economy as starting from a correspondingly weaker cyclical position. This suggests that interest rates should remain steady for the time being. The blip in measured CPI inflation is presumed to be transitory, and we treat it as such. Our OCR setting does not respond to it since there is expected to be no substantial generalised inflation pressure emerging subsequently, from compensatory price and wage adjustments.

For now, given the dual nature of the economy and the divergent possibilities ahead, we feel that our central projection balances appropriately the risks associated with each scenario. We also feel that stability in the OCR at this stage is itself a positive contribution to rebuilding confidence.

Dealing with the exchange rate

As noted already, the sharp fall in confidence since May has been accompanied by a sharp fall in the exchange rate, and it seems likely that similar factors may be involved in each event. Whatever the case, the exchange rate remains well below the level assumed in the May *Statement* for the second half of 2000. Indeed, looking back one year to the August 1999 *Statement*, the weakness relative to assumption for that period is even more stark. In the August 1999 *Statement*, we assumed an average TWI of 58.7 for the second half of this year, more than 12 per cent higher than the TWI at the time of writing of this *Statement*. Although the fall in the exchange rate since May has been quite sharp, it has nevertheless occurred against the background of a more general and persistent downward trend.

We have repeatedly reminded ourselves and others over the past few years about the need for care in interpreting movements in the exchange rate and, more particularly, how monetary policy should respond to movements in the exchange rate from quarter to quarter. There are several distinct aspects to the judgements surrounding the exchange rate at this point. Two issues are salient: first, the current level of the exchange rate and how stimulatory it is for exporting and import-competing industries; and second, how best to understand the apparent change in the relationship between movements of the exchange rate and subsequent consumer price movements.

There is no question that the exchange rate is at low levels, judged by any of the conventional yardsticks. On a nominal TWI basis, the NZ dollar has been trading below its previous cyclical lows reached in 1992. Even in real terms (i.e., adjusted for relative inflation rates here and in our trading partners) the TWI is at very low levels. As explained in Chapter 3, we have assumed for our central projection, as we have for previous ones, that the exchange rate will tend in the direction of some assessed equilibrium level over time.

We could normally expect sustained exchange rate weakness, as experienced over the past couple of years, to provide strong stimulus to export growth and subsequently to domestic activity. The experience of the early 1990's illustrated how powerful that effect can be. However, at present, while

stimulus to certain types of exports is apparent, we do not see a uniformly strong export growth profile across the board, nor do we have a strong sense of imminent spill-over from export demand to more generalised domestic demand (notwithstanding an undoubtedly buoyant season for pastoral farming).

The explanations for this – to date – apparently muted exchange rate response may have several dimensions. First, and most simply, the lags between a weakening of the exchange rate and a generalised expansion of exporting activity may in fact be quite long, as commitment to investment and overseas marketing efforts tends initially to be cautious, and then takes time to bear fruit. However, there is at least the possibility that more 'structural' factors may be at work impeding the stimulus one might have expected from the exchange rate.

As import penetration ratios have increased, New Zealand manufacturers have found themselves facing tough competition from imports in their domestic markets. Much the same process seems to be underway within Australia – an important market for New Zealand manufacturing exporters. Our discussions with businesses in that sector indicate that, notwithstanding that the Australian economy has been and is enjoying a sustained period of robust growth, and that the value of the New Zealand dollar against the Australian dollar has been reasonably stable at a fairly competitive level for New Zealand producers, competition against New Zealand products in the Australian market remains tough. So-called 'third country competition', from other countries exporting to the Australian market, has apparently maintained a degree of downward pressure on the margins on New Zealand goods exported to Australia. This pattern of increased competitive pressure appears to have become more obvious in the aftermath of the Asian crisis, as Asian producers responded to sudden capacity surpluses and sharply depreciated exchange rates with keen pricing.

Longer-term developments in the structure of the New Zealand economy may also be at work. Although the reduction in protection for local industry has been underway for many years now, the consequential restructuring of manufacturing activities continues to echo. In some cases, manufacturing capacity and related activity is still in the process of winding

down. That process is unlikely to be reversed even where local production has become more profitable through a lower exchange rate, unless or until there is confidence that the lower real exchange rate is likely to persist for an extended period. In the same vein, new investment and expansion to exploit emerging opportunities for profitable local production is likely to be inhibited by any perception that the exchange rate weakness is simply a cyclical phenomenon.

The question of structural versus cyclical exchange rate weakness is an important one in assessing our current policy stance. Structural reductions in competitiveness stemming from such factors as noted above would imply less stimulus from any given level of the exchange rate. Indeed, weaker exchange rate stimulus than one might have expected at first sight may perhaps explain the persistence of the current account deficit at high levels. If, consistent with this view, the equilibrium or neutral level of the exchange rate has fallen, a less pronounced expected future appreciation would be indicated, as well as reduced need for counteracting restraint on demand via higher interest rates, all else equal.

Although we have not yet reached any firm conclusions on these matters to date, they are an area to which we will be devoting further research effort.

A further puzzle with respect to the exchange rate over recent years has been the pass-through (or 'direct price' effects) from movements of the exchange rate into consumer prices. Both during the appreciation of the NZ dollar in the 1994 to 1996 period, and during the subsequent depreciation, we have observed rather less pass-through than our historical experience, and simple ratios of imports to GDP, would suggest. New Zealand has not been the only open economy to observe this changed pattern of pass-through – other inflation-targeting countries, such as Australia, the UK, Canada and Sweden, have seen an apparent reduction in pass-through too.

Understanding this change is important to forecasting future inflation developments. The explanations offered are many. For example:

- increased competition, new entrants in particular sectors and increased import penetration (due to such factors as

removal of parallel-importing restrictions, and tariff reductions);

- surplus capacity in Asia after the 1997 crisis leading to increased price competitiveness of Asian exports;
- better-anchored inflation expectations associated with the move to inflation-targeting regimes; and
- more active 'pricing to market' strategies on the part of foreign suppliers, who now take a more 'swings and roundabouts' attitude to exchange rate cycles while holding prices fairly steady in each of the countries in which they operate.

For the future, the key questions are whether factors of this sort will persist and perhaps intensify, or whether the experience of the past couple of years is best regarded as a transitional or adjustment phase. If the latter, then we may see pass-through behaviour reverting to historical patterns. An important consideration in the resolution of these questions will undoubtedly be the international environment and whether demand pressures in major markets eventually spill into increased inflationary pressures abroad. If they do, it seems unlikely that New Zealand will be able to avoid those pressures completely.

* * *

With the OCR decision delivered with this *Statement*, we have aimed to steer a path for policy that appears most appropriate given the outlook for the economy as we see it presently, recognising that outcomes on either side of our central projection are not only possible, but indeed quite likely. An important policy consideration therefore has been that our OCR decision at this point should position monetary policy well to respond to new developments as they emerge. As always, the Bank stands ready to adjust policy as new information regarding the inflation outlook comes to hand.

Appendix 1

Chronology

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

2000

- 17 May: The Reserve Bank released its twenty-sixth *Monetary Policy Statement*, raising the Official Cash Rate 50 points to 6.50 per cent. The news release accompanying the *Statement* is reproduced in Appendix 2.
- 26 June: Production GDP figures were released showing that the New Zealand economy grew 0.8 per cent in the March 2000 quarter.
- 5 July: At the intra-quarter review, the Reserve Bank left the Official Cash Rate unchanged at 6.50 per cent. The accompanying news release is reproduced in Appendix 2.
- 17 July: CPI statistics were released for the June quarter, showing that the CPI increased by 0.7 per cent over the quarter, and by 2.0 per cent for the year to June 2000.

Appendix 2

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 raised to 6.50 per cent

17 May 2000

The Reserve Bank has decided to increase the Official Cash Rate (OCR) by 0.5 per cent to 6.5 per cent. This came today with the release of the Reserve Bank's *May Monetary Policy Statement*.

Reserve Bank Governor Don Brash said: "Inflationary pressures are beginning to build. GDP in the December quarter of 1999 was 5.8 per cent higher than it was a year earlier. Even allowing for a significant slowing in growth in the March quarter, we estimate that over the last two years the economy has grown to the point where demand is beginning to put pressure on capacity, and thus beginning to create inflationary pressures.

"We project that growth will continue to be moderately strong over the next year or so, before slowing somewhat to around the sustainable growth rate, as the gradual tightening of monetary policy in recent months takes hold.

"There are already indications that inflation itself is beginning to pick up. It seems likely that inflation would increase in the next year or two if monetary conditions were not gradually tightened further. Today's decision to raise the OCR should be seen in this light.

"Looking ahead, there are lots of uncertainties. The only thing which is absolutely certain at this stage is where the OCR is set now, which reflects the information available now. Our projections are, as always, highly conditional. If the United States or Australian economies were to grow more slowly than projected, for example, then monetary policy further ahead would probably not need to tighten as much as projected here. On the other hand, if household expenditure in New Zealand were to rise very strongly, then monetary policy might need to tighten more than now projected.

"With a new *Monetary Policy Statement* issued approximately each three months, and an additional review between each *Monetary Policy Statement*, there is ample opportunity to adjust the OCR as new information comes to hand," Dr Brash concluded.

Fourth quarter MPS date changed

28 June 2000

The Reserve Bank today announced that it had decided to move the date of the final *MPS* for 2000 to Wednesday 6 December. Previously this was scheduled for 15 November.

The change has no monetary policy significance and has been made to allow time for the Reserve Bank to incorporate more fully upcoming changes to the method by which GDP is calculated by Statistics New Zealand.

In addition, the first OCR review of the New Year will take place on **Wednesday 24 January 2001**.

OCR unchanged

5 July 2000

The Reserve Bank today announced that the Official Cash Rate would remain at 6.50 per cent.

The next Official Cash Rate announcement will take place on 16 August with the release of the August *Monetary Policy Statement*.

Appendix 3: Summary Tables¹

Table A

CPI inflation projections and monetary conditions

(CPI is in percentage changes)

	CPI* Annual	TWI	90-day bank bill rate	MCI	
				Nominal	Real
1997	Jun.	64.6	9.7	875	900
	Sep.	65.6	10.0	1000	1025
	Dec.	67.1	8.9	1000	1000
	Mar.	68.4	7.5	950	975
1998	Jun.	68.0	7.2	875	950
	Sep.	64.8	8.1	750	775
	Dec.	63.9	7.9	650	700
	Mar.	61.2	9.0	550	600
1999	Jun.	58.5	9.1	325	400
	Sep.	57.1	6.8	-25	25
	Dec.	56.0	4.6	-350	-225
	Mar.	57.6	4.5	-200	-125
2000	Jun.	59.1	4.7	-50	75
	Sep.	56.7	4.8	-250	-150
	Dec.	54.4	5.4	-400	-325
	Mar.	54.1	6.0	-375	-375
2001	Jun.	53.4	6.7	-350	-350
	Second Half Average	51.9	6.8	-500	-500
	First Half Average	53.9	7.0	-300	-300
	Second Half Average	55.4	7.1	-125	-75
2002	First Half Average	56.3	7.2	-50	0
	Second Half Average	57.1	7.2	25	50

⁽¹⁾ Notes for these tables are in Appendix 4

* The target measure shown is annual underlying inflation until the September quarter 1997, annual CPI 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

World outlook

(Annual average percentage change, unless specified otherwise)

March year	Actuals										Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
World GDP	3.5	4.4	4.2	4.4	3.1	1.1	4.1	4.0	3.4	3.5			
World CPI inflation	1.9	2.2	2.4	2.6	2.6	1.4	1.3	2.0	1.8	1.9			
Domestic													
Import prices	-2.7	-1.8	-0.7	-3.4	0.8	3.7	4.3	7.8	-4.7	-2.0			
Export prices	-1.2	-2.1	-2.8	-4.2	0.1	3.3	4.1	5.9	-4.1	-1.6			
Terms of trade	1.5	-0.3	-2.2	-0.8	-0.6	-0.5	-0.1	-1.8	0.6	0.4			
March quarter													
World 90-day rate (level, %)	3.7	6.5	5.7	5.5	5.5	4.7	5.9	6.8	6.4	6.1			
World bond rate (level, %)	6.2	8.0	6.4	6.8	5.6	5.1	6.5	6.4	6.4	6.3			

Table C

Composition of real GDP growth

(Annual average percentage change, unless specified otherwise)

March year	Actuals							Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Final consumption expenditure										
Private	3.4	6.0	4.1	3.7	3.0	1.4	2.8	1.7	3.0	3.3
Public authority	-1.1	-0.7	3.3	2.5	5.3	0.1	7.2	0.4	0.7	1.1
Total	2.4	4.6	3.9	3.5	3.4	1.1	3.7	1.4	2.5	2.9
Gross fixed capital formation										
Market sector:										
Residential	17.0	12.3	-0.1	4.0	1.8	-15.1	22.0	-5.6	-2.2	4.7
Business	22.5	17.6	14.2	4.6	0.8	4.4	6.7	4.5	12.7	7.1
Non-market government sector	-3.8	27.9	2.4	32.5	12.8	-7.0	11.9	-1.6	1.9	7.9
Total	18.2	17.2	9.6	7.0	2.4	-1.1	10.1	1.7	8.7	6.8
Final domestic expenditure	5.1	7.0	5.1	4.3	3.2	0.6	5.1	1.5	4.0	3.8
Stockbuilding ⁽¹⁾	1.1	0.0	-0.7	-0.3	0.1	-0.9	1.4	-0.5	0.0	0.1
Gross national expenditure	6.2	6.9	4.3	3.9	3.3	-0.3	6.5	1.0	4.0	3.8
Exports of goods and services	7.9	8.4	2.6	3.7	3.9	2.2	6.2	8.8	5.3	4.2
Imports of goods and services	8.0	14.3	7.4	7.2	4.8	3.3	11.1	1.2	5.9	6.6
Expenditure on GDP	6.2	5.3	2.9	2.7	3.0	-0.7	4.8	3.6	3.7	2.9
GDP (production)	6.3	5.4	3.8	2.7	1.9	0.0	4.4	3.1	3.4	2.9
GDP (production, March qtr to March qtr)	6.9	4.6	3.8	1.3	1.0	1.8	5.6	2.0	3.4	2.9
Potential output	2.8	3.7	3.7	3.3	2.8	2.5	2.5	2.7	2.8	3.1
Output gap (% of potential GDP, year average)	0.3	2.0	2.0	1.4	0.6	-1.9	-0.1	0.3	1.0	0.8

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

Table D

Household income and consumption

(Annual average percentage change)

March year	Actuals							Projections		
	1994	1995	1996	1997	1998	1999	2000e	2001	2002	2003
Compensation of employees	4.4	6.4	5.9	5.6	3.2	0.2	4.6	3.1	5.1	5.2
Entrepreneurial income	13.5	8.7	11.3	1.6	-0.6	4.8	5.5	7.9	4.5	4.0
Other income	3.1	1.8	7.3	4.2	2.6	1.7	5.1	5.9	4.6	4.5
Total income	5.2	5.4	7.1	4.6	2.5	1.3	4.8	4.6	4.9	4.8
Less income tax	6.0	7.2	6.7	1.9	0.6	-4.1	4.1	9.0	4.9	4.8
Nominal disposable income	5.0	4.8	7.2	5.3	2.9	2.6	5.0	3.6	4.9	4.8
Consumption deflator	1.7	2.0	2.8	1.6	1.2	2.0	1.3	2.5	1.7	1.6
Real disposable income	3.2	2.8	4.3	3.7	1.7	0.6	3.7	1.0	3.1	3.2
Real household consumption	3.2	6.0	4.0	3.7	3.0	1.4	2.9	1.6	2.9	3.2
Household savings rate ⁽¹⁾	3.3	0.3	0.6	0.6	-0.7	-1.5	-0.7	-1.2	-1.1	-1.1

e = estimate.

⁽¹⁾ Percentage of disposable income.

Table E
Fiscal accounts
(\$billion)

June year	Actuals					Projections				
	1994	1995	1996	1997	1998	1999	2000e	2001	2002	2003
Revenue										
Direct taxation	17.6	19.8	21.3	20.5	21.3	20.3	21.6	23.3	24.7	25.9
Indirect taxation	10.1	10.4	11.0	11.4	11.7	11.9	12.4	12.9	13.4	14.1
Non-tax revenue	2.5	3.4	2.8	2.9	2.6	4.2	2.4	2.2	2.3	2.4
Total revenue	30.2	33.6	35.1	34.8	35.6	36.4	36.4	38.4	40.4	42.4
Total expenses	29.6	30.4	31.7	33.0	34.2	35.8	36.4	38.1	39.1	40.2
Revenue less expenses	0.5	3.2	3.3	1.8	1.4	0.5	0.0	0.3	1.3	2.2
Net surplus attributable to SOEs and Crown entities	0.2	-0.6	0.0	0.1	1.2	1.2	0.9	0.7	0.6	0.8
Operating balance (% of nominal expenditure GDP)	0.8	2.7	3.3	1.9	2.5	1.8	0.8	1.0	1.9	2.9
	0.9	3.1	3.6	2.0	2.6	1.8	0.8	0.9	1.7	2.4
Net public debt (as at June 30) (% of nominal expenditure GDP)	35.4	32.6	28.6	25.3	24.1	21.7	21.8	22.2	21.9	21.2
	43.0	37.0	31.0	26.4	24.5	21.7	20.6	20.0	18.8	17.4

e = estimate

Table F
Investment
 (Annual average percentage change)

March year	Actuals							Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Plant and machinery (excluding computers)	30.3	18.6	13.6	3.0	9.2	3.8	14.5	5.5	13.0	7.3
Transport equipment	29.2	12.7	8.8	-2.7	1.9	-4.0	7.6	3.5	12.2	6.4
Commercial buildings	17.2	20.8	5.5	13.5	-22.1	-1.5	-1.1	-2.2	11.0	4.4
Other	29.3	22.5	23.6	-3.7	-5.1	14.0	-4.6	4.3	11.6	7.4
	-5.1	1.4	19.1	12.5	5.5	2.4	-8.2	6.2	15.2	8.5
Market sector business investment (excluding computers)	22.5	17.6	14.2	4.6	0.8	4.4	6.7	4.5	12.7	7.1
	21.5	14.5	11.9	1.9	-4.0	0.6	1.4	3.1	12.3	6.6
Market sector residential investment	17.0	12.3	-0.1	4.0	1.8	-15.1	22.0	-5.6	-2.2	4.7
Total market sector investment	20.9	16.2	10.4	4.4	1.0	-0.3	9.8	2.2	9.6	6.7
Government (non-market) investment	-3.8	27.9	2.4	32.5	12.8	-7.0	11.9	-1.6	1.9	7.9
Total investment (excluding computers)	18.2	17.2	9.6	7.0	2.4	-1.1	10.1	1.7	8.7	6.8
	17.4	14.9	7.6	4.8	-1.2	-4.8	6.5	0.3	7.5	6.3

Table G

Trade volumes and the current account

March year	Actuals										Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
(Annual average percentage change)													
Exports of goods	6.9	7.2	0.8	6.6	6.7	-0.6	4.5	7.6	6.3	5.3			
Exports of services	11.3	12.5	8.1	-4.9	-4.9	12.2	11.6	12.4	2.2	0.9			
Total exports	7.9	8.4	2.6	3.7	3.9	2.2	6.2	8.8	5.3	4.2			
Imports of goods	12.1	15.6	7.1	7.7	5.4	3.5	14.3	0.6	5.9	6.9			
Imports of services	-5.3	9.1	8.2	5.3	2.5	2.5	-2.8	4.1	5.8	4.9			
Total imports	8.0	14.3	7.4	7.2	4.8	3.3	11.1	1.2	5.9	6.6			
Current account (\$ billion March year annual total)													
Merchandise trade balance	3.1	2.1	0.9	1.0	1.4	1.5	-0.8	1.4	2.0	1.8			
Services balance	-0.9	-0.6	-0.1	-0.5	-1.1	-1.2	-0.5	0.1	-0.2	-0.5			
Investment income balance	-4.5	-6.0	-6.0	-7.3	-6.4	-6.4	-7.8	-8.6	-8.8	-9.1			
Transfers balance	0.4	0.3	0.3	0.8	0.6	0.5	0.6	0.4	0.5	0.5			
Current account⁽¹⁾	-1.9	-4.1	-5.0	-6.0	-5.5	-5.7	-8.5	-6.7	-6.5	-7.3			
(% of nominal expenditure GDP)	-2.3	-4.7	-5.5	-6.3	-5.6	-5.8	-8.2	-6.1	-5.6	-6.0			

⁽¹⁾ Errors in adding up the current account are due to rounding.

Table H
Labour market

March year	Actuals										Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
Change in labour force:													
Natural increase (000's)	23.4	24.6	25.2	19.0	19.0	18.9	17.1	19.6	20.6	21.5			
Net migration (000's)	6.5	9.2	13.0	9.1	-0.2	-6.4	-5.3	-5.7	0.4	5.3			
Increase in participation (000's)	28.2	9.4	30.5	0.4	-4.4	-2.1	-2.5	8.4	15.8	7.8			
Total change in labour force (000's)	58.1	43.2	68.7	28.5	14.4	10.4	9.3	22.4	36.8	34.6			
March quarter:													
Population of working age (000's)	2671	2723	2781	2824	2853	2872	2890	2911	2942	2983			
Labour force participation rate (%)	64.3	64.7	65.8	65.8	65.6	65.6	65.5	65.8	66.3	66.6			
Total labour force (000's)	1718	1761	1830	1858	1872	1883	1892	1914	1951	1986			
Total employment (000's)	1555	1639	1711	1731	1732	1741	1766	1793	1833	1867			
Annual growth (%)	4.4	5.4	4.4	1.2	0.0	0.6	1.4	1.5	2.2	1.9			
Unemployment (000's)	163	122	119	127	141	142	127	121	118	119			
Unemployment rate (s.a.)	9.1	6.6	6.2	6.5	7.2	7.2	6.4	6.0	5.7	5.7			
Total hours worked	3.8	6.6	4.8	-2.1	-0.6	1.4	-0.1	3.2	2.1	1.8			
Annual growth (%)													
Labour productivity	1.7	-0.4	-0.5	1.0	2.0	0.0	2.4	1.4	1.8	0.9			
Annual growth (%)													
OES private sector wages	1.3	2.1	3.6	4.0	2.6	2.7	1.5	3.3	3.8	3.0			
Annual growth (%)													

Appendix 4

Notes to the tables

CPI	Consumers Price Index
CPIX	Consumers Price Index excluding Credit Services. <i>Consumers Price Index</i> .
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, and the United Kingdom, and against the euro.
90-day rate	RBNZ. Defined as: The interest yield on 90-day bank bills.
Nominal MCI	RBNZ. Defined as: $\{(90\text{day}-r_0) + (1/2)*[\log_n(\text{TWI}) - \log_n(\text{TWI}_0)]*100\}*100 + 1000$ where 90day and TWI are nominal rates and r_0 and TWI_0 are corresponding averages of daily rates for the December 1996 quarter, where $r_0 = 8.91$ and $\text{TWI}_0 = 67.11$.
Real MCI	RBNZ. Defined as: $\{(R90\text{day}-R_0) + (1/2)*[\log_n(\text{RTWI}) - \log_n(\text{RTWI}_0)]*100\}*100 + 1000$ where R90day and RTWI are the estimated real 90day interest rate and the real TWI exchange rate. R90day is calculated as the nominal 90-day rate less the annual (four-quarter) inflation rate in the CPIX prior to June quarter 1999, and less the CPI thereafter, adjusted for interest and section prices for the September 1999 to June 2000 quarters inclusive. RTWI is calculated as the TWI multiplied by New Zealand's GDP deflator (interpolated from annual data) and divided by the trade-weighted average of GDP deflators of our trading partners. R_0 and RTWI_0 are base levels for the December 1996 quarter, where $R_0 = 6.5$ and $\text{RTWI}_0 = 1$ (normalised). All input numbers are rounded to one decimal place.
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> .
World 90-day rate	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 90-day interest rates. Projections based on <i>Consensus Forecasts</i> .
World bond rate	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 10-year interest rates. Projections based on <i>Consensus Forecasts</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>
Export of goods and services	<i>System of National Accounts.</i>
Imports of goods and services	<i>System of National Accounts.</i>
GDP (production)	<i>System of National Accounts.</i>
Potential output	RBNZ definition and estimate. Refer to: Conway, P. and B. Hunt, (1997), 'Estimating Potential Output: a semi-structural approach', <i>Reserve Bank of New Zealand Discussion Paper, G97/9.</i>
Output gap	RBNZ definition and estimate: The percentage difference between real GDP (production, seasonally adjusted) and potential output GDP.
Compensation of employees	<i>Household Income and Outlay Accounts.</i>
Other income	<i>Household Income and Outlay Accounts.</i>
Nominal disposable income	<i>Household Income and Outlay Accounts.</i>
Consumption deflator	<i>System of National Accounts.</i>
Real disposable income	<i>Household Income and Outlay Accounts.</i>
Real household consumption	<i>System of National Accounts.</i>
Household savings rate	<i>Household Income and Outlay Accounts.</i>
Direct taxation	Historical source: The Treasury. Defined as total personal taxation, total company taxation and total withholding taxes. Adjusted by the RBNZ over the projection period.
Indirect taxation	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Non-tax revenue	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Total expenses	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Net surplus attributable to SOEs and Crown entities	The Treasury.
Government operating balance	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Net public debt	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Plant and machinery investment	RBNZ definition: Market sector plant and machinery investment. <i>System of National Accounts.</i>
Plant and machinery investment (excluding computers)	RBNZ definition: Market sector plant and machinery investment excluding computer investment. <i>System of National Accounts.</i>
Transport equipment	RBNZ definition: Market sector transport equipment investment. <i>System of National Accounts.</i>
Commercial buildings	RBNZ definition: Market sector non-residential building investment. <i>System of National Accounts.</i>

Other investment	RBNZ definition: Market sector other construction and land improvement investment. <i>System of National Accounts.</i>
Total market investment	RBNZ definition: The sum of total business investment and total residential investment. <i>System of National Accounts.</i>
Total investment	<i>System of National Accounts.</i>
Total investment (excluding computers)	Total investment less computer investment. <i>System of National Accounts.</i>
Export of goods	<i>System of National Accounts.</i>
Export of services	<i>System of National Accounts.</i>
Import of goods	<i>System of National Accounts.</i>
Import of services	<i>System of National Accounts.</i>
Merchandise trade balance	<i>Balance of Payments.</i>
Services balances	<i>Balance of Payments.</i>
Investment income balance	<i>Balance of Payments.</i>
Transfers balance	<i>Balance of Payments.</i>
Current account balance	<i>Balance of Payments.</i>
Natural increase	Defined as the change in the population of working age minus net migration.
Net migration	Net arrivals of working age (15-64). <i>External Migration.</i>
Participation rate	<i>Household Labour Force Survey.</i>
Labour force	<i>Household Labour Force Survey.</i>
Total employment	<i>Household Labour Force Survey.</i>
Unemployment rate	<i>Household Labour Force Survey.</i>
Total hours worked	<i>Household Labour Force Survey.</i>
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>
House prices	Average house price index, Quotable Value New Zealand.
Construction costs (residential)	RBNZ estimate: component of the Housing Group, <i>Consumers Price Index.</i>
Quarterly percentage change	$(\text{Quarter}/\text{Quarter}_{-1}) * 100$
Annual percentage change	$(\text{Quarter}/\text{Quarter}_{-4}) * 100$
Annual average percentage change	$(\text{Year}/\text{Year}_{-1}) * 100$

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