
Monetary Policy Statement¹

March 1999

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

Contents

1.	Overview and policy assessment	2
	Table 1: Summary of economic projections	4
2.	Demand influences	5
3.	Meeting the demand	10
4.	Inflation	12
5.	Uncertainties	15
6.	Developments in financial markets	17
7.	Operating monetary policy with an Official Cash Rate	20

Appendices:

1.	Chronology	23
2.	Reserve Bank statements on monetary policy	24
3.	Summary tables	29
4.	Notes to the tables	37

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

ISSN 1170-4829

¹ Projections finalised on 1 March 1999. Policy assessment finalised on 15 March 1999.

1 Overview and policy assessment

The Bank has decided to set the first Official Cash Rate at 4.50 per cent.

This setting is broadly consistent with current monetary conditions. Given our current assessment of how inflation pressures will evolve over the next two or three years, we do not at this stage see any need for a material change in the stance of policy for some quarters ahead.

As subsequent chapters explain, we estimate that the domestic economy is currently growing at roughly its long-term sustainable growth rate of about 3 per cent per annum – in other words, at quarterly growth rates which are broadly similar to the rate at which new productive resources are becoming available. We expect that growth over the next few years will be quite moderate compared with that experienced as we came out of recession in the early nineties, in large part because of the very much higher levels of household sector debt at this time. If this proves to be correct, it seems likely that it will be some time yet before the slack built up in the economy over the last year or so has been used up, with downward pressure on trend inflation persisting until that point.

Internationally, we see average growth in our trading partners picking up over the next two years, with slowing growth in the United States and Australia being offset by a pick-up in growth in some other markets. But this international growth will not be as robust as that experienced in the early nineties, and we expect to see continued weak prices for both our exports and our imports. This too will tend to keep inflation at low levels.

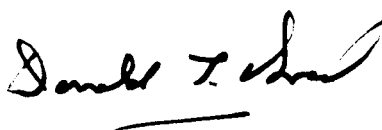
There are clearly some important risks in this assessment and, as always, events may turn out rather differently than now projected. Two risks seem particularly relevant, one suggesting inflationary pressures could be rather stronger than now expected, the other suggesting weaker inflationary pressures.

Inflationary pressures could turn out to be stronger than now anticipated if we are wrong about the attitude of New Zealanders to taking on more debt – in other words, if currently low interest rates encourage people to take on even more debt than the relatively high level already carried. In this

event, consumption spending and possibly housing investment will be stronger than now expected, with resultant pressures on both inflation and the balance of payments deficit.

On the other hand, inflationary pressures could well turn out to be weaker than now expected if growth in our trading partners turns out to be weaker. That could occur, for example, as a result of a slowdown in the growth of US consumption expenditure – perhaps triggered by a correction in US equity prices – or as a result of further difficulties in the Japanese economy.

As always, we are committed to adjusting policy as necessary in the light of actual developments. As always, we are committed to keeping CPIX inflation above zero and below 3 per cent, as required by the *Policy Targets Agreement*.



Donald T Brash
Governor

Figure 1
Consumer price inflation
(annual percentage change)

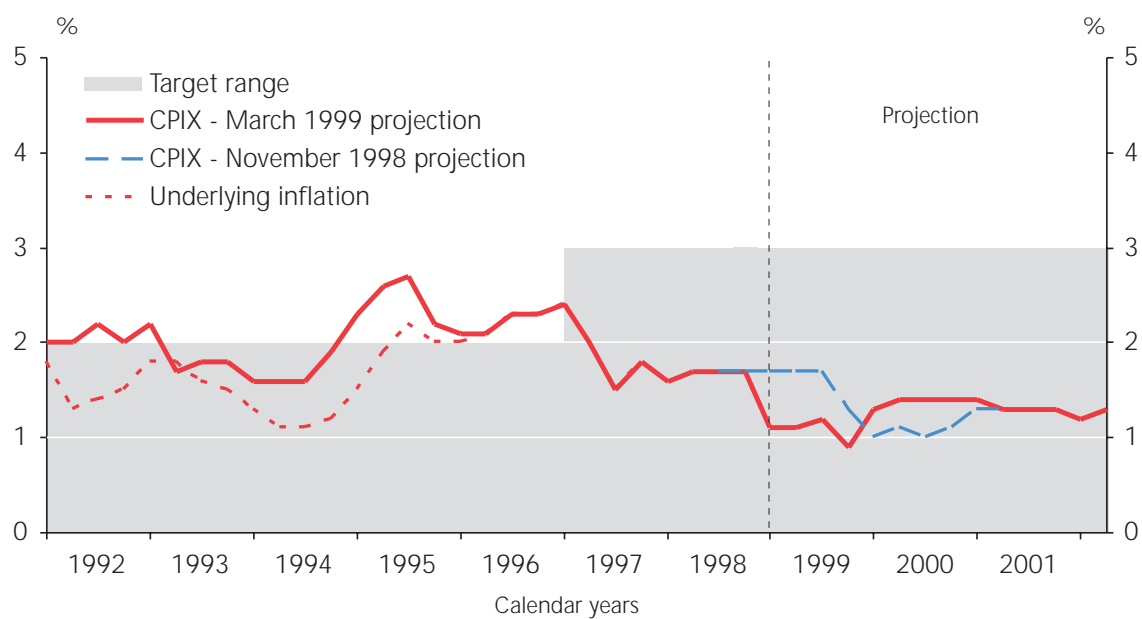


Table 1

Summary of economic projections

(Annual percentage change, unless specified otherwise)

March year	Actuals		Projections		
	1998	1999e	2000	2001	2002
Price measures					
CPIX	1.7	1.1	1.4	1.3	1.3
Wages	2.6	2.7	2.4	2.7	2.6
Import prices (in New Zealand dollars)	2.9	4.1	-1.2	1.2	-0.8
Export prices (in New Zealand dollars)	4.6	-0.1	-0.3	1.1	0.7
Monetary conditions					
Nominal MCI (year average)	700	-50	-175	-100	0
90-day rate (year average)	8.0	6.2	4.6	4.6	5.3
TWI (year average)	64.4	57.3	57.8	58.6	59.0
Output					
GDP (production, annual average % change)	2.3	-0.3	3.0	3.6	3.8
Output gap (% of potential GDP, year average)	0.4	-2.5	-2.0	-1.1	-0.2
Key balances					
Government operating balance (% of GDP, June year average)	2.6	0.3	-0.4	-0.1	0.7
Current account balance (% of GDP, annual level)	-6.6	-7.4	-6.6	-6.1	-5.6
Terms of trade (annual average % change)	-0.7	-1.3	-0.7	0.3	1.0
Unemployment rate (March quarter s.a.)	7.1	7.8	7.6	7.1	6.4
Household savings rate (% of disposable income)	-0.2	-1.1	-0.2	-0.3	0.1
World economy					
World GDP (annual average % change)	3.2	0.7	2.0	2.6	3.0
World CPI inflation	2.4	1.5	1.5	2.1	1.8
Quarterly projections					
(quarterly percentage change, unless specified otherwise)	Sep-98	Dec-98	Mar-99	Jun-99	Sep-99
CPIX	0.6	-0.1	0.3	0.3	0.4
GDP (production, s.a.)	0.7	0.6	0.8	0.9	0.7

e = estimate

s.a. = seasonally adjusted

2 Demand influences

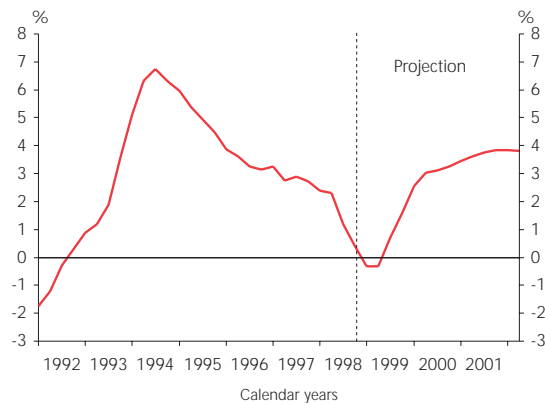
Overview

Since our November *Statement*, the outlook for domestic and trading partner economic activity has improved a little. Although we continue to expect trading partner growth to remain fairly weak over the next two to three years, the outlook appears to have stabilised recently, after several quarters of successive downward revisions. The anticipated gradual recovery of economic activity in New Zealand has begun, as confirmed in GDP data for the September quarter, and in indicators of subsequent activity.

We estimate that quarterly growth remained around the same level over the December and March quarters as over the September quarter, and project growth to pick up to somewhat higher rates over the next two years. The recovery is expected to be fairly broad-based, with exports, business investment and household expenditure all picking up to reasonably healthy rates of growth. We project monetary conditions to remain around current levels for the next two years or so, supporting the economy in the face of slow trading partner growth. Output is not projected to reach full-capacity levels until around 2001. Inflation is expected to remain subdued, tracking near the midpoint of the inflation target range throughout the projection period.

This chapter elaborates on the outlook for the economic performance of our trading partners and for demand growth in New Zealand. Chapter 3 discusses the economy's capacity to meet that demand, and Chapter 4 the likely evolution of inflationary pressure given the outlook for real activity.

Figure 2
Real GDP
(annual average percentage change)

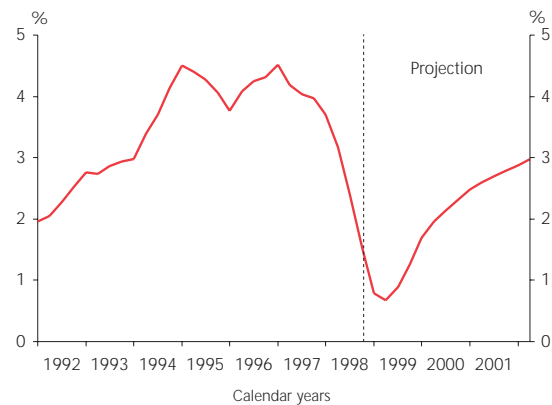


Trading partner economic outlook

The outlook for world growth appears to be stabilising, after several successive quarters of major downward revisions. Threats to the stability of the US and European financial sectors, which we considered to be an important risk to world growth in November, seem to have abated. Credit spreads internationally have contracted, and expectations of further US monetary easing have diminished.

However, world prospects remain fragile. Generalised health in the world economy is projected to return only in two to three years' time (see Figure 3).

Figure 3
Trading partner² GDP
(annual average percentage change)



Despite further encouraging signs in some of the nations most affected by the Asian crisis (notably Thailand and Korea), emerging economies remain subject to financial sector weakness and the high cost of credit that implies. This fact was amply demonstrated in January, with the devaluation, subsequent float, and further substantial depreciation of the Brazilian currency. The substantial restructuring requirements revealed by the financial turmoil of 1997/98 remain, and will take a number of years to work through.

As economic prospects in Japan continue to be poor, and European growth slows, the momentum of the world economy is becoming ever more dependent on continuing strong

² This chart depicts our 14-country measure of world GDP, an export-weighted mean of GDP forecasts for Australia, China, France, Germany, Hong Kong SAR, Indonesia, Italy, Japan, Malaysia, South Korea, Taiwan, Thailand, the United Kingdom and United States.

Table 2
Trading partner GDP projections³
(Calendar year annual average percentage change)

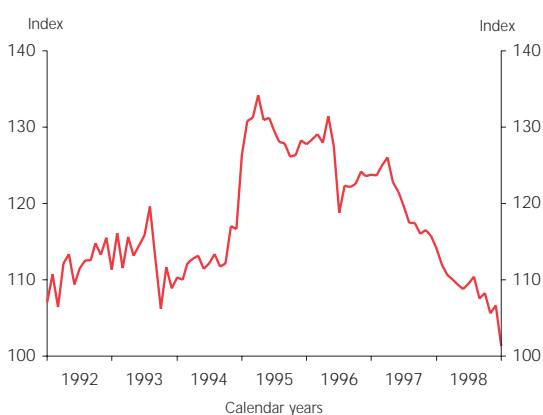
Country	1998e	1999p	2000p
Australia	4.7	3.0	3.1
United States	3.9	3.1	2.2
Japan	-2.9	-1.1	0.2
United Kingdom	2.5	0.5	1.8
Germany	2.8	1.8	2.6
Italy	1.5	1.7	2.4
France	3.0	2.2	2.7
China	7.8	7.3	7.2
Hong Kong	-5.0	-1.5	1.7
Indonesia	-13.7	-3.9	2.3
Malaysia	-6.4	0.2	3.1
South Korea	-6.1	2.2	3.9
Taiwan	4.8	4.4	4.8
Thailand	-7.9	0.7	3.3
14 country index	0.8	1.7	2.5

e = estimate
p = projection

growth in the US. That strength, in turn, is dependent on continued robust consumption growth. To the extent that US consumption growth has been driven by the wealth effects of the high level and growth rate of US equity prices, there is ample potential for US consumption growth to slow more sharply than assumed. We discuss this risk further in Chapter 5.

Overall, this disparate outlook suggests that, over the next few years, the world economic environment will not be particularly conducive to strong economic growth in New Zealand, or in other open economies, unlike the situation at the beginning of the upswing in the New Zealand economy in the early 1990s. The world prices of New Zealand's commodity exports (see Figure 4) – now at their lowest point this decade – and external demand are likely to remain weak for some time.

Figure 4
ANZ world commodity price index⁴
(July 1986 month = 100)



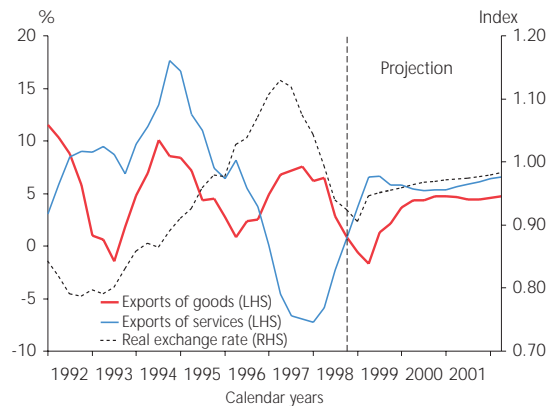
Exports

Recent data suggest that overall export volumes are beginning to recover slowly from the lows reached in the middle of last year, although individual commodity performance remains patchy. On the positive side, log exports are picking up quickly with the nascent economic recovery in Korea. Tourism receipts are also improving rapidly, benefiting from the stimulatory real exchange rate as well as from airlines' switching their flights towards the US and Australian markets, who tend to be relatively higher-spending tourists. On the negative side, pastoral production is again being hampered by unfavourable weather. Drought is adversely affecting meat production, while the combination of wet weather in spring and dry weather in summer looks likely to

³ Based on *Consensus Forecasts* released in February.

⁴ The ANZ World Commodity price index measures the foreign currency prices of the commodities that New Zealand exports.

Figure 5
Export volumes and the real exchange rate
(annual average percentage change; index)



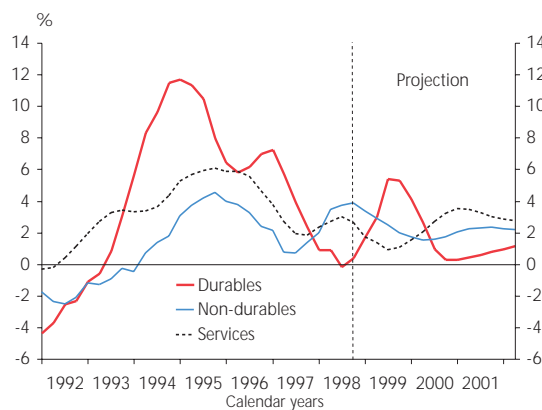
reduce dairy production this season. Volumes of exports of manufactures have yet to show any marked response to the substantial currency depreciation that has taken place over the last two years.

Although export growth is projected to gather strength through the projection period, principally as a result of the supportive real exchange rate, several factors will act as constraints. We expect the lingering effects of poor weather to weigh on agricultural exports for the next couple of years, as livestock levels are rebuilt, while weak external demand will constrain export growth in general. On their current schedules, airlines appear to be approaching aircraft capacity limits, and whether they respond by increasing the number of flights to New Zealand will determine how much longer tourism receipts can be expected to grow at current rates.

Household expenditure

Low interest rates, the cash windfall from the demutualisation of AMP, the tax cuts, and the removal in May 1998 of tariffs on cars combined to ensure consumption growth held up remarkably well last year. As well as the economic upswing in the second half of 1998, these influences also contributed to the recent rise in household spending on discretionary items. The latest retail sales figures show sharply increased household spending on 'big-ticket' durables (such as furniture and appliances), and dining out. Our business

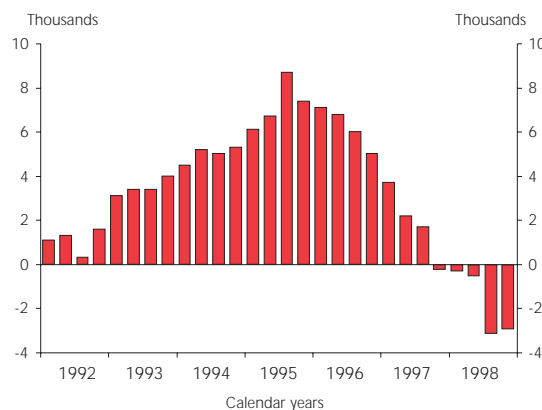
Figure 6
Private consumption
(annual average percentage change)



contacts suggest that consumption growth will continue at reasonable levels over the near term, despite weak employment growth.

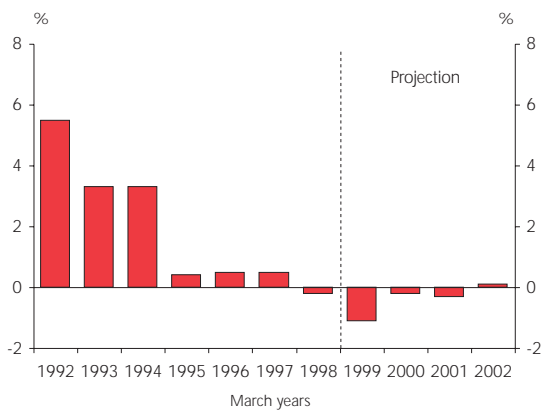
Activity in the housing market is continuing to climb from the low point reached in the middle of last year. The return of growth in house sales has recently been reflected in an increased rate of issue of consents for new dwelling construction. We expect that house-building activity will, in turn, begin growing again this year. However, this rise in building activity is not expected to be as strong as in 1994/95, when net immigration was running at high levels. Currently, by contrast, the country is experiencing net emigration (see Figure 7). Historical relationships suggest that house prices should start trending upwards from around the middle of this year, and we expect that to add impetus to growth in household expenditure.

Figure 7
Net immigration
(quarterly seasonally adjusted)



However, growth of household expenditure in response to low interest rates and the overall economic recovery is projected to be more muted than in the previous economic recovery. Back then, consumption fell materially during the preceding 1991/92 recession, and as the subsequent recovery progressed, the release of pent-up demand helped boost consumption growth to high levels. This time, by contrast, consumption has not gone through the same slump, suggesting that any pent-up demand pressure will be weaker. Moreover, household debt-to-disposable income ratios are now considerably higher than at the start of the previous recovery. We expect this weaker financial position to constrain growth in consumption and household debt over the next few years. The household savings rate is at a very low level, having trended downwards since the early 1990s. We project it to remain at about this level through the projection period (see Figure 8).

Figure 8
Household savings rate⁵
(percentage of disposable income)



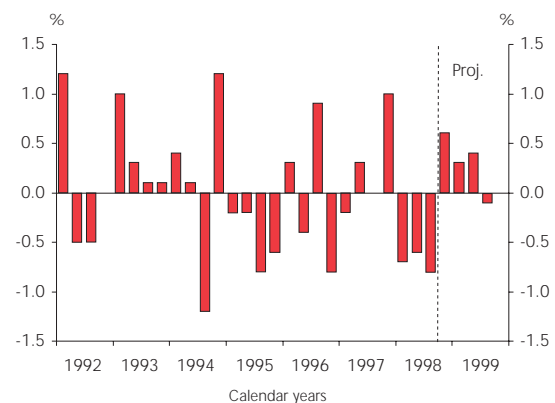
Having said this, there is some risk that household expenditure will *not* be so constrained by debt levels, and that household spending picks up more sharply than projected. We discuss the implications for monetary policy of this risk in Chapter 5 of this *Statement*.

Business investment

Business investment growth is expected to remain relatively subdued over the near term, while firms remain uncertain about the strength and speed of the economic recovery. However, our business contacts indicate a willingness to undertake new investment projects in the medium term once demand picks up. We project business investment to strengthen through the projection period as the recovery gathers momentum. All components of business investment are expected to grow fairly strongly from late 1999.

One feature of this projection is a sizeable positive contribution from stockbuilding this year. Over 1998, firms ran their stocks down sharply, as the outlook for the economy deteriorated and uncertainty about prospects reached high levels (see Figure 9). As the economy recovers and the outlook improves, we expect to see firms increase their investment in stocks. The large amount of de-stocking last year also suggests that near-term increases in product demand will feed quickly into increased production.

Figure 9
Stockbuilding contribution to quarterly GDP growth
(seasonally-adjusted percentage points)



⁵ SNZ definition, which now includes the depreciation on owner-occupied dwellings.

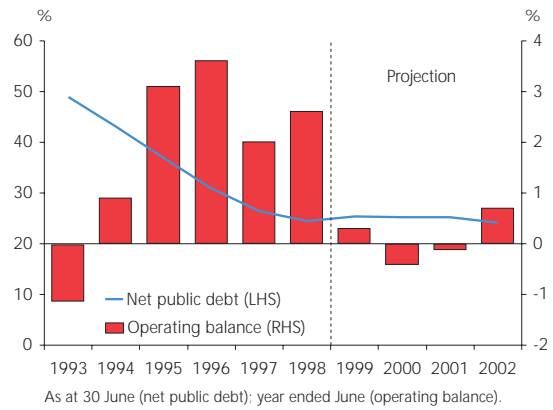
Fiscal outlook

We project the government operating balance to remain close to zero over the entire projection period. Our fiscal projections are based on those contained in Treasury's *December Economic and Fiscal Update (DEFU)*, with the usual adjustments to allow for differences between our macroeconomic projections and those underlying the *DEFU*.

Our projections of the government operating balance are higher than those contained in the *DEFU* over the entire projection period. Our stronger growth profile lifts the government revenue projection and reduces expenditure on unemployment benefits, while our lower CPI projection reduces projected expenditure on inflation-adjusted benefits.

We project net public debt, as a percentage of GDP, to remain roughly unchanged at around 25 percent throughout the projection period.

Figure 10
Government operating balance and net public debt
(percentage of nominal production GDP)

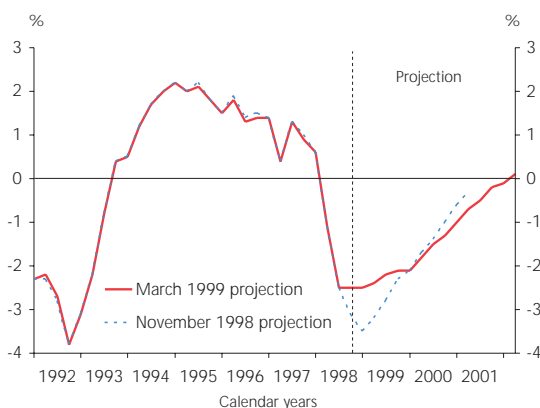


3 Meeting the demand

Productive capacity

Despite demand growth in the second half of 1998 being stronger than we expected in November, it remains our assessment that considerable spare capacity still exists in the economy. We anticipate that demand growth will exceed growth in the supply capacity of the economy throughout the projection period, resulting in the gradual absorption of spare resources. In other words, we project the negative 'output gap' – our benchmark measure of the level of spare capacity in the economy – to close gradually, from about the middle of this year (see Figure 11).

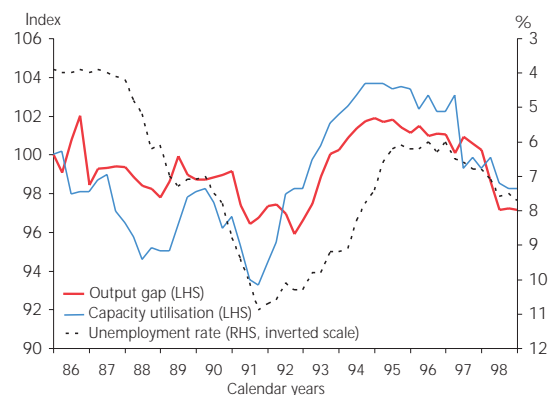
Figure 11
Output gap
(percentage of potential GDP)



The supply capacity, or 'potential' output, of the economy is not directly observable. It can only be estimated on the basis of its effects on other variables that are observable, such as actual output, the unemployment rate, capacity utilisation, and inflation. These indicators lend support to the assessment that there is currently room for the economy to grow without capacity constraints leading to upward inflation pressure (see Figure 12).

Growth in potential output itself is projected on the basis of growth in the labour force, the capital stock, and their overall productivity. Over the near term, we project a mild slowing in the rate of potential growth, reflecting the reduction in labour force growth as a result of net emigration, and the sluggish rate of business investment growth last year. Further out, a return to net immigration and a pick-up in business investment growth are projected to lift the potential growth rate back to around 3 percent per annum.

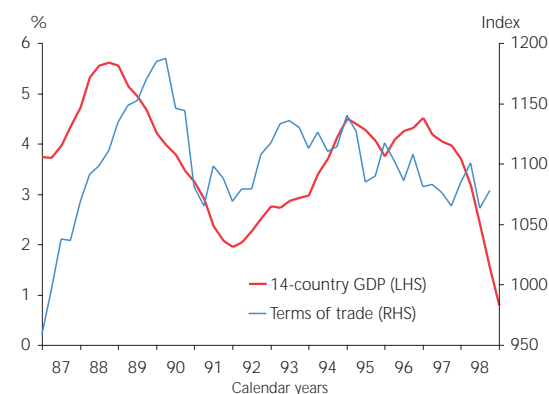
Figure 12
Measures of spare capacity
(December 1985 quarter = 100; percentage)



Balance of payments

The current account deficit is likely to remain around its current level of 6 to 7 percent of GDP over the next few quarters. Although we expect the current account deficit to diminish over the remainder of the projection period, the process will be slow. The low level of the real exchange rate should help lift net exports of goods and services, but weak world growth and the supply-reducing effects of drought will be a hindrance, as discussed in Chapter 2. The weak world demand environment will also weigh on the terms of trade, which we expect to continue to deteriorate slightly over the next year or so.

Figure 13
14-country GDP and terms of trade
(annual average percentage change; 1980-89 average = 1000)



Nevertheless, we project the balance of payments position to begin to stabilise over the projection period, principally as a result of improvement in the balances on trade in goods and services. Some risk is associated with this aspect of the projection – household expenditure growth could pick up more quickly, slowing the improvement in the trade position. The implication, all else equal, would be that the country's net external liability position does not begin to stabilise as early as projected. The consequences for inflation

of such a development would depend on the reaction of financial markets to the current account deficit either persisting at its current levels, or deteriorating further. If financial markets viewed the deficit as unsustainable, the exchange rate would remain low or depreciate further, while interest rates could rise. This process would facilitate a faster current account adjustment. Of course, such an exchange rate depreciation could well have monetary policy implications, as discussed in Chapter 5.

4 Inflation

Overview

The CPI excluding Credit Services (CPIX) fell by 0.1 percent in the December 1998 quarter. At 1.1 percent for the year to December 1998, annual CPIX inflation has fallen into the lower half of the Reserve Bank's target band for the first time.

We expect inflation pressures to remain subdued throughout the projection period. The excess capacity currently in the economy is projected to persist through most of the period, intensifying competitive pressure on margins at all points along the distribution chain. Weak international commodity prices will add to the downward pressure on general inflation. In addition, over the near term, ongoing structural change within the economy, particularly in the petrol and electricity industries, will continue to exert downward pressure on consumer prices.

Combining these factors, we project CPIX inflation to track a little below the midpoint of the target range over the next three years.

On the basis of these influences on inflation pressure in the economy and those discussed in Chapters 2 and 3, we project monetary conditions to remain flat at around current levels through to the end of the year 2000. Beyond this, monetary conditions are projected to begin to tighten towards neutral levels, as demand approaches the economy's capacity to supply.

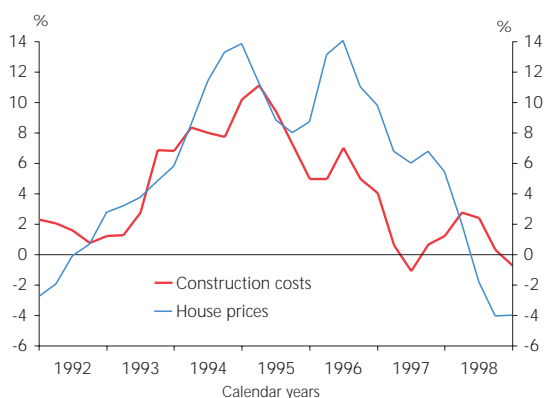
Recent inflation outcomes and the near-term outlook

The CPI excluding Credit Services fell 0.1 percent over the December quarter, continuing the trend decline in inflation since 1996. The disinflationary effects of the excess capacity that has built up in the economy are particularly evident in non-tradeable prices, which fell by 0.4 percent in the December quarter. In that quarter, non-tradeable prices were only 0.9 percent higher than they had been a year earlier.

Recent developments in the construction sector offer a good example of the inflationary implications of the state of demand relative to capacity. Activity in that sector was weak throughout most of 1998, with the rate of issue of consents for new dwellings falling sharply. Subsequently, both con-

struction costs and the price of new houses fell in the latter half of the year. Of all the CPIX item groups, the Housing group had the most negative impact on CPIX inflation in the December quarter. Over the near term, construction costs, house prices, and rentals are expected to remain fairly flat.

Figure 14
Construction costs and house prices
(annual percentage change)



Recent CPIX inflation outturns have also been characterised by a number of sharp falls in particular components, as structural changes within certain industries have been followed by substantial price reductions. We expect ongoing structural change to maintain downward pressure on prices of the following items in particular:

- domestic electricity, as competition in the market increases;
- petrol, as new competitors in retailing continue to increase their presence; and
- new cars, as the effects of the removal of import tariffs in May last year feed through.

Price pressures have not been downward for all items in the regimen, of course. In particular, while some of last year's drought-related increases in fruit and vegetable prices were reversed towards the end of the year, recent poor growing conditions are again impacting on prices, keeping them at fairly high levels. We expect this situation to persist over the near term.

Figure 15
New car and petrol prices
(December 1993 quarter = 1000)

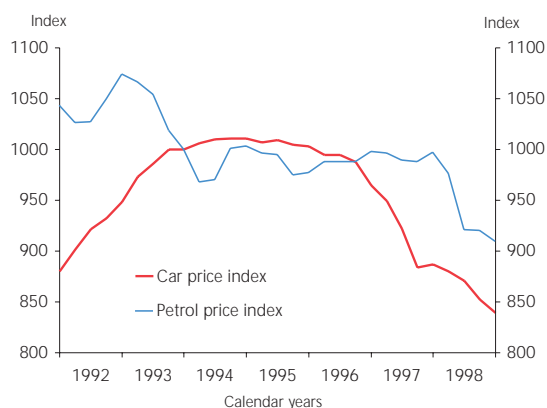


Figure 16
Fruit and vegetable price index
(December 1993 month = 1000)

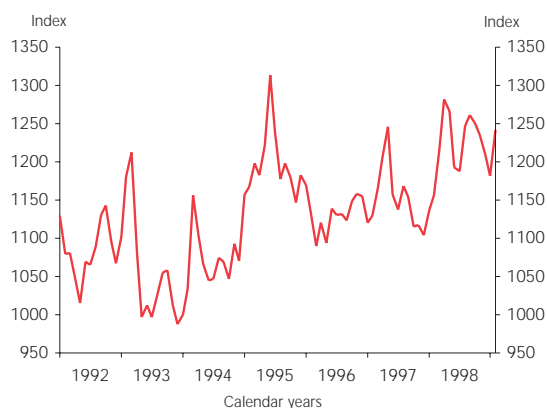
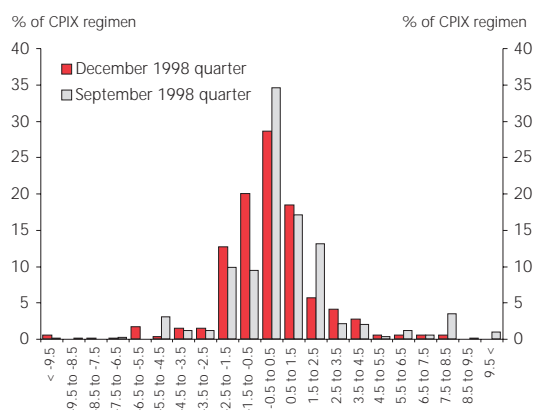


Figure 17
Weighted distribution of quarterly percentage changes in CPIX regimen items
(September and December 1998 quarters)



Exchange rate passthrough continues to be more muted and diffuse than historical experience would suggest. In recent quarters, the prices of some 'tradeable' items have risen, but generalised rises in tradeables prices have not been apparent. This absence of obvious, generalised, exchange-rate-related price increases probably reflects the weak state of demand in the economy during 1998, falling international commodity prices, and the structural changes mentioned above. The experience reported by our business contacts suggests that all of these factors have been relevant in containing the inflationary impact of the currency depreciation.

In a low inflation environment, sharp movements in particular components of the CPI regimen, of a magnitude considerably greater than that of general price inflation, stand out. Supply-driven increases, such as those seen in food prices, or the price declines brought about by structural change, can swamp the generalised movement of consumer prices. It is precisely to make such relative price changes clearer that price stability in *average* prices is desirable. Figure 17 shows that many components of the regimen move by a large amount in any particular quarter, even though the average movement across the regimen is relatively small.

Where large price movements in particular items have had a substantial influence on the CPIX (i.e. weighted average) measure of inflation, alternative measures of inflation, and measures of inflation expectations, can assist in our assessment of the persistent trends in general consumer price inflation.

As can be seen in Table 3 (overleaf), our alternative measures of inflation, and surveyed inflation expectations, suggest that annual inflation remains close to the middle of the Bank's target range, with a gentle downward trend.

With these factors in mind, we expect CPIX inflation of 0.3 percent for each of the March and June quarters respectively. These forecasts are very similar to those in the November *Statement*.

Although the prime focus of monetary policy is CPIX inflation, it is worth noting that the large decline in mortgage rates over the second half of 1998 should drive headline CPI inflation well below CPIX inflation in the near term. In addition to the downward influence of lower floating rates,

Table 3
Alternative measures of consumer price inflation, and inflation expectations

	CPIX		Weighted Median		10% Trimmed Mean ⁶		Inflation expectations RBNZ survey	
	Qtly.	Ann.	Qtly.	Ann.	Qtly.	Ann.	Qtly. 1 qtr ahead	Ann. 4 qtrs ahead
Mar 98	0.3	1.7	0.4	2.0	0.3	1.7	0.4	1.7
Jun 98	0.3	1.7	0.5	2.3	0.4	1.8	0.4	1.5
Sep 98	0.6	1.7	0.3	1.8	0.4	1.6	0.3	1.4
Dec 98	-0.1	1.1	0.0	1.3	0.2	1.3	0.4	1.5
Mar 99							0.4	1.3

fixed-rate mortgages are being rolled over at lower rates. These factors should see annual headline inflation drop below zero for a time later this year.

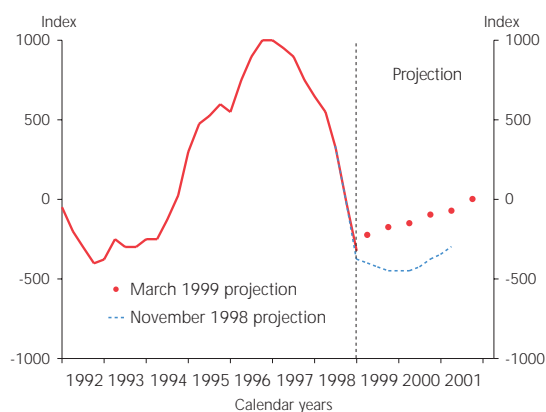
Medium-term outlook

With import price inflation projected to remain subdued, the main influence on our medium-term inflation projection is the level of spare capacity in the economy.

Persistent spare capacity is projected to keep downward pressure on trend inflation for some time. As economic activity strengthens, though, the spare capacity will be gradually absorbed, with that downward pressure on inflation gradually diminishing.

We project monetary conditions to remain at around their current levels for the next two years or so, as downward inflationary pressure persists. From about the beginning of 2001, monetary conditions are projected to begin tightening towards neutral levels. This tightening is projected to occur around a year before growing demand reaches the supply capacity of the economy, so as to prevent the emergence of a materially positive output gap, and the upward inflation pressure that would imply.

Figure 18
Nominal MCI⁷
(December 1996 quarter average = 1000)



⁶ Calculated as the average percentage change excluding the largest rises constituting 5 percent of the regimen and the largest falls constituting 5 percent of the regimen.

⁷ Projections are half-yearly averages.

5 Uncertainties

In this section, we discuss the most salient risks around our current inflation projection. These risks consist of a *downside* risk associated with the international environment, and an *upside* risk specific to the New Zealand economy. We see the overall risk around our current inflation projection as evenly balanced.

The external risk is that the world economy continues slowing, rather than gradually picking up as projected. Despite stabilisation of the world outlook most recently, this risk has not disappeared. Developments in Korea and Thailand are encouraging, but it must be remembered that those countries account for only a fairly small part of Asia. The other economies in the region are still coping with enormous economic and financial stress, and depend on continued strong growth in developed countries to drive export-led recovery. With Japan's economy weak, and European growth slowing, an increasing reliance is being placed on the US economy – and US consumption spending in particular – to sustain economic activity. In addition, a key means by which the Japanese economy can sustain activity is through a weaker yen-US dollar exchange rate. However, ongoing concern about the trade imbalance between these countries has acted to limit this source of stimulus.

We assume, based on *Consensus* forecasts, that US growth will converge gradually from its current high levels to a more sustainable rate over the projection period, without going through a period of more substantial cooling along the way. But macroeconomic imbalances may soon emerge in that economy, if they have not already. Following several years of sustained rapid growth, the US unemployment rate has fallen to a very low level, equity price-earning ratios are very high, and the household savings rate has dropped below zero. The US current account deficit has also widened considerably.

The risk is that this combination of circumstances leads soon to the emergence of inflationary pressure, or, if the equity market falters, a rapid downward adjustment in US household wealth and wealth perceptions. The impact of a rapid slowdown in consumer and business spending in the US would adversely affect New Zealand growth not only directly, but also via our trading partners whose fortunes are strongly tied to those of the US. Because this would tend to lower inflationary pressure in New Zealand for some years,

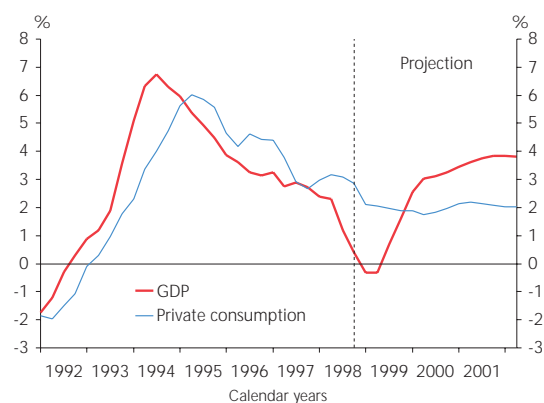
it would, in that event, be appropriate for monetary conditions to become easier than envisaged in our central projection.

Counterbalancing the downside risk to inflation from the international economy is an upside risk associated with the behaviour of New Zealand households as the projected recovery progresses. As touched on in Chapters 2 and 3, we project only mild growth in household expenditure over the projection period, but recognise the risk associated with household spending growing more strongly.

The November 1998 *Statement* highlighted several reasons why the recovery in consumption this time should be more subdued than during the early 1990s, including that initial household debt levels are higher. However, there are risks that the recovery could show a more traditional New Zealand household spending-led bounce-back, which would be short-lived in the absence of ongoing income growth.

There is a fundamental uncertainty about the level of debt that households are prepared to carry. If that debt tolerance is higher than we have assumed, then domestic demand growth may be stronger than projected, implying stronger inflationary pressure and an earlier and/or stronger monetary tightening.

Figure 19
Real GDP and private consumption growth
(annual average percentage change)



An expansion of household debt beyond that projected would also imply a larger current account deficit, all else equal. As discussed in Chapter 3, that might in turn pro-

voke a reaction from financial markets such that the exchange rate fell and interest rates rose, if investors believed that the path of the country's net foreign liability position was not sustainable. The appropriate response in overall monetary conditions would depend on the relative magnitudes of the exchange rate and interest rate movements, given their opposing impacts on inflationary pressure over the medium term. It might well be the case that monetary conditions

could appropriately move relatively little, if the *indirect* exchange rate and interest rate movements were broadly offsetting in terms of their medium-term impact on demand and therefore inflationary pressure. However, some temporary increase in near-term inflation could be expected, as the *direct* impact of the exchange rate movement fed more quickly into consumer prices.

6 Developments in financial markets

International developments

International financial market instability was a defining feature of 1998. The economic dislocation that began in Asia in mid-1997 hit Russia in August 1998, setting off a wave of financial market turmoil in September and October last year (see Figures 20 and 21). Volatility in financial markets exacerbated a general reduction in investors' appetite for risk, which in turn reduced liquidity in world credit markets. Fears of a global credit crunch were prevalent. Concerns mounted that the financial market turmoil would spill over into Brazil, possibly leading to widespread difficulties in Latin America.

Figure 20
Historical volatility: The Dow Jones and USD/JPY⁸

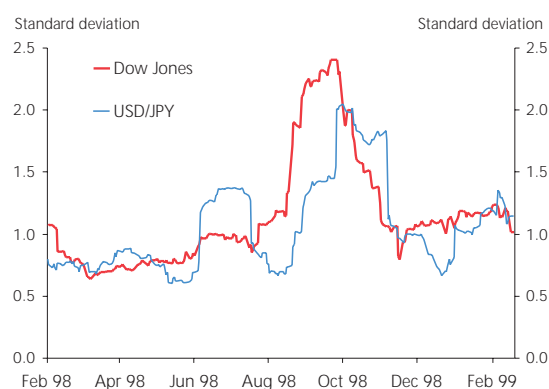
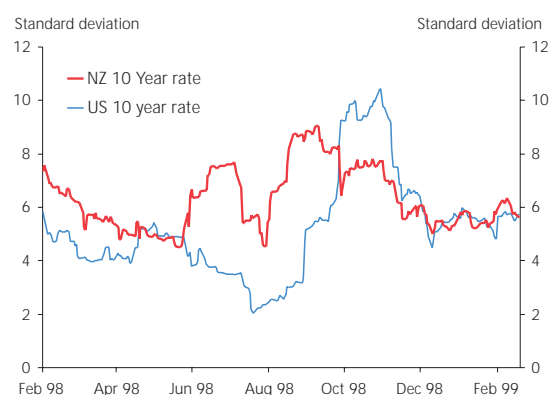


Figure 21
Historical volatility: NZ and US 10 year rates⁹

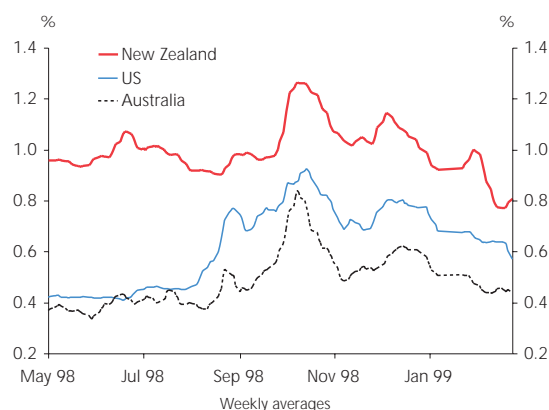


⁸ Volatility is calculated as a 30-day rolling standard deviation of daily percent changes.

⁹ Volatility is calculated as a 30-day rolling standard deviation of daily basis point changes.

In the period since the November *Statement*, international financial markets became more settled. Volatility fell in most major bond and currency markets – Japan being an important exception – both in historical terms and as reflected in option prices. As fears of a credit crunch and recession receded, US equity prices rose 3 percent from November to early March, and the Dow Jones index reached an all-time high on 9 January. International swap spreads (the spread between yields on corporate debt and similar-maturity government debt) have fallen back, suggesting either that international investors' appetites for risk have recovered somewhat, or that perceptions of corporate financial prospects have improved (see Figure 22).

Figure 22
New Zealand, Australian and US five-year swap spreads¹⁰



Key to this improvement in financial market sentiment was the easing of monetary policy by central banks in the US and Europe in late 1998. Those easings sought to reduce both strains in financial markets, and the likelihood that weak economic growth in Asia and elsewhere could lead to a sharp fall in growth in the US and Europe.

Against this background, three issues have been in focus.

First, financial markets have closely watched developments in Brazil. After several months of capital flight, on 14 January Brazil devalued its currency. In the lead-up to the devaluation, many had feared that it might trigger competitive devaluations in other Latin American countries and in China, which might in turn cause the same friction in world

¹⁰ Weekly average is calculated as a 5 day moving average.

financial markets seen in September and October. However, these fears were not realised. The devaluation in Brazil led to some volatility in Latin American financial markets, but knock-on effects were relatively limited. To a great extent, that lack of 'contagion' reflected the fact that investors had already reduced their exposures to Brazil, and their leverages more generally, after the turmoil of last year.

Second, the contrast between economic activity in the US and the rest of the world became more stark. It became clear that the US economy, rather than slowing, was actually picking up speed. Forecasts of a US slowdown were postponed further. In contrast, incoming data for Japan and Europe have suggested continuing – indeed, increasing – weakness. This imbalance in demand across countries has manifested itself in a widening current account deficit in the US and, in tandem, a strong US dollar. The upward revisions to estimates of growth in the US have led market participants to price-in some chance that the Federal Reserve could soon begin to reverse its late-1998 rate cuts. As a consequence, the yield on 10-year US Treasury securities has risen some 40 basis points since the November *Statement*.

Third, since the November *Statement*, prospects for Japan have not improved. As a result, the Bank of Japan has continued to cut its official overnight interest rate – to 0.15 percent at the time of writing – and the Japanese authorities have undertaken measures to try to stem the rise in long-term Japanese Government bond (JGB) yields.

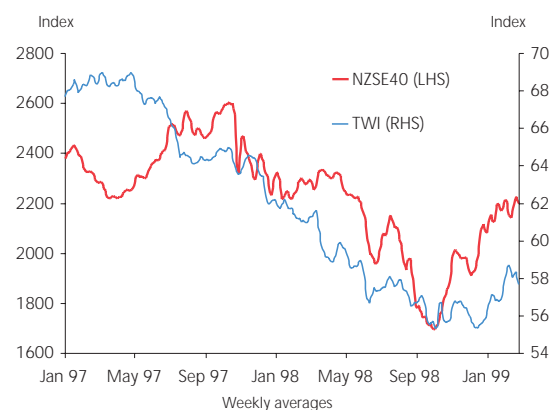
Domestic developments

Domestic financial developments since the November *Statement* have reflected the improved sentiment in world financial markets. Credit spreads have narrowed and volatility in the foreign exchange market has fallen in step with international trends. Share prices also rose sharply over the period, and are now about 30 percent above their October 1998 level.

For the period as a whole, monetary conditions firmed slightly, although fluctuating substantially in response to incoming data and perceptions about the state of the domestic and international economies. Earlier in the period, monetary conditions eased somewhat as concerns about world financial markets continued to put downward pressure on world

interest rates. Later on, monetary conditions tightened with the release of a considerably stronger-than-expected figure for September quarter GDP, and as other signs of a pick-up in domestic activity accumulated. Much of this tightening came through the exchange rate – the TWI rose to a high of 59.5 from 56.3 at the time of the November *Statement*.

Figure 23
TWI and NZSE40¹¹



However, short-term interest rates have remained near all-time lows. After falling sharply in the second half of 1998, the 90 day rate has traded in a 4 to 5 percent range for much of the period since the November *Statement*, falling to a low of 3.95 percent on 4 February.

On 8 February, the Bank announced that, after the March *Statement*, it would shift to targeting the overnight cash interest rate for the purposes of implementing monetary policy. Following the announcement, expectations of short-term volatility in the 90-day rate fell. Swap spreads also fell, as reduced expected volatility in short rates weakened the incentive to pay fixed rates in the swaps market to hedge the costs of borrowing. In addition, government bond spreads to the US and Australia initially fell, reportedly as international investors responded positively to the move to the new regime.

Domestic money and credit

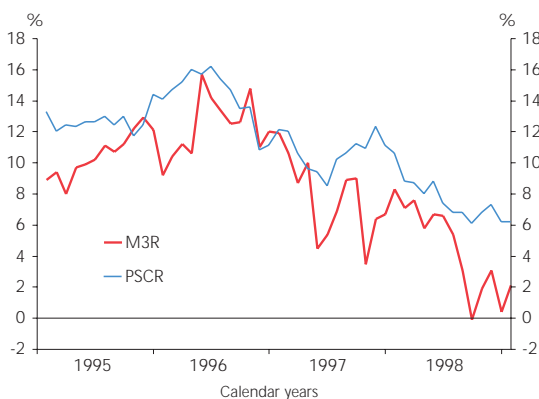
Availability of credit for domestic lending has not been constrained by international financial market conditions over the period since the November *Statement*. Credit quality re-

¹¹ Weekly average is calculated as a 5 day moving average.

mains the key factor determining loan growth, and there are no signs that it is generally constraining the market.

Private sector lending to residents (PSCR) grew 6.2 percent in the year to January 1999. However, broad money, as measured by M3R (which comprises New Zealand dollar deposits of residents), grew only 2.1 percent in the same period. Banks increased their foreign-currency funding from non-residents by \$4 billion from June 1998 to January 1999, to support domestic lending growth. This largely explains the recent divergence in the growth rates of M3R and PSCR.

Figure 24
Resident broad money (M3R) and resident private sector credit (PSCR)
(annual percentage change)

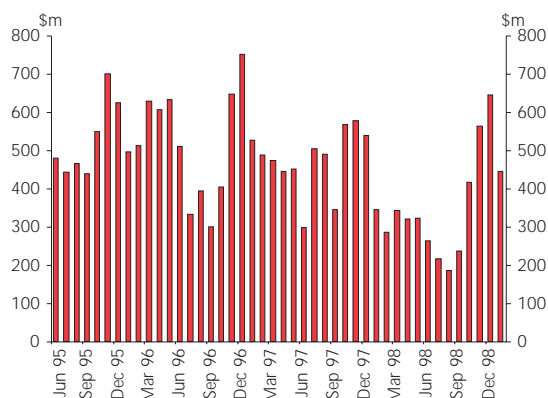


PSCR growth was slow in the first half of 1998, but then picked up substantially in the second half of the year and into January 1999. Apart from loan activity related to energy-sector restructuring, there has been little growth in lending to the business sector. The growth in borrowing demand has come from the household sector, but that growth has varied over the year. Annualised growth in household borrowing slowed to around 5 percent in the September quarter, but then the sharp falls in mortgage interest rates beginning in that quarter quite rapidly stimulated faster borrowing. Currently, the annualised rate of growth of household borrowing is around 10 percent. Although strong, this growth rate remains well below that experienced over the three years to the end of 1996.

The rapid increase in household indebtedness that occurred mid-decade came at a time of strong growth in employment and net immigration, as well as robust growth in

house-building activity and substantial house price inflation. Conditions now are significantly different. The economy is experiencing net emigration, and households are significantly more indebted. These two factors, combined with signs of residential rental market oversupply, suggest that households may not repeat the sustained borrowing of the previous business cycle.

Figure 25
Net household lending growth
(monthly)



7 Operating monetary policy with an Official Cash Rate

This chapter discusses how the setting of the Official Cash Rate (OCR) – the Bank’s policy instrument – relates to projected monetary conditions and future exchange rate developments. The key points are that a formal inflation projection process, with a thorough analysis of the balance of inflation risks, is an integral step in setting the OCR. Also, the Bank’s quarterly projection updates and eight OCR reviews during the year are sufficient for the stance of policy to be adjusted appropriately in response to new information, including unexpected developments in the exchange rate. Finally, we view the publication of our inflation projections – which focus on medium-term developments in inflation pressures – as one means by which to reduce public uncertainty about our current and near-term monetary policy actions.

Setting the Official Cash Rate

This *Statement* launches the Bank’s Official Cash Rate (OCR), with which the Bank intends to influence the level of other short-term interest rates and, hence, monetary conditions more generally. In the future, if the Bank changes its policy stance, it will shift the OCR. The OCR simplifies the Bank’s operations and provides reliable leverage over monetary conditions when needed. When market participants consider whether and how the Bank might act, they will be able to focus exclusively on the medium-term outlook for inflationary pressure and the appropriate policy response to it, which is implemented by setting the OCR.

The OCR will be reviewed eight times per year. However, the quarterly *Monetary Policy Statements*, with the transparency and discipline that the formal projection process helps provide, will continue to be the main vehicle for substantive policy assessment. Of course, the OCR reviews between *Statements* will allow the Bank to react to any major unexpected events in a timely way. They will also give the Bank the ability to adjust the OCR incrementally, if the key uncertainties are such that caution is warranted.

The OCR and projected monetary conditions

The use of inflation projections in deciding the stance of policy follows from the fact that the Bank’s actions influence inflation with a lag of around one to two years. Monetary policy decisions must thus be forward-looking, with the Bank’s interest rate setting *conditional* on the outlook for inflation pressures and, in an open economy, the evolution of the exchange rate.

The projections outlined in the Bank’s quarterly *Statements* are thus based directly on a key question: Given the outlook for activity and other sources of inflation pressure, what would monetary conditions have to do to ensure that annual consumer price inflation is close to the mid-point of the target range in one to two years’ time?

Although the Bank may no longer be expressing its *implementation* decision in terms of a projected MCI, it will continue to discuss the projected path for monetary conditions using the MCI. This reflects the importance of both interest rates and the exchange rate in influencing inflation pressures, as well as the fact that the Bank has no control over the eventual mix of monetary conditions.

These projections include a path for interest rates consistent with achieving desired inflation outcomes. However, as indicated, those interest rates are *conditional* on a projected path for the trade-weighted exchange rate. Of course, the exchange rate generally cannot be forecast with any great accuracy. Accordingly, the eventual mix of monetary conditions is often different to that projected by the Bank. It is because of this that a construct such as the MCI is useful as a rough guide as to how much, *all other things equal*, nominal short-term interest rates would need to change in order to keep monetary conditions constant in the face of movements in the exchange rate.

Of course, seldom, if ever, do all other things remain equal. Movements in the exchange rate – and hence the MCI – need to be interpreted in the context of everything else that is happening in the economy that has the potential to alter inflation pressure. Indeed, exchange rate movements are usually motivated by some underlying ‘real’ phenomenon.

The nature of that ‘real’ influence will determine whether, or to what extent, monetary policy should react. For example, if the exchange rate depreciates because of a decline in the terms of trade, then the consequently lower MCI level might still be consistent with the inflation objective, warranting no interest rate response.

Obviously, the Bank will be able to observe exchange rate developments between quarterly projections. It *could* adjust its OCR setting at the time of the next formal reset consideration in light of these exchange rate movements. At that point, the Bank will have assessed *why* the exchange rate has moved, and the implications of that movement for the appropriate interest rate setting. The important point is that, in order to make such judgements, a full assessment of inflation developments is needed.

Our recent research on these issues has been illuminating.¹² The results of this analysis are consistent with the Bank’s increasingly flexible use of the MCI over 1998 and into 1999, as well as the recent shift to a fixed interest rate (OCR) rule for the implementation of policy. Under the Bank’s new cash rate implementation system, any OCR offset to exchange rate developments will occur at the time of the formal reset windows, following a thorough analysis of the reasons for any exchange rate developments. A formal six-weekly, or indeed even quarterly, reassessment of *why* the exchange rate evolved as it did is frequent enough for the Bank to maintain control over medium-term inflation developments. Of course, the rest of the yield curve will be able to continue to reflect any inflationary consequences of exchange rate movements, and the likely next policy reset.

Managing uncertainty

The forward-looking nature of monetary policy implies that the setting of an OCR is *conditional* on the projections proving broadly correct. Given the degree of uncertainty in forming projections, any projection will be surrounded by wide confidence intervals. However, it is the *medium-term* trend in the economy (i.e., the outlook one to two years

ahead) that is most relevant to inflation control, rather than short-term fluctuations.

With the aim of keeping the focus of the Bank and other inflation-watchers correctly on the medium term, we have begun to publish half-yearly averages of key variables in the projection tables of the *Statement* – rather than the previous quarterly values. This emphasises that it is the trends in activity – those that influence inflation on a *persistent* basis – that are the appropriate focus of monetary policy.

For example, the weaker-than-expected activity in the first half of 1998 was followed by stronger-than-expected activity in the second half. ‘Smoothing through’ these sharp fluctuations, and focusing on the medium-term trends in inflation pressure, suggests that the Bank’s move towards more stimulatory monetary conditions throughout 1997 and 1998 was appropriate.

The Bank must take account of uncertainty about the economic outlook when deciding if, and by how much, the OCR should be shifted. At any point in time we will be assessing the current state of the economy, how the economy actually operates, and the balance of risks around the projection. In dealing with economic uncertainty, the Bank must set policy in a timely fashion in order to prevent inflation pressures gathering momentum. However, it must balance this consideration against a concern to avoid excessive instrument instability (i.e., minimising the size and frequency of policy resets and reversals) and excessive output variability.

There is no single rule for dealing with economic uncertainty. Rather, the Bank has several means at its disposal.

First, the Bank revisits its economic projections every quarter, in order to account rigorously and formally for new information and unexpected developments.

Second, the Bank publishes its projections, thereby reducing one form of uncertainty – that about how the Bank views the economy and what its future policy actions might be.

Third, the Bank focuses on the mid-point of the inflation target range (i.e., 1.5 percent per annum) when setting its policy stance. This focus maximises the likelihood that future inflation outcomes will be within the target range, and reduces the need for vigorous policy reaction in response to small changes in inflationary pressure.

¹² See Hunt, B and A Orr, (1999) “Inter-forecast monetary policy implementation: responding to unexpected exchange rate developments”, forthcoming Reserve Bank of New Zealand *Bulletin*, March 1999.

Fourth, financial market prices respond to relevant information as it emerges between formal OCR resets. At times, this may pre-empt and perhaps even obviate the necessity for a shift in the policy instrument. If the market knows the Bank's objectives, receives the same information, and understands how the Bank forms its views, then we should expect financial market prices to behave in this way. Under the OCR implementation system, the yield curve and exchange rate movements will be likely to exhibit this behaviour, and reflect the Bank's probable next policy move.

Appendix 1: Chronology

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

1998

- 18 November: The Reserve Bank released its twentieth *Monetary Policy Statement*. The news release accompanying the *Statement* is reproduced in Appendix 2.
- 23 December: Production GDP figures were released showing that the New Zealand economy grew 0.7 percent in the September quarter, and grew by 0.4 percent for the year to September 1998.

1999

- 18 January: The December 1998 quarter CPI was released. The CPIX fell 0.1 percent in the quarter and rose 1.1 percent over the year to December.
- 8 February: The Reserve Bank announced changes to the way it will implement monetary policy. The statement is reproduced in Appendix 2.
- 10 February: The Reserve Bank announced it is to close its Wednesday Window, previously used to comment on monetary conditions. The statement is reproduced in Appendix 2.
- 2 March: The Reserve Bank announced changes to penalty rates on overnight lending to settlement account holders. The statement is reproduced in Appendix 2.

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*.

Inflation pressures now subdued

18 November 1998

The Reserve Bank said it now viewed a level of around minus 400 on the Monetary Conditions Index (MCI) as appropriate. This was a cut of 400 points from the index level indicated as appropriate in the August *MPS*. Looking further into the future, the Reserve Bank projected monetary conditions to remain roughly at this level.

Reserve Bank Governor Don Brash commented: "Economic activity both globally and in New Zealand has weakened significantly, and inflation pressures are expected to be subdued over the medium term as a result. In the Reserve Bank's judgement, these relatively easy monetary conditions are required to ensure that inflation remains at roughly its present level over the next year or two.

"There has rarely been a time of greater uncertainty in the world economy, with some now suggesting that there is a realistic possibility of a serious global recession. While over recent weeks there have been some positive developments internationally, at this stage we are not yet inclined to take these glimmers of light for the world economy as the beginning of a bright new day.

"At the same time, monetary conditions have eased substantially since their peak in the December quarter of 1996, and the economy is responding to this very considerable monetary stimulus. GDP growth is expected in the second half of 1998, steadily picking up momentum after that.

"This suggests that, assuming no further marked deterioration from that projected, further easing of monetary policy from this point on is unlikely," Dr Brash concluded.

Speaking notes for briefing journalists on the release of the 18 November 1998 *Monetary Policy Statement*

18 November 1998

Good morning, and welcome to the release of our 20th *Monetary Policy Statement*.

Overall assessment and level of conditions

Since the release of our last *Monetary Policy Statement* in August, the economic outlook has deteriorated both internationally and in New Zealand. We now project weaker growth and more subdued inflation pressure than we projected in the August *Statement*, with the outlook now similar to the 'weaker world' scenario illustrated in that *Statement*.

The Bank has viewed the easing in monetary conditions since August as broadly consistent with this decline in inflation pressure, and has not sought either to impede or to accelerate it to any great degree. Based on the projections in this *Statement*, we see an MCI of around minus 400 as appropriate for the March 1999 quarter. This is 250 MCI points easier than we projected for that quarter back in August and about 150 points easier than market conditions yesterday, but only a little easier than where conditions have been over recent weeks.

Uncertainty about world economic prospects continues to cloud the assessment of the outlook for New Zealand. Since August, the idea that a serious global recession may be possible has gained currency. While some positive developments have emerged internationally over recent weeks, with an easing of monetary policy in a number of countries and some encouraging signs that Japan may be moving to deal with the problems in its banking sector, at this stage we are not yet inclined to take these glimmers of light for the world economy as the beginning of a bright new day. Moreover, the extent of unused capacity in the New Zealand economy suggests that there is considerable scope for growth before the re-emergence of significant inflationary pressure.

At the same time, with circumstances able to change rapidly, caution seems warranted. Monetary conditions are now at quite a stimulatory level, and their full effects will take some time to come through in the economy. Given all these circumstances, we project monetary conditions to remain roughly stable for some time. However, if events unfold in a manner different to that now projected, we will of course adapt our policy stance as necessary.

The outlook for growth and inflation

To elaborate on our view, it is clear that the economy went into recession in the first half of this year: even with modest growth resuming in the second half, it is our current assessment that GDP for the whole of calendar 1998 will be 1.5 per cent down on 1997.

To some extent the slowdown in the New Zealand economy over recent quarters was the result of firm monetary policy in late 1996 and early 1997, at a time when inflation was pushing the top of our inflation target and the Asian crisis was not even a distant cloud on the horizon. Coming on top of this slowdown, the sharp contraction in some of New Zealand's major trading partners and the drought have together taken a considerable toll on domestic activity. The agricultural sector and other export sectors have been hit the hardest, of course, but the general climate of uncertainty and economic weakness has dampened activity in other areas of the economy too. Looking ahead, we expect that it will be early 1999 before quarterly growth rates of GDP begin to gather strength.

We now project GDP growth to reach 3.4 per cent for the year to March 2000, and 4.0 per cent for the year to March 2001. (In August, we expected 4.0 per cent and 4.7 per cent respectively.) Compared to the last economic recovery, in 1991-92, the projected recovery will be quite modest. There are various reasons for this judgement, and two in particular. First, the international environment is projected to remain relatively weak for some time, providing less impetus to exports than was the case in 1991. Second, household sector debt levels are now very much higher, relative to household sector income, than they were in the early nineties, which suggests that growth in consumption expenditure will be less vigorous than it was in the earlier recovery.

We devote Chapter 2 of the *Statement* to a fuller discussion of the differences between the projected recovery and the recovery from the 1991 recession. It is sufficient to note at this point that one of the major drivers of the projected recovery is stimulatory monetary conditions. In the previous recovery, by contrast, robust growth in household expenditure funded by a sustained rise in borrowing, high rates of growth in business investment following restructuring of the business sector, and a relatively buoyant world economy played large roles.

The weakening of demand has led to the emergence of substantial spare productive capacity. Although GDP growth is projected to pick up to above-trend rates over the projection period, we do not anticipate this excess capacity to be fully absorbed until a little beyond the end of the projection period. This persistent excess capacity will continue to place downward pressure on inflation through the projection period.

We project CPIX inflation to remain at around its current levels until the middle of next year, as further pass-through effects from the recent substantial fall in the exchange rate come through in tradeables inflation. CPIX inflation is then projected to

fall slightly to just below the mid-point of the inflation target. I should acknowledge that we have projected CPIX inflation below the mid-point of the target in the past, and it has not occurred yet! We shall see.

It's worth emphasising, as we have many times before, that our inflation and growth projections depend on our projected path for monetary conditions. In turn, our assessment of the appropriate path of monetary conditions is driven by the outlook for inflationary pressure, which is the product of many factors.

If things occur to change the outlook for inflationary pressure, we will project a different monetary conditions path, consistent with our aim of keeping inflation close to the midpoint of the target range. This means that, in general, the inflation projection will not vary a lot from quarter to quarter. What will change rather more is the level and path of monetary conditions, which acts to offset the effects of unexpected events on overall inflationary pressure.

Uncertainties

As discussed at length in our *August Statement*, dealing with unexpected developments is inherent in the formulation of monetary policy. And as already noted, the major uncertainty as we look ahead now concerns how the world economy will evolve.

Since August, the financial difficulties that began in East Asia have spread to Russia and Latin America. Aversion to risk on the part of international investors has become pronounced, and this has led to often-violent movements in the prices of currencies, bonds, and shares.

In the last few weeks, there have been some positive developments internationally. Several central banks, including the US Federal Reserve, have reduced their interest rates, alleviating to some degree concerns about a 'credit crunch' becoming a reality in global markets. (A 'credit crunch', of course, is the situation in which credit becomes prohibitively expensive, or simply unavailable.) Meanwhile, the Japanese authorities have taken steps to help resolve the debt problems of their banks.

Although financial markets in New Zealand have remained relatively calm, relative to offshore markets, while these events unfolded, they have been caught up to some degree nevertheless. In particular, the volatility of offshore markets has had an impact on the way the mix of domestic monetary conditions has evolved as the overall level of conditions has progressively eased.

Investors who had previously positioned their investments in the expectation that the New Zealand dollar would fall in value have been reducing the size of those positions, by buying New Zealand dollars. This has meant that the recent easing in monetary conditions has come about principally through lower interest rates, rather than through a lower exchange rate. Indeed, New Zealand 90-day interest rates have fallen by around 200 basis points over the last three months, while the TWI exchange rate has remained relatively stable.

Although there are tentative signs that October may have seen the worst of the global financial market volatility, it's unlikely that the recent erratic behaviour of financial markets has ended. The mix of monetary conditions which we have assumed for New Zealand over the next few years is, as always, a relatively mechanical result of some simple relationships between projected domestic and international interest rates. On this occasion, we have assumed a relatively flat profile for both 90 day rates and the TWI.

What actually happens to the mix, however, will depend on several things, including investors' assessments of the risk of holding New Zealand dollar assets, and movements in interest rates here and abroad. Assessments of risk may well be affected by developments in the current account. In August, we projected a reasonably rapid fall in the current account deficit over the next couple of years. Our present projections have the already-high deficit remaining high for rather longer, as a result of the further deterioration in the world economy. But as I have observed many times before, these things that affect the mix of interest rates and the exchange rate are outside our control, and we do not try to influence that mix. What we can

influence is the level of monetary conditions, and we will seek to keep the level of conditions appropriate to ensure that inflation is under control whatever the mix.

Events occur and circumstances change quickly and without warning. In setting monetary policy in such an environment, we continue to believe that there are substantial benefits in informing the public about how we see the economic outlook (notwithstanding the fact that we would save ourselves some embarrassment at times if we did not!). As well, we continue to believe that there are advantages in allowing financial markets considerable scope to adjust monetary conditions as events unfold. The flow of emerging news is continuous, whereas formal projections by the Bank are made only once a quarter.

In releasing our August *Statement*, I mentioned that we had, over the previous three months, sanctioned rather more divergence between actual monetary conditions and the level indicated as appropriate in May than had been our custom previously. I suggested that that degree of divergence was likely to be unusual, and was the result of the very considerable deterioration in the world economy over that three month period.

The same comment can be made about the most recent three months. The global economy has suffered some rather major shocks, and that has caused a general downgrading of the outlook for world growth next year. In late September, it was revealed that the New Zealand economy had contracted in the June quarter. These developments in turn led both the Reserve Bank and financial markets to see less inflationary pressure in New Zealand in the years ahead, and as a consequence to see easier monetary conditions as being appropriate.

The reality is that we are still in unusual circumstances, where the chance of large unforeseen developments hitting the economy remains high. Under these conditions, I am not inclined to specify an appropriate range within which monetary conditions should move over the next three months. Nor am I saying of course that we will sanction monetary conditions at any level. Our response to developments will depend on our assessment of the implications for the inflation outlook, which at the moment calls for monetary conditions to be somewhat easier than has been the case in recent days.

RBNZ simplifies monetary policy implementation

8 February 1999

Following a long-running review, the Reserve Bank today announced a series of changes that will simplify the way it implements monetary policy.

In future the Reserve Bank will announce an Official Cash (interest) Rate, of the sort used by most major overseas central banks. This rate will be the lever the Reserve Bank uses to influence overall monetary conditions to maintain price stability.

The new system will come into effect on 17 March, when the first Official Cash Rate will be announced at the release of the Reserve Bank's next *Monetary Policy Statement*. Key features of the new system include:

- the Official Cash Rate will be reviewed approximately every six weeks;
- in its dealings with financial markets, the Reserve Bank will pay an interest rate 0.25 percentage points below the Official Cash Rate for money deposited in Reserve Bank settlement accounts, and the Bank will provide overnight cash at 0.25 percentage points above the Official Cash Rate.

Managing overnight interest rates in this way will provide substantial leverage over other short-term interest rates, enabling the Reserve Bank to influence monetary conditions.

Reserve Bank Assistant Governor David Archer said: "This technical change will make the implementation of monetary policy simpler and easier to understand. The previous implementation system was complex – mostly we influenced monetary conditions by making public statements, and behind that was the seldom-used sanction of adjusting the settlement cash

target.

“ Many features of the system will be unchanged. The Monetary Conditions Index (MCI) will remain an important indicator of actual monetary conditions, though we won’t use it to describe so-called “ desired conditions”. The way we formulate monetary policy - assessing inflation pressures prior to implementation - will not change. Nor will this change have any significant impact on cyclical swings in interest rates or the exchange rate. However, the Reserve Bank’s monetary policy actions will be better understood,” Mr Archer concluded.

Wednesday window closed

10 February 1999

The Reserve Bank has closed the Wednesday Window, previously used to comment on current monetary conditions.

Reserve Bank Assistant Governor David Archer said today: “ We have decided to close the Wednesday Window now because, on reflection, the risks of misinterpretation of either using the window to make a comment, or being silent with the window open, are too great.

“ This announcement conveys no information either way about the Reserve Bank’s view of current monetary conditions,” Mr Archer concluded.

Penalty rate changes

2 March 1999

For technical reasons related to the current functioning of the inter-bank cash market, the discount margin will be set to 25 bps over market rates and the penalty rate applied to the roll of intra-day autorepo will be set at 300 bps over the Minimum Float Tender Rate. Both changes will take effect immediately.

Appendix 3: Summary tables

Table A

CPIX inflation projections and monetary conditions

(CPIX is in percentage changes)

	CPIX		90-day bank bill rate	TWI	MCI	
	Annual	Real			Nominal	Real
1995	Mar.	2.6	9.4	59.8	475	425
	Jun.	2.7	9.1	60.8	525	475
	Sep.	2.2	9.0	61.7	600	600
	Dec.	2.1	8.5	61.9	550	575
1996	Mar.	2.1	8.7	64.2	750	775
	Jun.	2.3	9.7	64.6	900	900
	Sep.	2.3	10.0	65.6	1000	1025
	Dec.	2.4	8.9	67.1	1000	1000
1997	Mar.	2.0	7.5	68.4	950	1000
	Jun.	1.5	7.2	68.0	900	975
	Sep.	1.8	8.1	64.8	750	775
	Dec.	1.6	7.9	63.9	650	700
1998	Mar.	1.7	9.0	61.2	550	600
	Jun.	1.7	9.1	58.5	325	375
	Sep.	1.7	6.8	57.1	-25	25
	Dec.	1.1	4.6	56.0	-325	-225
1999	First Half Average	1.1	4.5	57.6	-225	-100
	Second Half Average	1.1	4.6	57.7	-175	-50
2000	First Half Average	1.4	4.6	58.2	-150	-50
	Second Half Average	1.4	4.6	58.6	-100	-50
2001	First Half Average	1.3	4.8	58.8	-75	0
	Second Half Average	1.3	5.3	59.0	0	50

Table B

World outlook

(Annual average percentage change, unless specified otherwise)

March year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002
World GDP	2.7	3.4	4.4	4.1	4.2	3.2	0.7	2.0	2.6	3.0
World CPI inflation	2.7	1.9	2.2	2.5	2.6	2.6	1.5	1.4	1.9	1.9
Domestic										
Import prices	6.7	-2.7	-1.8	-0.7	-3.4	0.8	5.4	-1.4	0.4	0.1
Export prices	9.3	-1.2	-2.1	-2.8	-4.2	0.0	4.0	-2.1	0.7	1.2
Terms of trade	2.4	1.5	-0.3	-2.2	-0.8	-0.7	-1.3	-0.7	0.3	1.0
March quarter										
World 90-day rate (level, %)	3.6	3.7	6.5	5.7	5.5	5.5	5.0	4.9	5.3	5.1
World bond rate (level, %)	6.7	6.2	8.0	6.4	6.8	5.6	5.0	5.1	5.4	5.6

e = estimate

Table C

Composition of real GDP growth

(Annual average percentage change, unless specified otherwise)

March year	Actuals										Projections			
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002				
Final consumption expenditure														
Private	0.3	3.4	6.0	4.2	3.8	3.2	2.0	1.7	2.2	2.0				
Public authority	3.0	-1.1	-0.7	3.3	2.4	6.9	-0.2	6.2	-1.0	3.0				
Total	0.9	2.4	4.6	4.0	3.5	3.9	1.6	2.6	1.5	2.2				
Gross fixed capital formation														
Market sector:														
Residential	2.8	17.1	12.2	-0.1	4.0	1.7	-16.5	1.3	4.0	2.9				
Business	5.3	20.3	16.1	12.0	2.4	0.3	3.0	5.7	8.7	7.0				
Non-market government sector	-3.1	8.5	37.0	14.4	30.0	6.8	-5.2	0.3	4.0	4.1				
Total	3.7	18.2	17.2	9.4	6.2	1.6	-2.5	4.1	7.2	5.8				
Final domestic expenditure	1.3	5.1	7.0	5.1	4.1	3.4	0.7	2.9	2.7	3.0				
Stockbuilding ⁽¹⁾	0.7	1.1	0.0	-0.7	-0.5	0.3	-1.1	0.8	0.3	0.3				
Gross national expenditure	2.0	6.2	6.9	4.4	3.6	3.6	-0.4	3.7	3.0	3.3				
Exports of goods and services	2.5	7.9	8.4	2.6	3.8	3.6	0.1	4.6	4.9	5.1				
Imports of goods and services	7.4	8.0	14.3	7.2	7.0	4.8	0.8	5.0	2.5	3.5				
Expenditure on GDP	0.8	6.2	5.3	2.9	2.6	3.2	-0.7	3.6	3.8	3.8				
GDP (production)	1.2	6.3	5.4	3.6	2.8	2.3	-0.3	3.0	3.6	3.8				
GDP (production, March qtr to March qtr)	2.0	7.0	4.6	3.6	1.6	1.3	1.3	3.2	3.8	3.7				
Potential output	1.5	2.8	3.7	3.8	3.5	3.0	2.6	2.6	2.7	2.8				
Output gap (% of potential GDP, year average)	-2.9	0.3	2.0	1.8	1.1	0.4	-2.5	-2.0	-1.1	-0.2				

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

e = estimate

Table D

Household income and consumption

(Annual average percentage change)

March year	Actuals						Projections			
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002
Compensation of employees	2.4	4.4	6.4	5.9	6.1	3.6	2.0	2.1	4.9	4.8
Other income	-2.6	4.7	4.8	9.8	5.6	2.6	-1.1	2.6	2.6	4.4
Total income	-0.1	4.5	5.6	7.8	5.9	3.4	0.5	2.4	3.7	4.6
Nominal disposable income	-0.4	5.1	4.9	7.1	5.7	3.4	2.7	3.9	3.6	3.7
Consumption deflator	1.7	1.7	1.9	2.6	2.0	0.9	1.4	1.3	1.4	1.3
Real disposable income	-2.1	3.3	2.9	4.4	3.7	2.4	1.2	2.6	2.2	2.4
Real household consumption	0.3	3.2	6.0	4.3	3.7	3.2	2.1	1.7	2.2	2.0
Household savings rate ⁽¹⁾	3.3	3.3	0.4	0.5	0.5	-0.2	-1.1	-0.2	-0.3	0.1

e = estimate.

⁽¹⁾ Percentage of disposable income

Table E
Fiscal accounts
(\$ billion)

June year	Actuals										Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002			
Revenue													
Direct taxation	16.6	17.6	19.8	21.3	20.5	21.3	20.3	21.1	21.9	23.4			
Indirect taxation	9.2	10.1	10.4	11.0	11.4	11.7	11.9	12.1	12.4	12.9			
Non-tax revenue	4.0	2.5	3.4	2.8	2.9	2.6	2.6	2.4	2.5	2.6			
Total revenue	29.8	30.2	33.6	35.1	34.8	35.6	34.8	35.6	36.9	38.9			
Total expenses	31.4	29.6	30.4	31.7	33.0	34.2	35.5	36.6	37.5	38.7			
Revenue less expenses	-1.6	0.5	3.2	3.3	1.8	1.4	-0.7	-1.0	-0.6	0.2			
Net surplus attributable to SOEs and Crown entities	0.8	0.2	-0.6	0.0	0.1	1.2	1.1	0.6	0.6	0.6			
Operating balance (% of nominal expenditure GDP)	-0.8	0.8	2.7	3.3	1.9	2.5	0.3	-0.4	-0.1	0.8			
	-1.1	0.9	3.1	3.6	2.0	2.6	0.3	-0.4	-0.1	0.7			
Net public debt (as at June 30) (% of nominal expenditure GDP)	37.1	35.4	32.6	28.6	25.3	24.1	25.4	26.3	27.3	27.2			
	48.7	43.1	37.1	31.0	26.4	24.4	25.4	25.0	24.9	24.1			

e = estimate

Table F

Investment

(Annual average percentage change)

March year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002
Plant and machinery (P&M excluding computers)	15.6	25.8	19.4	11.1	2.1	10.2	4.0	4.6	8.7	6.3
Transport equipment	14.6	25.0	13.7	6.4	-3.2	2.7	-1.2	3.2	8.6	6.3
Commercial buildings	25.4	21.0	11.0	3.6	12.7	-22.8	-2.9	10.9	10.6	6.6
Other	2.1	26.0	26.9	26.4	-2.5	-4.2	-1.5	8.1	13.0	10.0
	-30.7	-7.5	-7.4	6.8	-4.9	-5.2	17.6	1.4	-3.6	6.0
Market sector business investment (excluding computers)	5.3	20.3	16.1	12.0	2.4	0.3	3.0	5.7	8.7	7.0
	4.3	19.6	12.9	9.6	-0.2	-4.8	0.1	5.3	8.7	7.1
Market sector residential investment	2.8	17.1	12.2	-0.1	4.0	1.7	-16.5	1.3	4.0	2.9
Total market sector investment	4.6	19.4	15.0	8.7	2.8	0.7	-2.0	4.8	7.7	6.1
Government (non-market) investment	-3.1	8.5	37.0	14.4	30.0	6.8	-5.2	0.3	4.0	4.1
Total investment (excluding computers)	3.7	18.2	17.2	9.4	6.2	1.6	-2.5	4.1	7.2	5.8
	3.0	17.5	15.0	7.4	4.0	-2.1	-4.7	3.8	6.9	5.7

e = estimate

Table G
Trade volumes and the current account

March year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002
Trade volumes (Annual average percentage change)										
Exports of goods	0.6	6.9	7.2	0.9	6.8	6.5	-1.7	4.4	4.6	4.7
Exports of services	9.5	11.3	12.5	8.1	-4.6	-5.9	6.5	5.4	5.7	6.6
Total exports	2.5	7.9	8.4	2.6	3.8	3.6	0.1	4.6	4.9	5.1
Imports of goods	8.1	12.1	15.6	7.0	7.5	5.6	-0.7	5.5	2.2	4.0
Imports of services	5.1	-5.3	9.1	8.2	5.0	1.9	7.0	3.0	3.8	1.6
Total imports	7.4	8.0	14.3	7.2	7.0	4.8	0.8	5.0	2.5	3.5
Current account (\$ billion, March year annual total)										
Merchandise trade balance	3.4	3.1	2.1	0.9	0.9	1.3	1.1	0.8	1.5	2.1
Services balance	-1.7	-0.9	-0.6	-0.1	-0.6	-1.2	-1.8	-1.8	-1.6	-1.3
Investment income balance	-3.9	-4.5	-6.0	-6.0	-7.3	-7.3	-6.9	-6.3	-7.2	-8.1
Transfers balance	0.9	1.5	1.8	2.4	2.3	0.8	0.4	0.5	0.8	1.0
Current account⁽¹⁾	-1.3	-0.8	-2.6	-2.9	-4.7	-6.5	-7.3	-6.8	-6.5	-6.3
(% of nominal production GDP)										
(% of nominal production GDP ex migrants' transfers)	-1.7	-1.0	-3.1	-3.2	-4.9	-6.6	-7.4	-6.6	-6.1	-5.6
	-2.6	-2.3	-4.7	-5.5	-6.4	-6.8	-7.6	-6.9	-6.5	-6.1

⁽¹⁾ Errors in adding up the current account are due to rounding
e = estimate

Table H

Labour market

	Actuals										Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002			
Change in labour force:													
Natural increase (000's)	22.5	23.4	24.7	25.2	19.0	19.0	19.1	18.4	18.5	18.5			
Net migration (000's)	2.8	6.5	9.2	13.0	9.1	-0.2	-4.7	-1.6	5.0	7.4			
Increase in participation (000's)	-13.7	28.2	9.4	30.5	0.4	-4.4	-9.8	11.6	10.4	2.9			
Total change in labour force (000's)	11.6	58.1	43.2	68.7	28.5	14.4	4.6	28.4	33.8	28.8			
March quarter:													
Population of working age (000's)													
Labour force participation rate (%)	2624	2671	2723	2781	2824	2853	2875	2900	2936	2975			
Total labour force (000's)	63.2	64.3	64.7	65.8	65.8	65.6	65.3	65.7	66.1	66.2			
Total employment (000's)													
Annual growth (%)	1660	1718	1761	1830	1858	1872	1877	1905	1939	1968			
Unemployment (000's)													
Unemployment rate	1490	1555	1639	1711	1731	1732	1722	1752	1794	1835			
Unemployment rate (s.a.)	1.6	4.4	5.4	4.4	1.2	0.0	-0.5	1.7	2.4	2.3			
Total hours worked													
Annual growth (%)	170	163	122	119	127	141	155	154	145	133			
Labour productivity	10.2	9.5	6.9	6.5	6.8	7.5	8.2	8.1	7.5	6.8			
Annual growth (%)	9.8	9.1	6.6	6.2	6.5	7.1	7.8	7.6	7.1	6.4			
OES private sector wages (\$ per hour)													
Annual growth (%)	3.4	3.8	6.6	4.8	-2.1	-0.6	0.2	1.7	2.2	2.1			
Labour productivity													
Annual growth (%)	-0.9	1.7	-0.4	-0.7	1.1	2.4	0.0	2.9	1.4	1.6			
QES private sector wages (\$ per hour)													
Annual growth (%)	14.1	14.3	14.6	15.1	15.7	16.1	16.6	17.0	17.4	17.9			
Annual growth (%)	0.7	1.4	2.1	3.7	4.0	2.6	2.7	2.4	2.7	2.6			

e = estimate

Appendix 4: Notes to the tables

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 of Australia, Japan, United States, United Kingdom and Germany.
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. 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, 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</i> , G97/9.
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	Percentage of nominal GDP (expenditure), June year.
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.