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

November 1998

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

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ISSN 1170-4829

<sup>1</sup> Projections finalised on 30 October 1998, text finalised on 11 November 1998.

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# 1 Overview and policy assessment

Since the August *Monetary Policy Statement*, economic activity has weakened both globally and in New Zealand. An increasing number of countries are now expecting a fall in GDP for calendar 1998, with New Zealand's GDP having contracted by 1.8 percent during the first half of the year. As a consequence of this generalised weakness, world commodity prices are low and the New Zealand economy is operating with significant unused capacity. These factors suggest that inflation pressures will be subdued over the medium term.

There has rarely been a time of greater uncertainty in the world economy. Some observers are now suggesting that a serious global recession may be a realistic possibility. Many East Asian countries have already suffered major falls in output, while Japan remains in the grips of a prolonged recession. Several Latin American countries and Russia are under considerable economic and financial stress. The UK and US economies are now expected to slow in 1999 by more than previously expected. These events have been associated with considerable turmoil in world financial markets, which itself has led to increased risk aversion and reduced credit availability.

On balance, we have opted to remain with the mean of *Consensus Forecasts* when forming our view on the international economy. The consensus judgement is that growth in New Zealand's 14 major export markets weakened considerably over 1998, with only a modest pick-up expected over 1999 and 2000. This outlook is worse than that of only three months ago, and is similar to the 'weaker world' scenario used in our August *Statement*. We now assume a slow-down in growth – but not a recession – in the United States next year, continuing growth in Europe and Australia, and stabilisation in Japan and East Asia. However, because a further weakening in the world economy is a possibility, in this *Statement* we have again considered the monetary policy implications of such a further weakening for New Zealand.

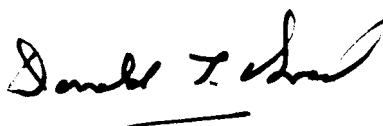
Over recent weeks, however, some positive developments have emerged internationally, providing more balance to the international outlook. The US and European equity markets appear to have regained some confidence, recent data suggests the US economy has been more resilient than anticipated, Japan has initiated policies aimed at resolving its bank debt situation, and several central banks have lowered interest rates. Depending on the future course of monetary

policy in major markets, the possibility of the world economy being stronger than expected next year cannot be dismissed. For this reason, we also present in this *Statement* a scenario in which the global economy turns out to be stronger than now projected, but where we delay our policy response for some six months. This scenario indicates that a tightening of policy would eventually be required, although overall monetary conditions would still remain fairly easy.

The subdued world economy and weak demand in New Zealand mean that medium-term inflation pressures are projected to be weak. We expect annual price inflation to remain roughly at its present level over the next year or so, with the direct price effects of the substantial fall in the exchange rate broadly offsetting price falls elsewhere. Beyond that, over the policy-relevant period, inflation pressures are projected to weaken slightly.

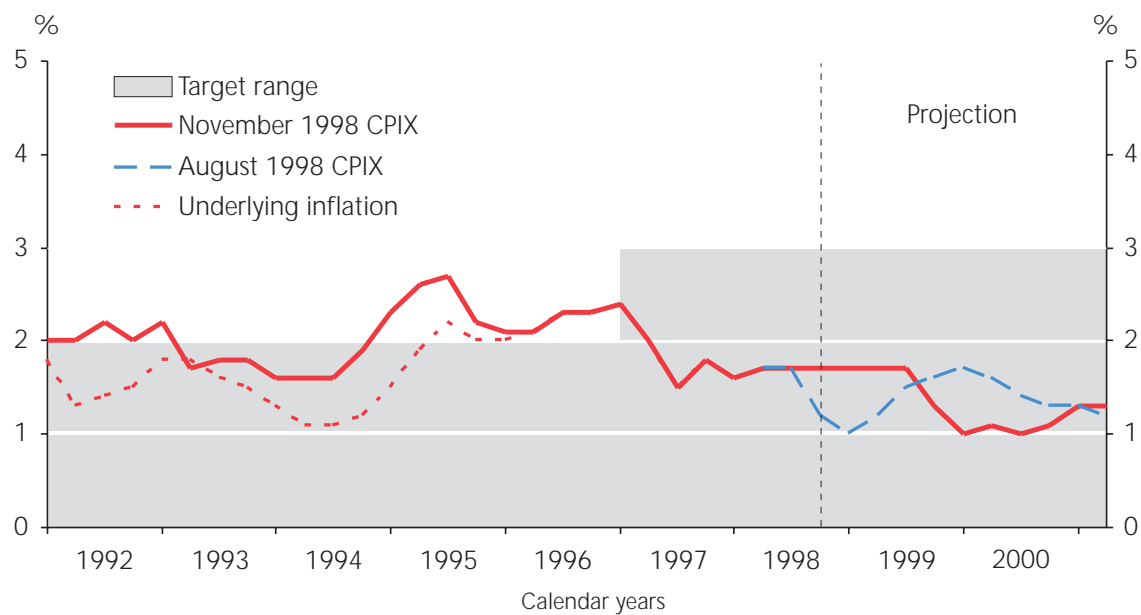
Monetary conditions have eased substantially since their peak at the end of 1996 – declining by some 1400 points on the Monetary Conditions Index (MCI). The trade-weighted exchange rate has fallen roughly 20 percent from its peak, while floating mortgage rates are now lower than at any time since 1970. The economy is still responding to this very considerable monetary stimulus, with GDP projected to commence growing from the second half of 1998, and steadily pick up momentum to March 2001. Both the substantial easing which has already occurred, and the possibility of a more stable international environment, suggest that monetary conditions are near their low point.

On balance, we believe that a level of around –400 on the MCI is broadly appropriate for the March quarter of 1999, and we see monetary conditions remaining at about that level for some time. Indeed, on the basis of the assumptions underlying this projection, we do not envisage the need for any significant tightening of monetary policy until mid-2000. The extent of current unused capacity and the benign world inflation environment do not generate immediate inflation concerns. We will, of course, remain alert to the prospect of a rapid change in circumstances, and willing to change our policy stance as necessary.

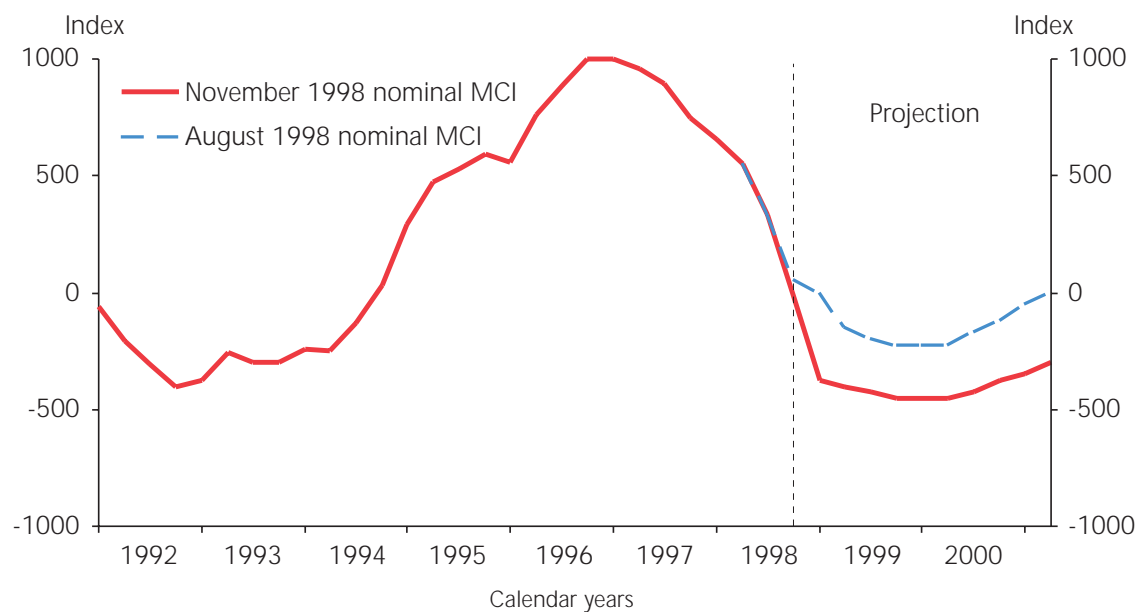


Donald T Brash  
Governor

**Figure 1**  
**Consumer price inflation**  
*(annual percentage change)*



**Figure 2**  
**Nominal monetary conditions**  
*(December 1996 quarter average = 1000)*



**Table 1**

**Summary of economic projections**

(Annual percentage change, unless specified otherwise)

March year	Actuals		Projections		
	1997	1998e	1999	2000	2001
<b>Price measures</b>					
CPIX	2.0	1.7	1.7	1.1	1.3
Wages	4.0	2.6	1.8	2.0	2.3
Import prices (in New Zealand dollars)	-4.6	3.1	8.8	1.5	0.3
Export prices (in New Zealand dollars)	-6.3	5.5	4.7	1.7	0.4
<b>Monetary conditions</b>					
Nominal MCI (March quarter level)	956	550	-400	-450	-300
90-day rate (March quarter level)	7.5	9.0	4.7	4.8	4.9
TWI (March quarter level)	68.4	61.2	55.1	54.5	56.0
<b>Output</b>					
GDP (production, annual average % change)	2.7	2.3	-1.0	3.4	4.0
Output gap (% of potential GDP, year average)	1.2	0.5	-3.1	-2.2	-0.8
<b>Key balances</b>					
Government operating balance (% of GDP, June year average)	2.0	2.6	0.4	-0.2	0.1
Current account balance (% of GDP, year average)	-4.7	-7.2	-7.3	-6.5	-5.0
Terms of trade (annual average % change)	-0.8	-0.6	-0.9	-0.5	0.0
Unemployment rate (March quarter s.a.)	6.5	7.1	8.4	7.9	7.0
Household savings rate (year average level, s.a.)	1.4	1.0	-1.9	0.2	1.8
<b>World economy</b>					
World GDP (annual average % change)	3.9	2.9	0.7	2.3	2.8
World CPI inflation	2.3	2.4	1.7	1.9	2.1
<b>Quarterly projections</b>					
	<b>Jun-98</b>	<b>Sep-98</b>	<b>Dec-98</b>	<b>Mar-99</b>	<b>Jun-99</b>
(quarterly percentage change, unless specified otherwise)					
CPIX	0.3	0.6	0.5	0.3	0.4
Nominal MCI (level)	334	-17	-375	-400	-425
GDP (production, s.a.)	-0.8	0.0	0.3	0.9	1.0

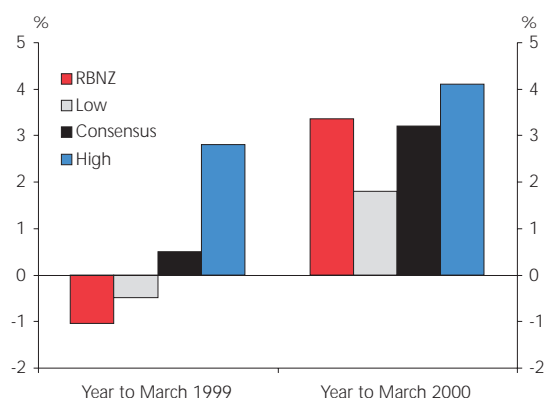
e = estimate.

s.a. = seasonally adjusted

## 2 The current business cycle in perspective

The projections detailed in this *Statement* suggest that the New Zealand economy will soon be recovering from a reasonably short and shallow economic recession. These projections are similar to the mean New Zealand consensus forecast, which suggests the economy will expand by 3.2 percent in the March year 2000 (see Figure 3).

**Figure 3**  
**September NZIER consensus**  
**GDP forecasts: mean, high and low**



Given the recent economic and financial turbulence internationally, projecting an economic recovery so soon may appear optimistic. On the other hand, with the recent substantial easing in monetary policy, and New Zealand's previous experience when conditions were at this level, projecting such a modest recovery may seem pessimistic. There remains considerable uncertainty about the outlook, as reflected in the spread of opinion amongst local economists (see Figure 3). This uncertainty relates not only to the timing and magnitude of the recovery, but also to the implications for inflation and monetary conditions.

Although it is usual to observe an increase in the variance of economic forecasts when near a turning point, such a divergence in views is, in the present case, driven by many factors. It is thus illuminating to compare past economic recoveries in New Zealand to that projected in this *Statement*. Better understanding of past influences may assist in gauging the strength and timing of the projected upswing, and clarify the risks ahead.

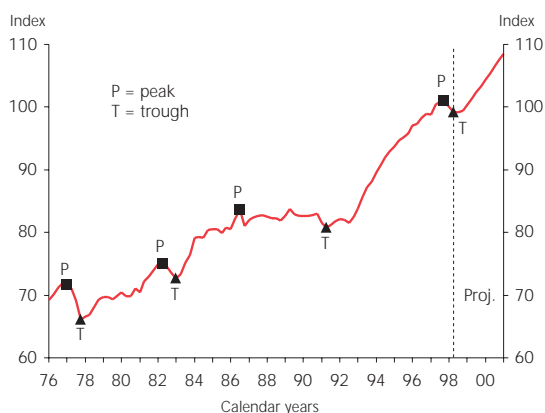
Briefly, it appears that the most recent business cycle recovery from the 1991 recession was, in large part, sustained by the release of pent-up consumption demand and rapid investment growth, following a period of restructuring. A reasonably robust international economic environment also sustained domestic demand. Looking ahead now, it appears less likely that consumption will surge, with household debt already high. The business sector has also completed a significant period of investment, with future spending more likely to be demand-led, rather than structurally driven. Meanwhile, the international environment appears considerably weaker than in the early 1990s. Overall, the projected recovery and subsequent inflation pressures are expected to be more modest than those experienced in the early-1990s, despite a similar level of monetary conditions.

### Past business cycles

The most recent economic recovery started in mid-1991; other recoveries include 1978-82 and 1983-1986.<sup>2</sup> Figure 4 shows real GDP since the mid-1970s, with the troughs and peaks of economic activity indicated. Figure 5 compares our projected expansion and the two previous expansions by re-basing the GDP indices for each growth period so that they begin at a common starting point. It can be seen that, although the 1991 recovery was initially slow, it proved to be one of the most persistent and vigorous economic expansions of recent decades. By contrast, our projections suggest a more modest recovery than that initially experienced from the trough in 1983, and than that eventually experienced from the trough in 1991.

<sup>2</sup> These cyclical upswings are dated according to a seasonally-adjusted levels-based definition of the business cycle.

**Figure 4**  
Real GDP peaks and troughs since 1976



## The components of growth

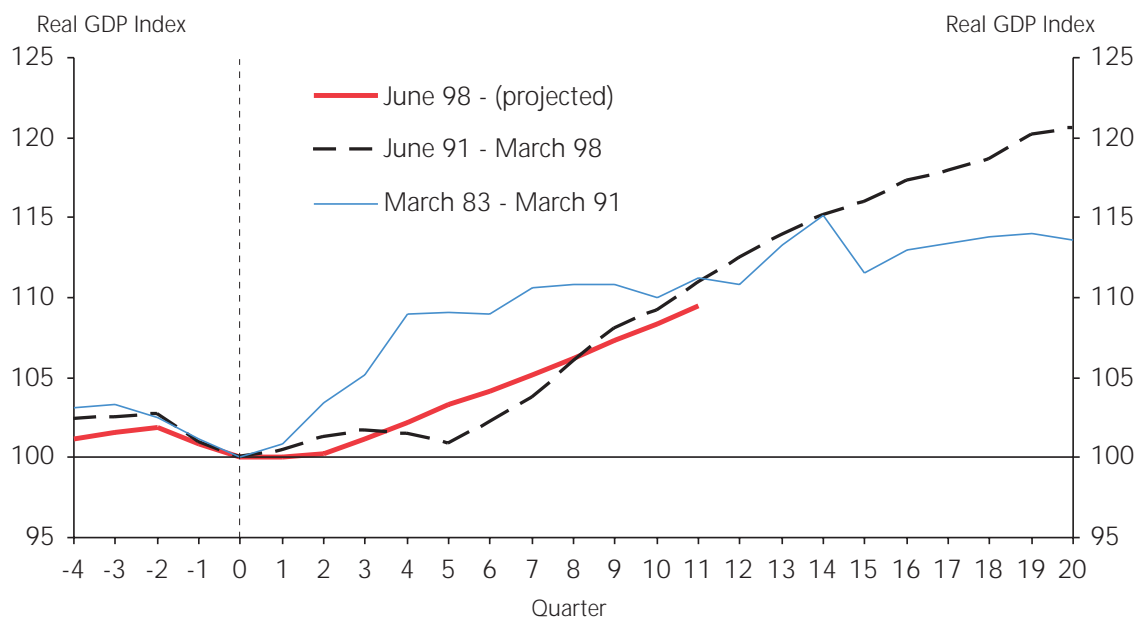
The strength of an economic recovery depends on the factors driving it. Figures 6a–d compare the projected expansion paths for exports, investment, consumption, and government spending with those in the 1983 and 1991 recoveries. The index levels of each GDP component are based on a common starting point to assist comparison. It can be seen that the projected rise in activity in most components over 1999 and 2000 is weak in comparison to the 1983 and 1991 experience.

The sustainability of an economic recovery depends not only on the combination of factors that generate it, but also on the sequence of events. The most notable feature of the 1991 expansion was the very rapid and prolonged growth in investment. This is in contrast to 1983, when investment growth was initially strong, but proved short-lived. The private consumption story was similar in 1991, with spending uncharacteristically subdued for the initial year of recovery, before accelerating for a long period.

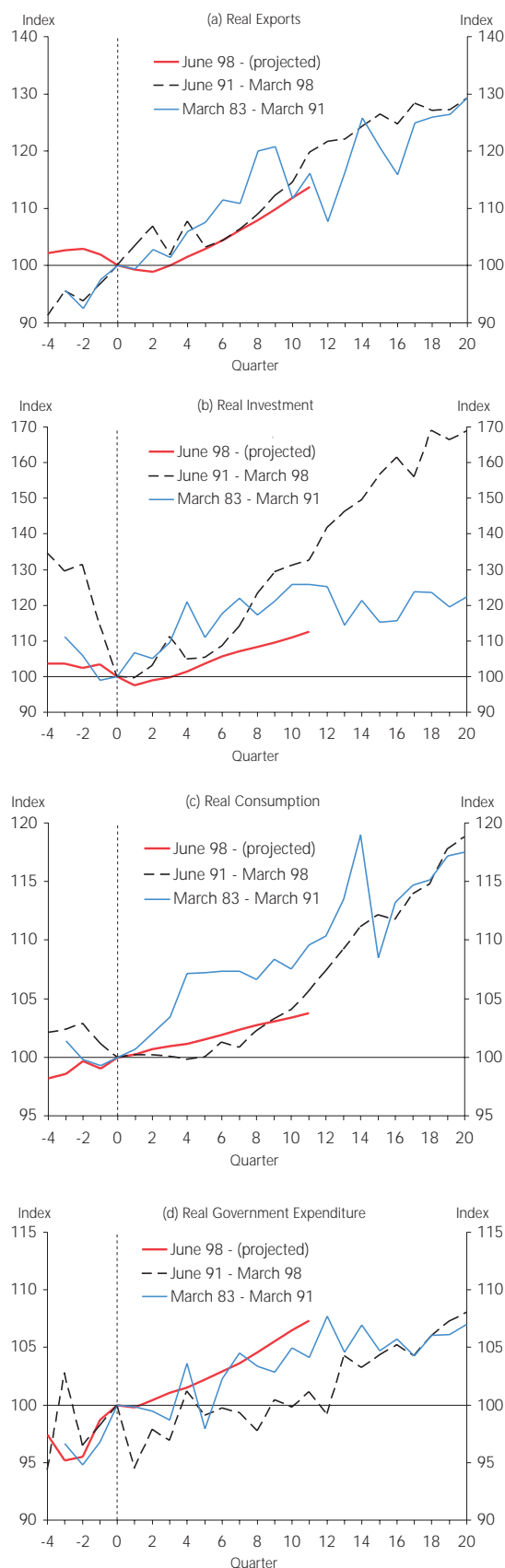
Although Figure 6a suggests that export volumes did not play a large role in the 1991 upswing, this is simply an issue of dating the cycle. Exports were a major driver, but their key contribution began a year or so in advance. By the time aggregate GDP started to rise in late 1991, export volumes were already growing strongly, providing considerable momentum to the domestic economy. A reverse story can be told for the role of government spending. The 1991 upswing commenced with government spending having contracted in the previous year.

The 1991 expansion was based on reasonably strong supply-side fundamentals. By contrast, the 1983 pick-up was driven more by a rise in government and household spending. Exports and investment provided the initial kick in 1991, followed by consumption, with government spending not

**Figure 5**  
Comparing real GDP expansions



**Figure 6**  
**GDP components over past**  
**cycles and that projected**



entering the growth profile until some three years later. Meanwhile, rising world growth provided an ongoing stimulus to demand. This particular sequence of events explains, in large part, the persistent nature of the 1991 economic expansion relative to that experienced in the early 1980s.

## Why is this recovery projected to be more modest than that of 1991?

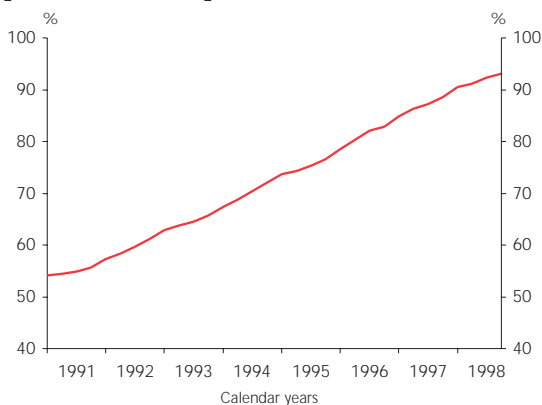
The projected recovery will be more modest than that which started in 1991, for two reasons. First, the international environment is expected to provide less impetus to exports than it did in 1991. Second, the domestic and international factors driving the projected recovery will operate in the absence of new long-term structural changes such as those that marked the earlier part of this decade, and which served to amplify the last expansion.

With regard to **exports**, the economies of our key trading partners were expanding from early 1991. World growth boosted demand for our exports and supported export prices. Looking ahead, world growth is expected to be at a very different stage, with a more subdued international environment likely. Significant risks surround the growth outlook for Europe, the United States and Australia – in addition to the ongoing concerns regarding Asia. We project a reasonably soft landing for economic growth in the United States and Australia, with modest growth sustained in Western Europe, but this is quite different from the world situation in 1991/92.

Meanwhile, New Zealand's real exchange rate has only recently reached the lows of the early 1990s. Although the fall in the real exchange rate implies a dramatic improvement in competitiveness, this is not expected to increase domestic demand immediately, nor investor and consumer confidence. Temporary hindrances include forward-covering on exchange rate contracts for many exporters (which reduces their ability to benefit immediately from the lower dollar), trade-financing concerns in some key export sectors such as forestry, and the negative impact of the summer drought on pastoral production. In sum, although export volumes will grow over the projection period, the bounce-back is likely to be modest relative to that of the early 1990s.

There are several reasons why growth in **household spending** is projected to be less vigorous than in the early eighties and nineties (see Figure 6c). One is that financial liberalisation in the 1980s, combined with a starting point of low levels of household debt, allowed a rapid rise in consumer borrowing and a prolonged period of consumption and strong residential investment. Adding to this was a strong rise in immigration. Also, New Zealanders' appetite for debt grew (see Figure 7), as perceptions of the economy's growth potential and future earnings were probably inflated by rapid employment growth, major government restructuring, and predictions of sustainable fiscal surpluses and declining tax rates.

**Figure 7**  
**Ratio of household debt to personal disposable income<sup>3</sup>**



The outlook for consumption now is quite different to that at the same stage of the early 1990s cycle. Rather than net immigration, the country has recently experienced net emigration. Household balance sheets are also considerably more leveraged, and the outlook for employment growth is subdued. Potential tax reductions are also being pushed further into the future, while perceptions of New Zealand's growth potential have been knocked by the deterioration in the fortunes of some of our key trading partners.

On the other hand, there are many positives. Interest rates have again reached the lows experienced in the early 1990s (albeit only recently), the unemployment rate is well below the double-digit levels reached in 1991-92, and consumer

confidence has not plumbed its 1991 depths. Asset prices have also held up reasonably well; there are tentative signs that the housing market may already be steadying, with the volume of sales starting to rise. This suggests household debt-to-wealth positions are unlikely to become a substantial constraint on spending. Immigration requirements have also been relaxed recently. Meanwhile, the automatic fiscal stabilisers are operating, with increased welfare spending supporting demand, in addition to specific government spending initiatives. The recent reduction in tax rates, and the liquidity effect of the AMP demutualisation, are also likely to be underpinning consumption.

On balance, it remains our view that consumption growth will remain positive. However, the pace of this spending recovery will probably be slower than that experienced in the early 1990s, as many of the significant one-off structural developments are absent, and household debt levels are higher.

Our profile for **investment** growth also differs from the earlier cycle. We anticipate an expansion, but one which is likely to be much more subdued than the early 1990s upswing. One important reason for this is that the capital stock is starting from a much higher base now than it did following the capital scrapping of the late 1980s. Investment levels have remained high throughout the 1990s, as firms have favoured more capital-intensive means of production. The drive for productivity gains, and the increased openness of the New Zealand economy to both international capital and trade, have fuelled the growth in investment.

The strong surge of investment of the early 1990s has since stabilised, especially as the economy emerged from its restructuring period. Investment is now more likely to be cyclically determined, rather than structurally driven. Rising anticipated demand and lower interest rates will prove stronger motivations to invest over the years ahead.

The role of the government in the projected upswing is also expected to be different from that in the last expansion. In the early 1990s, the government tightened **fiscal policy** sharply. This time we expect fiscal policy to be mildly expansionary, albeit largely as a consequence of the automatic fiscal stabilisers. These stabilisers include increased expenditure on welfare and reduced effective tax rates. As a result,

<sup>3</sup> Personal disposable income is from annual *Household Income and Outlay Account* data. Household debt is total claims on households by M3 institutions.

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the fiscal position is projected to deteriorate, with operating deficits emerging – an unsurprising outcome for an economy going through a substantial cyclical dip. When the projected fiscal deficit is cyclically adjusted (ie to account for the temporary decline in revenue and increase in spending), the fiscal position remains in reasonable stead. In addition, relative to 1991, there are fewer planned structural changes in government welfare or transfer spending that, in the past, have tended to act as a temporary drag on consumer spending.

However, given New Zealand's large external deficit and high external debt-to-GDP ratio, there are real limits to the scope for the government to use fiscal policy to boost domestic demand. The fiscal dilemma involves balancing pressures to loosen policy in order to support domestic demand, against the need for fiscal restraint in order to enhance national savings and thereby reduce the current account deficit.

The most likely outcome of this dilemma is that both households and government will act to moderate spending growth. This is reflected in the modest projected improvement in the current account deficit. The bottom line is that, when compared to the 1991 business cycle, there remains considerably less household balance sheet 'head-room' within which to expand spending. Spending growth is likely to be constrained by income growth, with the household savings rate projected to rise slightly.

## Operating monetary policy

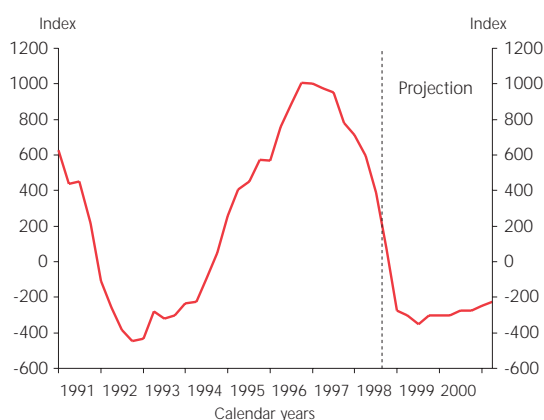
It is clear that there remains substantial uncertainty regarding the strength and the timing of the pick-up. Judging from the comparisons above, any rise in activity is likely to be more modest than recent experience, reflecting the absence of the structural changes operating in the early 1990s. The large external deficit position in which the country now finds itself is likely to continue to have a strong influence over the mix of monetary conditions. The exchange rate may remain under some downward pressure, as investor risk premiums on New Zealand assets remain significant. Such pressures would suggest a stronger likelihood of an export-led recovery, rather than a consumption-driven revival, especially if world output growth recovers. However, judging from previous recoveries, domestic spending – especially investment – is also likely soon to rebound.

## 3 Demand influences

### Overview

Over the period to March 2001, we project a generalised pick-up in both net export and domestic demand growth, driven principally by relatively stimulatory monetary conditions. The level of real monetary conditions is currently at about the same level as its previous trough in 1992 (see Figure 8).

**Figure 8**  
**Real MCI**  
*(December 1996 quarter average = 1000)*



Household expenditure growth is projected to be modest, constrained somewhat by households' high debt levels. Also,

although sound fundamentals set the stage for renewed growth in business investment, the fairly weak outlooks for the domestic and international economies will moderate investment growth.

Uncertainty about the world economic outlook and the demand for New Zealand exports continues to dominate the risks around our projection for aggregate demand. As discussed in Section 2, past economic recoveries in New Zealand have been assisted by either healthy world growth or a domestic fiscal expansion. Given currently-announced Government policies and balance of payments constraints, the latter is not a major feature of this projection. Much of the outlook therefore depends on prospects for the world economy, which have deteriorated since the August *Monetary Policy Statement*.

### World economic outlook

We now anticipate a deeper and more prolonged slowdown in the world economy. Based on *Consensus Forecasts* released in October, we assume export-weighted GDP growth in New Zealand's top 14 export markets of 0.7 percent, 1.9 percent and 2.7 percent for calendar years 1998, 1999 and 2000 respectively.<sup>4</sup> Illustrating how fast the world outlook

**Table 2**  
**Trading partner GDP projections<sup>5</sup>**  
*(Calendar year annual average percentage change)*

Country	1998	1999	2000
Australia	3.8	2.5	3.5
Japan	-2.5	-0.2	1.0
US	3.4	2.0	2.0
UK	2.5	1.0	1.8
South Korea	-6.7	-0.3	4.2
Hong Kong	-4.6	-1.8	-0.7
China	7.2	7.5	8.0
Taiwan	4.8	4.2	5.2
Germany	2.6	2.3	2.6
Malaysia	-4.8	-0.3	2.1
Italy	1.9	2.2	2.4
Indonesia	-16.5	-3.7	3.9
Thailand	-7.9	-0.4	2.5
France	3.0	2.4	2.6
14-country index	0.7	1.9	2.7

<sup>4</sup> Our 14-country measure of world GDP is 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 the United States.

<sup>5</sup> Based on *Consensus Forecasts* released in October.

has been deteriorating, *Consensus Forecasts* released in April posited growth of 1.7 percent, 2.9 percent and 3.1 percent for those years, respectively.

Since August, prospects for developed countries – in particular the US – have tended to be downgraded. Concerns about the banking and financial sector in the US and Europe have emerged, as banks suffered large losses on their exposures to Asian countries, Latin America and Russia. In tandem, risk aversion has increased. This has lifted the spread between corporate and 'official' interest rates, dampening the stimulus coming from falls in the latter. The effects of these developments on the world economy are difficult to quantify, in terms of both magnitude and timing.

Eastern Europe, Latin America and China remain pivotal to preventing confidence about emerging markets from sliding further. However, some Asian economies have shown positive signs recently (for example, Thailand).

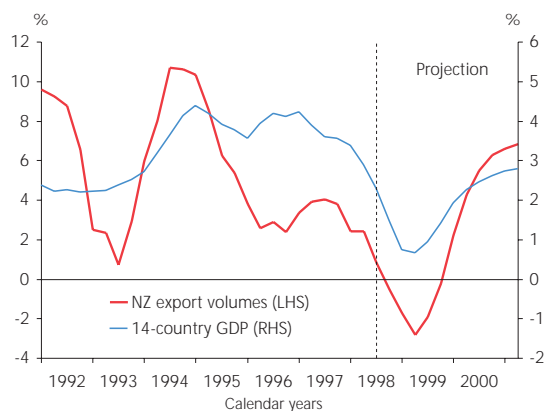
Monetary policy worldwide has shifted into easing mode. The ability and preparedness of central banks in the US and Europe to act to stimulate demand and alleviate credit concerns remain crucial to the maintenance of demand for New Zealand exports. Large downside risks persist – some commentators have suggested that the US is headed for a mild recession. Recovery in Japan continues to be necessary for rapid recovery in New Zealand's Asian trading partners.

## Exports

Overall export volumes are still declining, and a pick-up is not expected until next year. In the face of sharply improved competitiveness, weakening world growth is depressing not only the demand for New Zealand exports of manufactures and forestry products, but also the world prices of commodity exports in general.

Over the near term, these adverse external influences will be compounded by the effects of last summer's drought. It is possible that another drought could occur this summer, although recent rainfall has reduced the likelihood of that. However, should another drought occur, the consequences for output would be worse than those of last year's drought. Stock numbers are lower, world prices are weaker, feed stocks

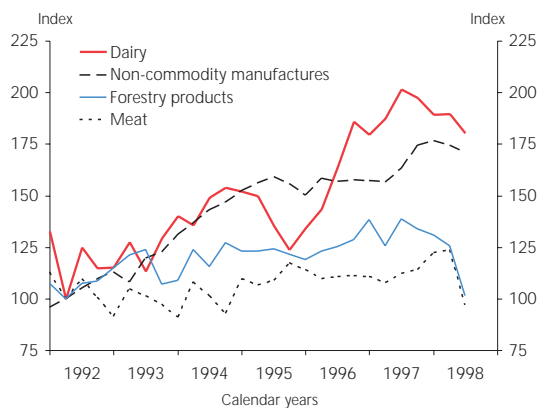
**Figure 9**  
World growth and exports  
(annual average percentage change)



are lower, and, as a result of last summer's drought, farmers are under a greater amount of financial stress.

We expect the outlook for dairy production to remain the most favourable of our major agricultural exports. The relative profitability of sheepmeat and wool production continues to decline, and the reduction in Russian demand has contributed to oversupply in the world beef market.

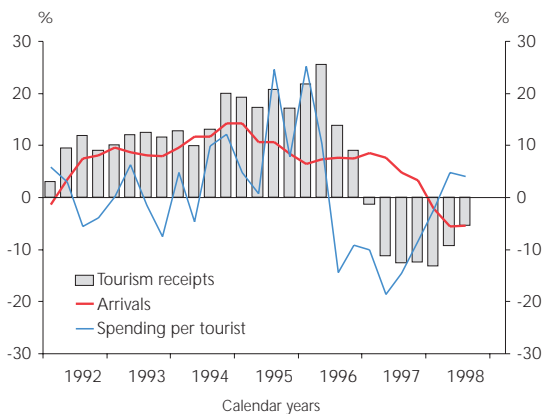
**Figure 10**  
Major export product volumes  
(March quarter 1992 = 100)



Despite the fairly bleak near-term outlook, there are a number of reasons for being positive about the medium term. The positive impact of the depreciation of the New Zealand dollar on exporters' profitability is becoming more generalised, as forward exchange rate cover taken out at higher rates is starting to roll off. Volumes of manufactured exports, and tourist numbers, stand to benefit from improved competi-

tiveness. The outlook for tourism looks particularly promising, given the apparent success of the switch to markets such as the US and Europe where per-person spending is higher, and imminent events such as the America's Cup and the Sydney Olympics.

**Figure 11**  
**Tourism numbers and spending per tourist**  
*(annual average percentage change)*

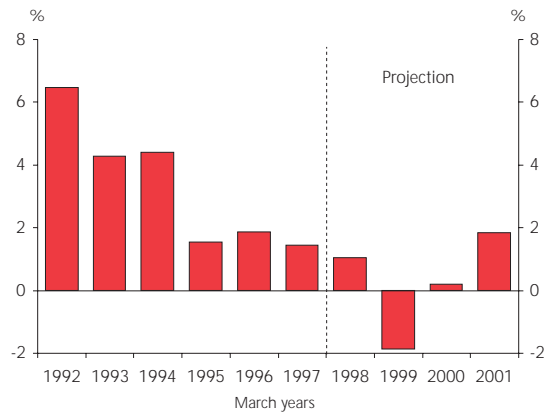


## Household expenditure

Information from our business contacts and recent retail trade data suggest that consumption growth will remain moderate over the near term. Falls in mortgage interest rates, the July personal income tax cuts, and the AMP demutualisation appear to have buoyed consumer confidence somewhat. We expect these fillips to disposable income and wealth to underpin consumption growth in the near term.

Precautionary saving is projected to increase over the next year or so, as a rise in the unemployment rate restrains consumer confidence. Also, the period of strongly rising house prices has ended, which is likely to induce households to save in order to build up wealth in other forms. However, the household savings rate is projected to rise only gradually through the projection period, even though it is currently at very low levels. The modest outlook for household disposable income growth will constrain to some extent households' ability to save.

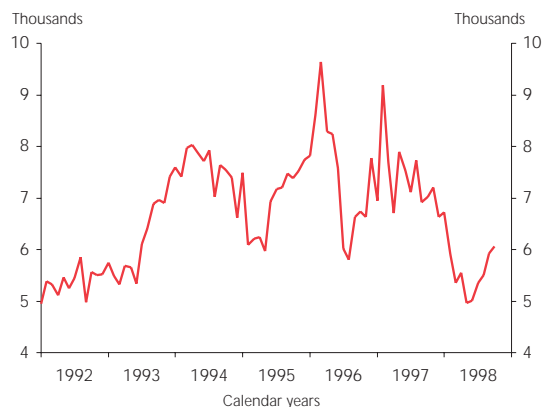
**Figure 12**  
**Household savings rate**  
*(percentage of disposable income)*



Lower mortgage interest rates appear to have stimulated activity in the housing market. The number of house sales has now been increasing for several months (see Figure 13). The rate of issue of consents for new dwellings, which had been falling very steeply, appears to have stabilised (see Figure 14). House prices remain weak, however.

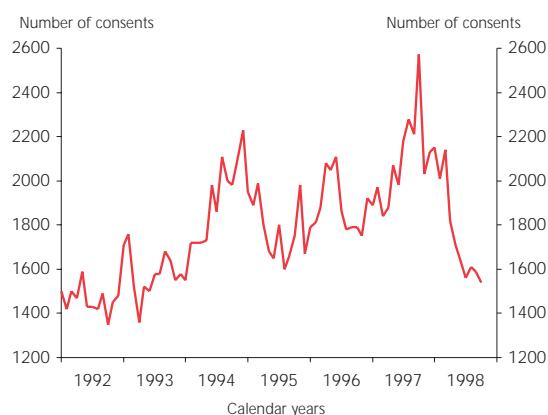
We expect the level of residential dwelling investment to be fairly flat over the next few quarters. Although there are signs that the recent cooling of housing market activity has ended, it appears unlikely that we will, over the projection period, see a strong surge in prices and residential investment to the high levels seen through 1994-96. Household debt levels and job uncertainty are now considerably higher, and pressure from substantial net immigration flows is absent. We project residential investment to grow modestly

**Figure 13**  
**House sales<sup>6</sup>**  
*(monthly, seasonally adjusted)*



<sup>6</sup> Source: Real Estate Institute of NZ Inc.

**Figure 14**  
**Consents for new dwelling units**  
*(monthly, seasonally adjusted)*



over the medium term, in line with the natural increase in demand from a slowly growing population and moderate economic growth.

## Business investment

The near-term outlook for business investment remains relatively weak, with firms tending to defer or re-evaluate their investment plans while the economic outlook is uncertain. Further out, however, the outlook for business investment is expected to improve. Business confidence has picked up recently. Stock levels, which had been rising over the last year, are beginning to stabilise at their current levels, and real interest rates are now at levels quite likely to stimulate investment.

The year-2000 problem is expected to underpin investment in computer equipment over 1999, and into the early part of 2000. Awareness amongst businesses of the risk to output posed by non-compliant computer systems is increasing, and as the time available to repair systems shrinks we anticipate a move towards full replacement of systems.

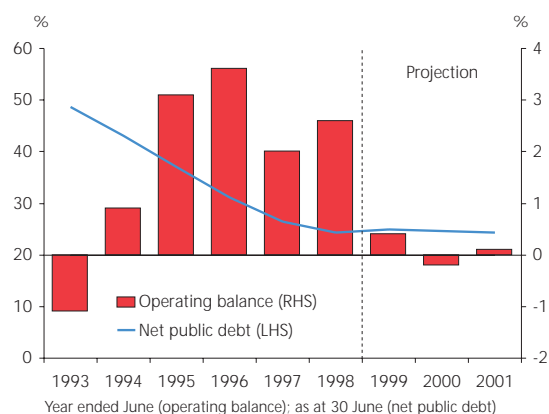
New Zealand firms are becoming increasingly exposed to the global marketplace, forcing them to adopt international-best-practice production techniques in order to compete. We expect the trend towards increased investment in capital equipment to continue to be a general feature of the business environment, as international competitive pressure maintains the pressure for productivity gains.

These factors set the stage for moderate growth in business investment over the projection period. Deepening of financial markets in New Zealand has increased firms' access to investment funding, and the banking sector is soundly placed to lend, with no signs of a 'credit crunch' in the domestic market. With these fundamentals in place, and as domestic and net export demand improve, we project business investment to pick up, around the end of calendar 1999. As is usually the case with business investment, the turnaround is expected to be quite sharp, in line with previous experience of investment dynamics in a recovery phase.

## Fiscal policy

We project the government operating balance to run slightly in deficit in fiscal year 2000, before returning to a small surplus in fiscal year 2001.<sup>7</sup>

**Figure 15**  
**Government operating balance and net public debt**  
*(percentage of nominal GDP)*



Past experience, both domestically and internationally, suggests that when an economy is running both a current account deficit and a fiscal deficit (ie 'twin deficits'), the appropriate policy prescription is to keep fiscal policy reasonably

<sup>7</sup> Our fiscal projections are based on the Treasury's *Economic and Fiscal Outlook*, released in September, and updated to include initiatives announced in the *Policies for Progress* package. We have made the usual adjustments to reflect differences in our macroeconomic outlook relative to the outlook on which the *Economic and Fiscal Outlook* is based.

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tight, and to loosen monetary policy. However, we project that the Government's fiscal settings are already at a level sufficient for the fiscal balance to return to surplus as the economy recovers. The small deficit reflects the working of the automatic stabilisers inherent in the fiscal system as the economy goes through a cyclical dip.

We project government spending to continue to increase over the projection period, but at a slower rate than that expected by the Treasury. Our lower projected rates of CPI inflation constrain the growth of expenditure on indexed welfare benefits, while our lower projected interest rates moderate finance costs.

On a cyclically-adjusted basis, the operating balance is likely to be in small surplus over the entire projection period. Government revenue growth is projected to remain subdued as a result of a fairly weak nominal GDP outlook. Government investment is projected to continue at moderate levels. Projects include investment in such areas as education, health, and infrastructure. In the absence of further asset sales, net public debt is projected to rise through the projection period.

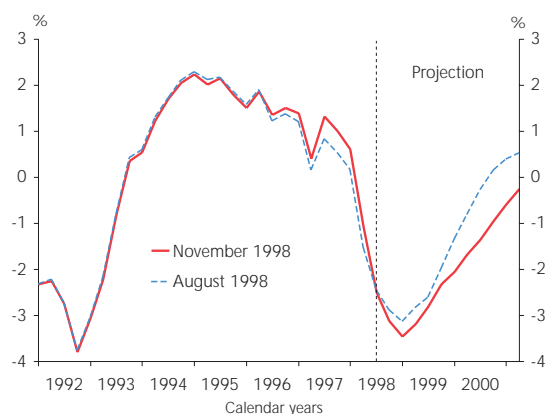
## 4 Meeting the demand

### Productive capacity

We project growth in the productive capacity of the economy to slow and fall below its long-run rate over the next year or so, after which it gradually picks up towards around 3 percent per annum. The slowdown in potential output growth over the near term reflects the adverse supply effects of last summer's drought on agricultural output, the recent slowing of investment growth and net immigration, and falling participation in the labour force.

We estimate that the level of aggregate demand in the economy is currently about 3 percent below the level of potential output – in other words, we estimate that there is currently a negative output gap of around 3 percent of GDP. The surprisingly weak result for GDP in the June quarter, and leading indicators of GDP over the next few quarters, suggest that the output gap will remain at about that level until around mid-1999.

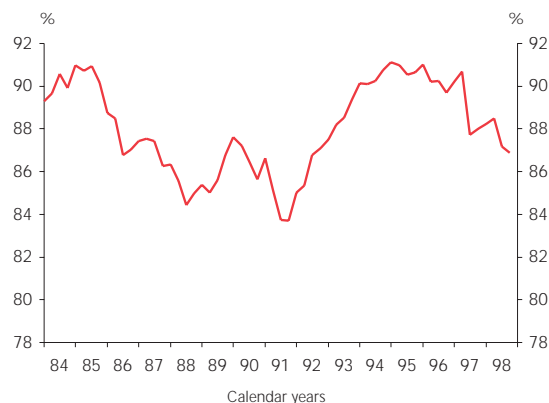
**Figure 16**  
**Output gap**  
*(percentage of potential GDP)*



The extent of excess capacity varies considerably across the sectors of the economy at present. The forestry sector, for example, is characterised by considerable slackness as a result of the sharp fall-off in Asian demand for New Zealand forestry products. In the manufacturing and building industries, on the other hand, capacity utilisation is at moderate levels (see Figure 17).

As projected demand growth picks up through the second half of 1999 and continues rising through to the end of the projection period, the negative output gap quickly diminishes. However, the output gap remains negative for longer

**Figure 17**  
**Capacity utilisation in the manufacturing and building sectors<sup>8</sup>**



than we projected in the August *Monetary Policy Statement*. This persistent excess capacity places substantial downward pressure on inflation over the projection period (see Section 6).

It is worth emphasising that, under most circumstances, it is the *level* of output (GDP) relative to potential output, rather than the *growth rate* of GDP, that is primarily relevant for medium-term inflation developments. As long as excess productive capacity is present in the economy, inflation will tend to fall. A corollary of this is that the economy can temporarily grow quite rapidly without imparting upward pressure to inflation, provided that there exists scope for capital equipment to be more fully utilised, and that new jobs can be readily filled.

New Zealand experienced such a situation of rapid growth with little increase in inflation as the economy emerged from recession in 1993. As the high rates of growth continued into 1995 and 1996, however, the *level* of demand exceeded potential output (a sizeable *positive* output gap emerged), with the result that inflation began to rise.

Economic conditions over the projection period will resemble the first part of this 1993-96 episode. We project above-trend rates of GDP growth for 2000 and 2001, which will absorb the excess productive capacity in the economy. Looking ahead, the challenge for monetary policy will be to ensure that the economy does not experience a repeat of the second part of the episode – growth that continues at

<sup>8</sup> Source: New Zealand Institute of Economic Research Inc.

above-trend rates for too long, generating excessive upward inflationary pressure.

There is an argument that 'too high' growth rates *per se* could be inflationary, even if there is excess productive capacity at the time of the high growth. In this view, higher aggregate growth rates are associated with uneven sectoral stresses and a higher probability of upward price pressure emerging from particular industries – in short, 'speed wobbles'. Although it is possible that these 'speed wobbles' may contribute to the inflationary process at very high rates of growth, we do not think they are of material importance at the growth rates currently projected.

Having said that, the Bank remains conscious of inflationary risks emerging from whatever source as economic activity climbs out of a cyclical dip. We monitor a range of indicators of sectoral stresses and of incipient inflation, such as capacity utilisation, wage movements, the unemployment rate, and inflation itself. These indicators are all either included in our estimate of potential output or analysed separately.

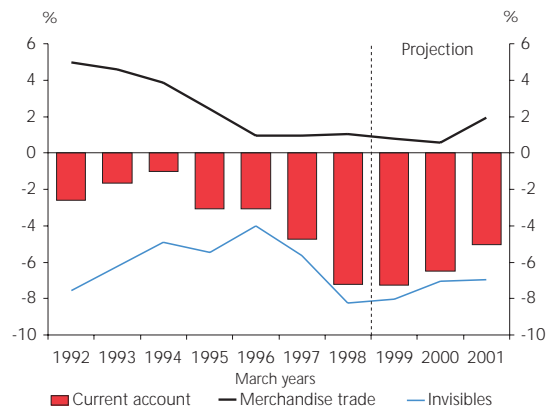
## Balance of Payments

We now expect the current account deficit to remain at around 7 percent of GDP over the next few quarters, rather than immediately improving as we had forecast in the August *Monetary Policy Statement*. In particular, we anticipate further weakness in the trade position, as a result of higher import volumes and a deterioration in the terms of trade as world demand growth remains weak.

An improvement in net international investment income flows will mitigate to some extent the near-term deterioration arising from net trade flows. The weakness in the domestic economy is likely to constrain the domestic profits of foreign-owned corporations, reducing direct investment income outflows. Lower domestic interest rates will also slowly reduce the cost of servicing NZ-dollar-denominated foreign debt. We expect these positive influences to be offset in part by reduced investment income inflows, as returns on New Zealand-owned foreign direct investment come under further pressure from the weak international economy.

Over the medium term, we expect the current account deficit to improve, as the weak domestic economy absorbs less output and as export performance improves.

**Figure 18**  
Current account balance  
(percentage of nominal GDP)



The risk is that the weaker global environment may delay this improvement. Export earnings from primary sectors such as agriculture, which has been weakened by drought, and forestry, which has been hit hard by Asia's problems, are also a concern.

The transfers balance is projected to improve gradually. The net inflow of immigrants should pick up in response to the Government's new net immigration target and a more relaxed approach to English language requirements. Also, the average amount of wealth each migrant brings into the country appears to have stabilised, after falling sharply over the last two years. Falls in both the net number of immigrants and the wealth they each brought were material contributors to the sudden increase in the current account deficit recorded over 1997<sup>9</sup>.

Over the medium term, the trade balance will be the major influence on the current account deficit. Export growth will be constrained by world demand developments, while imports are projected to rise in line with the recovering economy. The arrival of the second frigate, *Te Mana* (now expected in the September 1999 quarter), further delays the projected improvement.

<sup>9</sup> Migrant transfers will no longer be included in the current account once Statistics New Zealand introduces the IMF's latest balance of payments methodology, around the year 2000.

# 5 Developments in financial markets

## Overview

The financial market difficulties that began in East Asia in mid-1997 reached Russia and Latin America in the third quarter of 1998. What began as a relatively small, localised, economic adjustment has ballooned into global financial turmoil. A heightened perception of risk now exists amongst global investors, who have sharply reduced their holdings of non-government debt. This general re-assessment of financial risk has increased the price of credit in most capital markets. In addition, as large hedge funds and major banks have moved to reduce their risk exposures, they have temporarily, but significantly, exacerbated the abruptness of currency and asset price movements. Increased discrimination between borrowers has also emerged, increasing the probability of a 'credit crunch' in global – rather than just emerging – markets. This is a situation where credit becomes prohibitively expensive, or simply unavailable.

In such circumstances, monetary authorities can, and did, play a significant role in alleviating financial concerns. Several central banks, including the US Federal Reserve, have recently reduced their interest rates. Meanwhile, the Japanese authorities have established a framework to help restore their banks to financial health. There are emerging signs that October may have seen the worst of the global volatility.

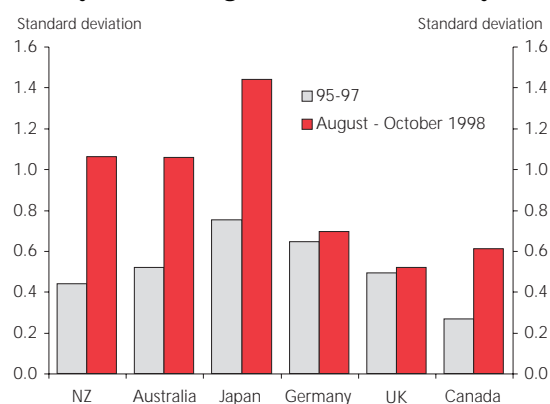
Although New Zealand financial markets have been caught up in international developments, the domestic markets have remained relatively calm. This is despite the fact that the New Zealand market is small and open, with a high degree of offshore investor participation. Such factors would normally be thought of as predisposing the domestic market to more volatility in times of global turmoil.

Although credit spreads have widened to their highest levels this decade, the overall cost of funds has nevertheless declined, due to the recent fall in domestic interest rates. Meanwhile, banks apparently remain willing and able to take on sound business. Overall credit quality remains good, and banks have been applying greater time and resources to remedial action on non-performing loans. As a result of the competitive nature of the sector, and the significant restructuring of recent years, banks appear now to be better-equipped to deal with this downturn than was the case in the early-1990s recession.

## International financial markets

Volatility over and above that implied by economic fundamentals has been the dominant feature of the international financial markets recently. The best example of the scale of volatility is the foreign exchange market (see Figure 19). Currency values have moved by more, in a shorter period of time, than has been the case since major currencies began to float freely in the early 1970s.

**Figure 19**  
Daily exchange rate volatility<sup>10</sup>



A marked change in investor attitudes to risk has been the key factor driving market volatility. Increased concern about the economic prospects of a number of regions – especially emerging markets – has seen investors around the globe look to trim back their exposures. Few markets have been left untouched.

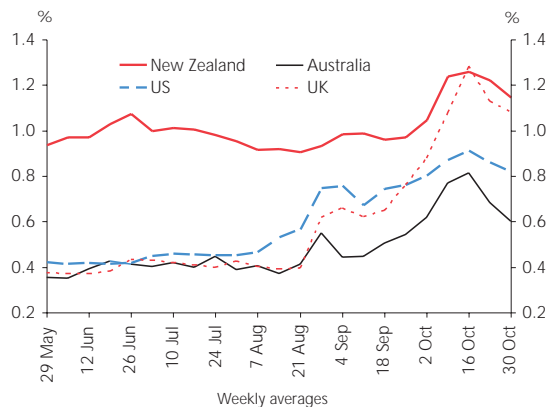
In this environment, liquidity and capital preservation have been the watchwords. Because of their perceived safety and increased liquidity, government bonds – particularly in the larger markets – have been much sought after, resulting in lower yields. In the US, 10-year government bond rates have fallen by around 60 points since early August to the time of writing, while 60-point and 40-point falls have been recorded for New Zealand and Australian government bonds respectively. Meanwhile, yields on riskier, less liquid, corporate bonds have not fallen by anywhere near as much.

The spread between the yields on corporate debt and similar-maturity government debt can be observed by looking at

<sup>10</sup> Standard deviation of daily percent changes; exchange rates against US dollar.

interest rate swaps (see Figure 20). These swap spreads widened significantly in the last few months, before narrowing slightly in early November.

**Figure 20**  
**Five-year swap spreads in the UK, US, NZ and Australia since June**



However, the transition of investor portfolios to lower risk levels has not been smooth. Market liquidity has been stretched, resulting in pronounced movements in financial market prices.

International investors have typically reduced their net holdings<sup>11</sup> of Japanese yen (JPY), Australian dollars (AUD) and New Zealand dollars (NZD) over the last year, as the Asian crisis has unfolded. The yen was sold by investors taking advantage of relatively low Japanese interest rates to finance investments elsewhere in the world. Meanwhile, the weakness in the Asian region led to weakness in the Australasian currencies, and to a view that there were profits to be made from being 'short'. The net result was that large short positions in the JPY, AUD and NZD accumulated relative to the liquidity of those markets.

When hedge fund investors were forced to reduce these positions, this created a large demand for the corresponding currencies relative to their availability, driving up their exchange rates. Since early August to the time of writing, the JPY has appreciated by around 16 percent against the US dollar, while the AUD and NZD have each gone up by about 5 percent. By most accounts, however, the economic

fundamentals have not moved in a direction fully supportive of the recent strengthening in these currencies. In a sense, the financial volatility has been self-sustaining.

Rising risk perceptions have also affected the corporate debt market. In the rush to sell corporate debt and reinvest in less-risky government debt, the spreads between corporate and government debt widened. Wider credit spreads in the major markets have flowed through to wider spreads in the rest of the world. The volume of debt issuance has also declined markedly, particularly for lower-credit-rated issuers. As new issuance has declined, the possibility of a global 'credit crunch' has emerged. As a result, volatility in markets has further increased, as investors have priced in a higher probability of tighter credit conditions.

Equity markets have also become more volatile as concerns over international growth prospects have increased. In particular, even relatively deep markets like those in the United States have fluctuated widely. The US equity market has traded in a 16 percent range since early August, at one point trading some 21 percent below the record highs seen as recently as July.

Globally, the stance of monetary policy has either eased (eg the US and the UK) or is expected to ease (eg Australia), supporting the general trend towards lower interest rates. Weaker world growth prospects and increased concerns over the stability of the international financial system have been the primary drivers.

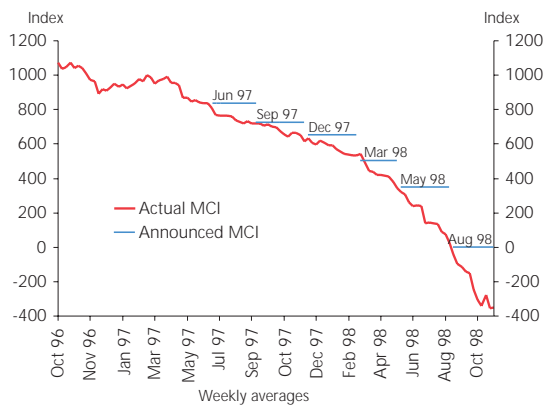
## Implications for New Zealand

Monetary conditions in New Zealand have eased considerably over recent months, both in absolute terms and relative to the projection for the December quarter in the August *Monetary Policy Statement* (see Figure 21). Monetary conditions have responded to the domestic and international news which emerged over the quarter, and which overall suggested a more benign inflation outlook.

The impact of the offshore volatility on domestic markets has been mainly on the mix of monetary conditions. The bulk of the easing has occurred in interest rates rather than in the exchange rate. This shift is unusual, given that do-

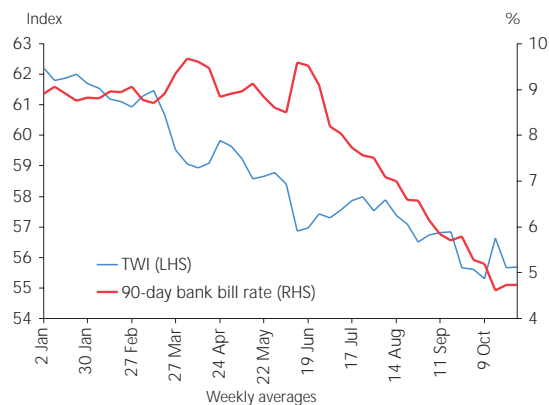
<sup>11</sup> Net holdings are gross holdings less 'short' positions, ie those accumulated by selling a currency in advance of actually acquiring it.

**Figure 21**  
Actual and announced MCI



domestic monetary conditions have eased by more than in many other countries. The international rise in risk aversion has placed upward pressure on the NZD exchange rate recently, as investors have unwound 'short' positions. As a result, the easing pressure fell mainly on interest rates. A number of other factors may also explain the recent movements in the mix, including the perception that monetary policy may be near the bottom of its easing cycle, with investors in the exchange rate market beginning to anticipate a tightening bias.

**Figure 22**  
90-day bank bill rate and the TWI

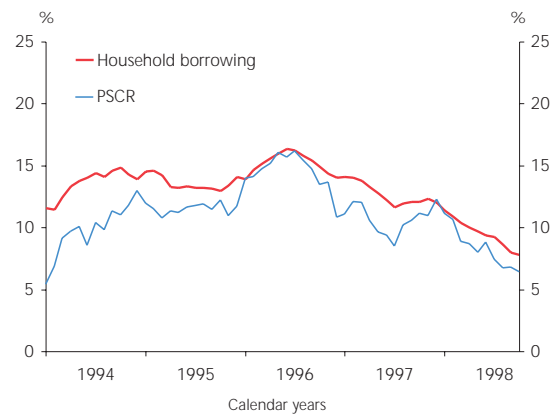


Domestic credit spreads have widened significantly since August, but only in line with (or in some cases by significantly less than) movements offshore, at a time when the demand for credit has dropped off. The five-year swap spread (the interest rate premium that highly-rated corporations need to pay over government rates) has widened by around

15 points since early June. The primary driver has been that seen offshore: the widening reflects, in large part, investors seeking to reduce their positions in non-government bonds, with downward re-rating of the credit quality of the domestic corporates concerned playing a relatively minor role. Although margins for credit risk have widened in New Zealand, there seems to be little evidence of a 'credit crunch'.

Credit growth has slowed considerably this year, to a pace not recorded for about five years. Household borrowing, which has been the main driver of credit growth, is now growing at under 8 percent annually, less than half the peak rate measured in mid-1996. Although it is too early to expect the full effects of lower interest rates on household borrowing to be evident, to date they have been muted. Business borrowing is now growing at less than the 7 percent annual rate of growth of total private sector credit.

**Figure 23**  
Growth in resident private sector credit (PSCR) and household borrowing  
(annual percentage change)



Banks apparently remain prepared to take on good business. Although a reassessment of credit risk has occurred in New Zealand, for sound businesses the rise in the risk margin for bank lending has been modest. However, there has been an increase in the range of margins offered to different customers, although this does little more than restore the degree of credit risk discrimination that existed back in the early 1990s. Overall, the effect on borrowers of the increased margin for risk is swamped by the recent sharp fall in interest rates.

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Investors in capital market instruments in New Zealand have lifted their credit quality demands, at the same time as ratings for some corporates are being downgraded. However, since most current corporate borrowing is by utilities, or 'quasi-sovereign' risk entities, investors' perception of security requirements is satisfied at limited cost. Some of New Zealand's large corporations, which have been freely able to tap international capital markets directly, have recently taken

steps to secure lines of credit with domestic banks. This action appears to reflect precaution against the potential, in the period ahead, for reduced credit availability internationally.

For the bulk of business lending, though, the key feature of current credit conditions is the normal action taken by banks to limit their risk exposure during a cyclical downturn.

# 6 Inflation

## Overview

In the year to September 1998, the CPI excluding Credit Services (CPIX) increased by 1.7 percent. We expect inflation to remain at around this level until mid-1999, as the effects of the recent exchange rate depreciation are passed through into consumer prices. Further out, inflation is projected to fall slightly below the mid-point of the 0 to 3 percent target band, largely under the pressure of the sizeable excess capacity that has recently emerged, and which will be absorbed only gradually (see Figure 1). As world growth is projected to remain sluggish, weakness in the world prices of New Zealand imports and exports will add to the downward pressure on consumer inflation. Stronger exchange rate passthrough is one potential upside risk over the short term, although the weak state of demand, and cautious businesses, should limit this risk.

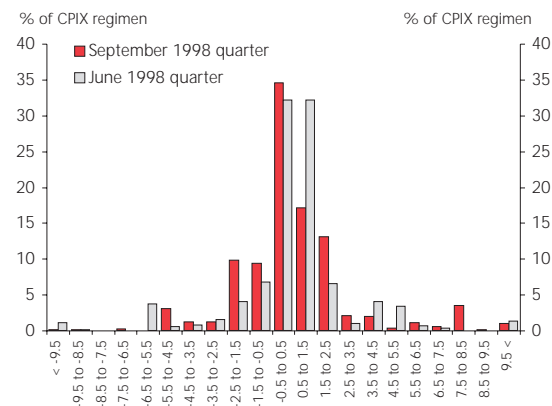
As we have emphasised many times before, this inflation outlook is conditional on our projected path for monetary conditions. We project monetary conditions to remain roughly stable until the middle of next year, maintaining monetary stimulus to the economy in the face of strong disinflationary influences at home and from offshore. The Monetary Conditions Index (MCI) is projected to average -400 for the March 1999 quarter, before falling slightly to -450 by mid-1999, and remaining at about that level until the March quarter of 2000. As the excess capacity in the economy is absorbed, monetary conditions begin gradually to tighten, as mild inflationary pressures begin to emerge. By the March quarter of 2001, the MCI is projected to be around -300, well below the level projected for that quarter in August (see Figure 2).

## Review of September quarter

The CPI excluding Credit Services (CPIX) increased by 0.6 percent in the September quarter, bringing the annual increase to 1.7 percent for the year to September 1998. As in the June quarter out-turn, large price movements in a small number of regimen items had a material impact on the overall index. For example, the prices of a number of fresh fruit and vegetable items rose strongly as a result of adverse climatic conditions, and the 20 percent fall in toll call charges recorded in the June quarter was reversed in the September quarter.

The 'weighted median', a measure in which the influence of large movements in a small number of items is less than in the CPIX, suggests that 'generalised' inflation remains subdued, despite a rise in quarterly CPIX inflation. A general leftward shift in the weighted distribution of price changes in the CPIX regimen is evident in Figure 24, showing that

**Figure 24**  
**Weighted distribution of**  
**quarterly percentage changes in**  
**CPIX regimen items**  
*(June and September 1998 quarters)*



**Table 3**  
**Alternative measures of inflation**

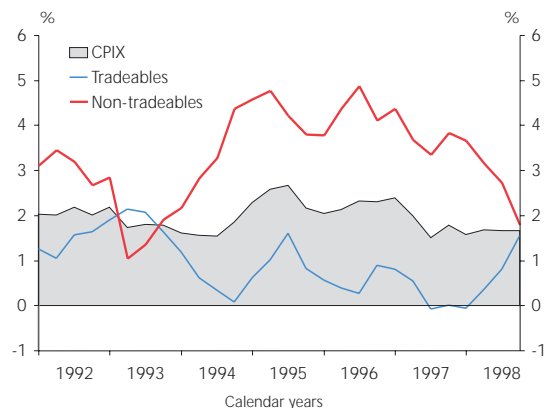
	Sep-1998 qtr	Year to Sep-1998	Year to Jun-1998
CPIX	0.6	1.7	1.7
Weighted median <sup>12</sup>	0.3	1.7	2.3
Tradeables	0.9	1.5	0.8
Non-tradeables	0.2	1.8	2.7

<sup>12</sup> Yearly weighted median inflation is calculated as the sum of quarterly median inflation rates. An 'annual median' constructed along the same lines as a quarterly median would be the median of the annual percent changes in the CPIX components.

the 'general' rise across the CPIX items in the September quarter was smaller than it was in the June quarter. Annual inflation in the weighted median measure is now the same as annual CPIX inflation, after having tracked above CPIX inflation for the previous three quarters.

The effects of the exchange rate depreciation are becoming apparent in the relative movements of tradeables and non-tradeables inflation (see Figure 25). Annual inflation rates in these two subsets of the CPIX are now almost equal, whereas a year ago non-tradeables inflation was some 4 percentage points above tradeables inflation. In the September quarter, some items in the tradeables subset rose quite sharply, showing clearly the effects of exchange rate passthrough. However, other tradeable items were either stable, or actually fell. As expected, and as reported by our business contacts, competitive pressure appears to have limited businesses' ability to pass through higher import prices resulting from the lower New Zealand dollar, to date at least.

**Figure 25**  
**Tradeables and non-tradeables inflation<sup>13</sup>**  
*(annual percentage change)*



The weakness of domestic demand was evident in the movements in a large proportion of housing-related items in the September quarter. In particular, section prices, construction costs, and real estate agent fees all fell.

## Near-term outlook

Further exchange rate passthrough into the CPIX is expected to be one of the features of the next couple of quarters. For the December quarter 1998 and the March quarter 1999, we expect CPIX inflation of 0.5 percent and 0.3 percent, respectively. This would leave CPIX inflation unchanged at 1.7 percent over the years to December 1998 and March 1999, a little higher than projected in the August *Monetary Policy Statement*.

This upward revision from our August estimates of annual inflation largely reflects the higher-than-expected September quarter outturn. Other key features of the short-term outlook are the following.

- Prices in the housing market are expected to remain subdued. Mortgage interest rates falling to historically low levels has stimulated sales activity, but not, so far, prices. In the rental market, announced changes to Housing New Zealand (HNZ) rent-setting policy will maintain overall downward pressure on rentals, along with a softening in private sector rents.
- Some further exchange rate passthrough into appliance prices is expected.
- Lower electricity prices are likely, following the entrance of Contact Energy and First Electric into the retail power market.

The TWI exchange rate has depreciated roughly 20 percent from its peak in early 1997. This has affected costs in New Zealand directly, via the prices of tradeable goods as well as the cost of imported componentry. At the same time, the subdued state of domestic demand has made it difficult to raise selling prices. Consequently, businesses have absorbed these costs, thereby squeezing their profit margins. We expect firms to try to recoup their lost margins, as soon as they believe the market will bear higher prices.

Although the focus of monetary policy is on consumer price inflation *excluding* the effects of credit services, it is worth commenting on the recent unusually large movements in mortgage rates. These movements will have quite a large downward impact on headline (CPI) inflation. We estimate that the mortgage costs component of the CPI will fall 13 percent over the December quarter, resulting in headline in-

<sup>13</sup> RBNZ calculation

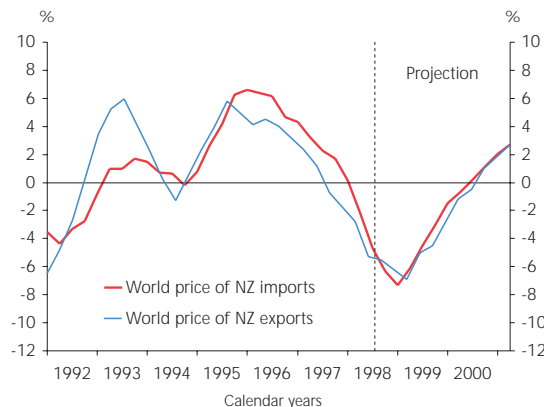
flation of -0.3 percent in the December quarter, and taking headline inflation to 0.8 percent for the year to December. The lagged effect of interest rate falls suggests a further drop in quarterly headline inflation for the March quarter. This would result in annual CPI inflation falling to 0.4 percent, the lowest annual rate since 1960.

## Medium-term outlook

Over the coming year, the balance of inflationary pressure will be downward. Weakening world growth is expected to reduce world price inflation (see Figure 26), and hence tradeables inflation in New Zealand. Further out, the continued weak state of both world and domestic demand will maintain downward pressure on CPIX inflation.

Although we do not forecast tradeables inflation explicitly over the medium term, the prices of New Zealand imports and exports provide a useful rule-of-thumb. Both import and export prices affect tradeables inflation, as it is the international price of the goods and services in which New Zealand trades that matters, not just the prices of goods directly imported. We project import and export prices to rise moderately through the projection period, as the effects of the exchange rate depreciation more than offset the weak outlook for world prices.

**Figure 26**  
**World prices of NZ export and imports**  
*(annual average percentage change)*



We expect non-tradeables inflation to remain under pressure, as the level of excess capacity in the domestic economy is expected to be larger, for longer, than in our August projections.

Our medium-term inflation projection, like the short-term outlook, is driven principally by 'macroeconomic' influences such as the output gap and import prices. However, influences such as ongoing microeconomic reforms may also have a significant impact on CPIX inflation.

The timing and extent of changes to road-user charges and HNZ rentals, for example, could affect measured inflation. The proposal to shift to user-pays in road usage, through a tax on petrol, would initially add several cents to the price of a litre of petrol, adding around 0.2 percent to inflation. However, local authorities could also presumably reduce their rates in proportion to the direct road maintenance charges. This would partially, or even totally, offset the initial inflationary impact of the policy change.

In a low inflation environment, shocks that cause big changes in a single item have a large, potentially misleading, influence on CPIX inflation, as discussed above. Also, in such an environment, statistical agencies' measurement and treatment of price changes become more of an issue for the assessment of general inflation.

For example, intense competition in the telecommunications industry has led to innovations in the provision of domestic and international toll call services, with the appearance of '\$5 specials'. Given that one consumer may speak for 20 minutes and another for 60 minutes, and yet both be charged \$5, how should one measure the 'price' and the 'volume' of the service consumed? The *measured* movement in toll call charges was a 20 percent *fall* over each of the March and June quarters of 1998, followed by a 20 percent *rise* over the September quarter (relating to the daily '\$5 specials' reverting to weekend-only specials) – enormous changes compared to typical CPIX movements.

This example illustrates the difficult nature of the problem. Statisticians may measure a price change one way, while economists may take a different conceptual approach.

# 7 Uncertainties

Uncertainty about the economic outlook for New Zealand's trading partners remains a key risk to this projection. As in the August *Monetary Policy Statement*, we illustrate in this section how much our projections for New Zealand growth, inflation and monetary conditions might differ should our assumptions about the world outlook be modified.

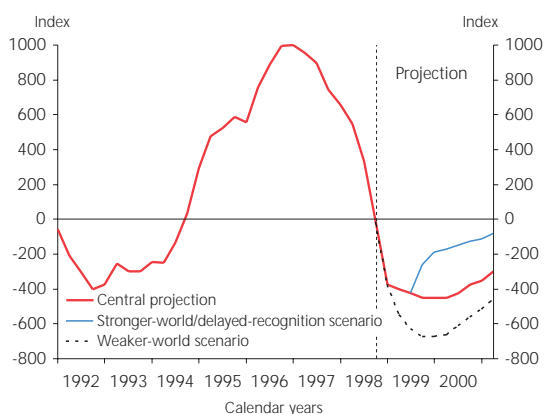
In August, we focused on the downside risks to the world economic outlook. We sketched a stylised scenario in which world growth, inflation and interest rates were assumed to be lower than in the central projection. In this *Monetary Policy Statement*, we repeat that exercise, but also include a scenario in which world growth is stronger than assumed in our central projection. We do this partly to underscore the fact that our central projection is a best-guess, around which there are upside as well as downside risks. But in addition, the exercise offers the opportunity to conduct another interesting thought experiment: what would be the consequences if monetary policy were 'slow off the mark' in recognising changed circumstances?

The two scenarios were implemented in our model of the New Zealand economy, FPS, as follows. In the 'weaker world' scenario, we made essentially the same changes to the world outlook assumptions as in the risk scenario in the August *Monetary Policy Statement*. The most important of these changes is to lower world GDP growth by around 1 percentage point for calendar 1999 and calendar 2000, relative to the central projection. This weaker-world scenario corresponds approximately to the growth outlook of a 'pessimist' subset of October *Consensus Forecasts*, as used for the December 1997 and March 1998 *Statements*.

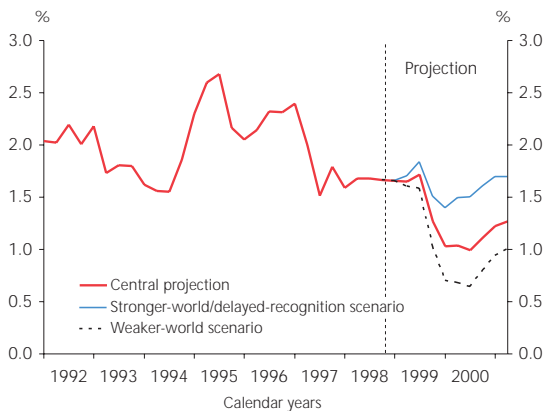
Our 'stronger world' scenario is a mirror-image of the weaker-world scenario – world growth is assumed to be 1 percentage point higher in 1999 and 2000 than in the central projection. However, the stronger-world scenario has the additional feature that the nominal MCI is forced, for the first two quarters of the projection period, to follow the same track as in the central projection. We include this feature to explore the consequences of monetary policy being mistakenly run for a couple of quarters on the basis of the central projection for the world outlook, when in fact world growth turns out to be stronger.

Figures 27-29 show the results of these two simulations, compared to the central projection. In the weaker-world scenario, the projected nominal MCI falls quickly to a level around 200 MCI points below that in the central projection,

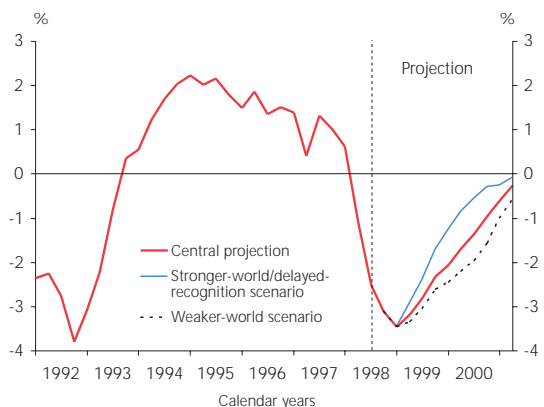
**Figure 27**  
Risk scenarios: nominal MCI



**Figure 28**  
Risk scenarios: CPIX inflation (annual percentage change)



**Figure 29**  
Risk scenarios: output gap (percentage of potential GDP)



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the output gap tracks about 0.5 percent of GDP lower, and CPIX inflation is about 0.3 percentage points lower. These differences are of about the same magnitude as in the weaker-world scenario in the August *Monetary Policy Statement*.

In the stronger-world/delayed-recognition scenario, monetary conditions are forced to follow the central projection path for two quarters. In the third quarter of the projection period, monetary policy 'recognises' that the world outlook is in fact stronger than in the central projection, and reacts accordingly. The nominal MCI jumps up reasonably sharply in the third quarter, by about 175 MCI points. The path of the nominal MCI through the rest of the projection period is 250 to 275 MCI points higher than in the central projection. The output gap runs around 0.7 percent of GDP higher (that is, less negative), and CPIX inflation tracks around 0.5 percentage points higher.

In this simulation, the cost of monetary policy being late by two quarters is the sharpness of the movement in monetary conditions when reality dawns. Notably, the lateness does not much affect the inflation profile (a 0.5 percentage point difference from the central scenario, as opposed to a 0.3 percentage point difference in the weaker-world scenario in which monetary policy acted on the different world outlook immediately).

These results, which we emphasise are illustrative only, suggest the following points.

- Within a couple of quarters, monetary policy is able to make up for its initial lack of adjustment with a larger adjustment later.
- Inflation can be kept close to the target as long as 'mistakes' are corrected promptly, and a quarterly resetting of monetary conditions is sufficiently frequent for this purpose.
- With quarterly resets, the cost of mistakes shows up in the quarterly volatility of monetary conditions, rather than in material departures of inflation from target.

### Other risks

An additional risk to those explored quantitatively above is that the mix of monetary conditions that eventuates might

be quite different to that assumed here. The mix is beyond the Bank's control, varying instead with international financial markets' perceptions of, and attitudes towards, investment in New Zealand.

Developments in the current account position can influence those perceptions and attitudes. Compared to the August projections, the current account deficit is now projected to improve at a rather slower rate – notwithstanding the substantially lower exchange rate now compared to that projected in August – as world demand prospects have deteriorated. A further deterioration in the world outlook could slow the improvement even further.

In our central projection, we have assumed a roughly flat TWI profile. But it could well turn out that international markets take a dim view of the sustainability of New Zealand's current account position, and mark the exchange rate down further to compensate.

The implications of a further fall in the exchange rate for monetary policy would depend on the speed and duration of the fall, and on how quickly and/or strongly the fall were passed through into consumer prices. In the case of a sharp fall in the exchange rate, followed by a period of relative stability, the bulk of the direct-price consequences would be likely to occur over the short term (about a year). Because monetary policy focuses primarily on inflationary pressure somewhat further out – six to eight quarters ahead – a rise in interest rates to offset the exchange rate fall would in this case be warranted, to keep overall monetary conditions *unchanged* given the unchanged medium-term inflation outlook.

By contrast, a fall in the exchange rate that was long and drawn-out would be more likely to warrant a *tightening* in the overall level of monetary conditions (in this case, a *more than offsetting* rise in interest rates), as more of the direct-price effects would be likely to emerge six to eight quarters ahead.

In either case, the strength and speed of the passthrough would be likely to vary with the state of demand and profit margins. In this regard, our business contacts report that they have little remaining capacity in margins to absorb exchange rate falls. Further exchange rate falls could therefore be passed through quite quickly and strongly into prices.

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# Appendix 1: Chronology

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

## 1998

- 20 August: The Reserve Bank released its nineteenth Monetary Policy Statement. The news release accompanying the statement is reproduced in Appendix 2.
- 26 August: The Reserve Bank issued a statement on current monetary conditions. The statement is reproduced in Appendix 2.
- 25 September: GDP production figures were released showing that the New Zealand economy contracted 0.8 percent in the June quarter, and grew by 1.2 percent for the year to June 1998.
- 7 October: The Reserve Bank issued a statement on current monetary conditions. The statement is reproduced in Appendix 2.
- 15 October: The September 1998 quarter CPI was released. The CPIX rose 0.6 percent in the quarter and by 1.7 percent over the year to September.
- 30 October: The Reserve Bank announces changes to the calculation of the TWI.

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# 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*.

## Reserve Bank eases again

20 August 1998

The Reserve Bank's easing of monetary policy, underway since December 1996, continued today with the release of the August 1998 *Monetary Policy Statement*.

The Reserve Bank said that it now viewed a level of around zero on the Monetary Conditions Index (MCI) as appropriate. This was a cut of 350 points from the index level indicated as appropriate back at the time of the May *Monetary Policy Statement*, and was the largest cut in desired conditions since the Reserve Bank began easing monetary conditions at the end of 1996.

In recent days, actual conditions have settled at around zero on the MCI and the Reserve Bank is not seeking any further easing in monetary conditions at this stage.

Reserve Bank Governor Don Brash said: "The New Zealand economy in the first half of this year has been considerably weaker than we had expected. Also, the outlook for the world economy has weakened further, as the Asian crisis has continued to take its toll. As a result, inflationary pressures are expected to be lower than we thought earlier, allowing for easier monetary conditions.

"From here on, we project further easings into mid 1999, but at a much more modest pace than we've seen recently.

"Moreover, those further easings are clearly conditional on inflationary pressures evolving in the way now projected. With the economy projected to grow quite strongly from early 1999, some measures of inflation already showing some increase, and a risk that we may have under-estimated the effects of the recent depreciation in the New Zealand dollar on prices, there is obviously a chance that we will not be able to accommodate the easing now projected.

"At the same time, the international situation remains fragile. For that reason we will be monitoring the world economy and global financial markets with particular care over the months ahead," Dr Brash concluded.

## Speaking notes for briefing journalists on the release of the 20 August 1998 *Monetary Policy Statement*

20 August 1998

Good morning. This morning we are releasing our 19th *Monetary Policy Statement*.

### Overall assessment and level of conditions

Since the release of our last *Monetary Policy Statement* in May, the outlook for the economy has weakened considerably, and inflation pressures seem likely to be more subdued than we then anticipated. As a result, the Bank has been willing to sanction a very large easing in monetary conditions over the last quarter.

Clearly, in current circumstances we find ourselves making important judgements based on very uncertain prospects. The international environment has evolved rapidly over the last year, and will probably continue to be quite unstable for some time yet. At the same time, we must be conscious that we have eased monetary conditions very considerably, and the full impact of that has still to emerge.

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On balance, we have decided to go with a level of zero on the MCI for the December quarter. This is about where monetary conditions currently are, of course, so no further adjustment is called for with today's announcement.

### Developments since the May *Monetary Policy Statement*

When we released our *May Monetary Policy Statement*, it was obvious that the economy had been slowing sharply for several months. It is now apparent that GDP actually fell somewhat in the March quarter, and almost certainly fell further in the June quarter. This means that the economy was probably in a mild recession in the first half. At this stage, we project that GDP will grow by about 0.8 percent during the second half of 1998, but this too is markedly less than the 1.7 percent growth we had expected for the second half when we did our projections back in May.

Firm monetary policy in 1996 provides some of the explanation for the slow-down in the real economy. At that time, the Bank was trying to reduce the inflationary pressures which had pushed underlying inflation above 2 percent, the top of the target to which we were committed until December of that year.

But what turned a projected slow-down into an actual fall in GDP was the combined impact of the Asian crisis and a prolonged drought along the eastern coasts of both Islands. Neither of these factors could have been foreseen back in late 1996, when the monetary conditions which affected the real economy in the first half of this year were being determined.

As recently as October 1997, the International Monetary Fund projected, in its *World Economic Outlook*, that world growth would continue at over 4 percent per annum for the foreseeable future. In November, when we were preparing our December *Monetary Policy Statement*, the mean of the *Consensus Forecasts* for the 14 countries which constitute our main export markets was that GDP in those countries would grow by 3.4 percent in 1998 (weighted on the basis of New Zealand's exports). Last month, as we were preparing the projections for this August *Statement*, the mean of the *Consensus Forecasts* was that GDP in the same 14 countries would in aggregate grow by only 1.2 percent.

The main factor in this deterioration has been the very much weaker state of the Japanese economy than projected late last year, though the very weak condition of South Korea and some of the other countries of East Asia, and the slow-down in both the United States and Australia, have also been relevant. The sluggish state of demand in external markets has had a dramatic effect on the foreign-currency prices of many of our major commodity exports, and in some cases has also sharply curtailed export volumes.

At the end of June, I suggested that the Asian crisis could well constitute the most adverse shock to hit the New Zealand economy since the oil shocks of the 'seventies. So far, I have had no reason to change that view.

To make matters worse, the drought turned out to be more severe and more prolonged than we (and indeed most other people) had expected in the second half of 1997. This had a marked effect on GDP in the March quarter, and indeed will have an adverse impact on the economy for many months yet, as farmers struggle to rejuvenate their pastures and rebuild their herds.

In the second half of 1998, we see a more gradual pick up in growth than previously projected. Several of our major markets remain in recession and seem likely to remain sluggish for some time. At home, residential property prices look somewhat weaker than we had projected in May and this, together with an increase in unemployment, suggests that consumer demand will grow rather more slowly than previously projected.

But going into 1999, we still see quite a strong pick-up, with growth averaging a little over 4 percent in each of the years to March 2000 and March 2001. This expectation is based on a number of factors, of which the main ones are:

- \* First, the sharp fall in the real exchange rate which has taken place over the last 16 months has greatly improved the competitiveness of New Zealand producers, and assisted them in penetrating new export markets.

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- \* Second, the balance sheets of New Zealand banks and corporates are in very much better shape than they were in the early 'nineties, and this should assist the economy to respond to the lower exchange rate.
  - \* Third, we are projecting that external demand for our exports will be a little stronger next year than this, as East Asian economies stop contracting, steady but slightly slower growth continues in Australia and the US, and Euroland growth picks up further.
  - \* Fourth, we are projecting a moderate increase in investment next year, partly on the basis of our business contacts' suggesting that new investment is currently being deferred rather than cancelled and partly on the basis of anticipated public sector investment in infrastructure, health and education.

Already there are signs that both business sector and consumer confidence have improved rather sharply over recent weeks. While GDP growth of 1 percent per quarter sounds implausibly optimistic at this stage, it is worth recalling that GDP grew by at least 1.5 percent per quarter in each of the first three quarters of 1993, as New Zealand emerged from the recession of the early 'nineties.

### Outlook for inflation, and implications for monetary conditions

Because growth has been appreciably slower than expected three months ago, it seems clear that there is more spare capacity in the economy now than we expected back in May. This is reflected in the output gap (graph 13), which is expected to be both larger and more long-lasting than previously projected.

As a result of this excess capacity, and weak international prices for both our imports and our exports, inflationary pressures seem likely to remain weak for some time. Measured inflation is being further restrained by some sector-specific developments (such as new entrants into petrol retailing and electricity distribution, and intense competitive pressures in the telecommunications market), and by policy measures such as the removal of restrictions on parallel importing.

In 1999, we see some increase in measured inflation as the direct effects of recent exchange rate depreciation finally come through to some extent, but at this stage our best estimate is that CPIX inflation will remain between 1 and 2 percent per annum over the period covered by our projection.

There are some risks to that inflation outlook. Already, some measures of inflation (such as the weighted median) suggest that inflation may actually be somewhat higher than suggested by the CPIX, while expectations of inflation in the household sector remain much higher than measured inflation. There is a risk that we may be under-estimating the potential for prices to be pushed up by the exchange rate depreciation. Clearly the Bank will need to be mindful of these risks, and to monitor new information carefully as it comes to hand.

Our projection is based on a markedly easier track for monetary conditions than we thought was appropriate three months ago. As already mentioned, we now believe that monetary conditions of around zero on our Monetary Conditions Index are appropriate for the December quarter (we had projected 275 for the December quarter in our *May Statement*).

Beyond that, we see scope for some further easing, with the MCI levelling off at around -225 in the second half 1999, before firming gradually in 2000. But as always, our forward track for monetary conditions is highly conditional, and will be reviewed in the light of emerging data. We have no desire to over-do the easing; that would only require a more vigorous tightening further out, to the detriment of everybody.

As has often happened in the past, financial markets have reached very much the same conclusion as the Bank has, so that monetary conditions in recent days have been very close to the level suggested in today's *Statement*. This confirms our view that the better informed financial markets are about our likely reactions to new information, the greater the probability that monetary conditions will evolve in a way consistent with our policy objectives.

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## Uncertainties

Looking ahead, there are plenty of uncertainties.

For example, future revisions of the March quarter GDP number may well show that output fell by rather less than the preliminary figure suggested and that, as a result, the output gap is smaller than now seems possible. Confidence may continue picking up more strongly than now expected, perhaps as a result of the sharp fall in interest rates recently. In that event, importers and retailers may well try to pass on to consumers to a greater extent than now expected the increased New Zealand dollar prices they have been paying as a result of the depreciation in the exchange rate.

On the other hand, the international environment could turn out to be even weaker than now projected, with further difficulties in Asia, and possibly sharper slow-downs in the United States and Australia, perhaps triggered by an apparently-overdue correction in US equity prices. Domestically, consumer spending could be eroded by house prices falling by more than the 5 percent we have assumed they will fall (in real terms) over 1998.

From a policy point of view, it is quite a tricky call. Our sense is that the world economic situation is fragile. It is rare for such a large part of the world economy to be in sharp contraction, with a quick return to robust growth not just around the corner. At the same time, some important economies, including the world's largest, are at the tail end of a long period of growth, and are showing some of the signs of imminent correction. If these economies continue to grow, weakness in Asian and other emerging economies will be buffered. If not, a major world recession is possible.

On what scenario should we base policy? Section 7 contains a scenario in which world growth is assumed to be much slower, and it shows, not surprisingly, that in that event we should be engineering significantly easier monetary conditions. But it is by no means certain that a much slower world economy is the most probable outcome, and we also have to be mindful of the risks of higher inflation that I have already mentioned.

Given all the uncertainty, our view is that the Bank will need to continue to adopt a flexible approach to allowing the financial markets latitude to adjust. This flexibility has been well illustrated since the *May Statement*.

## Flexibility in the level of monetary conditions

It may be helpful at this point to make a few comments about the Monetary Conditions Index.

The MCI was developed as a very broad guide as to how much, all other things remaining equal, short-term interest rates need to change in order to keep overall monetary conditions constant if the exchange rate changes. Of course, seldom do all other things remain equal. Movements in the MCI thus always need to be interpreted in the context of everything else that is happening that has the potential to influence inflation pressures in the period ahead.

When in June 1997 we first began projecting the monetary conditions which would be required to deliver inflation close to the middle of our target band (in contrast to projecting the inflation rate which would result from given assumptions about monetary conditions), we provided markets with a rough indication of how we expected actual monetary conditions to behave relative to those specified in our projections as being consistent with the inflation objective.

In broad terms, and with considerable qualification that bears re-reading, we indicated that ".....we would expect actual monetary conditions to be within a range of plus or minus 50 MCI points from desired in the weeks immediately following a comprehensive inflation projection. As more data comes to hand over the ensuing three months, and as our last comprehensive inflation projection recedes into history, we may be rather more tolerant."

With that in mind, how should the markets interpret the development of the MCI over the past quarter, and what does the last quarter say about the Bank's likely behaviour in the future?

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The last quarter can best be viewed as unusual. Only a few weeks after the release of the *May Statement*, it became clear from the flow of emerging data that there was justification for a weaker MCI track than had been outlined in that document. The renewed weakness in Asia, the depreciation of the yen and the Australian dollar, and the evidence of greater-than-expected weakness in the domestic economy (especially the first quarter GDP result) all pointed in the direction of weaker inflationary pressures. As that new data emerged, financial markets generally adjusted smoothly in the direction of a lower MCI. In that situation, there was little case for a Reserve Bank response.

Have we become more tolerant of deviations from the specified MCI? As I have noted, the last quarter provided sound reasons for substantially greater deviation from 'desired' than we have seen, or have been prepared to accept, in the past. But deviations of the scale seen between May and August cannot be assumed to recur. If they do, they will need to be similarly justified by the flow of new information.

The Bank has, however, attempted to become less immediately responsive to market developments. The move to limit responses to the once-weekly window was a deliberate step in that direction. In making our weekly assessments, we are explicitly considering the duration as well as the extent of any deviations of the MCI from that announced, in the light of new information regarding the inflation outlook. As the quarter proceeds, we also pay some attention to the projected level of the MCI announced for the subsequent quarter.

## **Monetary conditions have eased too far, too fast**

**26 August 1998**

Reserve Bank Governor Don Brash today said: "Monetary conditions have eased too far, too fast since we released the *Monetary Policy Statement* last week.

"Only last Thursday, we indicated a desired MCI of zero. Since completing our projections, nothing has happened to change our assessment.

"Accordingly, in the absence of new information, we will be looking to see conditions tracking a good deal closer to the levels that we indicated as appropriate."

## **RBNZ signals caution**

**7 October 1998**

"The extent and pace of monetary policy easing over recent months has been very substantial, suggesting increasing need for caution", Reserve Bank Assistant Governor, David Archer, said today.

"While it has been appropriate for the Reserve Bank to stand back and facilitate this adjustment, given all the signs of a sharply weakening global economy", said Mr Archer, "the full effects of this easing will not materialise for some time. With monetary conditions now quite stimulatory, further softening from this point will need to be well justified."

# Appendix 3: Summary tables

Table A

## CPIX inflation projections and monetary conditions

(CPIX is in percentage changes)

	CPIX		TWI	90-day bank bill rate	MCI	
	Quarterly	Annual			Nominal	Real
1995	Mar.	0.5	59.8	9.4	474	408
	Jun.	0.6	60.8	9.1	527	452
	Sep.	0.4	61.7	9.0	590	574
	Dec.	0.6	61.9	8.5	557	567
1996	Mar.	0.6	64.2	8.7	759	759
	Jun.	0.8	64.6	9.7	890	886
	Sep.	0.4	65.6	10.0	997	1004
	Dec.	0.7	67.1	8.9	1000	1000
1997	Mar.	0.2	68.4	7.5	956	974
	Jun.	0.3	68.0	7.2	897	950
	Sep.	0.7	64.8	8.1	746	781
	Dec.	0.5	63.9	7.9	656	713
1998	Mar.	0.3	61.2	9.0	550	597
	Jun.	0.3	58.5	9.1	334	388
	Sep.	0.6	57.1	6.8	-17	71
	Dec.	0.5	55.6	4.6	-375	-275
1999	Mar.	0.3	55.1	4.7	-400	-300
	Jun.	0.4	54.8	4.7	-425	-350
	Sep.	0.2	54.4	4.8	-450	-300
	Dec.	0.2	54.4	4.8	-450	-300
2000	Mar.	0.4	54.5	4.8	-450	-300
	Jun.	0.3	55.0	4.7	-425	-275
	Sep.	0.3	55.3	4.7	-375	-275
	Dec.	0.4	55.7	4.7	-350	-250
2001	Mar.	0.4	56.0	4.9	-300	-225

## Table B

### World outlook

(Annual average percentage change, unless specified otherwise)

March year	Projections									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
World GDP	2.2	2.2	3.2	4.2	3.9	3.9	2.9	0.7	2.3	2.8
World CPI inflation	3.2	2.7	1.9	2.2	2.5	2.6	2.6	1.6	1.7	2.1
Domestic										
Import prices	1.0	6.7	-2.7	-1.8	-0.7	-3.4	0.8	7.2	3.2	1.0
Export price	-1.3	9.3	-1.2	-2.1	-2.8	-4.2	0.2	6.2	2.7	0.9
Terms of trade	-2.3	2.4	1.5	-0.3	-2.2	-0.8	-0.6	-0.9	-0.5	0.0
March quarter										
World 90-day rate (level, %)	4.7	3.6	3.7	6.5	5.7	5.5	5.5	4.7	4.4	4.7
World bond rate (level, %)	7.8	6.7	6.2	8.0	6.4	6.8	5.6	4.4	4.2	4.4

## Table C

## Composition of real GDP growth

(Annual average percentage change, unless specified otherwise)

March year	Actuals										Projections		
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001			
Final consumption expenditure													
Private	-2.0	0.3	3.2	6.1	4.1	4.1	3.3	1.6	1.3	1.5			
Public authority	0.0	3.0	-1.1	-0.9	2.8	2.3	6.0	-0.9	6.8	-0.5			
Total	-1.6	0.9	2.3	4.6	3.9	3.7	3.8	1.1	2.3	1.1			
Gross fixed capital formation													
Market sector:													
Residential	-15.3	2.8	17.0	12.3	-0.7	2.0	5.8	-12.2	-0.9	2.5			
Business	-20.7	5.3	20.3	16.1	14.0	4.9	-1.1	-2.1	7.8	6.6			
Non-market government sector	-3.5	-3.1	8.4	36.9	2.9	24.6	18.7	8.2	-0.4	3.6			
Total	-17.6	3.7	18.2	17.2	9.2	6.5	2.9	-2.7	4.7	5.3			
Final domestic expenditure	-4.6	1.3	5.0	7.0	5.0	4.3	3.6	0.3	2.8	2.0			
Stockbuilding <sup>(1)</sup>	0.0	0.7	1.1	0.0	-0.7	-0.4	0.2	-0.5	0.6	0.3			
<b>Gross national expenditure</b>	-4.6	2.0	6.1	6.9	4.1	3.9	3.8	-0.2	3.4	2.3			
Exports of goods and services	9.3	2.5	7.9	8.4	2.6	3.8	2.7	-3.0	4.2	6.9			
Imports of goods and services	-3.8	7.4	8.0	14.3	7.2	6.9	4.8	-1.0	3.2	1.3			
<b>Expenditure on GDP</b>	-1.1	0.8	6.1	5.3	2.7	2.9	3.1	-0.8	3.7	4.0			
<b>GDP (production)</b>	-1.2	1.2	6.3	5.4	3.6	2.7	2.3	-1.0	3.4	4.0			
GDP (production, March qtr to March qtr)	0.8	2.0	7.0	4.6	3.6	1.6	1.3	0.3	4.0	4.0			
Potential output	0.4	1.5	2.8	3.7	3.8	3.4	3.0	2.6	2.4	2.5			
Output gap (% of potential GDP, year average)	-2.7	-3.0	0.3	2.0	1.8	1.2	0.5	-3.1	-2.2	-0.8			

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

**Table D**  
**Household income and consumption**  
(Annual average percentage change)

March year	Actuals										Projections		
	1992	1993	1994	1995	1996	1997	1998e	1999	2000	2001			
Compensation of employees	-1.1	2.4	4.4	6.4	6.6	5.5	3.3	0.9	3.0	4.8			
Other income	0.2	-2.5	4.7	4.9	9.4	5.8	3.5	-0.9	1.6	3.1			
Total income	-0.5	-0.1	4.5	5.6	8.0	5.6	3.4	0.0	2.3	3.9			
Nominal disposable income	2.4	-0.4	5.0	5.0	6.9	5.4	4.1	0.8	4.6	4.4			
Consumption deflator	2.2	1.7	1.7	1.9	2.5	1.8	1.1	2.2	1.3	1.1			
Real disposable income	0.2	-2.0	3.3	3.0	4.3	3.5	3.0	-1.3	3.3	3.2			
Real household consumption	-2.2	0.3	3.2	6.1	3.9	4.0	3.4	1.6	1.2	1.5			
Household savings rate <sup>(1)</sup>	6.5	4.3	4.4	1.5	1.8	1.4	1.0	-1.9	0.2	1.8			

e = estimate.

<sup>(1)</sup> Percentage of disposable income.

## Table E

### Fiscal accounts (\$ billion)

June year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999	2000	2001	
Revenue										
Direct taxation	16.6	17.6	19.8	21.3	20.5	21.3	20.5	21.4	22.2	
Indirect taxation	9.2	10.1	10.4	11.0	11.4	11.7	11.7	12.0	12.3	
Non-tax revenue	4.0	2.5	3.4	2.8	2.9	2.6	2.5	2.6	2.7	
Total revenue	29.8	30.2	33.6	35.1	34.8	35.6	34.8	36.0	37.2	
Total expenses	31.4	29.6	30.4	31.7	33.0	34.2	35.2	36.6	37.7	
Revenue less expenses	-1.6	0.5	3.2	3.3	1.8	1.4	-0.5	-0.7	-0.5	
Net surplus attributable to SOEs and Crown entities	0.8	0.2	-0.6	0.0	0.1	1.2	0.9	0.4	0.6	
Operating balance (% of nominal expenditure GDP)	-0.8	0.8	2.7	3.3	1.9	2.6	0.4	-0.3	0.1	
	-1.1	0.9	3.1	3.6	2.0	2.6	0.4	-0.2	0.1	
Net public debt (as at June 30) (% of nominal expenditure GDP)	37.1	35.4	32.6	28.6	25.3	24.1	25.2	26.1	26.8	
	48.7	43.1	37.1	31.1	26.4	24.4	25.0	24.7	24.4	

**Table F**

**Investment**

(Annual average percentage change)

March year	Actuals										Projections		
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001			
Plant and machinery (P&M excluding computers)	-22.9	15.6	25.8	19.4	12.5	3.9	7.1	-4.6	11.0	5.4			
Transport equipment	-24.6	14.5	25.0	13.7	7.6	-1.4	-0.5	-6.8	10.2	5.4			
Commercial buildings	-20.9	25.4	21.0	11.0	6.8	12.5	-25.8	-5.3	1.2	10.5			
Other	-38.4	2.1	26.1	26.9	22.8	-0.4	-4.7	1.2	6.4	10.5			
	9.5	-30.7	-7.4	-7.7	22.0	7.8	5.1	12.0	0.8	2.3			
Market sector business investment (excluding computers)	-20.7	5.3	20.3	16.1	14.0	4.9	-1.1	-2.1	7.8	6.6			
	-21.4	4.3	19.6	12.9	11.6	2.4	-6.0	-2.6	6.6	6.8			
Market sector residential investment	-15.3	2.8	17.0	12.3	-0.7	2.0	5.8	-12.2	-0.9	2.5			
Total market sector investment	-19.2	4.6	19.4	15.0	10.0	4.2	0.5	-4.6	5.7	5.7			
Government (non-market) investment	-3.5	-3.1	8.4	36.9	2.9	24.6	18.7	8.2	-0.4	3.6			
Total investment (excluding computers)	-17.6	3.7	18.2	17.2	9.2	6.5	2.9	-2.7	4.7	5.3			
	-18.1	3.0	17.5	15.0	7.2	4.3	-0.7	-4.0	3.3	5.3			

## Table G

## Trade volumes and the current account

March year	Actuals										Projections			
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001				
Trade volumes (Annual average percentage change)														
Exports of goods	10.3	0.6	6.9	7.2	0.8	6.9	5.4	-5.4	3.6	6.9				
Exports of services	5.9	9.5	11.3	12.5	8.1	-4.9	-5.8	5.8	6.0	6.7				
Total exports	9.3	2.5	7.9	8.4	2.6	3.8	2.7	-3.0	4.2	6.9				
Imports of goods	-5.7	8.1	12.1	15.6	7.0	7.4	5.7	-2.2	4.0	0.8				
Imports of services	3.0	5.1	-5.3	9.1	8.2	5.0	1.1	4.0	0.2	3.6				
Total imports	-3.8	7.4	8.0	14.3	7.2	6.9	4.8	-1.0	3.2	1.3				
Current account (\$ billion March year annual total)														
Merchandise trade balance	3.6	3.4	3.1	2.1	0.9	0.9	1.0	0.8	0.6	2.1				
Services balance	-1.4	-1.7	-0.9	-0.6	-0.2	-0.6	-1.1	-1.9	-1.9	-1.6				
Investment income balance	-4.8	-3.9	-4.5	-6.0	-6.0	-7.1	-7.9	-6.4	-6.0	-6.7				
Transfers balance	0.7	0.9	1.5	1.8	2.5	2.3	0.8	0.3	0.6	0.8				
Current account <sup>(1)</sup>	-1.9	-1.3	-0.8	-2.6	-2.8	-4.5	-7.2	-7.2	-6.8	-5.5				
(% of nominal production GDP)														
(% of nominal production GDP ex migrants' transfers)	-2.6	-1.7	-1.0	-3.1	-3.1	-4.7	-7.2	-7.3	-6.5	-5.0				
	-3.3	-2.6	-2.3	-4.7	-5.4	-6.2	-7.4	-7.4	-6.7	-5.4				

<sup>(1)</sup>Errors in adding up the current account are due to rounding.

**Table H**  
**Labour market**

March year	Actuals										Projections		
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001			
Change in labour force:													
Natural increase (000's)	24.2	22.5	23.4	24.7	25.2	19.0	19.0	17.1	17.2	17.3			
Net migration (000's)	1.7	2.8	6.5	9.2	13.0	9.1	-0.2	-3.4	1.6	6.1			
Increase in participation (000's)	-10.1	-13.7	28.2	9.4	30.5	0.4	-4.4	-9.8	11.6	10.4			
Total change in labour force (000's)	15.7	11.6	58.1	43.2	68.7	28.5	14.4	3.9	30.4	33.8			
March quarter													
Population of working age (000's)	2584	2624	2671	2723	2781	2824	2853	2874	2902	2938			
Labour force participation rate (%)	63.8	63.2	64.3	64.7	65.8	65.8	65.6	65.3	65.7	66.1			
Total labour force (000's)	1648	1660	1718	1761	1830	1858	1872	1876	1907	1940			
Total employment (000's)	1466	1490	1555	1639	1711	1731	1732	1709	1748	1796			
Annual growth (%)	-0.4	1.6	4.4	5.4	4.4	1.2	0.0	-1.3	2.3	2.8			
Unemployment (000's)	182	170	163	122	119	127	141	167	159	144			
Unemployment rate	11.1	10.2	9.5	6.9	6.5	6.8	7.5	8.9	8.3	7.4			
Unemployment rate (s.a.)	10.6	9.8	9.1	6.6	6.1	6.5	7.1	8.4	7.9	7.0			
Total hours worked	0.8	3.4	3.8	6.6	4.8	-2.1	-0.6	0.4	2.1	2.6			
Annual growth (%)													
Labour productivity	0.9	-0.9	1.7	-0.4	-0.7	1.1	2.4	0.0	2.1	1.4			
Annual growth (%)													
OES private sector wages (\$ per hour)	14.0	14.1	14.3	14.6	15.1	15.7	16.1	16.4	16.8	17.1			
Annual growth (%)	2.8	0.7	1.4	2.1	3.7	4.0	2.6	1.8	2.0	2.3			

## Table I

## Short-term projections

(Quarterly percentage changes, unless specified otherwise)

	Actuals						Projections					
	Dec-96	Mar-97	Jun-97	Sep-97	Dec-97	Mar-98	Jun-98	Sep-98e	Dec-98	Mar-99	Jun-99	
Price measures												
CPIX	0.7	0.2	0.3	0.7	0.5	0.3	0.3	0.6	0.5	0.3	0.4	
Wages	0.6	1.4	1.0	0.6	0.4	0.6	1.1	-0.1	0.1	0.8	1.0	
House prices	2.7	2.3	0.9	0.6	1.4	-1.0	-2.9	-1.5	0.1	0.1	-0.9	
Construction costs (residential)	0.4	0.2	1.0	1.4	1.4	0.5	1.1	-1.8	-0.3	0.0	0.6	
Import prices	-0.9	-0.7	0.1	2.5	0.6	-0.1	3.5	1.6	2.4	1.1	0.1	
Monetary conditions (level)												
Nominal MCI	1000	956	897	746	656	550	334	-17	-375	-400	-425	
TWI	67.1	68.4	68.0	64.8	63.9	61.2	58.5	57.1	55.6	55.1	54.8	
90-day rate	8.9	7.5	7.2	8.1	7.9	9.0	9.1	6.8	4.6	4.7	4.7	
Output and employment (seasonally adjusted)												
GDP (production)	0.7	-0.2	1.6	0.4	0.3	-1.0	-0.8	0.0	0.3	0.9	1.0	
Total employment	-0.4	-0.1	0.3	-0.2	0.2	-0.3	-0.8	-0.6	-0.1	0.4	0.4	

e = estimate

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# Appendix 4: Notes to the tables

<b>CPIX</b>	Consumers Price Index excluding Credit Services. <i>Consumers Price Index</i> .
<b>TWI</b>	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.
<b>90-day rate</b>	RBNZ. Defined as: The interest yield on 90-day bank bills.
<b>Nominal MCI</b>	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 $\text{TWI}_0$ are corresponding averages of daily rates for the December 1996 quarter, where $r_0 = 8.91$ and $\text{TWI}_0 = 67.11$ .
<b>Real MCI</b>	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 $\text{RTWI}_0$ 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.
<b>World GDP</b>	Reserve Bank definition. 14-country index, export weighted. Projections based on <i>Consensus Forecasts</i> . Seasonally adjusted.
<b>World CPI inflation</b>	RBNZ definition and estimate: TWI trading partners' CPI inflation, weighted by TWI weights. Projections based on <i>Consensus Forecasts</i> .
<b>Import prices</b>	Domestic currency import prices. <i>Overseas Trade Indexes</i> .
<b>Export prices</b>	Domestic currency export prices. <i>Overseas Trade Indexes</i> .
<b>Terms of trade</b>	Constructed using domestic-currency export and import prices. <i>Overseas Trade Indexes</i> .
<b>World 90-day rate</b>	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 90-day interest rates. Projections based on <i>Consensus Forecasts</i> .
<b>World bond rate</b>	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 10-year interest rates. Projections based on <i>Consensus Forecasts</i> .
<b>Private consumption</b>	<i>System of National Accounts</i> .
<b>Public authority consumption</b>	<i>System of National Accounts</i> .
<b>Residential investment</b>	RBNZ definition: Private sector and government market sector residential investment. <i>System of National Accounts</i> .
<b>Business investment</b>	RBNZ definition: Total investment less the sum of non-market investment and residential investment. <i>System of National Accounts</i> .
<b>Non-market investment</b>	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.
<b>Final domestic expenditure</b>	RBNZ definition: The sum of total consumption and total investment. <i>System of National Accounts</i> .
<b>Stockbuilding</b>	Percentage point contribution to the growth of GDP by stocks. <i>System of National Accounts</i> .

<b>Gross national expenditure</b>	Final domestic expenditure plus stocks. <i>System of National Accounts</i> .
<b>Export of goods and services</b>	<i>System of National Accounts</i> .
<b>Imports of goods and services</b>	<i>System of National Accounts</i> .
<b>GDP (production)</b>	<i>System of National Accounts</i> .
<b>Potential output</b>	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.
<b>Output gap</b>	RBNZ definition and estimate: The percentage difference between real GDP (production, seasonally adjusted) and potential output GDP.
<b>Compensation of employees</b>	<i>Household Income and Outlay Accounts</i> .
<b>Other income</b>	<i>Household Income and Outlay Accounts</i> .
<b>Nominal disposable income</b>	<i>Household Income and Outlay Accounts</i> .
<b>Consumption deflator</b>	<i>System of National Accounts</i> .
<b>Real disposable income</b>	<i>Household Income and Outlay Accounts</i> .
<b>Real household consumption</b>	<i>System of National Accounts</i> .
<b>Household savings rate</b>	<i>Household Income and Outlay Accounts</i> .
<b>Direct taxation</b>	Historical source: The Treasury. Defined as total personal taxation, total company taxation and total withholding taxes. Adjusted by the RBNZ over the projection period.
<b>Indirect taxation</b>	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
<b>Non-tax revenue</b>	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
<b>Total expenses</b>	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
<b>Net surplus attributable to SOEs and Crown entities</b>	The Treasury.
<b>Government operating balance</b>	Percentage of nominal GDP (expenditure), June year.
<b>Net public debt</b>	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
<b>Plant and machinery investment</b>	RBNZ definition: Market sector plant and machinery investment. <i>System of National Accounts</i> .
<b>Plant and machinery investment (excluding computers)</b>	RBNZ definition: Market sector plant and machinery investment excluding computer investment. <i>System of National Accounts</i> .
<b>Transport equipment</b>	RBNZ definition: Market sector transport equipment investment. <i>System of National Accounts</i> .
<b>Commercial buildings</b>	RBNZ definition: Market sector non-residential building investment. <i>System of National Accounts</i> .
<b>Other investment</b>	RBNZ definition: Market sector other construction and land improvement investment. <i>System of National Accounts</i> .
<b>Total market investment</b>	RBNZ definition: The sum of total business investment and total residential investment. <i>System of National Accounts</i> .
<b>Total investment</b>	<i>System of National Accounts</i> .

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<b>Total investment (excluding computers)</b>	Total investment less computer investment. <i>System of National Accounts.</i>
<b>Export of goods</b>	<i>System of National Accounts.</i>
<b>Export of services</b>	<i>System of National Accounts.</i>
<b>Import of goods</b>	<i>System of National Accounts.</i>
<b>Import of services</b>	<i>System of National Accounts.</i>
<b>Merchandise trade balance</b>	<i>Balance of Payments.</i>
<b>Services balances</b>	<i>Balance of Payments.</i>
<b>Investment income balance</b>	<i>Balance of Payments.</i>
<b>Transfers balance</b>	<i>Balance of Payments.</i>
<b>Current account balance</b>	<i>Balance of Payments.</i>
<b>Natural increase</b>	Defined as the change in the population of working age minus net migration.
<b>Net migration</b>	Net arrivals of working age (15-64). <i>External Migration.</i>
<b>Participation rate</b>	<i>Household Labour Force Survey.</i>
<b>Labour force</b>	<i>Household Labour Force Survey.</i>
<b>Total employment</b>	<i>Household Labour Force Survey.</i>
<b>Unemployment rate</b>	<i>Household Labour Force Survey.</i>
<b>Total hours worked</b>	<i>Household Labour Force Survey.</i>
<b>Labour productivity</b>	Defined as GDP (production) divided by HLFS hours worked. This series is smoothed by taking a four-quarter moving average.
<b>Wages</b>	Private sector ordinary time average hourly earnings. <i>Quarterly Employment Survey.</i>
<b>House prices</b>	Average house price index, Quotable Value New Zealand.
<b>Construction costs (residential)</b>	RBNZ estimate: component of the Housing Group, <i>Consumers Price Index.</i>
<b>Quarterly percentage change</b>	$(\text{Quarter}/\text{Quarter}_{-1}) * 100$
<b>Annual percentage change</b>	$(\text{Quarter}/\text{Quarter}_{-4}) * 100$
<b>Annual average percentage change</b>	$(\text{Year}/\text{Year}_{-1}) * 100$

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

