
Monetary Policy Statement¹

August 1999

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

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¹ Projections finalised on 3 August 1999. Policy assessment finalised on 17 August 1999.

1 Overview and policy assessment

The Bank has decided to leave the Official Cash Rate at 4.5 per cent. If the economy evolves as now projected, however, it looks increasingly likely that there will need to be some increase in that rate before the end of the year. Without such an increase, we could face the prospect that inflation in one to two years' time will be pushing towards, or even through, the upper end of the 0 to 3 per cent target range.

Since our May *Monetary Policy Statement*, there have been several developments which point in the direction of stronger and earlier inflation pressures. The most important of these is a relatively marked change in the outlook for the world economy. In May, using the April *Consensus Forecasts*, we saw an increase in the export-weighted GDP of our 14 main trading partners of 1.9 per cent in 1999. The July *Consensus Forecasts*, on which these projections are based, suggest growth in those countries of 2.7 per cent this year and slightly more than previously projected next year as well. This additional growth in our main trading partners, together with a general perception that the international economy has become rather less fragile, provides a significantly more positive environment for the New Zealand economy than was envisaged only three months ago.

Moreover, it appears that there is less spare capacity in the economy than we thought previously. These two factors taken together suggest that the point at which growth in demand will start to put upwards pressure on inflation is some 12 months earlier than previously assessed, in late 2000 rather than in late 2001.

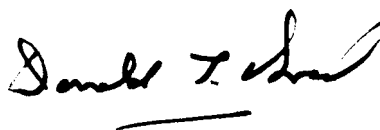
In other words, the economy appears to be growing slightly faster than potential output, and the output gap is closing. At the time of writing, it seems clear that the New Zealand economy has been maintaining a growth rate of something like 3 per cent per annum for the last 12 months. Credit continues to expand briskly, wages seem to be growing well ahead of productivity, and measured inflation is likely to increase significantly over the next year. Monetary conditions remain stimulatory. Indeed, they are considerably easier than they were prior to the release of our May *Statement* because of the fall in the exchange rate since that time. We recognise that all too often central banks find themselves behind the game, realising only after the event that they were a bit

too slow to respond to changing conditions. All of these factors suggest that the time is approaching when it will be appropriate to begin putting a little less pressure on the monetary policy 'accelerator'.

This does not mean that we see any imminent need to 'hit the brakes' however, and as usual there are conflicting signals on the monetary policy check-list. Although the world economy is looking considerably more robust than previously, there remain some significant question marks, such as the strength and duration of the recoveries in Japan and Korea, the prospects for growth in China and Latin America, and the possibility of a stock market correction in the US. Domestically, we suspect that confidence is still relatively fragile. There are a few signs that credit growth, while still not slowing, is at least no longer accelerating. Longer-term interest rates have already risen quite sharply, largely because of a strong rise in international bond yields. And importantly, the significant near-term increase in inflation is a result of a small number of clearly identifiable 'one-offs': generalised inflationary pressures are expected to pick up more gradually.

Financial markets are expecting an increase in the Official Cash Rate over the next six to 12 months. Most market analysts have been expecting the Bank to increase the Official Cash Rate late this year or early next, while forward markets are pricing in an Official Cash Rate of approximately 5.75 per cent by the middle of next year.

On balance, as indicated, the Bank has decided to leave the Official Cash Rate unchanged at this point, but it looks increasingly likely that an increase in that rate will soon be appropriate.



Donald T Brash
Governor

Figure 1
Consumer price inflation
(annual percentage change)

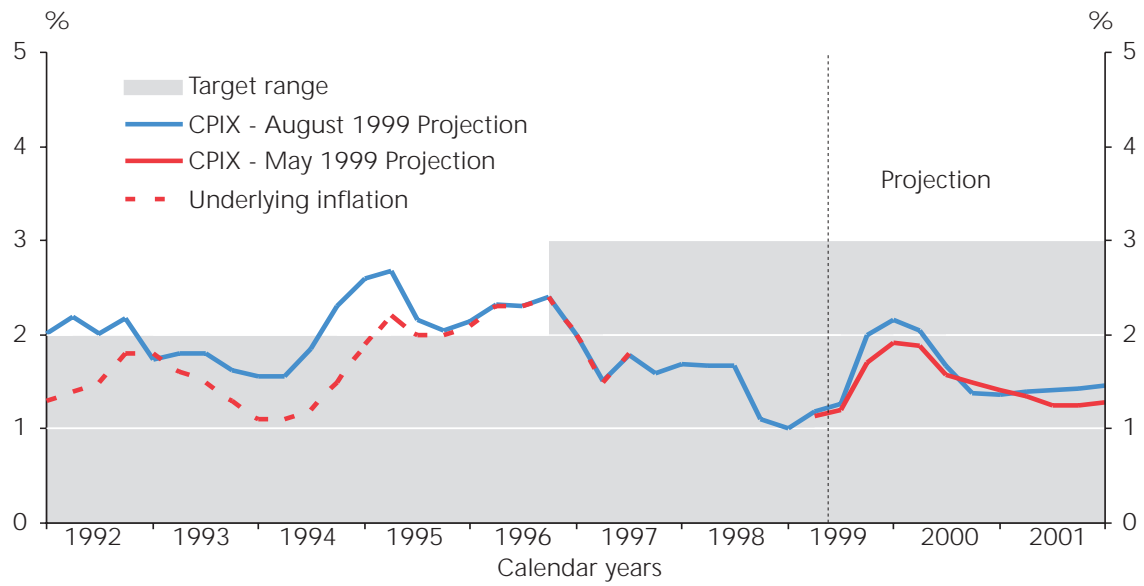


Table 1

Summary of economic projections

(Annual percentage change, unless specified otherwise)

March year	Actuals		Projections		
	1998	1999	2000	2001	2002
Price measures					
CPIX	1.7	1.0	2.2	1.4	1.5
Wages	2.6	2.7	2.6	3.1	3.1
Import prices (in New Zealand dollars)	2.9	2.9	1.7	-0.8	-0.2
Export prices (in New Zealand dollars)	4.8	-1.5	2.6	-0.9	-0.4
Monetary conditions					
Nominal MCI (year average)	700	-50	-125	0	100
90-day rate (year average)	8.0	6.2	5.0	5.5	6.0
TWI (year average)	64.4	57.3	58.0	58.6	59.4
Output					
GDP (production, annual average % change)	2.0	-0.2	3.0	3.8	3.5
Output gap (% of potential GDP, year average)	0.6	-2.0	-1.4	-0.2	0.3
Key balances					
Government operating balance (% of GDP, June year average)	2.6	2.3	0.3	0.8	1.1
Current account balance [†] (% of GDP, year average)	-6.8	-6.5	-7.0	-5.5	-5.3
Terms of trade (annual average % change)	-0.6	-0.6	-1.7	0.8	-0.2
Unemployment rate (March qtr. s.a.)	7.2	7.2	6.8	6.3	5.8
Household savings rate (% of disposable income)	0.0	0.3	0.0	0.7	1.1
World economy					
World GDP (annual average % change)	3.1	0.9	2.8	2.8	2.8
World CPI inflation	2.4	1.0	1.7	1.8	2.0
Quarterly projections					
(quarterly percentage change, unless specified otherwise)	Mar-99	Jun-99	Sep-99	Dec-99	Mar-00
CPIX	0.2	0.5	0.7	0.6	0.3
CPIX (annual percentage change)	1.0	1.2	1.3	2.0	2.2
GDP (production, s.a.)	0.7	0.5	1.0	1.0	0.8

e = estimate.

s.a. = seasonally adjusted

Notes for this table are in Appendix 4

[†] excluding migrants' transfers

2 Recent developments and current economic situation

Looking back to the May *Monetary Policy Statement*

In the *May Statement*, the Bank noted that both international and domestic economic conditions were improving. Trading partner growth was expected to pick up gradually over the next two to three years, and global financial markets had stabilised following the turmoil of 1998. Domestically, too, the economic recovery was underway. Growth at around 3 percent per annum was anticipated for this calendar year, picking up to slightly higher rates over the next two to three years. With spare capacity expected to persist in the economy for some time, and with general inflation continuing to trend downwards, the Bank saw continued monetary stimulus as appropriate.

International developments since May

Recent economic data for New Zealand's major trading partners have been surprisingly strong, particularly in the US, Australia, and Japan. US and Australian growth continues at robust levels, and is showing few signs of weakening markedly over the near term. Prospects for the European economies have also improved.

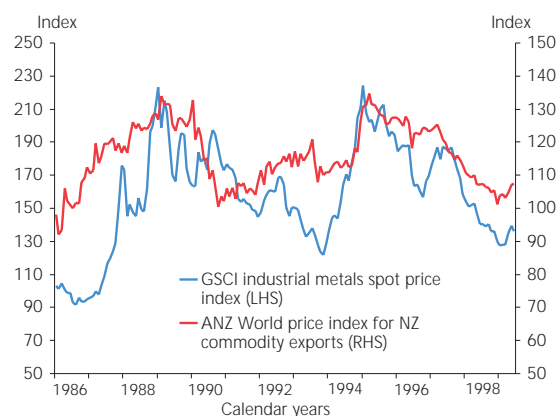
The growth in Japan over the March quarter, at 1.9 percent, was especially notable, given that country's long period of economic languor. That result is encouraging, and indicators for the June quarter – including industrial production – have also been surprisingly strong. However, the Bank's assessment is that growth figures in Japan for the next few quarters are unlikely to be quite as strong as for the March quarter. This view seems to be shared by international forecasters. Much of the strong March quarter growth in Japan reflected increased government spending on infrastructure, that offset weak or declining net external demand. It seems unlikely, given Japanese government debt levels, that such fiscal support can be sustained indefinitely into the future. The recovery in Japan is therefore still expected to be gradual, with robust growth unlikely to return to the economy soon.

Economic activity in other parts of Asia appears to be picking up a little more convincingly. Most countries in the region

are showing signs of growth, notably in manufactured exports. The recovery in South Korea appears to be somewhat more advanced than in other countries in the region, with domestic private sector demand beginning to improve. However, considerable economic and financial-sector stress remains, with the durability of the upswing and strong growth prospects dependent on ongoing structural reform.

The improvement in developed-country prospects, together with the turnaround in the Asian region, has seen the international prices of New Zealand's commodity exports stabilise and show some signs of recovery, after falling over the past four years or so (see Figure 2). Other commodity prices have begun rising – crude oil prices particularly sharply, from around US\$10 per barrel (Dubai blend) in February, to US\$16 per barrel at the time of the *May Statement*, to around US\$19 per barrel now. The rise in crude oil prices, however, probably reflects OPEC-driven supply cuts as much as increased world demand.

Figure 2
Commodity price indices²



Around the developed world, inflation remains low, at around 1 to 2 percent in the US and Australia, below 1 percent in Euroland, and close to zero in Japan. In the US, some upward inflationary pressure now appears to be emerging, after that country's long period of high growth and tight labour markets.

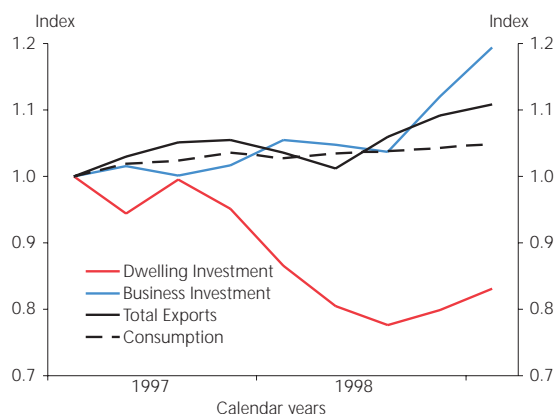
² Sources: Datastream, ANZ.

Along with the strengthening perception that the world economy and international financial markets have become more stable and robust, increasing wariness about rising inflationary pressure in the US has changed the tone of market expectations about US monetary policy towards higher interest rates in the near term.

Developments in domestic activity

Since May, economic activity in New Zealand has developed largely as the Bank projected. The GDP result for the March quarter came in at 0.7 percent, as expected. This result marked the third quarter of solid economic growth since the recession in the first half of 1998. Household and business spending continued to trend upwards. House-building activity in particular picked up quite rapidly, after the sharp fall in 1998. Exports as a whole showed reasonable growth, though strength was more evident in exports of services. Exports of goods continue to be constrained by the poor pastoral production conditions stemming from two consecutive seasons of drought.

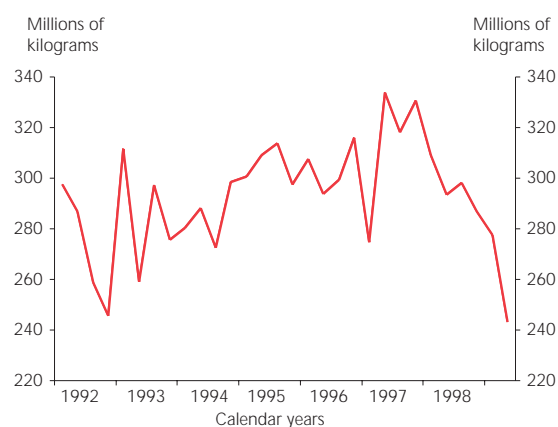
Figure 3
Selected components of GDP
(*seasonally adjusted; March 1997 quarter = 1*)



We still see the current rate of overall economic growth as trending around $\frac{3}{4}$ percent per quarter (3 percent per annum). We expect growth over the June quarter to be a little weaker than that, but this dip in growth should be temporary, and fully recovered in the September quarter.

The fluctuation over the June and September quarters reflects two principal factors. One, the recent greater availability and quality of feed has enabled farmers to carry more stock than usual through winter, thus delaying some of the normal pre-winter slaughtering (see Figure 4). At least some of this extra stock will probably be slaughtered in the September quarter.

Figure 4
Quarterly total slaughter volumes
(*seasonally adjusted*)



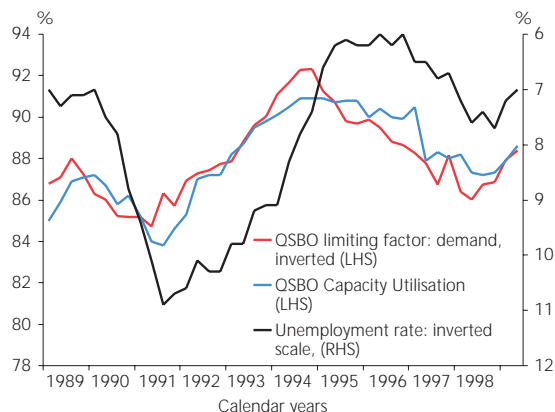
Two, the recent pattern of retail activity has been influenced by mild weather over the early months of winter. Our business contacts suggest that the weak retail figures for the June quarter reflect initially slow sales of winter items, with a pick-up expected currently and in coming months. In addition, the cashflow required for purchases of Contact Energy shares in the June quarter may have delayed some household expenditure.

If we look through these temporary influences on activity, the weight of other economic indicators suggests that growth will maintain a steady pace over the next few quarters. Our business contacts indicate that they are beginning to undertake new investment. Building consents issued for the construction of new dwellings have recently reached high levels, indicating that the recovery in dwelling investment is likely to continue for the rest of this year. Although goods exports have shown weakness in the last couple of months, this mainly reflects the delayed stock slaughtering noted above. Exports of manufactured goods are beginning to pick up noticeably, suggesting that improvements in price competitiveness from the lower exchange rate are starting to boost

growth in this sector. Visitor arrivals continue to grow strongly, and the low exchange rate is encouraging tourists to spend more. We expect the make-up of growth to become more balanced over the near term, with growth in goods exports 'catching up' to growth elsewhere in the economy.

Based on indicators of spare capacity (see Figure 5), the Bank's assessment is that there is currently a negative output gap in the economy of around 1½ percent of GDP. The indicators have turned in the direction of less spare capacity in the last six months or so, indicating that the negative output gap is closing.

Figure 5
Measures of spare capacity³
(seasonally adjusted)



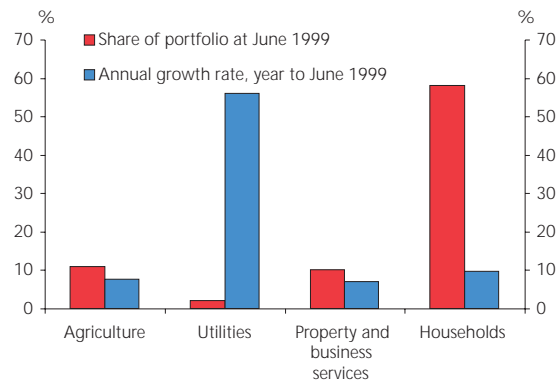
Indeed, the indicators shown in Figure 5 have turned upwards a little more quickly than we expected, which leads us to see slightly lower near-term growth in potential output. Given our view on demand growth, this implies slightly faster absorption of the current spare capacity than anticipated previously.

Developments in money and credit markets

In the year to June, lending to the private sector has grown at a healthy rate, reflecting the favourable interest rate environment and the economic recovery. However, the composition of new lending has been somewhat lop-sided, with most being loans for housing. Among non-financial

businesses, only farming, property and business services, and utilities have shown much demand for new credit (see Figure 6). Only in the last few months has lending to the non-food manufacturing sector shown some mild growth.

Figure 6
Growth in loans from M3 institutions, by sector⁴



On the business lending side, our recent discussions with bankers reveal that, to this point in the business cycle, investment has been funded largely from firms' cash-flow. Availability of credit is not constraining business investment. Lending to households has risen in tandem with the recovery in the housing market. The annualised rate of growth in lending to households rose from around 5 percent per annum in the third quarter of 1998, to about 11 percent per annum for the first half of 1999.

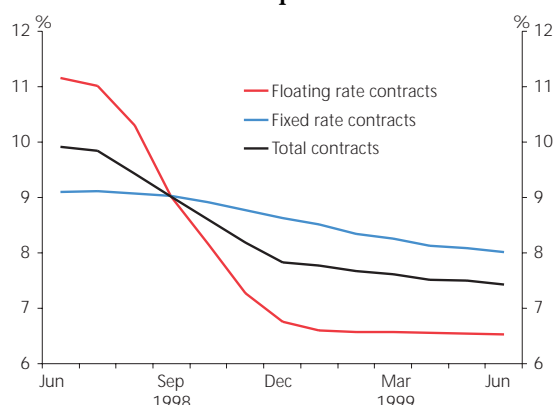
Although the fall in floating mortgage interest rates over the last year has been large, the effect on household disposable income will have been muted by the prevalence of fixed-rate mortgages. Around 60 percent of outstanding residential loans are now at fixed interest rates, in contrast to the early 1990s when few residential loans were fixed. Over the year to June 1999, floating mortgage interest rates fell from an average of 11.25 percent to 6.5 percent, while the average interest rate on all mortgages fell only 2.5 percentage points over the same period, because of the large proportion of fixed-rate mortgages (see Figure 7, overleaf).

Despite this move towards fixed-rate mortgages, any policy tightening will still have a fairly rapid impact in the mortgage market, with 40 percent of residential mortgages on floating rates, and another 20 percent re-pricing from fixed rates in

³ Sources: NZIER, Statistics New Zealand. QSBO limiting factor: demand has been rescaled.

⁴ Source: RBNZ.

Figure 7
Average yields on bank residential loan portfolios⁵



the coming year. In addition, there may be a tendency for borrowers to fix their mortgage rates at the first sign of tightening, which, given the upward-sloping yield curve, would have the effect of raising the interest rate faced by the average residential borrower. On balance, though, we expect that the effect of rising short-term interest rates on household disposable income will now be somewhat more drawn-out than previously, due to the higher proportion of fixed-rate contracts.

Recent developments in inflation

Inflation developments in New Zealand since May have been close to our expectations. CPIX inflation for the June quarter came in at 0.5 percent, bringing inflation for the year to June to 1.2 percent. Our assessment remains that the trend rate of CPIX inflation is currently around 1½ percent per annum, and that it will remain at around this level over the near term. This view of the trend rate of CPIX inflation 'looks through'

Table 2
Core inflation measures⁶

	CPIX		Weighted median		10% trimmed mean		CPIX excl. food, energy & petrol	
	QPC	APC	QPC	APC	QPC	APC	QPC	APC
Sep-98	0.6	1.7	0.3	1.8	0.4	1.6	0.5	1.5
Dec-98	-0.1	1.1	0.0	1.3	-0.1	1.0	-0.1	0.9
Mar-99	0.2	1.0	0.0	0.8	0.2	0.8	0.1	1.0
Jun-99	0.5	1.2	0.1	0.5	0.2	0.6	0.6	1.2

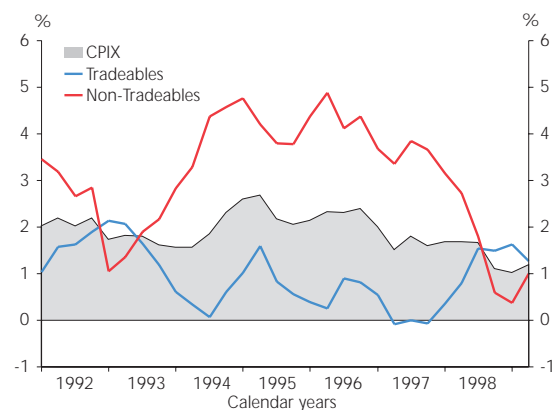
⁵ Source: RBNZ survey of M3 institutions.

certain one-off price movements expected to lift CPIX inflation temporarily over the near term, about which we have written before, and which we discuss later in this section.

Weighted-median consumer inflation and trimmed-mean consumer inflation, examples of measures of 'core' consumer inflation, appear also to be following a flattish trend (see Table 2). The CPIX excluding food, energy and petrol, another common measure of core inflation, has been following a similar profile to the overall CPIX.

The non-tradeables and tradeables CPIX inflation results were quite divergent for the June quarter, with the influence of large increases in particular regimen items evident. The increase in motor vehicle licensing fees and electricity prices – which we expect to be one-off in nature – helped push non-tradeables inflation to 0.9 percent for the June quarter, and to 1.0 percent for the year to June.

Figure 8
Tradeables and non-tradeables inflation
(annual percentage change)

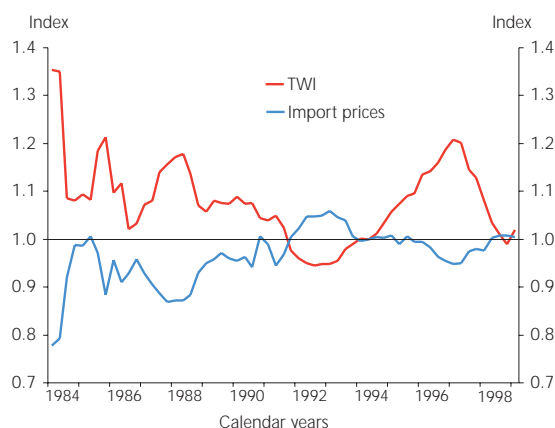


⁶ QPC = quarterly percentage change. APC = annual percentage change.

Tradeables inflation remains low, at zero percent for the June quarter and 1.3 percent for the year to June. Some time has now elapsed since the large depreciation in the exchange rate from 1997 to mid-1998, with little apparent impact on tradeables inflation. However, as Figure 8 shows, annual tradeables inflation has run above annual non-tradeables inflation for three quarters now, whereas the reverse has been the case through most of this decade.

Looking back at the large exchange rate appreciation and subsequent depreciation in the five years since 1994, it is apparent that 'passthrough' behaviour has been quite different to that seen earlier in New Zealand. In particular, the very muted response of New Zealand dollar import prices to the latest exchange rate cycle is notable (see Figure 9).

Figure 9
TWI and New Zealand import prices
(Index 1994q2 = 1)



This phenomenon, of reduced response of domestic import prices to exchange rate movements, is not unique to New Zealand. Other open economies, such as Australia, the UK and Canada, have experienced the same thing, suggesting that the causes are something to do with global markets generally, rather than specific to New Zealand. There are two likely, not mutually exclusive, explanations.

The first possible explanation is that the strength of world demand has followed a cycle similar to that in the New Zealand dollar exchange rate recently, implying offsetting pressures on local-currency prices. During the 1993-96 appreciation, demand internationally (as well as in New Zealand) was strong, implying relatively little pressure on international suppliers to the New Zealand market to reduce local-currency

prices, even though the value of the New Zealand dollar was rising. The opposite then occurred during the 1997-98 depreciation – world and domestic demand were relatively weak, which limited the ability of suppliers to raise local-currency prices.

The second possible explanation is a broader one. It may simply be the case that, for competitive reasons, multi-national suppliers are now taking a more 'swings and roundabouts' approach to pricing. In this view, suppliers are more tolerant of exchange-rate-driven fluctuations in profit margins, and avoid quickly passing on exchange rate movements into local-currency prices.

Even where there have been exchange-rate-driven rises in New Zealand dollar materials costs, our business contacts report reluctance to pass these cost increases into final consumer prices. The typical reason cited is the downward pressure on prices as a result of competition, which is identified either as a general feature of the New Zealand economy, or as reflecting the current slack state of demand.

The latter assessment implies some risk of upward price pressure due to margin recovery when the state of demand improves (that is, exchange rate passthrough could simply now take longer than previously). But weighing together all the above arguments, we expect the reduced response of New Zealand dollar prices to exchange rate movements, observed over the past five years, to be an enduring feature of pricing behaviour in New Zealand.

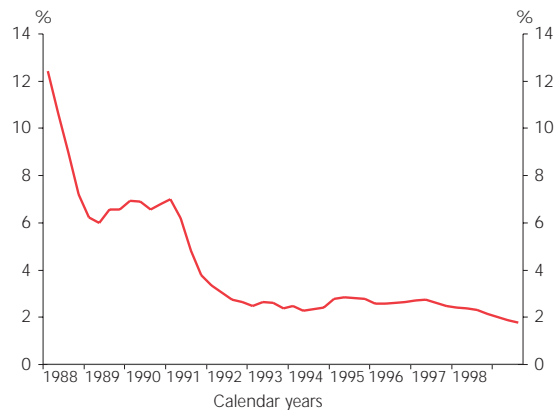
Short-term inflation outlook

CPIX inflation will be boosted temporarily in the current quarter and in the December quarter by some large upward shifts in particular CPI regimen items. As noted in May, these items include petrol and electricity prices, and local authority rates. Increases in motor-vehicle registration fees, announced since May, add further to the short-term rise in inflation.

As we indicated in May, we do not expect this temporary rise in measured inflation to lead to more generalised inflationary pressure. The argument leading us to this view is similar to that noted earlier as explaining the lack of passthrough of exchange-rate-driven cost increases into CPI inflation – namely, the competitive pressure on prices. Inflation expectations in

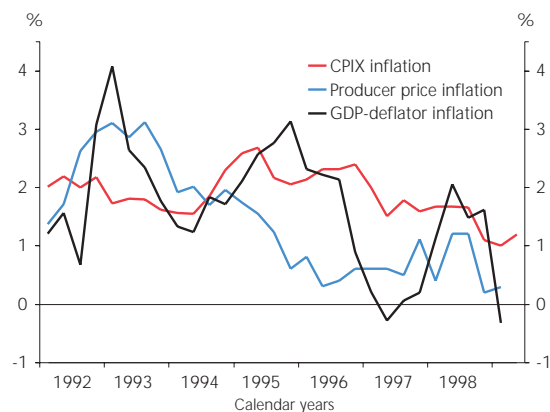
New Zealand (like those in other developed countries) appear well-anchored, trending in a narrow range over the past seven years or so despite quite wide fluctuations in cost pressures and in the overall state of demand in the economy. Indeed, surveyed inflation expectations in New Zealand have trended mildly downwards over the past two years (see Figure 10).

Figure 10
One-year-ahead CPI inflation expectations⁷



Wider measures of price inflation, such as producer price inflation and inflation in the GDP deflator, are also still falling (see Figure 11). These data generally support the Bank's assessment that overall demand conditions in the economy are currently placing net downward pressure on general inflation.

Figure 11
Measures of inflation (annual percentage change)

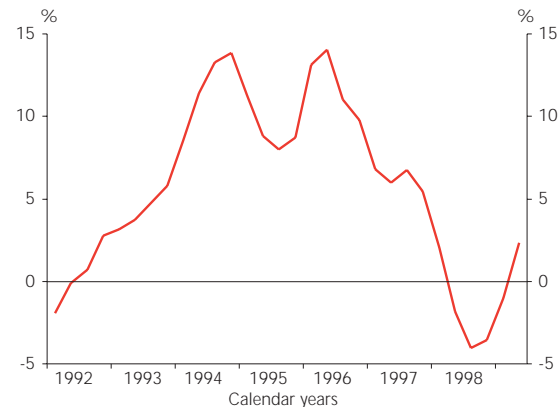


⁷ Source: National Bank of New Zealand survey of businesses.

The exception to this general picture is house price inflation, which has turned around from its trough in 1998 and is now trending at around six percent per annum. The presence of housing-related components in the CPI is probably responsible for CPIX inflation appearing to have flattened off recently, rather than continuing to fall, as are most other measures of general inflation.

This rise in house price inflation is largely as expected in May, and reflects the continuing recovery in housing market activity. The price of houses is an asset price, and it is usual for asset prices to turn upwards a little earlier and more strongly than consumption good prices. House price inflation remains well below the 10 to 15 percent annual rates seen through 1994-96, when the economy was growing very strongly (see Figure 12). Consistent with the relatively steady rate of economic growth currently and expected over the next few years, and ongoing net emigration, house price inflation appears unlikely to accelerate greatly.

Figure 12
House price inflation⁸ (annual percentage change)



Changes to the CPI regimen

From the September quarter, Statistics New Zealand will calculate the CPI on the basis of a revised regimen. The Box summarises the major changes. We do not expect these changes in the regimen to have any major effect on near-term CPIX out-turns or on monetary policy.

⁸ Source: Quotable Value New Zealand.

Changing the CPI Regimen

The September quarter CPI (to be released on 29 October) will incorporate a number of technical changes resulting from the 1997 Statistics New Zealand (SNZ) review of the CPI. The main changes are the removal of interest costs and section prices from the regimen (though the costs of constructing a new home will continue to be represented).

Although interest costs will now be excluded, bank transaction fees will be included, recognising the cost of services provided by financial institutions.

There will also be a number of technical modifications of lesser importance. Some of these changes are designed to improve the accuracy of the index, and some are simply periodic updates. These changes include the following:

- The selection of goods and services prices in the CPI has been modified to reflect changes in expenditure patterns. Significant additions in the new regimen are Internet charges, bank transaction fees, cell phone charges, and rest-home fees.
- The new CPI regimen will update the outlets surveyed.
- All components in the new regimen will be re-weighted. New weights for the CPI have been calculated from the 1997/98 Household Economic Survey, updated to reflect June 1999 prices.

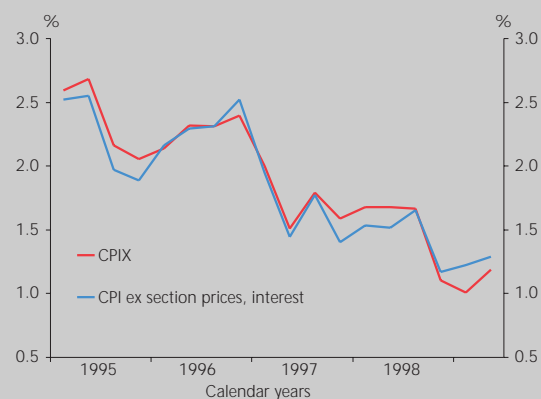
It will not be possible to assess fully the impact of these technical changes on the behaviour of the CPI until SNZ

releases the new regimen on 31 August. However, we note the following features of the new CPI:

- The exclusion of interest costs brings the composition of the new CPI regimen very close to that of the CPIX.
- The exclusion of section prices makes the CPI more consistent with a consumption-based price measure.

Figure 13 compares the CPIX and the current CPI excluding section prices and interest costs. Although the volatility of the two indices appears comparable, inflation in the CPI excluding interest and section prices has been marginally below that in the CPIX, except over the last few quarters.

Figure 13
CPIX and CPI excluding interest and section prices
(annual percentage change)



Financial market developments since May

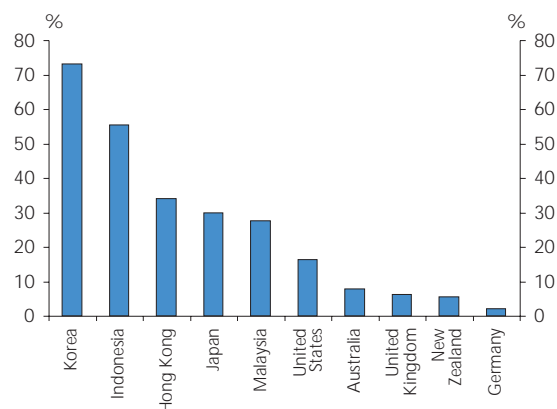
The New Zealand 90-day interest rate has remained in a relatively narrow range around 4.7 percent in recent months. This is consistent with the market's roughly unchanged expectations of the future path of interest rates. As the market expected, the Bank left the OCR unchanged at 4.5 percent at its intra-quarter OCR review on 30 June.

While short-term interest rates have been stable in recent months, the New Zealand currency has fluctuated. Leading into the *May Statement*, upward momentum had been apparent in the values of both the New Zealand and the

Australian dollars, driven by expectations of recovery in Asia and in Euroland, and of associated higher commodity prices.

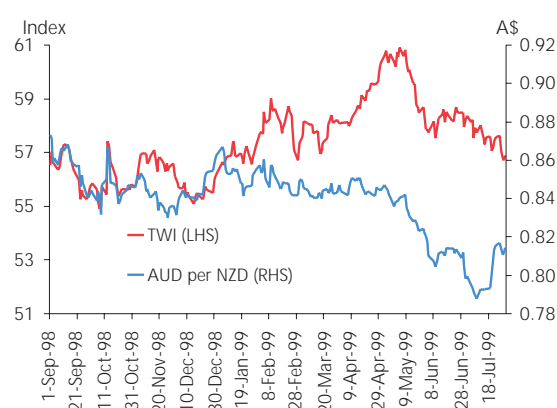
Since the *May Statement*, the Japanese yen has strengthened, despite attempted offsetting intervention by the Bank of Japan, as the market has begun to anticipate recovery in the Japanese economy. Having depreciated steadily since the beginning of the year, the euro also showed signs of recovery in July as the market increasingly began to anticipate an improving economic outlook in Euroland. One financial market indicator of sentiment about prospects for the overall world economy is sharemarket performance, which around the world has reflected increasing optimism (see Figure 14, overleaf).

Figure 14
Percentage change in
sharemarket price indices since
1 January 1999⁹



Despite these improved expectations, the New Zealand dollar fell back from its May level. In the *May Statement*, the Bank noted that “the factors driving the recent rise in the currency are unclear”, suggesting that the strength might not have been justified by the fundamentals at that time. Consistent with this, the projected TWI in the *May Statement* was significantly below the market level at that time. Subsequently, the TWI eased as the market reassessed its view of the factors, such as commodity price recovery, that had driven up the New Zealand currency.

Figure 15
New Zealand TWI and NZ/
Australian bilateral exchange
rate



This reassessment was more marked for the New Zealand dollar than for the Australian dollar. After trading between 84 and 86 Australian cents for most of 1998, the New Zealand

⁹ To 3 August 1999.

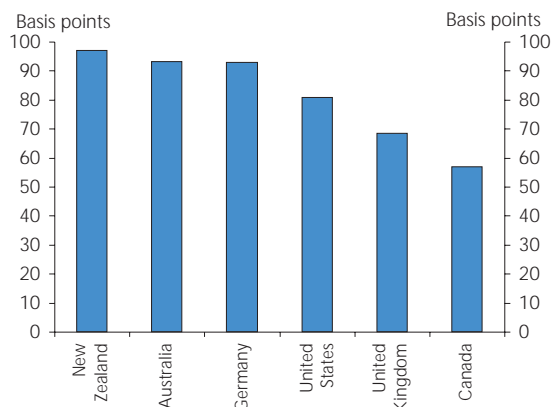
land dollar exchange rate fell to a five year low of 78.5 Australian cents on 9 July, before rebounding to around 81 cents. Factors driving the fall included an expectation that the Australian economy would benefit more from the recovery in Asia, differing performances of export commodity prices, differences in current account positions, and perhaps an element of greater political uncertainty in New Zealand given the upcoming general election.

The combination of the fall in the TWI and stability in the 90-day interest rate has resulted in the MCI falling since May. The MCI has fallen from around +100 at the time of the *May Statement*, to around -150 in June and July, and to below -200 in early August. However, we note that, since May, New Zealand bond yields have risen quite markedly. This rise in bond yields will act to dampen aggregate demand in the economy, just as a rise in short-term interest rates dampens demand. On balance, our assessment is that the effect on aggregate demand of the fall in the TWI broadly offsets that of the rise in bond yields.

The main factor behind this rise in New Zealand bond yields has been rising global bond yields (see Figure 16). With financial markets and world growth prospects looking more robust, the US Federal Reserve moved to a tightening bias in May. As a result, the market increasingly moved towards the expectation that the Federal Reserve would reverse some, if not all, of the 75 basis points of policy easing made in late 1998. On 30 June, the Federal Reserve increased the Federal funds rate by 25 basis points to 5 percent, and on 22 July in his Humphrey-Hawkins testimony Federal Reserve Board Chairman Alan Greenspan confirmed that the Fed still saw the risks skewed towards further tightenings. As a result, the yield on US 10-year government bonds rose above 6 percent in July – 140 basis points above its average for the fourth quarter of 1998. This steepening of the US yield curve has fed through to the New Zealand curve.

When global bond yields are rising, a ‘peripheral’ bond market, such as New Zealand’s, typically under-performs the US bond market. Consistent with this pattern, the differential between New Zealand and US 10-year government bond yields has widened significantly since the *May Statement*, accentuating the steepening of the New Zealand yield curve. An increase in the New Zealand-specific risk premium, possi-

Figure 16
Basis point change in 10-year interest rates since the March Monetary Policy Statement¹⁰



bly related to concerns over the current account position and political uncertainty leading into the general election, may also have had an effect on New Zealand bond yields.

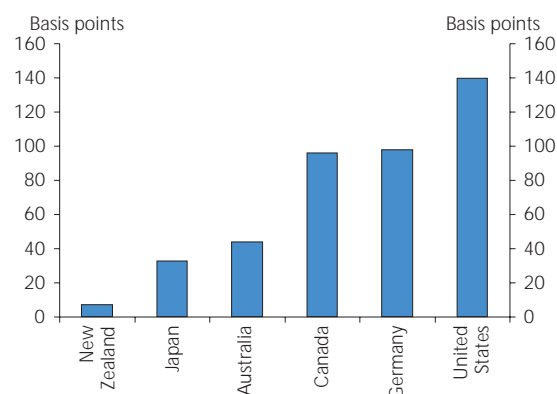
The shape of the yield curve can be used to derive market expectations of near-future monetary policy settings. These expectations provide insights into how the market interprets economic information, indicate in part the extent to which the market 'believes' the Bank's projections, and show whether the chosen policy stance will surprise market economists.

The yield curve over recent months has continued to indicate that the market has been pricing in the possibility that the Reserve Bank will raise interest rates more quickly than was projected in the March and May *Statements*. The curve also shows a more rapid tightening than predicted by market economists in surveys of their expectations.

The shape of the yield curve also embodies expectations of other future events – for example, the potential year 2000 (Y2K) 'problem'. This is illustrated by the 'kink' in implied forward interest rates in world financial markets, representing banks' willingness to borrow at higher rates to secure funding over this potentially uncertain time.

Thus far, the kink in New Zealand's implied forward curve is very modest, and much smaller than those in comparable countries (see Figure 17). This may reflect the Reserve Bank's

Figure 17
Y2K impact on forward rates¹¹



relatively liberal approach to the provision of Y2K liquidity. To minimise risks of market disruption, the Bank has made it clear that ample liquidity will be provided to the banking system over this time, including unsecured lending if necessary.

In this context, some market commentators have suggested that central banks will be less inclined to change official interest rates around the end of the year for fear of creating financial market stresses at an unusually difficult time. Given the measures already taken in New Zealand, such concerns should not prevent an alteration in the OCR at one of the Reserve Bank's regular review dates later in the year, if that is deemed appropriate on inflation grounds.

¹⁰ To 3 August 1999.

¹¹ As at 2 August 1999. The kink is calculated as the implied forward rate between December and January, compared with the average of the two 1-month forward rates in November and January.

3 The medium-term macroeconomic outlook

This chapter discusses how the Bank currently sees economic activity, inflation and monetary conditions in New Zealand evolving over the next two to three years. As usual, our medium-term projections incorporate the monetary conditions path that we see as necessary to maintain annual CPIX inflation near the middle of the target range of 0 to 3 percent, given how the other pressures on inflation are likely to develop.

Our projections for growth, inflation and monetary conditions are 'conditional', in the sense that they each depend on each other, and on judgements covering a wide array of other economic variables. Therefore, the projections will generally change from quarter to quarter, as they are updated to take account of new information. To the extent that new information has implications for inflationary pressure over the medium term, our projection of monetary conditions will also change, reflecting the changed degree of monetary stimulus or restraint required in light of the new information.

Our discussion begins by setting out the economic outlook for New Zealand's major trading partners. We then discuss the projection for domestic growth, and the degree to which the economy's productive resources are expected to be able to meet growing demand. The convergence of inflation back to the middle of the target range is discussed next, with the path for monetary conditions we see as necessary for that convergence to occur.

Trading-partner outlook

Our medium-term projections for growth in New Zealand's main trading partners are based on *Consensus* forecasts published in July. The recent strong economic data for Australia, the US and Japan (referred to in Chapter 2) have led the majority of international forecasters to revise up their forecasts of growth for the remainder of calendar 1999. Beyond this year, steady growth in the economies of our trading partners is expected, leading to a general pick-up in world commodity prices.

Table 3 Trading partner growth projections¹²
(calendar year annual average percentage change)

Country	1998	1999p	2000p	2001p
Australia	4.8	4.0	3.2	2.9
United States	3.9	4.0	2.7	2.4
Japan	-2.8	0.1	-0.2	0.3
United Kingdom	2.1	0.9	2.3	2.8
Germany	2.0	1.6	2.5	2.5
Italy	1.4	1.2	2.2	2.5
France	3.2	2.3	2.7	2.5
China	7.8	7.2	7.3	7.6
Hong Kong	-5.1	-0.6	2.1	2.5
Indonesia	-13.7	-1.1	3.3	4.5
Malaysia	-7.5	2.5	4.1	4.6
South Korea	-5.8	5.8	4.9	4.4
Taiwan	4.8	5.1	5.5	4.8
Thailand	-9.4	2.4	3.6	3.6
14 country index	0.7	2.7	2.7	2.7

¹² Based on *Consensus Forecasts* released in July.

A gradual slowdown in growth to more sustainable long-term trend rates is forecast for Australia and the US. Forecasts for those countries now also incorporate further monetary tightening over the near term, to help slow the pace of demand growth. A pick-up in growth is seen for Europe, from the relatively sluggish rates recorded recently. Economic conditions in Japan are expected to stabilise, while growth in non-Japan Asia is projected to rise quite sharply.

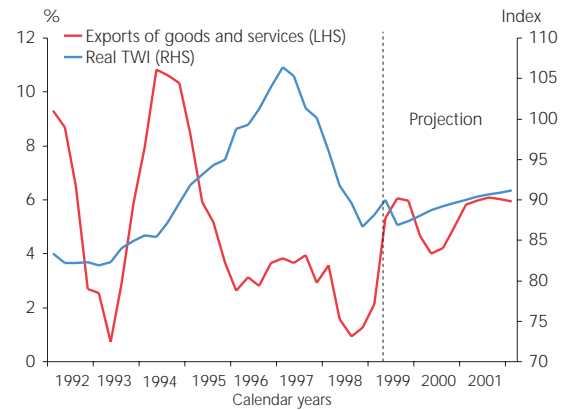
We see the risks around this *Consensus* view as evenly balanced. This assessment is more 'optimistic' than in the *May Statement*, in which we saw the risks around the world growth outlook as still skewed to the downside. In May, it had not been long since the signs of stabilisation first appeared, and we had the sense that some fragility remained, particularly in Asia, and in respect of the high level of US equity prices compared to earnings. Since then, further stabilisation has occurred, with data showing a nascent recovery in Asia. Although US equity prices remain high, the possibility of continued, surprisingly strong, trading-partner growth now seems roughly to balance the risk of further adverse shocks. The general mood of financial markets about prospects for the world economy is now more upbeat. We discuss the risks around the world outlook in some more detail in Chapter 4.

New Zealand growth outlook

We continue to see trend growth in the New Zealand economy rising gradually over the next two to three years, to reach rates of 3½ to 4 percent per annum. This growth profile is a little higher than that published in May, principally due to the stronger international environment and consequently stronger impetus to exports. The effects of this stronger world environment on overall growth, though, are offset to an important extent by less stimulatory projected monetary conditions.

The growth in exports over the next two to three years is projected to be driven initially by manufactured exports and tourism, as trading partner growth picks up and as the lower real exchange rate boosts the competitiveness of New Zealand products in overseas markets. We expect primary exports to be held back over the next year or so as livestock levels are rebuilt and as production recovers from two seasons of

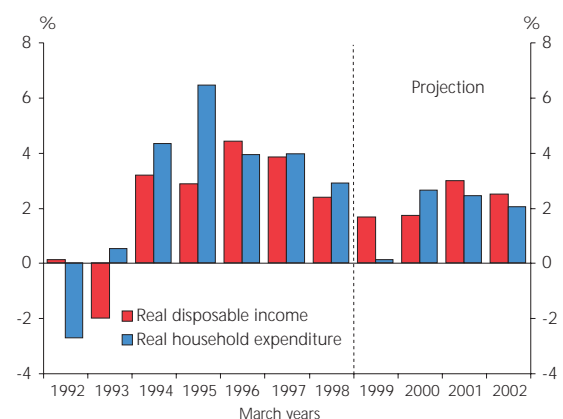
Figure 18
Real TWI and exports of goods and services
(*real TWI: index; exports: annual average percentage change*)



adverse weather. But as growing conditions improve further ahead, pastoral products will make a stronger contribution to export growth.

Household expenditure and business investment growth are also projected to rise as general economic growth continues. As discussed previously, we have assumed that borrowing will be used to support household expenditure growth considerably less than has been the case in the past. Private consumption growth is essentially projected to follow real disposable income growth, resulting in a mildly rising household savings rate over the projection period. Dwellings investment growth is also projected to be fairly mild, following the sharp recovery back to 'normal' levels currently underway.

Figure 19
Household income and expenditure growth
(*annual average percentage change*)



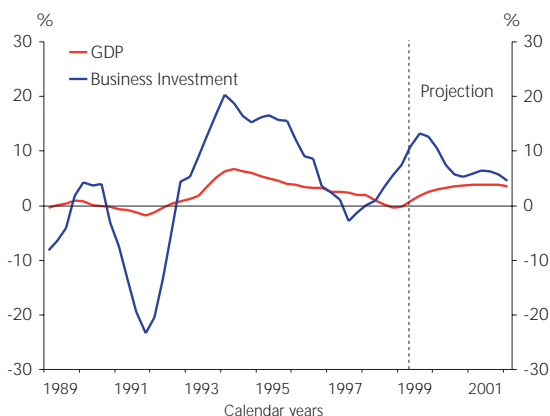
The mildly rising path for household savings contrasts with the declining trend seen over the last decade or so. The main driver of this increased household saving is the slower rate of growth of net wealth expected in the years ahead, itself reflecting a weaker house price inflation projection compared to that seen in the middle of this decade.

Any projection of the likely future path of household expenditure requires some sort of assessment about households' perceptions of their sustainable level of debt. Implicit in our current projection is the idea that the perceived sustainable level of debt has more-or-less been reached. New Zealand household debt levels have now 'caught up' with those in comparable countries. We have assumed, therefore, that the catch-up phase which drove household borrowing in recent years is now over, and that future borrowing growth will be more moderate.

However, the sustainable level of debt is, of course, very difficult to observe. One can identify some probable determinants, such as growth in household wealth and income, and interest rates – in short, the 'serviceability' of debt. Although interest rates are currently low, implying greater serviceability (all else equal), the projected rise in interest rates will reduce serviceability. The substantial increase in household debt levels seen over the past five years or so makes it likely that this interest rate rise will have more impact than previously, helping to keep household expenditure growth fairly mild as growth picks up.

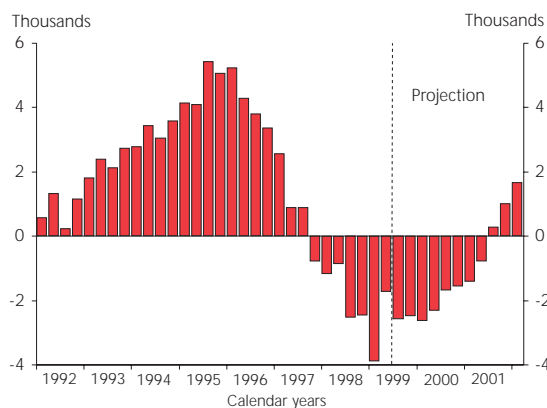
We expect business investment growth to rise over the projection period, as demand pressure and future earnings

Figure 20
Business investment and GDP
(annual average percentage change)



prospects grow. Compared to previous growth rates of business investment during a general economic recovery, our projected growth in business investment is also quite mild. This mild growth reflects the fact that the *level* of business investment stayed at fairly healthy levels through the 1998 downturn in the economy, rather than falling sharply as it has in previous recessions (see Figure 20). Our business contacts generally report reasonable room for demand to grow without putting great pressure on plant and equipment, suggesting little imminent need for large amounts of new capital expenditure.

Figure 21
Net long-term immigration, individuals aged 15 years and over
(quarterly seasonally adjusted)



Productive capacity

Growth in the productive capacity of the economy (potential output) is projected to rise mildly over the next two to three years, as new business investment is put in place, and as a return to net immigration and increased numbers of job seekers lift growth in the labour force. As explained in Chapter 2, our revised view of potential output growth is due to the indicators of spare capacity turning around a little faster than expected, indicating more rapid closure of the negative output gap.

Growth in overall demand is expected to exceed growth in potential output over the projection period. This implies absorption of the spare capacity that currently exists in the economy, and a reduction of downward pressure on general inflation. The negative output gap is now projected to have closed by around the end of calendar 2000 (see Figure 22). This is around a year earlier than in the *May Statement*.

Figure 22
GDP growth, potential growth and the output gap
(GDP growth and potential growth: annual average percentage change; output gap: percent of potential GDP)

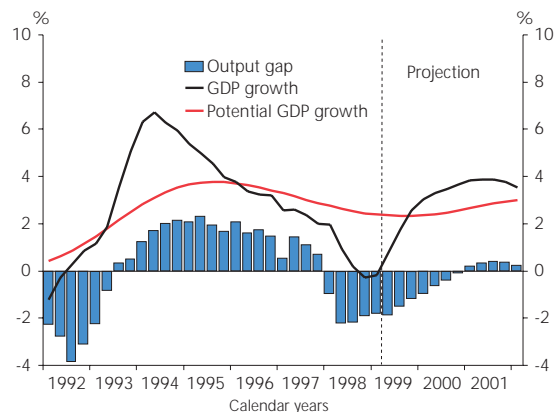
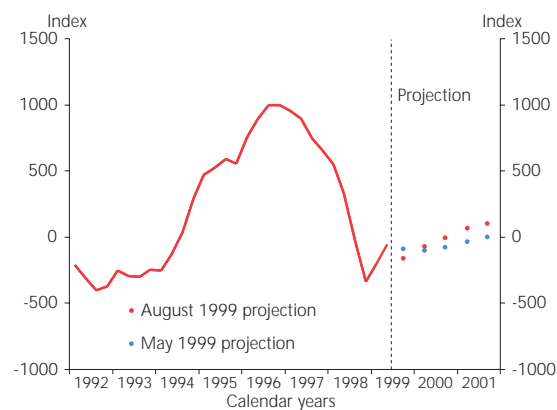


Figure 23
Nominal MCI
(December 1996 quarter average = 1000)



surplus and net public debt as a ratio to GDP to fall gradually, through the projection period.

At this stage, we have made no specific allowance for the Government's proposed personal income tax cut. We expect to do so when this initiative is formally legislated, or when it is accounted for in Treasury projections, in line with our usual practice.

New Zealand's annual balance of payments current account deficit is projected to fall gradually over the projection period, to just over 5 percent of GDP by the beginning of 2002. This projection reflects the combined effects of a projected increase in net overseas earnings from trade and investment, as trading partner economic conditions improve, and a projected faster rise in national savings than in national investment.

Inflation and monetary conditions

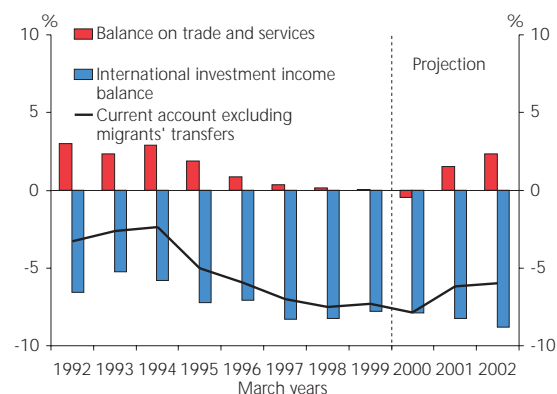
As explained at the beginning of this chapter, we have projected a path for monetary conditions that we expect will keep CPIX inflation near the middle of the target range in one to two years' time. In this *Statement*, monetary conditions are projected to become gradually less stimulatory, as trading-partner demand and other cyclical forces turn upwards, lifting economic activity in New Zealand. Monetary conditions are projected to average around -50 on the MCI for calendar 2000, and around +50 for calendar 2001.

As a result of these projected monetary conditions, annual CPIX inflation is expected to track around 1½ percent from the second half of 2000, following a brief rise above 2 percent early next year, due to the one-off price shifts discussed in Chapter 2. In particular, CPIX inflation is projected to track around the middle of the target range through calendar 2001, the period over which current monetary policy settings have the most influence on inflation trends.

Fiscal outlook and balance of payments

Our fiscal projections are based on the *Budget Economic and Fiscal Update*, adjusted for differences between our macroeconomic projections and those of the Treasury. We project the government operating balance to show a small

Figure 24
Current account components
(percentage of GDP)



4 Uncertainties and policy issues

Monetary policy is inevitably an exercise in making choices in the face of uncertainty. We know that central banks will often find with hindsight that they should have moved sooner, or more aggressively, once a clear business cycle trend has been established. However, we also know that after a turning point in the business cycle, the economic indicators available to us will often tell a mixed and even contradictory story. The economic projection on which this *Statement* is based contains elements of both mixed evidence and uncertain prospects.

Over the past year or so, the global mood has swung from extreme pessimism and fears of imminent financial collapse, to one of rapidly increasing optimism as the Asian economies recover and the US continues to show robust, low-inflation growth. So while we base our projections and policy judgements on the *Consensus* view of an orderly and increasingly strong global economic recovery, we are also mindful of a number of crucial risks and potential departures from that central view.

For example, we know that the consensus will often lag the actual trend – implying that the emerging global recovery could gain more momentum than currently anticipated. On the other hand, we also know that basic production capacity in many industries internationally remains in substantial oversupply. Associated with that, we are aware that considerable financial and policy stress is evident in a number of important economies. We are also conscious of potentially destabilising imbalances between the performances of the major economies, suggesting a risk of sharp market corrections at some point.

Domestically, we are mindful that growth has been proceeding at a near 3 percent annual rate for about a year. Household spending has increased, as has residential and business investment. However, our basic assessment is that domestic spending will only match, if not lag, domestic income growth over the next couple of years. This assumes that households' appetite for additional debt is now reaching satiation. In fact, there is no direct evidence, at this stage, that households have exhausted their appetite for debt. If anything, we have recently seen private sector credit demand increase. Should additional borrowing lead to domestic spending rising significantly ahead of income growth, as it did for much of the early to mid-1990's, then overall demand pressures

will be greater than projected. As a consequence of that, we would expect greater inflation pressures and prolonged current account weakness.

We are also aware of a number of specific factors that will have the effect of pushing up measured inflation over the next couple of quarters. We believe that those price pressures will be transitory – that they will not provide the spur for a round of more general price increases – and that inflation will subsequently settle back to its current benign levels. We expect that pattern because we feel that inflationary expectations are now reasonably anchored around our inflation target. But again, that is more in the nature of an assumption than a verifiable fact. If we are wrong on that point, the Bank may again find itself battling to restore the public's inflationary expectations to somewhere in the targeted 0 to 3 percent range.

So, how can we best set monetary policy in the face of such uncertainties?

Over recent years, the Bank has also evolved to a more flexible approach in its inflation-targeting role. Our policy horizon has stretched to some one to two years ahead. We are also more willing to accommodate greater near-term volatility in inflation, in the aim of reducing interest rate or output instability, so long as inflationary pressures over the policy horizon remained anchored near the mid-point of our target range.

Given the central track outlined in our projections, and accepting the various judgements and assumptions we have made, at this stage we can reasonably conclude that the next monetary policy move will be to tighten, and sooner than we expected in May. It is also reasonable to assume that if the business cycle has turned, there is likely to be more than one policy adjustment eventually required. However, in arriving at its current policy judgement, the Bank has had to balance many considerations.

For example, some issues that suggest the Bank should move to tighten policy earlier rather than later include that:

- It is possible that we may be at the start of another quite rapid recovery. If we delay too long, we risk stimulating a strong expansion, with consequent damage to inflation and inflation expectations, resulting in a more costly return to price stability.

-
- Monetary conditions have been quite stimulatory and will need to move back towards something more neutral eventually, without necessarily having to swing to a constraining phase.

On the other hand, several factors suggest that the Bank should wait and err on the side of caution, before acting to tighten. For example:

- If we have too sharp a tightening in policy, we risk undermining business and consumer confidence, and thus choking the recovery before it is firmly established. On our best current evidence, we feel confident that the cycle has turned up, but the recovery remains patchy across sectors.

- In addition, while the consensus is for a strengthening global economy, we are conscious of the downward impact on global inflation pressures from the current excess capacity. A number of countries have enjoyed quite subdued inflationary pressures over the past couple of years, even in the face of strong growth.

- Finally, while monetary conditions have been quite stimulatory, with both short-term interest rates and the exchange rate supporting domestic activity, longer-term interest rates have lifted in recent months, providing some restraining influence.

In summary, given the uncertainties inherent in monetary policy, the Bank must continue to observe the emerging inflation pattern and be prepared to act in a pre-emptive fashion when the need arises.

Appendix 1: Chronology

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

1999

- 19 May: The Reserve Bank released its twenty-second *Monetary Policy Statement*. The news release accompanying the *Statement* is reproduced in Appendix 2.
- 25 June: Production GDP figures were released showing that the New Zealand economy grew 0.7 percent in the March 1999 quarter, and fell by 0.2 percent for the year to March 1999.
- 30 June: The Reserve Bank announced that it would leave the Official Cash Rate unchanged at 4.5 percent.
- 15 July: The June 1999 quarter CPI was released. The CPIX rose 0.5 percent in the quarter, and rose 1.2 percent over the year to June.

Appendix 2: Reserve Bank statements on monetary policy

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

OCR unchanged

19 May 1999

The Reserve Bank today left its Official Cash Rate (OCR) unchanged at 4.5 per cent. This came with the release of the May 1999 *Monetary Policy Statement*.

Reserve Bank Governor Don Brash commented, "The economic data during the last quarter have been much as we projected back in the March *Monetary Policy Statement*, and a steady economic recovery is now well under way. Inflationary pressures still appear to be well in check.

"Compared to March, the international environment now seems less fragile. With this, confidence has lifted, and markets around the world appear to be anticipating a robust global recovery, and, in particular, a significant rebound in commodity prices. This appears to have driven the substantial appreciation in the New Zealand and Australian currencies in recent months.

"This rise in the exchange rate means monetary conditions have tightened more than we projected back in March. In the Reserve Bank's view, the global economic fundamentals are not as strong as this appreciation would suggest, and the rise in the exchange rate may prove to be temporary. For this reason no change in the OCR is currently warranted," Dr Brash concluded.

OCR unchanged at 4.5 per cent

30 June 1999

(no further statement)

Appendix 3: Summary Tables¹

Table A

CPIX inflation projections and monetary conditions

(CPIX is in percentage changes)

	CPIX Annual	TWI	90-day bank bill rate	MCI	
				Nominal	Real
1995	Jun.	60.8	9.1	525	475
	Sep.	61.7	9.0	600	575
	Dec.	61.9	8.5	550	550
1996	Mar.	64.2	8.7	750	750
	Jun.	64.6	9.7	900	875
	Sep.	65.6	10.0	1000	1000
1997	Dec.	67.1	8.9	1000	1000
	Mar.	68.4	7.5	950	1000
	Jun.	68.0	7.2	900	950
1998	Sep.	64.8	8.1	750	775
	Dec.	63.9	7.9	650	700
	Mar.	61.2	9.0	550	575
1999	Jun.	58.5	9.1	325	375
	Sep.	57.1	6.8	-25	25
	Dec.	56.0	4.6	-325	-225
2000	Mar.	57.6	4.5	-200	-100
	Jun.	59.1	4.7	-50	0
	Second Half Average	57.4	5.0	-175	-150
2001	First Half Average	58.0	5.4	-75	-75
	Second Half Average	58.7	5.5	0	25
	First Half Average	59.1	5.7	50	100
	Second Half Average	59.4	6.0	100	125

¹ Notes for these tables are in Appendix 4

Table B

World outlook

(Annual average percentage change, unless specified otherwise)

March year	Actuals						Projections			
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
World GDP	2.7	3.4	4.4	4.1	4.2	3.1	0.9	2.8	2.8	2.8
World CPI inflation	2.7	1.9	2.2	2.4	2.6	2.6	1.4	1.2	1.7	2.0
Domestic										
Import prices	6.7	-2.7	-1.8	-0.7	-3.4	0.8	3.8	1.1	-0.3	-0.4
Export prices	9.3	-1.2	-2.1	-2.8	-4.2	0.1	3.2	-0.6	0.5	-0.6
Terms of trade	2.4	1.5	-0.3	-2.2	-0.8	-0.6	-0.6	-1.7	0.8	-0.2
March quarter										
World 90-day rate (level, %)	3.6	3.7	6.5	5.7	5.5	5.5	4.7	5.4	5.3	5.3
World bond rate (level, %)	6.7	6.2	8.0	6.4	6.8	5.6	5.1	6.2	6.1	6.0

e = estimate

Table C

Composition of real GDP growth (Annual average percentage change, unless specified otherwise)

March year	Actuals										Projections				
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002					
Final consumption expenditure															
Private	0.3	3.4	6.0	4.2	3.8	3.1	1.3	2.0	2.3	2.2					
Public authority	3.0	-1.1	-0.7	3.3	2.4	6.4	-0.4	5.3	-3.3	-0.1					
Total	0.9	2.4	4.6	4.0	3.5	3.7	0.9	2.6	1.2	1.7					
Gross fixed capital formation															
Market sector:															
Residential	2.8	17.1	12.2	-0.1	4.0	1.7	-15.0	13.2	5.0	1.5					
Business	5.3	20.3	16.1	12.0	2.4	0.1	7.4	10.5	5.9	4.6					
Non-market government sector	-3.1	8.5	37.0	14.3	30.0	7.0	-6.2	6.1	6.3	3.4					
Total	3.7	18.2	17.2	9.4	6.2	1.5	0.4	10.4	5.8	3.9					
Final domestic expenditure	1.3	5.1	7.0	5.1	4.1	3.2	0.8	4.3	2.2	2.2					
Stockbuilding ⁽¹⁾	0.7	1.1	0.0	-0.7	-0.5	0.2	-0.9	0.3	0.3	0.3					
Gross national expenditure	2.0	6.2	6.9	4.3	3.6	3.4	-0.1	4.6	2.5	2.5					
Exports of goods and services	2.5	7.9	8.4	2.6	3.8	3.6	2.1	4.6	5.8	5.9					
Imports of goods and services	7.4	8.0	14.3	7.2	7.0	4.8	3.6	7.2	1.7	2.8					
Expenditure on GDP	0.8	6.2	5.3	2.9	2.6	3.0	-0.7	3.7	3.9	3.6					
GDP (production)	1.2	6.3	5.4	3.8	2.6	2.0	-0.2	3.0	3.8	3.5					
GDP (production, March qtr to March qtr)	2.0	6.9	4.6	3.8	1.2	1.0	1.4	3.3	4.0	3.1					
Potential output	1.5	2.8	3.7	3.7	3.3	2.8	2.4	2.4	2.7	3.0					
Output gap (% of potential GDP, year average)	-3.0	0.3	2.0	2.0	1.3	0.6	-2.0	-1.4	-0.2	0.3					

e = estimate

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

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

March year	Actuals							Projections			
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002	
Compensation of employees	2.4	4.4	6.4	5.9	6.1	3.6	2.0	2.4	4.7	4.0	
Entrepreneurial income	-2.4	13.5	8.7	10.6	1.3	2.5	-0.6	4.0	4.5	4.0	
Other income	-2.1	3.1	1.9	7.3	4.4	1.4	0.9	3.5	4.7	4.0	
Total income	0.3	5.2	5.4	7.0	4.9	2.8	1.3	2.9	4.7	4.0	
Less income tax	3.0	6.0	7.2	6.7	1.9	0.6	-5.5	1.0	4.9	4.0	
Nominal disposable income	-0.4	5.0	4.9	7.1	5.7	3.4	3.1	3.4	4.7	4.0	
Consumption deflator	1.7	1.7	2.0	2.6	1.8	1.0	1.4	1.7	1.6	1.4	
Real disposable income	-2.0	3.2	2.9	4.4	3.8	2.4	1.7	1.7	3.0	2.5	
Real household consumption	0.3	3.2	6.0	4.3	3.7	3.1	1.3	2.0	2.3	2.1	
Household savings rate ⁽¹⁾	3.4	3.3	0.4	0.5	0.7	0.0	0.3	0.0	0.7	1.1	

e = estimate.

⁽¹⁾ Percentage of disposable income.

Table E
Fiscal accounts
(\$billion)

June year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999e	2000	2001	2002
Revenue										
Direct taxation	16.6	17.6	19.8	21.3	20.5	21.3	20.6	21.5	22.7	23.7
Indirect taxation	9.2	10.1	10.4	11.0	11.4	11.7	11.8	12.2	12.5	12.8
Non-tax revenue	4.0	2.5	3.4	2.8	2.9	2.6	4.1	2.2	2.3	2.5
Total revenue	29.8	30.2	33.6	35.1	34.8	35.6	36.5	35.9	37.5	39.0
Total expenses	31.4	29.6	30.4	31.7	33.0	34.2	35.2	36.2	37.2	38.3
Revenue less expenses	-1.6	0.5	3.2	3.3	1.8	1.4	1.4	-0.3	0.3	0.7
Net surplus attributable to SOEs and Crown entities	0.8	0.2	-0.6	0.0	0.1	1.2	1.0	0.6	0.6	0.5
Operating balance	-0.8	0.8	2.7	3.3	1.9	2.5	2.3	0.3	0.9	1.2
(% of nominal expenditure GDP)	-1.1	0.9	3.1	3.6	2.0	2.6	2.3	0.3	0.8	1.1
Net public debt (as at June 30)	37.1	35.4	32.6	28.6	25.3	24.1	22.2	23.1	23.1	22.7
(% of nominal expenditure GDP)	49.1	43.0	37.0	31.0	26.4	24.6	22.3	22.2	21.3	20.1

e = estimate

Table F
Investment
(Annual average percentage change)

March year	Actuals										Projections		
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002			
Plant and machinery (excluding computers)	15.6	25.8	19.4	11.1	2.1	9.7	11.5	16.3	5.7	2.4			
Transport equipment	14.6	25.0	13.7	6.5	-3.2	2.1	3.0	10.4	6.7	4.7			
Commercial buildings	25.4	21.0	11.0	3.6	12.7	-22.8	-1.2	4.2	6.9	9.9			
Other	2.1	26.0	26.9	26.4	-2.5	-4.2	1.8	0.9	8.4	12.0			
	-30.7	-7.5	-7.4	6.8	-4.9	-5.2	3.4	-6.8	-0.9	-1.8			
Market sector business investment (excluding computers)	5.3	20.3	16.1	12.0	2.4	0.1	7.4	10.5	5.9	4.6			
	4.3	19.6	12.9	9.7	-0.2	-5.1	2.1	5.8	6.5	6.6			
Market sector residential investment	2.8	17.1	12.2	-0.1	4.0	1.7	-15.0	13.2	5.0	1.5			
Total market sector investment	4.6	19.4	15.0	8.7	2.8	0.5	1.7	11.1	5.7	3.9			
Government (non-market) investment	-3.1	8.5	37.0	14.3	30.0	7.0	-6.2	6.1	6.3	3.4			
Total investment (excluding computers)	3.7	18.2	17.2	9.4	6.2	1.5	0.4	10.4	5.8	3.9			
	3.0	17.5	15.0	7.4	4.0	-2.3	-3.6	7.1	6.0	4.9			

e = estimate

Table G

Trade volumes and the current account

March year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Trade volumes (Annual average percentage change)										
Exports of goods	0.6	6.9	7.2	0.8	6.8	6.5	-0.5	3.4	6.2	6.2
Exports of services	9.5	11.3	12.5	8.1	-4.6	-5.9	11.8	8.7	4.8	5.0
Total exports	2.5	7.9	8.4	2.6	3.8	3.6	2.1	4.6	5.8	5.9
Imports of goods	8.1	12.1	15.6	7.0	7.5	5.6	3.6	9.8	1.3	2.2
Imports of services	5.1	-5.3	9.1	8.2	5.0	1.8	3.9	-4.0	3.5	6.0
Total imports	7.4	8.0	14.3	7.2	7.0	4.8	3.6	7.2	1.7	2.8
Current account (\$ billion March year annual total)										
Merchandise trade balance	3.4	3.1	2.1	0.9	0.9	1.3	1.3	-0.1	1.3	2.2
Services balance	-1.7	-0.9	-0.6	-0.1	-0.6	-1.2	-1.3	-0.3	0.2	0.1
Investment income balance	-3.9	-4.5	-6.0	-6.0	-7.3	-7.3	-6.9	-7.2	-7.9	-8.7
Transfers balance	0.9	1.5	1.8	2.4	2.3	0.8	0.6	0.4	0.5	0.6
Current account⁽¹⁾	-1.3	-0.8	-2.6	-2.9	-4.7	-6.5	-6.4	-7.3	-5.9	-5.8
(% of nominal production GDP)	-1.7	-1.0	-3.1	-3.2	-4.9	-6.6	-6.4	-7.1	-5.5	-5.2
(% of nominal production GDP ex migrants' transfers)	-2.6	-2.3	-4.7	-5.5	-6.4	-6.8	-6.5	-7.0	-5.5	-5.3

e = estimate

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

Table H
Labour market

March year	Actuals							Projections		
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Change in labour force:										
Natural increase (000's)	22.5	23.4	24.6	25.2	19.0	19.0	18.9	18.4	18.4	18.3
Net migration (000's)	2.8	6.5	9.2	13.0	9.1	-0.2	-6.4	-7.1	-4.6	1.4
Increase in participation (000's)	-13.8	28.2	9.4	30.5	0.4	-4.4	-2.1	6.5	6.3	10.8
Total change in labour force (000's)	11.6	58.1	43.2	68.7	28.5	14.4	10.4	17.8	20.1	30.5
March quarter:										
Population of working age (000's)										
Labour force participation rate (%)	2624	2671	2723	2781	2824	2853	2872	2889	2910	2940
Total labour force (000's)	63.2	64.3	64.7	65.8	65.8	65.6	65.6	65.8	66.0	66.4
	1660	1718	1761	1830	1858	1872	1883	1901	1921	1951
Total employment (000's)										
Annual growth (%)	1490	1555	1639	1711	1731	1732	1741	1764	1792	1832
	1.6	4.4	5.4	4.4	1.2	0.0	0.6	1.3	1.6	2.2
Unemployment (000's)										
Unemployment rate	170	163	122	119	127	141	142	136	128	119
Unemployment rate (s.a.)	10.2	9.5	6.9	6.5	6.8	7.5	7.5	7.2	6.7	6.1
	9.8	9.1	6.6	6.2	6.5	7.2	7.2	6.8	6.3	5.8
Total hours worked										
Annual growth (%)	3.4	3.8	6.6	4.8	-2.1	-0.6	1.4	1.6	1.4	1.9
Labour productivity										
Annual growth (%)	-0.9	1.7	-0.4	-0.5	0.9	2.1	-0.2	1.5	2.6	1.7
QES private sector wages (\$ per hour)										
Annual growth (%)	14.1	14.3	14.6	15.1	15.7	16.1	16.6	17.0	17.5	18.1
	0.7	1.4	2.1	3.7	4.0	2.6	2.7	2.6	3.1	3.1

e = estimate

Appendix 4: Notes to the tables

CPIX	Consumers Price Index excluding Credit Services. <i>Consumers Price Index</i> .
TWI	RBNZ. Nominal Trade Weighted Index of the exchange rate. Defined as: A geometrically-weighted index of the New Zealand dollar bilateral exchange rates against the currencies of Australia, Japan, the United States, and the United Kingdom, and against the euro.
90-day rate	RBNZ. Defined as: The interest yield on 90-day bank bills.
Nominal MCI	RBNZ. Defined as: $\{(90\text{day}-r_0) + (1/2)*[\log_n(\text{TWI}) - \log_n(\text{TWI}_0)]*100\}*100 + 1000$ where 90day and TWI are nominal rates and r_0 and TWI_0 are corresponding averages of daily rates for the December 1996 quarter, where $r_0 = 8.91$ and $\text{TWI}_0 = 67.11$.
Real MCI	RBNZ. Defined as: $\{(R90\text{day}-R_0) + (1/2)*[\log_n(\text{RTWI}) - \log_n(\text{RTWI}_0)]*100\}*100 + 1000$ where R90day and RTWI are the estimated real 90day interest rate and the real TWI exchange rate. R90day is calculated as the nominal 90-day rate less the annual (four-quarter) inflation rate in the CPIX. RTWI is calculated as the TWI multiplied by New Zealand's GDP deflator (interpolated from annual data) and divided by the trade-weighted average of GDP deflators of our trading partners. R_0 and RTWI_0 are base levels for the December 1996 quarter, where $R_0 = 6.5$ and $\text{RTWI}_0 = 1$ (normalised). All input numbers are rounded to one decimal place.
World GDP	Reserve Bank definition. 14-country index, export weighted. Projections based on <i>Consensus Forecasts</i> . Seasonally adjusted.
World CPI inflation	RBNZ definition and estimate: TWI trading partners' CPI inflation (euro-zone proxied by Germany), weighted by TWI weights. Projections based on <i>Consensus Forecasts</i> .
Import prices	Domestic currency import prices. <i>Overseas Trade Indexes</i> .
Export prices	Domestic currency export prices. <i>Overseas Trade Indexes</i> .
Terms of trade	Constructed using domestic-currency export and import prices. <i>Overseas Trade Indexes</i> .
World 90-day rate	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 90-day interest rates. Projections based on <i>Consensus Forecasts</i> .
World bond rate	RBNZ definition and estimate: 80:20 weighted combination of US and Australian 10-year interest rates. Projections based on <i>Consensus Forecasts</i> .
Private consumption	<i>System of National Accounts</i> .
Public authority consumption	<i>System of National Accounts</i> .
Residential investment	RBNZ definition: Private sector and government market sector residential investment. <i>System of National Accounts</i> .
Business investment	RBNZ definition: Total investment less the sum of non-market investment and residential investment. <i>System of National Accounts</i> .
Non-market investment	RBNZ definition: The <i>System of National Accounts</i> annual nominal government non-market/market investment ratio is interpolated into quarterly data. This ratio is used to split quarterly expenditure GDP Government Investment into market and non-market components.
Final domestic expenditure	RBNZ definition: The sum of total consumption and total investment. <i>System of National Accounts</i> .
Stockbuilding	Percentage point contribution to the growth of GDP by stocks. <i>System of National Accounts</i> .

Gross national expenditure	Final domestic expenditure plus stocks. <i>System of National Accounts.</i>
Export of goods and services	<i>System of National Accounts.</i>
Imports of goods and services	<i>System of National Accounts.</i>
GDP (production)	<i>System of National Accounts.</i>
Potential output	RBNZ definition and estimate. Refer to: Conway, P. and B. Hunt, (1997), 'Estimating Potential Output: a semi-structural approach', <i>Reserve Bank of New Zealand Discussion Paper, G97/19.</i>
Output gap	RBNZ definition and estimate: The percentage difference between real GDP (production, seasonally adjusted) and potential output GDP.
Compensation of employees	<i>Household Income and Outlay Accounts.</i>
Other income	<i>Household Income and Outlay Accounts.</i>
Nominal disposable income	<i>Household Income and Outlay Accounts.</i>
Consumption deflator	<i>System of National Accounts.</i>
Real disposable income	<i>Household Income and Outlay Accounts.</i>
Real household consumption	<i>System of National Accounts.</i>
Household savings rate	<i>Household Income and Outlay Accounts.</i>
Direct taxation	Historical source: The Treasury. Defined as total personal taxation, total company taxation and total withholding taxes. Adjusted by the RBNZ over the projection period.
Indirect taxation	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Non-tax revenue	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Total expenses	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Net surplus attributable to SOEs and Crown entities	The Treasury.
Government operating balance	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Net public debt	Historical source: The Treasury. Adjusted by the RBNZ over the projection period.
Plant and machinery investment	RBNZ definition: Market sector plant and machinery investment. <i>System of National Accounts.</i>
Plant and machinery investment (excluding computers)	RBNZ definition: Market sector plant and machinery investment excluding computer investment. <i>System of National Accounts.</i>
Transport equipment	RBNZ definition: Market sector transport equipment investment. <i>System of National Accounts.</i>
Commercial buildings	RBNZ definition: Market sector non-residential building investment. <i>System of National Accounts.</i>
Other investment	RBNZ definition: Market sector other construction and land improvement investment. <i>System of National Accounts.</i>

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

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