
Monetary Policy Statement¹

March 2000

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

Contents

1.	Overview and policy assessment	2
2.	Recent developments and current economic situation	5
3.	Medium-term macroeconomic outlook	16
4.	Policy issues	20

Appendices

1.	Chronology	26
2.	Reserve Bank statements on monetary policy	27
3.	Policy Targets Agreement	30
4.	Summary tables	32
5.	Notes to the tables	40

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¹ Projections finalised on 3 March 2000. Policy assessment finalised on 14 March 2000.

1 Overview and policy assessment

The Reserve Bank has decided to increase the Official Cash Rate to 5.75 per cent.

The economy has now been growing since mid-1998 at a rate of around 3 to 4 per cent per annum. Barring surprises, we expect growth will continue at a broadly similar pace over the next two or three years. This outlook is supported by strong growth in our trading partners, a recovery from the droughts of the last two summers, and the very stimulatory monetary conditions which have prevailed over most of the last two years.

For all of that period, there has been surplus capacity in the New Zealand economy, which has contributed to the generally low inflation seen recently. But we estimate that that surplus capacity has now been largely exhausted. This assessment is reinforced by a range of indicators, some of which are near levels last seen just preceding the increase in inflation in the mid-nineties. This is particularly true of indicators of capacity utilisation. Inflation expectations and pricing intentions have also turned up. Overall, the balance of risks now points quite clearly in the direction of rising inflation pressures over the next one to two years.

For this reason, we are confident that the increases in the Official Cash Rate in November and January were well justified, and that continuing to remove monetary stimulus with today's increase is appropriate.

Looking further ahead, however, there is ample scope for alternative views on the prospects. Our central projection, on which we base the forward track for monetary conditions, contains a fairly subdued pattern of growth in household expenditure, consistent with increased debt levels beginning to weigh on household sector behaviour. But the evidence to support this relatively slow growth in household expenditure remains fragmentary. The exchange rate is also at historic lows and may be providing stronger stimulus to the export and import-competing sectors than we have allowed for in these projections. In short, we can readily envisage a need for monetary conditions to tighten further, and perhaps more quickly, than is projected in this *Statement*.

But there are also arguments to be made on the other side. To the extent that recent growth has resulted from favourable weather patterns, it is likely to be fairly transitory, and can

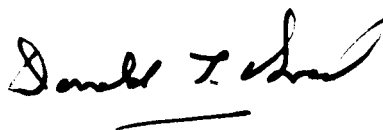
therefore be safely ignored for monetary policy purposes. Perhaps we will find that the economy can grow more quickly than we now expect without inflation, as central banks in some other developed countries have found in the last few years. To date, we have seen little evidence that actual inflation has begun to turn up. Indeed, CPI inflation turned out to be somewhat lower than we had expected in the September 1999 quarter, and much lower than we had expected in the December 1999 quarter. These factors at least raise the possibility that, beyond the next few months, monetary conditions will not need to tighten as much as now projected.

That is for the future. As for now, it is our assessment that, even after today's adjustment to the OCR, overall monetary conditions continue to be supportive of economic activity, not restrictive.

Contrary to our expectations in the November *Monetary Policy Statement*, the New Zealand dollar has not appreciated since the start of the year; indeed, it has depreciated further. There are a number of reasons for that, some of which (for example, still relatively weak commodity prices) imply that the exchange rate stimulus is being offset by other factors, and some of which (for example, rising interest rates abroad) don't imply this.

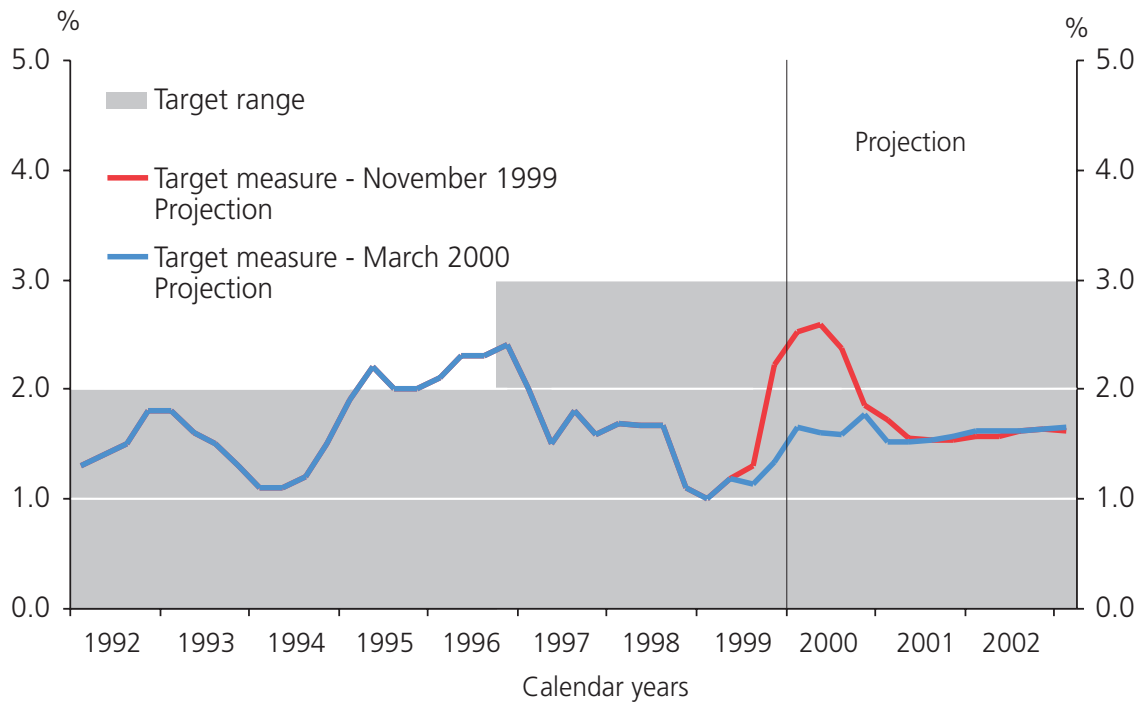
At this stage, the Bank has chosen to respond to this exchange rate weakness cautiously. But the longer the exchange rate remains persistently weaker than assumed, the greater the likelihood, all else equal, that the stimulus to the export and import-competing sectors will prove sufficiently strong to warrant more marked increases in interest rates than those currently projected.

Overall, faced with these uncertainties about how events will unfold, but in a situation where excess capacity appears to be largely used up, the prudent course of action is to ease up on the accelerator fairly quickly, while pondering the need for pressure on the brakes further down the track.



Donald T Brash
Governor

Figure 1
Consumer price inflation²
(annual percentage change)



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

Table 1

Summary of economic projections

(Annual percentage change, unless specified otherwise)

March year	Actuals		Projections		
	1999	2000	2001	2002	2003
Price measures					
CPI*		1.0	1.7	1.5	1.6
1.7					
Wages	2.7	2.3	2.8	2.9	3.0
Import prices (in New Zealand dollars)	2.7	4.0	-3.3	-1.3	0.4
Export prices (in New Zealand dollars)	-1.1	8.5	-4.5	-0.9	2.2
Monetary conditions					
Nominal MCI (year average)	-50	-275	-150	100	175
90-day rate (year average)	6.2	5.2	6.6	7.2	7.2
TWI (year average)	57.3	56.0	55.9	58.0	58.8
Output					
GDP (production, annual average % change)	-0.1	3.5	3.6	3.4	3.4
GDP (production, March qtr to March qtr)	1.7	3.9	3.2	3.6	3.1
Output gap (% of potential GDP, year average)	-1.8	-0.8	0.2	0.6	0.8
Key balances					
Government operating balance (% of GDP, June year average)	1.8	0.4	0.7	1.4	2.1
Current account balance (% of GDP, year average)	-5.8	-7.9	-5.8	-5.5	-4.8
Terms of trade (annual average % change)	-0.5	2.0	-0.1	0.0	1.5
Unemployment rate (March qtr. s.a.)	7.2	6.1	5.8	5.5	5.2
Household savings rate (% of disposable income)		-1.5	-1.6	-1.7	-0.4
0.2					
World economy					
World GDP (annual average % change)	1.0	3.8	3.6	3.3	3.2
World CPI inflation	0.9	1.9	1.8	1.8	1.8
Quarterly projections (quarterly percentage change, unless specified otherwise)					
	Sep-99	Dec-99	Mar-00	Jun-00	Sep-00
CPI	0.4	0.2	0.6	0.4	0.4
CPI (annual percentage change)*	1.1	1.3	1.7	1.6	1.6
GDP (production, s.a.)	2.3	1.0	0.8	0.8	0.7

s.a. = seasonally adjusted

Notes for this table are in Appendix 5

* Up to and including the June 1999 quarter, the series is the annual percent change in CPIX. From September quarter 2000, the series is the annual percent change in the new CPI. For September quarter 1999 to June quarter 2000, the series is calculated by adding the quarterly increases in the new CPI to quarterly increases in the old CPI excluding interest rates and section prices.

2 Recent developments and current economic situation

The economy has continued to expand since the November *Statement*, a process that commenced in mid-1998. However, quarterly growth rates have been volatile. For example, in the November *Statement*, we correctly anticipated economic growth to pick up over late-1999 and continue into 2000. However, GDP in the September quarter subsequently proved stronger than we anticipated, which, combined with other indicators of activity, suggests that there is less spare capacity in the economy than we had expected in November. We anticipated inflation to increase temporarily over late-1999 and into 2000, due to increasing global oil prices and a low New Zealand dollar. In the event, the December 1999 quarter CPI proved considerably lower than anticipated. Finally, in November, when discussing the weakness of the New Zealand dollar, we suggested that some short-term factors, primarily related to Y2K, were temporarily holding the currency down. That period passed without incident, yet the exchange rate remains low.

This chapter elaborates on these key events since November. Chapter 3 updates our medium-term outlook for the economy, having taken stock of these recent developments.

Economic activity

Domestic demand

The New Zealand economy has now been growing since mid-1998. We estimate that growth overall is now running at around 4 percent per annum. Quarterly growth rates in 1999 were not particularly smooth, but looking through the bumps, it seems clear that it was a year of robust growth driven by an upturn in trading partner demand, improved pastoral production, and stimulatory monetary conditions.

Although the context of the present upswing is similar to that of the early-1990s, there are some significant differences. Simply extrapolating past trends, while ignoring the differences, could be misleading.

Compared to the downturn in the early-1990s, over 1997 and 1998 household and business spending, and business borrowing growth, remained reasonably robust (figures 2 and 3). Although household borrowing growth over this period was comparable to 1992-93 levels, household consumption

Figure 2: Ratio of household and business spending to GDP

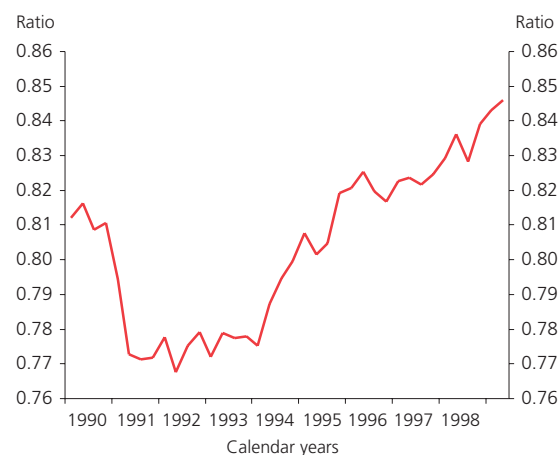
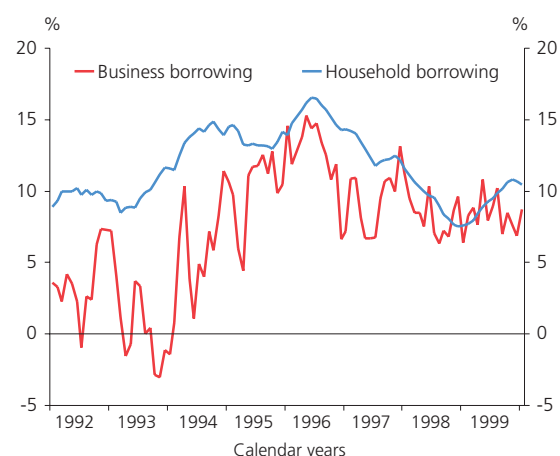


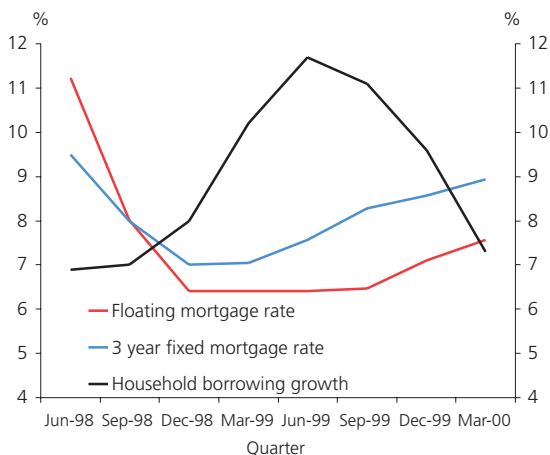
Figure 3: Business and household borrowing growth (annual percentage change)



and residential investment remained at reasonably high levels, suggesting less scope for a cyclical 'catch up' during the current upswing than in the early 1990s.

The ratio of household debt to income is now broadly similar to the levels of our international peer group, and is high by New Zealand's historical standards. We expect this to constrain consumption growth somewhat over the next few years. More immediately, rising interest rates are increasing the servicing cost of existing debt. Mortgage interest rates have risen since March 1998, with the largest rises for fixed-rate mortgages, further restraining household borrowing growth (figure 4, overleaf). Recent data on bank lending suggest that borrowing growth is already slowing a little.

Figure 4: Household borrowing and selected mortgage rates³



In addition, New Zealand asset prices – in contrast with those in Australia and the US, for example – have remained broadly stable over the past year, implying little increase in household sector wealth.

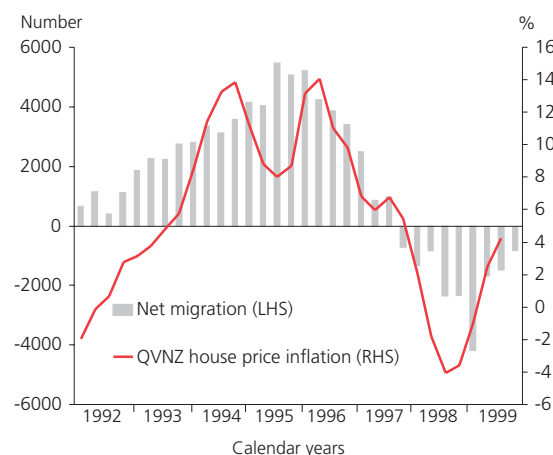
Nonetheless, the latest data suggest that fairly strong consumption growth occurred over late-1999, with our retail sector contacts reporting a better-than-average pre-Christmas period. Some stocking-up for Y2K appears to have occurred, and the improvement in farm incomes resulting from a better season has supported rural spending. However, over the next few quarters, we expect a slight moderation in consumption growth rates, to broadly match growth of disposable income.

Residential investment accelerated over 1999, as in the mid-1990s. The housing market appears to be mildly oversupplied: unlike the mid-1990s, house sales have been reasonably subdued, as have prices and rentals. The higher levels of household sector debt have probably also contributed to keeping activity in the housing market moderate. In addition, unlike the recovery in the early 1990s, this recovery has been accompanied by net outward migration (figure 5). Overall, these factors suggest that a rapid pick-up in prices or building activity in the near future is unlikely.

At the end of last year, the rate of issue of consents for new dwellings fell from the high levels seen in the middle of the year, and currently appear likely to remain relatively weak

³ Source: RBNZ. Note: Interest rates for March quarter as at end February 2000. Household borrowing growth is expressed in annualised quarterly rates, and is estimated for March 2000.

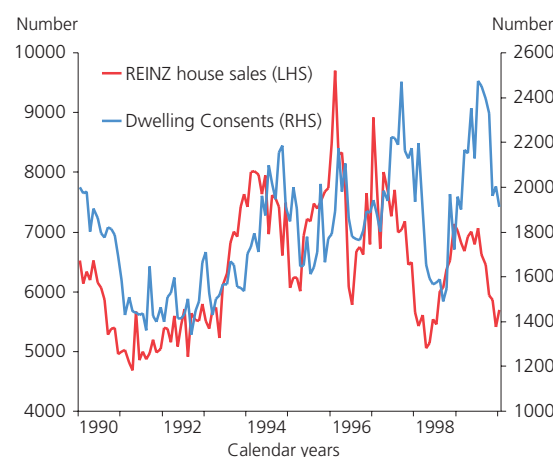
Figure 5: Net migration and annual house price inflation⁴



given the low level of house sales (figure 6). Over the next few quarters, we expect residential investment to fall as a result, dragging down overall growth in the near term.

Growth in business investment has been a little sluggish, but again levels have remained near the peaks seen over the past twenty years. With demand expected to pick up, and firms' balance sheets in good shape, investment intentions have

Figure 6: Monthly consents for new dwellings and house sales⁵ (seasonally adjusted)



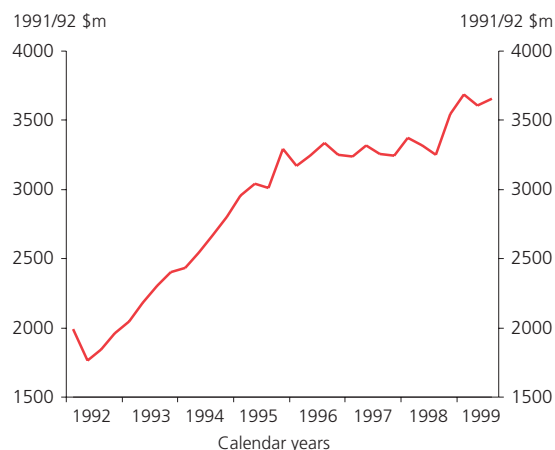
remained positive. Surveyed capacity utilisation is also climbing, suggesting that capacity constraints may soon spur investment growth. The forest products industry, for example, faces the need for quite extensive capacity investment, to deal with the large quantity of trees maturing over the

⁴ Source: Quotable Value NZ, Statistics NZ.

⁵ Source: Real Estate Institute of New Zealand, Statistics NZ.

next few years. However, if anything, the general investment response to date has been slow. Business borrowing growth currently is reasonably modest compared to the mid-1990s, and is not widespread across sectors.

Figure 7: Quarterly real business investment
(*seasonally adjusted*)



Over the near term, indications are that business investment will continue picking up at a moderate pace. Our business contacts report that, with the uncertainty associated with Y2K now having been resolved, investment to increase capacity is now higher on their agendas. Moreover, the passing of Y2K without incident has allowed discretionary funds to be turned towards this kind of investment.

External demand

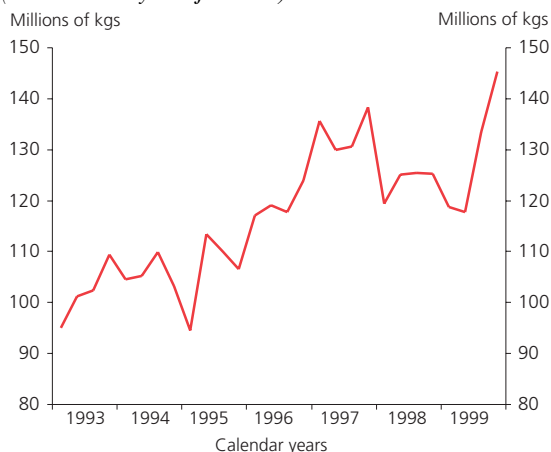
Since mid-1998, an upswing has been evident in world activity, and in world commodity prices generally (particularly oil). The pick-up in trading partner growth has mostly reflected the recovery in non-Japan Asia and increased growth in Europe, while the United States and Australian economies have continued to grow at solid rates. Japan, by contrast, has shown roughly static activity for two or three years, with signs of recovery only very recently being apparent, and fragility still present. Latest data suggest that Japanese growth weakened in the second half of 1999. Nominal interest rates in Japan remain very low, in an attempt to lift demand in the face of persistent sluggishness of private spending.

Apart from in Japan, incipient inflation pressures have led almost all central banks in the developed world to begin tight-

ening monetary policy, and there is a widespread expectation of further tightening.

New Zealand export volumes are growing, but total export growth to date has been a little weaker than in the 1992-93 pick-up. The main reason for this is the fall in agricultural production as a result of two consecutive seasons of drought. However, excellent climatic conditions for agriculture since mid-1999 have resulted in a strong recovery in pastoral production generally, and dairy production in particular (figure 8).

Figure 8: Quarterly milkfat production⁶
(*seasonally adjusted*)



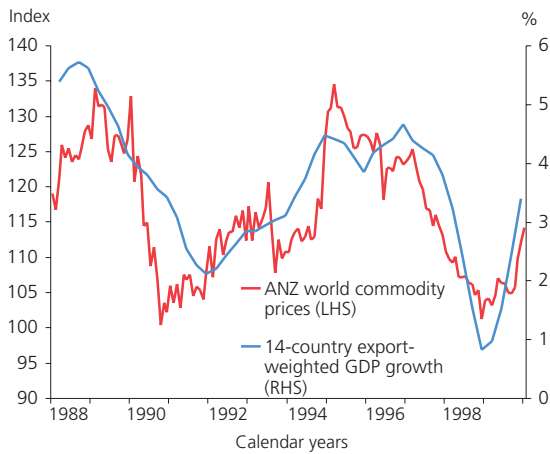
The recent fluctuations in agricultural production largely explain the volatility in the quarterly GDP statistics over 1999. In particular, much of the surprising strength in GDP growth for the September quarter was due to a stronger-than-expected 'bounce-back' in agricultural production from the June quarter, in which there had been some holding-back of stock to take advantage of good grass growth before slaughter. For the purposes of monetary policy, it is important to 'average through' these fluctuations in assessing the longer-term growth prospects of the economy. Such GDP volatility often represents temporary supply changes, rather than persistent demand pressure on the economy's productive resources. Over the near term, the recovery in agricultural production is likely to continue to cause further fluctuations in the growth figures, which the Bank will treat carefully.

A more persistent source of demand pressure attributable to the export sector – and consequently one of greater interest

⁶ Source: NZ Dairy Board.

for the purposes of setting monetary policy – is the level of prices received for New Zealand exports. Although world commodity prices generally are rising, prices of New Zealand's commodity exports (figure 9) overall appear to be lagging somewhat, despite some apparent gains in the prices of meat, wool and milk-solids. The terms of trade, though improving, remain at a rather low level, and the rate of improvement has thus far not been as large as that after the early-1990s recession.

Figure 9: ANZ world commodity price index and annual average trading partner growth⁷



Strongly rising oil prices have constrained the improvement in the terms of trade. However, this is not all bad news for New Zealand. As many large importers of dairy products are also oil-producing countries, the price increase appears to have led to increased demand for dairy products. It has also increased the prices of synthetic fibres, which should support the prices of substitutes such as wool.

Exports of manufactured goods and services are picking up, with services exports doing particularly well. Tourism continues to grow strongly (figure 11), as a result of the low exchange rate, the wide international media coverage associated with the America's Cup and APEC, and the increased awareness of New Zealand as a tourist destination those events have created. Business contacts also report some optimism about the flow-on effects of the Sydney Olympics later this year.

⁷ Source: ANZ, RBNZ.

Figure 10: Ratio of manufactured exports and services to GDP, and TWI

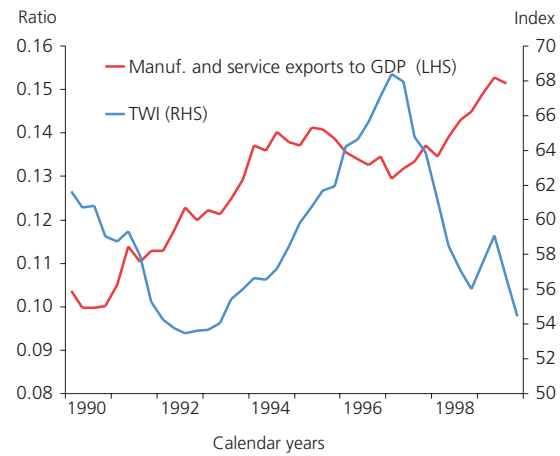
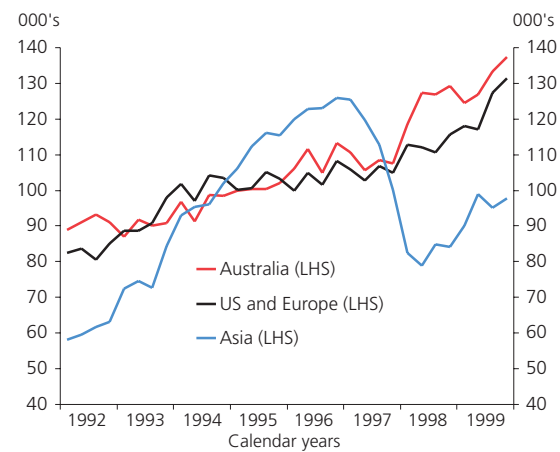
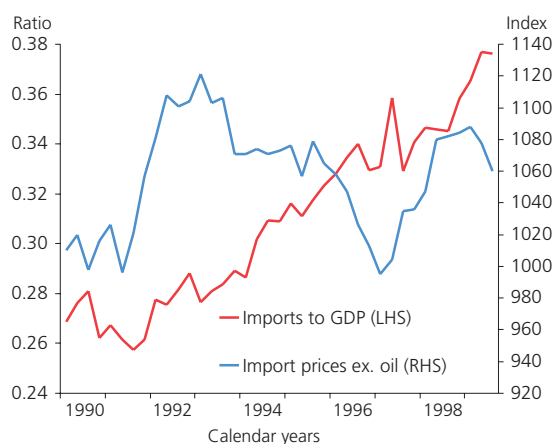


Figure 11: Quarterly short term visitor arrivals (seasonally adjusted)



On the other side of the accounts, import penetration continues to increase, with import growth offsetting export growth to some degree. Excluding the effect of oil prices, import prices have not risen to the same extent as the exchange rate has fallen (figure 12). The restraint on imports from the low exchange rate is therefore likely to have been somewhat less than might otherwise have been expected. Over recent years, a number of structural factors have probably contributed to keeping import prices relatively low, including an increasing flexibility in the sourcing of imports by businesses, tariff reduction, the removal of restrictions on parallel importing, and rapidly expanding capacity in import-supplying countries. As these structural changes are likely to be quite long-lasting, the import penetration ratio is expected to remain high.

Figure 12: Ratio of imports of goods and services to GDP, and domestic import prices excluding oil



Capacity constraints

With growth having run at rates above potential for some quarters, spare capacity in the economy has now been largely absorbed. The stronger-than-expected September quarter GDP, and a range of direct indicators of spare capacity, suggest that demand is currently running at levels consistent with stable inflation. In other words, it appears that the output gap is around zero currently, rather than indicating a small amount of spare capacity as anticipated in November. Less spare capacity suggests, all else equal, less downward pressure on inflation over the medium term than we expected in November.

Inflation

The CPI increased 0.2 percent in the December quarter, bringing the inflation rate for the year to December to 1.3 percent. Derivative series of CPI inflation – the weighted median and

trimmed mean – were also very low in the December quarter, as was non-tradeables inflation. Import price inflation remains very weak, with tradeables inflation running at only 0.3 percent for the December quarter and 0.5 percent for the year to December (table 2).

Although the low inflation result is consistent with the Bank's assessment that there has been material spare capacity in the economy over the past couple of years, the outturn was considerably weaker than expected. Indeed, the petrol price increase masks the fact that there was on average no increase in the rest of the CPI. Box 1 discusses our interpretation of the December quarter result in more detail.

Figure 13: Tradeables and non-tradeables CPI inflation⁹ (annual percentage change)

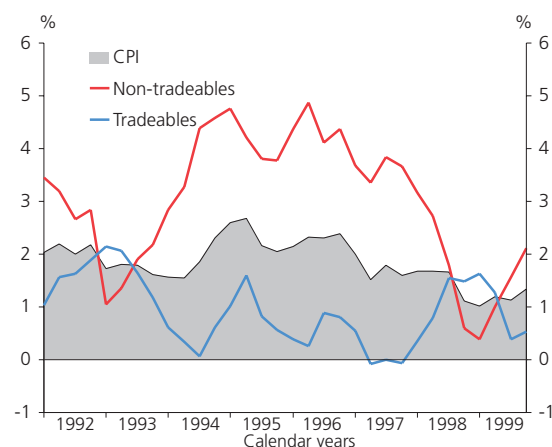


Table 2: CPI⁸ and derivative series

	CPI		Tradeables		Non-tradeables		Weighted Median		10% Trimmed Mean	
	apc	qpc	apc	qpc	apc	qpc	apc	qpc	apc	qpc
March 1999	1.0	0.2	1.6	0.2	1.4	0.2	0.8	0.0	0.8	0.2
June 1999	1.2	0.5	1.3	0.0	1.0	0.9	0.5	0.1	0.6	0.2
September 1999	1.1	0.4	0.4	0.0	1.6	0.8	0.4	0.3	0.5	0.3
December 1999	1.3	0.2	0.5	0.3	2.1	0.2	0.5	0.1	0.9	0.2

⁸ CPI inflation figures are CPIX to 1999q2 and CPI from 1999q3 onwards. Annual CPI for 1999q3 and 1999q4 is calculated using CPI ex interest and sections for the quarters prior to 1999q3.

⁹ CPIX inflation up to June 1999 quarter, annual CPI inflation thereafter (adjusted to exclude interest and section prices for the September and December 1999 quarters).

Box 1: Implications of the December 1999 quarter CPI

The CPI for the December quarter came in at 0.2 percent, well below our November *Statement* estimate of 0.9 percent. This downside surprise on the CPI was unusually large, compared to the Bank's historical experience. This Box looks at the outturn in detail, discussing some findings from our review of the result.

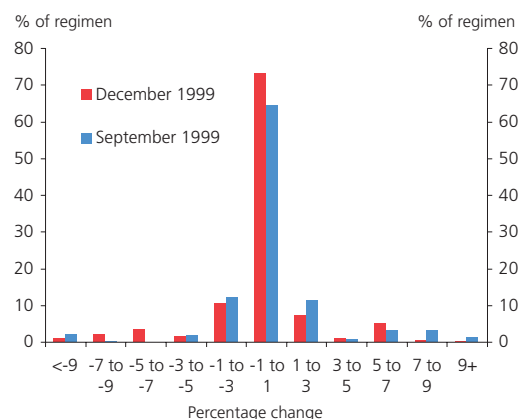
Our current-quarter CPI estimates are based on an add-up process, in which we divide the CPI regimen up into 30 or so major items and consider the likely movements for each item. We draw upon information from business contacts, newspaper articles reporting price increases, and indicator information where it is available. In many cases, little current information is available, leading to a greater reliance on recent trends and past statistical patterns as the basis for the estimates.

The estimate of 0.9 percent for the December quarter published in the November *Statement* incorporated, in particular, allowance for the effects of announced large increases in petrol prices and local authority rates, plus the effects of the low exchange rate on the prices of internationally-traded goods and services. Together, these factors boosted the estimate of the overall CPI movement quite substantially. However, general inflation indicators, such as surveyed pricing intentions and inflation expectations, also pointed to (and still point to) a higher quarterly rate of inflation than turned out to be case for the December quarter. The very low outturn caught not just the Bank, but also most market commentators, by surprise.

Comparing forecasts of specific items with the published outturns, it is apparent that the surprisingly low inflation result was common to the majority of the CPI items. Although the Bank received quite large downside surprises on local authority rates, petrol prices and food prices in particular, over half of the total surprise was due to many small downside errors elsewhere. This widespread nature of the surprise means we cannot dismiss it as merely a technical aberration in a small number of items. In-

deed, the distribution of the CPI price changes at the item level does not suggest any unusually large movements in the December quarter (figure 14).

Figure 14: Weighted distribution of quarterly percent changes in CPI items



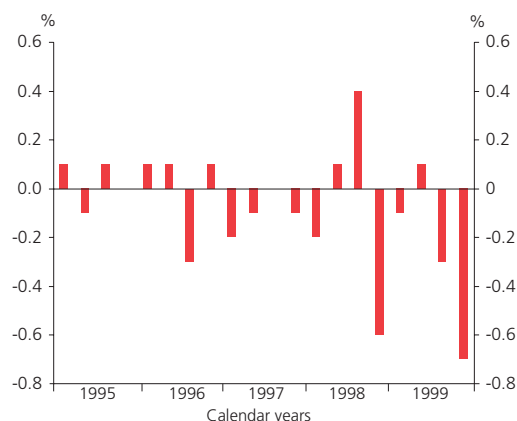
Current-quarter forecasting of CPI inflation is not entirely straightforward. This is because, compared to GDP forecasting, say, there are very few reliable indicators or early estimates of current inflation. Moreover, for monetary policy purposes, the relevant information in the current inflation assessment is the trend in inflation, or that component which sheds light on inflationary pressures that are likely to persist into the medium term.

The Bank takes a holistic approach to this assessment, in which the detailed component-by-component add-up is cross-checked against other measures of inflation and our assessment of the degree of cyclical pressure in real economic activity. In addition, there are technical measurement issues involved in constructing the CPI that need to be considered, and the Bank routinely engages with Statistics New Zealand to better understand these issues. They include the treatment of changes in market share for a given item, quality adjustment, and the timing of price measurement. Finally, certain items in the CPI regimen are showing signs of changed pricing behaviour, which may be due to changes in industry structure in New Zealand. For example, a new seasonal pattern in electricity prices seems to be emerging, in which prices

through the year move to reflect differences in the marginal costs of production through the seasons.

How will the Bank take the December quarter result into account in its policy deliberations? The December quarter surprise was large, and we also overestimated the September quarter CPI, compared to Statistics New Zealand's revised figure (figure 15).

Figure 15: One-quarter-ahead CPI forecast errors
(*actual minus forecast*)



One or two quarters' historical observations, though, are not enough to materially affect our assessment of trend inflationary pressure in the economy. The December quarter outturn therefore has a quite limited impact on the immediate policy decision to be taken. However, persistently lower-than-expected inflation could be interpreted in a variety of different ways, which have different implications for monetary policy going forward. One of these interpretations in particular, the possibility that trend inflation in New Zealand could now be lower and/or less sensitive to cyclical pressures than historical experience suggests, is discussed in Box 2 in Chapter 4.

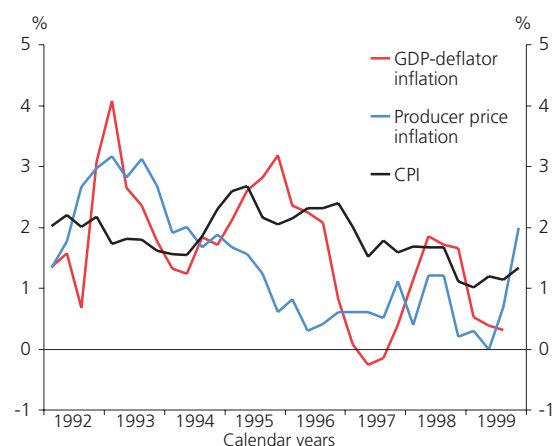
At the very least, the very recent inflation developments argue for some open-mindedness about the nature of the inflation process in New Zealand and the current state of inflation pressure. The low December quarter outturn, and downward revision to the September quarter figure, also have the fortuitous implication that there is now considerably less risk of a breach of the inflation target range in the near term, as the temporary rise in inflation should now be much smaller than expected in November.

Other inflation measures are broadly consistent with the picture of low general inflation in the economy (figure 16). Inflation in the GDP deflator, for example, is running at very low levels. House price inflation is also at low levels. Although producer output price inflation has picked up recently, that pick-up is largely attributable to petrol price increases and some recovery in primary product prices.

Recent import price outturns have on the whole been fairly weak despite the low level of the exchange rate and, as discussed above, this has probably contributed to the ongoing strength in import growth. For the purposes of the inflation projections, we see fairly weak import price inflation continuing over the near term, which should partly offset the rise in non-tradeables inflation expected as the strength of domestic demand increases.

The relatively subdued rate of tradeables inflation is not a particularly new phenomenon. The sorts of factors serving to keep import prices low have been strong enough to hold tradeables inflation below non-tradeables inflation on a trend

Figure 16: Inflation measures¹⁰
(*annual percentage change*)

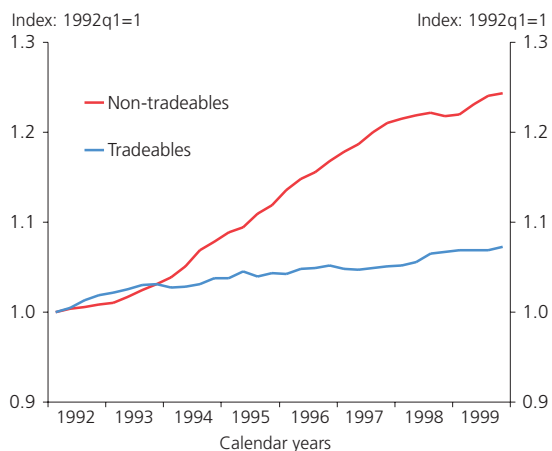


basis. Over the past decade or so, non-tradeables prices have risen considerably further than tradeables prices (figure 17, overleaf).

Forward-looking inflation indicators, such as pricing intentions and inflation expectations, persist at reasonably high

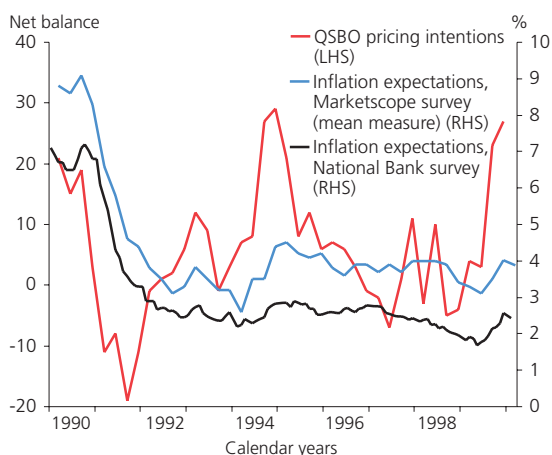
¹⁰ See footnote 9.

Figure 17: CPI tradeables and CPI non-tradeables



levels, similar to those seen in 1994 (figure 18). Although this is consistent with economic activity entering the sustained growth phase, with spare capacity being absorbed, one has to be careful in interpreting the rises. Notably, respondents to inflation expectations surveys are asked about CPI inflation, so the recent rise may simply reflect a response to the sharp petrol price increases in the second half of last year. Pricing intentions measures are less vulnerable to this particular effect.

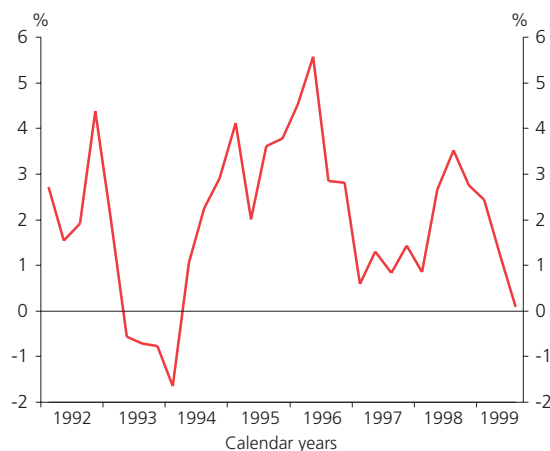
Figure 18: Pricing intentions and inflation expectations¹¹



Latest wage and unit labour cost outturns have not provided a very clear signal about incipient inflation pressure, with both the QES wages and labour productivity measures showing some volatility. Currently, unit labour cost inflation appears low (figure 19).

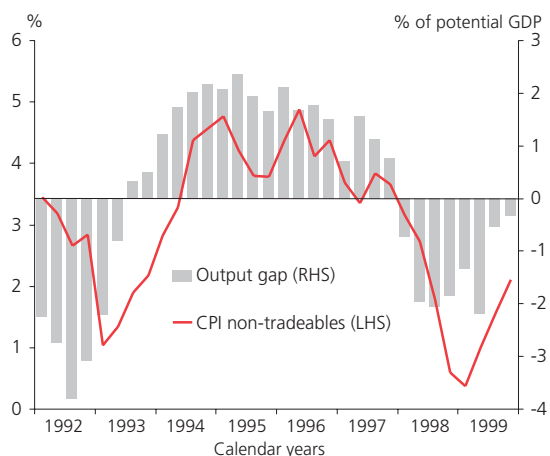
¹¹ Source: NZ Institute of Economic Research, National Bank of NZ, Marketscope.

**Figure 19: Unit labour cost inflation¹²
(annual percentage change)**



Over the next few quarters, we would expect to see general inflation bottoming out, and perhaps start to rise, due to the absorption of spare capacity. Typically, non-tradeables inflation follows output gap movements quite closely (figure 20).

Figure 20: Annual non-tradeables inflation and output gap¹³



Over the near term, tradeables price inflation is also likely to rise, as petrol prices are pushed up by international oil price increases. OPEC restrictions on supply remain in place, and stocks are falling. A key period for the outlook for oil prices will be the meeting of OPEC countries this month, in which they will reassess their current production quotas.

¹² Defined as QES private sector ordinary time wages divided by labour productivity (GDP divided by HLF hours worked).

¹³ Source: Statistics NZ, RBNZ.

As noted in the November *Statement*, the Bank must assess the risk of second-round general inflation effects from rising oil prices, and act to restrain them if necessary. Oil prices continuing to increase raises, to some degree, the risk of second-round inflation effects. However, at this stage we maintain our assumption that second-round effects will not be material, in the present environment of generalised low inflation.

Monetary policy and financial market developments since November

In the November *Statement*, we indicated that the most notable financial market development in recent months had been exchange rate weakness. The Bank, and many market commentators, thought some of this was likely to be temporary. The temporary weakness was attributed to a number of identified short-lived factors, such as the uncertainty surrounding the general election in New Zealand, and a tendency among investors to withdraw from 'peripheral' markets such as New Zealand ahead of Y2K.

If the weakness did not prove temporary, however, the Bank would have to judge the circumstances surrounding the stimulus to demand from the exchange rate. On the one hand, if the stimulus was sufficient to materially increase inflationary pressure, higher interest rates would be warranted. On the other, if the stimulus was already being offset by factors that underlay the exchange rate weakness, there would be no need for an interest rate response.

Figure 21: Daily TWI



In the event, the exchange rate weakness is still present, despite Y2K and the uncertainty of the general election passing (figure 21). What are the likely causes? Four factors may be relevant.

First, interest rates in New Zealand are not noticeably higher than interest rates elsewhere – for some maturities, New Zealand interest rates are lower than rates in Australia and in the US, for example. Since the second half of last year, the level of official interest rates has been increased both in NZ and overseas (table 3). Much of this central bank tightening has been broadly in line with market expectations. The Bank's own increase of 25 basis points in the OCR on January 19, although a surprise to many market commentators, was already anticipated by market prices at the time.

Although current market prices reflect expectations of further increases in New Zealand interest rates, that is also the case in other countries, leaving the relative interest rate position a little uncertain. Overall, New Zealand interest rates are expected to increase slightly more than those elsewhere. This

Table 3: Overseas official interest rates

	Shift since mid-June 1999 (basis points)	Level as at 7 March (%)
United States	+100	5.75
Australia	+75	5.50
United Kingdom	+75	6.00
European Central Bank	+75	3.25
Canada	+50	5.00

pattern is evident in both 3-month Forward Rate Agreement (FRA)¹⁴ interest rates for New Zealand compared with the US (figure 22), and in the yield curves of New Zealand and the US (figure 23).

Figure 22: 90-day Forward Rate Agreement interest rates as at 6 March 2000

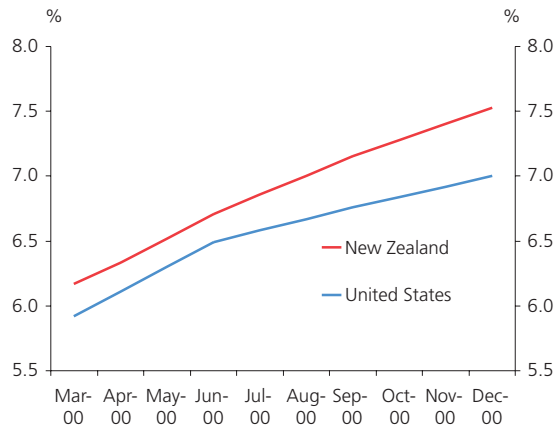
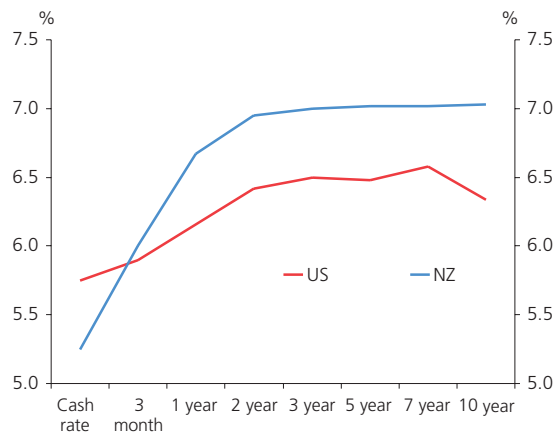


Figure 23: NZ and US yield curves as at 6 March 2000¹⁵



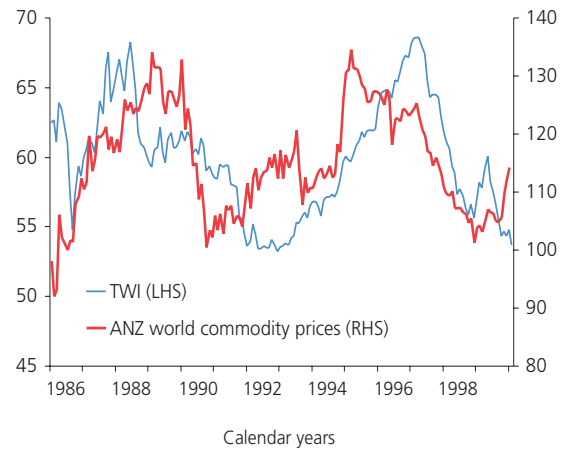
Second, New Zealand's 'soft' commodity prices generally remain low (albeit with some signs of recovery), and have lagged the recovery evident in the prices of 'hard' commodities produced by some other countries. In the past, as figure 24 shows, the exchange rate has tended to follow similar cycles

¹⁴ Under a FRA, the two counterparties agree today on an interest rate starting at some point in the future. FRAs are used by financial market participants to 'lock in' future interest rates; they are therefore a useful guide to market expectations of future interest rates. The FRA rates shown in figure 22 are plotted in the first month from which the interest rate will apply.

¹⁵ Cash rate is the official target rate.

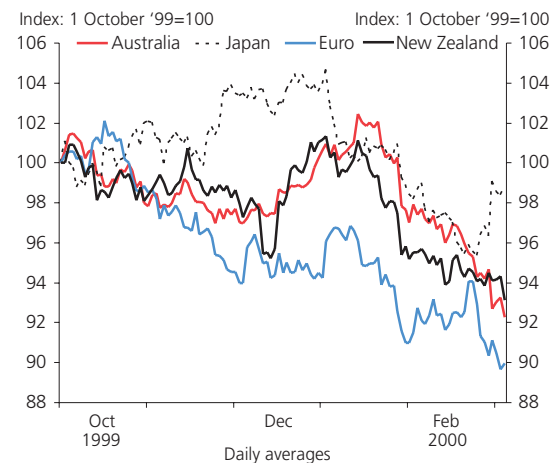
to those in commodity prices (which is unsurprising given the relevance of commodity prices for New Zealand's general economic fortunes).

Figure 24: ANZ world commodity prices and TWI¹⁶



Third, global capital markets appear currently to be differentiating more strongly than usual between new-technology-based industries and traditional industries, based on a perception that new technologies promise significantly higher future returns. Equity-related global capital flows may help explain some of the recent movements in exchange rates. In particular, the perception that exchange

Figure 25: New Zealand dollar, Australian dollar, euro, and Japanese yen against US dollar



¹⁶ Source: ANZ, RBNZ.

rates will be affected by such flows may in turn help explain why New Zealand – and to some extent Australia – is currently experiencing weak exchange rate performance. It also helps explain why the US dollar has recently been showing increasing strength against a number of major currencies (figure 25).

Finally, the perceived credit risk associated with the high current account deficit and external debt position may have

reduced the willingness of investors to commit further capital to New Zealand. This would imply an enlarged risk premium on New Zealand dollar assets, and be reflected in a relatively weak exchange rate, until the perceived risk diminishes.

The implications for monetary policy of these factors is discussed further in chapter 4.

3 Medium-term macroeconomic outlook

This chapter presents the Bank's projections for the economy over the next two to three years. Of course, this projection is a 'central' one within a wide spectrum of plausible alternatives, with quite large differences in eventual outcomes possible. As we have discussed previously, differences in outcomes relative to forecast can arise from unexpected shocks, from mismeasurement of the current state of the economy, or from a less-than-complete understanding of how the economy works. The Bank's policy decisions and choices are taken after considering the central projection, an assessment of the reasonable alternatives, and a weighing of the policy risks

associated with different courses of action. Chapter 4 discusses the key issues regarding the monetary policy outlook the Bank sees at this point.

We project overall growth to maintain a rate of around 3½ percent per annum over the next three years or so. This growth rate is similar to international forecasts for growth in our major trading partners over the next few years (table 4). Solid rates of growth are forecast to continue in Australia and the US, and to be reached in the UK and Europe too. Japan's growth prospects are seen as rather weaker, though a gradual recovery is anticipated nevertheless. The recovery in the rest of Asia is expected in general to consolidate, with a return to robust growth predicted for Malaysia, South Korea, Taiwan and Thailand in particular.

Forecasters internationally expect the strong growth in most developed countries – Japan excluded – to lead central banks in those countries to continue tightening monetary policy, in response to the emergence of inflationary pressure.

We anticipate that the strong performance expected for our trading partners will continue to drive growth in New Zealand export revenues. Growth in household and business spending, too, is projected to continue at moderate rates. Growth overall is expected to be fairly balanced between ongoing domestic spending and an improved external performance.

Figure 26: Economic growth projections, RBNZ and NZ consensus
(annual average percentage change)

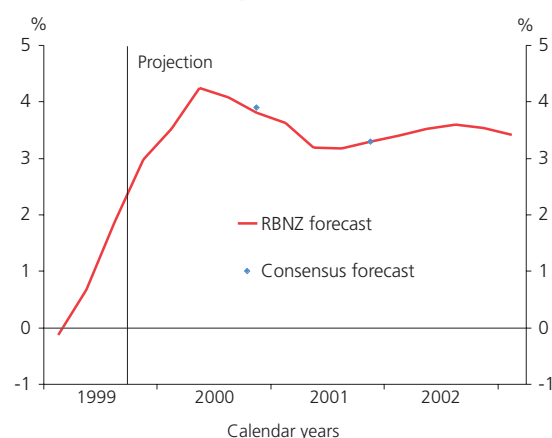


Table 4: February Consensus forecasts for trading partner growth
(calendar year, annual average percentage change)

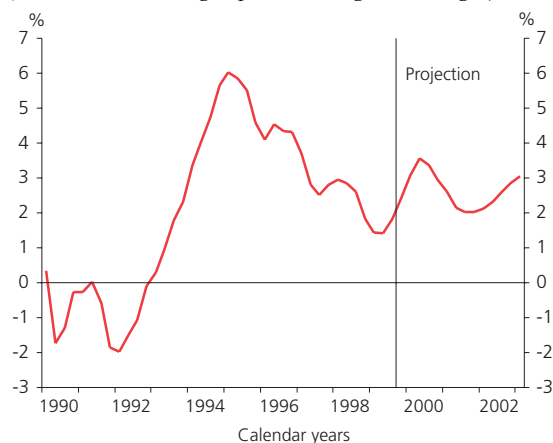
Country	1998	1999e	2000p	2001p
Australia	4.8	4.3	4.0	3.4
United States	4.3	4.0	3.9	3.0
Japan	-2.5	0.5	0.7	1.6
United Kingdom	2.2	1.9	3.1	2.7
Germany	2.2	1.4	2.8	2.9
Italy	1.3	1.3	2.6	2.7
France	3.4	2.7	3.4	3.0
China	7.8	7.1	7.4	7.6
Hong Kong	-5.1	2.0	4.1	4.1
Indonesia	-13.7	0.1	4.0	0.0
Malaysia	-7.5	5.1	6.2	6.1
South Korea	-5.8	9.8	7.2	6.1
Taiwan	4.7	5.5	6.3	6.0
Thailand	-9.4	4.3	5.2	5.2
14 country index	0.8	3.4	3.7	3.4

p = projected
e = estimate

Continued, solid growth is already being reflected in growing employment and real incomes, which we expect to underpin household consumption over the medium term. However, unlike the situation in the mid-1990s, when consumption growth outstripped real income growth by a fair margin, we expect consumption growth in the current upswing largely to match real income growth. As a result, the household savings rate is projected to remain roughly stable, at the low levels it reached in the previous upswing, through the projection period.

As we have noted in previous *Statements*, we see the higher levels of household sector debt in this upswing constraining growth in household expenditure somewhat. We expect this effect to be reinforced by the more limited scope for wealth increases arising from rapid house price inflation. However, the precise magnitude and timing of these effects is difficult to know, and poses some risks to the medium-term outlook of importance for policy. Our central projection assumes that the debt constraint will have some effect over the next two to three years, with consumption projected to grow at an average of 2½ percent per annum, rather than the 4 to 6 percent seen from 1994 to 1996 (figure 27). We discuss the risks around this assumption further in chapter 4.

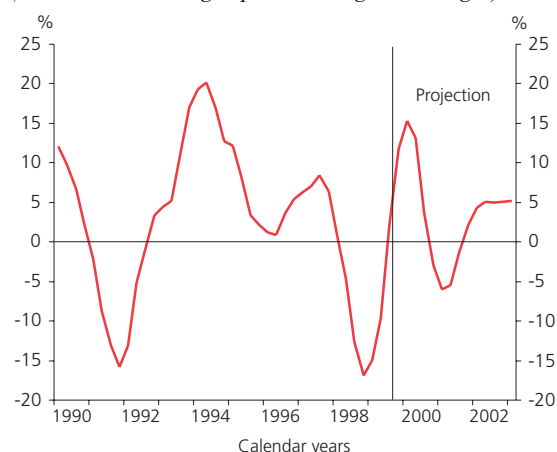
Figure 27: Real private consumption growth
(annual average percentage change)



We see only mild growth in residential investment, too, over the medium term, following a reasonably pronounced dip over the next year or so (figure 28). Generally speaking, we do not expect a repeat of the very strong housing market activity seen in the mid-1990s, when house prices rose around 10 percent per annum, and house-building at around 15 per-

cent per annum, for two or three years. This view of modest new housing demand is based on the lower medium-term target for net immigration, and the fact that net migration remains outward currently. Also, the higher level of debt now on household balance sheets reduces the scope for large increases in debt-financed investment.

Figure 28: Real residential investment growth
(annual average percentage change)

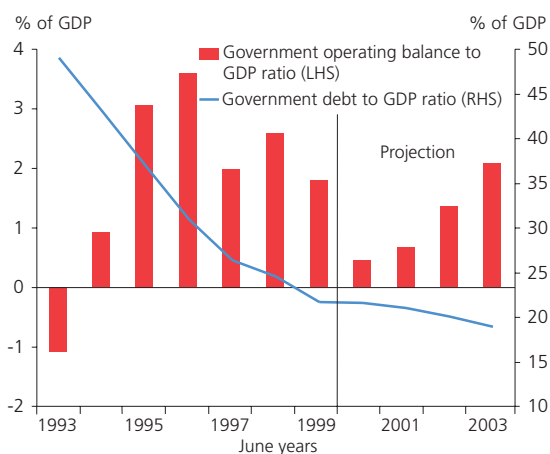


These factors do not preclude a continuation of the trend shift in housing preferences suggested by the quite noticeable rise in the proportion of new dwelling consents represented by apartments and terraced housing. Essentially, our medium-term projection for residential investment assumes a continuation of this gradual change in the nature of the housing stock in New Zealand, and of the more general trend fall in average household size.

Business investment is projected to grow over the next two to three years at rates similar to that over the past year or so. Capacity constraints are beginning to become apparent, and business investment is expected to continue growing to maintain the capacity to meet demand. Again, the projected average growth in business investment, at about 6 to 8 percent per annum, is quite mild compared to the 15 to 20 percent rates seen in the mid-1990s. This largely reflects the higher starting level of investment as a ratio to GDP, and the generally milder profile for overall growth seen for this upswing compared to the previous one. Slightly lower projected average real interest rates, though, should provide some support to the investment growth profile.

Based on the Treasury's forecasts prepared for the *Budget Policy Statement*, fiscal policy is expected on balance to have a broadly neutral effect on domestic demand growth. Slight rises in the government operating balance are projected over the medium term (figure 29).

Figure 29: Fiscal projections¹⁷



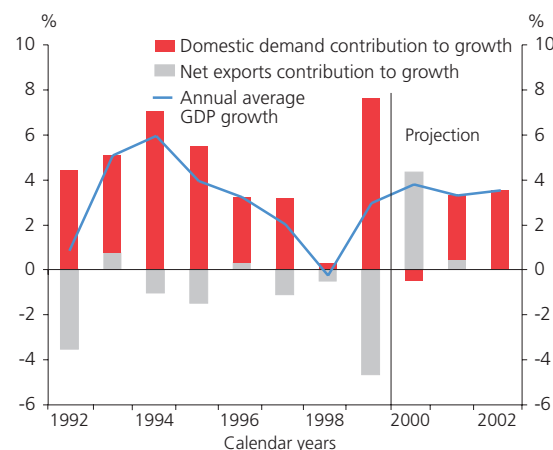
Over the medium term, we anticipate rising export revenues due to both volume growth and an increase in prices, as a result of robust trading-partner demand. Strengthening world demand, assisted by the low exchange rate, is expected to support manufactured exports and tourism in particular. Pastoral exports this season will be much increased compared to last season, due to the better weather. We project more moderate growth in pastoral exports over the next few seasons, assuming 'normal' weather patterns.

Imports are projected to grow a little faster than domestic expenditure, continuing the trend rise in the import penetration ratio seen over the previous decade. As explained in Chapter 2, imports have grown strongly recently (even abstracting from large items such as the frigate), as import prices have remained relatively low in spite of the weak exchange rate. We expect the structural changes behind this phenomenon to persist over the medium term.

The balance of exports over imports (net exports) is projected to make a stronger contribution to overall growth over the next two to three years, after the drag on growth experienced last year (figure 30). This improved net export

performance, reinforced by an improvement in the terms of trade as the prices of New Zealand commodity exports rise, is the main factor driving our projected gradual decline in the current account deficit. The current account deficit is projected to fall from its current level of around 8 percent of GDP, to around 5 percent of GDP by March 2003.

Figure 30: Net exports and domestic contribution to growth



We project potential output growth of around 3 percent per annum over the next two to three years. This is based on the fairly mild projected growth in business investment discussed above, and moderate labour force growth. Projected growth in the labour force averages about 1½ percent per annum over the period, rather than the 2 to 3½ percent per annum rates seen for several years in the mid-1990s. This reflects the weak outlook for net immigration, and a fairly slow projected rise in the labour force participation rate. This rise is in line with the trend over the past twenty years or so, but we do not see great scope for large increases, because the participation rate is already at quite high levels compared to New Zealand's historical experience.

Reflecting the slightly faster projected rate of demand growth compared to potential growth, and given our assessment discussed in Chapter 2 that the negative output gap has substantially disappeared, we expect a small positive output gap gradually to emerge.

Given the analysis of this and the previous chapter, the outlook for inflationary pressure over the medium term implies the need for some tightening of monetary conditions over the projection period. We project short-term interest rates

¹⁷ Source: NZ Treasury.

to continue to rise over the near term, to reduce the risk of material inflationary pressure building up over the next one to two years. Further out, the short-term interest rate is projected to remain at a level just over 7 percent. This track is about 50 basis points higher than the November *Statement* projection.

We assume that the tightening in interest rates is accompanied by a gradual rise in the exchange rate. This assumption is supported by the likely path of the world prices of New Zealand's commodity exports over the next few years. Although those prices are currently at fairly low levels, a gradual recovery is beginning to become apparent, and should strengthen as world demand growth picks up.

Although New Zealand's monetary policy is projected to follow a tightening profile over the next year or so, interest rate differentials over the medium term are unlikely to put much upward pressure on the exchange rate. As discussed in Chapter 2, financial markets have already accounted for the expected tightening, and the anticipated differential with foreign interest rates appears modest.

Alongside these cyclical factors, a key structural factor influencing the exchange rate outlook will be developments in the level and trend in the current account deficit. As noted above, we project only a gradual reduction of the current account deficit from its current high levels. To the extent that the risk perceptions discussed in Chapter 2 arising from the high current account deficit persist, downward pressure on the exchange rate from this source is likely to continue.

Overall, at this stage, our medium-term projection for the exchange rate shows a much less pronounced cycle than that in the previous upswing. Neither are monetary conditions projected to rise to the very high levels prevalent in 1996-97. Our projected peak in short-term interest rates of 7 percent contrasts with the peak of almost 10 percent in 1996, and the projected TWI exchange rate of 58 to 59 in 2002 contrasts with a peak of almost 69 in 1997.

Of course, these are, as usual, central projections only. The projection of relatively mild tightening of monetary conditions over the next two to three years is based on the view, discussed above, that the influences on demand growth and inflationary pressure going forward are likely to be rather milder than was seen in the previous upswing. However,

unexpected shocks happen, and actual monetary policy may turn out to follow a correspondingly different path.

Our assumption that the tightening of monetary conditions will reflect both rising interest rates (in the early part of the projection period at least) and an appreciation of the exchange rate is also subject to some risk. A similar tightening in monetary conditions, with similar implications for overall growth and inflation, may well eventuate in the form of more strongly rising interest rates, and a weaker appreciation of the exchange rate. In particular, there is the possibility that the downward pressure on the exchange rate resulting from the high current account deficit may turn out to be greater than we have assumed. We discuss this issue in more detail in Chapter 4.

The above projections for domestic growth and spare capacity – which of course take into account the projected tightening in monetary conditions – suggest little pressure in either direction on domestic inflationary pressure over the next two to three years. Import price inflation over the period is expected to be rather lower than domestic inflation, as a result of the projected gradual rise in the exchange rate, and the fairly weak recent trends in the foreign prices of New Zealand imports. Although the strong outlook for world growth presents some risk of rising inflation in our trading partners – suggesting some upward pressure on the prices of New Zealand imported goods – in general we expect the competitive international market conditions to dampen this effect.

As usual, we project CPI inflation close to the middle of the target range through the projection period – and indeed project monetary conditions to achieve this outcome, given the information currently available. In November, we expected a near-term rise in CPI inflation due to the sharp increases in domestic petrol prices, before convergence of CPI inflation towards the middle of the target range. The temporary rise in CPI inflation we expect over this year is now much smaller than that expected in November, because of the surprisingly low CPI outturn for the December 1999 quarter, and the downward revision to the September quarter CPI since the November *Statement*.

4 Policy issues

The economy is experiencing a period of economic growth that commenced around mid-1998. Annual CPI inflation remains subdued, at around the middle of the target range, providing 'headroom' for absorbing unanticipated inflation developments. However, it seems reasonably clear that the excess capacity that has been evident since the beginning of 1998 has now been substantially exhausted. If growth continues as projected, we can expect to see capacity constraints emerge and, with that, upward pressure on inflation.

With inflation near the middle of the target, the near-absence of spare capacity, and the above-trend growth outlook, on the face of it monetary stimulus is no longer required. Hence, it is clear that the recent adjustments to the OCR in November, January and now March are justified, and that further increases in the OCR are likely over the near term.

The obvious question is, how much higher will the OCR go, and when? The obvious, if unsatisfying, answer is "it depends". This chapter discusses the sorts of factors that the Bank will need to consider as it makes future monetary policy decisions, including issues relating to:

- the momentum of the domestic recovery;
- the path of household sector expenditure;
- the linkage from growth to inflation;
- the behaviour of the exchange rate, and its implications for policy;
- developments in the rest of the world, including the monetary policy stance in our key trading partners; and
- how the Bank should interpret the new PTA requirement to "seek to avoid unnecessary instability in output, interest rates, and the exchange rate".

Domestic momentum

Because New Zealand is a small and narrowly-based economy, its business cycles are typically rather sharper than those experienced by larger and more diverse economies such as the US or even Australia. The projections discussed in this *Statement* embody a fairly muted cycle and, for that reason, it is natural to pose the question of why this cycle should be different to previous ones. In particular, we can look back to

the very sharp recovery from the recession of the early 1990s, and recall the challenges that it posed for monetary policy.

Of course, the recession of 1991-92 was much deeper, with the negative output gap at the trough of the recession approaching 4 percent of GDP, almost twice the gap that emerged in 1998. Moreover, the recovery through 1993 was fuelled by a sharp recovery in the rural sector, spurred by an increase in export prices which was considerably stronger than that which has emerged to date. As we approach the end of the second year of recovery from the latest recession, it is apparent that there has not yet been the same strength of 'bounce-back' evident in either exports or domestic demand.

Also, some of the recovery we have seen in export volumes is simply a product of improved weather. Once 'normal' growing conditions return, growth in pastoral production will return to its relatively milder trend performance. It is thus appropriate to look through the shorter-term volatility in primary product output in the setting of monetary policy. Monetary policy is principally concerned with managing the inflationary impact of persistent demand shocks, not relatively short-lived supply shocks.

Consumer behaviour

A key part of our reasoning that this cycle may be relatively moderate – as we have maintained for a number of *Statements* – lies in the behaviour of households. In Chapters 2 and 3, we explained our mild projection for household sector expenditure, citing factors such as higher debt ratios, the relatively higher starting point for consumer spending this time, and the relatively sluggish medium-term outlook for house prices. We also noted that the precise timing and magnitude of these effects is difficult to detect and to predict.

With household expenditure representing some 70 percent of GDP, different, but plausible, assumptions would have a marked effect on projected demand and subsequent inflationary pressure, and hence the appropriate monetary policy track over the medium term. At this stage, the Bank is relatively agnostic about the magnitude of the debt-constraint effects. We continue to project that debt constraints will impact on household behaviour, though not in a particularly strong way. It has to be acknowledged that there are few

signs of such an impact as yet, and the savings behaviour of New Zealand households has confounded expectations before. As the current upswing matures, this key part of the projection will be continually cross-checked against a variety of possible indicators of the debt constraint effect, such as borrowing growth, savings trends and the ratio of household sector expenditure to GDP.

Growth and inflation

Box 2 discusses the argument which has emerged elsewhere, particularly in the United States, that it is now possible for developed economies to achieve both strong growth and price stability simultaneously. Does the recent benign inflation data in New Zealand indicate that we may be on the cusp of a new paradigm here? The Box concludes that the appropriate strategy for New Zealand is to acknowledge the new paradigm possibility, but to maintain a cautious stance, while searching for more concrete evidence.

The exchange rate

At the time of our November *Statement*, we assumed a gradually appreciating track for the exchange rate over the projection period. In fact, we have seen further depreciation since then, and the New Zealand dollar is now close to the lows of the trough of the previous, much deeper, downturn.

At these levels, the exchange rate appears to be strongly supportive of profitability and activity in export and import-competing sectors, and clearly carries risks of increasing cost and demand pressures in the economy generally. We again assume a gradually appreciating exchange rate track over the projection period, and that is obviously influential in the profiles of our inflation and monetary policy projections.

To date, we have seen a surprisingly moderate response of CPI inflation to the exchange rate weakness. This pattern has also been evident in a number of other economies over the past couple of years. In any case, though, with a longer policy horizon, we can look through the direct price effects of exchange rate changes, accepting the shorter-term variations in the CPI that result from exchange rate fluctuations, without a policy response.

In thinking about the appropriate policy response to exchange rate movements, given this longer policy horizon, an understanding of the reasons underlying any movement is as important as the absolute level of the exchange rate – perhaps more so. Monetary policy needs to assess how much of an exchange rate movement merely *reflects* economic developments that themselves have implications for inflation pressure, such as commodity price developments, and how much of it is an *additional* source of stimulus to the economy. In short, the question to be asked is, what does the movement in the exchange rate imply about future demand pressure in the economy, all else equal?

At this stage, the weak exchange rate can be readily explained by still-sluggish international prices for our key commodity exports, New Zealand interest rates being very similar to major trading-partner rates, and the fairly disappointing performance of net exports that remains evident to date. Given these factors and their impact on the overall demand picture, the need for very firm interest rates is not obvious at this stage. Future movements in New Zealand's commodity export prices, and in net exports more generally, will be important in assessing how monetary policy should respond to exchange rate developments.

International monetary policy developments

The future path of the exchange rate is likely to be influenced by developments in monetary policy in our major trading partners. As discussed in Chapter 2, the outlook for interest rate differentials is a little uncertain. Market expectations are for a similar rate of tightening in New Zealand and in our trading partners. To the extent that economic developments in our trading partners turn out to be different to assumption, monetary policy will correspondingly be different. As new information leads to revisions of future interest rate differentials, the exchange rate is likely to respond accordingly. For example, a more positive outlook for demand in our trading partners would probably lead to upward revisions to expected overseas interest rates, putting downward pressure on the New Zealand exchange rate.

Box 2: Strong growth without inflation: the new paradigm?

Before about 1995, it was widely held that trend growth in the productive capacity of developed economies was probably considerably less than 4 percent per annum. Thus, sustained economic growth above 4 percent would, after a lag, lead quickly to rising inflation. However, since recovering from the global slowdown in 1992, economic growth in the US and Australia has averaged in excess of 4 percent, yet well after the normal lags would have played out, inflation in those countries has remained remarkably subdued (figures 31 and 32).

As a result, it has been suggested that the links normally assumed between rapid economic growth and inflation

Figure 31: Economic growth
(annual percent change)

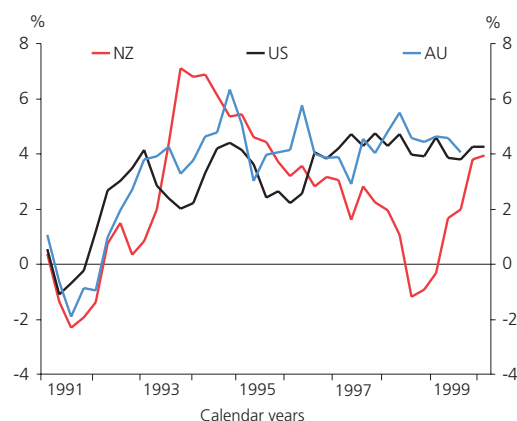
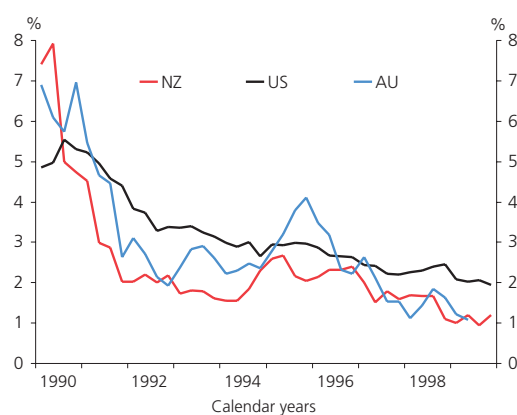


Figure 32: CPI inflation¹⁶
(annual percent change)



¹⁶ CPIX for New Zealand, CPI-ex. interest rates for Australia; CPI-ex. food and energy for the US.

no longer hold – that there is a ‘new paradigm’ governing economic developments. In New Zealand, last year’s strong growth, coupled with the unexpectedly weak inflation outcomes in the second half of 1999, has led some to argue that a new paradigm has arrived here also. This Box looks at the evidence, and draws some implications for monetary policy.

There are three main strands to the new paradigm:

1. that the development of new data processing and transmission technologies (such as the Internet) has strongly boosted productivity, and will continue to do so;
2. that the greater openness of the world economy now limits the ability of domestic producers to raise prices in response to demand; and
3. that the better anchoring of inflation expectations has reduced the strength of the ‘wage-price spiral’, in which price increases lead to demands for compensating wage increases, which in turn lead to further price increases.

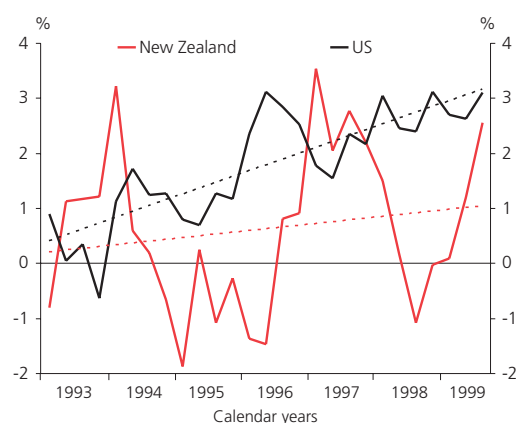
If correct, the new paradigm could have important implications for monetary policy. Many central banks, the Reserve Bank of New Zealand included, forecast inflationary pressure using some notion of a ‘capacity constraint’ on economic activity, beyond which inflation pressures tend to rise. Faster productivity growth than assumed would lift the capacity constraint, allowing more goods to be produced and consumed without upward pressure on prices. And given a particular level of excess demand, more intense international competition than assumed, or better anchoring of inflation expectations than assumed, would mean that the upward inflation pressure flowing from the excess demand would be weaker.

The evidence on the new paradigm is mixed. Certainly in the US, evidence is accumulating that something different is occurring. The Internet and associated technologies are being adopted widely and labour productivity has been rising sharply, while wage pressures have been quite subdued.

In addition, there is little doubt that the world is now more open to trade. For example, in part because of greater international competition, prices of international phone calls have fallen considerably in New Zealand in the last few years (though technology has played an important role in this case too). More recently, international airfares in New Zealand have remained more subdued than might have been expected given the very sharp rise in oil prices – one explanation that has been offered is the threat of increased competition from offshore.

These observations, amongst others, have been cited as evidence for the existence of a new paradigm in New Zealand.

Figure 33: Labour productivity¹⁷
(annual percentage change)



However, there are a number of reasons to be cautious about the new paradigm, even for the US, which has probably been the main beneficiary of gains in productivity associated with high technology. One reason is that the low inflation outcomes seen in that country in 1997 and 1998 in part reflect the combined downward price effects of falling oil prices, a marked appreciation of the US dollar, the Asian crisis (which resulted in sharply lower commodity prices), and some other price-level influences. Thus, it is difficult to tell how much of the favourable growth and inflation outcomes, in the US at least, is attributable to new-paradigm effects, and how much to a fortuitous set of events putting temporary downward pressure on inflation.

¹⁷ The dashed lines are the respective trends since 1993. Labour productivity is measured as output per hour worked.

The evidence on the new paradigm in New Zealand is even more tentative, not least because the lag from the removal of economic slack to inflation pressures has not yet had time to play out. It seems safe to assume that inflation expectations have been much more firmly anchored since inflation targeting was adopted in New Zealand, but inflation expectations have risen a bit recently. In addition, although the Internet and associated technologies have increasingly been adopted in New Zealand, sustained increases in measured productivity are not strongly evident.

Figure 33 shows labour productivity for the US and for New Zealand. The record for the US seems fairly clear: productivity growth has trended up noticeably in the last few years to a higher level. Labour productivity in New Zealand did rise in 1999. However, measured productivity in New Zealand tends to swing markedly through the business cycle, making it difficult to say whether the recent improvement is purely a cyclical phenomenon, or something more fundamental.

If low inflation despite strong growth became a reality for New Zealand, the implications for monetary policy of low inflation coexisting with strong growth would depend somewhat on which elements of the new paradigm were thought to be most influential. For example, suppose new-paradigm effects were *solely* the result of better-anchored inflation expectations. Better-anchored inflation expectations could rapidly disappear if monetary policy became overly accommodative for the given economic environment – if, for example, strong economic growth were mistakenly associated with a trend rise in productivity rather than a cyclical rise in demand pressure, leading to the renewed emergence of rising inflation.

Given these issues, and the still-tentative nature of the evidence on the new paradigm in New Zealand, it seems appropriate at this stage for monetary policy to proceed cautiously. If a new paradigm is emerging in New Zealand, it will take some time to be revealed clearly in the data. The Bank has not ruled out the possibility, and in the meantime, we will continue to monitor the evidence closely.

The current account deficit and risk premia

As we consider the likely future paths of the exchange rate and interest rates, there remain important issues related to the impact of the current account deficit and associated risk premia. As discussed in Chapter 2, perceptions that the current account deficit is unsustainable at current levels, and the absence of imminent correction, may have raised the risk premium on investment in New Zealand dollar assets, and this will influence the balance between rising interest rates and exchange rate appreciation as the upswing progresses.

At this stage, evidence on whether the risk premium in New Zealand's long-term interest rates has grown is equivocal. On the face of it, the difference between New Zealand and US 10-year bond yields appears quite low by historical standards, at about 80 basis points against the 100 or more that prevailed through most of the 1990s. However, New Zealand's short-term interest rates are currently, and atypically, well below those of the US – which for funding-cost reasons would pull New Zealand bond rates downwards. In addition, New Zealand's and Australia's bond yields contrast with those of most other OECD countries, whose bond yields are below those of the US. These factors suggest that New Zealand's risk premium might have increased.

The usual response to concerns about the current account deficit in a floating exchange rate environment is that markets inevitably sort these things out: the current account deficit will persist only as long as overseas investors are prepared to finance it. The adjustment mechanism, of course, is a declining exchange rate associated with a rising risk premium and corresponding lift in interest rates. However, it is well understood that what looks like an unsustainable current account position may, in fact, persist for many years. Equally well-understood is that the adjustment, when it finally emerges, can be sharp and disruptive – for example, of the sort experienced by some Asian economies in 1997.

It is possible that what we have been witnessing over recent months is part of such an adjustment process, although thankfully it has not been a disruptive one. Under any adjustment scenario, however, sustainable reduction of a sizeable current account deficit must entail some combination of increased

national savings, and moderated consumption and investment behaviour.

If indeed an adjustment process is underway, a lower-than-otherwise exchange rate and higher-than-otherwise interest rate configuration will persist. The stimulative effect of the lower exchange rate would be offset by the contractionary effect of the higher interest rates, consistent with resources being encouraged to move from interest-rate-sensitive industries to exchange-rate-sensitive industries (broadly corresponding to a switch from the non-tradeable part of the economy to export and import-competing sectors). The net effect on the intensity with which resources are utilised, and therefore the likely pressure on inflation, is not clear.

The new PTA

On 16 December, 1999, Governor Don Brash and Minister of Finance Michael Cullen signed a new *Policy Targets Agreement* (Appendix 3). The significant feature of the new PTA is the modification of clause 4c in the section relating to issues of monetary policy implementation and accountability. That clause now says:

“In pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner and shall seek to avoid unnecessary instability in output, interest rates and the exchange rate.”

What are the implications of the new PTA for the conduct of monetary policy? The Bank has already changed its approach to monetary policy in recent times. Those changes are evolutionary in nature, rather than being distinct reactions to the new PTA, but are nevertheless entirely consistent with it. The evolutions are as follows:

- The shift to the OCR in March 1999 had already had a significant impact in terms of reduced short-term interest rate volatility without, it seems, any noticeable increase in exchange rate volatility.
- As already documented, we have taken a very deliberate decision to push out our policy horizon in the last few years, being less responsive to shocks and surprises that have only a temporary effect on inflation. In doing so, we have also focused more on trying to identify and con-

centrate our policy reactions on longer-term trends related to overall demand pressures.

- A particular example of this new approach is in our thinking regarding the direct price effects of exchange rate developments and how to incorporate them into policy formulation. In the early stages of our inflation-targeting experience, the direct price effects of the exchange rate were regarded as the key part of the monetary policy transmission process. Since then, we have moved to focus more on the real interest rate and real exchange rate channels, through their effect on pressure on productive resources in the economy.
- This increased preparedness to absorb short-term fluctuations in inflation is assisted by better-anchored inflation expectations, now that several years have passed with inflation remaining reliably at low single-digit levels.
- After the 1996 election, the inflation target range was widened from 0 to 2 per cent, to 0 to 3 per cent. The widening of the range was consistent with the evolution of the conduct of monetary policy as noted above. The November 1999 *Statement* provides an illustration of the new approach, in which the impact of the depreciating exchange rate and oil price rises was expected to push the CPI to around 2.6 percent by the middle of 2000. The Bank did not consider a specific monetary policy response was required.

Being less reactive to temporary inflation disturbances, while focusing firmly on medium-term trend developments in inflation pressure, is consistent with maintaining a more stable

path for output, the exchange rate and interest rates, as required by the new PTA.

How does the present decision to raise the OCR fit in? This decision represents the third increase in the OCR since November and, like the increases in November and January, is part of a prudent response to the evident gradual shift in the balance of medium-term inflation risks towards higher inflationary pressure. By moving interest rates in anticipation of rising inflationary pressure – rather than in response to an actual increase in inflation – the Bank aims to reduce the likelihood that a pronounced tightening in monetary conditions will be necessary to keep inflation stable over the next few years.

* * *

The quantitative projections discussed in Chapter 3 expressly capture only a part of that longer horizon. As discussed at length in this chapter, many uncertainties surround the likely evolution of inflationary pressure and the economy more generally. Although the Bank feels confident that the present OCR decision is well justified by the information at hand, prospects for the future path of interest rates are more hazy. We will continue to monitor economic developments closely, and update our policy assessments and medium-term projections accordingly, in light of new information. As always, we stand ready to adjust monetary policy in either direction if that seems required by the emerging data.

Appendix 1: Chronology

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

1999

- 17 November: The Reserve Bank released its twenty-fourth *Monetary Policy Statement*. The news release accompanying the *Statement* is reproduced in Appendix 2.
- 3 December: Statistics New Zealand revised down the September quarter CPI result from 0.6 to 0.4 per cent. The Reserve Bank released a press statement stating that this change had no policy implications. The statement is reproduced in Appendix 2.
- 16 December: A new *Policy Targets Agreement* was signed between the Governor of the Reserve Bank, Dr Don Brash, and the Treasurer, Hon Dr Michael Cullen. The text of the *Agreement* is reproduced in Appendix 3, and the accompanying news release is reproduced in Appendix 2.
- 23 December: Production GDP figures were released showing that the New Zealand economy grew 2.3 per cent in the September 1999 quarter.

2000

- 19 January: The Reserve Bank raised the Official Cash Rate by 25 basis points to 5.25 per cent. The accompanying news release is reproduced in Appendix 2.
- 19 January: CPI statistics were released for the December quarter, showing that the CPI increased by 0.2 per cent over the quarter. The price stability target measure was 1.3 per cent for the year to December 1999.

Appendix 2: Reserve Bank statements on monetary policy

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

OCR raised to 5.0 per cent 17 November 1999

The Reserve Bank today raised the Official Cash Rate (OCR) from 4.5 per cent to 5.0 per cent, the first increase since the OCR was introduced in March 1999.

That's come with the release of the Reserve Bank's November 1999 *Monetary Policy Statement*.

Reserve Bank Governor Don Brash commented, "The current recovery began over a year ago, boosted in part by stimulatory monetary conditions. In the Bank's view, now is the right time to begin to ease back on the accelerator. Monetary policy will remain stimulatory, but a little less so than previously.

"We foreshadowed a change of this sort in the August *Monetary Policy Statement*, if events unfolded as expected. The June GDP fall was a surprise, but, after looking carefully at a great deal of data, we believe this was an aberration. Numerous indicators suggest that the economy bounced back strongly during the September quarter, and that it is now growing at an annualised rate of around 4 per cent.

"We expect this growth will continue, supported by an increasingly robust world economy. If so, the sustained growth will absorb the New Zealand economy's spare capacity, and monetary conditions will need to be less expansionary to keep inflationary pressures in check.

"Again, if the economy evolves as we expect, in the next year or two monetary conditions are likely to move gradually from being stimulatory to more neutral levels. Official interest rates in many other advanced countries – UK, Australia, USA, Euroland – are now also rising for similar reasons.

"Today's tightening is not in response to recent oil price increases. The Reserve Bank looks beyond these one-off price rises, focusing on the inflation outlook in the medium-term – one to two years ahead. In our judgement, these recent increases will not spill over into medium-term inflation pressures.

"By standing ready to act, as we've done today, the Reserve Bank makes its best contribution to steady and, as a consequence, prolonged economic growth," Dr Brash concluded.

CPI adjustment: no policy implications 3 December 1999

Following today's amendment of the Consumers Price Index (CPI) figure for the September 1999 quarter by Statistics New Zealand, Reserve Bank Governor Don Brash said that there were no implications for current monetary policy settings.

"As I have said in the past, it is the future path of inflation that is most relevant for the settings of monetary policy. This adjusted figure does not carry any particular implications for current monetary policy settings," Dr Brash concluded.

New Policy Targets Agreement Joint Press Release by the Governor and the Treasurer - 16 December 1999

The Treasurer and the Governor of the Reserve Bank today signed a new Policy Targets Agreement (PTA), this being the statutory contract between the Treasurer and the Governor which sets out specific targets for achieving and maintaining price stability.

The one significant change compared to the previous PTA is that, with the new words in bold, section 4(c) of the PTA now states: "In pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner and shall seek to avoid unnecessary instability in output, interest rates and the exchange rate."

Dr Cullen commented: "The amendment meets the Government's requirements. It in no way compromises either the 0 to 3 percent inflation target or the focus on the maintenance of price stability.

"The renegotiation sought by the Government reflected a concern not to repeat the experience of the mid-1990s, when the export sector was placed under immense pressure by a sharp increase in the value of the dollar.

"Since then, the Reserve Bank has introduced a number of changes to the conduct of monetary policy, the effect of which should be to inject more stability into the system. I welcome those changes and consider this latest change another step in the same direction," Dr Cullen said.

Dr Brash said: "I did not seek this change to the PTA, but I nevertheless welcome it, as it makes explicit the way monetary policy in New Zealand has been evolving in recent years. Inflationary expectations have become lower and better anchored, and provided this continues to be the case aggressive shifts in interest rates, and consequently the exchange rate, should become less necessary. As the credibility of the monetary framework in New Zealand continues to be further enhanced, so 'instability in output, interest rates and the exchange rate' should further decline. The Reserve Bank will encourage this trend, while recognising that, as in other countries, there will still be cycles in output, interest rates and the exchange rate.

"The Reserve Bank remains totally focussed on its obligation, set by statute and the PTA, to maintain 'a stable general level of prices.' This has not changed. Also, offshore or climatic events, or sharp shifts in fiscal policy, can still exaggerate the business cycle. However, a trend towards less variability is apparent and, barring extreme events, this should continue," Dr Brash concluded.

OCR rises to 5.25 per cent 19 January 2000

The Reserve Bank today increased the Official Cash Rate (OCR) to 5.25 per cent.

This increase came with the Reserve Bank's scheduled January OCR review.

Reserve Bank Governor Don Brash said today: "Both the domestic and world economies are growing strongly, and at least as strongly as foreshadowed in our last *Monetary Policy Statement (MPS)*.

"The September quarter GDP number, released in December, confirmed our view that the economy is growing strongly, and that the recovery has been underway since the middle of 1998. Business and consumer confidence remain high, and international share markets are buoyant. Strong growth in the world economy is prompting interest rate rises around the world.

"The November *MPS* projected an ongoing series of interest rate increases, and today's announcement should be seen in that context.

"Strong growth is gradually using up spare capacity in the economy. As this happens, to avoid inflation pressures building the

Reserve Bank needs to ease back on the degree to which monetary policy is stimulating the economy. An OCR of 5.25 per cent is still stimulatory, as opposed to being a brake on the economy, but less so than previously.

“By gradually, but promptly, adjusting the OCR in this fashion, the Reserve Bank is attempting to ensure that price stability is delivered in the context of economic growth that continues steadily for as long as possible,” Dr Brash concluded.

Dr Brash noted that the OCR decision had been made without knowledge of the December quarter CPI, to be released later this morning. He stressed that knowledge of that number would not, by itself, materially alter the Bank’s policy assessment, which focuses on inflation prospects one to two years ahead.

Appendix 3: Policy Targets Agreement

POLICY TARGETS AGREEMENT

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

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

1. Price stability

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

2. Policy target

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

3. Unusual events

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

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

- b) When disturbances of the kind described in clause 3 (a) arise, the Bank shall react in a manner which prevents general inflationary pressures emerging.

4. Implementation and accountability

- a) The Bank shall constantly and diligently strive to meet the policy target established by this agreement.
- b) It is acknowledged that, on occasions, there will be inflation outcomes outside the target range. On those occasions, or when such occasions are projected, the Bank shall explain in Policy Statements made under section 15 of the Act why such outcomes have occurred, or are projected to occur, and what measures it has taken, or proposes to take, to ensure that inflation comes back within that range.
- c) In pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner and shall seek to avoid unnecessary instability in output, interest rates and the exchange rate.
- d) The Bank shall be fully accountable for its judgments and actions in implementing monetary policy.



Hon Michael Cullen
Treasurer



Donald T Brash
Governor
Reserve Bank of New Zealand

DATED at Wellington, this 10th day of December 1999

Appendix 4: Summary Tables¹

Table A

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

	CPI* Annual	TWI	90-day bank bill rate	MCI	
				Nominal	Real
1996	Mar.	64.2	8.7	750	825
	Jun.	64.6	9.7	900	900
	Sep.	65.6	10.0	1000	1025
	Dec.	67.1	8.9	1000	1000
1997	Mar.	68.4	7.5	950	1000
	Jun.	68.0	7.2	900	975
	Sep.	64.8	8.1	750	775
	Dec.	63.9	7.9	650	700
1998	Mar.	61.2	9.0	550	625
	Jun.	58.5	9.1	325	425
	Sep.	57.1	6.8	-25	50
	Dec.	56.0	4.6	-325	-225
1999	Mar.	57.6	4.5	-200	-125
	Jun.	59.1	4.7	-50	50
	Sep.	56.7	4.8	-250	-150
	Dec.	54.4	5.4	-400	-325
2000	First Half Average	54.4	6.0	-350	-300
	Second Half Average	56.0	6.6	-150	-125
2001	First Half Average	57.2	7.0	0	25
	Second Half Average	58.1	7.2	100	125
2002	First Half Average	58.6	7.3	150	175
	Second Half Average	58.8	7.1	175	200

⁽¹⁾ Notes for these tables are in Appendix 5

* Up to and including the June 1999 quarter, the series is the annual percent change in CPIX. From June 2000, the series is the annual percent change in the new CPI. For September 1999 to March 2000, the series is calculated by adding the quarterly increases in the new CPI to quarterly increases in the old CPI excluding interest rates and section prices.

Table B

World outlook

(Annual average percentage change, unless specified otherwise)

March year	Actuals										Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
World GDP	3.4	4.4	4.2	4.4	3.2	1.0	3.8	3.6	3.3	3.2			
World CPI inflation	1.9	2.2	2.4	2.6	2.6	1.4	1.3	1.8	1.8	1.8			
Domestic													
Import prices	-2.7	-1.8	-0.7	-3.4	0.8	3.7	1.7	-0.3	-2.1	-0.2			
Export prices	-1.2	-2.1	-2.8	-4.2	0.1	3.3	3.6	-0.4	-2.0	1.3			
Terms of trade	1.5	-0.3	-2.2	-0.8	-0.6	-0.5	2.0	-0.1	0.0	1.5			
March quarter													
World 90-day rate (level, %)	3.7	6.5	5.7	5.5	5.5	4.7	5.9	6.2	5.8	5.5			
World bond rate (level, %)	6.2	8.0	6.4	6.8	5.6	5.1	6.7	6.7	6.3	6.1			

Table C

Composition of real GDP growth

(Annual average percentage change, unless specified otherwise)

March year	Actuals							Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Final consumption expenditure										
Private	3.4	6.0	4.1	3.7	3.0	1.5	3.1	2.6	2.1	3.0
Public authority	-1.1	-0.7	3.3	2.5	5.3	0.0	7.0	-3.6	-1.1	1.0
Total	2.4	4.6	3.9	3.5	3.4	1.2	3.9	1.3	1.5	2.7
Gross fixed capital formation										
Market sector:										
Residential	17.1	12.2	-0.1	4.0	1.8	-15.1	15.6	-5.4	5.5	5.7
Business	22.5	17.6	14.3	4.6	0.8	4.5	9.3	5.7	7.6	5.2
Non-market government sector	-3.9	28.4	2.2	32.4	12.9	-7.9	3.5	8.1	5.0	4.7
Total	18.2	17.2	9.6	7.0	2.4	-1.2	9.8	3.8	7.0	5.3
Final domestic expenditure	5.1	7.0	5.1	4.3	3.2	0.6	5.1	1.9	2.8	3.3
Stockbuilding ⁽¹⁾	1.1	0.0	-0.7	-0.3	0.1	-1.1	1.4	-0.4	0.1	0.0
Gross national expenditure	6.2	6.9	4.3	3.9	3.3	-0.4	6.6	1.5	2.8	3.3
Exports of goods and services	7.9	8.4	2.6	3.7	3.9	2.3	4.4	7.5	5.7	5.1
Imports of goods and services	8.0	14.3	7.4	7.2	4.8	3.1	11.9	-0.1	3.6	4.7
Expenditure on GDP	6.2	5.3	2.9	2.7	3.0	-0.7	3.9	4.1	3.5	3.4
GDP (production)	6.3	5.4	3.8	2.6	2.0	-0.1	3.5	3.6	3.4	3.4
GDP (production, March qtr to March qtr)	6.9	4.6	3.8	1.2	1.1	1.7	3.9	3.2	3.6	3.1
Potential output	2.8	3.6	3.7	3.3	2.8	2.4	2.4	2.6	3.0	3.2
Output gap (% of potential GDP, year average)	0.3	2.0	2.0	1.4	0.7	-1.8	-0.8	0.2	0.6	0.8

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

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

March year	Actuals							Projections			
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Compensation of employees	4.4	6.4	5.9	5.6	3.2	0.2	3.6	4.8	5.2	5.2	
Entrepreneurial income	13.5	8.7	11.3	1.6	-0.6	4.8	4.4	5.2	5.5	5.4	
Other income	3.1	1.8	7.3	4.2	2.6	1.7	4.1	5.0	5.3	5.3	
Total income	5.2	5.4	7.1	4.6	2.5	1.3	3.9	4.9	5.3	5.3	
Less income tax	6.0	7.2	6.7	1.9	0.6	-4.1	2.0	8.5	6.3	5.3	
Nominal disposable income	5.0	4.8	7.2	5.3	2.9	2.6	4.3	4.1	5.0	5.3	
Consumption deflator	1.7	2.0	2.8	1.6	1.2	2.0	1.3	1.6	1.6	1.6	
Real disposable income	3.2	2.8	4.3	3.7	1.7	0.6	3.0	2.4	3.4	3.6	
Real household consumption	3.2	6.0	4.0	3.7	3.0	1.4	3.2	2.5	2.0	3.0	
Household savings rate ⁽¹⁾	3.3	0.4	0.6	0.6	-0.7	-1.5	-1.6	-1.7	-0.4	0.2	

⁽¹⁾ Percentage of disposable income.

Table E

Fiscal accounts
(\$billion)

June year	Actuals					Projections				
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Revenue										
Direct taxation	17.6	19.8	21.3	20.5	21.3	20.3	21.6	23.2	24.6	26.1
Indirect taxation	10.1	10.4	11.0	11.4	11.7	11.9	12.2	12.6	13.0	13.6
Non-tax revenue	2.5	3.4	2.8	2.9	2.6	4.2	2.4	2.2	2.3	2.4
Total revenue	30.2	33.6	35.1	34.8	35.6	36.4	36.3	37.9	39.9	42.1
Total expenses	29.6	30.4	31.7	33.0	34.2	35.8	36.3	37.8	39.0	40.2
Revenue less expenses	0.5	3.2	3.3	1.8	1.4	0.5	0.0	0.1	0.9	1.8
Net surplus attributable to SOEs and Crown entities	0.2	-0.6	0.0	0.1	1.2	1.2	0.5	0.7	0.6	0.7
Operating balance (% of nominal expenditure GDP)	0.8	2.7	3.3	1.9	2.5	1.8	0.5	0.7	1.6	2.5
	0.9	3.1	3.6	2.0	2.6	1.8	0.4	0.7	1.4	2.1
Net public debt (as at June 30) (% of nominal expenditure GDP)	35.4	32.6	28.6	25.3	24.1	21.7	22.6	23.2	23.2	23.0
	43.0	37.0	31.0	26.4	24.5	21.7	21.6	21.1	20.1	19.0

Table F
Investment
(Annual average percentage change)

March year	Actuals										Projections		
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
Plant and machinery (excluding computers)	30.3	18.6	13.6	3.0	9.1	4.2	16.6	6.7	6.0	5.2			
Transport equipment	29.2	12.7	8.8	-2.7	1.8	-3.5	8.4	7.7	6.9	3.5			
Commercial buildings	17.2	20.8	5.5	13.5	-21.9	-1.0	7.0	-4.8	10.0	4.7			
Other	29.3	22.5	23.6	-3.7	-5.1	14.0	-3.5	10.1	9.3	4.8			
	-5.1	1.4	19.1	12.5	5.5	0.2	-7.6	6.5	13.0	6.9			
Market sector business investment (excluding computers)	22.5	17.6	14.3	4.6	0.8	4.5	9.3	5.7	7.6	5.2			
	21.5	14.5	11.9	1.9	-4.0	0.6	3.5	5.8	8.7	4.4			
Market sector residential investment	17.1	12.2	-0.1	4.0	1.8	-15.1	15.6	-5.4	5.5	5.7			
Total market sector investment	20.9	16.1	10.4	4.5	1.0	-0.3	10.6	3.3	7.2	5.3			
Government (non-market) investment	-3.9	28.4	2.2	32.4	12.9	-7.9	3.5	8.1	5.0	4.7			
Total investment (excluding computers)	18.2	17.2	9.6	7.0	2.4	-1.2	9.8	3.8	7.0	5.3			
	17.4	14.9	7.6	4.8	-1.2	-4.9	5.9	4.0	7.6	4.6			

Table G

Trade volumes and the current account

March year	Actuals					Projections				
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Trade volumes (Annual average percentage change)										
Exports of goods	6.9	7.2	0.8	6.6	6.7	-0.4	3.6	7.6	5.6	4.9
Exports of services	11.3	12.5	8.1	-4.9	-4.9	12.2	7.0	7.3	6.0	5.5
Total exports	7.9	8.4	2.6	3.7	3.9	2.3	4.4	7.5	5.7	5.1
Imports of goods	12.1	15.6	7.1	7.7	5.4	3.3	15.6	-0.5	3.3	4.6
Imports of services	-5.3	9.1	8.2	5.3	2.5	2.5	-3.7	1.8	5.5	4.8
Total imports	8.0	14.3	7.4	7.2	4.8	3.1	11.9	-0.1	3.6	4.7
Current account (\$ billion March year annual total)										
Merchandise trade balance	3.1	2.1	0.9	1.0	1.4	1.5	-0.5	1.7	2.4	3.3
Services balance	-0.9	-0.6	-0.1	-0.5	-1.1	-1.2	-0.8	-0.3	-0.2	0.1
Investment income balance	-4.5	-6.0	-6.0	-7.3	-6.4	-6.4	-7.7	-8.2	-9.0	-9.6
Transfers balance	0.4	0.3	0.3	0.8	0.6	0.5	0.8	0.5	0.5	0.5
Current account⁽¹⁾	-1.9	-4.1	-5.0	-6.0	-5.5	-5.7	-8.1	-6.2	-6.3	-5.7
(% of nominal production GDP)										
	-2.3	-4.7	-5.5	-6.3	-5.6	-5.8	-7.9	-5.8	-5.5	-4.8

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

Table H
Labour market

March year	Actuals					Projections				
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Change in labour force:										
Natural increase (000's)	23.4	24.6	25.2	19.0	19.0	18.9	16.4	18.7	19.7	20.3
Net migration (000's)	6.5	9.2	13.0	9.1	-0.2	-6.4	-3.6	2.0	5.9	7.3
Increase in participation (000's)	28.2	9.4	30.5	0.4	-4.4	-2.1	2.6	14.4	10.3	3.4
Total change in labour force (000's)	58.1	43.2	68.7	28.5	14.4	10.4	15.4	35.2	35.9	31.0
March quarter:										
Population of working age (000's)	2671	2723	2781	2824	2853	2872	2891	2922	2961	3002
Labour force participation rate (%)	64.3	64.7	65.8	65.8	65.6	65.6	65.7	66.2	66.5	66.6
Total labour force (000's)	1718	1761	1830	1858	1872	1883	1898	1933	1969	2000
Total employment (000's)	1555	1639	1711	1731	1732	1741	1775	1814	1854	1890
Annual growth (%)	4.4	5.4	4.4	1.2	0.0	0.6	2.0	2.2	2.2	1.9
Unemployment (000's)	163	122	119	127	141	142	123	119	115	111
Unemployment rate (s.a.)	9.1	6.6	6.2	6.5	7.2	7.2	6.1	5.8	5.5	5.2
Total hours worked	3.8	6.6	4.8	-2.1	-0.6	1.4	2.5	1.6	1.5	1.6
Annual growth (%)										
Labour productivity	1.7	-0.4	-0.5	0.9	2.1	-0.1	0.9	2.3	1.7	1.8
Annual growth (%)										
QES private sector wages (\$ per hour)	1.3	2.1	3.6	4.0	2.6	2.7	2.3	2.8	2.9	3.0
Annual growth (%)										