

Economic Projections¹

September 1997

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This document, together with the associated database information and news releases, is available on the Reserve Bank's internet homepage (address: <http://www.rbnz.govt.nz>).

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¹ Text finalised on 12 September. Projections finalised on 4 September.

Policy assessment

The Reserve Bank now views 725 as the appropriate level for the Monetary Conditions Index (MCI), down from the 825 level set in the June *Monetary Policy Statement*. This is in line with the conditions applying in financial markets over recent weeks. The new, lower, level for the MCI is justified by our estimate of more slack in the economy until at least mid-1998. This spare capacity will act to reduce inflation pressures over 1998.

These projections incorporate a further modest easing in monetary conditions in the December and March quarters. However, this is by no means certain, with several important factors suggesting caution. First, economic activity is expected to pick up late this year, driven by a significantly more expansionary fiscal policy, accelerating household expenditure, rising business investment and expanding world markets. The excess capacity in the economy, although greater than estimated in the June *Statement*, is projected to be exhausted by late 1998. This means inflation is projected to pick up early in 1999. Given the lag between setting monetary policy and influencing inflation outcomes, this pick up in inflation suggests that monetary conditions will need to tighten again from mid-1998.

The extent of the current easing is also constrained by the upward revision of projected inflation for the remainder of 1997 and early 1998. This partly reflects the recent depreciation of the New Zealand dollar. Several positive effects flow from the rebalancing in the mix between interest rates and the exchange rate, including improved export prospects and a smaller current account deficit. However, the decline of the exchange rate will also increase inflation in the short term. This provides the Bank with a smaller margin of comfort to offset the inflationary consequence of the forthcoming fiscal policy stimulus.

Figure 1
Consumer price inflation
(Annual percentage change)

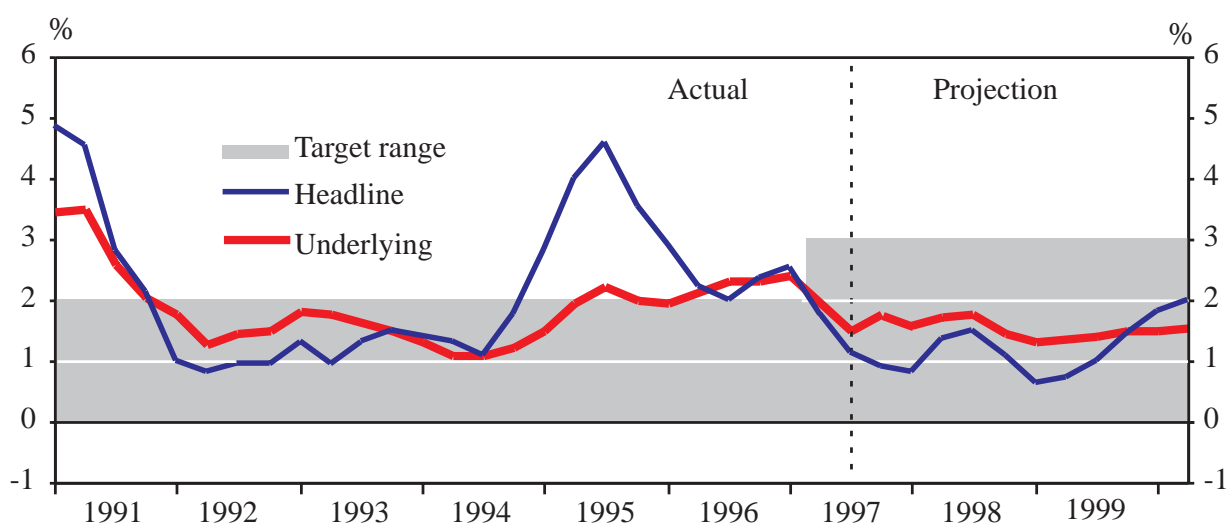
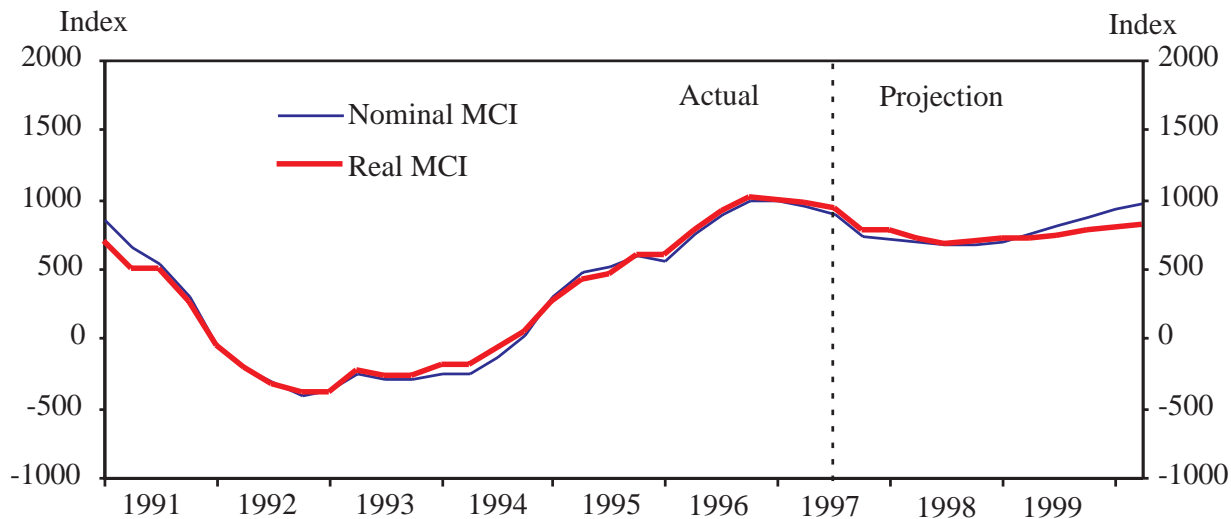


Figure 2
Real and nominal monetary conditions
(December 1996 quarter average = 1000)



In sum, the Bank views the decline in the MCI since June as appropriate. Although these projections suggest some further easing over the next six months, whether this eventuates will depend on the growth trend in the economy this year and the impact of the recent fall of the exchange rate on prices. If economic growth turns out to be stronger than projected, or the price effects of the exchange rate appear more strongly, the likelihood of the projected policy easing will diminish.

Donald T Brash
 Governor

1. Overview

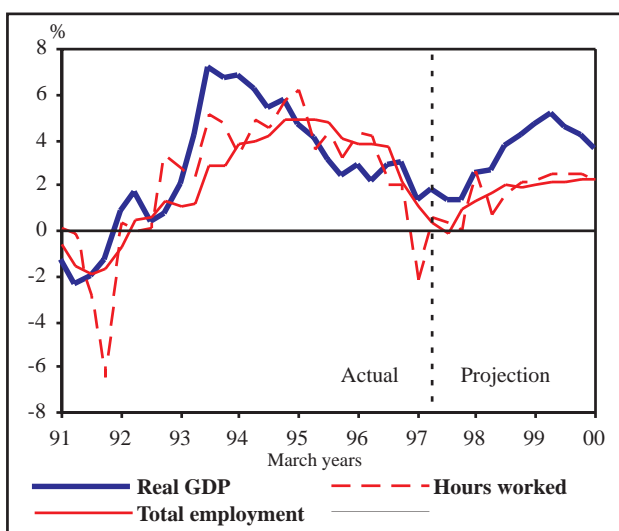
The pace of economic activity is projected to rise over the medium term due to many of the developments outlined in our June *Statement*. The driving factors include a more expansionary fiscal policy stance, a modest world economic expansion, and increased productivity growth. The growth in activity is projected to reach a cyclical peak in early 1999, with inflation pressures lagging somewhat. This allows monetary conditions to ease now, before gradually tightening from mid-1998 in advance of the emerging inflation pressures.²

In contrast to the June *Statement*, the recent depreciation of the New Zealand dollar leads us to project a more positive outlook for the export and import-competing sectors of the economy. Meanwhile, higher real interest rates have dampened our projections for household and business spending. Overall, New Zealand's external balance is projected to improve.

Despite a similar medium-term projection to our June *Statement*, the short-term outlook in this projection has changed somewhat. Recent data and analysis point to a greater margin of spare

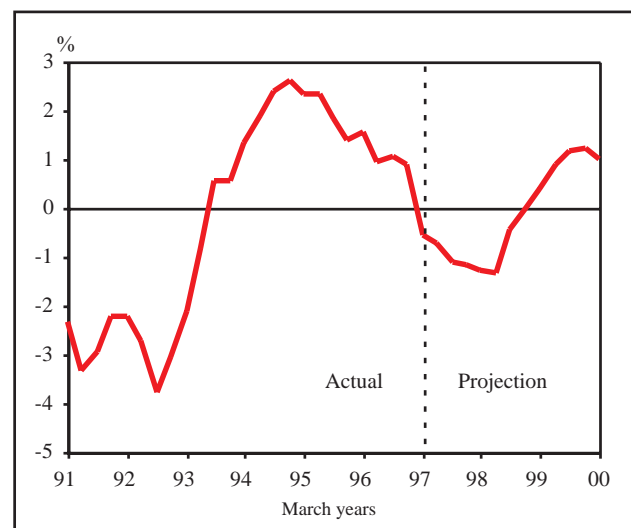
capacity existing in the economy at present and over the next few quarters. This excess capacity will place greater downward pressure on prices over 1998 than projected in the June *Statement*, enabling the Bank to validate the easing in monetary conditions since then. However, the projected rise in demand is expected to absorb the excess capacity by late 1998, with upward price pressures resurfacing in 1999. This limits the scope for future easings in monetary policy and suggests the likelihood of a renewed tightening phase from mid-1998 onward.

Figure 3
Economic activity indicators
(Annual percentage change)



² Tables 1 and 2 summarise the main elements of the projection to 2000, while table 10 in the appendix provides details of the projection for GDP components.

Figure 4
Excess demand
(Output gap as a percentage of GDP)



The immediate outlook for inflation has also been revised up since June. The higher inflation pressure expected over the remainder of 1997 and early 1998 is in part due to the recent depreciation of the New Zealand dollar, which has raised the domestic price of imports. It is also a result of past government policy initiatives, in particular Housing New Zealand rental increases and rising tertiary education fees. Should the total of the policy component of these charges contribute more than 0.25 percent to the annual rate of inflation in the CPI excluding credit services, then they may be removed from our measure of underlying inflation.

The lag between monetary policy setting and outcomes means the higher inflation we now expect over the short term is largely beyond our direct influence. The earliest period when monetary policy can now influence inflation significantly is around mid-1998. At this point, excess capacity is projected to remain in the economy

while the temporary boost to inflation arising from the recent exchange rate depreciation is waning. This combination of factors enables the Bank to accommodate an easier monetary policy stance now, despite the higher short-term inflation profile.

Table 1
Summary of economic projections
(Annual percentage changes, unless specified otherwise)

Refer to appendix for notes to table

| March years | Actuals/Estimates | | Projections | | |
|--|-------------------|-------|-------------|-------|-------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| <i>Inflation measures</i> | | | | | |
| Underlying inflation | 2.1 | 2.0 | 1.7 | 1.4 | 1.5 |
| Consumer Price Index (CPI) | 2.2 | 1.8 | 1.4 | 0.7 | 2.0 |
| Import prices | -1.3 | -4.6 | 0.5 | -2.5 | -0.8 |
| Export prices | -3.5 | -6.6 | 5.7 | -1.0 | -3.2 |
| Wages | 3.7 | 3.6 | 2.6 | 2.8 | 3.6 |
| <i>Monetary conditions (year average)</i> | | | | | |
| Real MCI | 612 | 975 | 800 | 700 | 790 |
| Nominal MCI | 608 | 961 | 770 | 700 | 900 |
| Exchange rate (TWI) | 62.2 | 66.4 | 65.3 | 65.0 | 66.8 |
| 90-day bank bill yield | 8.8 | 9.0 | 7.9 | 7.5 | 8.1 |
| <i>Output and labour force</i> | | | | | |
| Output gap (year average) | 1.8 | 0.6 | -1.1 | -0.3 | 1.0 |
| Real GDP (production) | 2.8 | 1.3 | 2.5 | 4.6 | 3.5 |
| (annual average) | (3.1) | (2.3) | (1.7) | (3.8) | (4.3) |
| Potential output | 3.6 | 3.5 | 3.3 | 2.9 | 3.0 |
| Total factor productivity | 0.8 | 0.9 | 1.1 | 0.8 | 0.6 |
| Labour force | 3.4 | 1.4 | 1.8 | 1.5 | 1.4 |
| <i>Other information</i> | | | | | |
| Government operating balance | | | | | |
| (June year average, % of GDP) | 3.6 | 2.1 | 0.9 | 1.0 | 1.0 |
| Current account balance | | | | | |
| (year average, % of GDP) | -3.7 | -4.8 | -5.8 | -4.7 | -4.1 |
| Terms of trade | -2.2 | -2.1 | 5.1 | 1.6 | -2.4 |
| Unemployment rate (year average, | | | | | |
| % of labour force) | 6.2 | 6.2 | 6.9 | 6.6 | 5.9 |
| <i>World economy</i> | | | | | |
| Industrial production (OECD) | 0.1 | 3.8 | 2.0 | 3.2 | 1.7 |
| Consumer prices | 2.6 | 2.3 | 2.3 | 2.4 | 2.8 |
| Short-term interest rates (year average) | 6.0 | 5.6 | 5.6 | 5.8 | 5.8 |

Table 2
Summary of short-term forecasts
(Quarterly percentage changes, unless specified otherwise)
Refer to appendix for notes to table

| | <u>Actuals/Estimates</u> | | <u>Projections</u> | | | |
|--|--------------------------|---------------|--------------------|---------------|---------------|---------------|
| | <u>Mar-97</u> | <u>Jun-97</u> | <u>Sep-97</u> | <u>Dec-97</u> | <u>Mar-98</u> | <u>Jun-98</u> |
| <i>Inflation measures</i> | | | | | | |
| Underlying inflation (annual percentage change) | 0.2 (2.0) | 0.3 (1.5) | 0.6 (1.8) | 0.5 (1.6) | 0.3 (1.7) | 0.3 (1.8) |
| Consumer Price Index (CPI) | -0.3 | 0.1 | 0.4 | 0.6 | 0.3 | 0.2 |
| “Consumer” import prices | -2.7 | -0.2 | 0.3 | 0.4 | 0.8 | 0.2 |
| Wages | 1.1 | 1.2 | 0.2 | 0.2 | 0.9 | 1.0 |
| House prices | 2.3 | 0.6 | 0.8 | 0.7 | 0.6 | 0.4 |
| Construction costs (residential) | 0.2 | 1.0 | 0.7 | 1.1 | 0.9 | 0.9 |
| <i>Monetary conditions (quarter average)</i> | | | | | | |
| Nominal MCI | 956 | 897 | 740 | 725 | 700 | 670 |
| Exchange rate (TWI) | 68.4 | 68.0 | 64.6 | 64.4 | 64.4 | 64.5 |
| 90-day bank bill yield | 7.5 | 7.2 | 8.2 | 8.2 | 8.0 | 7.6 |
| <i>Output and hours worked (s.a.)</i> | | | | | | |
| Real GDP (production) | -0.5 | 0.7 | 0.5 | 0.7 | 0.6 | 0.7 |
| Total hours worked | -2.0 | 2.5 | -0.5 | 0.1 | 0.5 | 0.5 |

2. Output growth

Sustainable output growth and inflation

The concept of an economy's steady sustainable growth rate is important for the Reserve Bank, as it enables an assessment of when inflation pressures may be expected. For example, if actual output is running ahead of its sustainable rate then inflation pressures will build. An economy's sustainable (or potential) growth rate is that which can be achieved without inducing inflation pressures. It is determined by the growth rate of the labour force and the rate of labour productivity growth. Actual economic activity does not always grow at its sustainable rate and instead tends to grow in cycles. The business cycle is generated by factors such as changes in international trading conditions, asset price developments, swings in business investment and household expenditure, and changes in fiscal and monetary policy.

An improved performance

In New Zealand, the labour force is projected to expand at about 1.5 percent per annum, with output per person (or labour productivity) growing at a similar pace. This makes New Zealand's sustainable growth rate about 3 percent per annum, which is a considerable improvement over the 1.5 percent rate in the 1980s (see Box 1). The recent improvement has had an impact on investment and consumption behaviour, with firms and households appearing content to spend more now in the expectation of higher future incomes.

New Zealand's sustainable growth rate has benefited most from an expanding labour force over recent years. Net immigration ran at record levels, while unemployment fell and labour force participation rates rose. Over the projection period we expect investment and technology growth to be the key drivers of growth in sustainable output. A shift to increased capital usage is a likely outcome as the economy continues to benefit from restructuring.³

Initial spare capacity

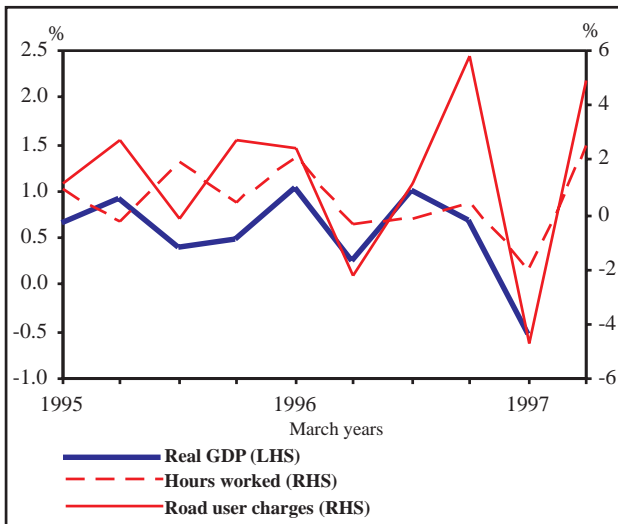
Over the period 1994 to 1996, output was clearly running ahead of its sustainable growth rate, prompting a progressive tightening in monetary conditions. This period of excess demand also partly explains New Zealand's widening external trade deficit. In early 1997, the level of economic activity fell below its potential, creating a situation of excess supply (or a negative output gap). This has reduced inflation pressures and allowed the recent relaxation in monetary conditions.

Economic activity appeared to slow markedly over the first half of 1997, with the March quarter GDP (production-based) contracting by 0.5 percent. The contraction occurred in part because the Easter vacation was in March rather than April, leaving 5 percent fewer trading days than normal. However, even after accounting for this influence, economic activity was subdued.

Most leading indicators suggest a pick up in output since March, with an estimated 0.5 to 1 percent rise in activity for the June quarter. Total hours worked and road user charges, for example, suggest an upswing (see figure 5). Data from the services and distribution sectors, which account for around one-half of the economy, support these indicators. However, the short-term outlook for manufacturing is more mixed, with indicators suggesting a weak June quarter. Overall, we estimate the level of output in the first half of 1997 to be 0.4 percentage points lower than anticipated in the June *Statement*. The greater excess capacity which is now evident in the economy is likely to persist until at least mid-1998.

3 In our view the capital-to-output ratio will grow from its current level of 1.5 to around 1.6 over the medium term. A long-term capital-output ratio of 1.6 is below that assumed in the Bank's recently published *Forecasting and Policy System* (see RBNZ *Research Paper No. 43*). Details of this change, incorporated in these projections, are available on the Bank's World Wide Web home page.

Figure 5
Coincident indicators of GDP
(Quarterly percentage change)



Rising output growth and inflation pressure

Economic output is projected to continue to gather momentum, with GDP growth peaking at over 4 percent in the year to March 1999. Government and household expenditure will contribute strongly to this profile, as will rising business investment. An improved export performance, with sustained world demand and a lower New Zealand dollar, will also support this growth.

The excess capacity currently in the economy is expected to be exhausted by late 1998, as output rises above its sustainable capacity. The re-emergence of a positive output gap will lead to rising inflation pressures from early 1999 and necessitate a gradual pre-emptive tightening in monetary conditions from mid-1998.

Box 1:

A better measure of potential output

To understand inflation pressures in the economy we need to gauge the extent of excess demand or supply in the economy. To do this we need to know the level of output at which the cyclical pressure on inflation is neutral. We refer to this level as 'potential' or sustainable output.

However, the level of potential output is not directly observable. To get around this in the past we have estimated potential output by a widely-used method which smooths through the fluctuations in production-based Gross Domestic Product (GDP).¹ The smoothed-GDP series abstracts from business-cycle peaks and troughs, identifying potential output. However, the simple smoothing technique suffers from the twin problems of ignoring notable relevant information, and quite significant revision of its results as new data becomes available.

As part of our Forecasting Policy System we improved our estimate of potential output by including economic information relevant to demand and supply in the economy. Our new estimation technique incorporates additional information from three sources:²

- past inflation in the economy;
- a survey measure of the economy's capacity utilisation rate; and
- an indicator of labour market conditions.

With the addition of these three factors, the new technique provides a measure of potential output that is more consistent with the evolution and direct evidence of pressures on the economy's productive capacity. Furthermore, it is more stable, reducing the revision problem with new data.³

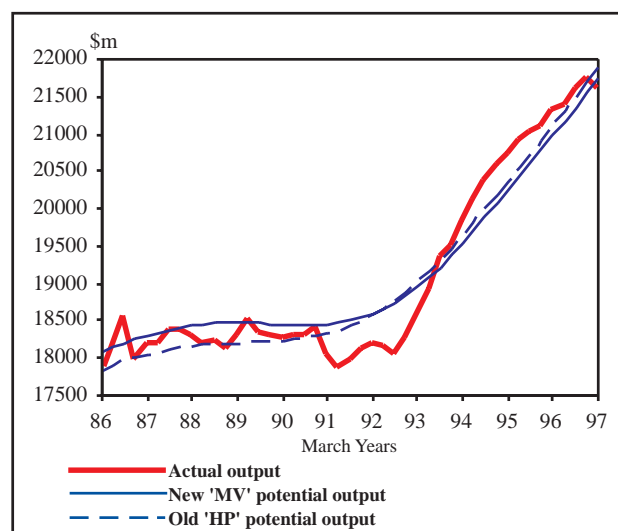
1 This smoothing technique is called the Hodrick-Prescott (HP) filter.

2 This new technique is called the multivariate (MV) filter.

3 A full description of the multivariate filter is given in Conway and Hunt (1997), "Estimating Potential Output: A Semi-Structural Approach", forthcoming Discussion Paper.

Figure 6 presents the old and new measures of potential output plotted against actual output. The new measure of potential output shows more excess supply over the late eighties and early nineties.

Figure 6
Measures of potential output



3. Fiscal policy

Following confirmation in the 1997 *Budget*, these projections incorporate the additional \$5 billion of government expenditure proposed in the Coalition Agreement: around \$0.9 billion in the June fiscal year 1997/98, \$1.6 billion in 1998/99, and \$2.5 billion in 1999/2000. The tax cuts of about 1 percent of GDP are included in fiscal year 1998/99. The proposed Retirement Savings Scheme is not included as the referendum result is not known at the time of writing. Also not included are the tax cuts mooted for the 1999/2000 fiscal year.

Although the fiscal projections are based on the parameters outlined in the 1997 *Budget*, our expenditure and revenue profiles differ from the government's where we have different projections for nominal economic activity.

A fiscal stimulus fuels demand

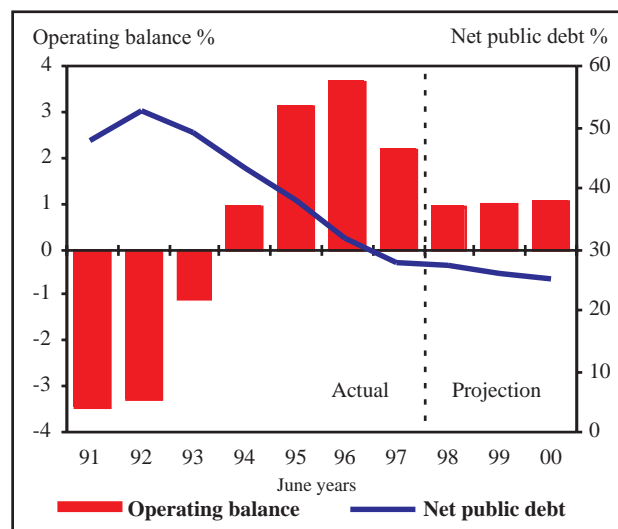
Increased government spending and the planned tax cuts contribute to a cyclical upswing which peaks early in 1999. Government consumption and investment are projected to grow by around 6 percent in the year to March 1998. The tax cut in July 1998 also boosts household disposable income and expenditure. To the extent that the impact of the fiscal stimulus is well anticipated and perceived as permanent, aggregate demand will build in advance of the actual tax cut.

The operating balance remains in surplus

Our projections for government expenditure and revenue imply that the government's operating balance will remain in surplus throughout the projection period. Nevertheless, the operating surplus declines from \$2 billion in the 1996/97 fiscal year to around \$1 billion in the fiscal year 1997/98, and remains at this level for the following two years.

Despite weaker growth in the current projections, the operating surpluses we project are similar to those in the June *Statement*. The offset is the higher inflation profile, which results in the income tax base being approximately unchanged in nominal terms.

Figure 7
Operating balance and net public debt
(As a share of GDP)



Net public debt continues to decline

Continued operating surpluses and ongoing economic growth leads to a further decline in the ratio of net public debt to output. We project that net public debt will fall from around 28 percent of GDP in the 1996/97 fiscal year to about 25 percent in 1999/2000.

Table 3
Fiscal accounts
(\$ billion)

| June years | Actuals | | Projections | | | |
|--|------------|------------|-------------|------------|------------|------------|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| Direct taxation | 19.8 | 21.3 | 20.4 | 21.0 | 21.2 | 22.3 |
| Indirect taxation | 10.4 | 11.0 | 11.4 | 11.8 | 12.3 | 12.6 |
| Non-tax revenue | <u>3.4</u> | <u>2.8</u> | <u>2.9</u> | <u>2.4</u> | <u>2.4</u> | <u>2.5</u> |
| Total revenue | 33.6 | 35.1 | 34.7 | 35.1 | 35.9 | 37.4 |
| Total expenses | 30.4 | 31.7 | 33.0 | 34.7 | 35.5 | 37.0 |
| Revenue less expenses | 3.2 | 3.3 | 1.7 | 0.5 | 0.4 | 0.4 |
| Net surplus attributable to SOEs & Crown entities | -0.6 | 0.0 | 0.3 | 0.5 | 0.6 | 0.6 |
| Operating balance | 2.7 | 3.3 | 2.0 | 0.9 | 1.0 | 1.1 |
| (% of nominal expenditure GDP) | (3.1) | (3.6) | (2.1) | (0.9) | (1.0) | (1.0) |
| Net public debt | 32.6 | 28.6 | 26.1 | 26.3 | 26.3 | 26.2 |
| (% of nominal expenditure GDP) | (37.6) | (31.5) | (27.7) | (26.9) | (25.7) | (25.0) |

4. Household activity

Consumption and saving

Consumer spending is expected to pick up through 1998

Growth of household consumption has slowed considerably over the past year and is expected to remain subdued until the end of 1997. Consistent with recent retail sales statistics, we project consumption to grow at a 1.5 to 2 percent annual rate over the remainder of the year.

In line with the cyclical upswing in the aggregate economy, consumption expenditure is projected to average around 3 percent per annum over the calendar years 1998 and 1999. These growth rates are generally below those of real disposable income. Consequently, the household savings rate is projected to increase from 1 percent of disposable income in 1997 to around 4 percent by the year 2000.

Cyclical and structural factors influence demand

Both cyclical and structural factors influence the outlook for household consumption and residential investment. The structural factors relate to the economy's shift to a higher sustainable growth rate and the tax cuts made possible by fiscal restraint. These factors have important effects on

Figure 8
Real household income and consumption
(Annual percentage change)

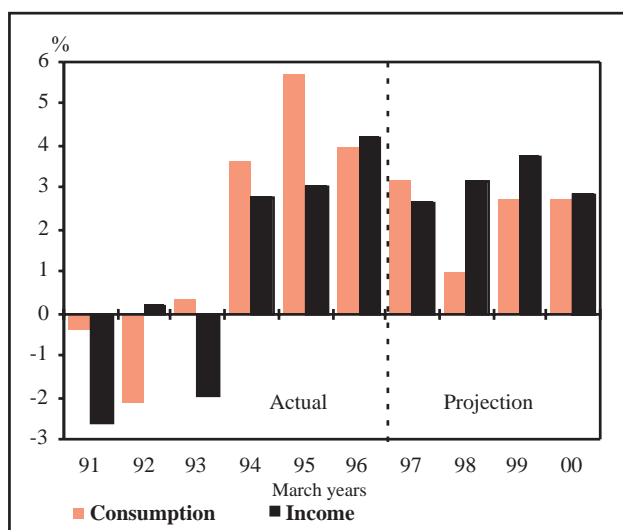
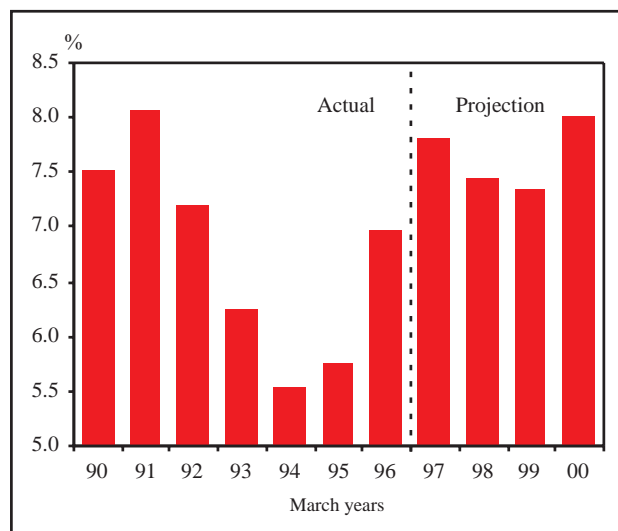


Figure 9
Debt servicing cost
(As a proportion of disposable income)



the level and composition of household wealth, and thereby consumption.

The cyclical factors constraining household spending in the short term include:

- initial slower employment growth;
- a period of higher real interest rates; and
- subdued house price growth.

These factors come together following a period of rising household debt and growing debt-servicing costs. Overall, household income growth and wealth will be subdued initially, leading to a period of weaker spending activity.

Structural factors that improve an economy's ability to generate wealth also have important effects on household consumption. Stronger economic growth and capital accumulation ultimately imply higher real wages and household wealth. An improved government fiscal position can also imply a lower tax burden, with positive income and wealth implications for households. In addition, households will tend to spend in advance of a tax cut, or higher expected real wages, to the extent that they are confident these gains are permanent.

Table 4
Household incomes and consumption
(Percentage change in annual totals)

| March years | Actuals | | Projections | | | |
|----------------------------|------------|------------|-------------|------------|------------|------------|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| Compensation of employees | 6.7 | 6.6 | 4.9 | 3.9 | 4.3 | 5.7 |
| Other income | <u>4.4</u> | <u>8.7</u> | <u>4.4</u> | <u>3.1</u> | <u>3.4</u> | <u>4.2</u> |
| Total income | 5.6 | 7.6 | 4.7 | 3.5 | 3.8 | 5.0 |
| Nominal disposable income | 4.8 | 6.9 | 5.2 | 4.8 | 5.3 | 4.4 |
| Consumption deflator | <u>1.7</u> | <u>2.6</u> | <u>2.4</u> | <u>1.6</u> | <u>1.5</u> | <u>1.5</u> |
| Real disposable income | 3.1 | 4.2 | 2.7 | 3.1 | 3.7 | 2.8 |
| Real household consumption | 5.7 | 3.9 | 3.1 | 1.0 | 2.7 | 2.7 |
| Savings rate | 1.1 | 1.3 | 0.9 | 3.0 | 3.9 | 4.1 |

Over the period 1993-96, both the transition to stronger economic growth and the improved fiscal position, which resulted in the 1996 tax cuts, were in part responsible for household expenditure running ahead of disposable incomes. Household spending and rising debt levels were further promoted by growing house prices. Together, these factors led to a period of quite low household savings rates despite relatively high real interest rates.

Over the projection period, we expect these key structural factors to be relatively more favourable towards saving. First, the economy's transition to a higher sustainable growth rate will be less evident than in the early 1990s, dampening expectations of future income growth. Second, reduced fiscal surpluses and the recent focus on retirement income may lead the public to perceive there is less scope for future tax cuts beyond 1998. Third, several factors, as outlined below, suggest a more subdued growth rate of house prices, reducing the anticipated rise in household wealth. Overall, although household consumption is projected to grow, it will tend to lag behind disposable income growth and lead to a rise in household savings.

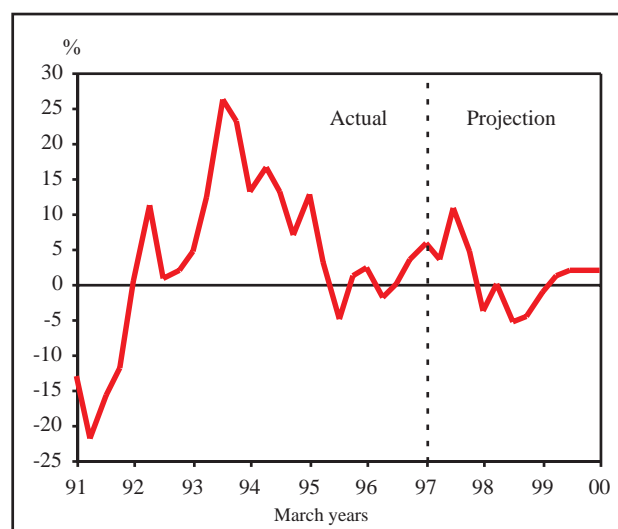
Residential investment

The recent robust growth in dwelling consents is likely to provide a transitory boost to residential

investment over the September quarter. This will partly offset the significant decline in building work put in place in the June quarter.

From 1998 onwards higher real interest rates are projected to dampen housing demand. Growth in construction costs is expected to exceed house-price inflation, leading people to opt to buy existing homes rather than build new homes (see Box 2). The projected sharp decline in net immigration will also reduce the rate of population growth and restrain residential dwelling demand.

Figure 10
Residential investment
(Annual percentage change)



Box 2: Forecasting residential investment

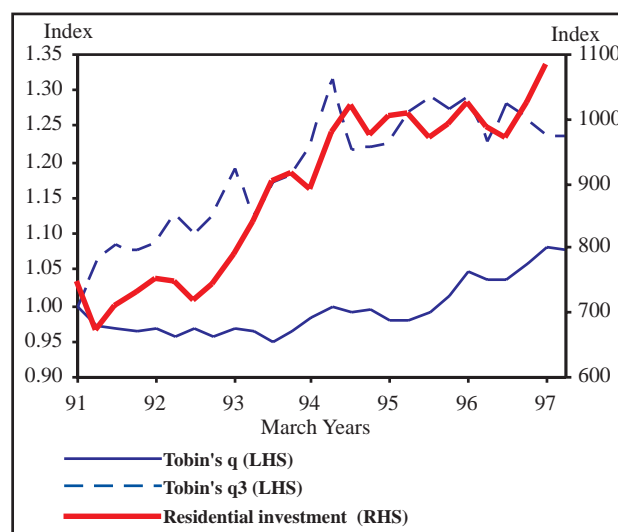
Investors considering whether to construct a new house or buy an existing one will compare the market value of houses with the cost of building a house. If the cost of construction is less than the price of buying an existing house, then it makes sense to build. This relationship, the ratio of house prices to construction costs, is an example of what the economics literature refers to as Tobin's q .

For the purposes of forecasting residential investment, comparing the average price of all existing houses with construction costs has not, however, given a good guide to future house building. Comparing the average price of existing houses less than three years old with construction costs provides a much better guide.

Our statistical analysis indicates that this new measure, which we call Tobin's q_3 , is a leading indicator of residential investment, as can be seen by the dashed line in figure 11. The strong growth in residential investment from 1991 to 1993 is consistent with the fact that prices of existing houses less than three years old were increasing faster than construction costs.

The q_3 house price series we use is a Valuation New Zealand quarterly index. Construction costs are measured as the 'purchase and construction cost of new dwellings'.

Figure 11
Tobin's q



5. Business investment

Investment has continued to grow in 1997

Business investment continued to grow over the first half of 1997 despite the cyclical slowdown in economic activity. This reflects a desire by firms to enhance the use of technology and maintain their market position. Nevertheless, real investment growth is projected to be subdued over the remainder of 1997, reflecting higher real interest rates and recent lower profitability.

Investment growth is projected to pick up

Investment is projected to pick up over 1998/99 as expected demand, export sales, and profitability improve. Investment in plant and machinery will continue to increase, keeping the level of investment at a historically high rate.

Commercial construction will be a key driver in the investment profile. Several medium-sized and large construction projects are planned in some of the major urban centres. These include hotels, a sports stadium, apartment blocks, and shopping and transport centres. Investment in the transport and utilities sectors is also projected to remain strong. Investment spin-offs will also result from the increased government expenditure in health and education.

Figure 12
Market sector business investment
(As a share of GDP)

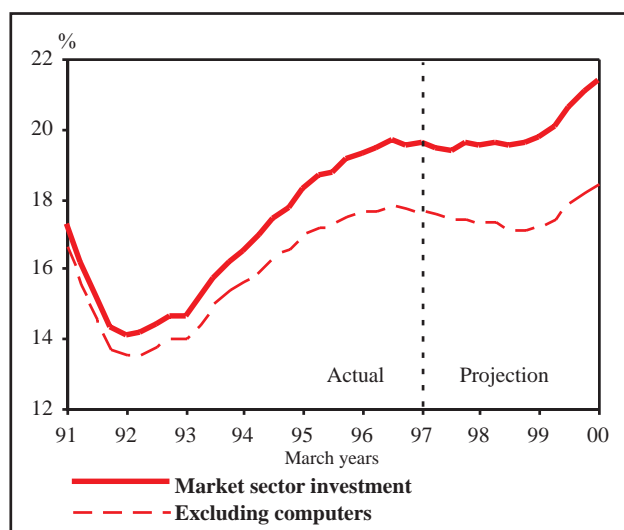
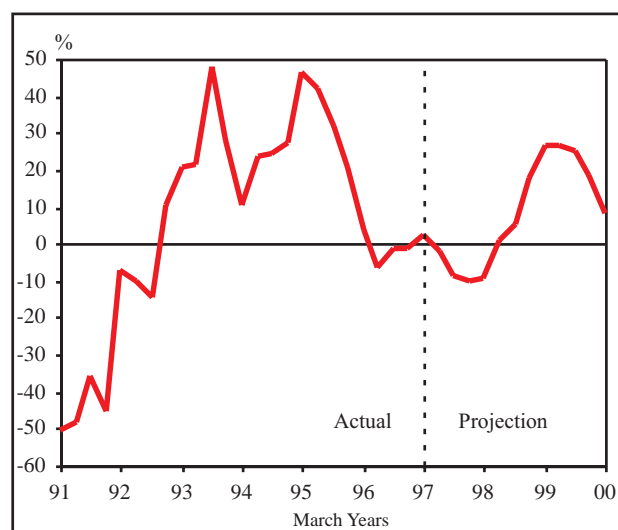


Figure 13
Non-residential construction
(Annual percentage change)



Investment moves to a higher level in the medium term

Underlying our projections is a view that investment is moving to a higher level in the medium term:

- the economy's capital-to-output ratio is likely to rise as the impact of past economic restructuring continues. This implies robust investment growth over time, even if the build-up in investment occurs only slowly.
- higher sustainable output growth also requires stronger investment just to maintain a given capital-to-output ratio. Figure 14 illustrates that the projected investment growth rates are still insufficient to prevent the capital-to-output ratio from falling. The decline occurs because of the particularly strong growth of output over 1998/99.
- the increased use of technology has accelerated the depreciation rate on capital. The rapid depreciation rate on computers is an extreme example. With the depreciation rate higher in aggregate, gross investment must increase to maintain a given level of productive capital.

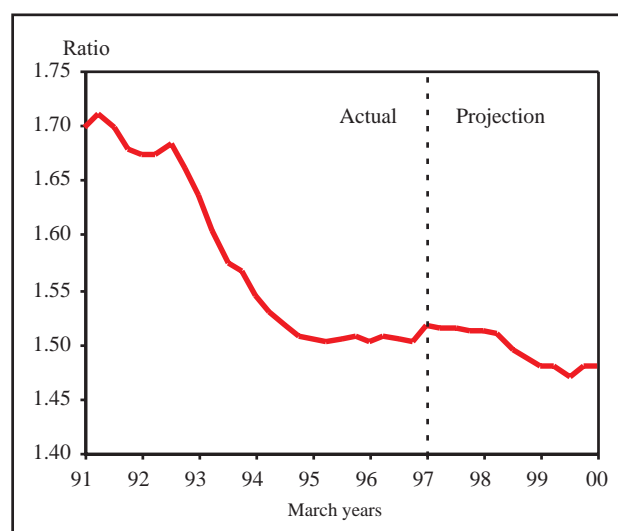
Table 5
Investment
 (Real annual average percentage change)

| March years | Actuals | | Projections | | |
|---|---------------|---------------|---------------|---------------|----------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Market sector business investment | | | | | |
| Plant and machinery (P&M excluding computers) | 10.1 (6.4) | 1.9 (-1.1) | 2.5 (-3.6) | 11.0 (6.5) | 18.2 (17.8) |
| Transport equipment | 6.7 | 13.5 | 4.3 | -4.9 | 8.0 |
| Commercial buildings | 24.0 | -1.8 | -7.4 | 11.9 | 19.4 |
| Other | <u>7.1</u> | <u>5.2</u> | <u>0.4</u> | <u>5.0</u> | <u>9.8</u> |
| Total (Total excluding computers) | 11.6 (9.8) | 3.4 (2.1) | 0.9 (-0.7) | 7.7 (5.3) | 16.0 (15.5) |
| Market sector residential investment | -0.7 | 3.0 | 3.1 | -3.0 | 2.1 |
| Total market sector investment | 8.1 | 3.4 | 1.4 | 5.2 | 12.7 |
| Government (non-market) investment | 5.0 | 13.1 | 18.2 | -1.5 | 2.8 |
| Total investment (Total excluding computers) | 8.0 (6.4) | 4.2 (3.1) | 3.0 (2.0) | 4.3 (2.2) | 11.8 (10.8) |

A fall in the stock-to-sales ratio

Stock building is expected to make a small positive contribution to GDP growth throughout the projection period. The stock-to-sales ratio has fallen sharply over recent years, reflecting continued improvements in stock management practices. Between 1998-2000 we expect this trend to continue, though at a much more moderate rate.

Figure 14
Capital-to-output ratio



6. External sector

Current account

The current account deficit improves

The current account deficit is projected to decline more rapidly than we estimated in June. This profile is driven by a strengthening trade balance resulting from improved terms of trade, a lower exchange rate and increased world demand. We now estimate that the current account deficit will reduce to around 4 percent of GDP in the year to March 2000.

The invisibles balance remains in significant deficit due to a number of factors, including:

- the growing cost of debt servicing;
- the decline in net migrant transfers; and
- lower returns from New Zealand's overseas investments.

Over the projection period the invisibles balance stays in deficit, with the improving current account trend driven by a rising trade surplus.

Figure 15
Current account balance
(As a share of nominal GDP)

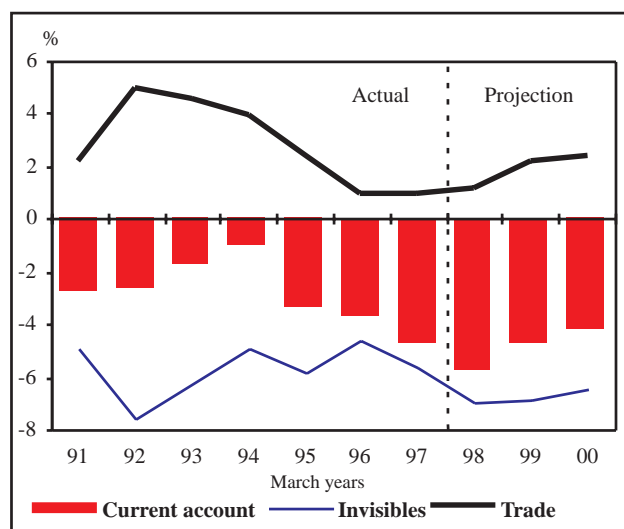
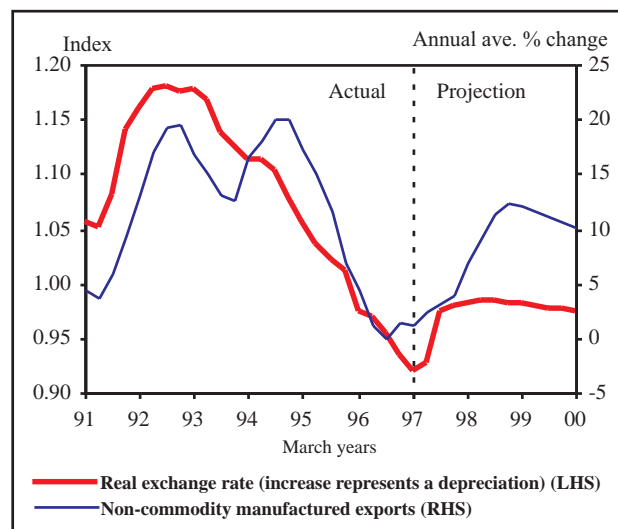


Figure 16
Non-commodity manufactured exports and the real exchange rate



Exports

The outlook for the export sector improves

The fall in the real exchange rate, combined with a favourable international outlook from 1998, allows New Zealand exporters to regain some of the competitiveness lost over the past year. Recent investment aimed at improving competitiveness puts exporters in a stronger position to take advantage of the improved trading environment.

However, improved competitiveness will initially feed into increased margins rather than volume growth. While our projection for export volumes has been revised up relative to June, the new growth rates remain well short of those achieved earlier this decade. Non-commodity manufactured exports are expected to grow the most rapidly.

Modest primary product export growth

The outlook for export growth in the primary sector is mildly positive. Forestry, dairy and meat exports are all projected to grow over the next three years. However, the long-term outlook for wool exports remains mixed.

Table 6
Current account
(\$ billion)

| March years | Actual/Estimate | | Projections | | |
|---|-----------------|------------|-------------|------------|------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Merchandise trade balance | 0.9 | 0.9 | 1.2 | 2.2 | 2.5 |
| Services balance | -0.4 | -0.6 | -0.9 | -1.0 | -0.6 |
| Investment income balance | -6.3 | -7.1 | -7.0 | -7.0 | -7.5 |
| Transfers balance | <u>2.5</u> | <u>2.3</u> | <u>1.1</u> | <u>1.0</u> | <u>1.2</u> |
| Current account | -3.3 | -4.5 | -5.6 | -4.8 | -4.4 |
| (% of nominal GDP) | (-3.7) | (-4.8) | (-5.8) | (-4.7) | (-4.1) |
| (% of nominal GDP ex migrants' transfers) | (-5.9) | (-6.3) | (-6.3) | (-5.1) | (-4.7) |

Table 7
Trade volumes
(Percentage change in real annual totals)

| March years | Actuals | | Projections | | |
|--|------------|-------------|-------------|------------|------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Goods | 0.8 | 6.8 | 4.2 | 3.2 | 4.6 |
| Services | <u>4.7</u> | <u>-1.8</u> | <u>2.0</u> | <u>5.3</u> | <u>7.2</u> |
| Total exports | 1.8 | 4.6 | 3.7 | 3.7 | 5.2 |
| Total imports (goods and services) | 6.8 | 5.8 | 6.9 | 1.5 | 3.7 |
| Selected categories: | | | | | |
| Consumption goods | 6.9 | 2.6 | 23.5 | -1.4 | -7.1 |
| Capital goods (ex transport and computers) | 10.0 | 4.5 | 0.8 | 10.4 | 18.3 |
| Intermediate goods | 2.1 | 2.1 | 4.4 | 2.1 | 1.8 |

Export prices are expected to improve

The outlook for the world price of New Zealand's exports is one of modest growth. Prices for forestry products and, to a lesser extent, dairy and meat products are expected to improve. 'Other export' commodity prices have recently increased, particularly because of a rise in the price of aluminium, but they are projected partly to unwind. Little change is projected in the price of non-commodity manufactured exports.

Tourist arrivals will increase from next year

Visitor numbers have fallen because of the recent strength of the New Zealand dollar and a shift in tourism patterns. This slowdown in tourism growth is expected to continue in the short term. However, a lower exchange rate will help boost tourist numbers from mid-1998 onwards. The outlook becomes even more positive as we approach the year 2000. Additional boosts are expected to come as New Zealand hosts the America's Cup yacht race, and from benefits spilling over from the Sydney Olympics and the All Blacks bringing home the 1999 Rugby World Cup.

Imports

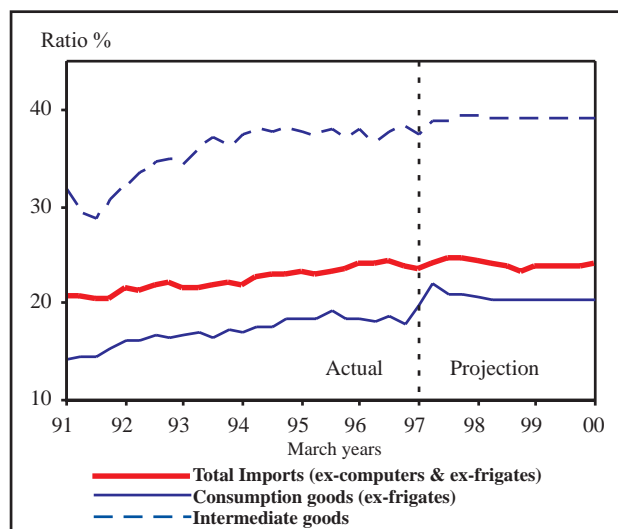
Lower growth in import volumes

Import volumes increased substantially in the June quarter 1997 and are expected to do the same in December 1998 as a result of the Government's purchase of two frigates. Apart from these temporary spikes, import volumes are expected to rise much in line with household consumption and business investment.

We now project imports to maintain a stable share of domestic spending, compared to a rising share in the June *Statement*. This more subdued import trend reflects the impact of a weaker exchange rate, making foreign-produced goods and services relatively more expensive. However, imports remain at a historically high level. This reflects ongoing tariff reductions, trade liberalisation and

a change in consumer and business preferences towards imported goods.

Figure 17
Import shares



7. Labour market

Employment remains weak over the short term

Employment growth continued to weaken over the first half of 1997, reflecting lower business profitability and ongoing restructuring. Total employment is expected to record a small decline in the year to September, the first annual decline since June 1992. The unemployment rate is also expected to peak in the September quarter at around 7 percent. We project that employment growth will accelerate steadily over the projection period, although it will lag behind economic growth as firms initially meet rising demand through productivity gains.

Unemployment declines from mid-1998

Declining net immigration over the projection period causes weaker labour force growth than experienced over recent years. Labour force growth arises largely from the natural increase in population and increased participation rates. The participation rate is expected to increase in response to

recent policy initiatives encouraging people to enter the labour force. In all, the subdued growth of the labour force, combined with an upturn in employment levels, leads to a decline in the unemployment rate.

Figure 18
Employment and unemployment

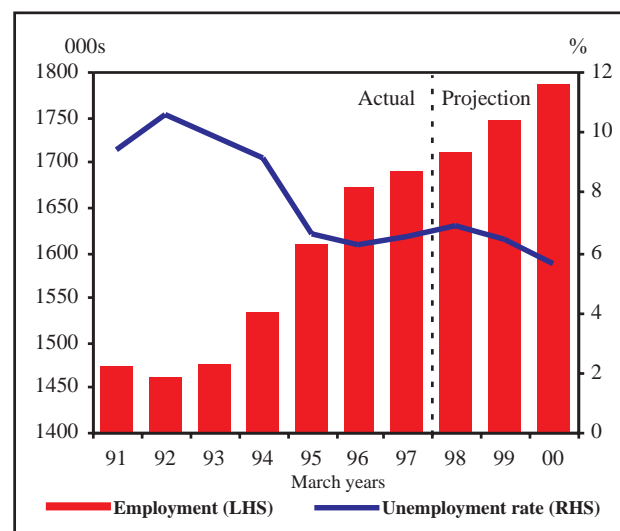


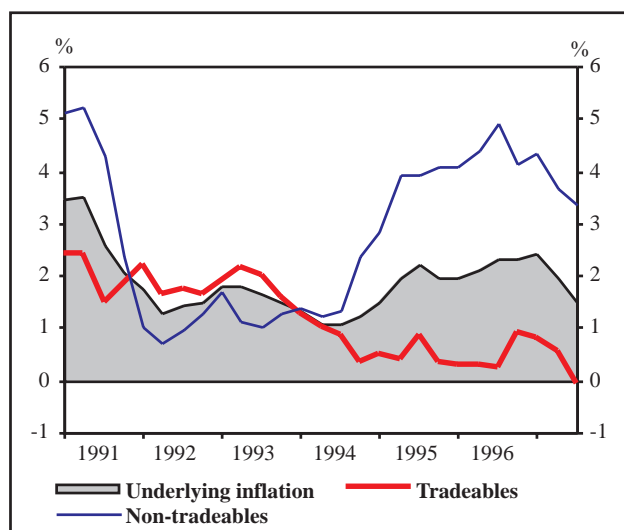
Table 8
Labour market

| March years | Actuals | | Projections | | |
|-------------------------------------|-----------|----------|-------------|-----------|----------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Labour force: | | | | | |
| Natural increase (000's) | 17 | 16 | 16 | 16 | 16 |
| Net migration (000's) | 13 | 9 | 1 | -1 | 1 |
| Increase in participation (000's) | <u>29</u> | <u>1</u> | <u>16</u> | <u>13</u> | <u>8</u> |
| Change in labour force (000's) | 59 | 26 | 33 | 28 | 25 |
| March quarter: | | | | | |
| Employment (000's) | 1,672 | 1,690 | 1,713 | 1,747 | 1,786 |
| Annual growth (%) | 3.9 | 1.1 | 1.3 | 2.0 | 2.3 |
| Unemployment (000's) | | | | | |
| Unemployment (000's) | 116 | 124 | 135 | 127 | 112 |
| Unemployment rate (seas. adj.) | 6.2 | 6.5 | 6.9 | 6.4 | 5.6 |
| Labour force participation rate (%) | | | | | |
| Labour force participation rate (%) | 65.6 | 65.6 | 66.2 | 66.6 | 66.9 |

8. Inflation

The June quarter underlying inflation rate of 0.3 percent was in line with the Bank's expectations. This brought the annual rate of underlying inflation down to the mid-point of the target band. However, inflation in the non-tradeables sector continues to run well ahead of inflation in the tradeables sector. Underlying non-tradeables inflation was 0.8 percent in the June quarter, compared to a 0.1 percent decline in underlying tradeables prices.⁴

Figure 19
Underlying inflation: tradeables & non-tradeables components
(Annual percentage change)



The short-term outlook

Underlying inflation is revised up

Our projection for underlying inflation for the second half of 1997 has been revised up significantly compared to the June *Statement*. Both the September and December quarter estimates are based on analysis of individual components of the CPI regimen.

As has been the case in recent inflation outturns, non-tradeables inflation continues to run ahead of

inflation in tradeables. Over the next two quarters continued house price and construction cost increases, combined with price increases arising from previous government policy decisions, will bolster prices considerably.

The rises in tertiary education fees and Housing New Zealand rents are both expected to exert upward pressure on prices. If the total policy-induced component of these charges contributes more than 0.25 percent to the annual rate of inflation in the CPI excluding credit services, then they may be removed from our measure of underlying inflation. That possibility does not materially influence our view of the current appropriate level of monetary conditions.

Tradeables inflation increases

The recent depreciation of the exchange rate is also expected to produce some short-term inflation pressures in the tradeables sector. In particular we expect the prices of household electronic goods to rise in the September quarter, as well as some small increases in car prices in the December quarter. However, since it appears that the full effect of the earlier appreciation in the exchange rate was not passed through to lower consumer prices, the upward price impact of the recent exchange rate decline could be similarly dampened.

The medium-term outlook

Underlying inflation remains close to 1.5 percent

Annual underlying inflation is projected to remain close to 1.5 percent, the mid-point of the inflation target range. This is an upward revision from the June *Statement* which saw inflation dipping below 1 percent. A key reason for this higher profile is the recent change in the mix of monetary conditions.

Comparing the June and estimated September quarter averages, the New Zealand TWI has depreciated by 5 percent. The New Zealand dollar

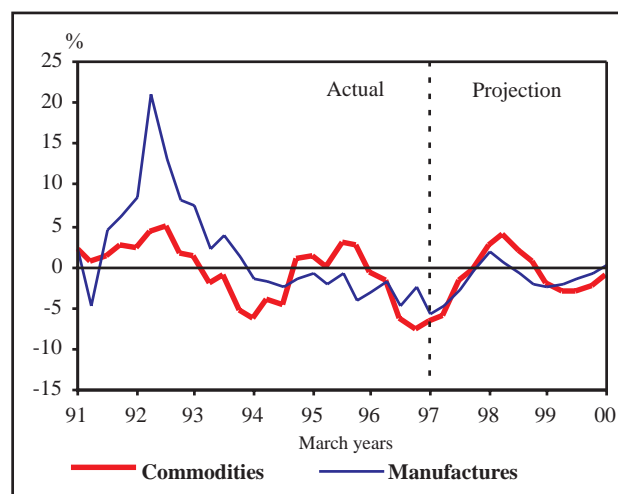
⁴ 'Tradeables' refers to goods and services whose prices are primarily determined in international markets, while 'non-tradeables' refers to goods and services whose prices are determined primarily in domestic markets.

decline is even larger against the US dollar (nearly 7 percent) and the Japanese yen (about 9 percent). The more immediate impact of the exchange rate on prices (compared to interest rates) is the cause of the higher inflation profile over the next year or so. Increased world prices for New Zealand's commodity imports are also expected as growth in OECD industrial production accelerates. However, oil prices are expected to remain stable over the projection period.

Domestic inflation pressures ease initially

Offsetting the upward pressure on import prices is reduced domestic inflation pressure. Inflation pressure from domestic sources is now stronger at the start of the projection period because we assess past excess demand to have been stronger than measured in the June *Statement*. However, with the recent slowdown in economic activity and continued growth in capacity, this excess demand

Figure 20
Domestic import prices
(Annual percent change)



pressure dissipates. We now project a negative output gap over 1998, which is larger and slightly more persistent than that projected in the June

Table 9
CPI inflation projections
(Percent changes)

| | Underlying | | CPI ex credit services | | Headline | |
|-------------|------------|------------|------------------------|------------|------------|------------|
| | Quarterly | Annual | Quarterly | Annual | Quarterly | Annual |
| 1995 - Mar. | 0.5 | 1.9 | 0.5 | 2.6 | 1.2 | 4.0 |
| June | 0.6 | 2.2 | 0.6 | 2.7 | 1.0 | 4.6 |
| Sep. | 0.3 | 2.0 | 0.4 | 2.2 | 0.2 | 3.5 |
| Dec. | 0.6 | 2.0 | 0.6 | 2.1 | 0.6 | 2.9 |
| 1996 - Mar. | 0.6 | 2.1 | 0.6 | 2.1 | 0.5 | 2.2 |
| June | 0.8 | 2.3 | 0.8 | 2.3 | 0.8 | 2.0 |
| Sep. | 0.3 | 2.3 | 0.4 | 2.3 | 0.6 | 2.4 |
| Dec. | 0.6 | 2.4 | 0.7 | 2.4 | 0.7 | 2.6 |
| 1997 - Mar. | 0.2 | 2.0 | 0.2 | 2.0 | -0.3 | 1.8 |
| <u>June</u> | <u>0.3</u> | <u>1.5</u> | <u>0.3</u> | <u>1.5</u> | <u>0.1</u> | <u>1.1</u> |
| Sep. | 0.6 | 1.8 | 0.7 | 1.8 | 0.4 | 0.9 |
| Dec. | 0.5 | 1.6 | 0.5 | 1.6 | 0.6 | 0.8 |
| 1998 - Mar. | 0.3 | 1.7 | 0.4 | 1.8 | 0.3 | 1.4 |
| June | 0.3 | 1.8 | 0.3 | 1.8 | 0.2 | 1.5 |
| Sep. | 0.3 | 1.5 | 0.3 | 1.4 | 0.0 | 1.1 |
| Dec. | 0.4 | 1.3 | 0.4 | 1.3 | 0.2 | 0.6 |
| 1999 - Mar. | 0.4 | 1.4 | 0.5 | 1.4 | 0.4 | 0.7 |
| June | 0.4 | 1.4 | 0.3 | 1.4 | 0.5 | 1.0 |
| Sep. | 0.4 | 1.5 | 0.5 | 1.6 | 0.5 | 1.5 |
| Dec. | 0.4 | 1.5 | 0.4 | 1.5 | 0.5 | 1.8 |
| 2000 - Mar. | 0.4 | 1.5 | 0.4 | 1.5 | 0.5 | 2.0 |

Statement. Hence, although beginning at a higher level, inflation pressure from domestic sources abates at a faster rate than previously.

Inflation pressures rise from 1999

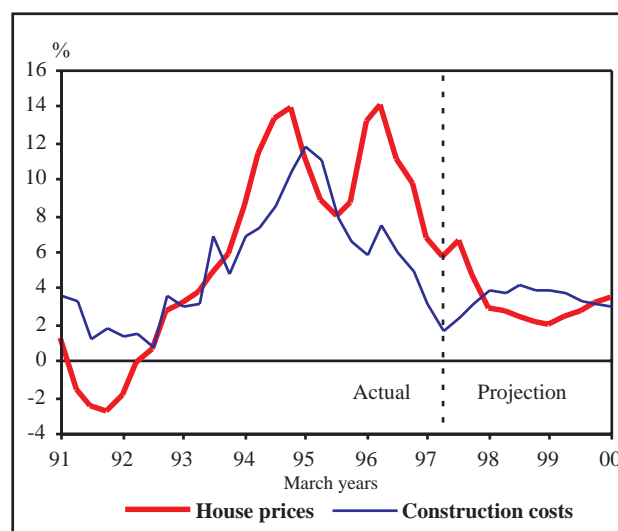
As economic activity accelerates, supply constraints begin to re-emerge late in 1998. As a consequence, the economy will be subject to rising domestic inflation pressures. Unit labour costs are not a significant source of inflationary pressure in these projections, as we expect wage rises to catch up with inflation rather than initiate it. In the short term, wage and salary growth is expected to ease as firms only slowly regain profitability. As economic growth strengthens, private sector hourly earnings are projected to increase by around 3 percent per annum.

House price inflation moderates

Throughout the projection period several factors will act to dampen house price growth. These include high real interest rates, slower population growth from reduced net immigration and a portfolio shift in household savings towards other assets. The current high level of residential construction relative to demand will also act to constrain rentals over 1998 and 1999, reducing yields on investment property. Increased construction costs are again on the horizon however, with the large number of commercial construction projects earmarked for 1998 and 1999. Supply constraints may again emerge in this sector.

Quarterly headline inflation is projected to remain below underlying inflation in the September quarter, before rising above it in the December quarter. Despite the recent increases in mortgage interest rates, the large proportion of fixed rate loans in banks' portfolios and the usual delay in increases to existing floating-rate mortgage rates will result in a fall in the average September quarter mortgage interest rate. The corollary to this is that the CPI measure of interest rates is likely to rise in the December quarter.

Figure 21
House prices and construction costs
(Annual percentage change)



9. Risks and uncertainties

Weaker output growth

The estimated bounce back in GDP growth in the June quarter is based on the majority of relevant economic indicators. However, some indicators remain subdued. These include the National Bank's Leading Indicator of business activity and the Colmar-Brunton and Westpac-McDermot-Miller surveys of consumer confidence. These indicators suggest that there is a risk that output growth and inflation pressure may be weaker than projected.

Lower domestic demand

The projections imply that household consumption and business investment are likely to show only modest growth over the next year. The combined effect of higher real interest rates, and the rapid slowdown in net immigration, may have a larger negative impact on house prices and construction costs than projected. Lower construction cost inflation would reduce CPI inflation directly, while a weaker housing market could reduce households' perceptions of wealth and hence domestic demand.

Asian financial market turbulence

A number of countries in East Asia have experienced sharp changes in financial market prices over the past six months. These countries and their close trading partners take a significant proportion by value of New Zealand's exports. This makes the prospects for exports more uncertain, with both prices and volumes possibly being detrimentally affected.

Uncertain exchange rate passthrough

The speed and magnitude of the price passthrough from a lower exchange rate is uncertain. Newspaper reports of potentially significant price increases, and an increase in 'pricing intentions' as measured in the National Bank's Business Outlook, suggest a quicker than usual price effect.

In terms of the magnitude of price increases, our projection assumes that much of the import price margin built up as the exchange rate appreciated will be unwound with the recent depreciation in the exchange rate. This means prices will increase by less than normal for a given depreciation. However, if the previous increase in margin was related to structural factors - such as product quality improvements - then the exchange rate depreciation will increase inflation by more than projected.

A change in the mix of conditions

The impact of a further change in the mix of monetary conditions is uncertain. Successive 100 basis point increases in interest rates may not have the same impact on domestic demand. Indeed, ever higher interest rates may constrain demand by proportionally more. In a similar fashion, further falls in the exchange rate may have a proportionately larger impact on inflation. In sum, the estimated 2:1 trade-off between interest rates and the exchange rate may not hold for all points on the monetary conditions index. This will warrant ongoing judgment by the Bank.

Appendix

Table 10

Composition of real GDP growth 1996-2000

(Annual percentage changes of annual totals or averages, unless specified otherwise)

| March years | Actuals/Estimates | | Projections | | |
|-----------------------------------|-------------------|-------------|-------------|-------------|-------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Final consumption expenditure | | | | | |
| – Private | 4.0 | 3.2 | 1.1 | 2.7 | 2.7 |
| – Public authority | <u>2.0</u> | <u>0.3</u> | <u>8.7</u> | <u>2.6</u> | <u>-2.1</u> |
| Total | 3.6 | 2.6 | 2.5 | 2.7 | 1.7 |
| Gross fixed capital formation | | | | | |
| – Market sector: | | | | | |
| - Residential | -0.7 | 3.0 | 3.1 | -3.0 | 2.1 |
| - Business | 11.6 | 3.4 | 0.9 | 7.7 | 16.0 |
| – Non-market government sector | <u>5.0</u> | <u>13.1</u> | <u>18.2</u> | <u>-1.5</u> | <u>2.8</u> |
| Total | 8.0 | 4.2 | 3.0 | 4.3 | 11.8 |
| Final domestic expenditure | 4.5 | 3.0 | 2.6 | 3.0 | 3.9 |
| Stockbuilding ¹ | <u>-0.5</u> | <u>-0.5</u> | <u>0.1</u> | <u>0.0</u> | <u>-0.1</u> |
| Gross national expenditure | 3.9 | 2.5 | 2.7 | 3.0 | 3.8 |
| Exports of goods and services | 1.8 | 4.6 | 3.7 | 3.7 | 5.2 |
| Imports of goods and services | <u>6.8</u> | <u>5.8</u> | <u>6.9</u> | <u>1.5</u> | <u>3.7</u> |
| GDP (expenditure based) | 2.3 | 2.1 | 1.6 | 3.8 | 4.3 |

1 Percentage point contribution to growth rate of GDP

Notes to tables 1 and 2

| | |
|--|---|
| Underlying inflation | Reserve Bank of New Zealand definition and estimate. |
| Import prices | <i>Overseas Trade Index</i> (domestic currency). |
| “Consumer” import prices | Selected group of import prices relevant to underlying inflation. Reserve Bank of New Zealand estimate of <i>Overseas Trade Index</i> (domestic currency) excluding non-fuel crude materials and petroleum and petrol products. |
| Export prices | <i>Overseas Trade Index</i> (domestic currency). |
| Wages | Private sector average hourly earnings, <i>Quarterly Employment Survey</i> . |
| House prices | Average house price index, Valuation New Zealand. |
| Construction costs (residential) | Component of the Housing Group, Consumer Price Index. |
| Real MCI | Reserve Bank of New Zealand, defined as: $\{(R_{90day}-R_0)+(1/2)*[\log_n(RTWI)-\log_n(RTWI_0)]*100\}*100+1000$ where R90day and RTWI are the estimated real 90-day interest rate and the real TWI exchange rate. R90day is calculated as the nominal 90 day rate less the annual (four quarter) inflation rate in the CPI excluding credit services. RTWI is calculated as the TWI multiplied by New Zealand’s GDP deflator (interpolated from annual data) and divided by the trade-weighted average of GDP deflators of our trading partners. R ₀ and RTWI ₀ are base levels for the December 1996 quarter, where R ₀ = 6.5 and RTWI ₀ = 1 (normalised). Revisions to deflators will result in revisions to historic MCI numbers. |
| Nominal MCI | Reserve Bank of New Zealand, defined as: $\{(90day-r_0)+(1/2)*[\log_n(TWI)-\log_n(TWI_0)]*100\}*100+1000$ where 90day and TWI are nominal rates and r ₀ and TWI ₀ are corresponding averages of daily rates for the December 1996 quarter, where r ₀ = 8.9 and TWI ₀ = 67.1. All nominal and real MCI input numbers are rounded to one decimal place. All nominal and real projected MCIs are to the nearest 10, 25 or 75 points. |
| Exchange rate (TWI) | Reserve Bank of New Zealand. |
| 90-day bank bill yield | Reserve Bank of New Zealand. |
| Output gap | Defined as percentage difference between real GDP (production, seasonally adjusted) and potential GDP. |
| Potential output | Reserve Bank of New Zealand definition and estimate. |
| Total factor productivity | Reserve Bank of New Zealand estimate, based on potential output. |
| Labour force | <i>Household Labour Force Survey</i> . |
| Total hours worked | <i>Household Labour Force Survey</i> . |
| Government operating balance | Percentage of nominal GDP (expenditure), June year. |
| Current account balance | Percentage of nominal GDP (production). |
| Terms of trade | Defined using domestic-currency export and import prices, <i>Overseas Trade Indices</i> . |
| Unemployment rate | Seasonally adjusted rate, <i>Household Labour Force Survey</i> . |
| Industrial production (OECD) | Actuals sourced from OECD. Projections based on Consensus Forecasts. Seasonally adjusted. |
| Foreign consumer prices | Reserve Bank of New Zealand definition and estimate. TWI trading partners’ CPI inflation, weighted by TWI weights. Projections based on Consensus Forecasts. |
| Foreign short-term interest rates | Reserve Bank of New Zealand definition and estimate. 80:20 weighted combination of US and Australian short-term interest rates. Projections based on Consensus Forecasts. |
| Annual percentage change | $(Q/Q_{-1})*100$ |
| Quarterly percentage change | $(Q/Q_{-1})*100$ |

Except where noted, all historical data is sourced from Statistics New Zealand.

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