3

Risks and Scenarios

Overview

There are a number of risks surrounding any set of economic projections. The key risks in the 1999 *Budget Economic and Fiscal Update* arise from significant uncertainties surrounding the strength of exports' response to the past fall in the exchange rate, the near-term strength of the domestic economy, how two consecutive droughts will affect the New Zealand economy, and how trading partner growth will evolve over the next few years.

If any of these issues were to develop differently than allowed for in our Central Forecast, they could produce outcomes where economic growth is stronger or weaker than in the Central Forecast, with the associated flow-on effects for the fiscal position.

The next section outlines in more detail the risks that could lead to different growth paths for the economy. The following section then presents an example of a high growth ("Export-Led Recovery") scenario and a low growth ("Weak Recovery") scenario to illustrate some of these risks.

Table 3.1 - Alternative Scenarios: Summary

	1997/98 Actual	**1998/99 Forecast**	**1999/00 Projection**	**2000/01 Projection**	**2001/02 Projection**
Production GDP (Annual average % change, March years)					
Central Forecast	2.0	(0.3)	2.9	3.5	3.0
Export-Led Recovery	2.0	(0.3)	3.8	4.4	2.7
Weak Recovery	2.0	(0.4)	2.0	1.8	3.7
Nominal Expenditure GDP (Annual Average % change, March years)					
Central Forecast	3.3	0.4	3.8	5.2	4.6
Export-Led Recovery	3.3	0.4	4.9	6.5	5.1
Weak Recovery	3.3	0.3	2.7	2.6	5.2
Operating Balance ($ billion, June years)					
Central Forecast	2.5	2.2	(0.0)	0.8	1.5
Export-Led Recovery	2.5	2.2	0.3	1.7	2.8
Weak Recovery	2.5	2.1	(0.6)	(0.7)	(0.3)

Sources: Statistics New Zealand, The Treasury

Alternative economic scenarios lead to different fiscal outcomes, mainly because of differences in the outlook for nominal GDP, a key driver of tax revenue. The Export-Led Recovery scenario has the operating balance in surplus in all years of the forecast horizon. In contrast, the Weak Recovery scenario sees the operating balance in deficit from the 1999/2000 year onward.

Economic Risks

There are risks that the economy could grow differently from the Central Forecast. The Central Forecast balances the upside risks facing the economy against the downside risks, in order to reach our best assessment of the way the economy is likely to evolve. However, it is almost inevitable that some of these risks will turn out differently from our prediction, so leading to different economic outcomes.

For example, the Central Forecast incorporates a reasonable upswing in export volume growth, with the sizeable depreciation in the exchange rate over the past two years providing a catalyst for more favourable export growth.

However, it may underestimate the positive effect that the fall in the exchange rate will have on export volume growth. The Central Forecast may also underestimate firms' ability to penetrate new markets in light of New Zealand's increased price competitiveness. These factors could also lead to higher growth in the domestic economy.

On the other hand, there could be a more adverse effect of back-to-back droughts than the Central Forecast assumes, particularly over the next quarter or two. The Central Forecast assumes some adverse effect from two consecutive droughts. Nevertheless, back-to-back droughts may result in a weaker profile for agricultural exports, while the adverse flow-on effects to the rest of the economy may be more pronounced than those embodied in the Central Forecast. This could lead to a weaker recovery in the near-term than has been anticipated.

Furthermore, recent climate forecasts suggest a continuation of La Nina weather conditions next summer, which could produce further drought conditions in some areas.

In addition, a sharp slowdown in the world economy is still possible. The Central Forecast reflects the consensus view of global growth prospects. Here, global growth, as measured by trade-weighted growth in our top ten trading partners, is seen as lying in the range 2-2.5% over the next three years.

Yet, there remain significant downside risks to the global economic outlook, particularly for calendar 2000.

There is a danger that the US will experience a marked slowdown in economic activity, perhaps triggered by a severe downward correction in the US stockmarket. Such a slowdown could adversely affect the Australian economy, whose economic fortunes are generally closely tied to those of the US.

Risks to world growth also exist from the possibility of continued recession in Japan, ongoing structural problems elsewhere in Asia, a prolonged war in the Balkans impacting on Europe, and the ongoing risks of emerging market economies. In addition, the new millennium may trigger serious disruptions throughout the world by way of the Y2K computer problem.

Other risks could also alter the nature of the recovery. For example, the current elevated levels of business and consumer confidence, combined with the strength in the labour market seen recently, may point to a more vigorous recovery in the domestic economy. The recent decision to demutualise Tower Corporation could provide added impetus to the domestic sector.

The high level of the current account deficit heading into this recovery poses a further risk. A significant widening in the current account deficit, perhaps due to a slowdown in global activity or a vigorous recovery in the domestic sector, might trigger a loss of confidence in New Zealand's external position. This would be likely to lead to a very different mix in monetary conditions: interest rates would be higher, while the exchange rate would probably suffer from a substantial downward correction.

If eventualities such as these transpire, the growth path for the economy and the composition of that growth could look very different.

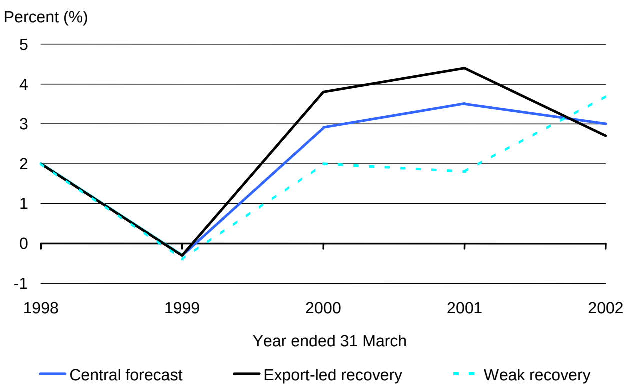
Economic Scenarios

The following two scenarios illustrate the likely economic consequences of some of the risks outlined above.

Export-Led Recovery

This scenario traces the likely growth path for the economy if export volumes respond much more favourably to the past fall in the exchange rate, resulting in an export-led recovery.

Figure 3.1 - Real GDP Growth



Sources: Statistics New Zealand, The Treasury

Under this set of circumstances, economic growth rebounds quite strongly in the March 2000 year. The economy maintains this momentum in the March 2001 year, before falling back somewhat in the final year of the forecast horizon.

Exports surge in the March 2000 year. Manufactured and service exports lead the way, far outweighing weakness in agricultural exports, which are still feeling the effects of the drought. Exports garner a little more momentum in the March 2001 year, aided by the rebound in agricultural exports. However, export growth slows somewhat in the final year as a result of the exchange rate rising on the back of tighter monetary conditions.

Table 3.2 - Export-Led Recovery

(Annual average % change, March years)	1997/98 Actual	1998/99 Forecast/ Actual	1999/00 Projection	2000/01 Projection	2001/02 Projection
Private consumption	3.1	1.5	2.2	3.6	2.9
Business investment	(0.3)	4.4	3.4	9.0	11.0
Gross national expenditure	3.4	(0.5)	4.1	4.0	3.5
Exports of goods and services	3.6	1.0	6.7	7.3	5.2
Imports of goods and services	4.8	2.5	6.7	5.9	7.2
GDP (Production Measure)	**2.0**	**(0.3)**	**3.8**	**4.4**	**2.7**
Unemployment rate[1]	7.1	7.6	7.4	6.5	5.6
90-day rate[2]	8.9	4.5	5.0	6.0	7.3
TWI[2]	61.2	57.6	60.0	61.0	63.0
CPIX[3]	1.7	1.0	1.8	2.2	2.5
Current account balance (% GDP)	(6.6)	(6.3)	(6.2)	(5.0)	(5.0)
Nominal GDP (Expenditure Measure)	3.3	0.4	4.9	6.5	5.1

Sources: Statistics New Zealand, Telerate, The Treasury

Notes: 1 Percentage of labour force, March quarter, seasonally adjusted.

2 Average for March quarter.

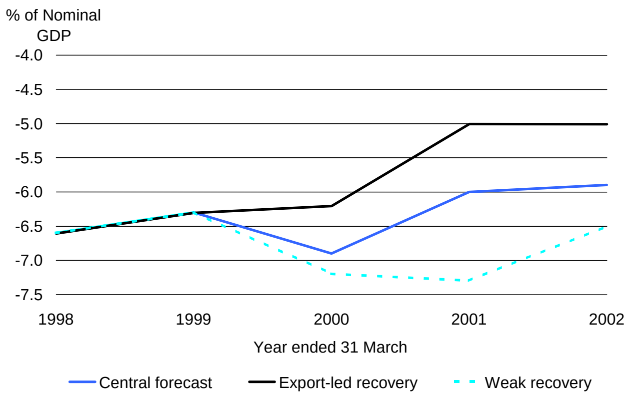
3 Annual percent change.

Domestic confidence lifts as a result of the strong export performance. Investment spending rises quite quickly. Firms take on more labour, and employment growth gathers momentum. The tightening labour market sees the unemployment rate fall to just over 5.5% by March 2002, and wages are growing quite strongly by the end of the forecast period. Consumption growth improves with rising incomes.

The surge in economic activity puts pressure on existing capacity fairly quickly. As a consequence, inflationary pressures start to build quite rapidly. In response to this, monetary conditions start tightening from the March 2000 year onwards. The tightening in monetary conditions sees growth slow in the final year of the forecast period and helps to keep inflation just inside the Reserve Bank's target range.

The strength in export volume growth results in a sustained improvement in the current account deficit. By March 2001, the current account deficit stands at around 5% of GDP and remains at that level in the final year of the forecast period.

Figure 3.2 - Current Account Balance



Sources: Statistics New Zealand, The Treasury

Under this scenario, nominal GDP would be around $3 billion higher in the March 2002 year than in the Central Forecast. Of this, half would be due to stronger economic activity and half would be due to the higher GDP deflator.

Weak Recovery

The discussion in the risks section highlighted a number of downside risks to the economy. To illustrate the sort of changes these risks might make to the economy, this section discusses the combination of a worse effect from two consecutive droughts and lower world economic growth.

This scenario assumes that the economic impact of back-to-back droughts is more severe than that incorporated in the Central Forecast. The droughts' effect is assumed to be most pronounced in the March 2000 year. The scenario also assumes a sharp slowdown in global growth at the beginning of calendar 2000.

A more severe impact from two consecutive droughts results in a more subdued pick-up in growth. Agricultural exports contract further in the March 2000 year, contributing to the current account deficit widening by around 1 percentage point of GDP.

Firms are cautious, so that growth in business investment falls back and employment growth is modest. Growth in private consumption is quite subdued, with mild income growth.

Monetary conditions stay easy with inflationary pressures remaining well in check. Short-term interest rates and the exchange rate are both broadly stable.

Table 3.3 - Weak Recovery

(Annual average % change, March years)	**1997/98 Actual**	**1998/99 Forecast/ Actual**	**1999/00 Projection**	**2000/01 Projection**	**2001/02 Projection**
Private consumption	3.1	1.4	1.0	1.5	2.8
Business investment	(0.3)	4.4	2.6	3.6	4.8
Gross national expenditure	3.4	(0.6)	2.9	1.3	2.5
Exports of goods and services	3.6	1.0	3.7	2.7	5.7
Imports of goods and services	4.8	2.5	5.6	1.4	2.5
GDP (Production Measure)	**2.0**	**(0.4)**	**2.0**	**1.8**	**3.7**
Unemployment rate[1]	7.1	7.6	7.5	7.0	6.7
90-day rate[2]	8.9	4.5	4.5	4.2	5.5
TWI[2]	61.2	57.6	59.0	58.0	60.0
CPIX[3]	1.7	1.0	1.5	1.4	1.8
Current account balance (% GDP)	(6.6)	(6.3)	(7.2)	(7.3)	(6.5)
Nominal GDP (Expenditure Measure)	3.3	0.3	2.7	2.6	5.2

Sources: Statistics New Zealand, Telerate, The Treasury

Notes:
1 Percentage of labour force, March quarter, seasonally adjusted.
2 Average for March quarter.
3 Annual percent change.

There is a sharp slowdown in global growth at the start of calendar 2000. The global slowdown sees New Zealand's growth ease slightly in the March 2001 year. However, the improvement in the global outlook sees New Zealand's economic growth double in the final year of the projection period.

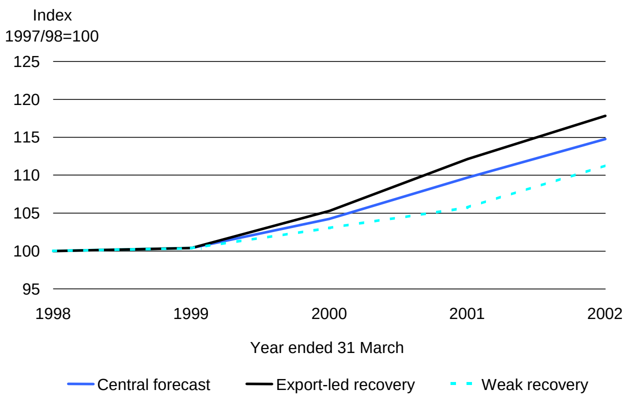
Growth in manufactured exports and service exports slows quite markedly in response to the weaker global trading environment. This is partially offset by a stronger performance by agricultural exports, as the agricultural sector rebounds from the effects of the back-to-back droughts. In the final year, though, export volumes rebound quite strongly, underpinned by the low exchange rate and a more robust international trading environment.

The deterioration in international growth in calendar 2000 sees firms reasonably cautious when it comes to investment spending. Household spending is still quite subdued, largely as result of weak confidence and household incomes that are under pressure.

In the final year, business confidence is buoyed by stronger global growth, and business investment spending increases somewhat. Household spending lifts with improved confidence and the strengthening labour market.

The subdued nature of activity in the March 2001 year allows monetary conditions to ease. The exchange rate depreciates somewhat, and short-term interest rates fall slightly. The strong rebound in economic growth, though, sees both short-term interest rates and the exchange rate rise in the final year.

Figure 3.3 - Nominal GDP Levels



Sources: Statistics New Zealand, The Treasury

The slowdown in global growth results in the current account deficit widening slightly in the March 2001 year. In the final year, the strong rebound in export volumes is partly responsible for the current account deficit improving to 6.5% of GDP, around one-half of a percentage point worse than at present.

Under this scenario, nominal GDP would be around $3.4 billion lower in the March 2002 year than in the central forecast. Of this, $1.8 billion would be due to lower economic activity, while the remainder would be due to the lower GDP deflator.

Fiscal Scenarios

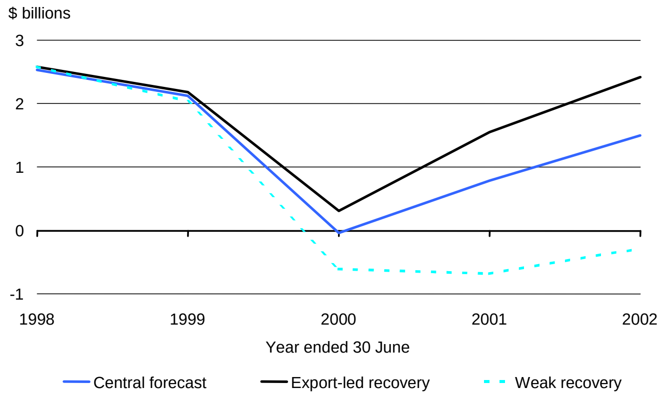
Alternative economic scenarios lead to different fiscal outcomes. This is largely because of the different manner in which nominal GDP evolves, where nominal GDP is a key influence on tax revenue flows. For example, firms' profits are quite sensitive to the state of the economy. Therefore, small changes in income and expenditure can lead to relatively large changes in profits, and so in company and small business taxes.

Economic changes also influence other operating balance components, such as benefits, through changes in the unemployment rate and CPI inflation.

Table 3.4 shows the effect of the two different sets of economic outcomes on the operating balance and net debt.

The stronger nominal economy in the Export-Led Recovery sees the operating balance remain in surplus throughout the forecast period. Compared with the Central Forecast, the operating balance is around $400 million higher in 1999/2000, improving to around $1.3 billion higher by the final year of the forecast.

Figure 3.4 - Operating Balance



Source: The Treasury

In contrast, the Weak Recovery scenario sees the operating balance in deficit throughout the forecast period. However, an improvement in growth in nominal GDP, largely due to stronger activity, results in the operating balance deficit narrowing in the final year. Compared with the Central Forecast, the operating balance is around $600 million lower in 1999/2000, deteriorating to $1.8 billion lower in 2001/02.

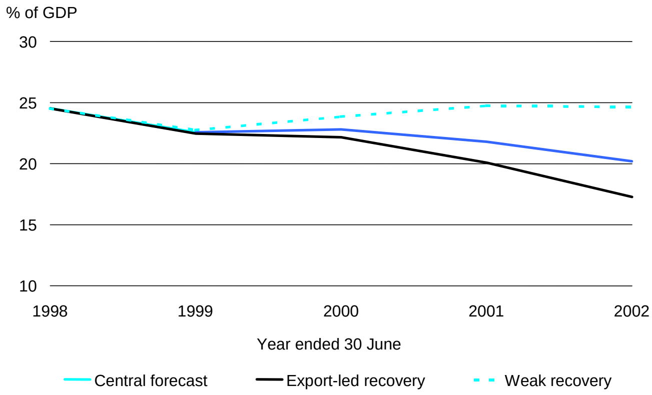
Table 3.4 - Alternative Scenarios: Operating Balance and Net Crown Debt

	1997/98 Actual	1998/99 Forecast	1999/00 Projection	2000/01 Projection	2001/02 Projection
($ billion, June years)					
Operating Balance					
Central Forecast	2.5	2.2	(0.0)	0.8	1.5
Export-Led Recovery	2.5	2.2	0.3	1.7	2.8
Weak Recovery	2.5	2.1	(0.6)	(0.7)	(0.3)
Net Crown Debt					
Central Forecast	24.1	22.4	23.6	23.8	23.0
Export-Led Recovery	24.1	22.3	23.2	22.4	20.3
Weak Recovery	24.1	22.5	24.3	25.9	27.0
(% nominal GDP, June years)					
Operating Balance					
Central Forecast	2.6	2.2	(0.0)	0.7	1.3
Export-Led Recovery	2.6	2.2	0.3	1.6	2.4
Weak Recovery	2.6	2.1	(0.6)	(0.7)	(0.3)
Net Crown Debt					
Central Forecast	24.6	22.5	22.8	21.8	20.2
Export-Led Recovery	24.6	22.5	22.2	20.1	17.3
Weak Recovery	24.6	22.7	23.8	24.7	24.6

Source: The Treasury

Compared to the Central Forecasts net debt is lower in the Export-Led Recovery scenario by around 3% of GDP and higher by around 4.5% of GDP in the Weak Recovery scenario, in 2001/02.

Figure 3.5 - Net Debt



Source: The Treasury

Fiscal Sensitivities

The fiscal position is sensitive to judgements on the economic outlook and behavioural responses to policy and economic changes.

Tax revenue forecasts are highly sensitive to economic judgements. For example, if tax revenue varies by 1% from forecast in 2001/02, the impact on the operating balance is around $370 million.

In addition, both tax and benefit forecasts are sensitive to behavioural assumptions. For example, tax forecasts assume responses to recent policy changes and economic outcomes, while benefit forecasts include estimates of the proportion of eligible people that actually apply for benefits.

The following table provides "rules of thumb" to give an indication of the sensitivity of the fiscal forecasts to changes in economic activity.

Table 3.5 - Sensitivity Analysis

($ million, June years)	**1999/00**	**2000/01**	**2001/02**
1% Higher Nominal GDP Growth per Annum			
Revenue	340	680	1,080
Expenses (debt servicing)	10	50	110
Impact on the Operating Balance	**350**	**730**	**1,190**
10% Reduction in Community Wage Costs			
Revenue	(30)	(30)	(30)
Expenses	210	220	230
Impact on the Operating Balance	**180**	**190**	**200**
Revenue Impact of a 1% Increase in the Growth Rate of:			
Wages and salaries	140	280	440
Taxable business profits	60	150	240
One Percentage Point Lower Interest Rates			
Revenue	(40)	(50)	(50)
Expenses	100	160	200
Impact on the Operating Balance	**60**	**110**	**150**

Source: The Treasury