3

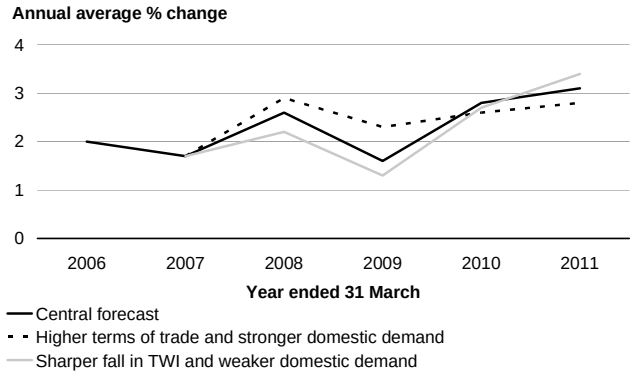
Risks and Scenarios

Summary

- The central forecast presented in the *Economic and Tax Outlook* chapter is for the current recovery in domestic demand to be sustained through most of 2007. Tight monetary conditions are expected to slow its quarterly growth from late 2007 and the high exchange rate will constrain export growth, leading to low growth overall in the March 2009 year, before it recovers in the final two years of the forecasts. However, the course taken by the economy depends on a number of different factors.

- A key judgement is the strength of domestic demand in the near term, particularly private consumption. There is also uncertainty about the path of the exchange rate and the strength of the world economy. The investment and employment responses of firms to increasing costs and weak profit growth are also key judgements, as are the underlying assumptions concerning population growth, labour market participation and productivity growth.

Figure 3.1 – Real GDP



Source: Statistics New Zealand, The Treasury

- Although we believe the central forecast presented in the *Economic and Tax Outlook* chapter is the most likely outcome, two scenarios that illustrate different paths for the economy are presented in this chapter. These scenarios are only two of a number of possible outcomes and therefore do not fully illustrate the range of possibilities, but they represent key risks.

- The first scenario illustrates the impact of higher terms of trade and stronger domestic demand in the short term. Gross domestic product (GDP) is higher in both real and nominal terms, but inflation pressures abate more slowly and the current account deficit reduces less. The second scenario assumes that the exchange rate falls sooner and that domestic demand is weaker than in the central forecast, leading to lower growth in GDP and an increase in tradables inflation. Subsequently, inflation is weaker, interest rates are lowered and the current account adjusts sooner than in the central forecast.

Introduction

The central forecast presented in the *Economic and Tax Outlook* chapter incorporates a number of key judgements about how various forces affecting the economy will evolve. These judgements reflect the balancing of both positive and negative risks facing the economy to arrive at our best assessment of how it is likely to develop. Some of these judgements are related to the cyclical drivers of activity and some relate to the structural characteristics of the economy. If events turn out differently from our assessment, the path taken by the economy is also likely to deviate from the central forecast.

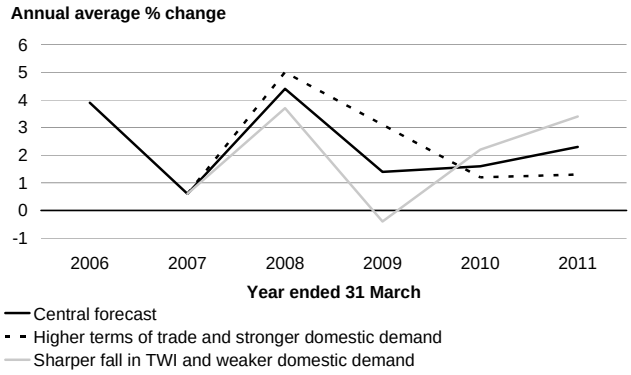
The first part of this chapter, Economic Risks, outlines some of the risks associated with the economic outlook. There are both positive and negative risks – some domestically and some internationally oriented. The second part of this chapter, Economic Scenarios, presents in more detail two scenarios that could occur if events were to unfold differently. The third part of this chapter, Fiscal Scenarios, considers the implications of the two economic scenarios on the fiscal position.

Economic Risks

There is uncertainty about the strength of domestic demand in the near term …

Domestic demand was the major driver of growth in the New Zealand economy from 2002 to 2004, but its contribution to GDP growth has decreased in the past two years. However, growth in domestic demand – particularly private consumption – picked up in the final quarter of 2006, but the outlook depends on the reasons for the resurgence. Petrol prices fell nearly 15% in the final quarter of 2006 as oil prices fell and the NZ dollar strengthened, increasing disposable income and giving private consumption growth a boost. Although the level of consumption might be maintained, further falls in fuel prices would be required to lift growth in consumption again.

Figure 3.2 – Real gross national expenditure



Source: Statistics New Zealand, The Treasury

Another uncertainty is the impact of past interest rate increases on domestic demand. From late 2003 until recently, the effective mortgage interest rate has not increased by as much as the Official Cash Rate and 90-day rates. However, longer term rates have increased recently, affecting new borrowers, and the effective mortgage rate will continue to increase as borrowers re-finance at higher rates. It is uncertain when the effect of these changes will be felt and what impact they will have on domestic demand.

… and the sustainability of the recent increase in the terms of trade

The impact of the recent increase in the terms of trade (largely as a result of increases in dairy prices) is a further uncertainty. International dairy prices have increased by nearly

50% since late 2006, but it is not certain how sustainable these increases are and what effect they will have on the exchange rate, real incomes and consumption.

The future rate of growth in house prices is another uncertainty for domestic demand. In the past six years house prices have approximately doubled, boosting household wealth and supporting private consumption growth and encouraging further residential investment. There has also been an increase in household liabilities, leaving the household sector exposed to a slowdown in house price growth as well as increases in debt servicing costs.

There are both positive and negative risks associated with the strength of domestic demand, but the greater risk is that it will continue to be stronger or continue for longer than in the central forecast. A scenario is developed below which illustrates this risk, combined with a stronger terms of trade, and shows the consequent developments in the economy and the implications for tax revenue.

The exchange rate is an important influence on the economy …

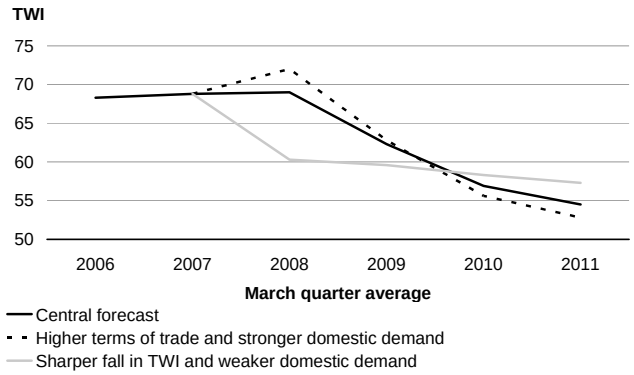
In the central forecast we have assumed that the exchange rate will remain around its current level until early 2008 when it will begin to fall in response to lower interest rates and slower economic growth. However, the exchange rate is always a major uncertainty in economic forecasts and recent volatility has shown that sentiment can change quickly.

There are a number of factors which help to explain the recent strength in the NZ dollar and which are likely to continue to influence it in the forecast period. The large positive interest rate differential between New Zealand and some other countries (particularly Japan, but also the United States) has encouraged offshore investment in New Zealand. Recent increases in commodity prices have also sustained the NZ dollar. The rebound in domestic demand in the final quarter of 2006 and first quarter of 2007 is an additional factor supporting the NZ dollar currently.

… but its future path is uncertain

The NZ dollar could appreciate further, especially against the US dollar if growth slows in the United States, or could remain strong for longer than assumed in our central case if export commodity prices remain strong or domestic demand remains robust. Such an outcome would further postpone the export recovery and narrowing of the current account deficit, and likely bring stronger domestic demand and higher non-tradables inflation.

Figure 3.3 – TWI exchange rate



Source: Reserve Bank of New Zealand, The Treasury

It is also possible that the NZ dollar could fall sooner than assumed in our central forecast, most likely because of international developments. A scenario which explores the implications of a sharp fall in the currency sooner than in the central forecasts, in conjunction with weaker domestic demand, is developed below. Its effect on other parts of the economy and tax revenue is also explored.

The pace of growth in the world economy is a potential risk …

The world economy is currently in the mature phase of an expansion which began in 2002 with the recovery from the bursting of the "tech bubble" in the United States. Our central forecast assumes that trading partner growth will average 3.6% per annum over the forecast period, similar to its average for the past three years. However, there are risks to this outlook, mostly on the downside.

Interest rates are being tightened in most developed economies as inflation pressures emerge. Consequently there is a risk that growth might be weaker than assumed in our central forecast if, for example, inflation pressures become greater and further monetary tightening is required in the major developed economies. In addition, the housing market in the United States has slowed over the past year and problems have emerged in the sub-prime mortgage sector.

If these financial difficulties spill over to other sectors, perhaps combined with further monetary tightening, growth could slow dramatically. Although the performance of the Asian economies, particularly China, may not be as dependent upon the US economy as previously, there are doubts about the sustainability of the growth in the Asian region as inflation pressures develop there too.

… as are other international developments

Changes in international commodity markets can have a major impact on the New Zealand economy. The recent emphasis on bio-fuels in the United States has placed upward pressure on stockfeed prices with flow-on effects on dairy prices. To the extent that these price increases are sustained, they point to higher terms of trade for New Zealand and a higher equilibrium exchange rate with consequent benefits for real incomes.

International events can also affect the prospects for the New Zealand economy. Recent fluctuations in oil prices have shown the continued influence of political events, as well as the usual supply and demand factors. Changes in oil prices are directly reflected in local fuel prices and affect household disposable income and private consumption, as well as inflation. Increased costs also affect firm profitability and investment and hiring decisions.

Employment and investment decisions by firms are a key factor …

The response of firms to higher costs (including labour costs) and steady or lower profits will also be a key factor in the forecast period. In the central forecast we have assumed that employment growth will ease. However, continuing tight labour market conditions and a pick-up in domestic demand may lead firms to seek to expand employment further.

If employment levels or labour incomes were higher than in the central scenario, private consumption and residential investment would also be stronger. If firms are unable to find the labour they are seeking, they may increase their investment in plant and equipment even more than already assumed in order to increase productivity and output.

Similarly, the response of firms to the Business Tax Reform in this budget is an uncertainty. The impact of the changes on business costs is a key dimension likely to affect employment and investment decisions.

… and so are the responses of households to labour market conditions

The response of households to labour market conditions is also important. The fall in participation from its peak in the second half of 2006 may be related to weaker employment growth at that time, but may also reflect the effect of income support policies which impose high effective marginal tax rates. Lower labour force participation, for a constant employment level, would bring lower unemployment and a tighter labour market and may lead to faster wage growth than assumed in the central forecasts. While this might support total labour income – and private consumption – in the short term, it would adversely affect firm profitability. Lower participation also implies a lower potential growth rate for the economy as a whole and greater inflation pressure for a given rate of growth above that trend.

Underlying assumptions concerning productivity are an uncertainty …

The central forecast assumes that labour productivity growth will recover in the forecast period. Productivity growth has been weak recently as output growth has fallen without a commensurate change in labour input, typical of the mature phase of the economic cycle. In addition, unemployment has been below 4% since September 2004 and so the productivity of the latest workers hired may be lower than the existing workforce, detracting from aggregate productivity. Some firms may also be holding onto existing labour despite a fall in output, adversely affecting measured productivity.

However, we consider that labour productivity growth is likely to strengthen in the forecast period as a result of a reversal of these cyclical factors, as well as the beneficial effects of recent business investment. If these assumptions are not correct and productivity growth turns out to be lower than assumed, the potential growth rate of the economy will be lower and inflation pressures will be higher for a given level of output.

… as are assumptions concerning population growth

Another key assumption in our central forecast is the rate of population growth, with the net gain from external migration the main uncertainty. In the central forecasts we have assumed that net migration will decline gradually to its long-run average of 10,000 per annum by March 2010. There is a risk that migration will be lower in the short term as increasing departures of New Zealanders lowered the net gain to only 6,400 on an annualised basis for the March 2007 quarter. Lower net migration gains would affect both the potential growth rate (through its effect on labour supply) and short-term demand via consumption and residential investment.

There are also risks associated with some other types of events

There are also a number of non-economic risks which might impact on the development of the economy. Climatic events can affect agricultural production levels, both in New Zealand and in competing supplier countries with adverse or beneficial effects on returns to New Zealand producers. Similarly, agricultural diseases can have adverse or beneficial consequences for New Zealand producers, depending on how they affect them. Market perceptions arising from concerns about long-term climate change and environmental concerns may also affect the demand for New Zealand products.

Economic Scenarios

The following scenarios show how the growth path of the economy might evolve if some of the key judgements underlying the central forecast are altered. The scenarios are two of a large number of possible examples, and do not represent upper or lower bounds for the central forecast, with more extreme paths possible. They represent what are assessed to be two key risks to the central forecast and serve to illustrate the impact which relatively small changes in the assumptions underlying the forecasts have on some key variables, especially the fiscal aggregates.

In the first scenario, entitled "Higher terms of trade and stronger domestic demand", a stronger terms of trade (in the form of higher export prices) in the near term, accompanied by stronger consumption and residential and market investment, raises real GDP growth in the near term but also increases inflationary pressures and postpones the current account adjustment.

The second scenario is entitled "A sharper fall in the TWI and weaker domestic demand". The NZ dollar falls sooner than in the central forecast and domestic demand is weaker, leading to lower growth in GDP initially and an increase in tradables inflation. Subsequently, inflation is weaker, interest rates are lowered and the current account deficit adjusts sooner than in the central forecast.

Table 3.1 – Alternative scenarios: summary

	2006 Actual	2007 Estimate	2008 Forecast	2009 Forecast	2010 Forecast	2011 Forecast
Production GDP (annual average % change, year ending 31 March)						
Central forecast	2.0	1.7	2.6	1.6	2.8	3.1
Higher terms of trade and stronger domestic demand	2.0	1.7	2.9	2.3	2.6	2.8
Sharper fall in TWI and weaker domestic demand	2.0	1.7	2.2	1.3	2.7	3.4
Nominal expenditure GDP (annual average % change, year ending 31 March)						
Central forecast	4.6	4.4	5.6	3.5	4.2	4.8
Higher terms of trade and stronger domestic demand	4.6	4.4	6.4	4.6	4.2	5.0
Sharper fall in TWI and weaker domestic demand	4.6	4.4	4.8	3.4	3.9	4.5
OBEGAL ($billion, year ending 30 June)[1]						
Central forecast	8.6	5.5	5.0	4.0	3.5	3.3
Higher terms of trade and stronger domestic demand	8.6	5.6	5.6	5.0	4.4	4.1
Sharper fall in TWI and weaker domestic demand	8.6	5.5	4.4	3.4	3.0	2.7

Sources: Statistics New Zealand, The Treasury

NOTE: 1 Operating balance before gains and losses. See Chapter 2 above for an explanation. The figures for 2006 are the OBERAC.

Higher terms of trade and stronger domestic demand

In the central forecast, the terms of trade (on an overseas trade index basis) are forecast to increase 3.6% in annual average terms in the March 2008 year. Most of this increase is an upward revision from the *Half Year Update* forecasts; in this scenario, the terms of trade are assumed to increase by a further 2% in the March 2008 year. The reason for this could be a more sustained increase in international dairy prices or a greater flow-through from the recent increases to the price received by New Zealand producers. As a result of the increased export prices, the exchange rate is assumed to be 3% higher in the March 2008 quarter. It is also assumed that there is greater confidence as a result of the higher terms of trade and more momentum in the economy than in the central scenario.

Table 3.2 – Higher terms of trade and stronger domestic demand scenario

(Annual average % change, year ending 31 March)	**2006 Actual**	**2007 Estimate**	**2008 Forecast**	**2009 Forecast**	**2010 Forecast**	**2011 Forecast**
Private consumption	4.3	1.7	3.6	2.8	1.2	1.0
Residential investment	-4.7	-2.3	5.8	-1.3	-5.1	-0.0
Market investment	7.5	-4.6	6.6	5.5	1.3	0.8
Gross national expenditure	3.9	0.6	5.0	3.1	1.2	1.3
Exports of goods and services	-0.3	3.1	0.4	3.4	3.8	4.2
Imports of goods and services	4.1	-1.2	5.5	5.2	-0.3	-0.2
GDP (production measure)	**2.0**	**1.7**	**2.9**	**2.3**	**2.6**	**2.8**
Employment growth	2.6	1.6	1.1	1.7	1.2	1.3
Unemployment rate[1]	3.9	3.8	3.9	4.1	4.0	4.0
90-day bank bill rate[2]	7.6	7.8	8.5	8.3	7.2	6.9
TWI[2]	68.3	68.8	72.0	62.8	55.6	52.8
CPI[3]	3.3	2.6	2.7	3.1	3.3	2.7
Current account balance (% GDP)	-9.6	-8.6	-7.2	-8.1	-8.7	-7.3
Nominal GDP (expenditure measure)	4.6	4.4	6.4	4.6	4.2	5.0

Sources: Statistics New Zealand, Reserve Bank of New Zealand, The Treasury

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

In this scenario, private consumption growth is assumed to be stronger in the March 2008 and 2009 years than in the central forecast, as households respond to their higher real incomes and increased confidence; higher real incomes also lead to stronger residential investment in the first two years of the scenario. With stronger demand from households, firms increase their investment relative to the central forecast in the same period.

As a result of the stronger domestic demand, employment growth is approximately half a percentage point higher in the March 2009 and 2010 years and the unemployment rate approximately half a percentage point lower. Wage growth is higher than in the central forecasts and the greater strength in the labour market reinforces the stronger domestic demand.

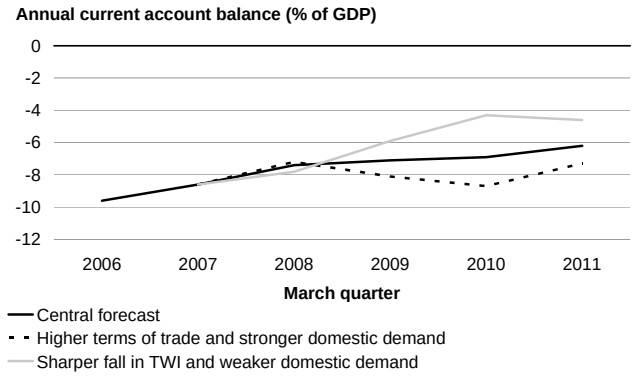
Export volume growth in this scenario is assumed to be slightly lower than in the central forecast because of the effect of the higher exchange rate inhibiting growth in non-commodity and services export volumes. Import volume growth responds rapidly to the increased private consumption and business investment to be slightly higher in the March 2008 year and 3.0% higher in the March 2009 year. GDP growth is higher in the first two years of the forecast period.

The stronger domestic demand leads to higher inflation and more persistent inflation pressures. Consumer price inflation is 0.7% higher in March 2009 and 1.0% higher in the following year. Increased inflation pressure results in tighter monetary policy and 90-day interest rates are half a percentage point higher in the March 2008 quarter and do not fall as rapidly in the following year, remaining at 8.3% in March 2009, 1.6% points higher than in the central scenario. Even with this monetary tightening, inflation remains half a percentage point higher in the final year of the forecasts.

The monetary tightening, however, brings about a slowing in domestic demand. Private consumption, residential investment and market investment all grow more slowly in this scenario in the final two years of the forecast than in the central forecast. Import growth is also lower in this period, but so is real GDP growth. Nominal GDP growth receives a boost of approximately 1% in each of the first two years of the projection period as the higher real GDP is boosted by higher inflation, but is practically unchanged from the central forecast in the last two years as lower real GDP growth offsets the higher inflation.

The stronger domestic demand, especially increased demand for imports, leads to a slower adjustment in the current account deficit. Net investment income outflows also increase as firm profitability increases with the stronger domestic demand. The deficit increases in the March 2009 and 2010 years, reaching 8.7% of nominal GDP in March 2010, 1.8% points higher than in the central forecast. It declines slightly in the following year as GDP growth falls below the central forecasts, but remains at least one percentage point higher at 7.3% of GDP. A continuation of current account deficits at such a level is unsustainable, suggesting that further adjustment will be necessary in the future.

Figure 3.4 – Current account



Source: Statistics New Zealand, The Treasury

Because of the stronger growth in nominal GDP in the early part of the forecast period, the level of nominal GDP is higher throughout the whole forecast period. The cumulative increase over the period to March 2010 is $11.6 billion, with an increase in the final year of $3.7 billion. This higher level of nominal GDP leads to higher tax revenues throughout the period.

A sharper fall in the TWI and weaker domestic demand

The second scenario illustrates a situation in which the NZ dollar falls sooner than assumed in the central forecast (possibly as a result of a change in investor sentiment towards New Zealand as a result of other international developments) and – in conjunction with an assumption of greater impact from recent increases in interest rates – there is weaker domestic demand.

Table 3.3 – Sharper fall in TWI and weaker domestic demand

(Annual average % change, year ending 31 March)	**2006 Actual**	**2007 Estimate**	**2008 Forecast**	**2009 Forecast**	**2010 Forecast**	**2011 Forecast**
Private consumption	4.3	1.7	2.6	0.5	1.3	2.0
Residential investment	-4.7	-2.3	0.9	-7.6	0.8	9.0
Market investment	7.5	-4.6	4.7	-4.7	5.0	7.4
Gross national expenditure	3.9	0.6	3.7	-0.4	2.2	3.4
Exports of goods and services	-0.3	3.1	0.4	3.7	4.4	4.2
Imports of goods and services	4.1	-1.2	4.0	-2.2	2.8	4.3
GDP (production measure)	**2.0**	**1.7**	**2.2**	**1.3**	**2.7**	**3.4**
Employment growth	2.6	1.6	0.9	1.2	0.2	0.8
Unemployment rate[1]	3.9	3.8	4.0	4.6	4.9	4.8
90-day bank bill rate[2]	7.6	7.8	8.0	6.2	5.2	5.5
TWI[2]	68.3	68.8	60.3	59.6	58.3	57.3
CPI[3]	3.3	2.6	3.0	2.2	1.2	1.5
Current account balance (% GDP)	-9.6	-8.6	-7.8	-5.9	-4.3	-4.6
Nominal GDP (expenditure measure)	4.6	4.4	4.8	3.4	3.9	4.5

Sources: Statistics New Zealand, Reserve Bank of New Zealand, The Treasury

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

In this scenario, the Trade Weighted Index (TWI) falls to 60.3 in March 2008, nearly 13% lower than in the central forecast, and below 60.0 in the following March, approximately 4% lower than in the central case. Thereafter, the decline in the exchange rate levels off and it is slightly above the central track at the end of the forecast period. The earlier fall in the NZ dollar, combined with weaker domestic demand, helps achieve a faster re-balancing of the economy and so the exchange rate does not fall as much at the end of the period.

Private consumption growth is half a percent lower than the central forecasts in the year to March 2008 and 1.2% lower in the following year as recent interest rate increases have more effect. Residential investment growth is lower initially in this scenario, falling by 7.6% in the March 2009 year. Market investment is also lower than in the central forecast, declining by nearly 5% in the March 2009 year as a result of the weaker domestic demand.

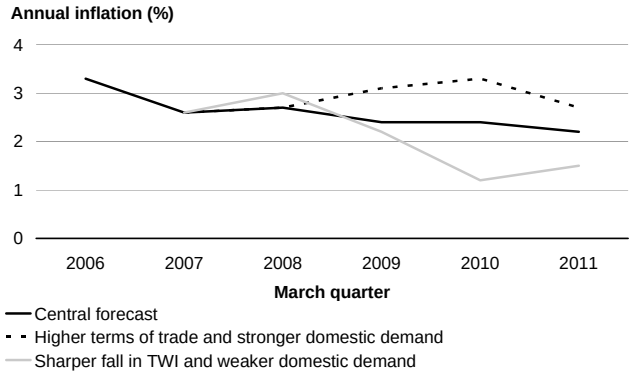
The weaker domestic demand is accompanied by slower growth in imports in the first two years of the scenario. Import volume growth in the March 2008 year is slightly lower at 4.0% and declines 2.2% in the following year. In the final two years of the forecast, import growth is higher than in the central forecasts as domestic demand strengthens again.

The response of export volumes to the lower exchange rate is muted, partly because the lower exchange rate is more likely to affect primary product prices than volumes and partly because the extended period of the high exchange rate has limited the ability of the manufacturing export sector to increase output in response to increased competitiveness. Growth in real GDP is lower in the first three years than in the central forecasts.

Employment growth is lower throughout the forecast period, as firms utilise a lower level of labour input in response to weaker demand. The unemployment rate is higher as a result, rising to 4.0% in March 2008 and averaging just below 5.0% in the final two years of the projections. Wage growth is weaker throughout the period, compounding the weaker private consumption and residential investment growth.

Initially, consumer price inflation is higher than in the central forecasts because of the pass-through from the sharp fall in the exchange rate, but thereafter it falls below the rate in the central case as domestic demand eases and non-tradables inflation declines. Inflation increases to 3.0% in March 2008, but falls away quickly to 2.2% in the following year and 1.2% the year after that. Once lower inflation becomes established, monetary policy is loosened and 90-day rates fall nearly two percentage points to 6.2% in March 2009 and 5.2% the following March, well below the 6.3% in the central forecast.

Figure 3.5 – CPI inflation



Source: Statistics New Zealand, The Treasury

The lower interest rates stimulate domestic demand in the final two years of the scenario. Residential investment begins to recover in the 2010 March year from its decline in the previous year and records solid growth of 9.0% in the final year. Private consumption growth takes slightly longer to respond, but is also above the central forecast in the final year. Market investment responds to both the lower interest rates and the stronger consumption and residential investment, and real gross national expenditure growth is higher than in the central case in the final two years of the forecast period. Import volume growth also recovers.

The current account deficit increases initially in this scenario as the price effects of the fall in the exchange rate are felt before import volumes respond, but then it narrows more quickly, reaching 4.6% of nominal GDP at the end of the period (compared with 6.2% in the central forecasts).

Because of the lower rate of growth in real GDP initially and the lower consumer price inflation after the initial period, both the rate of growth and the level of nominal GDP are lower throughout the forecast period by a cumulative total of approximately $7.2 billion. This brings a corresponding reduction in tax revenues.

Fiscal Scenarios

The fiscal position is strongly influenced by the economy. The major economic determinants, and how they impact on the fiscal position, are listed below. While each effect is expressed in terms of an increase in the determinant, the opposite impact applies for a decrease.

- Nominal GDP – higher GDP levels are reflected in higher tax revenue, which increases the operating balance and lowers the Government's net debt.
- Interest rates – higher interest rates lead to increased debt-financing costs but also to higher interest-based revenue.
- The level of unemployment – higher levels of unemployment translate to an increase in spending, because the number of unemployment beneficiaries rises. This decreases the operating balance and raises net debt levels.
- CPI inflation – as most benefits are indexed to CPI movements, higher inflation results in increased benefit costs. This reduces the operating balance and increases net debt.

Table 3.4 – Alternative scenarios: impact on OBEGAL and debt

Year ending 30 June	2006 Actual	2007 Forecast	2008 Forecast	2009 Forecast	2010 Forecast	2011 Forecast
OBEGAL ($billion)[1]						
Central forecast	8.6	5.5	5.0	4.0	3.5	3.3
Higher terms of trade	8.6	5.6	5.6	5.0	4.4	4.1
Sharper fall in TWI	8.6	5.5	4.4	3.4	3.0	2.7
Gross sovereign-issued debt ($billion)[2]						
Central forecast	33.5	32.0	34.5	34.3	34.0	36.8
Higher terms of trade	33.5	32.0	33.8	32.7	31.5	33.5
Sharper fall in TWI	33.5	32.0	35.0	35.4	35.5	39.0
OBEGAL (% GDP)[1]						
Central forecast	7.3	3.4	2.9	2.2	1.9	1.7
Higher terms of trade	7.3	3.4	3.2	2.7	2.3	2.1
Sharper fall in TWI	7.3	3.4	2.6	1.9	1.6	1.4
Gross sovereign-issued debt (% GDP)[2]						
Central forecast	21.4	19.4	19.9	19.2	18.2	18.8
Higher terms of trade	21.4	19.4	19.3	17.9	16.5	16.8
Sharper fall in TWI	21.4	19.4	20.4	19.9	19.2	20.2
Core Crown net debt (% GDP)						
Central forecast	5.0	3.1	2.7	3.1	3.3	3.5
Higher terms of trade	5.0	3.0	2.3	2.1	1.9	1.8
Sharper fall in TWI	5.0	3.0	3.0	3.7	4.2	4.7

Sources: Statistics New Zealand, The Treasury

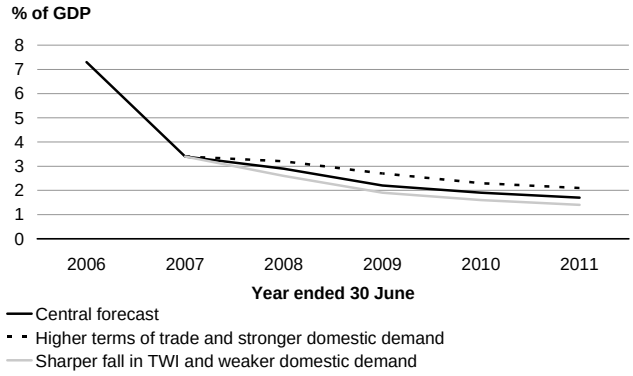
NOTES: 1 Operating balance before gains and losses. The figures for 2006 are the OBERAC.

2 This chapter assumes that changes in the OBEGAL translate into changes in gross sovereign-issued debt. As discussed in the Fiscal Strategy Report, for the purpose of assessing progress towards the fiscal objectives in the forecast period the measure of gross sovereign-issued debt excludes the $5.9 billion increase in the level of Reserve Bank settlement cash. For 2006, $2.0 billion is excluded from gross sovereign-issued debt for consistency.

Higher terms of trade and stronger domestic demand

The first scenario sees higher terms of trade and continuing high levels of domestic consumption and investment. This leads to lower unemployment, higher wage growth and higher inflation. Initially, the higher terms of trade and stronger domestic demand lead to higher nominal GDP. However, by 2010 both nominal and real GDP growth are lower than in the central forecast, as private consumption and residential investment respond to higher interest rates. The higher level of nominal GDP leads to a cumulative increase in tax revenue of $3.9 billion by 2011 relative to the central forecast.

Figure 3.6 – OBEGAL (OBERAC for 2006)



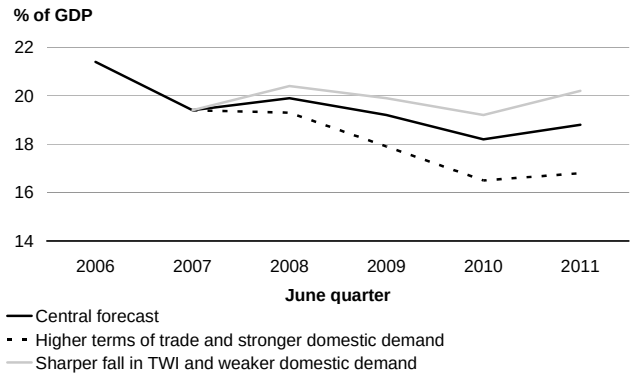
Source: The Treasury

A reduction in the number of unemployment beneficiaries is offset by higher inflation-indexed benefit costs. The combination of lower debt and higher interest rates results in an overall reduction in net finance costs. Overall, expenses are higher over the period, but by less than the increase in tax revenue. As a result, the OBEGAL as a percentage of GDP is 0.4% higher compared with the central forecast at the end of the period and gross sovereign-issued debt is $3.3 billion lower by 2011.

Sharper fall in the TWI and weaker domestic demand

The second scenario is characterised by a 13% fall in the TWI in the year to March 2008 compared with the central forecast, as well as weaker private consumption in 2008 and 2009. Lower inflation over the forecast period leads to lower interest rates and reduced debt financing costs. Weaker demand results in an increase in the unemployment rate relative to the central forecast and slightly lower nominal GDP reduces tax revenue by a cumulative $2.5 billion by 2011 compared to the central forecast.

Figure 3.7 – Gross sovereign-issued debt



Source: The Treasury

Expenses are lower overall as the increase in the number of unemployed is offset by the lower cost of inflation-indexed benefits. The OBEGAL is lower over the forecast period and is 0.3% of GDP lower in the final year of the forecast. As a result, gross sovereign-issued debt is 1.4% of GDP higher at the end of the forecast period.

Fiscal Sensitivities

The scenarios above indicate the sensitivity of fiscal aggregates to changes in economic conditions. Table 3.5 provides some "rules of thumb" on the sensitivities of the fiscal position to changes in specific variables.

Table 3.5 – Fiscal sensitivity analysis

($million) Year ending 30 June	**2007 Forecast**	**2008 Forecast**	**2009 Forecast**	**2010 Forecast**	**2011 Forecast**
1% lower nominal GDP growth per annum					
Revenue	(497)	(1,033)	(1,589)	(2,208)	(2,883)
Addition to financing costs	15	62	141	255	407
Impact on the operating balance	**(512)**	**(1,094)**	**(1,730)**	**(2,463)**	**(3,290)**
Revenue impact of a 1% decrease in the growth rates of:					
Wages and salaries	(230)	(490)	(775)	(1,090)	(1,435)
Taxable business profits	(135)	(280)	(410)	(560)	(735)
One percentage point lower interest rates					
Interest income	(117)	(168)	(187)	(137)	(77)
Expenses	(70)	(160)	(174)	(179)	(209)
Impact on the operating balance	**(47)**	**(8)**	**(13)**	**42**	**132**

The forecasts of capital contributions to the New Zealand Superannuation (NZS) Fund are sensitive to the rate of return assumed on the Fund's assets:

Table 3.6 – NZS Fund contributions sensitivity analysis

Variable	**Marginal Change**	**Effect on Net Return After Tax**	**Effect on Capital Contribution ($million)**			
	(%age points)	(%age points)	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Expected gross rate of return	-1%	-0.71%	203	216	231	249