2

Fiscal Outlook

Overview

- The fiscal outlook of the Crown is expected to continue improving from last year, with the OBEGAL deficit reducing in 2014/15 followed by surplus in 2015/16 and rising to $4.1 billion in 2018/19. Net debt as a percentage of GDP falls from 26.5% in 2014/15 to 22.5% in 2018/19.
- However, the fiscal outlook is expected to be weaker than the *Pre-election Update* in the short term, reflecting a downward revision of tax revenue forecasts.
- Tax revenue forecasts have been revised down since the *Pre-election Update* by $2.4 billion across the forecast period, with $0.6 billion relating to the 2014/15 year, as recent price growth has been slower than expected and global dairy prices have fallen further than anticipated (refer to the section on *Half Year Update* compared to *Pre-election Update* forecast on pages 42 to 45).
- However, core Crown tax revenue is still expected to increase across the forecast period and by 2018/19 is expected to be $18.5 billion higher than 2013/14, reflecting the growth in the nominal economy, as discussed in the Economic Outlook chapter.

Table 2.1 – Fiscal indicators

Year ended 30 June	2014 Actual	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast
$billions						
Total Crown OBEGAL[1]	(2.9)	(0.6)	0.6	2.6	3.1	4.1
Core Crown residual cash	(4.1)	(4.0)	(3.5)	(0.1)	0.6	1.8
Net core Crown debt[2]	59.9	63.5	67.0	67.0	66.4	64.5
Net worth attributable to the Crown	75.6	77.4	80.9	86.5	92.7	100.2
% of GDP						
Total Crown OBEGAL[1]	(1.3)	(0.2)	0.2	1.0	1.1	1.4
Core Crown residual cash	(1.8)	(1.7)	(1.4)	-	0.2	0.6
Net core Crown debt[2]	25.6	26.5	26.5	25.2	24.0	22.5
Net worth attributable to the Crown	32.3	32.3	32.0	32.5	33.5	35.0

Notes: 1 Operating balance before gains and losses
2 Net core Crown debt excluding the New Zealand Superannuation Fund (NZS Fund) and advances

Source: The Treasury

- The operating allowances have been re-phased since the *Pre-election Update* as indicated by the Government in the 2014 Fiscal Strategy Report. An allowance of $1.0 billion has been set for Budgets 2015 and 2016, increasing to $2.5 billion for Budget 2017 before reducing back to $1.5 billion. Once the expected increase in social assistance spending is added to the operating allowances, core Crown expenses are expected to rise by $11.7 billion over the forecast period. This increase is slower than growth in the nominal economy so by the end of the forecast period core Crown expenses fall to below 30% of GDP.
- The OBEGAL deficit in 2014/15 is $572 million (0.2% of GDP) with an OBEGAL surplus of $565 million expected in 2015/16. Beyond 2015/16 these surpluses are expected to increase and by 2018/19 the OBEGAL surplus is expected to reach $4.1 billion.
- Residual cash reaches surplus in 2017/18, a year earlier than previously forecast, primarily reflecting reduced capital spending, enabling debt to begin to reduce in nominal terms.
- In nominal terms, net core Crown debt increases until 2015/16 where it remains static before falling in 2017/18. As a share of GDP, net core Crown debt remains flat for the first two years of the forecast before gradually declining, falling to 22.5% by the end of 2018/19.
- The Crown's balance sheet continues to strengthen over the forecast period. Total assets grow from $256 billion in 2013/14 to $294 billion in 2018/19, total liabilities from $175 billion in 2013/14 to $188 billion in 2018/19.
- The Risks and Scenarios and the Specific Fiscal Risks chapters outline the key risks to the Crown achieving these forecasts.

Table 2.2 – Reconciliation between OBEGAL and net core Crown debt

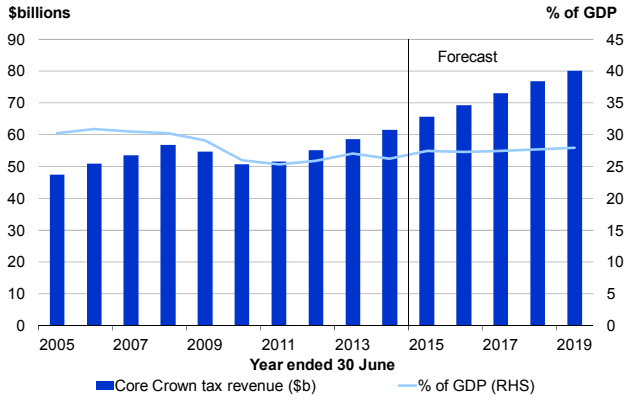
Year ending 30 June $billions	**2014 Actual**	**2015 Forecast**	**2016 Forecast**	**2017 Forecast**	**2018 Forecast**	**2019 Forecast**
Core Crown revenue	67.3	71.5	75.3	79.4	83.5	87.0
Core Crown expenses	(71.5)	(73.0)	(75.1)	(76.9)	(80.7)	(83.2)
Net surpluses/(deficits) of SOEs and CEs	1.3	0.9	0.4	0.1	0.3	0.3
Total Crown OBEGAL	**(2.9)**	**(0.6)**	**0.6**	**2.6**	**3.1**	**4.1**
Net retained surpluses of SOEs, CEs and NZS Fund	(0.8)	(1.0)	(0.3)	-	(0.2)	(0.2)
Non-cash items and working capital movements	0.7	1.6	1.9	2.3	1.4	1.8
Net core Crown cash flow from operations	**(3.0)**	**-**	**2.2**	**4.9**	**4.3**	**5.7**
Net purchase of physical assets	(1.9)	(2.0)	(2.5)	(2.1)	(1.3)	(1.3)
Advances and capital injections	(1.5)	(2.5)	(2.8)	(2.2)	(1.6)	(1.8)
Forecast for future new capital spending	-	(0.1)	(0.4)	(0.7)	(0.8)	(0.8)
Proceeds from government share offers	2.3	0.6	-	-	-	-
Net core Crown capital cash flows	**(1.1)**	**(4.0)**	**(5.7)**	**(5.0)**	**(3.7)**	**(3.9)**
Core Crown residual cash (deficit)/surplus	**(4.1)**	**(4.0)**	**(3.5)**	**(0.1)**	**0.6**	**1.8**
Opening net core Crown debt	55.8	59.9	63.5	67.0	67.0	66.4
Core Crown residual cash deficit/(surplus)	4.1	4.0	3.5	0.1	(0.6)	(1.8)
Valuation changes in financial instruments	-	(0.4)	-	(0.1)	-	(0.1)
Closing net core Crown debt	**59.9**	**63.5**	**67.0**	**67.0**	**66.4**	**64.5**
As a percentage of GDP	**25.6%**	**26.5%**	**26.5%**	**25.2%**	**24.0%**	**22.5%**

Source: The Treasury

Core Crown Tax Revenue

Core Crown tax revenue is forecast to rise in each year of the forecast period. By 2018/19, core Crown tax revenue is expected to reach $80.0 billion, $18.5 billion higher than in 2013/14. Forecast tax revenue increases as a percentage of nominal GDP, from 26.3% in 2013/14 reaching 27.9% at the end of the forecast period (Figure 2.1).

Figure 2.1 – Core Crown tax revenue



Source: The Treasury

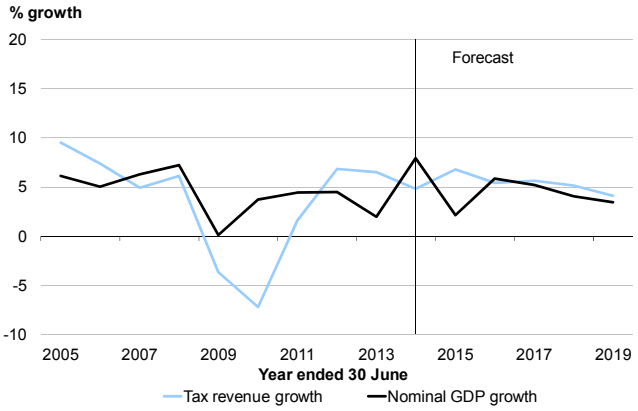
The main driver for the increase in tax revenue is forecast growth in nominal GDP (Figure 2.2). Other factors can also influence the tax revenue forecast such as the composition of that growth, interest rate track (impacting RWT) and assumptions regarding taxpayer behaviour.

Year to date tax outturns to 31 October 2014 are around 8% higher than the same period last year. This growth is largely owing to increases in source deductions, GST and corporate tax. In addition, increases in interest rates have resulted in higher income from RWT. Growth in tax revenue is expected to reduce to around 7% for the full year, as some of the strength in the year-to-date outturn is expected to soften, partly owing to weakness in the dairy sector.

Key assumptions over and above economic drivers include:

- Payments to dairy farmers are forecast to be spread smoothly through the early years of the forecast period as dairy co-operative payments for particular dairy seasons tend to extend well past the end of the corresponding tax year.
- Tax loss utilisation is assumed to ease off over 2015 and 2016 and then flatten out through the remainder of the forecast period.
- Earthquake-related GST refunds for insurers, which peaked in 2011/12, are expected to continue to decrease over the forecast period.

Figure 2.2 – Core Crown tax revenue and nominal GDP growth



Source: The Treasury

While growth in tax revenue is forecast to track closely to nominal GDP growth for most of the forecast period, growth in tax revenue is expected to outpace nominal GDP growth in 2014/15. There are a number of reasons for this:

- Income tax payments through the early part of the 2014/15 fiscal year indicate that a higher-than-usual proportion of 2014 tax year revenue will fall into the 2014/15 fiscal year.
- Some components of nominal GDP (employee compensation, private consumption and residential investment) are growing faster than total nominal GDP.
- GST refunds relating to insurers are declining.

From 2015/16 tax revenue is forecast to grow in line with nominal GDP.

Table 2.3 provides an analysis of the impact particular components of GDP have on the tax revenue forecasts.

Table 2.3 – Composition of growth in core Crown tax revenue over the forecast period

Year ending 30 June **$billions**	**2015** **Forecast**	**2016** **Forecast**	**2017** **Forecast**	**2018** **Forecast**	**2019** **Forecast**	**Total**
Movement in core Crown tax owing to:						
Employees' compensation	1.1	1.1	1.2	1.2	1.3	**5.9**
Private consumption	0.8	0.9	0.9	0.7	0.7	**4.0**
Corporate profits	0.1	0.9	0.7	0.4	0.3	**2.4**
Fiscal drag	0.2	0.3	0.3	0.3	0.4	**1.5**
Residential investment	0.4	0.3	0.2	0.1	-	**1.0**
Inflation indexation	0.2	0.2	0.1	0.1	0.1	**0.7**
Interest rates	0.1	0.1	0.1	0.2	0.2	**0.7**
Entrepreneurial income	(0.1)	0.1	0.4	0.1	0.1	**0.6**
Interest bearing deposit base	0.1	0.1	0.1	0.1	0.1	**0.5**
Other factors	1.2	(0.4)	(0.1)	0.4	-	**1.2**
Total movement in core Crown tax	**4.1**	**3.6**	**3.9**	**3.7**	**3.2**	**18.5**
Plus: previous year's tax base	61.5	65.6	69.2	73.1	76.8	**61.5**
Core Crown tax revenue	**65.6**	**69.2**	**73.1**	**76.8**	**80.0**	**80.0**
Percentage of GDP	**27.4%**	**27.3%**	**27.4%**	**27.7%**	**27.9%**	

Source: The Treasury

Employees' compensation contributes $5.9 billion to source deductions' growth over the forecast period, with the progressive nature of the personal tax scale (fiscal drag) adding a further $1.5 billion.

Growth in private consumption contributes $4.0 billion to the increase in GST over the forecast period, related to net migration growth and gradual wage growth.

Growth in corporate profits contributes $2.4 billion with the main driver being corporate tax increasing over the forecast period, despite the weakness in the dairy sector; profits in other sectors are higher than previously forecast.

Inland Revenue has also prepared a set of tax forecasts based on the Treasury's macroeconomic forecasts (Table 2.4)[3]. Inland Revenue's forecasts are higher than the Treasury's forecasts in the first three years of the forecast but lower in 2017/18. Source deductions and corporate taxes are where the largest forecast differences arise, reflecting the different methods used and assumptions made by the two forecasting agencies. For instance, Inland Revenue's source deductions forecast is higher than the Treasury's owing to the different assumptions made around how much of the current weakness in PAYE will be carried through to future years. Although these differences are less than half of one percent of total tax revenue, they highlight the uncertainties associated with any forecast.

Table 2.4 – The Treasury's and Inland Revenue's core Crown tax revenue forecasts

Year ending 30 June $billions	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast
Source deductions					
The Treasury	25.0	26.3	27.7	29.3	30.9
Inland Revenue	25.1	26.5	28.0	29.5	31.1
Difference	(0.1)	(0.2)	(0.3)	(0.2)	(0.2)
Net other persons tax					
The Treasury	3.8	3.9	4.2	4.5	4.5
Inland Revenue	4.0	3.8	4.3	4.4	4.5
Difference	(0.2)	0.1	(0.1)	0.1	-
Corporate taxes					
The Treasury	11.1	11.8	12.5	12.9	13.3
Inland Revenue	11.2	11.7	12.2	12.6	12.8
Difference	(0.1)	0.1	0.3	0.3	0.5
Goods and services tax					
The Treasury	17.4	18.3	19.2	20.2	20.7
Inland Revenue	17.4	18.4	19.3	20.0	20.7
Difference	-	(0.1)	(0.1)	0.2	-
Other taxes					
The Treasury	8.3	8.9	9.5	9.9	10.6
Inland Revenue	8.3	9.0	9.6	10.1	10.9
Difference	-	(0.1)	(0.1)	(0.2)	(0.3)
Total tax					
The Treasury	65.6	69.2	73.1	76.8	80.0
Inland Revenue	66.0	69.4	73.4	76.6	80.0
Difference	(0.4)	(0.2)	(0.3)	0.2	-
Total tax (% of GDP)					
The Treasury	27.4	27.3	27.4	27.7	27.9
Inland Revenue	27.6	27.4	27.6	27.7	27.9
Difference	(0.2)	(0.1)	(0.2)	-	-

Sources: The Treasury, Inland Revenue

3 For more details of the Treasury and Inland Revenue's forecasts, see the *Additional Information* document on the Treasury website www.treasury.govt.nz

Core Crown Expenses

Growth in core Crown expenses as a percentage of GDP reduces...

Growth in core Crown expenses is forecast to be at a slower rate than growth in the nominal economy. They fall from 30.5% of GDP in 2013/14 to 29.0% of GDP by the end of the forecast period. In 2015/16, core Crown expenses are expected to stand at 29.7% of GDP (Figure 2.3).

...however, nominal spending increases

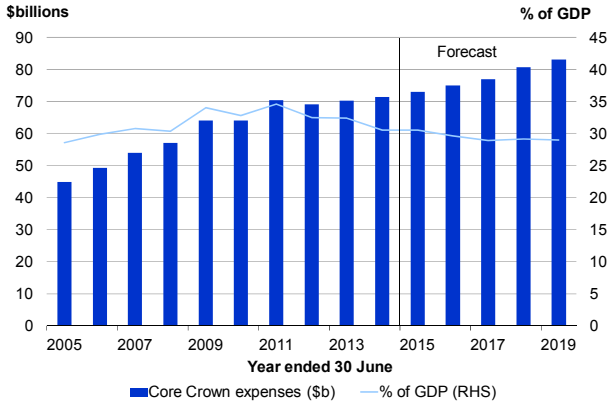
Nominal growth of $11.7 billion in core Crown expenses is largely attributable to new spending expected from future Budget allowances and increased social assistance spending (as shown in Figure 2.4).

Operating allowances have been set at $1 billion for Budget 2015 and 2016, rising to $2.5 billion in Budget 2017 before reducing to $1.5 billion in Budget 2018. For more detail, refer to the 2015 Budget Policy Statement.

The combined new budget spending totals $6.0 billion by 2018/19 (see Figure 2.5). For forecasting purposes these allowances have been assumed to be expenditure. However, these operating allowances can be used for a combination of both revenue and expense initiatives when allocated.

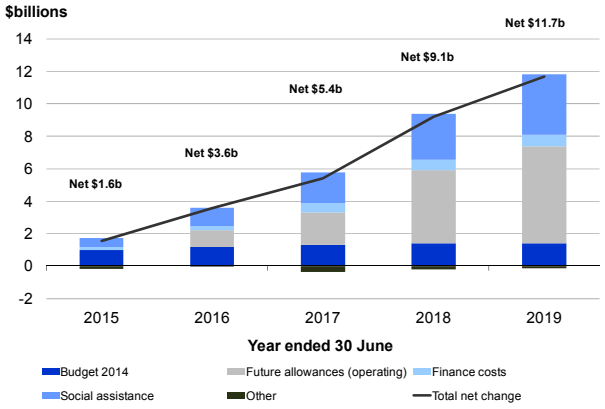
New operating spending will be allocated to department baselines once budget decisions are made. As a result most functional expense areas (eg, health, education) remain flat across the forecast period as new spending has yet to be allocated. Therefore comparisons across the forecast period will not necessarily reflect the expected spend at a functional level.

Figure 2.3 – Core Crown expenses



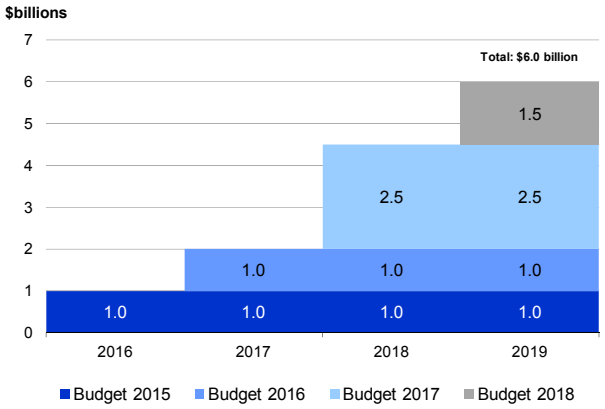
Source: The Treasury

Figure 2.4 – Increase in core Crown expenses



Source: The Treasury

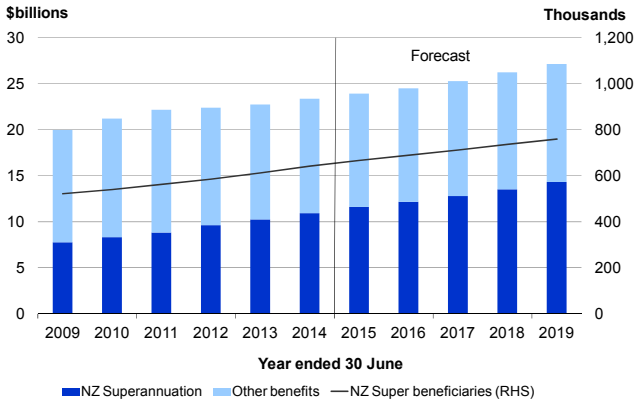
Figure 2.5 – Budget 2015 and future Budget allowances



Source: The Treasury

Outside new budget spending, social assistance spending is expected to increase by $3.7 billion across the forecast period. New Zealand Superannuation payments grow by $3.4 billion as payments are linked to wage growth and recipient numbers increase (Figure 2.6). As a percentage of total social assistance spending, New Zealand superannuation is expected to rise from 39% in 2008/09 to 53% by 2018/19.

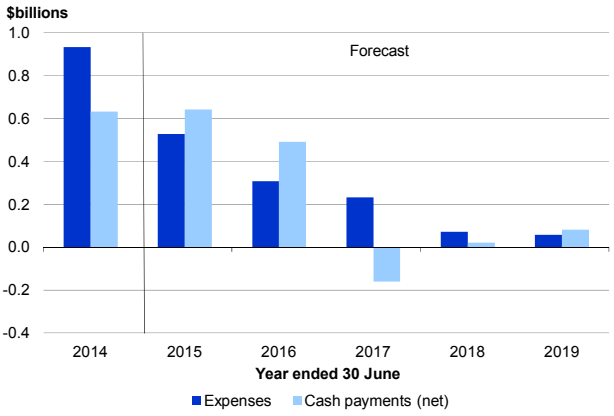
Figure 2.6 – Social assistance spending



Source: The Treasury

Other benefit types only increase marginally over the forecast period. Although most other benefit types' spending increases as they are adjusted for inflation, this growth is somewhat restrained owing to expected reductions in recipient numbers.

Figure 2.7 – Core Crown Canterbury rebuild operating expenditure and cash flows



Source: The Treasury

Core Crown expenses in relation to the Canterbury rebuild are expected to decrease over the forecast period, as most of the operating expenses have already been incurred. The net cash profile reflects that net payments/ (receipts) are expected to occur later than when expenditure is recognised. This analysis excludes EQC and Southern Response expenses. For a more detailed analysis for total Crown, refer to the box on page 32.

Cost to the Crown of the Canterbury rebuild

Table 2.5 outlines the latest estimates of the net impact of the earthquakes included in these forecasts. The total cost to the Crown is estimated to be $16.0 billion. This compares to an estimate of $15.8 billion in the *Pre-election Update*. This increase is spread across a number of areas, the most notable being an increase in the outstanding claims costs of Southern Response.

Table 2.5 – Net earthquake expenses (operating and capital)

Year ended 30 June $millions	2011-14 Actual	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast	Outside forecast period	Total *Half Year Update*	Total *Pre-election Update*
Local infrastructure	1,473	110	110	113	-	-	-	1,806	*1,828*
Crown assets[1]	158	513	675	521	157	-	-	2,024	*2,046*
Land zoning	1,009	16	35	48	31	-	-	1,139	*1,089*
Christchurch central city rebuild[2]	588	412	192	128	(21)	2	(175)	1,126	*1,117*
Welfare support	288	9	4	3	2	-	-	306	*306*
Southern Response support package	582	21	(32)	(14)	(4)	2	-	555	*492*
Other costs	628	209	117	51	36	53	-	1,094	*1,023*
Core Crown Canterbury earthquake recovery costs	**4,726**	**1,290**	**1,101**	**850**	**201**	**57**	**(175)**	**8,050**	***7,901***
EQC (net of reinsurance proceeds)	7,784	(255)	(124)	-	-	-	-	7,405	*7,404*
Other SOE and CEs	(129)	177	176	187	76	8	-	495	*506*
Total Crown	**12,381**	**1,212**	**1,153**	**1,037**	**277**	**65**	**(175)**	**15,950**	***15,811***
Operating and capital expenses									
Operating expenditure (OBEGAL)	11,579	221	155	252	67	53	-	12,327	*12,612*
Capital expenditure	802	991	998	785	210	12	(175)	3,623	*3,199*
Total Crown	**12,381**	**1,212**	**1,153**	**1,037**	**277**	**65**	**(175)**	**15,950**	***15,811***
Total cash payments[3]	**8,002**	**2,767**	**3,442**	**1,071**	**284**	**86**	**(175)**	**15,477**	***15,528***

Notes: 1 Crown assets includes capital expenditure on Canterbury hospitals, schools, Tertiary Education Institutions (TEIs), housing and the Justice and Emergency Services Precinct.

2 Central city rebuild costs include land acquisition and are net of expected recoveries and contributions from third parties.

3 Some expenses are non-cash (eg, asset write-offs and impairments) and therefore do not have a cash element to them.

Source: The Treasury

The Specific Fiscal Risks chapter discusses the fiscal risks associated with the Canterbury earthquake forecast net expenses. The Treasury's current estimates reflect the known costs under current government policy. They do not include future decisions the Government may or may not take regarding the rebuild. Key risks include the timing of expenditure and escalating costs as well as the independent review of infrastructure costs shared by the Christchurch City Council and the Crown.

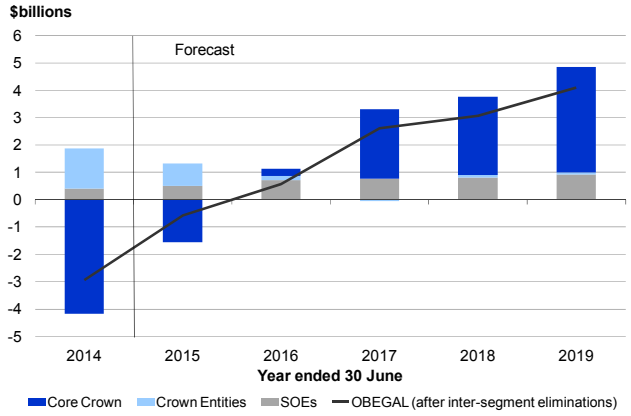
Operating Balance

The operating performance continues to improve…

An OBEGAL deficit of $572 million is forecast in 2014/15, followed by a surplus of $565 million in 2015/16 rising to $4.1 billion in 2018/19.

Figure 2.8 shows the composition of OBEGAL from the different segments of the Government. The core Crown segment is forecast to have an OBEGAL deficit of $1.6 billion in 2014/15, followed by a $0.3 billion surplus in 2015/16, then continues to rise over the forecast period, largely reflecting growth in tax revenue and continued management of expenditure.

Figure 2.8 – Components of OBEGAL by segment



Source: The Treasury

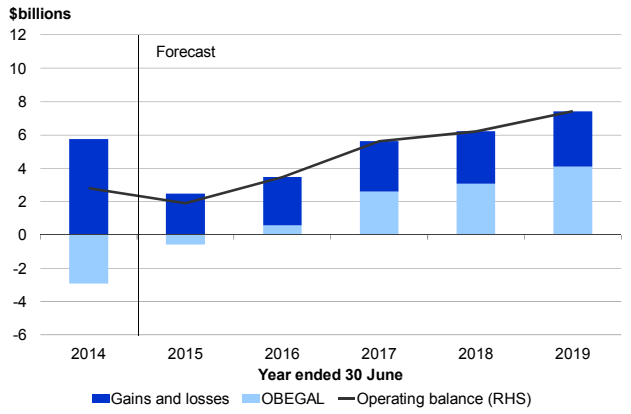
State-owned Enterprises (SOEs) and Crown entities (CEs) together contribute $1.3 billion to the OBEGAL surplus in 2014/15, reducing slightly to $1.0 billion by the end of the forecast period, largely reflecting reductions in ACC levy revenue, due to previously announced reduction in levy rates.

...and investment returns lift the operating balance

The total Crown operating balance, inclusive of gains and losses, is forecast to be a surplus across all years of the forecast period. Figure 2.9 shows the continuing growth in the operating balance and its components.

The current year's forecast surplus is largely a result of gains expected to be made by entities with large investment portfolios, primarily ACC and NZS Fund. Market movements in these portfolios can have a significant impact on the operating balance, particularly through gains and losses.

Figure 2.9 – Components of operating balance



Source: The Treasury

Investment returns in 2013/14 were higher than average reflecting the strong performance of global equity markets. The forecast assumes investment income returns to a long-term rate of return, resulting in subdued growth going forward. These gains play a part in increasing the Government's financial assets and the Crown's net worth (discussed on page 39). The current year operating balance is also impacted by losses of $1.7 billion, in relation to updated long-term liability valuations for ACC and the Government Superannuation Fund (GSF), mainly owing to changes in economic factors impacting the valuations and reducing the operating balance surplus.

Operating balance indicators and the fiscal impulse

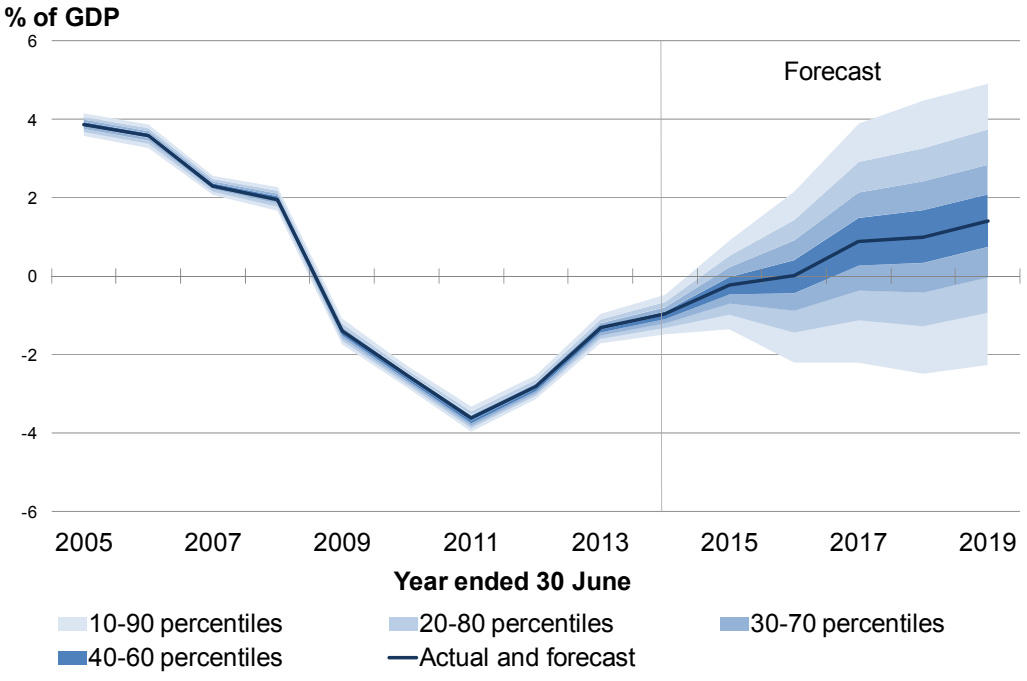
In addition to OBEGAL and the operating balance, the Treasury calculates other fiscal indicators, to help assess the relationship between fiscal policy and the economy. These indicators include the cyclically-adjusted balance (CAB), the fiscal impulse (provided in Table 2.6) and net operating balance per Government Financial Statistics.

Cyclically-adjusted balance[4]

The CAB is an estimate of the fiscal balance (OBEGAL) adjusted for fluctuations of actual GDP around trend GDP. It provides an assessment of the fiscal balance by estimating what the fiscal position would be if the economy was running at its potential level. In addition, because of its very large impact on the fiscal position, we have stripped out the "one-off" impact on expenses of the Canterbury earthquakes to give a more informative picture of the structural fiscal position. Figure 2.11 shows the forecast OBEGAL and CAB are similar as the economy is expected to be operating at around its potential level over the forecast period.

There is always considerable uncertainty about future fiscal developments. This is owing to forecast uncertainty about the path of the economy, tax revenue and government spending. When assessing the structural position there is also estimation uncertainty about the output gap. Figure 2.10 shows a probability interval around the CAB based on historical forecast errors and revisions to the output gap (assuming no policy change). While the central forecast shows the CAB achieving a small surplus in 2015/16, the fan chart indicates there is an 80% chance of the CAB being between -2% and +2% of GDP.[5]

Figure 2.10 – Cyclically-adjusted balance fan chart



Source: The Treasury

Note: The bands represent sequential deciles such that the difference between the 10th and 90th percentiles represents an 80% confidence interval.

4 For more detail on both the CAB and fiscal impulse, see the *Additional Information* document on the Treasury website www.treasury.govt.nz

5 Detail on the methodology and parameter values are provided in Treasury Working Paper 10/08 www.treasury.govt.nz/publications/research-policy/wp/2010/10-08

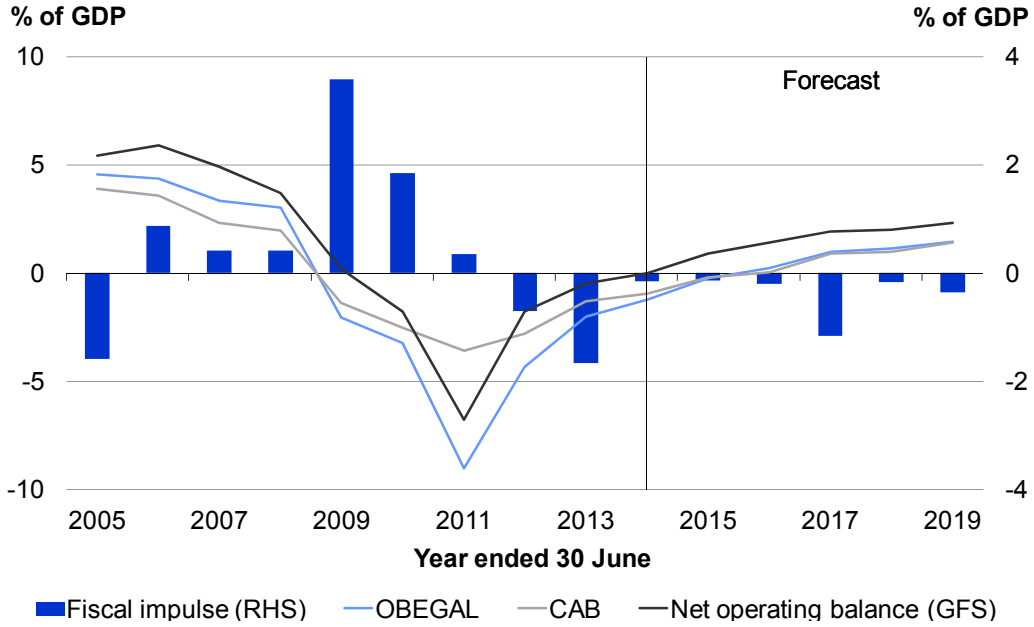
Fiscal impulse

The fiscal impulse is a measure of discretionary changes in the fiscal position, which can be expected to have an impact on aggregate demand in the economy. The fiscal impulse is calculated as the change in the cyclically-adjusted cash balance and excludes net interest payments. This means changes to revenue and spending forecasts not related to the output and unemployment gaps are attributed to discretionary fiscal policy changes. Figure 2.11 shows fiscal policy is expected to withdraw from aggregate demand over the forecast period as a whole (0.4% per year on average). Following a small withdrawal in 2013/14, further relatively small negative fiscal impulses are expected in the current and next fiscal year, reflecting offsetting effects of lower tax revenues and spending growth. Discretionary fiscal policy is expected to withdraw 1.2% of GDP from aggregate demand in 2016/17.

Net operating balance

The net operating balance uses the framework developed by the International Monetary Fund (IMF) called Government Financial Statistics and is specifically designed for government reporting. It is therefore a useful measure to compare with other countries. The net operating balance represents revenue and expenses of the core Crown (excluding the Reserve Bank) and CEs, and therefore excludes SOEs. It also excludes a wider range of valuation movements than OBEGAL, such as impairments and write-offs.

Figure 2.11 – Operating balance indicators



Sources: The Treasury, IMF (GFS 2005-2006 years)

Table 2.6 – Operating balance indicators[6]

Year ended 30 June % of GDP	2014 Actual	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast
OBEGAL	(1.3)	(0.2)	0.2	1.0	1.1	1.4
Cyclically-adjusted balance	(1.0)	(0.2)	0.0	0.9	1.0	1.4
Fiscal impulse	(0.2)	(0.1)	(0.2)	(1.2)	(0.2)	(0.4)
Net operating balance	0.0	0.9	1.4	1.9	2.0	2.3

Source: The Treasury

6 The fiscal impulse measure shown is the core Crown fiscal impulse plus Crown entities excluding EQC and Southern Response payments.

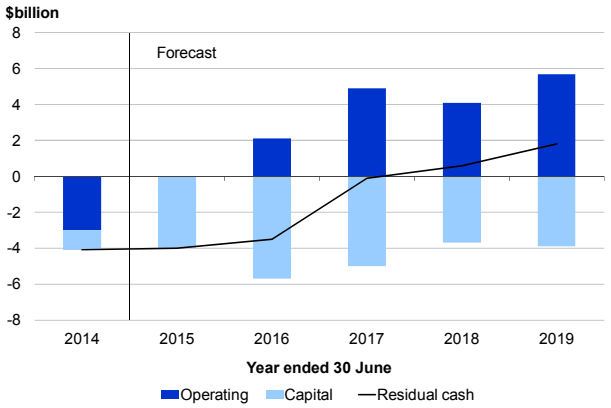
Residual Cash

Operating cash flows improve...

Similar to the trend in OBEGAL, cash flows from operations are expected to improve across the forecast period. Net operating cash flows are forecast to be in small surplus for 2014/15 and continues to increase across the remaining forecast period. The improvement largely represents the growth in tax receipts outpacing operating payments.

Over the forecast period, the Government is expected to generate cash flows from core Crown operations of $17.0 billion.

Figure 2.12 – Core Crown residual cash



Source: The Treasury

...but capital spending exceeds operating cash flows in the short-term

Net capital spending is forecast to exceed operating cash flows until 2017/18, resulting in Core Crown residual cash[7] remaining in deficit until then (Figure 2.12).

The Government is forecast to spend $22.9 billion (net excluding Government share offer) on capital items, which include purchasing physical assets (eg, school buildings), advances (eg, student loans), providing capital to Crown entities and future new capital spending.

Table 2.7 – Capital expenditure activity 2014/15 to 2018/19

Year ending 30 June $billions	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast	Cumulative Forecast
Purchase of physical assets	(3.1)	(2.9)	(2.4)	(1.5)	(1.5)	**(11.4)**
Sale of physical assets	0.5	0.1	0.1	0.2	0.1	**1.0**
Net purchase of physical assets	(2.6)	(2.8)	(2.3)	(1.3)	(1.4)	**(10.4)**
Advances made	(2.8)	(2.7)	(2.2)	(2.5)	(2.3)	**(12.5)**
Repayment of advances	1.9	1.6	1.6	2.2	2.0	**9.3**
Net advances	(0.9)	(1.1)	(0.6)	(0.3)	(0.3)	**(3.2)**
Purchase of investments	(1.8)	(1.7)	(1.5)	(1.3)	(1.4)	**(7.7)**
Sale of investments	0.2	-	-	-	-	**0.2**
Net investments	**(1.6)**	**(1.7)**	**(1.5)**	**(1.3)**	**(1.4)**	**(7.5)**
Government share offer proceeds	0.6	-	-	-	-	**0.6**
New capital spending	(0.1)	(0.4)	(0.7)	(0.8)	(0.8)	**(2.9)**
Top-down capital adjustment	0.6	0.3	0.1	0.1	0.1	**1.1**
Net capital spending	**(4.0)**	**(5.7)**	**(5.0)**	**(3.7)**	**(3.9)**	**(22.3)**

Source: The Treasury

7 Net core Crown debt and residual cash indicators are measured on a core Crown basis. Residual cash includes both operating and capital activity. This differs from OBEGAL, which is measured at a total Crown level and includes operating activity only.

Net purchases of physical assets represents forecast spending of core Crown agencies to mainly maintain their existing asset base and includes spending on defence equipment, school property and the Canterbury rebuild.

Net advances are mainly student loans with $8.3 billion expected to be borrowed over the forecast period and repayments of $6.3 billion. The other significant component of advances is in relation to financing capital projects (for example, funding for the Auckland Transport Package).

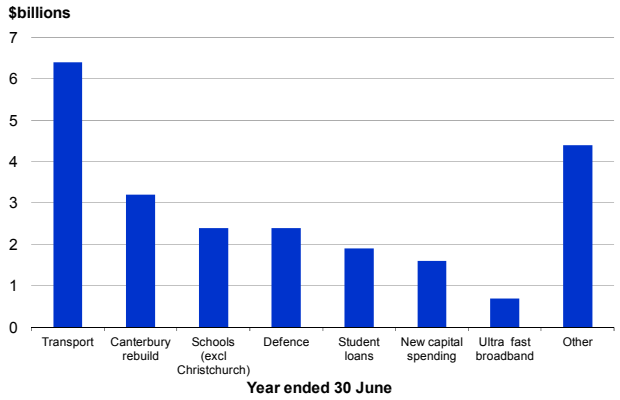
Net investments largely represent capital injections to Crown entities, to expand their asset base, estimated at $1.0 billion to $1.7 billion a year. The largest capital injections across the forecast period are to New Zealand Transport Agency for state highways.

Capital allowances relate to new capital spending that is expected to be allocated over the forecast period. The capital allowance for each Budget is spread over four fiscal years reflecting the expected profile of the spend. This profile is illustrated in Figure 2.14.

The future new capital spending for the next two Budgets (totalling $1.5 billion) is expected to be funded by the remaining proceeds from the Government share offer programme, (the Future Investment Fund) (Table 2.8).

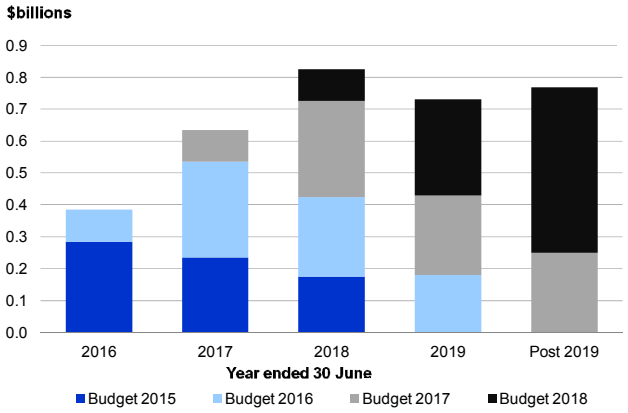
Capital allowances are $0.9 billion in Budget 2017 before growing at a rate of 2% per annum for subsequent budgets.

Figure 2.13 – Forecast capital activity for 2014/15 to 2018/19 by significant spending



Source: The Treasury

Figure 2.14 – New capital spending (capital allowances)



Source: The Treasury

Table 2.8 – Future Investment Fund

$billions	Total fund
Cash proceeds	4.669
Allocated in Budget 2012	(0.533)
Allocated in Budget 2013	(1.421)
Allocated in Budget 2014	(1.050)
Future new capital spending	**1.665**
Pre-committed Budget 2015	(0.137)
To be allocated	**1.528**

Source: The Treasury

Over the entire forecast period a cash shortfall of $5.3 billion is expected. The cash shortfall is funded through additional borrowing and reductions in financial assets.

Net Core Crown Debt

Net core Crown debt peaks as a share of GDP in 2014/15...

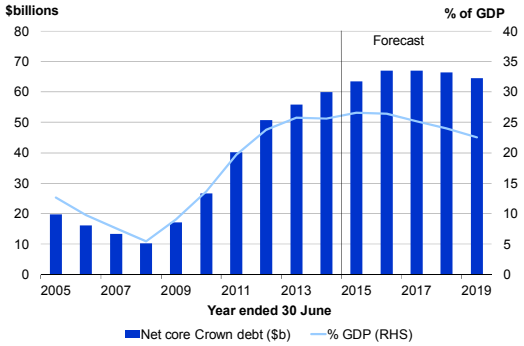
Net core Crown debt as a share of GDP peaks at 26.5% in 2014/15 and stays flat in 2015/16 (Figure 2.15) before reducing to 22.5% by 2018/19.

As residual cash returns to surplus, net core Crown debt is repaid.

...and gross debt begins to decline after 2016/17

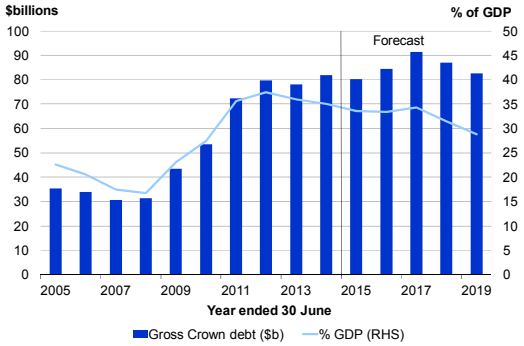
The bond programme to 2018/19 is expected to raise funds of $36.4 billion over the forecast period, while $34.8 billion of existing debt will be repaid, providing net cash proceeds of $1.6 billion (Table 2.9). Any excess cash proceeds raised from the bond programme will be invested in financial assets and used to meet future debt maturities.

Figure 2.15 – Net core Crown debt



Source: The Treasury

Figure 2.16 – Gross debt



Source: The Treasury

Table 2.9 – Net increase in government bonds

Year ending 30 June $billions	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast	5-year Total
Face value of government bonds issued (market)	8.0	7.0	7.0	7.0	7.0	36.0
Cash proceeds from government bond issue						
Cash proceeds from issue of market bonds	8.1	7.2	7.2	7.0	6.9	36.4
Repayment of market bonds	(8.7)	(1.8)	-	(11.3)	(11.5)	(33.3)
Net proceeds from market bonds	(0.6)	5.4	7.2	(4.3)	(4.6)	3.1
Repayment of non-market bonds	(0.8)	(0.7)	-	-	-	(1.5)
Net repayment of non-market bonds	(0.8)	(0.7)	-	-	-	(1.5)
Net cash proceeds from bond issuance	**(1.4)**	**4.7**	**7.2**	**(4.3)**	**(4.6)**	**1.6**

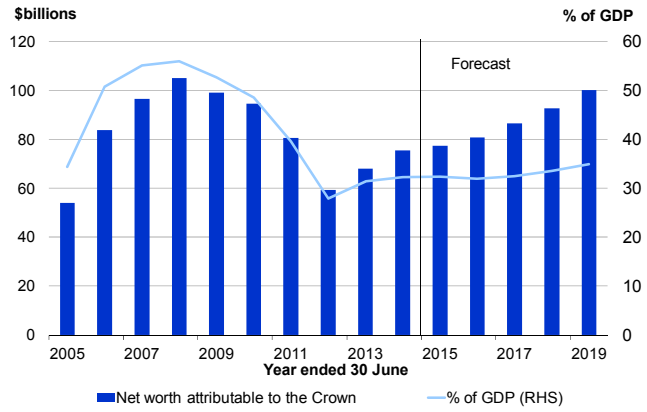
Source: The Treasury

Total Crown Balance Sheet

Operating balance surpluses result in a stronger balance sheet...

Net worth attributable to the Crown is forecast to grow steadily in nominal terms across the forecast period largely owing to forecast operating balance surpluses. Beyond 2015, net worth attributable to the Crown is expected to grow by $22.8 billion to stand at $100.2 billion by 2018/19, increasing as a share of GDP to reach 35.0% by 2018/19, still below the peak of 56.0% of GDP in 2007/08 as shown in Figure 2.17.

Figure 2.17 – Net worth attributable to the Crown



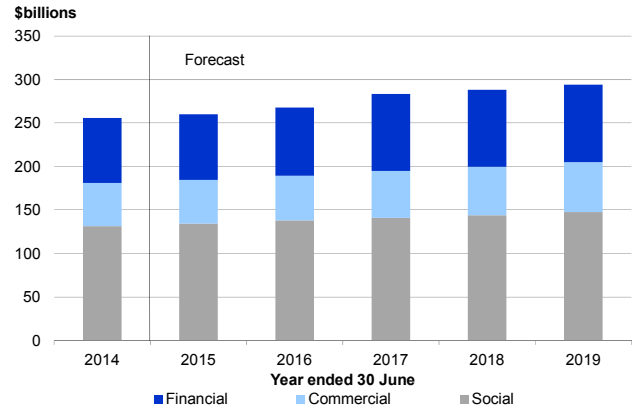
Source: The Treasury

...with assets increasing by $38 billion over the forecast period...

Total assets are forecast to grow by $37.7 billion over the forecast period, made up of additional investments in assets (both physical and financial) of $76.7 billion, partially offset by reductions (largely depreciation) of $39.0 billion.

The largest asset growth over the forecast period is in the social assets portfolio which increases by $16.1 billion (Figure 2.18) over the forecast period. This growth reflects increases in student loans and property, plant and equipment, including Canterbury rebuild assets, school property, hospitals and increases in the social housing portfolio.

Figure 2.18 – Total Crown assets



Source: The Treasury

The financial asset portfolio is expected to increase by $14.1 billion, reflecting the investment growth in entities with large investment portfolios such as those managed by NZS Fund and ACC.

The commercial asset portfolio is expected to increase by $7.5 billion over the forecast period, with growth coming from SOEs investing in additional physical assets and growth in Kiwibank mortgages.

Social housing

The Government has announced it is seeking to enlarge the role of non-Government providers of social housing. Housing New Zealand Corporation is currently the largest social housing provider in the country, owning just over 65,000 houses currently valued at $18.7 billion.

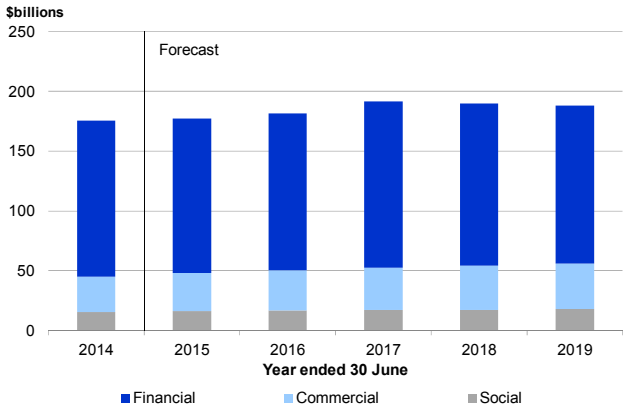
This valuation is based on the market value of individual houses in the residential market (the primary market for housing) and reflects the fact that these houses are predominantly held on a long-term basis to provide social housing capacity (and would therefore be replaced to maintain that capacity).

The form and timing of any divestment of social housing assets to other social housing providers is highly uncertain at this time and has therefore not been included in the fiscal forecasts. This potential divestment has therefore been included in the Specific Fiscal Risk chapter.

...and liabilities beginning to fall by the end of the forecast period

The Crown's liabilities are expected to increase by $12.9 billion (Figure 2.19) over the forecast period, largely driven by increased borrowing ($8.0 billion over the forecast period) before beginning to fall in 2017/18. Borrowings are mostly held by the Treasury's Debt Management Office, the Reserve Bank and Kiwibank, and are forecast to peak at $118.5 billion in 2016/17 before decreasing slightly to stand at $111.5 billion by 2018/19.

Figure 2.19 – Total Crown liabilities



Source: The Treasury

Borrowings in the financial portfolio are expected to increase by $8.1 billion to 2016/17 before reducing by $9.9 billion in the last two years of the forecast (refer to page 38 for discussion of the bond programme). The remainder of borrowing is primarily in the commercial portfolio, which is expected to grow by $7.9 billion. Approximately two-thirds relates to Kiwibank deposits, which continue to grow in line with Kiwibank's mortgages.

The Crown's balance sheet remains sensitive to market movements...

Many of the assets and liabilities on the Crown's balance sheet are measured at "fair value" in order to disclose current estimates of what the Crown owns and owes. While the measurement at fair value is seen as the most appropriate value of these items, it can be volatile, resulting in fluctuations in the value of the assets and liabilities reflecting changes in the market and underlying assumptions.

Financial assets are the largest asset group on the Crown's balance sheet and have increased significantly in recent years. Entities with large investment portfolios (eg, NZS Fund and ACC) hold these investments to make financial returns, and those asset values are dependent on market prices, interest rates and exchange rates, which can all be volatile. For example, a 10% change in the NZ dollar exchange rate or share prices can impact the Crown's operating balance by $1 billion to $2 billion.

In addition, the Crown has a number of significant long-term liabilities (eg, ACC claims and GSF retirement liability) which are actuarially valued based on estimated future cash flows more than 50 years into the future. As part of the actuarial valuation, inflation rates are used to help estimate future cash flows, while discount rates are used to obtain the value of those future cash flows in today's dollars (their present value). Even small changes in these assumptions can have significant impacts on the valuation because the cash flows are so large and over such long periods. For example, a 1% change in discount rates for ACC can impact insurance liabilities by $3 billion to $4 billion.

...and judgements and estimates will also impact on the balance sheet...

Outside of market factors, valuations are subject to a number of judgements and estimates. In general, as time goes on, better information becomes available and initial estimates are updated to reflect current information. Some examples of this include: ACC rehabilitation costs; earthquake-related insurance liabilities; and student wage growth.

...while other risks still remain

In addition to those items on the balance sheet there are a number of liabilities (and assets) that may arise in the future but are not yet included in our forecasts, either because they are contingent on an uncertain future event occurring (eg, outcome of litigation) or the liability cannot be measured reliably. If these liabilities crystallise, there will be associated costs with a negative impact (or positive in the case of contingent assets) on the operating balance or net debt. Refer to page 79 for a list of the contingent liabilities at 31 October 2014.

Comparison to the *Pre-election Update*

The *Pre-election Update* was published on 19 August 2014. There have been a number of developments since then that have significantly impacted on the fiscal outlook.

Table 2.10 – Key fiscal indicators compared to the *Pre-election Update*

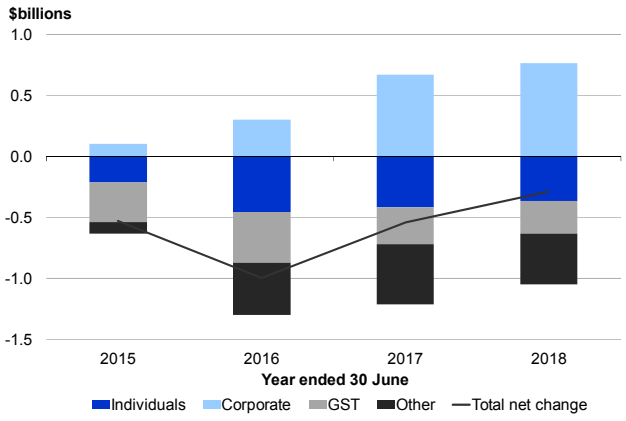
Year ending 30 June $billions	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Core Crown tax revenue				
Half Year Update	65.6	69.2	73.1	76.8
Pre-election Update	66.2	70.2	73.6	77.1
Change	**(0.6)**	**(1.0)**	**(0.5)**	**(0.3)**
Core Crown expenses				
Half Year Update	73.0	75.1	76.9	80.7
Pre-election Update	72.8	75.9	78.6	81.5
Change	**0.2**	**(0.8)**	**(1.7)**	**(0.8)**
OBEGAL				
Half Year Update	(0.6)	0.6	2.6	3.1
Pre-election Update	0.3	0.8	1.9	3.0
Change	**(0.9)**	**(0.2)**	**0.7**	**0.1**
Residual cash				
Half Year Update	(4.0)	(3.5)	(0.1)	0.6
Pre-election Update	(4.6)	(2.9)	(0.4)	(0.3)
Change	**0.6**	**(0.6)**	**0.3**	**0.9**
Net debt				
Half Year Update	63.5	67.0	67.0	66.4
Pre-election Update	64.3	67.0	67.5	67.9
Change	**(0.8)**	**-**	**(0.5)**	**(1.5)**

Source: The Treasury

Economic factors have adversely impacted tax revenue...

Recent price growth has been slower than expected and global dairy prices have fallen by more than anticipated. This is expected to flow through to slower growth in tax revenue directly through lower GST and other persons' tax. In addition, short-term interest rates are likely to remain lower than otherwise, we expect the Reserve Bank will not have to increase the OCR as quickly as previously thought. As a result, RWT on interest earnings will be less than previously forecast.

Figure 2.20 – Movement in core Crown tax revenue since the *Pre-election Update*



Source: The Treasury

Compared to the *Pre-election Update*, tax revenue forecasts have been revised down by $2.4 billion across the 2014/15 to 2017/18 forecast period, with $0.6 billion relating to the 2014/15 year (Table 2.11).

Across the forecast period:

- GST forecasts have reduced owing to lower forecasts of nominal private consumption and residential investment
- individuals' tax forecasts have reduced owing to lower forecast aggregate employees' compensation, reflecting slower nominal wage growth, and reduced forecasts of entrepreneurial income and weakness in the dairy sector
- the lower interest rate track lowered the forecast for interest RWT, and
- corporate tax forecasts have increased as, despite the weakness in the dairy sector, profits in other sectors of the economy are higher than previously forecast.

Table 2.11 – *Reconciliation of the change in core Crown tax revenue*

Year ending 30 June $billions	**2015 Forecast**	**2016 Forecast**	**2017 Forecast**	**2018 Forecast**
Movement in core Crown tax owing to:				
Source deductions	(0.1)	(0.2)	(0.3)	(0.4)
Other persons tax	(0.1)	(0.2)	(0.1)	-
Corporate tax	0.1	0.3	0.7	0.8
Residential Withholding Tax (RWT)	(0.1)	(0.4)	(0.5)	(0.4)
Goods and Services Tax (GST)	(0.4)	(0.4)	(0.3)	(0.3)
Other taxes	-	(0.1)	-	-
Total movement in core Crown tax	**(0.6)**	**(1.0)**	**(0.5)**	**(0.3)**
Plus: *Pre-election Update*'s tax base	66.2	70.2	73.6	77.1
Core Crown tax revenue at *Half Year Update*	**65.6**	**69.2**	**73.1**	**76.8**
As a % of GDP	**26.8%**	**28.0%**	**27.9%**	**28.1%**

Source: The Treasury

While the full-year forecasts have been revised down, year-to-date tax revenue to October 2014 was $0.2 billion above the *Pre-election Update* (Table 2.12). Some tax types are already showing weakness relative to the *Pre-election Update* (eg, source deductions and interest RWT) and their full-year 2014/15 forecasts have been reduced accordingly.

Other major tax types, ie, GST and net other persons tax, are currently tracking above the *Pre-election Update*, but their 2014/15 forecasts have been reduced. This has occurred because much of the nominal GDP forecast reduction is expected to unfold over the remainder of the year as consumption and entrepreneurial income components of GDP are expected to weaken.

Corporate tax to October is above forecast and its full-year forecast has been increased to reflect this.

Table 2.12 – *Pre-election Update* forecast compared to October 2014 actuals and change in *Half Year Update*

Year ending 30 June $billions	2014/15 October Actuals	Pre-election October Forecast	Actual October Variance	Forecast Year-end Change
Source deductions	8.3	8.4	(0.1)	(0.1)
Net other persons' tax	1.4	1.3	0.1	(0.1)
Corporate tax	3.0	2.8	0.2	0.1
Other direct tax (including RWT)	0.7	0.7	-	(0.1)
GST	5.5	5.4	0.1	(0.4)
Customs and excise duties	1.4	1.4	-	-
Other taxes	0.6	0.6	-	-
Total tax	**20.9**	**20.6**	**0.2**	**(0.6)**

Source: The Treasury

...but also reduce some core Crown expenses...

Benefit expenses are now expected to be lower than previously forecast, with New Zealand Superannuation payments reducing later in the forecast period as there is a lower wage track to which New Zealand Superannuation is indexed.

The lower interest rate track has also reduced debt servicing costs for the Crown since the *Pre-election Update*.

Operating allowances of $1 billion have been set for the next two Budgets, rising to $2.5 billion for Budget 2017 before dropping back to $1.5 billion for Budget 2018. This compares to the $1.5 billion per year in the *Pre-election Update*. The re-phasing results in a reduction in spending of $0.5 billion and $1.0 billion over the next two fiscal years, but is then broadly neutral thereafter.

...with a deficit now forecast in 2014/15...

The slower growth in tax revenue is the main driver of an operating deficit now expected in 2014/15. In addition to changes mentioned earlier, ACC insurance expenses from 2015/16 onwards are higher as the weaker interest rate track impacts the present valuing of future claims costs.

The key changes in OBEGAL are outlined in Table 2.13.

Table 2.13 – Changes in OBEGAL since *Pre-election Update*

Year ending 30 June **$billions**	**2015** **Forecast**	**2016** **Forecast**	**2017** **Forecast**	**2018** **Forecast**
OBEGAL – 2014 *Pre-election Update*	**0.3**	**0.8**	**1.9**	**3.0**
Changes in forecasts:				
Economic factors				
Tax revenue (forecast changes)	(0.6)	(1.0)	(0.5)	(0.3)
Benefit expenses (forecast changes)	-	-	0.1	0.2
Net finance costs	-	0.1	0.1	0.2
ACC forecasts	-	(0.1)	(0.1)	(0.1)
Other factors				
Change in Budget allowances	-	0.5	1.0	0.1
Other changes	(0.3)	0.3	0.1	-
Total changes since the Pre-election Update	**(0.9)**	**(0.2)**	**0.7**	**0.1**
OBEGAL – 2014 Half Year Update	**(0.6)**	**0.6**	**2.6**	**3.1**

Source: The Treasury

...however, net debt is forecast to be lower than previously expected

Net core Crown debt is expected to be lower by $1.5 billion by 2017/18, compared to the *Pre-election Update*. This improvement in net core Crown debt is driven by a reduction in the residual cash shortfall across the forecast period (which is forecast to be in surplus in 2017/18, a year earlier than at the *Pre-election Update*).

The cash impact of the changes to OBEGAL that also impact residual cash is broadly neutral. However, capital spending is expected to be $1.4 billion less than the *Pre-election Update,* owing in the main to reduced expectations regarding the purchase of physical assets.

Fiscal Forecast Assumptions

The fiscal forecasts are based on assumptions and judgements developed from the best information available on 24 November 2014, when the forecasts were finalised. Actual events are likely to differ from these assumptions and judgements. Furthermore, uncertainty around the forecast assumptions and judgements increases over the forecast period. The impacts of the Canterbury earthquakes add further uncertainty to the economic and fiscal forecasts.

The fiscal forecasts are prepared on the basis of underlying economic forecasts. Such forecasts are critical for determining revenue and expense estimates. For example:

- A nominal GDP forecast is needed in order to forecast tax revenue.
- A forecast of CPI inflation is needed because social assistance benefits are generally indexed to inflation.
- Forecasts of interest rates are needed to forecast finance costs, interest income and discount rates.

A summary of the key economic forecasts that are particularly relevant to the fiscal forecasts is provided in Table 2.14 below (on a June-year-end basis to align with the Government's balance date).

Table 2.14 – Summary of key economic forecasts used in fiscal forecasts

Year ended 30 June	2014 Actual	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast
Real GDP[1] (ann avg % chg)	3.5	3.4	3.3	2.7	2.3	2.1
Nominal GDP[2] ($m)	234,158	239,188	253,108	266,238	276,967	286,573
CPI (ann avg % chg)	1.5	1.2	1.9	2.1	2.0	2.0
Govt 10-year bonds (ann avg, %)	4.5	4.1	4.2	4.7	5.0	5.1
5-year bonds (ann avg, %)	4.1	4.0	4.1	4.6	4.9	5.1
90-day bill rate (ann avg, %)	2.9	3.7	3.8	4.3	4.8	5.1
Unemployment rate (ann avg, %)	5.9	5.4	5.1	4.8	4.5	4.5
Employment (ann avg % chg)	3.2	2.5	1.6	1.6	1.3	1.0

Notes: 1 Production measure.

2 Expenditure measure. These are revised numbers that incorporate changes to national accounts data released on 21 November 2014.

Source: The Treasury

In addition, a number of other key assumptions are critical in the preparation of the fiscal forecasts.

<table>
<tr><td>Government decisions</td><td>The forecasts incorporate Government decisions and other circumstances known to the Government and advised to the Treasury up to 24 November 2014.</td></tr>
<tr><td>Tax revenue</td><td>Tax policy changes enacted and announced by the Government will take place as planned and will affect tax revenue and receipts as calculated and agreed between Inland Revenue and the Treasury.</td></tr>
<tr><td>Earthquake costs</td><td>Expenditure (accrual measure) is forecast based on estimates of when key decisions will be taken. The timing of cash payments is based on estimates of when actual spending will take place. Refer to page 32 for further discussion.</td></tr>
<tr><td>Operating allowance</td><td>Operating allowances are net $1.0 billion for Budget 2015 and Budget 2016, increasing to $2.5 billion in Budget 2017 and reducing to $1.5 billion in Budget 2018. For further details, see note 9 of the Forecast Financial Statements.</td></tr>
<tr><td>Provision for new capital spending</td><td>Capital allowances are $0.9 billion and $0.8 billion in Budget 2015 and 2016 respectively, $0.9 billion in Budget 2017 then growing at a rate of 2% per annum for subsequent Budgets. For further details, see note 9 of the Forecast Financial Statements.</td></tr>
<tr><td>Finance cost on new bond issuances</td><td>Based on the five year rate from the main economic forecasts and adjusted for differing maturities.</td></tr>
<tr><td>Top-down adjustment</td><td>A top-down adjustment is made to compensate for departments that tend to forecast upper spending limits (appropriations) rather than best estimates.

Top-down adjustments to operating and capital expenses are as follows:

<table><tr><th>Year ending 30 June
$billions</th><th>2015
Forecast</th><th>2016
Forecast</th><th>2017
Forecast</th><th>2018
Forecast</th><th>2019
Forecast</th></tr><tr><td>Operating</td><td>1.0</td><td>0.6</td><td>0.5</td><td>0.4</td><td>0.4</td></tr><tr><td>Capital</td><td>0.6</td><td>0.3</td><td>0.1</td><td>0.1</td><td>0.1</td></tr></table>
The adjustment will be higher at the front end of the forecast period as departments' appropriations (and therefore expenses) tend to be higher in these years, reflecting the flexibility departments have around transferring underspends to later years.</td></tr>
<tr><td>Property, plant and equipment</td><td>For the purposes of the forecast financial statements, no revaluations of property, plant and equipment are projected beyond the current year. Valuations as recorded for the 2014 annual financial statements and any additional valuations that have occurred up to 30 September 2014 are included in these forecasts.</td></tr>
</table>

<table>
<tr><td>Student loans</td><td>The carrying value of student loans is based on a valuation model adapted to reflect current student loans policy. As such, the carrying value over the forecast period is sensitive to changes in a number of underlying assumptions, including future income levels, repayment behaviour and macroeconomic factors such as inflation and discount rates used to determine the effective interest rate for new borrowers. Any change in these assumptions would affect the present fiscal forecasts.</td></tr>
<tr><td>Investment rate of returns</td><td>The forecasts incorporate the actual results to 30 September 2014. Beyond this time, gains on financial instruments are based on long-term benchmark rates of return for each portfolio.</td></tr>
<tr><td>GSF and ACC liabilities</td><td>The GSF and ACC liabilities included in these forecasts have been valued as at 30 September 2014 and 30 June 2014 respectively. The ACC liability has also been adjusted for the 30 September 2014 discount rate. Both liabilities are valued by projecting future cash payments, and discounting them to the present. These valuations rely on historical data to predict future trends and use economic assumptions such as inflation and discount rates. Any changes in actual payments or economic assumptions would affect the present fiscal forecast. For example, if the discount rate decreases, the value of the liabilities would increase.

GSF's assets are offset against the gross liability and have been updated to reflect market values. The value of assets over the forecast period reflects long-run rate of return assumptions appropriate to the forecast portfolio mix.</td></tr>
<tr><td>NZS Fund contributions</td><td>No contribution is assumed in the forecast period in line with the Government's stated intentions to commence contributions once net core Crown debt has reached 20% of GDP as set out in the Fiscal Strategy Report (FSR).

<table>
<tr><th>Year ending 30 June
$billions</th><th>2015
Forecast</th><th>2016
Forecast</th><th>2017
Forecast</th><th>2018
Forecast</th><th>2019
Forecast</th></tr>
<tr><td>Required contribution[1]</td><td>1.7</td><td>1.9</td><td>2.1</td><td>2.1</td><td>1.9</td></tr>
<tr><td>Actual contribution</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
</table>
Note: 1 Calculations of annual contributions if they were to resume in 2014/15.

The underlying assumptions in calculating the required contribution in each year are the previous year's NZS Fund balance and projected series, over the ensuing 40 years of nominal GDP, net (after-tax) New Zealand superannuation expenses, and the government five year bond rate. The latter is used in calculating the Fund's expected long-run after-tax annual return. Over the forecast years, all Fund variables, apart from the capital contributions, are provided by the NZS Fund itself.

Refer to the Treasury's website for the NZS Fund model.</td></tr>
</table>