The Treasury

Budget 2017 Information Release

Release Document July 2017

www.treasury.govt.nz/publications/informationreleases/budget/2017

Key to sections of the Official Information Act 1982 under which information has been withheld.

Certain information in this document has been withheld under one or more of the following sections of the Official Information Act, as applicable:

[1]	to prevent prejudice to the security or defence of New Zealand or the international relations of the government	6(a)
[4]	to prevent prejudice to the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial	6(c)
[11]	to damage seriously the economy of New Zealand by disclosing prematurely decisions to change or continue government economic or financial policies relating to the entering into of overseas trade agreements.	6(e)(vi)
[23]	to protect the privacy of natural persons, including deceased people	9(2)(a)
[25]	to protect the commercial position of the person who supplied the information or who is the subject of the information	9(2)(b)(ii)
[26]	to prevent prejudice to the supply of similar information, or information from the same source, and it is in the public interest that such information should continue to be supplied	9(2)(ba)(i)
[27]	to protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information - would be likely otherwise to damage the public interest	9(2)(ba)(ii)
[29]	to avoid prejudice to the substantial economic interests of New Zealand	9(2)(d)
[31]	to maintain the current constitutional conventions protecting collective and individual ministerial responsibility	9(2)(f)(ii)
[33]	to maintain the current constitutional conventions protecting the confidentiality of advice tendered by ministers and officials	9(2)(f)(iv)
[34]	to maintain the effective conduct of public affairs through the free and frank expression of opinions	9(2)(g)(i)
[36]	to maintain legal professional privilege	9(2)(h)
[37]	to enable the Crown to carry out commercial activities without disadvantages or prejudice	9(2)(i)
[38]	to enable the Crown to negotiate without disadvantage or prejudice	9(2)(j)
[39]	to prevent the disclosure of official information for improper gain or improper advantage	9(2)(k)
[40]	Not in scope	

In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) and section 18 of the Official Information Act.

THE TREASURY
Kaitohutohu Kaupapa Rawa

Treasury Report: Risks to the Outlook for Net Debt

Date:	Friday 7 April 2017	**Report No:**	T2017/904
		File Number:	MC-1-5-2

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Steven Joyce)	Note scenarios showing the impact of major shocks on net debt.	Prior to Budget Ministers on Monday 10 April.

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
[34]	[34]	[39]	N/A (mob)	✓
Renee Philip	Manager, Macroeconomic and Fiscal Policy	[39]	[23]	

Actions for the Minister's Office Staff (if required)

Return the signed report to Treasury.

Note any feedback on the quality of the report	

Enclosure: No

Treasury Report: Risks to the Outlook for Net Debt

Executive Summary

The Government is required under the Public Finance Act 1989 to set a long-term objective for public debt at a 'prudent' level.

You requested information on the potential impact of shocks to inform the fiscal strategy's long-term debt objective. This report outlines New Zealand's historical experience of economic and fiscal shocks (eg, recessions and the Canterbury earthquakes), the international experience after the Global Financial Crisis (GFC), and the results of stress test scenarios on the Crown's balance sheet.

Since the 1970s, New Zealand has seen net debt increase by an average of 10 percentage points of Gross Domestic Product (GDP) following a recession. However, the increases have been contingent on the strength of the initial fiscal position combined with the severity of the shock.

Following the GFC and Canterbury earthquakes, net debt increased by 20 percentage points of GDP. Although it is difficult to disentangle the contribution of each of these events, current estimates suggest the Canterbury earthquakes contributed around 4 percentage points of GDP and the remaining 16 percentage points of GDP was due to recession and other factors (eg, the Deposit Guarantee Scheme and a lower growth outlook).

The impact of the Canterbury earthquakes on net debt was smaller than the impact on Crown net worth (7% of annual GDP) as the Natural Disaster Fund's (NDF) assets were used to meet EQC's expenses. Given that the NDF has been depleted, the full impact of a future earthquake would increase net debt.

Following the GFC, the median increase in public debt for OECD countries was 18 percentage points of GDP (excluding countries that contemporaneously experienced a domestic financial crisis).

The report also considers the following scenarios:

- A domestic banking crisis triggered by a second GFC, which increases net debt to GDP by around 17 percentage points;

- A major trading partner collapse, which increases net debt to GDP by around 11 percentage points;

- A milder slowdown in trading partner growth, which would increase net debt to GDP by around 3 percentage points; and

- Direct costs from a major Wellington earthquake, which is estimated to increase net debt by 8 percentage points of GDP.

These scenarios indicate that net debt could rise by around 10-15 percentage points of GDP following a major shock (eg, recession or natural disaster). As such, reducing net debt to 10% of GDP would mean it is likely that net debt is maintained under 25% of GDP. However, there is a risk that net debt could rise by a greater amount if there were multiple shocks, a more extreme event or policy did not sufficiently adjust.

It is not just the starting net debt position that matters for resilience. The initial fiscal balance is important for the debt trajectory (ie, the level of surplus or deficit when the shock hits) and the wider Crown balance sheet should also be taken into account, as illustrated by the role of the NDF following the Canterbury earthquakes.

Recommended Action

We recommend that you:

a **note** that net debt could rise by around 10-15 percentage points of GDP following a major shock;

b **note** that the Treasury has recommend setting a focus on reducing net debt to 10% of GDP beyond 2020 and maintaining it within a range of 0-20% of GDP [T2017/762 refers].

Renee Philip
Manager, Macroeconomic and Fiscal Policy

Steven Joyce
Minister of Finance

Treasury Report: Risks to the Outlook for Net Debt

Purpose of Report

1. You have requested information on the potential impact of shocks to inform the fiscal strategy's long-term debt objective.

2. This report outlines New Zealand's historical experience of economic and fiscal shocks (e.g. recessions and the Canterbury earthquakes), the international experience after the Global Financial Crisis (GFC), and the results of stress test scenarios on the Crown's balance sheet.

Background

Factors influencing the choice of long-term debt objective

3. Setting the long-term debt objective is an on-balance judgement that accounts for a wide range of factors such as:

   - The role of debt in funding capital expenditure;
   - The size of buffers needed to absorb shocks;
   - Longer term fiscal sustainability and intergenerational fairness; and
   - The strength and resilience of the wider Crown balance sheet.

4. A key trade-off involved in formulating a debt target is choosing a target at a sufficient level to act as an effective shock absorber, but not so low that you sacrifice significant short-to-medium term GDP gains by cutting expenditure or not funding high value capital expenditure.

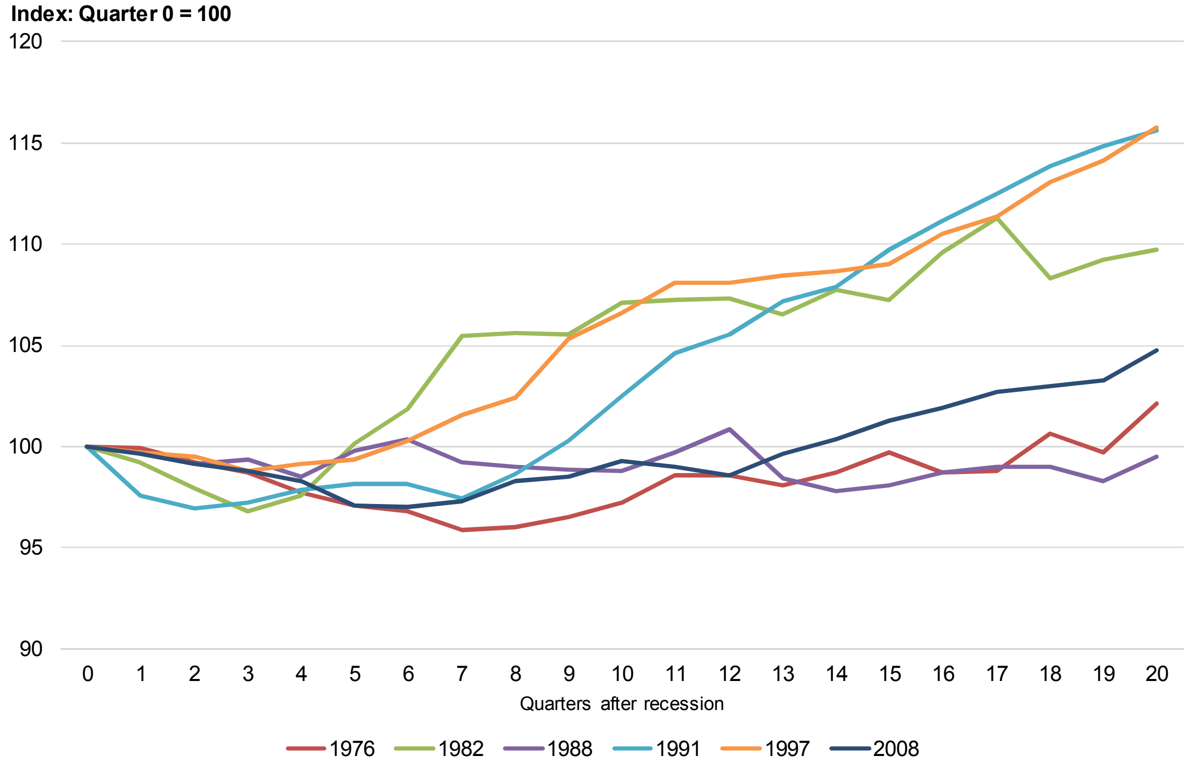
5. While net debt is a key indicator, there are a range of indicators used to assess fiscal sustainability and resilience. In particular, Crown net worth is a more comprehensive measure of the fiscal position as it accounts for all assets and liabilities. It is worth noting that net debt and net worth have both deteriorated by around 20 percentage points of GDP since 2008, indicating that fiscal buffers are significantly weaker than prior to the GFC by whichever measure is used.

Previous shocks to New Zealand's public debt

Past recessions

6. The average impact of recessions on net debt since 1970 has been around 10 percentage points of GDP (See Figure 2). However, the actual impact is contingent on factors within the Government's control (e.g. whether Government is running a structural deficit) and outside the Government's control (the international drivers, such as a trading partner slowdown).

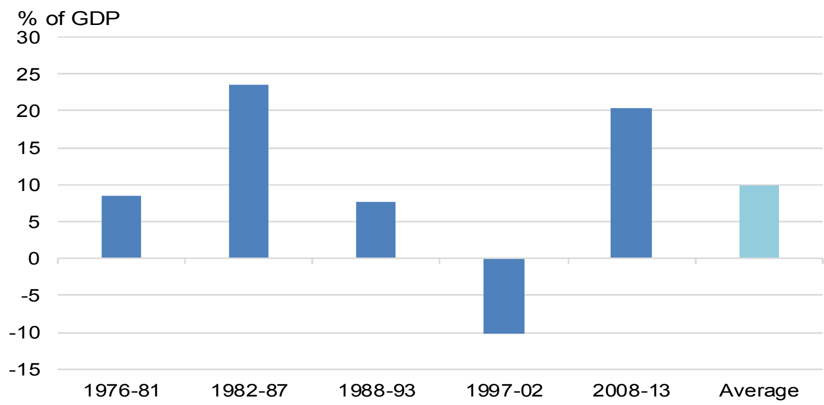
Figure 1: Real GDP following recessions



Source: Hall & McDermott, Treasury. (Quarter zero refers to real GDP the quarter before the recession).

7. New Zealand has experienced six recessions since 1970. Associated with most recessions is a deterioration in the operating position driven by higher expenses and lower tax receipts. If the Government is running an operating deficit leading up to a recession then the net debt impact tends to be larger. For example, the 1982 recession had the largest subsequent increase in net debt, at around 24 percentage points of GDP. At this time Government was running a large structural deficit and increased borrowing to fund capital projects. However, the 1997-98 recession was milder and the Government maintained a surplus.

Figure 2: Five-year change in net debt



Source: Treasury

The Global Financial Crisis and the Canterbury Earthquake

8. Over the five years following the Global Financial Crisis net debt increased by 20 percentage points of GDP from 5.5% in 2008 to 25.8% in 2013. It is difficult to disentangle the impact of the GFC and the Canterbury earthquakes as the costs of the earthquakes are ongoing and there is uncertainty around the estimates of the individual net debt impact of each event.

9. The total direct fiscal cost of the Canterbury earthquakes is expected to be $17 billion by 2021 (7% of 2017 GDP), but not all of this cost impacted on net debt. Around $10 billion (4% of annual GDP) related to core Crown expenses on recovery and infrastructure, which impacted on core Crown net debt. The EQC cost of $7 billion (3% of annual GDP) was met from the NDF and did not impact net debt. Without the contribution from the NDF the net debt impact would have been 7 percentage points of GDP. Given that the NDF has been depleted the full burden of another earthquake would need to be borne by net debt.

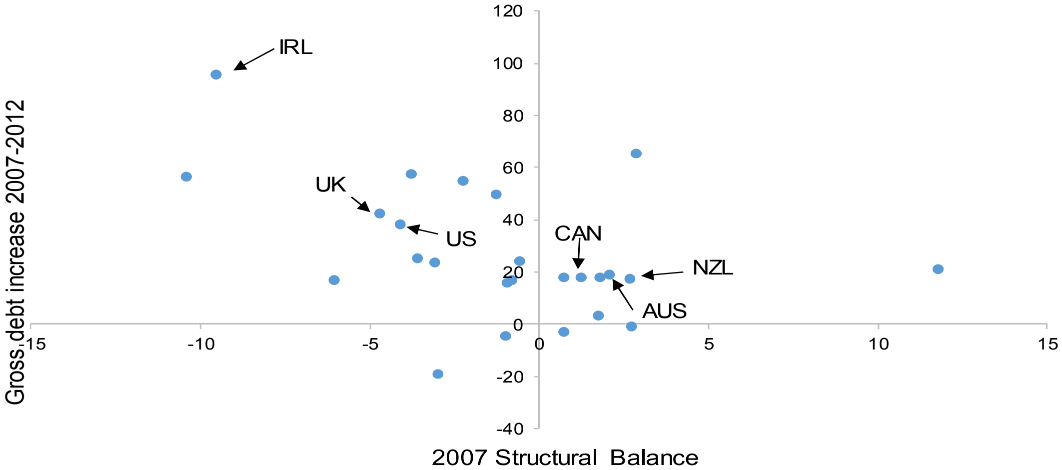
10. It is difficult to estimate the effect of the GFC on net debt. With 4 percentage points of GDP being attributed to the earthquake, we have assumed that the remainder (16 percentage points of GDP) is attributable to the recession and other factors (eg, the Deposit Guarantee Scheme and a lower growth outlook).

International Experience following the GFC

11. Table 1 displays the change in gross debt for OECD countries over the 5 years following the Global Financial Crisis. The median increase in gross debt for countries that experienced either a domestic financial crisis or a sovereign debt crisis was 56 percentage points of GDP. The median for countries who did not experience a financial crisis was 18 percentage points of GDP, similar to New Zealand’s post-GFC experience.

12. Countries that entered the GFC with a weak or negative structural fiscal balance (the fiscal balance adjusted for cyclical factors) tended to experience the largest increases in debt. Australia, Canada and New Zealand all entered the GFC with structural surpluses, which quickly deteriorated into structural deficits. However, these deficits began to improve by 2012. These countries experienced a similar cumulative change in gross debt.

Figure 3: Structural balance and general government debt



Source: IMF World Economic Outlook. Data are in calendar years. Gross debt is used as it is more easily comparable across countries. The structural balance is akin to the Treasury's cyclically-adjusted balance and is a measure of the operating balance adjusted for cyclical factors.

Table 1: Impact of GFC on OECD economies

	Fiscal Balance			General Government Gross Debt			
	As per cent of GDP						
	2007	2010	2012	2007	2010	2012	Change from 2007 to 2012
Australia	1.5	-5.1	-3.5	9.7	20.5	27.8	18.1
Austria	-3.9	-4.4	-2.2	64.8	82.4	81.6	16.8
Belgium	0.1	-4.0	-4.2	87.0	99.7	104.1	17.1
Canada	1.8	-4.7	-2.5	66.8	81.1	84.8	18.0
Denmark	5.0	-2.7	-3.5	27.3	42.9	45.2	17.9
Finland	5.1	-2.6	-2.2	34.0	47.1	52.9	18.9
France	-2.5	-6.8	-4.8	64.4	81.7	89.6	25.2
Germany	0.2	-4.2	-0.1	63.5	81.0	79.5	16.0
Greece*	-6.7	-11.2	-6.5	103.1	146.3	159.6	56.5
Iceland*	4.9	-9.8	-3.7	27.3	88.3	92.6	65.3
Ireland*	0.3	-32.1	-8.0	23.9	86.3	119.5	95.6
Israel	-0.6	-4.1	-5.0	73.0	70.7	68.3	-4.7
Italy	-1.5	-4.2	-2.9	99.8	115.4	123.3	23.6
Japan	-2.1	-9.3	-8.8	183.0	215.8	238.0	55.0
Korea	2.2	1.5	1.6	28.7	30.8	32.1	3.5
Netherlands	0.2	-5.0	-3.9	42.4	59.3	66.4	24.0
New Zealand	3.2	-5.9	-1.9	14.5	26.9	31.9	17.4
Norway	17.0	10.9	13.5	49.2	42.4	30.0	-19.2
Portugal*	-3.0	-11.2	-5.7	68.4	96.2	126.2	57.8
Singapore	10.1	6.0	7.9	84.7	97.0	105.8	21.1
Spain*	2.0	-9.4	-10.4	35.5	60.1	85.4	49.9
Sweden	3.3	0.0	-0.9	38.1	37.6	37.2	-0.9
Switzerland	1.6	0.3	0.0	49.5	46.1	46.6	-2.9
United Kingdom*	-2.9	-9.5	-7.7	42.2	75.7	84.8	42.6
United States*	-2.9	-10.9	-7.9	64.0	94.7	102.5	38.5

* indicates a country that experienced a sovereign debt crisis or a systemic domestic financial crisis following the Global Financial Crisis

Source: IMF World Economic Outlook Database October 2016. Gross debt is used as it is more easily comparable across countries.

13. As part of its Crown Asset and Liability Management (CALM) work, the Treasury has performed a number of stress tests to help determine the resilience of the Crown's balance sheet to potential future shocks. A detailed overview of this work will be presented to you under separate cover by the CALM team. This paper considers the outcomes of the 3 most severe scenarios. This section discusses the net debt impact of three illustrative stress tests:

- A domestic banking crisis triggered by a second Global Financial Crisis;
- A collapse of a major trading partner; and
- A Wellington earthquake of magnitude 7.5.

14. The Treasury also regularly presents alternative scenarios in the *Economic and Fiscal Updates* to illustrate sensitivity to key forecasting judgements.

15. There is uncertainty around these estimates which is reflective of modelling assumptions.

16. Table 2 displays a summary of the five-year increases in debt for each scenario.

Table 2: Net debt impact of stress tests

Scenario	Change in net debt (% pts of GDP)
Domestic Banking Crisis triggered by a GFC	17
Collapse of a major trading partner	11
Direct costs – Wellington earthquake of magnitude 7.5	8
Slowdown in trading partner growth	3

Source: The Treasury

Domestic banking crisis

17. In a scenario of a domestic banking crisis triggered by a second GFC, net debt is projected to rise by 17 percentage points of GDP. The direct costs to the Crown are estimated to be around $11 billion. The indirect costs (e.g. lower tax receipts) are around $32 billion.

18. The scenario plays out as follows: disruptions in the global financial markets, similar to those experienced between 2007 and 2009, result in New Zealand banks and corporates being unable to obtain funding, or finding costs of credit prohibitive.

19. Unable to obtain funding, the four largest New Zealand banks significantly curtail their business activities, resulting in widespread foreclosures and significant increases in unemployment. The housing market experiences substantial downward adjustments and major New Zealand banks suffer significant lending losses leading to a breach in regulatory requirements, such that the RBNZ's Open Bank Resolution is triggered. The Government faces lower tax revenue and needs to provide financial support to the banking system.

Collapse of a major trading partner

20. The estimated net debt impact of a collapse of one of New Zealand's major trading partners is estimated to be 11 percentage points of GDP. This is made up entirely of indirect costs through lower tax revenue.

21. The scenario plays out as follows: one of New Zealand's major trading partners, which is also a significant global economic power, experiences a major economic downturn, negatively affecting bilateral trade between the two countries.

22. Trade between NZ and other major economies is substantially reduced as these economies are also negatively affected by the trading partner's economic downturn, either directly through reduced trade or indirectly through fall in business confidence and sentiment.

Wellington earthquake

23. In this scenario, the direct fiscal cost is around $26 billion, which increases net debt by 8 percentage points of GDP. There could also be a large indirect fiscal cost (through lower tax receipts) to the extent that economic activity is reduced.

24. A magnitude 7.5 earthquake causes extensive damage to infrastructure. The damage to the port and transport links results in access to the city by air only. Unlike after the Canterbury earthquakes, EQC's net expense increases net debt via the Crown guarantee as the NDF is depleted.

Slower trading partner growth

25. The EFU scenarios show how the economy might evolve if some of the key judgements in the main forecast are altered, as such the impact on the Crown balance sheet tends not to be less pronounced than in the stress tests.

26. The downside scenario from the 2016 Half Year Economic and Fiscal Update illustrates the economic impacts of an international shock that slows trading partners' growth

27. Lower trading partner income growth reduces export growth and investment growth. A weaker wage and employment growth outlook dampens income growth and consumer confidence, reducing consumption growth.

28. These factors reduce the operating balance (before gains and losses). Net debt by the end of the five year period is 3.4 percentage points of GDP higher than the central forecast.

Implications for net debt objective

29. These scenarios indicate that net debt could rise by around 10-15 percentage points of GDP following a major shock. As such, reducing net debt to 10% of GDP would mean it is likely that net debt is maintained under 25% of GDP. However, there is a risk that net debt could rise by a greater amount if there were multiple shocks, a more extreme event or policy did not sufficiently adjust.

30. The Treasury has recommend setting a focus on reducing net debt to 10% of GDP beyond 2020 and maintaining it within a range of 0-20% of GDP [T2017/762 refers].

31. It is not just the starting net debt position that matters, however the initial fiscal balance is important (ie, the level of surplus or deficit when the shock hits).

32. The wider Crown balance sheet should also be taken into account. This is illustrated by the NDF’s role as a buffer following the Canterbury earthquakes.