Controller and Auditor-General
Tumuaki o te Mana Arotake

Discussion paper

Commentary on *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*

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Commentary on *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*

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Auditor-General's overview

The Treasury published *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position* (the 2013 Statement) on 11 July 2013. The 2013 Statement provides a long-term financial view of the future to 2060 and is the third statement released by the Treasury under the Public Finance Act 1989.

We looked at the 2013 Statement, the process used to prepare it, and the underlying financial model and assumptions used to support it as part of our 2012/13 work programme theme *Our future needs – is the public sector ready?* Financial sustainability is central to my role in improving the performance of, and the public's trust in, the public sector.

It can be difficult to plan for the future in a world of increasing complexity and uncertainty, particularly planning for more than 40 years. Notwithstanding these difficulties, long-term planning is important for prudent financial management and for preparing sensible and sustainable policy.

Since publishing the first statement on New Zealand's long-term fiscal position in 2006, the Treasury has improved how it prepares the statement, making the process much more inclusive and more public. It has drawn on more information and perspectives than in previous statements on New Zealand's long-term fiscal position. This included an independent expert panel that provided a helpful sounding board for discussion and debate.

Overall, I consider that the Treasury has done a good job in preparing the 2013 Statement, and presenting it in a way that is understandable and engaging. The 2013 Statement provides a summary of the issues and is supported by a set of 40 accompanying research papers.

The Treasury's aim in preparing the 2013 Statement has been to give a sense of the size of the fiscal challenge that New Zealand faces and what might be done to address it.

The Treasury has demonstrated the size of the fiscal challenge through its projection of core Crown net debt to gross domestic product (GDP). The Treasury notes in the 2013 Statement that its projection of net debt to GDP is not a forecast of what it expects to occur. Rather, its projection is intended to demonstrate what could happen in the future, taking into account demographic and other variables and assuming no change to current legislative policy settings. It is, therefore, in the nature of an early warning system.

The 2013 Statement makes it clear that New Zealand, like many other countries, faces a range of significant social, environmental, and economic challenges.

Recently, we have seen the effect of unforeseen events such as the global financial crisis and natural disasters, most notably the Canterbury earthquakes, which have emphasised the scale of these challenges.

It is difficult to capture the nature and extent of these challenges in a single projection of net debt to GDP. Although a single projection makes it easier for a reader to understand, I am concerned that the level of uncertainty implicit in the projection may not be readily understood by readers of the 2013 Statement. I would have liked to see the Treasury make more use of sensitivity analysis in the 2013 Statement to demonstrate this inherent uncertainty.

The increasing cost of healthcare and superannuation is highlighted in the 2013 Statement as likely to contribute significantly to New Zealand's financial challenge over the long term. Although I agree with this assessment, I think that there is a risk that New Zealand's financial challenge could be too readily seen as one relating only to healthcare and superannuation.

I also note that the Treasury's calculation of net debt excludes the financial assets held by the New Zealand Superannuation Fund. In my view, this approach is debatable and results in a higher projection of Crown net debt than if those assets were included. Our analysis suggests that, if those assets were used to offset superannuation costs in the period to 2060, the projected level of net debt to GDP in 2060 could reduce from 198% to about 170%, depending on the time period and rate of offsetting.

Further, some aspects of the Treasury's financial model could be improved, particularly the extent to which it is integrated, the extent to which it distinguishes between cash and non-cash movements, and its ability to run sensitivity analyses. These are areas that the Treasury is already planning to improve.

I encourage the Treasury to build on the increased public awareness as a result of publishing the 2013 Statement and the positive initiatives of its Living Standards Framework, to further encourage public debate on financial sustainability and public policy.

I thank the Treasury for helping my staff throughout our review.

Lyn Provost
Controller and Auditor-General

6 August 2013

Part 1
Introduction

1.1 In this Part, we consider:

- why the Treasury has prepared *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position* (the 2013 Statement); and
- why we carried out this work.

1.2 Part 2 sets out the background to long-term projections, the concept of financial sustainability, what drives it, and how it is shown. Part 2 also outlines the building blocks for reporting on long-term financial sustainability.

1.3 Part 3 outlines the history behind the 2013 Statement by summarising the Treasury's 2006 and 2009 long-term fiscal statements.[1] Part 3 then considers some international practice that might be relevant to New Zealand.

1.4 Part 4 describes the environment in which the 2013 Statement was prepared and the Treasury's objectives in preparing it. Part 4 then looks at how the Treasury prepared the 2013 Statement.

1.5 Part 5 describes the Treasury's financial model and assumptions that support the 2013 Statement.

1.6 Part 6 focuses on the 2013 Statement. We describe the form of the 2013 Statement, some of the main factors affecting financial sustainability, the resulting financial projection, and what could be done to improve New Zealand's financial sustainability.

Why the Treasury has prepared the 2013 Statement

The legislative requirements

1.7 The Public Finance Act 1989 (the Act) is one of five major statutes that underpin the government's financial management system. The Act's objective is to help improve public sector performance by promoting "responsible fiscal management".[2]

1.8 The Act sets out five guiding principles that describe what "responsible" means when managing government financial performance. The principles are to:

- reduce and then maintain prudent levels of debt;
- ensure, on average, that spending does not exceed revenue;
- achieve enough net worth to provide a buffer against shocks;

1 "Fiscal" means financial but refers specifically to government finances. For ease of reading, we use "financial" as the more common term.

2 Section 1A(2)(c) of the Act. The Act also covers lines of accountability, parliamentary scrutiny, and reporting obligations.

- manage risks prudently; and
- have predictable and stable tax rates.

1.9 The Treasury is required to forecast the Government's economic and financial performance and position over various periods, as follows:

- regular Economic and Fiscal Updates (the Budget, half-year, or pre-election updates) that reflect the Government's current policies and intentions for the upcoming five-year period – these updates use information from agencies' forecasts[3] in the Government's internal management reporting database;
- regular financial strategy projections published in the Fiscal Strategy Report that cover the 10 years after the initial five-year update forecasts – this medium-term projection follows the same structure as the Economic and Fiscal Updates and assumes that current policies and intentions will remain in place for the 10-year period; and
- a periodic statement – at least every four years – on the long-term financial position, covering not less than 40 years (the long-term financial statement).

1.10 The Act does not specify the contents of the long-term financial statement. It simply requires:

- a statement of responsibility stating that the Treasury has used its best professional judgements about the risks and the outlook; and
- all significant assumptions to be disclosed.

1.11 Importantly, the Treasury prepares the long-term financial statement, which is the responsibility of the Secretary to the Treasury. The Government does not issue the Statement.

1.12 The Treasury's *Guide to the Public Finance Act* says that the long-term financial statement:

> *... is intended to lead to more comprehensive reporting of the issues that could adversely impact on a prudent level of net worth and in this way to assist the Government in making decisions that are consistent with the principles of responsible fiscal management.*[4]

3 The Treasury uses the term "forecast" specifically for Economic and Fiscal Updates to imply greater predictive certainty compared with "projections" in the *Fiscal Strategy Report*.

4 The Treasury (2005), *Guide to the Public Finance Act*, page 37, available at www.treasury.govt.nz.

The Treasury's concerns with the sustainability of government finances

1.13 For the Treasury, financial sustainability "is about whether the Government is able to maintain current policies without major adjustments in the future".[5] Long-term financial sustainability has many drivers, and the Treasury measures it in the 2013 Statement by comparing projected core Crown net debt to gross domestic product (GDP).[6]

1.14 The 2013 Statement explains that several factors (all presenting challenges and opportunities) affect the financial sustainability of government. These are discussed in more detail in the accompanying research papers and include:

- an ageing population;
- an increasingly diverse society;
- continued, moderate, economic growth;
- changing income distributions; and
- changes in our natural environment.

1.15 Separate from these factors, the Treasury recognises that:

> *New Zealand is sensitive to financial and economic shocks, as well as natural disasters … [and] our economy carries high levels of net external debt*.[7]

1.16 The 2013 Statement says that a core problem that governments will face with an ageing population and other cost pressures is increasing debt. It projects the level of net debt to GDP to increase from 13.9% in 2010 to 198.3% by 2060. The main message is that the increasing percentage of net debt to GDP should be managed as early as possible.

1.17 Underlying this projection is what the 2013 Statement calls an "implied intergenerational contract".[8] This assumes that the working-age population (taxpayers) will always support the non-working-age population. Therefore, as our population ages, it becomes more difficult for taxpayers to continue to fund our non-working-age population.

Why we carried out this work

1.18 Financial sustainability is central to the Auditor-General's role in improving the performance of, and the public's trust in, the public sector.

5 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 11.

6 Elsewhere in this paper, we use "net debt" to mean core Crown net debt.

7 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 3.

8 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 7.

1.19 We wanted to look at the 2013 Statement in terms of how it describes what the future state of government finances might look like and the issues that the public sector and the country as a whole must deal with over the long term.

1.20 This work supports the Office of the Auditor-General's 2012/13 work programme, which was built around a theme of *Our future needs – is the public sector ready?*. The theme reflects a general recognition that public services must change and adapt to help build the future that New Zealanders want.

1.21 We looked at how the Treasury has:

- assembled and organised the relevant information (the process);
- considered the long-term implications that could arise for the financial sustainability of government (the model); and
- communicated its findings (the 2013 Statement).

1.22 We note that the Treasury has written the 2013 Statement as a communications document with much of the technical detail contained in a set of 40 accompanying research papers. Our work focuses on whether the 2013 Statement's main messages are presented in an understandable, informative, and useful way. We refer to some of the accompanying papers but have not reviewed them in detail.

Part 2
Background to long-term projections

2.1 In this Part, we discuss the background to long-term projections, the concept of financial sustainability, and the building blocks for reporting on long-term financial sustainability.

2.2 New Zealand, like many other countries, faces significant challenges arising from expected social, environmental, and economic changes. If the financial health of the Government were to worsen, the ability to continue to deal with these challenges would be reduced, and the financial situation could become unsustainable.

2.3 Preparing financial projections can help to:

- bring together and summarise the activities and elements of government;
- inform and encourage public discussion about policies and expectations;
- evaluate the robustness of policies and initiatives – before and after decisions are made;
- identify future uncertainties and risks for planning and management; and
- provide confidence about the resilience and sustainability of government.

2.4 Financial projections of government activities can never fully describe the real world. However, they are fundamental to understanding the strength or weakness of a government's future financial position.

Long-term financial sustainability

2.5 Two definitions of sustainability are the ability to maintain something at a certain rate or level (such as sustainable economic growth) and the ability to uphold or defend something (such as sustainable professional practices).[9] We consider that public sector financial sustainability encompasses both these definitions, which are inextricably linked.

2.6 We consider that the main elements of public sector financial sustainability are:

- immediate solvency – the ability to meet obligations when they fall due;
- resilience – the capacity to withstand internal and external shocks;
- service and financial responsibility – maintaining reasonable services, debt, and commitments relative to national expectations and likely future income; and
- public confidence – the ultimate guarantor that enough revenue can be collected to meet future obligations.

9 See the Oxford Dictionaries website, http://oxforddictionaries.com.

2.7 In our recent discussion paper, *Public sector financial sustainability*, we describe financial sustainability as:

> … *the financial capacity of the public sector to meet its current obligations, to withstand shocks, and to maintain service, debt and commitments at reasonable levels, relative to both national expectations and likely future income, while maintaining public confidence.*[10]

2.8 In that paper, we also suggested that indicators should consider social, environmental, and public sector non-financial factors, because these are the long-term drivers of demand for, and effective delivery of, public services.

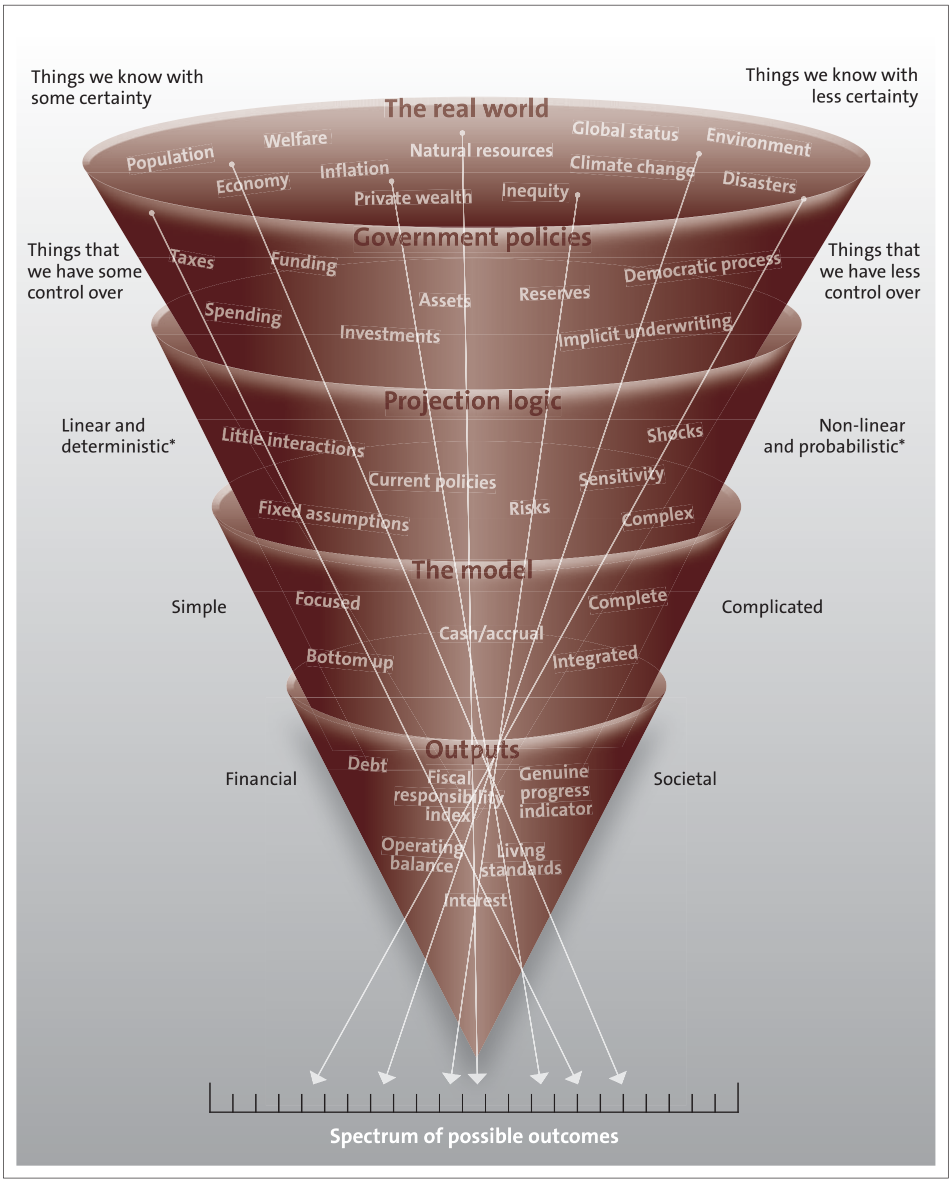
2.9 Trends in all these areas will shape how government taxation, regulation, redistribution, and spending will change. For instance, changing demographics and New Zealand's ageing population are obvious ongoing drivers of expenditure under current policy. However, potentially negative changes in New Zealand's biocapacity and income equality could also have significant long-term effects.

2.10 *Public sector financial sustainability* emphasised the connections between these social, environmental, and economic indicators. It noted that long-term public sector financial sustainability is a complex, society-wide issue, requiring a wide range of perspectives and effective debate.

2.11 Figure 1 shows that any single financial projection simplifies a far more diverse reality.

10 Controller and Auditor-General (2013), *Public sector financial sustainability*, page 5.

Figure 1
How drivers of financial sustainability can affect government policies and approaches to projecting the financial consequences



*In simple terms, linear and deterministic means that the model's drivers are fixed and assumed to represent all possible states of the world. Non-linear and probabilistic means that randomness and complexity are also present.

2.12 Understanding the diversity (or degree of uncertainty) that surrounds a single financial projection is essential in explaining how well the projection reflects reality. Without this understanding, it is difficult to recognise and plan for unseen challenges and future opportunities.

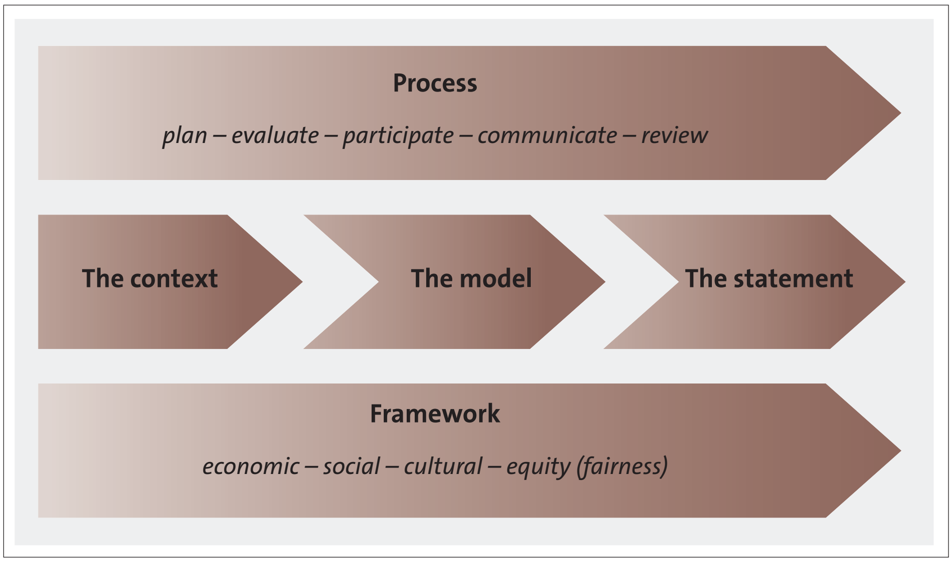
Building blocks for reporting on long-term financial sustainability

2.13 Being able to knowledgeably explain what might happen in the long term requires at least three components:

- a good knowledge of where we are today, what the important matters are, and what will bring about change (the context);
- a way of projecting that starting point into the future using drivers of change and assumptions (the model); and
- a way of translating what the context and projection mean for the intended audience (the statement).

2.14 Figure 2 shows how these components fit together and shows the need for a co-ordinated process and framework.

Figure 2
Building blocks for reporting on long-term financial sustainability



Part 3

Previous statements on New Zealand's long-term financial position

3.1 In this Part, we summarise the Treasury's first two statements on New Zealand's long-term financial position, and briefly summarise recent international developments.

An overview of the Treasury's 2006 Statement

The context

3.2 In 2006, the then-Government's financial position was strong. Government debt was low and financial assets, such as those held by the New Zealand Superannuation Fund, were increasing.

3.3 The Treasury identified that New Zealand's ageing population was a key challenge to this strong position. The first part of the "baby boomer" generation was nearing retirement and fertility rates had fallen dramatically since the 1960s.

The objective and what was said

3.4 The Treasury prepared *New Zealand's Long-term Fiscal Position* (the 2006 Statement) with little external contribution apart from some specific data projections from, for instance, Statistics New Zealand. The 2006 Statement had a clear informative purpose:

> *We see the purpose of this Statement as being to increase the quality and depth of public information and understanding about the long-term consequences of spending and revenue decisions. This will assist governments in making fiscally-sound decisions in the decades ahead.*[11]

3.5 The 2006 Statement identified that the major long-term issue was the changing structure of New Zealand's population. It described the effects that this would have on future government revenue, spending profiles, and the resulting debt position.

3.6 The evaluative framework in the 2006 Statement was entirely economic, and two projections were discussed:

- A "bottom-up" view assumed that the then-Government's current policies and intentions would continue. This showed that, because of the Government's strong opening position, the financial implications of an ageing population would not become onerous until about 2030, when gross debt reached about 30% of GDP.
- A "top-down" view targeted lower and stable gross debt of 20% of GDP, through increasing taxes and/or reduced spending.

11 The Treasury (2006), *New Zealand's Long-term Fiscal Position*, page 3, available at www.treasury.govt.nz.

3.7 The 2006 Statement looked at the sensitivity of these projections to changes in some of the assumptions. It found that lower fertility rates, smaller increases in life expectancy, and greater labour force participation could all reduce debt during the period.

3.8 Looking back, the Treasury acknowledges that reaction to the 2006 Statement was muted and did not fully meet Treasury's expectations and objectives.

An overview of the Treasury's 2009 Statement

The context

3.9 By 2009, New Zealand's economic position and outlook had deteriorated significantly. The global financial crisis and recession meant that much of the financial strength seen in previous years had disappeared. The then-Government's accounts were already in substantial deficit.

3.10 The main long-term concern of *Challenges and Choices: New Zealand's Long-term Fiscal Statement* (the 2009 Statement) remained the changing demographic profile. However, recent events meant that governments did not have as much time to deal with demographic change as the 2006 Statement had assumed. The tone of the 2009 Statement was understandably less optimistic. The further realisation that material shocks could and would happen increased uncertainty when managing the longer-term demographic change.

The objective and what was said

3.11 As with the 2006 Statement, the Treasury prepared the 2009 Statement with little external contribution. However, to encourage wider and more informed debate, the 2009 Statement was shorter and designed to make it more appealing to the reader.

3.12 After the limited effect of the 2006 Statement, the goal of the 2009 Statement was to become more "engaging". In the Treasury's words:

> *… we want this Statement to help this and future governments and the New Zealand public to think about what the major fiscal challenges are and what some different ways of dealing with them might be.*[12]

3.13 The two main scenarios were the same as in the 2006 Statement, but were renamed the "historical trends" and "sustainable debt" scenarios. These scenarios showed that, given the prevailing circumstances, the then Government had to make short-term policy changes to avoid ever-increasing debt from ongoing

12 The Treasury (2009), *Challenges and Choices: New Zealand's Long-term Fiscal Statement*, page 6.

deficits and increasing finance costs. Without moving to a "sustainable debt" scenario, net debt was projected to be an "unsustainable" 223% of GDP by 2050.[13]

3.14 The overall conclusions in the 2009 Statement, reflected greater uncertainties, but were non-specific. They included the need to:

- make early changes;
- keep debt under control;
- encourage workforce participation;
- focus on growth;
- keep spending under control; and
- improve public sector productivity.

3.15 The Treasury believes that the 2009 Statement, was better received than the 2006 Statement.[14] However, as in 2006, the Treasury sought no formal feedback after publishing the statement.

International developments in long-term financial reporting

3.16 During the last several decades, many organisations have worked on public sector financial sustainability and related issues. These include the Organisation for Economic Co-operation and Development (OECD) and the European Union, professional bodies such as the International Public Sector Accounting Standards Board, and both national and sub-national organisations.

3.17 Figure 3, adapted from an OECD paper, shows some of the regular and formal long-term financial reporting in other countries.[15]

13 The Treasury (2009), *Challenges and Choices: New Zealand's Long-term Fiscal Statement*, pages 9 and 21. In *Challenges and Choices*, the main financial indicator changed from being based on gross debt to net debt.

14 See Rodway, P. (2012), *Reassessing Assumptions Testing New Perspectives*, page 3.

15 Anderson, B. and Sheppard, J. (2009), *Fiscal Futures, Institutional Budget Reforms, and Their Effects: What can be learned?*, OECD (page 23).

Figure 3
Regular and formal long-term financial reporting in some other countries

Country	Report title	Responsibility for preparation	First release	Time horizon	Frequency
Australia	*Intergenerational Report*	Department of the Treasury	2002	40 years	At least every 3 years
Canada	*The Fiscal Sustainability Report*	Office of the Parliamentary Budget Officer	2010	75 years	Every year
Denmark	*Denmark's Convergence Programme*	Ministry of Economic Affairs and the Interior	1997	Until 2070 (most detail to 2020)	Every year
Germany	*Sustainability Report*	Federal Ministry of Finance	2005	Until 2060	Every legislative period (about 3 years)
The Netherlands	*Ageing and the Sustainability of Dutch Public Finances*	Central Planning Bureau	2000	Until 2100	Variable (but with annual "Sustainability Monitor"
Norway	*Long Term Perspectives for the Norwegian Economy*	Ministry of Finance	1993	Until 2060	At least every 4 years
Switzerland	*Long-term Sustainability of Public Finances in Switzerland*	Federal Finance Administration	2008	50 years	At least every 4 years
United Kingdom	*Fiscal Sustainability Report (previously Long Term Public Finance Report)*	Office of Budget Responsibility	1999	50 years	Every year
United States	*Analytical Perspectives*	Office of Management and Budget	1997	75 years	Every year
	The Long-term Budget Outlook	Congressional Budget Office	1991	Until 2087	Every year
	The Federal Government's Long-term Fiscal Outlook (previously *The Nation's Long-term Fiscal Outlook*)	Government Accountability Office	1992	Until 2060	At least every year

3.18 The Government of Australia released its latest *Intergenerational Report* in 2010. This focuses less on the financial facts and more on the drivers. The report's overview includes graphs and tables related to various social, economic, and environmental indicators to describe the challenges of the next 40 years. The Australian Treasury claims some success in influencing policy debate through this report. As a commentary on a resource-based economy, it discusses many of the issues that New Zealand also faces.

3.19 Canada's Parliamentary Budget Office produces a financial sustainability report. The 2010 report shows the effects of delay in addressing the financial gap.

3.20 Sweden, like New Zealand, is a small country with a floating exchange rate. Sweden considers that long-term financial sustainability depends on welfare and economic resources being redistributed acceptably, with "limited" conflict between redistribution, stabilisation, and structural policy. Sweden's National Audit Office and Fiscal Policy Council note weaknesses in the Swedish government's financial policy framework and in the methods used to assess long-term sustainability.

3.21 The United Kingdom set up an Office of Budget Responsibility to monitor financial sustainability. The first Office of Budget Responsibility report described the elements of past and future government activity in terms of stocks and flows. The report used this to underpin sustainability assessments and to show the limitations of the different methods used. For example, flow-based methods predict future revenue and spending, and stock-based methods measure assets and liabilities and then assess future revenue and expenditure streams. The Office of Budget Responsibility's 2013 *Fiscal Sustainability Report* continues this approach, using sensitivity and "fiscal gap" analysis, and explanations and commentary that are comprehensive and substantive.

3.22 The General Accountability Office (GAO) in the United States has been producing long-term fiscal outlook statements at the federal level since 1992. It provides six-monthly updates showing:

- a "Baseline Extended" scenario, which assumes the continuation of current settings, including the application of legally specified discretionary spending limits; and
- an "Alternative" scenario, which projects the situation if the legal limits and expiry provisions are not applied.

3.23 The GAO fiscal outlook statements show the changes in revenue or types of spending required to meet the fiscal gap under each scenario and show clearly the scale of the challenge.

Part 4
Context, objectives, and process for the 2013 Statement

4.1 In this Part, we consider the context and the Treasury's objectives for the 2013 Statement. We then discuss the process used by the Treasury to prepare the 2013 Statement.

The context for the 2013 Statement

4.2 Since the 2006 Statement, New Zealand has experienced the effects of various economic crises and natural disasters. Partly because of a history of sound financial management, New Zealand has come through these events relatively well.

4.3 However, these events have significantly affected the Government's financial position. Figure 4 uses the Treasury's 2006, 2009, and 2013 models to compare the relative percentages of net debt to GDP. From these models, we then show what the percentage would have been had the projection periods been held constant at 40 years.

Figure 4
Net debt to GDP at the start and end of each of the three projection periods for the 2006, 2009, and 2013 models

	2006 model	2009 model	2013 model
Economic context	Strong financial position and benign economic outlook	Weaker financial position and challenging economic outlook	Recovering financial position and challenging economic outlook
Net debt to GDP at the start of the projection period	7.3%	5.7%	24.3%
Final net debt to GDP at the end of the period	98.7%	223.4%	198.3%
Model's forecast period	45 years (to 2050)	42 years (to 2050)	48 years (to 2060)
Final net debt to GDP using a constant 40-year horizon	74.0%	204.1%	132.1%

4.4 The state of the economy at the time of the release of each statement is an important determinant of net debt to GDP at the end of the projection period. However, the length of the projection period used also has a significant effect on the projection, as is shown when the projection period is held at 40 years. For the 2013 projection, using a 40-year period would reduce the percentage of net debt to GDP at the end of the projection period, from 198.3% to 132.1%.

4.5 We have seen some of the Treasury's supporting material that summarises the context for the 2013 Statement.[16] The dominant theme in scene-setting papers is New Zealand's changing demographics. References are also made in various papers to the effects of the 2007 global financial crisis and the financial effect of the Canterbury earthquakes.

4.6 The 2013 Statement notes that the global financial crisis and the Canterbury earthquakes have "further weakened the government's financial position".[17] Specific mention is made of the country's "high levels of net external debt".[18] The 2013 Statement comments about current economic activity and the main drivers of financial sustainability, and discusses climate change, oil and gas, and fresh water.

4.7 The 2013 Statement discusses "Where we've come from and where we're heading".[19] However, apart from showing how various modelling assumptions have changed since 2009, there is little else connecting the 2013 Statement to its predecessor statements in 2006 and 2009.

The Treasury's objectives for the 2013 Statement

4.8 The 2013 Statement must relate to a period of at least 40 consecutive financial years, and be accompanied by a statement of all significant assumptions underlying any projections it includes. The Treasury must use its best professional judgements about the risks and outlook for the long-term financial position.[20]

4.9 Although no formal post-implementation review of the first two statements was carried out, the Treasury recognised that these statements did not fully meet its desired objectives. In June 2012, a Treasury official told the New Zealand Association of Economists' Conference that:

> *The 2006 statement attracted relatively little attention. The second, incorporating the effects of a domestic recession and the 2008 global financial*

16 Some of the accompanying research papers provide more detailed contextual material, such as on structural changes in the New Zealand economy since 1974, external influences on the economy, and the history of government spending, the welfare state, and social policy.

17 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 12.

18 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 3.

19 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 6.

20 Public Finance Act 1989, Section 26N, available at www.legislation.govt.nz.

> *crisis … produced a wider debate about what choices could be made to prevent the projected debt position.*[21]

4.10 Compared with previous statements, the Treasury's objectives for the 2013 Statement placed far more emphasis on the surrounding process of engaging the public. In an early (but undated) draft project plan, the Treasury noted that:

> *… the next long-term fiscal statement will present new approaches and a wider range of options for addressing the long-term fiscal problem … The overriding objective is to create a forum for rational policy discussion. The outcome will be a public that is better informed and accepting of the case for policy change starting in this decade.*[22]

4.11 The Treasury also saw the 2013 Statement as an opportunity to show its joined-up structure, values (bold, innovative, and ambitious), quality of policy analysis and advice, and its Living Standards Framework.

4.12 Overall, the objective of the Treasury was to learn from the two previous statements and to begin "a wider and more open public process".[23]

How the Treasury prepared the 2013 Statement

Preparatory work and governance

4.13 Preparatory work for the 2013 Statement began in early 2011. In April 2011, the Treasury's Executive Leadership Team received recommendations about the processes to address "the long term fiscal challenge [as] a strategic priority for the Treasury".[24]

4.14 In May 2012, the Treasury's Executive Leadership Team approved a detailed project plan (the May 2012 plan) for the preparation of the 2013 Statement.

4.15 The Manager of the Treasury's Macroeconomic and Fiscal Policy team led the core project team of six. Various internal advisory groups governed the project, including:

- the Statement Choices Group, which shared and discussed working-level information from the various policy teams within the Treasury;
- the Statement Governance Group, which oversaw the project and consisted of the managers of the various policy teams within the Treasury;

21 Rodway, P. (2012), "Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives", page 3, available at www.nzae.org.nz.

22 The Treasury (2012), unpublished project plan document.

23 Rodway, P. (2012), "Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives", page 3, available at www.nzae.org.nz.

24 The Treasury (1 April 2013), Executive Leadership Team paper.

- the Treasury Advisory Forum, which provided recommendations to the Executive Leadership Team; and
- The Treasury Board, which provided advice to the Leadership Team and the Chief Executive.

4.16 We have seen examples of regular status reports and Executive Leadership Team papers on the project. These are comprehensive and cover achievements, priorities, progress, budgets, and risks.

4.17 Based on our observations, the preparatory work and governance arrangements appear reasonable and appropriate considering the 2013 Statement's priority within the Treasury's strategy.

4.18 The Treasury has given considerable thought to having a wider and more open process for the 2013 Statement. In our view, the Treasury has largely achieved this. Paragraphs 4.19-4.37 set out some details of the Treasury's new and innovative approaches.

The Treasury's new and innovative approaches

4.19 To increase public awareness and participation and better prepare the 2013 Statement, the Treasury used:

- an external panel and external research to extend the breadth and depth of analytical debate;
- the Treasury's new Living Standards Framework to help frame research papers and debate;[25]
- a public survey, a secondary school competition, and a public conference to increase the level of external engagement and participation; and
- enhanced communication with stakeholders and general audiences.

4.20 We understand that the Treasury intends to commission formal post-implementation review processes to help guide and improve future statements. In our discussions with the Treasury, the need for some form of post-implementation review has been recognised as an important part in the overall process.

4.21 We consider that these measures give the Treasury a good platform for taking the next steps to engage with its various audiences, including the Government, members of Parliament, the media, and the public at large.

External panel

4.22 A major change from earlier processes was the use of an external panel of independent experts and commentators to help ensure a robust review and a credible range of options for managing the long-term financial position.

25 See Figure 6 and The Treasury (2012), "Improving the Living Standards of New Zealanders: Moving from a Framework to Implementation", a conference paper available at www.treasury.govt.nz.

4.23 The Pro Vice-Chancellor and Dean of Victoria Business School, Victoria University of Wellington chaired the panel of 16 members, which met for six sessions from August 2012 to April 2013.

4.24 It appears that the Treasury gained considerable value out of the external panel sessions.

External research

4.25 The May 2012 plan shows that, as well as preparing 18 internal papers, the Treasury planned to commission 19 external research papers. These papers were to cover traditional areas, such as tax and retirement issues, and less traditional areas, such as intergenerational distribution.

4.26 A set of research papers that support the 2013 Statement is available on the Treasury's website. Most of the authors of these papers were members of the external panel.

Public survey

4.27 In March 2012, Colmar Brunton was commissioned to carry out a survey of 1000 citizens that covered retirement, health, and tax matters. The findings included that:

- 59% of people expected to work past their 65th birthday (either part time or full time), and 81% of these people were not concerned by the prospect; and
- 55% of respondents said that, if taxes had to be increased, the corporate tax rate should increase.

Secondary schools competition

4.28 The Treasury and Victoria University jointly sponsored a Long-term Fiscal Schools Challenge for secondary schools in the first half of 2012, taking a lead from the Reserve Bank's annual Monetary Policy Challenge. Teams were invited to prepare a report proposing policy options that addressed New Zealand's long-term financial challenges. Of 19 schools that took part, 13 were chosen to present their proposals to a panel of judges from the Treasury and Victoria University at a "Finals Day" in Wellington. The three winning teams were then invited back in September 2012 to present their recommendations to the Treasury and the Minister of Finance and to receive their prizes.

4.29 A subsequent internal report by the Treasury, which included a survey of the teachers involved, concluded that the competition had been "successful and worthwhile". The report proposed that another Schools Challenge be run later in 2013.

Public conference

4.30 The Treasury and Victoria University of Wellington's Chair of Public Finance co-sponsored a two-day conference. It was called "Affording our future" and was held on 10 and 11 December 2012.

4.31 The conference brought together academic specialists, commentators, and practitioners from a range of fields (including all members of the external panel) to discuss financial sustainability, the main financial pressures facing the country, and the implications for major policy areas.

4.32 Apart from Treasury staff and the expert panel, 151 people registered to attend the conference. One-third of these came from government agencies, and the rest from media and other organisations.

4.33 Thirty of the attendees were young people attending a parallel conference run by the McGuinness Institute. These young people prepared a publication – *Youth Statement on New Zealand's Long-term Fiscal Position*.[26]

4.34 The December 2012 conference was successful and well attended. Much of the focus of the conference was on changing demographics and the effect of this on health and superannuation. Most of the conversation was about potential adjustments to current policy settings. However, the wider context of the private sector, households, and the environment received little attention. For example, climate change was mentioned only when the final external panellist spoke.

Enhanced communication

4.35 The Treasury has consistently emphasised the need to find better ways to communicate with potential and actual audiences of the 2013 Statement. The expert panel and conference are obvious examples of this, but the Treasury is also seeking new audiences (as in the Schools Challenge), and experimenting with social media (such as Facebook and the Ning social networking platform). The Treasury has also brought in outside experts to help with framing the 2013 Statement and its main messages.

4.36 The Treasury has published all commissioned research and conference papers on its website.

4.37 There has been positive media coverage of most of the Treasury's innovative activities. This has raised the public profile of the 2013 Statement. The Treasury plans to maintain this profile by releasing of a range of statements and related activities in the months after the 2013 Statement's publication.

26 *Youth Statement on New Zealand's Long-term Fiscal Position* is available at http://longtermnz.org.

Part 5

The Treasury's model used to prepare the 2013 Statement

5.1 In this Part, we consider the underlying model, assumptions, and the financial projection that support the 2013 Statement.

5.2 Because the Treasury's main financial indicator uses net debt, our observations in this Part focus on the core rather than the consolidated activities of government.[27]

Description of the model used to prepare the 2013 Statement

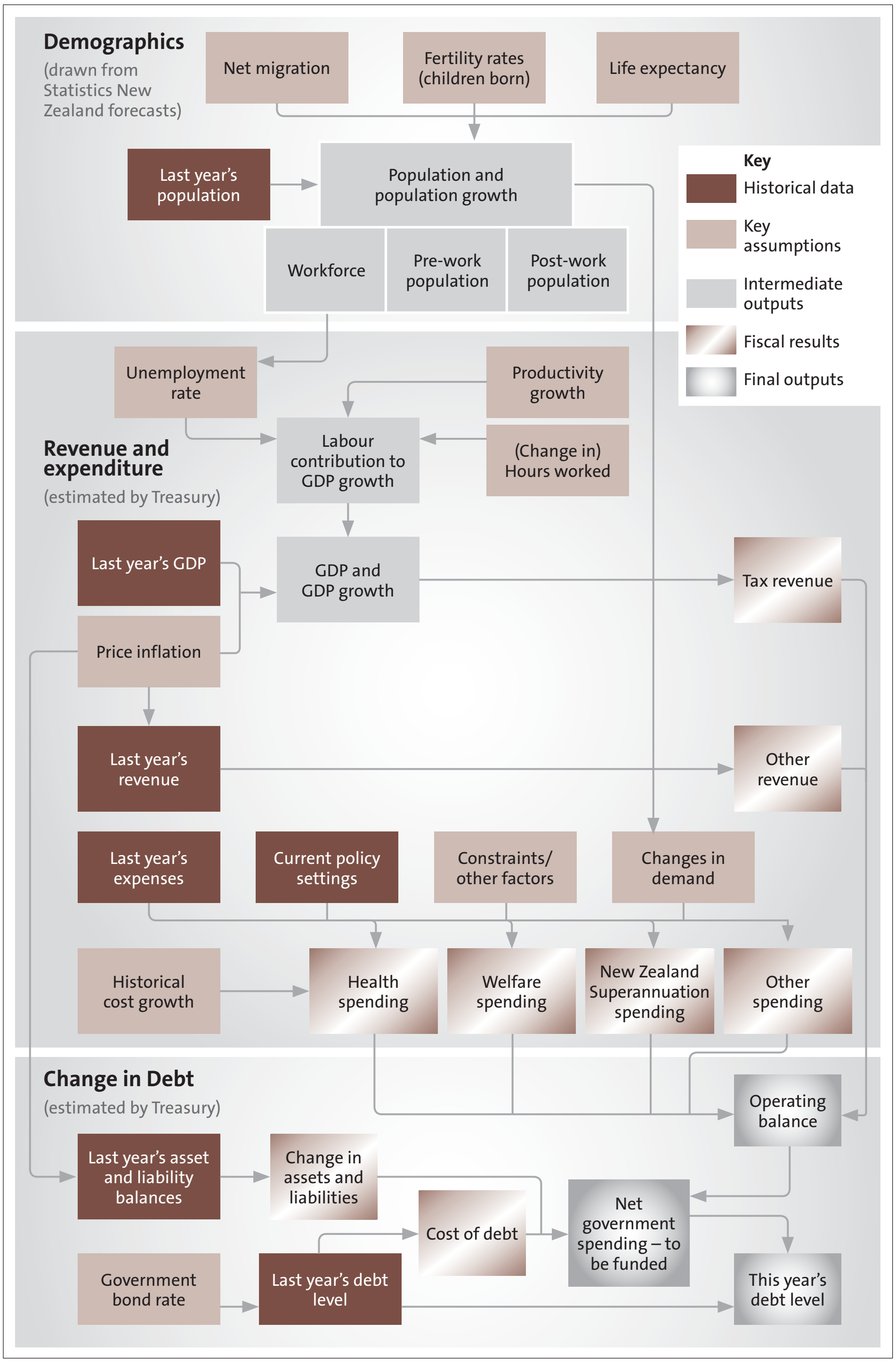
5.3 The Treasury uses a set of spreadsheets that were originally designed before 2006 to model medium-term financial strategies. The 2013 model:

- uses the latest Economic and Fiscal Update (EFU) forecasts as its base to project revenue inflows (mainly tax) and expense outflows (such as health and education) for the Government, using a set of demographic, economic, and other drivers; and
- shows how those revenues and expenses affect the operations, investments, and financing of the Government, using a statement of financial performance and position every year for 48 years.

5.4 Figure 5 summarises the structure of the 2013 model.

27 The 2013 model projects both the core and consolidated activities of government. Core activities exclude, for example, Crown entities and State-owned enterprises.

Figure 5
The elements and flows of the Treasury's 2013 model



5.5 The Treasury has used core net debt as the main measure of the Government's financial position. In line with current policy settings, the Treasury has excluded the New Zealand Superannuation Fund's assets from the calculation of net debt. The 2013 Statement notes that this approach is consistent with how net debt is defined in the Financial Statements of Government and reflects that these assets are "held for a specific future policy objective".[28] We understand that the policy objective is to help ease the financial pressure of the long-term costs of superannuation.

5.6 Although we understand the reasons given in the 2013 Statement, in our view, the Treasury should give further consideration to the exclusion of these assets in the calculation of net debt. If the New Zealand Superannuation Fund's assets were included in the 2013 model when calculating net debt, the percentage of net debt to GDP would reduce from 198% to about 170%. Alternatively, if these assets were all used to offset superannuation costs from 2032 to 2060 (through increased annual payments back to the Government), then the percentage of net debt to GDP in 2060 would also decline from 198% to about 170%.

5.7 The main purpose of the 2013 model is to estimate the funding needed to meet the operating and investing needs of the Government. This is primarily done through a single projection called the "Resume Historic Cost Growth" scenario, which assumes that tax revenues are held constant as a percentage of GDP and that government expenses grow from 2016 in line with their historical trends. The 2013 Statement also includes the "Sustainable Debt" scenario – a projection that assumes a spending path that maintains net debt to GDP at 20%.

5.8 Annex 2 of the 2013 Statement contains the main assumptions used in the 2009 and 2013 models. In our view, the main changes in assumptions between the two models are:

- a reduction in projected tax income – the assumed rate has changed from 30% of GDP in 2009 to 29% in 2013; and
- a reduction in the level of government spending and forecast spending for the next few years – in the 2013 model, government spending forecasts are based on current spending until 2016 and are lower than levels in the 2009 model.

5.9 As with earlier models, the 2013 model has maintained a focus on demographics, spending, and debt. Although these factors are important, many of the other wider drivers of financial sustainability mentioned in the 2013 Statement are not incorporated into the 2013 model.

28 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-Term Fiscal Position*, page 12.

Balancing simplicity and functionality

5.10 Although a financial projection will never fully reflect the real world, it is fundamental to supporting the Treasury's advice about the potential sustainability of government finances.

5.11 We reviewed how the 2013 model produces the long-term financial projection. We noted that the Treasury has made various judgements about what to include and how. These judgements tend towards more certainty, control, linearity, and simplicity – more towards the left side of the cone in Figure 1. There is little recognition of the spectrum of possible outcomes for the wider, less certain, less controllable, and, sometimes, more catastrophic drivers of financial sustainability.

5.12 In our view, the structure and functionality of the 2013 model does not fully complement the Treasury's newer initiatives, including more public engagement and the comprehensive Living Standards Framework.

5.13 We consider that the Treasury should consider whether a better balance could be achieved in future between the simplicity and the functionality of the model. We think that this will help the Treasury to:

- explain the factors that affect the long-term financial outcomes of government;
- clarify whether the Government's long-term financial position represents a problem and what the size, profile, and nature of that problem is; and
- evaluate the options available to manage and/or control the long-term financial position.

Evaluating inherent uncertainty in the financial projections

5.14 Because the future is uncertain, a key function of any long-term financial model is to help understand the uncertainty that surrounds the financial projections.

5.15 Sensitivity analysis is a way of understanding how the uncertainties in the model and in the assumptions that drive the model affect possible outputs or measures.

5.16 Sensitivity analysis allows readers to better understand which assumptions matter most, how the profile of the projection might change over time, and how well the model reflects reality. Without this understanding, it will be difficult to prepare relevant and durable policy responses.

5.17 Early on, the Treasury recognised the risks of readers of the 2013 Statement not understanding the uncertainty inherent in the projections. In May 2012, the Treasury's Executive Leadership Team noted that updated economic and financial projections "suggested that a one percentage point increase in the tax GDP ratio could solve New Zealand's long-term fiscal challenges" and that this "understates the extent of the fiscal pressures and risks".[29]

5.18 The Executive Leadership Team paper suggested addressing this by using more realistic parameters for some spending areas, such as health and "communicating more clearly the risks around the projections", such as the influence of another large economic shock on the financial outlook.[30]

5.19 The linearity and simplicity of the 2013 model means that "what if" sensitivity analysis is limited. As a result, there is no provision to look at major contingencies, such as future shocks of the scale of the Canterbury earthquakes or the global financial crisis. Examples of the potential scale of these are the estimated public cost of the Christchurch rebuild (10% of GDP, spread over five years), and the estimated cost of mitigating climate change (2% of GDP a year).[31]

5.20 A simple way of appreciating the long-term potential effect of shocks is to look at how the projected net debt position changed from the 2006 Statement (when no shocks were expected) to the 2013 Statement (when two shocks had taken place). Without any radical changes in financial stance, the net debt to GDP projection (at the end of the projection period) increased from about 98% in 2006 to 198% in 2013.

5.21 The Treasury has included some sensitivity analysis in the accompanying research papers to the 2013 Statement. For example, one paper looks at how changing an individual assumption could affect the main financial debt indicator.[32] Another paper refers to work by the Treasury in 2011 that attempted to assess the appropriate fiscal buffer for New Zealand by analysing the impact of fiscal and economic shocks on the fiscal position.[33]

5.22 The Treasury's 2011 work concluded that "having a starting level of net debt below 20% of GDP is an important condition for ensuring these shocks would be manageable".[34]

5.23 We recognise that estimating the effect of more uncertain events is difficult and involves making assumptions that will, most likely, later be shown to be wrong.

29 The Treasury (May 2012), Executive Leadership Team paper.

30 The Treasury (May 2012), Executive Leadership Team paper.

31 Doherty E. (2011), *Economic effects of the Canterbury earthquake*, New Zealand Parliament and former World Bank economist Lord Stern quoted in the Guardian newspaper (26 June 2008), "Cost of tackling global climate change has doubled, warns Stern", available at www.guardian.co.uk.

32 Rodway, P. (2012), "Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives", pages 35-40.

33 Buckle, R. and Cruickshank, A. (2012), "The Requirements for Long-Run Fiscal Sustainability", page 22.

34 Buckle, R. and Cruickshank, A. (2012), "The Requirements for Long-Run Fiscal Sustainability", page 22.

Explaining this analysis could, as the Treasury has said, distract readers from the main messages in the 2013 Statement.

5.24 However, we consider that there are important advantages in including sensitivity analysis within a document like the 2013 Statement. On balance, we consider that the advantages, if presented properly, should outweigh the potential disadvantages.

Reviews of the 2013 model

5.25 There has been no independent detailed review of the 2013 model (or earlier long-term fiscal models).[35] However, the 2006, 2009, and 2013 versions of the model are available on the Treasury's website. Compared to other countries, this transparency is very good.

5.26 Although there has been no detailed review of the model, we were provided with some documents that discussed the model, including:

- A referee report on a technical paper that a Reserve Bank economist wrote in November 2009 to summarise the 2009 model.[36] The report found the paper to be clear in describing the technical and structural aspects of the 2009 model. The report suggested better connecting and modelling the relationships between the assumptions and better analysing the uncertainties in the 40-year projections.
- High-level comments in June 2012 by the Emeritus Professor of Economics at Victoria University's School of Economics and Finance, on two papers about the Treasury's draft 2013 model.

5.27 We carried out a high level review of the 2013 model. We found the model difficult to understand because of, for instance, the use of complicated formulae. Although we found no evidence of any errors in arithmetic, we consider that readers might struggle to understand how the Treasury prepared the financial projection and how it supports what is said in the 2013 Statement. From a financial modelling perspective, many of these points also mean that potential errors are more easily introduced and might be more difficult to identify.

5.28 We consider that future long-term financial models could benefit from the Treasury getting independent financial modelling advice.

5.29 The Treasury has made some assumptions to simplify the 2013 model relating to how the operations, investments, and financing of government are accounted for in the period from 2018 to 2060. However, as explained below, these assumptions

35 The Treasury Model was reviewed in 2003, but the review noted that this model was different to the long-term financial model.

36 Bell, M. et al (2009), *Modelling New Zealand's Long-term Fiscal Position: The 2009 Statement.*

create some uncertainty about how the future financial strength or weakness of the Government is measured and portrayed.

5.30 The values of government assets and liabilities are expected to change because of wear and tear, the money spent on them, or the money received from them. The values can also change with changes in the surrounding market environment. Although the values of some assets and liabilities change along pre-set (fixed) tracks in the 2013 model, the values of most assets and non-debt liabilities only change with movements in external general price indices, such as GDP or the consumer price index.

5.31 Projected debt will rise and fall depending on the operating and investing cash flow needs of government. However, because the 2013 model does not differentiate between cashflows and non-cashflows, it is unclear how much of the projected increase in net debt results from non-cash movements, such as market value gains or losses.

5.32 The New Zealand Superannuation Fund is expected to be used to offset future superannuation costs and, therefore, plays an important role in reducing future funding needs of the Government. However, removing these assets from the 2013 model makes almost no difference to the percentage of net debt to GDP in 2060. This is because most of the cash flow benefits of the New Zealand Superannuation Fund (that is, the withdrawals the Government will receive to offset future superannuation costs) are expected after the end of the projection period in 2060.

5.33 The 2013 model included a "sustainable debt" scenario, whereby government expenditure is reduced by a total of about 21% between 2012 and 2060. A reduction of this magnitude would affect all aspects of government, including the balance sheet. However, because the financial statements in the model are not fully integrated, government assets and non-debt liabilities do not change under this scenario, despite the significant reduction in spending.

5.34 We have discussed these matters with the Treasury. We understand that the Treasury plans to improve the financial model, particularly in relation to assets and non-debt liabilities.

Part 6

The 2013 Statement

6.1 In this Part, we focus on the 2013 Statement, released by the Treasury on 11 July 2013.

The form and focus of the 2013 Statement

6.2 The 2013 Statement reflects the Treasury's ongoing efforts to improve the usefulness of the long-term financial statement. It is written clearly, with less of the technical content and language found in previous statements. We consider it a positive step in readability and understandability for its intended audiences (the general public, members of Parliament, and the media).

6.3 The Treasury told us that the 2013 Statement was written as a high-level communications document, with a lot of the technical detail contained in the set of accompanying research papers. These papers cover many matters relevant to financial sustainability. The Treasury regards these papers as part of the 2013 Statement.

6.4 We have focused on what the 2013 Statement says. Although we refer to some, we have not reviewed the set of accompanying research papers in detail.

6.5 The 2013 Statement is presented in two Parts:

- Part 1 covers the introduction to financial sustainability, summarises the future financial challenges, and discusses how to think about the size of the adjustment needed; and
- Part 2 discusses some options that might help address those financial challenges and, in doing so, move towards a more sustainable path.[37]

6.6 The 2013 Statement provides a good introduction to some of the matters that could affect government activities and how these could affect New Zealanders' living standards. However, these broader perspectives do not appear to have been reflected in the 2013 Statement's main messages, which remain focused on the ageing population, government spending, and government debt.

6.7 In contrast, Australia's *Intergenerational Report* uses graphs and tables related to various social, economic, and environmental indicators to describe the challenges of the next 40 years. The United Kingdom's Office for Budget Responsibility's *Fiscal Sustainability Report* is also more comprehensive and uses more sensitivity and "fiscal gap" analyses.

37 The annexes in *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position* describe how the future paths of some major government spending and revenues are expected to change until 2060, list some of the main assumptions, comparing them to the 2009 Statement, and briefly outline how *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position* was prepared.

The main factors affecting financial sustainability

6.8 The 2013 Statement explains that financial sustainability "refers to whether the government is able to maintain current policies without major adjustments in the future".[38] Importantly, the 2013 Statement says the principle of financial sustainability "is embedded in the Public Finance Act 1989, which requires governments to maintain a prudent level of government debt".[39]

6.9 The 2013 Statement explains that there are various things that will affect government activities and policies over the long term and, throughout, references are made to how sensitive the economy and government finances are to natural and economic shocks. There is a list of nine historic shocks, with an acknowledgement that "good fiscal management means understanding the worst that may happen".[40]

6.10 Also, specific mention is made of New Zealand's "high levels of net external debt", raising important questions about New Zealand's resilience in times of crisis.[41]

6.11 Recognising the need to think beyond debt levels and to think about how different policy options can affect people's living standards, the 2013 Statement introduces the Treasury's Living Standards Framework as another way of thinking more broadly about what New Zealanders find important.

6.12 Figure 6, based on a figure in the 2013 Statement, shows the five elements of the Living Standards Framework. All elements are interrelated, and include (and expand on) many of the potential drivers of long-term financial sustainability.

38 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 11.

39 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 11.

40 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 13.

41 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 3.

Figure 6
The five elements of the Treasury's Living Standards Framework

Source: The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 24.

6.13 The elements of the Living Standards Framework are compatible with the 2013 Statement's broad description of financial sustainability and are used to discuss the implications of the various policy responses.[42]

6.14 However, notwithstanding the broader description of financial sustainability, the emphasis of the 2013 Statement is on how current settings might be adjusted, rather than what the future might demand of the public sector.

42 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, pages 5 and 24.

Nature and profile of the financial challenge

6.15 The financial projection in the 2013 Statement is designed to give an idea of the size of the financial challenge. However, it is not a prediction of what is likely to happen. The 2013 Statement emphasises that the projection of net debt to GDP is based on a scenario that differs from the Government's current financial strategy "which involves firm control of expenditure growth".[43]

The financial projection

6.16 Figure 7 shows the financial projection in the 2013 Statement. The projection reflects what would happen if governments were to hold tax revenues constant as a percentage of GDP and allow expenses to grow faster, in line with historic trends and population forecasts.

Figure 7
Summary financial projection in *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*

% of nominal GDP	2010	2020	2030	2040	2050	2060
Healthcare	6.8	6.8	7.7	8.9	9.9	10.8
New Zealand superannuation	4.3	5.1	6.4	7.1	7.2	7.9
Education	6.1	5.3	5.2	5.2	5.1	5.2
Law and order	1.7	1.4	1.4	1.4	1.4	1.4
Welfare (excluding New Zealand Superannuation)	6.7	4.8	4.4	4.2	4.0	3.8
Other	6.5	5.6	5.7	5.8	5.9	6.1
Debt-financing costs	1.2	1.8	2.5	4.2	7.1	11.7
Total government expenses	33.4	30.8	33.4	36.9	40.6	46.8
Tax revenue	26.5	28.9	29.0	29.0	29.0	29.0
Other revenue	3.2	3.0	3.2	3.2	3.3	3.6
Total government revenue	29.7	31.9	32.2	32.2	32.3	32.6
Expenses less revenue	3.6	(1.1)	1.2	4.6	8.3	14.3
Net government debt	13.9	27.4	37.1	67.2	118.9	198.3

Note: Numbers are rounded.

Source: The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 4.

6.17 Figure 7 shows two main areas of government spending that are expected to grow significantly – healthcare and superannuation. From about 2030, the projection indicates that the Government will need to borrow an increasing amount to balance its budget, based on current policy settings. If nothing is done to address the growing deficit (the Expenses less revenues line), then debt-

43 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 3.

financing costs in 2060 are projected to be 11.7% of GDP a year and net debt is projected to be 198.3% of GDP.

6.18 Future expenditure on investments and property are not shown in the projection. The Treasury notes that: "Amounts borrowed for capital expenditure are reflected in the 'Net government debt line'."[44] We consider that this projection should have included at least a separate capital expenditure projection to clearly show how capital expenditure affects the movement in net debt. We note that, in the projections, the operating expenses of government include depreciation, which is often used as a proxy for capital expenditure.

The financial challenge ahead

6.19 Clearly, a net-debt-to-GDP percentage of 198.3% in 2060 is very high. However, it is not clear when the level of net debt is expected to become a problem and, compared to 2060, net debt to GDP of 37.1% in 2030 seems more manageable.

6.20 Although this could suggest that there is no immediate problem, importantly, the 2013 Statement is clear that delaying adjustment means that more significant adjustments will be needed. It will also take longer to implement because of the compounding effect of debt-financing costs.[45]

6.21 Although the 2013 Statement highlights many important matters relating to financial sustainability, we think that more could have been included to help readers to understand the nature of the financial problem, and the challenges and opportunities that surround it.

6.22 For example, more could have been said about how much government tax revenue is expected to be spent on delivering public services and how much on interest costs, and how this would affect the percentage of net debt to GDP.

6.23 This could help answer two important questions about future government spending and debt levels:

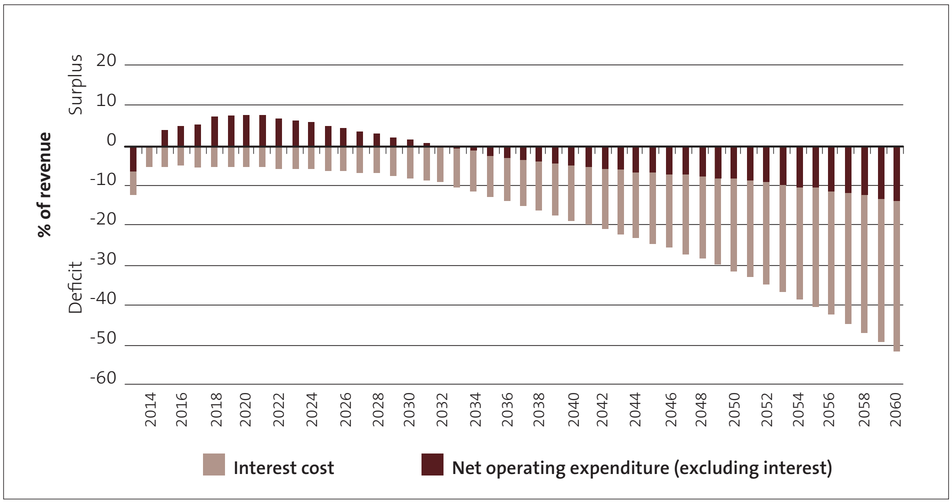
1. Are governments expected to spend more than they earn on core services?
2. What is driving the expected increase in net debt?

6.24 The cost of core services of government does not include the cost of interest. Figure 8 uses the Treasury's projection to show that, from 2015 to 2031, governments are expected to spend less than they earn on core services (they are in surplus) but this is assumed to reverse from 2032. Figure 8 shows a gradual increase in net operational spending after 2032, with the added borrowing leading to a compounding interest cost that becomes increasingly significant.

44 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 16.

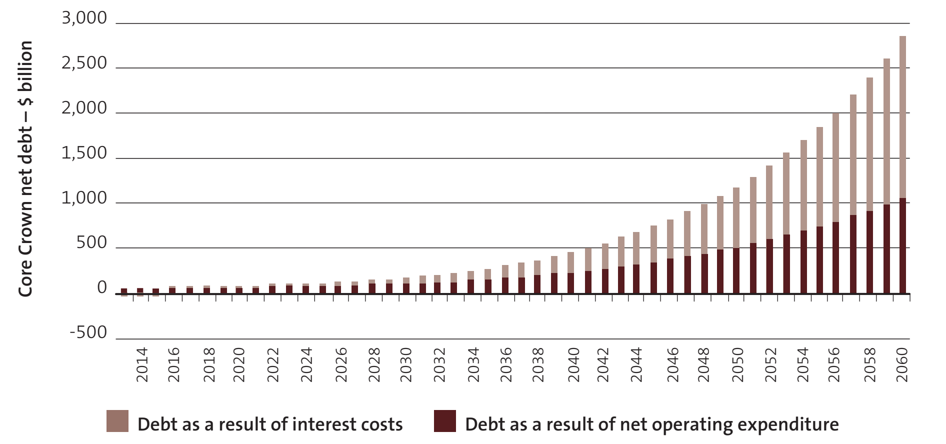
45 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 5. See an accompanying paper, "Fiscal Sustainability Under an Ageing Population Structure", available at www.treasury.govt.nz, for more detail.

Figure 8
Net operating expenditure and interest cost as a percentage of revenue, 2013 to 2060



6.25 Figure 9 uses the Treasury's projection to show that, for the first 30 years (until 2042), net debt increases by slightly more than $500 billion (or about $17 billion a year on average), driven mainly by assumptions about government spending and increases in asset values. However, for the last 18 years of the projection, net debt increases by about $2,350 billion (or around $130 billion a year on average), driven largely by compounding interest costs (highlighted in Figure 8) that add more to debt than government overspending on operations.

Figure 9
Contribution of net operating expenditure and interest cost to net debt, 2013 to 2060



6.26 Our main observations are that:

- from 2015 to 2031, the projected net operating expenditure (revenues less expenses) is in surplus and that, because of this, the increase in net debt is relatively small and controllable;
- this surplus reverses to a deficit from 2032 to 2060, but the trend of gradual increases in net operating expenditure continues; and
- if nothing is done, then, from 2032, governments will need to start borrowing more to cover the cost of interest, leading to an interest-driven debt spiral.

6.27 One implication of the above is that during the early years, relatively small and gradual changes to revenue, expenditure, or asset and other liability values could significantly reduce the build-up of net debt in future years. In other words, the 2013 Statement's projection is sensitive to changing certain assumptions – especially in the early years.

6.28 The 2013 Statement states that the financial projections are sensitive to the assumptions that the Treasury made in producing them. However, it also states that "changing our assumptions within reasonable parameters does not make much difference to the overall projections".[46] How big or small that difference could become, or how it could affect the main financial indicator itself, is not shown.

6.29 In one of the Treasury's research papers, some sensitivity analysis (using the 2013 model) looks at how changing an individual demographic, economic and financial

46 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 18.

assumption could affect the main financial debt indicator. Although this analysis does not reflect the relationships between the assumptions, it provides some relevant information, such as "if more of us worked, or worked longer hours, or we worked more productively, that would help, but it wouldn't solve the fiscal challenge".[47]

6.30 However, we consider that more could have been said about the potential financial effect of some important downside risks. For instance, although the 2013 Statement says that "One lesson from the recent financial crisis is that government debt can rise much faster than it falls",[48] the financial consequences of potential financial or natural shocks on the profile of government spending and debt are not shown.

Government debt and the financial sustainability problem

6.31 The Treasury's primary indicator of a financial sustainability problem is the percentage of net debt to GDP. To help understand this better, the 2013 Statement explains some aspects of what government debt is and notes that, although "high government debt can have negative impacts", low government debt provides a buffer.[49]

6.32 The 2013 Statement notes that the Treasury has advised the Government that net debt to GDP of 20% is prudent over the period up until 2020.[50]

6.33 The percentage of net debt to GDP is widely used internationally as an indicator of financial sustainability.

6.34 Research suggests that gross debt to GDP of more than 80%, coupled with sustained current account deficits, may result in a potential financial problem for a government.[51]

6.35 In our view, using the percentage of net debt to GDP alone is not enough to explain to readers of the 2013 Statement the long-term financial health of government. For instance, in certain circumstances, taking on further debt may be beneficial to financial sustainability. For example, "Borrowing to finance productive infrastructure raises long-run potential growth, ultimately pulling debt ratios lower."[52]

47 Rodway, P. (2012), "Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives", page 40.

48 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 13.

49 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, pages 11-12.

50 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 3.

51 Greenlaw, D. et al (2013) "Crunch Time: Fiscal Crises and the Role of Monetary Policy", a paper for the United States Monetary Policy Forum, New York, available at http://dss.ucsd.edu.

52 Reinhart, C. and Rogoff, K. (1 May 2013), "Austerity is not the only answer to a debt problem" in The Financial Times, available at www.ft.com.

6.36 In practice, other financial indicators such as net external debt (including private sector debt), net financial assets, net worth, and the ratio of interest costs to revenue are commonly used to help explain the long-term financial health of government. Some of these indicators are discussed in an accompanying research paper to the 2013 Statement.[53]

6.37 Paragraphs 6.23-6.27 show that, from sometime between 2040 and 2045, interest costs will start to add more to government debt than government overspending. International practice suggests that this would become a serious problem when interest costs become greater than 10-15% of the government's taxation revenue. Using 15% and applying this to the Treasury's projection suggests a serious problem in about 2042 and illustrates that the cost of debt is as important as the size of debt.

6.38 In our view, the financial sustainability problem that governments will face could be restated in broader terms to make it more relevant to a wider range of readers. The use of additional indicators, not necessarily just financial, may also have been helpful.

Improving financial sustainability

6.39 The 2013 Statement says that future financial challenges mean that the Government needs to move towards achieving a prudent level of net debt to GDP of 20% and then maintain it, on average, thereafter. Achieving this 20% level will "require firm fiscal management" and making some important policy decisions over the next decade.[54] However, the longer the delay, the larger the changes to government expenditure or revenues will need to be.

6.40 In effect, the Treasury's view is that, regardless of what happens in the future, moving sooner rather than later towards a prudent net debt level will allow future governments to better manage their financial position.

6.41 The 2013 Statement suggests that net debt to GDP of 20% is enough of a buffer to manage any unexpected changes over the long term. However, no sensitivity analysis is included to help readers to understand how unexpected changes could affect governments' ability to achieve the 20% target over the long term.

6.42 The 2013 Statement puts forward and reviews various alternatives in terms of their contribution to a prudent spending path. Their potential effect on New Zealanders' living standards is discussed. These alternatives can be grouped into three main areas:

- collecting more tax revenue;
- spending less (focusing on healthcare); and

53 See Buckle, R. and Cruickshank, A. (2012), "The Requirements for Long-Run Fiscal Sustainability", pages 8-9.

54 The Treasury (2013), *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*, page 13.

- responding to demographic change (focusing on the growth in New Zealand superannuation spending).

6.43 The 2013 Statement notes that these alternatives “individually would get us closer – although not all the way – to a sustainable long-term fiscal position”.[55] The accompanying research papers provide further details about these and other policy options.

6.44 Appropriately, the Treasury makes no specific policy recommendation based on these alternatives but does recommend that “governments develop plans to address these cost pressures over the course of the rest of this decade”.[56]

6.45 We think a more informed and wider discussion about available choices would also have been possible within the 2013 Statement if further information were available on the size, profile, and potential variability of the problem. Paragraphs 6.46-6.48 provide examples of this.

6.46 If the potential effects of future uncertainties (either positive or negative) were better understood, the level and urgency of the response might be different. Sensitivity analysis would have allowed an understanding of the financial impact if something unexpected happens, whether the 20% target was enough to cover it, and what a shock (or two) might mean for meeting and maintaining the target in the long run.

6.47 If a wider set of indicators were used, the form of response might have been different. Indicators such as net financial assets might have resulted in more discussion about using financial assets, such as those held by the Earthquake Commission and the New Zealand Superannuation Fund, to help manage financial sustainability. Generally speaking, we think good management of government assets and other non-debt liabilities can play an important role in managing the sustainability of the Government’s finances.

6.48 If the relationships between the drivers were better understood, the design of the response might be different. As an example, understanding how educational achievement affects healthcare and/or future government revenues, even in a simplified way, might allow a more integrated solution.

55 The Treasury (2013), *Affording Our Future: Statement on New Zealand’s Long-term Fiscal Position*, page 30.

56 The Treasury (2013), *Affording Our Future: Statement on New Zealand’s Long-term Fiscal Position*, page 5.

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