THE TREASURY
Kaitohutohu Kaupapa Rawa

Affording Our Future

STATEMENT ON NEW ZEALAND'S
LONG-TERM FISCAL POSITION

July 2013

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AFFORDING OUR FUTURE

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Preface

The Public Finance Act 1989 requires that the Treasury prepare a statement on New Zealand's long-term fiscal position at least every four years. The 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.

Affording Our Future is our third such Statement.

This Statement is in two parts. Part I explains the long-term fiscal pressures facing governments, and why it is so critical that governments continue to manage the Crown's fiscal position prudently over the long term. Part 2 illustrates some options for how spending or revenue might be adjusted to get New Zealand's finances on a more sustainable footing.

This Statement also has some important Annexes. Annex 1 sets out supplementary material on the possible future path of major government spending and revenue areas. Annex 2 sets out our key projection assumptions in table form. And Annex 3 summarises the process we went through in producing this Statement, which was particularly open and collaborative.

This Statement is not a standalone document. It is accompanied by a suite of analytical papers, commissioned by the Treasury, to underpin the analysis and conclusions. These supporting papers are referenced throughout this document and are available in full at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

In preparing this Statement, the Treasury has used its best professional judgement about the risks and outlook for the long-term fiscal position.

Signed

Gabriel Makhlouf, Secretary to the Treasury

Summary

On average, we will be healthier, richer, and will live longer in the future. But the future will also require some adjustments. Population ageing, rising demand for certain services, and increasing prices of those services mean that some things that the government provides will become more expensive – indeed this process has already started. These cost pressures create a fiscal challenge, which a growing economy will not fix. This Statement aims to give people a sense of the size of the fiscal challenge we face and what we might do to address it.

PRUDENT FISCAL MANAGEMENT IS IMPORTANT FOR NEW ZEALAND

Over the last two decades, New Zealand governments have run prudent short- and medium-term fiscal strategies, including achieving and maintaining prudent levels of government debt, as required by the Public Finance Act 1989.

Prudent fiscal management is important because New Zealand is sensitive to financial and economic shocks, as well as natural disasters. Also, our economy carries high levels of net external debt. We saw, in the global financial crisis, how investor sentiment can turn sour quickly on economies with these characteristics, and how easily private debt can become government debt. We have needed the buffer a low level of government debt provides.

Reaching a prudent level of government debt in the medium term and maintaining it thereafter will continue to be crucial for New Zealand. As a medium-term goal, the Treasury has advised that New Zealand should aim for net government debt to be 20% of gross domestic product (GDP) or below by 2020.[1]

FISCAL PRESSURES WILL MAKE ACHIEVING AND MAINTAINING A PRUDENT LEVEL OF GOVERNMENT DEBT MORE CHALLENGING

The fiscal pressures we are starting to face partly result from population ageing. Some entitlements – notably New Zealand Superannuation (NZ Super) – will become more costly as the nation continues to become older.

Cost pressures in public healthcare also drive this challenging fiscal outlook, because of increasing demand for healthcare services, new technologies, and the rising prices we will need to pay for those services.

This Statement gives an idea of the size of the fiscal challenge we are facing and illustrates some options for addressing that challenge. We project a "what if" scenario that shows how government expenses might grow from the 2015/16 fiscal year if they were to revert to their average historic rates of growth (different periods of history are relevant for different expense categories), taking into account demographic and other key economic variables, and assuming no change to current legislative policy settings. We call this scenario "Resume Historic Cost Growth". This scenario is different to the Government's fiscal strategy, which involves firm control of expenditure growth.

[1] The Treasury (2011). *Briefing to the Incoming Minister of Finance: Increasing Economic Growth and Resilience.* Available at http://www.treasury.govt.nz/publications/briefings/2011. The measure for net government debt the Treasury used when making this recommendation was "net core Crown debt", as defined in the *Financial Statements of the Government of New Zealand*. Available at http://www.treasury.govt.nz/government/financialstatements/yearend.

Two areas of government spending are projected to grow significantly in the "Resume Historic Cost Growth" scenario:

- Government spending on healthcare is projected to grow from 6.8% of GDP in 2010 to 10.8% in 2060, an increase of 4 percentage points.
- Spending on NZ Super is projected to grow from 4.3% of GDP in 2010 to 7.9% in 2060, an increase of 3.6 percentage points.

Our full projections under the "Resume Historic Cost Growth" scenario are set out in the table below. We assume that we collect tax revenue equal to 29% of GDP over most of the projection period. This percentage is roughly consistent with our tax take in recent history, but of course different governments may wish to collect more or less tax in the future. One consequence of holding tax revenue constant as expenses increase, however, is that from the mid-2020s revenues become insufficient to cover expenses. Accordingly, governments must borrow to make up the difference. The table below reflects the cost of this borrowing in the line "Debt-financing costs", which shows these costs increasing over time. The bottom line "Net government debt" also increases as a consequence.

The projections in this table are of course very sensitive to our assumptions. But changing our assumptions within realistic bounds makes little difference to the overall message: some major expense categories are growing. A higher birth rate or higher economic growth (within reasonable bounds), two things that might seem intuitively helpful for reducing fiscal pressures, in fact would do little to affect underlying trends.

Treasury projections for government expenses, revenue and debt as % of nominal GDP under the "Resume Historic Cost Growth" scenario[2]

% of nominal GDP	2010	2020	2030	2040	2050	2060
Healthcare	6.8	6.8	7.7	8.9	9.9	10.8
NZ Super	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 NZ Super)	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

[2] In this Statement, for "net government debt" we use "net core Crown debt", for "government expenses" we use "core Crown expenses", and for "government revenue" we use "core Crown revenue". All these terms are defined in the *Financial Statements of the Government of New Zealand*. "Core Crown" means the Crown, departments, Offices of Parliament, the NZ Super Fund and the Reserve Bank of New Zealand. It does not include Crown entities, State-owned Enterprises (SOEs), or local government.

EARLY ADJUSTMENT IS CRUCIAL

In the 2013 *Fiscal Strategy Report*, published in May, the Government said it aims to run budget surpluses from 2014/15 so that net government debt eases down to no higher than 20% of GDP in 2020. This approach is consistent with the approach of all governments over the past two decades.

By stating its 20% goal, the Government is signalling that it will adopt a more constrained – and prudent – fiscal path than our "Resume Historic Cost Growth" scenario shows.

The Government's fiscal strategy is one way of reaching a prudent level of debt over the medium term. It is not the only way, and other governments might make different choices. But the essential point is that a prudent medium-term fiscal strategy puts future governments in a stronger fiscal position and gives them a wider range of choices.

Delaying adjustment, and adopting a path like the "Resume Historic Cost Growth" scenario rather than the current fiscal strategy (or an equally prudent alternative), makes the fiscal challenge harder, owing to the compounding effect of debt-financing costs. If we delay, when we eventually make an adjustment we first will need to address the existing deficit. But that will not be enough, as we will then need to address the debt we have let accumulate during the period over which we ran deficits. Delaying adjustment turns one task into two, and means that the eventual adjustments will have to be more significant and will take longer to implement. For example, if we delay five years and keep to the fiscal path set out in the "Resume Historic Cost Growth" scenario, it could take us 10 years to get back to net government debt at 20% of GDP (assuming that annual adjustments cannot be too steep).

THIS STATEMENT SETS OUT EXAMPLES OF HOW WE COULD ACHIEVE A MORE SUSTAINABLE FISCAL POSITION

The Treasury has modelled some illustrative examples of the type and scale of policy adjustments that governments might consider both before the end of this decade and into the 2020s. These are not Treasury recommendations. They are designed to help people flesh out the implications and trade-offs that should be thought through before adopting alternative policy options. They are by no means the only policy changes that governments might adopt.

Our illustrative options show that we cannot achieve a sustainable fiscal path without trade-offs. These might be trade-offs between fiscal sustainability and equity, or between fiscal sustainability and economic growth. But at the same time there might be complementarities. This Statement uses the Treasury's Living Standards Framework to illustrate the different implications that various options involve. If we are aware of the trade-offs we can make informed decisions about what is best for New Zealand overall.

We recommend that governments develop plans to address these cost pressures over the course of the rest of this decade. The Treasury will advise governments as they make such plans. But it's not just up to governments. Parliament has given the Treasury a mandate to analyse the future financial pressures New Zealand is likely to face, in order to increase public understanding of the situation and what might be done about it. This Statement aims to explain and share information about our long-term fiscal future with all New Zealanders.

A. Where we've come from and where we're heading

New Zealand has seen significant changes over the past 40 years. In 1973, hardly anyone had a computer, a mobile phone, or any digital devices. The Government controlled the prices of many goods, how much money people could take overseas or bring into New Zealand, and the exchange rate. The Treaty of Waitangi was not recognised as having any legal force.

Things have certainly changed, and that will continue. On average, people will be richer, healthier, and will live longer. Our society will become more diverse across a number of dimensions. While there's much we can't foresee, we have to make some predictions when thinking about government policies over a long horizon.

NEW ZEALAND'S POPULATION IS AGEING

The profile of New Zealand's population is becoming older. This ageing of the population is partly a result of positive developments in health and longevity. People are, on average, healthier and enjoying longer lives. When a girl was born in 1961, for example, she could have expected a lifespan of 85 years, whereas a girl born in 2011 has a life expectancy of 93 years.[3]

New Zealand's falling birth rate contributes to population ageing. Women aged 45 to 49 years averaged 3.3, 2.5, and 2.3 births during their lifetime as at the 1981, 1996, and 2006 censuses, respectively. The proportion of women aged 45 to 49 years who were childless was 9%, 10%, and 13% at the 1981, 1996, and 2006 censuses, respectively.[4]

Population ageing is not a new trend – New Zealand's population has been gradually ageing for most of the 20th century. The number of people aged 65 years and over, for example, has doubled since 1980.

Statistics New Zealand projects that this age group will double in size again by 2036, numbering between 1.18 and 1.25 million in that year. By 2061, it may number between 1.44 and 1.66 million.[5] The increase in the number of people aged 65 years and over between 2011 and 2036 will be driven by the relatively large post-war generation. This generation, known as the "baby boomers", was born during a period of high birth rates between 1945 and 1965. The size of this generation is not the cause of population ageing, although it does accelerate the trend. The fall in the birth rate and the trends towards lengthening lives mean the population would still be ageing, even if there had been no post-war baby boom.

[3] The pattern is similar for males. See Statistics New Zealand, "How long will I live?" Calculator at http://www.stats.govt.nz/browse_for_stats/health/life_expectancy/how-long-will-I-live.aspx. In 1961, we would have under-estimated a newborn baby's life expectancy; the figure shown is what we now think it should have been. See Alison O'Connell (2012). Underestimating lifespans? Why longevity risk exists in retirement planning and superannuation policy. PhD thesis, Victoria University of Wellington.

[4] Geoff Bascand (2012). Planning for the Future: Structural Change in New Zealand's Population, Labour Force, and Productivity. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

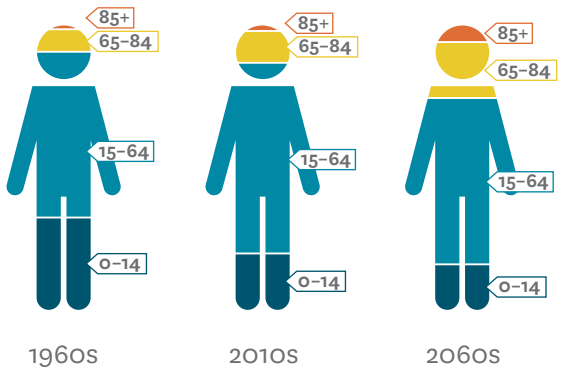
[5] Bascand, above note 4.

Increasing numbers of people in older age groups have implications for the structure of the population. Currently, around 66% of the population is in the 15-64 age group. In 2061, that proportion might be more like 58%. On the other hand, the proportion of people aged 65+ is projected to be between 22% and 30% in 2061, compared with around 14% now.[6]

Within this overall story of population ageing there is some variation among different ethnic groups and across different regions. Māori and Pasifika, for example, have higher birth rates and tend to give birth at younger ages and to die at younger ages, so they are ageing more slowly than other ethnic groups. Māori families might have five generations over the span of a century, whereas non-Māori families might have three generations. Also, some regions of New Zealand – often rural areas – are ageing much faster than the national average because of the departure of young adults or an inflow of older people wishing to retire.

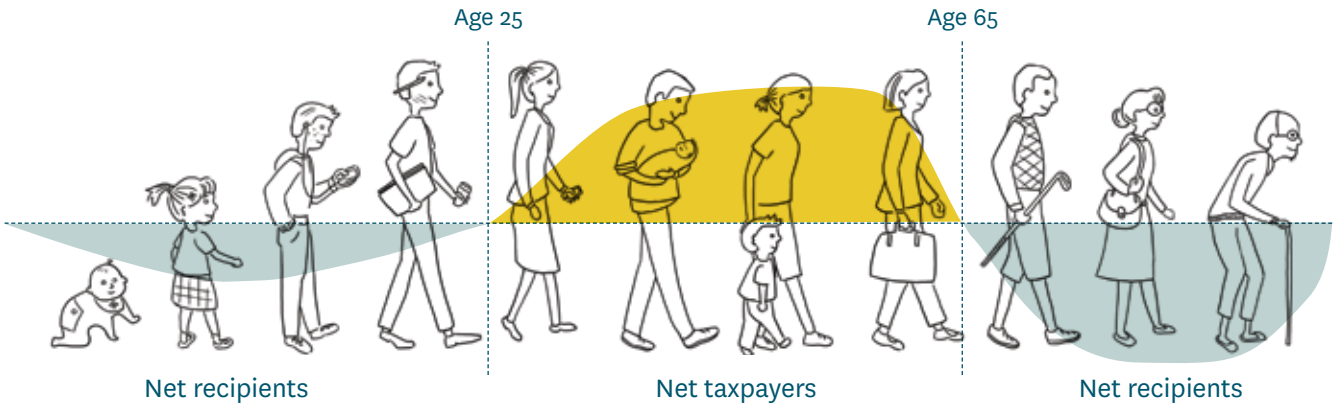
The process of population ageing is not unique to New Zealand. Most developed countries are experiencing this trend and are also considering what it means for society, for individuals and for government finances.[7]

Figure 1 Getting older: New Zealand's changing population structure, 1960s–2060s



An ageing population will put pressure on some government services. Our implied intergenerational contract assumes that people generally pay most taxes during their working lives, but less at the beginning and end of life, when they are more likely to receive benefits funded by taxpayers. In our system, these benefits come primarily in the form of education (at the beginning of life), healthcare (mainly at the end of life) and NZ Super (at the end of life).[8]

Figure 2 Net taxpayers and net recipients, 2010[9]



[6] Bascand, above note 4.

[7] For example, the United Kingdom House of Lords recently produced a report in which it canvassed the many ways in which governments and individuals will need to adjust to an older population. See United Kingdom House of Lords, Select Committee on Public Service and Demographic Change (2013). *Ready for Ageing?* www.publications.parliament.uk/pa/ld201213/ldselect/ldpublic/140/14002.htm.

[8] For one view of how New Zealand's intergenerational contract forms part of its welfare state, see David Thomson (1996). *Selfish Generations? How Welfare States Grow Old* (2nd ed). Wellington: Bridget Williams Books.

[9] Omar A. Aziz, Chris Ball, John Creedy, and Jesse Eedrah (2012). The Distributional Impact of Population Ageing. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

A world with a higher proportion of people in older age groups raises questions about the sustainability of this intergenerational contract. Retaining current policy settings for the benefits that older people receive will increasingly cost more. Working-age people might be asked to pay more tax as a result, but may not be able to receive the same benefits when they need them.[10]

These issues suggest that the precise parameters of what benefits older people get, when and how they get them, and how much taxpayers fund might need to change to some extent.

THE MIX OF ETHNIC GROUPS WILL CONTINUE TO CHANGE

Around 68% of the New Zealand population said they were ethnically European in the 2006 census. Māori are the next largest ethnic group, at around 15%, followed by the Asian population at around 9%, and the Pasifika population at around 7%. Approximately 11% of people identified as a "New Zealander".[11]

The ethnic mix of the population will continue to change in the future. All four of the major ethnic populations are expected to grow in number, but they will grow at different rates, with implications for the overall ethnic mix of the population. The Asian population is expected to see the fastest growth. Growth in the Māori and Pasifika populations is also expected to outpace the growth in the European population.

Different ethnic groups are associated with different demographic profiles. For example, Māori are a comparatively young population with generally higher fertility, earlier fertility, and shorter life expectancies than non-Māori New Zealanders.[12] As well as differences in life expectancy, a number of other health indicators reveal a high disparity in health outcomes between ethnicities. For example, there are clear ethnic and social inequalities in rates of infectious diseases. Rates of rheumatic fever for Māori are about 20 times higher than for people of European ethnicity and almost 40 times higher for Pacific people. Rates of avoidable hospital admission for Māori and Pacific people are significantly higher than the overall rate (almost double for Pacific people).

The Māori population itself is, of course, diverse. It is true, however, to say that the Māori population as a whole is associated with poorer average outcomes than the non-Māori population.

WE ASSUME THAT ECONOMIC GROWTH WILL CONTINUE TO BE MODERATE

The Treasury assumes that New Zealand's average economic growth rate over the long run will be consistent with historic trends.[13] A more interconnected world means that New Zealand will share in the gains from rising global incomes through export volumes and prices, and in productivity and technological improvements embodied in more sophisticated imports. Sustained economic growth means that people are likely, on average, to have higher incomes in the future.

It seems likely that in a more interconnected world, there will be increased competition between countries for skilled labour. Compared to other OECD countries, New Zealand has a high proportion of foreign-born people as a share of the total population and also has a high proportion of its New Zealand-born population living overseas. In terms of skills, currently the inflow of highly skilled migrants roughly balances the outflow.[14] Whether we are able to sustain or improve on this state of affairs will affect our future economic growth: our growth path will be affected by our ability to attract highly skilled migrants.

Whatever the average rate of New Zealand's economic growth, we know we will go through cycles and experience shocks. A recent study estimated that since 1970 there have been a total of 147 banking crises, 218 currency crises, and 66 sovereign

[10] This story is complicated by the fact that people in older age groups by and large still pay some tax. And the amount of tax that people in older age groups pay might change in the future – many people might work to older ages, meaning they will have more income from wages that they pay tax on. For a discussion of how increased labour force participation rates among older age groups could affect future tax revenue, see Christopher Ball and John Creedy (forthcoming). Population Ageing and the Growth of Income and Consumption Tax Revenue. *New Zealand Treasury Working Paper* 13/09.

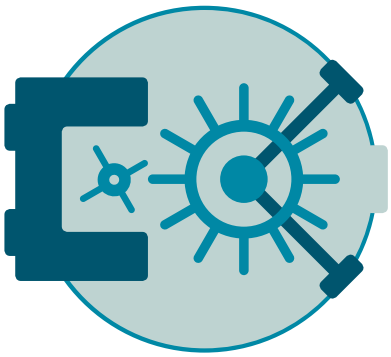
[11] People can identify with more than one ethnicity, and around 10% of people did so in the 2006 census, so these numbers will reflect some double counting.

[12] For a more detailed discussion of Māori life trajectories, see Chris Cunningham (2012). Aotearoa's Long-Term Fiscal Position. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[13] See Mario Di Maio (2013). External Influences on New Zealand's Economic Potential and Nick Carroll (2013). Structural Change in the New Zealand Economy 1974-2012. Background papers for the 2013 Statement on the Long-Term Fiscal Position. Both available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[14] Simon Upton (2012). Long Term Fiscal Risks – New Zealand's case in the context of OECD countries. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

debt crises.[15] New Zealand will feel the impacts of future crises even if it is not directly involved. The future is also likely to bring resource shocks, geo-political shocks, and natural disasters like earthquakes – all of which can impact on economic growth.



ECONOMIC GROWTH WILL PRESENT CHALLENGES AS WELL AS OPPORTUNITIES

Spending on healthcare and long-term care appears to be strongly influenced by national income. One explanation for this is that higher income drives higher public expectations of the healthcare services that should be available and, in a broad sense, a greater willingness to pay for these, although the strength of this relationship is uncertain. Public expectations also increase as technology extends the range of possible treatment options. A further consideration is that, as national income rises, so does the cost of labour, which is the major input into health and long-term care services. Together, these factors are expected to contribute significantly to future spending growth and, in fact, play a larger role in our projections of future spending in these areas than population ageing.

Health and long-term care services are likely to become relatively more expensive, compared with goods and services for which there is more scope for productivity gains. If unit costs for health and long-term care rise faster than inflation, then ongoing fiscal constraint implies either a reduction in the scope of the public system or a reduction in service quality, possibly both. Alternatively, if we allow spending to keep growing similarly to the way it has grown in the past, we would need to cut spending in other areas or raise taxes to pay for it.

THE DISTRIBUTION OF RISING INCOMES IS UNCERTAIN

We don't know how the benefits of future economic growth will be distributed across the population. Research suggests that household incomes in New Zealand are less equally distributed than they were in the mid-1980s.[16] While disposable incomes for most household deciles grew during this period, households with the highest incomes tended to see theirs grow faster.[17] This was largely owing to changes to market income levels, rather than direct changes in the redistributive role of the government.[18] This trend of increasing inequality was broadly mirrored across other OECD countries, although the change has been relatively sharper for New Zealand. Technological change, globalisation, and household structure have been identified as the major causes of these changes both in New Zealand and around the world.

Just as we do not necessarily know what will happen in the future in terms of income inequality, neither do we have a good understanding of the impacts of income inequality. A recent review of over 400 studies showed there is no simple relationship between levels of inequality and economic growth.[19] There are studies that do find a link, and others that do not. There is also some dispute about whether there is a connection between inequality and poorer social outcomes.

Income inequality within age groups might change in the future. For example, disparities within older age groups could become more pronounced if those who are healthy enough

[15] Luc Laeven and Fabian Valencia (2012). Systemic Banking Crises Database: An Update. *IMF Working Paper, WP/12/163*. IMF, Washington, D.C.

[16] The Treasury has produced a summary of the existing research and New Zealand's trends. See the Treasury (2013). *Living Standards Background Note: Increasing Equity*. Available at www.treasury.govt.nz/abouttreasury/higherlivingstandards/hls-bg-equity-jan13.pdf.

[17] This analysis uses the Gini coefficient as a measure of income inequality. The Gini coefficient is by no means a perfect measure, and different methodologies can come up with different results. Recent Treasury work has examined how New Zealand's Gini coefficient changes where different measures of "income" are used. See Omar Aziz, Matthew Gibbons, Chris Ball, and Emma Gorman (2012). Fiscal Incidence in New Zealand: The Distributional Effect of Government Expenditure and Taxation on Household Income, 1988 to 2010. Paper presented at the New Zealand Association of Economists Conference. Available at www.nzae.org.nz/event/nzae-conference-2012/2012-nzae-conference-papers/.

[18] See Aziz, Gibbons, Ball, and Gorman, above note 17. Although some specific policy changes over the period (such as changes in benefit levels or the introduction of Working for Families) might have had significant impacts at specific points in the income distribution. And some argue that changes to tax and benefit regimes played a significant part. See, for example, Brian Easton (1996). "Income Distribution" in Brian Silverstone, Alan Bollard, and Ralph Lattimore (eds). *A Study of Economic Reform: The Case of New Zealand*. Amsterdam: North Holland Books. Available at www.eastonbh.ac.nz/1996/01/income_distribution_part_i/.

[19] Laura de Dominicis, Raymond Florax, and Henri De Groot (2008). A Meta-Analysis on the Relationship Between Income Inequality and Economic Growth. *Scottish Journal of Political Economy,* vol. 55(5).

to continue working past 65 do so and also receive NZ Super (and might also be able to supplement their incomes with income from savings). Those who are unable to continue working might be more reliant on NZ Super as a source of income. This scenario would result in more inequality within the 65+ age group.[20]

> PRESSURES ON NATURAL RESOURCES ARE LIKELY

Developments in the natural environment will affect New Zealand in different and potentially unforeseen ways. Renewable resources, such as land, fresh water, and marine resources play an important role in New Zealand's economy, as do non-renewable resources, such as oil, gas and minerals. Demand for these resources in the developing economies is likely to increase in the future, but also global technological and regulatory changes will affect supply and demand factors. How we respond to that demand and adapt to new technology will affect not only our growth path but also our living standards more generally.

[20] Omar A. Aziz, Chris Ball, John Creedy, and Jesse Eedrah (2012). The Distributional Impact of Population Ageing. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

B. What is fiscal sustainability and why does it matter?

Fiscal sustainability is a term that is commonly used in relation to the affordability of government taxation and spending programmes. In simple terms, fiscal just refers to government spending and investing activities and how these are financed through taxes, debt and other liabilities. Sustainability means having the ability to maintain or support government programmes in the future. So, fiscal sustainability refers to whether the Government is able to maintain current policies without major adjustments in the future.[21]

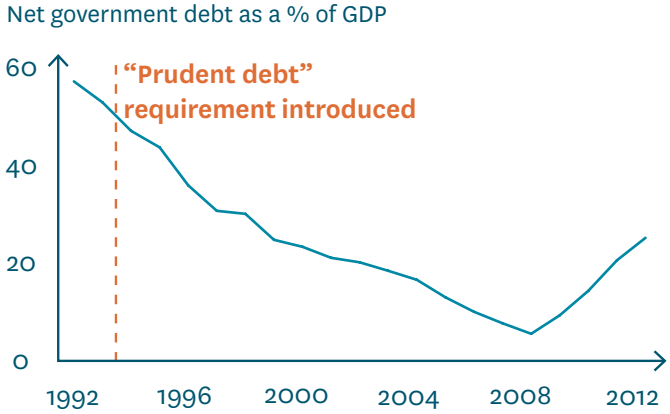
SUSTAINABILITY IS A CORNERSTONE OF RESPONSIBLE FISCAL MANAGEMENT

The principle of fiscal sustainability is embedded in the Public Finance Act 1989, which requires governments to maintain a "prudent" level of government debt. Governments are free to define what is prudent. They are also required to set a long-term – at least 10-year – objective for debt, and must show how that objective will be reached. This requirement aims to protect the financial position of the governments of future generations.

This Public Finance Act requirement acknowledges that high government debt can have negative impacts. It can increase the cost of borrowing right across the economy, thereby restricting, or "crowding out", some potentially productive private sector economic activity. A higher level of government debt also means the Government faces higher interest costs each year, at the expense of other government spending. High debt burdens future generations with higher tax rates than would otherwise be the case, as debt eventually needs to be repaid. It also allows governments less room to borrow to respond to shocks.

The requirement for governments to achieve and maintain a prudent level of debt was introduced in 1994.[22] Since then, successive governments have remained committed to maintaining low debt levels. Figure 3 shows the recent history of government debt, since the introduction of the "prudent debt" requirement.

Figure 3 The recent history of government debt



[21] For a fuller discussion of fiscal sustainability, see Robert A. Buckle and Amy A. Cruickshank (2013). The Requirements for Long-Run Fiscal Sustainability. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. See also Controller and Auditor-General (2013). Public Sector Financial Sustainability. Discussion paper presented to the House of Representatives under section 20 of the Public Audit Act 2001, which contains a public sector-specific definition of financial sustainability.

[22] The requirement was initially contained in the Fiscal Responsibility Act 1994. The Fiscal Responsibility Act was later incorporated into the Public Finance Act 1989, via the Public Finance Amendment Act 2004.

WHAT IS NET GOVERNMENT DEBT?

The principal way in which the Government borrows money is by issuing securities through the Treasury's Debt Management Office.[23] These securities are largely in the form of government bonds (coupon-paying securities with maturities of one year or more) and Treasury bills (maturities of one year or less with no interest payments, issued at a discount to the face value). Roughly two-thirds of New Zealand government bonds are held by non-residents.

When this Statement talks about net government debt, it means "net core Crown debt" as that term is defined in the *Financial Statements of the Government of New Zealand*. This particular debt indicator is used to represent the size of the buffer the Government has to respond to shocks.

Net core Crown debt is gross core Crown debt minus relatively liquid financial assets. Some significant financial assets are not subtracted from gross debt in the net debt measure. The Government's student loan portfolio is excluded, along with other core Crown advances, because we cannot rely on being able to cash up these assets sufficiently quickly in response to a shock. Financial assets held by the NZ Super Fund are also excluded. In this case it is not their lack of liquidity that is the reason, but because they are held for a specific future policy objective. This is to reduce the burden of the cost of funding the public pension on future taxpayers, in a period where the number of NZ Super recipients will be significantly higher than it is now.

There are many different alternatives for the definition of "net government debt". The net core Crown debt definition is the most suitable for this Statement, as we wish to use a measure that represents the size of the buffer the Government could have at different times to respond to shocks, but people use different definitions for different purposes. For example, for some purposes it might be suitable to net off assets held by the NZ Super Fund.

Allowing governments to determine a prudent level of debt, rather than enforcing a specific level of debt, acknowledges that a "prudent" level of debt will not be the same for all governments at all times. A number of factors are relevant to this calculation.

We would also not expect the level of government debt to remain constant over the tenure of one government. It is reasonable to expect government debt to be higher in an economic downturn as a result of government borrowing to cover a shortfall in tax revenue and higher spending to support the unemployed. Conversely, governments may take the opportunity provided by an economic upturn to reduce the level of government debt in anticipation of a future economic downturn.

It makes sense for governments to borrow to fund infrastructure, such as roads, schools and hospitals. This spreads the costs of these long-lived assets across the different generations expected to benefit from these assets. However, if a government needs to borrow to pay for day-to-day expenses – other than those associated with a short-term economic downturn or long-lived assets – it is living beyond its means.

There is no level of government debt that will be optimal for New Zealand in all circumstances. But New Zealand's particular characteristics suggest that a cautious approach, meaning a relatively low level of government debt, is appropriate. This has been the approach of successive governments over the past 20 years.

NEW ZEALAND NEEDS THE BUFFER THAT LOW GOVERNMENT DEBT PROVIDES

New Zealand, as a small open economy that is reliant on a relatively volatile natural environment, is vulnerable to shocks of various kinds. Maintaining a lower level of debt ensures the Government has the ability to respond to such shocks to its financial position without requiring unexpected service cuts.

Responsible fiscal management by successive governments meant that New Zealand entered the recent recession with a level of government debt that was low by historic and international standards. The Canterbury earthquakes of 2010 and 2011 further weakened the Government's financial position. An operating deficit emerged in 2009, owing to an increase in expenses and a decrease in anticipated tax revenue, and persists still. Borrowing has been required to cover the shortfall.

[23] This is not the sole way in which the Government can borrow money. SOEs, which are part of the "total Crown" reporting entity but not part of the "core Crown" reporting segment (both terms are defined in the *Financial Statements of the Government of New Zealand*), can and do borrow.

SHOCKS ARE PART OF LIFE IN NEW ZEALAND

Here is a brief sample of some shocks that have had significant negative economic or fiscal impacts for us over the past 40 years:

- Oil price shock in 1973
- Decline in commodity prices in 1974
- Oil price shock in 1979
- Global sharemarket crash of 1987
- Oil price shock of 1990
- Asian financial crisis 1997/98
- Oil price shock in 2002
- Global Financial Crisis in 2008/09
- Canterbury earthquakes in 2010 and 2011

Of course, not all shocks are negative. New Zealand has benefited from what could be called positive shocks; for example the unexpected lift in dairy prices towards the end of 2006, peaking in 2007. We are likely to see positive shocks in the future too. But good fiscal management means understanding the worst that may happen.

New Zealand's low government debt provided a buffer in that the Government had room to borrow when it needed to react to these events. However, that has meant that New Zealand's government debt has increased markedly in recent years. Net government debt increased from under 6% of GDP in 2008 to around 24% of GDP in 2012.[24] Although there is no hard rule about what level of debt is too high, the Government's room to borrow in response to another shock has been reduced (although with net government debt at around 24% of GDP, the Government's debt level is still relatively low by international standards).

One lesson from the recent financial crisis is that government debt can rise much faster than it falls.

A longstanding gap between national saving and investment means New Zealand has a large net external liability position, as foreign funding was used to meet some of our consumption and investment demands. Most of this net liability position is attributable to the private sector but this has not always been the case.

In a crisis, private debt can quite quickly become public debt. We have seen this recently with the United States and various European governments taking on debt from failed banks, or banks that might otherwise have failed. We have even experienced this effect to a limited extent in New Zealand, with the collapse of finance companies that were covered by the Retail Deposit Guarantee Scheme. The cost of servicing debt can also change quickly if investor sentiment toward an economy sours. This is usually reflected either in sharply higher interest rates, as we have seen in some European countries in recent years, and/or a declining currency. Both can have adverse impacts on the economy and wider living standards.

Maintaining a low level of public debt over time is one indicator to foreign lenders of solid economic and fiscal management. This provides one offset to the risks associated with the external debt position and contributes to New Zealand holding a high sovereign credit rating.[25] The Treasury takes the net external position into account when recommending a prudent level of government debt.

Furthermore, "refinancing risk" – the Government's ability to raise debt when required – is generally considered to be higher where debt is predominantly held by non-residents. Two-thirds of New Zealand government bonds are held by non-residents, which suggests our risk is fairly high.

> SO WHAT IS A PRUDENT LEVEL OF DEBT FOR NEW ZEALAND?

The Treasury's advice to governments over recent decades has been to maintain prudent and low average levels of debt over time. Taking into account New Zealand's particular characteristics, as described above, the Government has indicated that it intends to bring net government debt back to a level no higher than 20% of GDP by 2020.[26] This goal is consistent with the Treasury's advice.[27]

Achieving this target by 2020, and a prudent debt level beyond that date, will require firm fiscal management. As the next section will discuss, fiscal pressures will make achieving and maintaining a prudent debt level more challenging.

[24] 2013 *Budget Economic and Fiscal Update*. Available at www.treasury.govt.nz/budget/2013.

[25] In its statement on New Zealand sovereign credit rating published 3 August 2012, Standard and Poor's identified "Fiscal flexibility underpinned by moderate, albeit rising, general government debt and a long-standing commitment to fiscal discipline" as a rating strength while "High external debt and weak external liquidity" was a weakness.

[26] 2013 *Fiscal Strategy Report*. Available at www.treasury.govt.nz/budget/2013.

[27] The Treasury (2011). *Briefing to the Incoming Minister of Finance: Increasing Economic Growth and Resilience*. Available at www.treasury.govt.nz/publications/briefings.

THE GOVERNMENT'S BALANCE SHEET

Debt is a liability of the Government. But the Government also holds assets. This box provides an overview of the broader government balance sheet – what it is and what is on it.

A RECORD OF WHAT THE GOVERNMENT OWNS AND OWES

The Crown balance sheet encompasses the balance sheets of each individual "core" Crown agency, such as government departments, as well as Crown Entities and SOEs.

The Government is the largest reporting entity in New Zealand and its balance sheet reflects this. Almost all its liabilities are financial in nature. There are borrowings of just over $100 billion. Other financial liabilities of around $80 billion, include insurance (Accident Compensation Corporation, Earthquake Commission) and Government Superannuation Fund liabilities. (The Government Superannuation Fund is a retirement plan for government employees, and should not be confused with the NZ Super Fund.)

On the assets side, the Government owns property, plant and equipment of just under $110 billion, including schools, hospitals, and highways. It owns financial assets of around $120 billion, which includes the funds held by the NZ Super Fund, ACC, and the Reserve Bank, among others.[28]

CLASSES OF ASSETS

- Our financial assets can be broken down into those that are available to help deal with shocks and those that are aimed at meeting much more certain obligations.
- Our social assets help provide core government services. There will be upwards pressure from growing populations, especially in Auckland, and from the Canterbury rebuild.
- Our commercial assets are generally stand-alone companies that receive their income from the services they provide.

[28] See *Financial Statements of the Government of New Zealand*, available at www.treasury.govt.nz/government/financialstatements/yearend. More detail on the composition of the balance sheet will be available in the forthcoming *Investment Statement of the Government of New Zealand*.

C. New Zealand faces a growing fiscal challenge

We have started and will continue to face increasing pressures in some areas of government spending. These pressures are partly owing to the permanent change to our population's structure, the ageing process. Some entitlements – notably NZ Super – will become more costly as more people move into older age groups, and as the ratio of younger people paying taxes declines relative to older people.

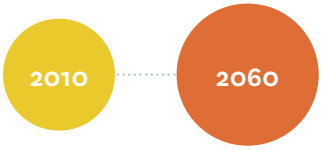
Cost pressures in public healthcare also drive this challenging fiscal outlook, because of increasing demand for healthcare services, new technologies, and the rising prices we will need to pay for those services.

How big are these cost pressures? This Statement gives an idea of the size of our fiscal challenge, as well as some options for addressing that challenge. To show the size of the challenge, we project how government expenses might grow from the 2015/16 fiscal year if they were to revert to their historic rates of growth per recipient (different periods of history are relevant for different expense categories), including how we think those historic growth rates interact with demographic and key economic variables. We also assume no change to current legislative settings. We call this scenario the "Resume Historic Cost Growth" scenario.

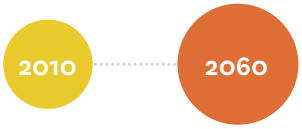
We use slightly different methodologies for projecting the future path of different areas of government spending. Historic rates of growth are relevant to different extents in different categories. For example, when we project the possible future path of public spending on healthcare, we rely heavily on how spending on healthcare has grown in the past. On the other hand, when we project how NZ Super costs will grow, historic growth is almost irrelevant. The main considerations are the current legislative settings for NZ Super, the future demographic structure of our population, and future average wages (as NZ Super payments are pegged to the average wage). Other expense categories have their own unique cost drivers.[29] Despite these differences across subject areas, for simplicity we call our scenario "Resume Historic Cost Growth".

We find two areas of significant growth:

- Government spending on healthcare is projected to grow from 6.8% of GDP in 2010 to 10.8% in 2060, an increase of 4 percentage points.



- Spending on NZ Super is projected to grow, from 4.3% of GDP in 2010 to 7.9% in 2060, an increase of 3.6 percentage points.



[29] For more detail about the "Resume Historic Cost Growth" scenario, see Matthew Bell (2013). Fiscal Sustainability Under An Ageing Population Structure. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position, and Paul Rodway (2013). Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position. Both papers are available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

Table 1 Treasury projections for government expenses, revenue and debt as % of nominal GDP under the "Resume Historic Cost Growth" scenario

% of nominal GDP	2010	2020	2030	2040	2050	2060
Healthcare	6.8	6.8	7.7	8.9	9.9	10.8
NZ Super	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 NZ Super)	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

Our full projections under the "Resume Historic Cost Growth" scenario are set out in Table 1 (this is the same table that appeared in the Summary). We assume that we collect tax revenue equal to 29% of GDP over most of the projection period. This percentage is roughly consistent with our tax take in recent history, but of course different governments may wish to collect more or less tax in the future. One consequence of holding tax revenue constant as expenses increase, however, is that from the mid-2020s revenues become insufficient to cover expenses. Accordingly, governments must borrow to make up the difference. Table 1 reflects the cost of this borrowing in the line "Debt-financing costs", which shows these costs increasing over time. The bottom line "Net government debt" also increases as a consequence.

This table does not explicitly set out amounts used for capital expenditure (that is, spending on buildings, roads, and other infrastructure). The "Total government expenses" line is just what we call "operating" expenses. But we do make some assumptions about capital spending when we produce these projections. Amounts borrowed for capital expenditure are reflected in the "Net government debt" line, and accordingly affect the size of the expense category "Debt-financing costs".

Higher-than-anticipated productivity growth (within reasonable bounds) would not alter these projections significantly. If our economy grows more quickly than expected, on a permanent basis, the higher tax revenue would be useful in managing future fiscal pressures. However, most spending areas would face additional pressures – both from wages being higher and from payments such as NZ Super being linked to wage growth.

Similarly, a birth rate that is higher than we expect would not make much difference either. Before they become taxpayers, contributing to government finances, those extra children would need medical care and education, increasing cost pressures in those areas. Eventually they would become taxpayers, but we will need to address our long-term fiscal pressures before then.

WHAT ASSUMPTIONS UNDERPIN OUR PROJECTIONS IN THE "RESUME HISTORIC COST GROWTH" SCENARIO?

We used the Treasury's Long-Term Fiscal Model to put the projections in Table 1 together. We started by using the 2013 *Budget Economic and Fiscal Update* spending forecasts until the end of the 2014/15 fiscal year.[30] This is shorter than the forecast period in the *Budget Economic and Fiscal Update*, and it represents a change in practice from our 2006 and 2009 Statements, in which we used the most recent *Budget Economic and Fiscal Update* forecasts for the whole of the forecast period.

The reason for this change is that the 2014/15 fiscal year is the last year that the current Government will set the Budget. 2015/16 is the start of a new parliamentary term. Regardless of the composition of the Government in 2015/16, legally it will be a new Government. It may be that the new Government directly continues the current Government's fiscal strategy, or adopts a strategy that is very similar. But we cannot assume that. Accordingly, from 2015/16, we project the spending pressures that would build over time under the "Resume Historic Cost Growth" scenario. This scenario assumes that different spending categories will revert to their historic rates of growth per recipient (which are different for different spending categories), taking into account likely future economic and demographic factors, and assuming that current legislative settings do not change. The projections are intended to be a "what if" scenario.

As is implicit in the idea of a "what if" scenario, **the projections are not a prediction for how expense areas will actually grow.**

In terms of tax revenue, which makes up most of core Crown revenue, we assume that tax revenue will rise gradually between now and 2020, when we project it will return to its 2001 to 2012 average of around 29% of GDP (tax revenue is somewhat depressed right now for cyclical reasons, hence our projecting it to rise again to its recent historical average). From 2020, we assume that tax revenue will remain constant at 29% of GDP. A totally stable tax take each year is in fact very unlikely – tax revenue fluctuates owing to the economic cycle and also owing to changes in government policy. However, we assume tax revenue stays at its long run average in order to show the growing gap between expenses and revenue that arises if we assume that our tax take will be broadly similar in size (in relative-to-GDP terms) to what it has been in recent history.

Since our projections hold tax revenue constant as a percentage of GDP, where revenues are insufficient to cover expenses the implication is that governments must borrow. Accordingly, we project "Debt-financing costs" as an item of core Crown expenses, which increase over time in our projections. We also project the path of core Crown net debt, which also increases over time in our projections.

Both expenses and revenues are affected by the assumptions we make about demography (like longevity and fertility) and the economy (such as how many people will be working, and how productive we will be). The projections in this table are very sensitive to those assumptions.

In terms of demography, we use Statistics New Zealand's median projections to make assumptions about the birth rate and life expectancy. We also use Statistics New Zealand's assumptions about net migration – the number of people moving to New Zealand minus the number leaving in any one year.

For example, Statistics New Zealand's median projections show life expectancies continuing to rise over time and reaching 88.1 years for men and 90.5 years for women in 2061. This life expectancy assumption we use here is higher than that used in our 2009 Statement, as since then Statistics New Zealand has revised its life expectancy assumptions upwards. It may be that even the new assumptions turn out to be too low. That would make our government spending projections too low, as people living longer would boost the costs of NZ Super. It may be that our adjustment task is harder than we think.

In terms of economic assumptions, our projections incorporate assumptions about average hours worked, productivity growth, workforce participation, inflation, and interest rates. All of these assumptions affect the path of our projections.

For example, we assume annual productivity growth of 1.5%. Treasury research suggests this is a reasonable assumption for the future.[31] However, we might be wrong. Productivity growth could be lower than what we project. Although less tax would be collected, lower productivity growth would also slow the projected growth of many expense categories. For instance, a major driver of future expenses is the wages of public servants – doctors,

[30] The 2013 *Budget Economic and Fiscal Update* is available at www.treasury.govt.nz/budget/2013.

[31] Mario Di Maio (2013). External Influences on New Zealand's Economic Potential. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. This paper contains a discussion of the possible future growth path for New Zealand and the various influences on it.

teachers, and others. And lower productivity growth implies lower wage growth.

Our projections are sensitive to the assumptions we made in producing them. But changing our assumptions within reasonable parameters does not make much difference to the overall projections. In fact, others have come to essentially the same conclusion as us: over time we will see a growing gap between government expenses and revenue if we make no policy changes.[32]

Annex 2 to this Statement contains a table of our key modelling assumptions and also notes whether those assumptions have changed from those we used for our 2009 Statement.

THE PROBLEM OF ACTUAL NUMBERS VERSUS PROJECTED NUMBERS

The 2010 column in Table 1 is different from the 2020-2060 columns. The numbers in the 2010 column reflect what our actual measures of expenses, revenue, and debt were in that year. The 2020 onwards columns reflect projected numbers. One important difference between historical years and projected years is that historical years take into account economic cycles, whereas projected years cannot (as we do not know when cycles will occur in the future or how big they will be).

Some of the numbers in the 2010 column reflect the impact of cycles. For example, welfare expenses tend to be higher in the downturn part of a cycle, as more people need to be supported through unemployment. Also, tax revenues tend to be lower in a downturn.

Because many of the numbers in the 2010 column reflect cyclical factors, for some lines in Table 1 the change between 2010 and 2020 looks more significant than it really is. For example, Table 1 shows welfare expenses declining from 6.7% of GDP in 2010 to 4.8% of GDP in 2020. However, we spent an unusually high amount on welfare in 2010, owing to being in an economic downturn. The decline in spending in 2020 is best thought of as a return to a longer-term average, rather than a particularly significant drop.

> WE FACE A FISCAL CHALLENGE, BUT IT IS MANAGEABLE IF WE START EARLY

The Treasury's advice is that allowing the "Resume Historic Cost Growth" scenario to eventuate would not be prudent, even in the medium term. There are many ways we could change current settings to adopt a more prudent fiscal path, including both spending and revenue changes, and Part 2 of this Statement models some examples.

However, early action is crucial. The more we delay returning to a prudent level of government debt, the larger our debt-financing costs will be. That means that when we ultimately decide to adjust spending, revenue, or both in order to return to a prudent debt level, the job will be bigger than it would have been had we started immediately. First, we will need to take action to reduce the deficit. But that will not be enough. After addressing the deficit, we will need to address the level of debt we have let accumulate during the period over which we ran deficits. Delaying adjustment turns one task into two, and means that the eventual adjustments will have to be more significant and will take longer to implement.

A stylised model can estimate how long it would take us to reach a net government debt level of 20% of GDP if we assume that annual adjustment cannot be too steep, after delays of different periods:

- If we delay five years and keep to the fiscal path set out in the "Resume Historic Cost Growth" scenario, it could take us 10 years to get back to net government debt at 20% of GDP.
- If we delay 10 years, it could take us 19 years.
- If we delay 13 years, it could take us 30 years.[33]

These figures argue for early adjustment as a way of managing the size of the adjustment we must make.

[32] For example, Creedy and Makale project social expenditures in New Zealand over a 50-year period. They use a stochastic approach that uses categories of social spending, decomposed by age and gender. They generate projections with accompanying confidence bands by allowing for uncertainty about fertility, migration, mortality, labour force participation and productivity. In their "benchmark" case, the ratio of expenditure to GDP is projected to rise from 25% in 2011 to 28% in 2061. See John Creedy and Kathleen Makale (2013). Social Expenditure in New Zealand: Stochastic Projections. *New Zealand Treasury Working Paper 13/07*.

[33] Matthew Bell (2013). Fiscal Sustainability Under An Ageing Population Structure. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

THE CURRENT FISCAL STRATEGY AS AN EXAMPLE OF EARLY ACTION

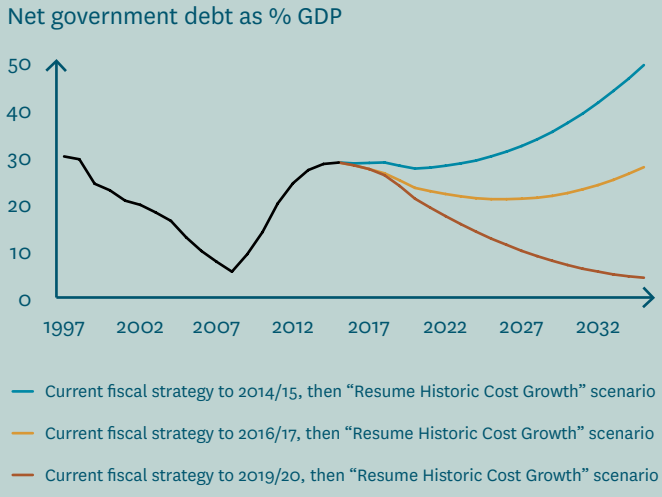
In its 2013 *Fiscal Strategy Report*, the Government indicated that it intends for net government debt to be no higher than 20% of GDP by 2020.[34] By stating this goal, the Government is signalling that it will adopt a more constrained – and prudent – fiscal path than this Statement's "Resume Historic Cost Growth" scenario implies.

The current fiscal strategy involves firm expenditure control through annual operating allowances (best thought of as discretionary new spending), coupled with ongoing efficiency savings by finding new ways to work with existing spending (for example, the "Investment Approach" to welfare spending),[35] as a way of reaching net government debt at no higher than 20% of GDP by 2020. The strategy also involves government spending falling as a share of GDP.

This approach is not the only way to reach a goal of net government debt at no higher than 20% of GDP by 2020, and other governments might make different – and equally prudent – choices.

> FOLLOWING THE FISCAL STRATEGY IN THE MEDIUM TERM WOULD PUT FUTURE GOVERNMENTS IN A STRONGER POSITION

Figure 4 Three "what if" paths for net government debt[36]



If we followed this fiscal strategy, it would make a significant – and positive – difference to the fiscal position of governments in the 2020s and beyond. The size of the difference depends on exactly how long we follow this strategy for.

Figure 4 sets out three "what if" tracks for net government debt:

- the net government debt path in the "Resume Historic Cost Growth" scenario (which assumes that we follow the current fiscal strategy until the end of 2014/15)
- the net government debt path we could have if we followed the current fiscal strategy until the 2016/17 fiscal year, and
- the net government debt path we could have if we followed the current fiscal strategy until the 2019/20 fiscal year.

Figure 4 shows that the longer governments follow the current fiscal strategy – or something like it – the more the fiscal position in the 2020s and beyond improves. Long-term cost pressures would still exist and need to be addressed, but a prudent fiscal strategy over the medium term will give future governments a wider range of choices about how to address them and more time over which to do it.

> THE CURRENT FISCAL STRATEGY WILL REQUIRE ONGOING PRIORITISATION AND SOME TRADE-OFFS AMONG COMPETING PRIORITIES

Sticking to the current fiscal strategy over the medium term puts future governments in a stronger position than they would be under this Statement's "Resume Historic Cost Growth" scenario. But in common with all ways of managing future fiscal pressures, this strategy is likely to require trade-offs.

In order to meet a goal of net government debt at 20% of GDP or under by 2020, and assuming governments make no changes to taxes, total spending growth will need to

[34] 2013 *Fiscal Strategy Report*. Available at http://www.treasury.govt.nz/budget/2013.

[35] This Statement discusses the Investment Approach in more detail in Annex 1: Supplementary material on the future path of government spending and tax - Welfare.

[36] In projecting the net government debt path for the lines "Current fiscal strategy until 2016/17, then 'Resume Historic Cost Growth'" and "Current fiscal strategy until 2019/20, then 'Resume Historic Cost Growth'", we assumed that (1) annual operating allowances will be those set out in the 2013 *Budget Economic and Fiscal Update*; (2) those operating allowances are allocated between different expense areas consistently with how they have been allocated in recent years; (3) the Government makes no tax policy changes prior to 2020; and (4) the Government makes no policy decisions that affect major long-term cost drivers.

be restricted to an average of just over 2% each year in nominal terms (that is, without adjusting for inflation).[37] This growth rate compares to an average nominal annual growth rate of total government spending of over 5% since 1997.

Total spending growth is only part of the story, however. The parameters of some spending areas are set in legislation – for example, working-age welfare benefits and NZ Super. Those expenses grow (or in some cases shrink) automatically as people become eligible for them, and the only way governments can control this growth is by changing legislation. Other expenses – such as spending on healthcare, education, and justice – are in a sense discretionary in that they grow only if governments decide to spend more money on them. Governments allocate new spending to these areas by operating allowances.

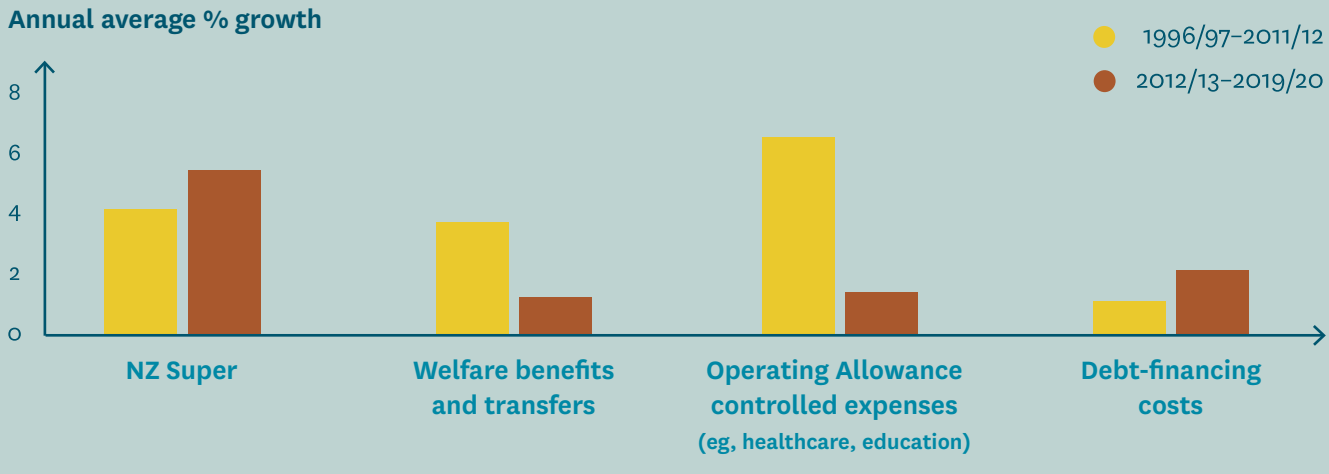
The amount spent on NZ Super will grow significantly over the rest of this decade. In just one year, between February 2012 and February 2013, the number of people receiving NZ Super payments grew by over 27,000, which is close to five times the annual rate of growth of a decade previously. Between now and 2020, we can expect the number of people receiving NZ Super to grow by over 150,000. These increased numbers translate into increased spending. As Table 1 earlier showed, NZ Super expenses were 4.3% of GDP in 2010 but are projected to be 5.1% of GDP in 2020.

In a world where total government spending must be constrained in order to achieve a prudent level of government debt, growth in numbers receiving NZ Super means that NZ Super payments will start to take up a bigger share of total government new spending than they have in the past. The amount available for discretionary new spending on healthcare, education, justice, and all the other areas of government spending that are controlled via operating allowances will shrink over time relative to GDP. The 2013 *Fiscal Strategy Report* reflects this – it uses the same expense track for NZ Super as the "Resume Historic Cost Growth" scenario, and accordingly shows relatively small operating allowances over the next few years.

Figure 5 sets out the projected rates of growth (in nominal terms) across the categories of NZ Super, welfare benefits and transfers, debt-financing costs, and expenses that are controlled by operating allowances if net government debt is to reduce to under 20% of GDP in the 2020/21 fiscal year, assuming no tax increases.[38] It sets out these growth rates alongside the growth rates these expense categories experienced between 1997 and now.[39]

Ongoing efficiency savings and trade-offs between different priorities are likely to be required in order to achieve this implied path for the expense classes that are controlled by operating allowances.

Figure 5 Implied growth in different expense categories between now and 2019/20 versus actual growth in different expense categories from 1996/97[40]



[37] This is the spending path implied by the Government's 2013 *Fiscal Strategy Report*, which projects net government debt to reach 17.6% of GDP in the 2020/21 fiscal year.

[38] Figure 5 uses the future operating allowances indicated in the 2013 *Budget Economic and Fiscal Update*.

[39] There are some government expenses that this graph does not show, for example transport expenses. The expenses not shown are a fairly minor part of total expenses. Note also that this graph shows only gross spending on each expense category, when in reality some kinds of spending also imply revenue offsets (for example, people pay tax on NZ Super payments).

[40] We used the period from 1997 as fiscal data prior to 1997 is prepared on a slightly different accounting basis and is therefore not strictly comparable.

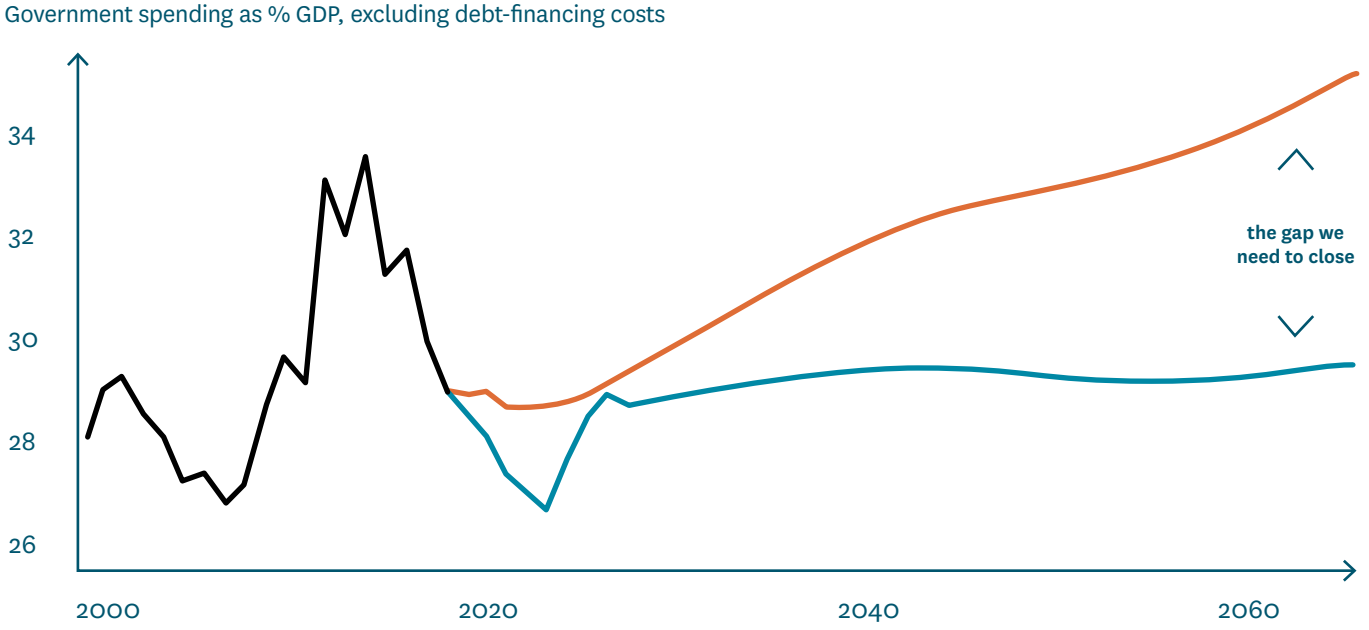
D. How should we think about the size of the adjustment we need to make?

One way of thinking about the size of the long-term policy changes that need to happen is by comparing the spending path that the "Resume Historic Cost Growth" scenario implies and the spending path that would be necessary to achieve net government debt at 20% of GDP as a long-term average, assuming we do not collect more tax. The selection of 20% net government debt as an average over time is not intended to represent a Treasury recommendation.[41] Rather, it is a benchmark level that is within the range of debt levels that past governments have considered "prudent".

Figure 6 below shows two "what if" spending paths:

- **The blue "Spending path that maintains 20% net debt"**, which tracks the average spending path that would allow us to maintain net government debt at an average of 20% of GDP from 2020, assuming our tax take remains constant at 29% of GDP; and
- **The orange "Spending path under 'Resume Historic Cost Growth' scenario"**, which tracks the average spending path that we would see if expense areas grow at the rates we have seen historically, also taking into account current legislative settings and demographic changes. This is the expense line implied by Table 1.

Figure 6 Two government spending paths – an illustration of the gap we need to close



[41] While we have recommended that net government debt be reduced to 20% of GDP or below by 2020, we have not made any recommendations about prudent debt levels beyond that date.

Both lines on Figure 6 track "primary" expenditure. That is, they do not include debt-financing costs. For the blue "Spending path that maintains 20% net debt", debt-financing costs would be fairly minimal. But for the orange "Spending path under 'Resume Historic Cost Growth' scenario", debt-financing costs would increase over time, assuming no revenue adjustments, eventually becoming quite significant.

The gap between the two lines illustrates the gap governments need to close. In 2060, there is an annual gap of around 5.5% of GDP (excluding debt-financing costs) between the spending path under the "Resume Historic Cost Growth" scenario and the spending path that maintains net government debt at 20% of GDP on average, assuming no tax increases.[42]

The task of governments is to move the two lines closer together. Broadly speaking, there are three ways we could do that:

- we could move the blue line upwards by collecting more tax than 29% of GDP, meaning that we could spend more and still achieve an average net government debt level of 20% of GDP
- we could move the orange line downwards by reducing growth in expenses, or
- we could do a bit of both.

WHAT IS HAPPENING AT THE BEGINNING OF THE BLUE LINE?

The blue "Spending path that maintains 20% net debt" line in Figure 6 has an unusual shape. From 2013 to 2020, it essentially reflects the actual spending path set out in the Government's 2013 *Fiscal Strategy Report* (before 2013 it reflects historic numbers). That is, between 2013 and 2020 it shows the spending path required to achieve the goal of 20% net government debt by 2020 (assuming no tax increases).

However, beyond 2020, the course the blue line takes is driven by our modelling assumptions. One result is that between 2021 and 2023, the line rises again quickly, before flattening out.

The reason for this quick rise is that producing the blue line, we assume that net government debt will be at 20% of GDP on average over time. This assumption means that once the 20% debt target is reached, as it is in 2020, our model needs to make spending rise again (to some extent) to maintain an average debt level of 20% of GDP. Hence the rise in spending from 2021. If the line rose more slowly, the average debt level over time would be lower than 20% of GDP.

So the unusual shape of the blue line is driven by the fact that it puts two things together: an actually planned spending path, and an assumption-driven spending path. The assumption-driven spending path provides a simple view of the widening gap between the spending path implied by the "Resume Historic Cost Growth" scenario and the average spending path necessary to maintain a steady level of government debt (not taking the impact of economic cycles into account).

[42] 5.5% of GDP is just the "primary" gap. If the gap is actually allowed to grow over time it would be far greater than 5.5% of GDP, owing to the effects of compounding debt-financing costs.

HOW MIGHT DEBT-FINANCING COSTS AFFECT THE SIZE OF THE POLICY ADJUSTMENT THAT MUST BE MADE?

In some ways Figure 6 under-represents the size of the gap that needs to be closed. As mentioned earlier, neither of the two lines on Figure 6 includes debt-financing costs. But if governments in fact allowed spending to grow along the path indicated by the orange line, and made no compensating changes to increase tax revenue, our expenses would quickly outstrip our revenue, meaning that we would need to borrow increasing amounts. That means that as well as the expenses shown in the orange line above, we would also need to pay interest on the money we have borrowed.

The existence of debt-financing costs – despite the fact that Figure 6 does not show them – has implications for the timing of the adjustment we must make. If we make adjustments – either to spending or to revenue – immediately, significant debt-financing costs need never arise (debt-financing costs at some level will almost always exist, however, as even a prudent level of debt attracts interest).

However, delaying adjustment means that debt-financing costs start to grow and the eventual adjustment path becomes two-pronged. As discussed in the previous section, we will need to address both the deficit (which grows over time) and the debt that accumulated during the period over which we ran deficits. So we might say that Figure 6 represents the size of the gap we need to close reasonably accurately if we make adjustments immediately, but it under-represents the size of the adjustment if we delay.

WHY IS FIGURE 6 HALF JAGGED AND HALF SMOOTH?

Up until 2012, Figure 6 shows our actual spending path between 1997 and 2012. Then to 2015, it shows forecasts (which are similar to actual numbers in that they take into account economic cycles). However, from 2016 onwards, this graph shows projections – what our spending path could be under certain assumptions. Actual data take into account cyclical fluctuations and government reactions to them. For example, governments tend to spend more on welfare benefits when the economy is going through a downturn.

Actual data also reflect ongoing policy decisions, whereas the "Resume Historic Cost Growth" projections do not. Some of the "jaggedness" on the left of Figure 6 represents government decisions to increase or decrease spending in certain areas.

Compounding these impacts, GDP fluctuates over economic cycles. Since government spending is represented here as a percentage of GDP, it appears to fluctuate more than if it were represented in dollars.

Our projections from 2016 are shown as smooth lines. There will be economic cycles in the future, but we cannot predict when they will occur or how big they will be, so our projections do not show them. Rather, they show two average spending paths given certain assumptions. In reality, any future spending path will look just as jagged as our past one.

E. What should we think about when making policy decisions?

Part 1 of this Statement has outlined the long-term fiscal challenges New Zealand faces. Part 2 sets out some illustrative policy changes that could put us in a more sustainable long-term fiscal position.

We need to think beyond just debt levels and also consider how different policy options affect people's living standards generally, taking into account a broad range of dimensions.

The Treasury developed its Living Standards Framework to help people think of the various impacts of policy choices.[43] Living standards encompass much more than just income or GDP. They also include a broad range of factors that affect the well-being of both the individual and society, such as trust, education, health and environmental quality. As a prompt for the kinds of dimensions that might be relevant when assessing policies, the Treasury created the Living Standards Pentagon.

Figure 7 The Treasury's Living Standards Pentagon

The five points of the pentagon serve as headings for different policy objectives and therefore different kinds of impacts to consider when assessing the options for achieving fiscal sustainability. They are not necessarily mutually exclusive – some impacts might fit equally well under two or more headings.

[43] More information about the Treasury's Living Standards Framework is available on its website, at www.treasury.govt.nz/abouttreasury/higherlivingstandards.

HOW DOES THE LIVING STANDARDS FRAMEWORK APPLY TO CHOICES WE MIGHT MAKE TO MANAGE LONG-TERM FISCAL PRESSURES?

Sustainability for the future is the first dimension we need to think about. In the context of this Statement, the most relevant component of sustainability is fiscal sustainability. Will a particular change actually save money or increase revenue? For example, collecting more tax is not just a matter of increasing tax rates. Tax changes affect people's behaviour, which sometimes means the Government collects less tax than it might hope. An increase in the corporate tax rate could make it attractive for multinational companies to structure their profits away from New Zealand.[44] We need to think about these possible second-round impacts when considering the impact of policy changes on fiscal sustainability.

Sustainability is not just about money, however. When thinking about possible policy changes, we need to think about whether they are likely to endure. Flexibility is part of this question – if it turns out that we are wrong about what the future is like (and it is unlikely we will be exactly right), will our policies be flexible enough to adapt to changed circumstances? Another element of sustainability is suitability: if policies do not reflect what the electorate in general wants, they are unlikely to endure.

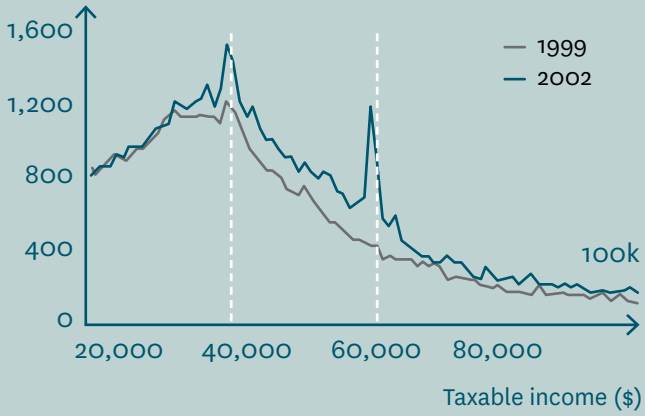
"To be successful and durable a policy change must lead at some point to consensus or at least to broad public acquiescence amounting to consensus by default."[46]

DO NEW ZEALANDERS CHANGE THEIR BEHAVIOUR WHEN TAX RATES CHANGE?

Recent evidence suggests that some New Zealanders do respond to tax rate changes. In the 2000/01 tax year, the Government introduced a suite of tax changes, including a new top marginal tax rate of 39%, from 33%. The 39% tax rate applied to income above $60,000.

A quick and telling indication of people's responses to this change can be seen in Figure 8. Figure 8 shows the distribution of personal taxable income in 1999 – before the announcement of the new rates – and the distribution of income in 2002, once the changes had been introduced and people's behaviour had adjusted. It shows that people responded to the introduction of the 39% tax rate by clustering their personal income just below the marginal rate thresholds at $38,000 and $60,000.

Figure 8 Distribution of personal taxable incomes in 1999 and 2002[45]



[44] Inland Revenue Department (2009). Company Tax Issues Facing New Zealand. Background paper prepared for Session 4 of the Victoria University of Wellington Tax Working Group. Available at www.victoria.ac.nz/sacl/cagtr/twg.

[45] Simon Carey, John Creedy, Norman Gemmell and Josh Teng (2013). Regression Estimates of the Elasticity of Taxable Income and the Choice of Instrument. *New Zealand Treasury Working Paper 13/08*.

[46] Colin James (2012). Making Big Decisions for the Future. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

CHANGES IN GOVERNMENT SPENDING AND TAXES CAN ALSO HAVE CYCLICAL IMPACTS ON THE ECONOMY

Changes in government spending or taxes can add to or subtract from existing pressures in the economy.

Other things being equal, government spending or tax reductions can add to inflation. Inflation can prompt a monetary policy response, so interest rates might be higher than they would otherwise be. Higher interest rates are likely to lead to a stronger New Zealand dollar. Over time, higher interest rates and a higher exchange rate can affect people's decisions about where to invest resources.

The precise impacts of changes in government spending depend on a number of factors, particularly the amount of spare resources in the economy. It is important for governments to be aware of the potential broader impacts that their policies might have.

We also need to consider the **economic growth** impacts of different policy choices. Economic growth is important because higher incomes give people choices they would not otherwise have. New Zealand is also exposed to international pressures. If we fail to match other countries, we can expect many skilled people to leave for higher-paying jobs overseas, and we will not have the level of resources that other countries have to address social needs.

Theory and evidence suggest that high government spending as a share of GDP can harm economic growth because of the economic costs of raising taxes to finance expenditure.[47] We should think carefully, then, about options that involve increased government spending. But it's not as simple as saying that all increased government expenditure harms growth. Spending on investments like education and infrastructure can be growth-supporting. And spending on the welfare system, for example, has been assessed as good, bad, and neutral for growth by different studies.[48]

Also, the type of tax used to finance government spending matters. Corporate taxes are generally thought to be the most damaging to growth, followed by personal income taxes, then consumption taxes (like GST). Taxes on immovable property, such as land, are much less distortive.[49]

The **equity** impacts of different policy choices are some of the most difficult to analyse. This is partly because "equity" means different things in different contexts, and to different people.[50] Ideas of equality of opportunity, "deservingness", playing by the rules, and protecting the vulnerable are all bound up in the word "equity".

At a minimum, we need to think about who bears the costs and benefits of particular policy changes. Few changes will benefit everybody. Where a policy option would reduce projected spending growth, we need to think about which individuals will not receive services they otherwise might have received. Where an option involves increasing taxes relative to GDP, we need to think about the distributional impacts of different tax changes. Does a tax increase affect some more than others? Who would be affected more?

Questions of inter-generational equity are also relevant, as policies can have different impacts on different age groups. Age-based entitlements like NZ Super illustrate this clearly. Contrast our retirement income system, where taxpayers support those receiving NZ Super, with one where people pay into a fund while they are working, then get that money (plus investment returns) back as income when they reach eligibility age. This is sometimes referred to as prefunding. If we changed to a prefunded system, different generations would feel the impact differently. In the years in which we transitioned, current NZ Super recipients would still receive NZ Super funded by the taxes of working-age people. But those working age people would also be contributing to a fund for their own NZ Super payments. So a change from one system to another has a "transitional generation" issue.[51]

[47] For a discussion of the high-level economic growth impacts of government spending, see Diana Cook, Carston Schousboe, and David Law (2011). Government and economic growth: Does size matter? *New Zealand Treasury Working Paper 11/01*.

[48] See Cook, Schousboe, and Law, above note 47.

[49] Victoria University of Wellington Tax Working Group (2010). *A Tax System for New Zealand's Future*. Available at www.victoria.ac.nz/sacl/cagtr/twg.

[50] For a discussion of the many different interpretations of "fairness" or "equity", see Rebecca Prebble (2012). The Long-Term Fiscal Living Standards Framework: Addressing Fairness. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[51] This transitional generation issue exists if we were to move to a system of compulsory private savings accounts too, as this possibility also involves each generation paying for its own costs in retirement. See Anne-Marie Brook (2013). Policy Options to Narrow New Zealand's Saving – Investment Imbalance. Paper presented at the Reserve Bank-Treasury Exchange Rate Policy Forum. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

On the other hand, not changing retirement income policy settings can also can have intergenerational impacts. If we leave current settings as they are, the system expands – as people live longer they receive NZ Super payments for longer on average than their predecessors. This expansion implies an increased intergenerational transfer from taxpayers to superannuitants.[52]

The specifics of policy change affect both intra- and intergenerational equity, and sometimes there may be trade-offs between the two. Immediate policy action to close our long-term fiscal gap completely – whether by increasing taxes, cutting spending, or a mix of both – might worsen intra-generational equity (for example by widening income inequality). However, it would be arguably good for intergenerational equity, as future taxpayers would not need to fund some costs of current spending.

Closing the long-term fiscal gap more gradually might have less of an impact on current inequality and poverty levels. But it would arguably be less fair on future taxpayers, as they would continue to fund higher government spending over the transition period.[53] There is no right answer to these trade-offs and it is very difficult to analyse them fully. Some would argue that comparing the fortunes of different generations is a futile task, even assuming those fortunes can be measured.[54]

Managing risks is another corner of the Treasury's Living Standards Pentagon. The different risks of policy options will be relevant in different contexts. Indeed, the view that policy change is desirable is a risk-management argument in itself. New Zealand's vulnerability to shocks means that not making adjustments and letting government debt rise would be a particularly risky position to take.

We need to consider other sorts of risks as well. For example, longevity risk is the risk that a person might run out of money before his or her death. NZ Super could be thought of as a risk-pooling mechanism that addresses this risk. We pay taxes to the Government, which pays NZ Super to every New Zealander (with some limited exceptions) from 65 until they die – whenever that is. Accordingly, the Government – or all taxpayers together – bears the risk that some people might live for longer than they are able to support themselves financially.

EQUITY AND TAX POLICY

When considering the equity of a tax change, or of a tax system as a whole, we generally talk in terms of vertical and horizontal equity.[55] Vertical equity is the idea that the tax system should take into account the relative positions of those on different income levels or in different circumstances. Most countries adopt a "progressive" tax rate structure – people on higher incomes are taxed at higher rates. Horizontal equity is the idea that those at similar income levels, or in similar circumstances, should have a similar tax burden.[56]

The introduction of a capital gains tax in New Zealand, if it occurred, might have implications for both horizontal and vertical equity:

> HORIZONTAL EQUITY

In the absence of capital gains tax, people are taxed when they become richer through a salary increase, but not when they become richer through an increase in the value of their shares or rental property. And yet these two situations could be seen as economically equivalent.

> VERTICAL EQUITY

The introduction of a capital gains tax would probably make our tax system more progressive, as better-off people tend to own more property and financial assets.[57]

[52] Andrew Coleman (2012). Intergenerational Transfers and Public Policy. Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[53] Omar A. Aziz, Chris Ball, John Creedy and Jesse Eedrah (2012). The Distributional Impact of Population Ageing. Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. See also Reform think tank (2012). Entitlement Reform. Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. Both available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[54] Bernard Cadogan (2013). Welfare Policy: Governance History and Political Philosophy. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. Cadogan argues that the fates of different generations are "incommensurable", as that term is used by Joseph Raz (1986). *The Morality of Freedom*. Chicago: Clarendon Press. To say that two things are incommensurable means that they are simply not comparable.

[55] Victoria University of Wellington Tax Working Group, above note 49.

[56] Victoria University of Wellington Tax Working Group, above note 49.

[57] However, how a capital gains tax would affect vertical equity depends to some extent on the base to which the tax is applied. See Inland Revenue and the Treasury (2009). The Taxation of Capital Gains. Background paper for Session 3 of the Victoria University of Wellington Tax Working Group. Available at www.victoria.ac.nz/sacl/cagtr/twg.

RETIREMENT INCOME AND NATIONAL SAVINGS

A recent study estimated the impact on national savings – the total of government and private savings – of three possible changes to retirement income settings from 2020.[58] The findings included the following:

- Lifting the age of eligibility for NZ Super from 65 to 67 could lead to a 38% improvement in cumulative national savings between 2020 and 2061.
- Indexing NZ Super payments by the average of wage inflation and general price inflation (currently NZ Super payments are effectively indexed to wage inflation) could lead to an 87% improvement in cumulative national savings.
- Introducing compulsory private saving and using accumulated balances to reduce NZ Super entitlements could lead to a 38% improvement in cumulative national savings. (This result depends on the specific design of the compulsory private saving scheme. The particular option modelled had 50% abatement of NZ Super against amounts saved.)

One potentially relevant risk is the macroeconomic risk associated with having relatively low rates of national saving. The persistent shortfall of saving relative to investment in New Zealand means we have relatively high rates of borrowing from overseas lenders to fund New Zealand's investment requirements.[59] This is reflected in our large net foreign liability position, which makes the New Zealand economy vulnerable to shocks. One way of addressing this vulnerability would be to encourage more saving, either by individuals or by the Government. Higher government saving could be achieved by running persistent fiscal surpluses. Private saving might be encouraged through tax policy, policies relating to retirement income, and policies that affect the housing market.

The Treasury's Living Standards Pentagon also prompts us to think about social infrastructure. Social infrastructure is closely related to the concept of social capital – the degree of trust in a society and the ability and willingness of people to work together for common purposes.[60] Social capital is important in underpinning both economic growth and personal well-being and resilience. Social infrastructure is the environment that allows social capital to grow. Many of the key institutions that underpin social capital, such as the rule of law, the democratic system, and access to important services, are part of our social infrastructure. The way the Government handles these areas – particularly the extent to which people see these as trustworthy and fair – can materially affect the level of social capital.

One way of thinking about social infrastructure is by considering the evolving role of the Government in New Zealand. The Government has always responded to changing needs. After the Great Depression and Second World War, the role of government expanded beyond the existing "last resort" safety net to a more generous welfare system. By the 1970s, following decades of sustained economic growth, the prevailing view was that the welfare system should allow all New Zealanders to participate fully in society.[61] However, the economic upheaval of the 1970s brought increasing fiscal pressures, and governments of the 1980s and 1990s wound back aspects of New Zealand's welfare system. While it was not a change to what we normally think of as the "welfare" system, one of the most significant changes over the last 50 years might be that we no longer expect there to be full employment.[62]

[58] David Law (2013). Retirement Income Policy and National Savings. Paper presented at the 2013 New Zealand Association of Economists Conference. Forthcoming as a New Zealand Treasury Working Paper.

[59] Savings Working Group (2011). *Saving New Zealand: Reducing Vulnerabilities and Barriers to Growth and Prosperity*. Final Report to the Minister of Finance. Available at www.treasury.govt.nz/publications/reviews-consultation/savingsworkinggroup/finalreport.

[60] There are in fact many different definitions of social capital, getting at similar but not identical ideas. This particular definition comes from World Bank (2001). *Understanding and Measuring Social Capital: A Synthesis of Findings and Recommendations from the Social Capital Initiative*.

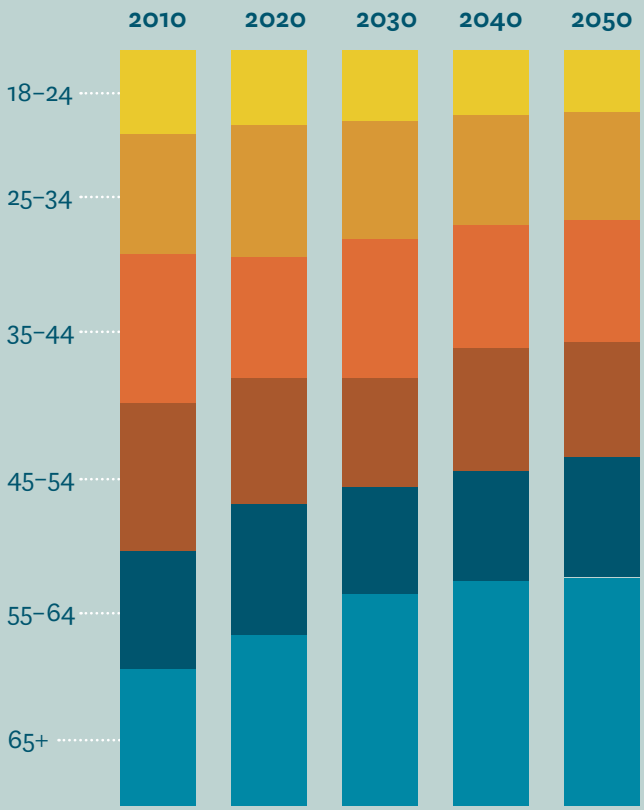
[61] As described by the 1972 Royal Commission on Social Security. Royal Commission of Inquiry on Social Security in New Zealand (1972). *Social Security in New Zealand*. Wellington: Government Printer.

[62] For a discussion of New Zealand's evolving social welfare system, see Michael Belgrave (2012). Social Policy History: Forty Years On, Forty Years Back. Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. Bernard Cadogan, above note 54, places the development of New Zealand's welfare state in the context of welfare systems around the world and throughout history.

CHANGING VOTING POPULATIONS

The Reform think tank in the United Kingdom analysed the likely age composition of the voting population in the future, using Statistics New Zealand's population projections.[63]

Figure 9 Projected New Zealand elector count by age group (% of total)



What society wants will be affected by the composition of society. Our society will be more diverse in the future, and it will also be older. An older and more diverse population might not make the same choices as a younger and more homogeneous one.

Whatever changes we make, there will be winners and losers. This is nothing new. Governments have frequently redrawn the balance between protecting society's most vulnerable members, allowing everyone to participate in society, and rewarding individual effort. The goal is a society that is fair to everyone, but "fair" has meant different things at different times. Changing existing arrangements may be an appropriate and even necessary response to changed circumstances,[64] but if changes would harm some groups, they should follow public engagement processes to draw out the trade-offs and build some degree of consensus about the way forward.

Many options for managing long-term fiscal pressures involve trade-offs across different dimensions of the Living Standards Pentagon. Frequently, fiscal sustainability will need to be weighed up against equity, economic growth, or social infrastructure. But there will also be options that reinforce the different dimensions, such as economic growth that is widely distributed and sustainable, or risk management – whether to people, the economy or the environment – that improves the economic and social outcomes for the country as a whole.

[63] Reform think tank (2012). Entitlement Reform. Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

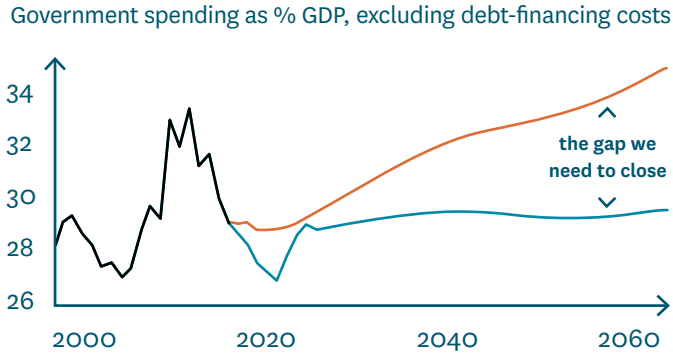
[64] Evans and Quigley characterise our social contract as a "relational" contract. Relational contracts are inherently flexible over time, and change in response to changing circumstances. See Lewis Evans and Neil Quigley (2012). Intergenerational Contracts and Time Consistency. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

F. What are some examples of changes we could make?

In what follows, we assess possible options that individually would get us closer – although not all the way – to a sustainable long-term fiscal position. As a benchmark for a sustainable long-term fiscal position, we use a long-term average of net government debt at 20% of GDP. At any particular time, net government debt would almost certainly be either lower or higher than that, as government debt fluctuates with economic cycles.

To demonstrate how much closer each option would get us to a sustainable long-term fiscal path, we will use the graph introduced in Section D:

Figure 10 Two government spending paths – an illustration of the gap we need to close



Essentially, what governments need to do is move the orange and blue lines on Figure 10 closer together. Neither of the two lines is set in stone. Governments can move the orange line down (ie, trim spending growth), move the blue line up (ie, increase taxes), or a mixture of both.

Since Figure 10 does not include debt-financing costs, it is best to think of it as showing the size of the gap we need to close if we take action within the next few years. If we delay, the gap will actually be rather larger than that represented here.

The options discussed here are not the only options. They are examples of the kinds of choices we could make, not necessarily choices the Treasury thinks we should make. The longer papers the Treasury has prepared on healthcare, long-term care, retirement income, education, welfare, justice, tax, and natural resources set out a much broader range of options for managing future fiscal pressures,[65] and Annex 1: Supplementary material on the future path of government spending and tax sets out some key points from this work.

[65] These papers are all publicly available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

THREE BROAD APPROACHES

We can think about three different broad approaches about how our future financial challenges should be addressed:

- **Government taxes more** as a percentage of GDP than it does currently.
- **Government restricts spending growth** in some areas, relative to historical growth rates. Spending in a particular area may still grow as a percentage of GDP, but not as much as it could grow.
- **Government reacts to demographic change.** Because one of the major drivers behind future financial pressures is population ageing, services are redefined to compensate for the fact that people are living longer, healthier lives.

In this part, we analyse some examples of policy options consistent with each of these broad approaches. They are not Treasury recommendations. They are illustrations of the kinds of policies governments could introduce.

G. Option: Government taxes more

In our "Resume Historic Cost Growth" scenario, we hold tax revenue constant at 29% of GDP, but this is not a prediction of the future size of the tax take. In fact, it is unlikely that all future governments will see 29% of GDP as the optimal amount they should collect in tax. Some governments will collect more than that, others less.

One reason for collecting more tax might be to fund spending increases in some areas. Options for raising more tax revenue include:

- introducing a new kind of tax
- increasing the existing tax rates
- extending the kinds of income that are subject to income tax, and
- making no adjustments to compensate for people moving into higher tax brackets as their wages rise through price inflation and real wage growth (sometimes called "fiscal drag" or "bracket creep").

This section gives more detail on two specific options: (1) only partially compensating for fiscal drag by indexing personal income tax thresholds to price inflation but not to real wage growth, and (2) increasing the GST rate to 17.5%.

Annex 1 discusses a broader range of options for raising more tax revenue.[66]

COULD WE BOOST TAX REVENUE BY INDEXING PERSONAL INCOME TAX THRESHOLDS TO INFLATION ONLY?

The projections in our "Resume Historic Cost Growth" scenario hold tax revenue constant at 29% of GDP. But holding tax revenue constant requires some assumptions about how governments will respond to the fact that people's pay rises over time, through the combined effect of price inflation and real wage increases through economic growth. As that happens, they move into higher tax brackets. We currently pay income tax of:

- 10.5% on income up to $14,000
- 17.5% on $14,001 to $48,000
- 30% on $48,001 to $70,000
- 33% above $70,000

As people move into higher personal tax brackets,

[66] See also the Treasury (2013). The Role of Tax in Maintaining a Sustainable Fiscal Position. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. Victoria University Tax Working Group, above note 49, also sets out and analyses some options for potential tax changes.

governments collect more money. Since in New Zealand there is no automatic adjustment for this, governments must adjust tax thresholds periodically if they wish to compensate for this effect. Our projections that hold tax revenue constant at 29% of GDP assume that this periodic adjustment happens. Otherwise, we would expect to see tax revenue rising as a share of GDP.

Some other countries[67] do automatically adjust income tax thresholds to allow for price inflation (although usually not for real wage growth). So when people's wages rise owing to price inflation, they are not pushed into higher tax brackets. However, they are pushed into higher brackets if economic growth increases their wages in real terms.

New Zealand could introduce such legislation – and at the same time no longer make periodic adjustments. Legislation like this would mean that people would not find themselves paying more tax when all that has happened is that inflation has pushed their wages up. But it would also mean that governments would collect more tax revenue relative to a situation where they periodically adjust tax thresholds to compensate for both inflation and real wage growth. It would mean that over time, the government would collect more tax revenue as a share of GDP.

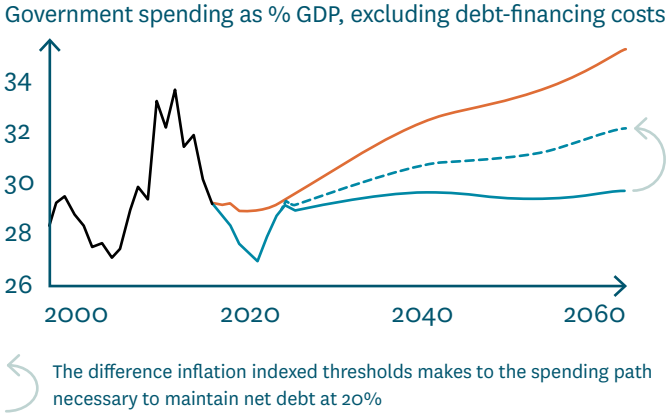
Figure 11 shows the difference such an adjustment would make to the government's fiscal position out to 2060. It shows three lines:

- **Our standard orange "Spending path under 'Resume Historic Cost Growth' scenario" line,** which tracks the average spending path we would see if expense areas grow at the rates we have seen historically, also taking into account current legislative settings and demographic changes.
- **Our standard blue "Spending path that maintains 20% net debt with tax revenue at 29% of GDP" line,** which tracks the average spending path that would allow us to maintain net government debt at an average of 20% of GDP from 2020, assuming our tax take remains constant at 29% of GDP (including the implicit assumption that governments will adjust tax thresholds to compensate for price inflation and real wage growth).
- **The dashed blue "Spending path that maintains 20% net debt with inflation indexed thresholds" line,** which shows how the spending path necessary to maintain net government debt at 20% of GDP changes if we index personal income tax thresholds to inflation.

Increasing the tax by indexing personal income tax thresholds to price inflation means that our spending can be higher and still allow us to have net government debt at 20% of GDP on average. The extra tax is represented by the difference between the solid blue and dashed blue lines.

As Figure 11 shows, the fiscal benefits of such indexing increase over time. As our gap grows, this approach continues to close about half of it.

Figure 11 Three government spending paths – the impact of inflation indexing tax thresholds



[67] For example, the United States.

HOW WOULD INDEXING PERSONAL INCOME TAX THRESHOLDS AFFECT OUR LIVING STANDARDS?

The change would mean that most people would eventually move into higher tax brackets. Currently around 10% of taxpayers pay the top tax rate of 33% on some of their income. Indexing personal income tax thresholds to price inflation (but not to real wage growth) could raise that to around 39% of people by 2060.[68] Eventually every full-time worker would be paying 33% tax on some of their income, although this would not happen until well after 2060.

Whether this impact is equitable depends on your point of view. On an individual basis, it seems reasonable: individuals will pay a higher share of their income in tax over time, but only if they actually earn more. The idea that people might move into higher income tax brackets as their incomes rise is one that people might be able to accept. However, on a population-wide basis, the impact of almost everyone moving into higher tax brackets is to make the tax system less progressive relative to a system where governments adjust thresholds to compensate for both price inflation and real wage growth (although the system would still be progressive overall).

We also need to consider the impacts that indexing personal income tax thresholds to inflation could have on economic growth. Essentially, this would be a personal tax increase so we might expect to see some dampening effect on economic growth via disincentives to work. This approach would raise the marginal tax rates faced by lower and middle income earners (although not top income earners whose income is already partially taxed at 33%), reducing incentives to work more or find better paying jobs. These disincentive impacts might be felt most acutely at the point where the tax and benefit systems interact. This approach would also raise the average tax rates that everyone pays, which could have implications for people's choices on whether to live and work in New Zealand.

However, this approach is likely to harm investment incentives less than an increase in all personal tax rates, as most saving and investment is made by higher income individuals who are already paying the highest tax rate of 33%.

LIVING STANDARDS IMPLICATIONS

Indexing personal income tax thresholds to price inflation but not adjusting for real wage growth would improve New Zealand's long-term fiscal position. It might be seen by some as an acceptable change, as people would only become liable to pay more tax as they become richer.

There are equity considerations though, as this approach would make our system less progressive (relative to a system that adjusts for the effects of both price inflation and real wage growth). Also, this approach would probably have negative economic growth impacts.

COULD WE INCREASE THE GST RATE TO COLLECT MORE TAX?

Another way of collecting more tax would be to increase the rate of GST. Currently, GST of 15% is charged on most purchases. We could raise it to, for example, 17.5% from the 2017/18 fiscal year.

To show the difference that would make to our long-term financial position, Figure 12 shows three lines:

- **Our standard orange "Spending path under 'Resume Historic Cost Growth' scenario" line,** which tracks the average spending path that we would see if expense areas grow at the rates we have seen historically, also taking into account current legislative settings and demographic changes.
- **Our standard blue "Spending path that maintains 20% net debt with tax revenue at 29% of GDP",** which tracks the average spending path that would allow us to maintain net government debt at an average of 20% of GDP from 2020, assuming our tax take remains constant at 29% of GDP.
- **The dashed blue "Spending path that maintains 20% net debt with GST at 17.5%" line,** which tracks the spending path that would allow us to have net government debt at an average of 20% of GDP from 2020 if we assume that the GST rate is 17.5% rather than 15%.

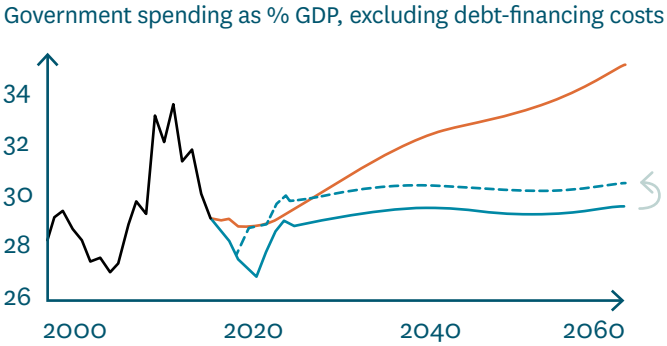
Increasing GST and therefore the amount of tax we collect means that our spending path can be higher yet still achieve a stable level of government debt over time.

As Figure 12 shows, the fiscal benefits of raising the GST rate to 17.5% are fairly modest but still useful. Governments would still need to take other actions to close the gap between spending and revenue, or pay more borrowing costs. A GST rate of 17.5% would increase our tax take by around 1 percentage point of GDP, bringing our total tax take to around 30% of GDP.

A rise to a GST rate of 20% would collect about twice as much additional revenue than a rise in GST to 17.5%.

[68] Norman Gemmell and John Creedy (2013). Can Automatic Tax Increases Pay for the Public Spending Effects of Population Ageing in New Zealand? Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

Figure 12 Three government spending paths – the impact of a 17.5% GST rate



HOW WOULD A GST INCREASE AFFECT OUR LIVING STANDARDS?

The equity impacts of a GST increase are complex to tease out. GST is a proportionate tax when measured on a lifetime basis, meaning that it is thought to affect people the same regardless of their level of income. On an annual basis, the distributional impacts of GST are more complicated. Measured as a proportion of expenditure, people of different incomes tend to pay about the same proportion of their expenditure in GST. But relative to incomes, lower-income people tend to spend more on GST relative to their incomes than higher-income people.[69]

A GST increase would also have different impacts on people of different ages. GST is often characterised as a tax on savings: a GST increase means that your savings can't buy as much as you had hoped. Older people are more likely to have significant savings, as they have had longer to accumulate them. In that sense, a GST increase might affect older people more.

On the other hand, assuming a GST increase lasts, the younger a person is the longer time they will pay the higher GST rate. So in that sense a GST increase would affect younger people more, although this is of course the case for any tax increase, not just GST, and any benefits of increased government spending the tax increase enabled can be enjoyed for longer too.

In terms of economic growth, consumption taxes like GST are generally considered to have lower adverse efficiency effects than other taxes, involving fewer disincentives for working, saving, or investing. However, GST is a tax on labour, as it means that people's wages cannot buy as much as they could before. That could affect some people's decisions about whether to live and work in New Zealand.

One risk associated with a GST rise is that it could lead to calls for certain goods to be exempted from GST. New Zealand's current GST regime is almost exemption-free, and consequently it is regarded as one of the most efficient consumption tax regimes in the world. Exemptions could undermine this efficiency without necessarily affecting the distributional impact of GST (distributional concerns being the main motivation for calls for exemptions). An exemption for food (other than takeaway or restaurant meals), for example, would not change the distributional pattern of taxable consumption over different income deciles.

There is also a risk around how much extra revenue we could expect to collect from a GST increase. It could encourage people to make more purchases from overseas, to the detriment of the local retail industry. Currently, people must pay GST on direct imports that are over $400 in value.[70] This threshold could be lowered, although there would be administration costs to enforcing GST payment.

LIVING STANDARDS IMPLICATIONS

Raising the rate of GST would improve New Zealand's long-term fiscal position, modestly with a rise to 17.5% and more significantly with a rise to 20%. There would be trade-offs, however. A GST rise would have fewer efficiency implications than some other revenue-raising options, but even so GST is still essentially a tax on labour so we would expect any economic growth effects to be negative rather than positive.

In terms of equity, the costs of a GST increase would be distributed proportionately across different income groups, at least if measured on a lifetime basis. A GST increase would also involve risks, namely that it could give rise to calls for exemptions and that it could prompt people to buy more goods from overseas, decreasing revenue and also potentially damaging the local retail industry.

[69] The Treasury (2010). Changing the Rate of GST: Fiscal, Efficiency, and Equity Considerations. Paper prepared for the Victoria University Tax Working Group. Available at www.victoria.ac.nz/sacl/cagtr/twg.

[70] This threshold is lower for goods that attract duty, such as clothing and shoes. See www.whatsmyduty.org.nz/faq for more details.

H. Option: Government restricts spending growth

The projections in our "Resume Historic Cost Growth" scenario – the standard orange line on the graph – show the possible path of government spending if we resume historical spending patterns, taking into account legislative settings as well as assumptions about the expected demand for certain services. However, the Government could make decisions that restrict spending growth to a lesser rate. This approach could make a significant difference to the long-term fiscal position.

There are many ways in which governments could restrict growth in government spending, such as those discussed in Annex 1 to this Statement. Here we look at one example: what would happen to the Government's overall financial situation if we allow healthcare spending to grow in the future, but not to the extent that the "Resume Historic Cost Growth" scenario suggests.

Healthcare spending is central to the long-term fiscal challenge because it is a large and growing part of total government spending. Controlling spending has historically been challenging, and this is likely to continue to be the case. Growth in healthcare spending is driven by many factors. While population ageing is important, it is not the most important factor. Other factors include: the development of new technologies and treatments, increasing public demand as national income increases, and rising costs owing to wage growth across the economy. Our projections suggest that these factors could push public healthcare spending from 6.8% of GDP in 2010 to more like 10.8% in 2060 if we revert to historical spending growth rates.[71]

There are arguments for letting public healthcare expenditure continue to grow. We will become richer over the next 40 years. So, as more and better healthcare will be available, perhaps it makes sense to spend a higher percentage of our national income on it. There will be trade-offs, of course, in the form of paying more tax or not getting so much from the Government in other areas, but we might be happy to make those trade-offs. Nevertheless, we need to make sure that we are maximising the returns from each dollar spent on public healthcare, even if spending is allowed to increase.

Most likely, what we do in the future will represent a compromise. Public healthcare spending might grow somewhat, but maybe not to the extent of reaching 10.8% of GDP in 2060. If public healthcare spending grew to 9% of GDP by 2060, rather than 10.8%, this would still represent considerable growth but would put less pressure on the overall fiscal situation.

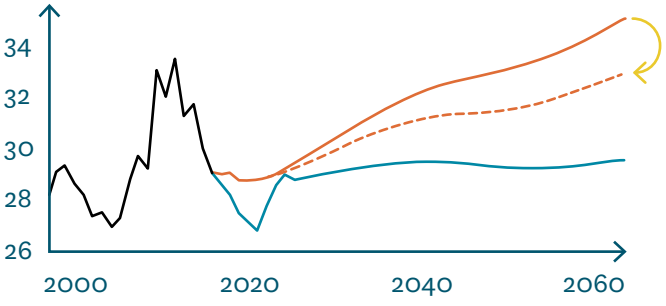
[71] The section "Healthcare" in Annex 1 of this Statement contains more detail about what is driving spending pressures in public healthcare. See also the Treasury (2013). Long-Term Health Projections and Policy Options. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Figure 13 shows how much difference it would make if public healthcare spending grew only half as much, reaching 9% of GDP in 2060 rather than 10.8%. It shows three lines:

- **Our standard orange "Spending path under 'Resume Historic Cost Growth' scenario" line,** which tracks the average spending path we would see if expense areas grow at the rates we have seen historically, also taking into account current legislative settings and demographic changes.
- **Our standard blue "Spending path that maintains 20% net debt" line,** which tracks the average spending path that would allow us to keep net government debt at an average of 20% of GDP from 2020, assuming our tax take remains constant at 29% of GDP.
- **The dashed orange "Spending path with lower growth in public health spending" line,** which shows how far constraining growth in public healthcare spending would bend the "Spending path under 'Resume Historic Cost Growth' scenario" line down.

Figure 13 Three government spending paths – the impact of lower growth in healthcare spending

Government spending as % GDP, excluding debt-financing costs



The difference lower health spending growth makes to the "Resume Historic Cost Growth" scenario.

It is important to recognise that even a lower projected spending growth track for public healthcare spending still implies that public healthcare spending will grow faster than the overall economy. Between now and 2060, we assume that economic growth will average around 2.1% per year in real terms. The scenario that produces the "Spending path with lower growth in public health spending" in Figure 13 assumes average real annual healthcare spending growth of around 2.8%. We set out below some ways in which we might be able to achieve growth in public healthcare spending that is below what our "Resume Historic Cost Growth" scenario suggests.

CAN WE GET MORE HEALTHCARE FOR LESS?

It is possible that we'll get better quality healthcare in the future for less money. Looking at other countries, we see that more money does not necessarily lead to better outcomes. We might be able to get more from our existing pool of resources. This is something we are always trying to do and it will continue to be important regardless of the level of future spending.

About 80% of the total amount spent on healthcare in New Zealand is spent by the Government. Our publicly funded system acts as a social insurance model, pooling resources and spreading risk. Private health insurance can play a similar role, but it doesn't cater well for certain groups, including the elderly, the chronically ill, or those on low incomes. Systems like ours also typically perform better in terms of containing overall healthcare spending, because the Government can control the amount of funding that is made available.[72] While other countries may have a different mix of public and private spending, there seems to be no single approach that is clearly better than the alternatives.

In looking at how to get the best possible health outcomes from the money we spend, we could consider ways of organising healthcare differently – to increase efficiency and reorient the system to deal better with the rising proportion of chronic conditions like diabetes and age-related disabilities. We could think about the skill mix of the health workforce, allowing professionals such as nurses and pharmacists to take on some of the tasks previously performed by doctors. We could also consider providing healthcare for certain conditions in more cost-effective locations (such as community settings rather than hospitals). Creating the right incentives for healthcare providers to deliver better quality healthcare and manage costs will also be important.

[72] Elizabeth Docteur and Howard Oxley (2003). *Health-Care Systems: Lessons from the Reform Experience (No. 9)* Paris: OECD.

ALTERNATIVE TREATMENT SETTINGS: AN EXAMPLE FROM THE AUCKLAND REGION

Primary Options for Acute Care (POAC) is a service run by district health boards (DHBs) in the Auckland region as an alternative to acute hospital admissions. The aim is to help manage the demand for hospital beds in the Auckland, Counties Manukau and Waitemata DHB regions. A range of community services are provided at no cost to the patient (except the initial GP consultation). These include: diagnostic procedures (eg, X-Ray, Ultrasound, ECG), incision and drainage, GP or nurse home visits, and intravenous therapies (antibiotics/ fluids). A standard requirement is that the patient would otherwise have been referred to hospital for an acute episode.

Studies of certain POAC interventions have found that the community-based setting for care is cost-effective. Patients are treated at a lower cost than would have been the case with hospital care.

An early evaluation found that 85% of patients were successfully kept out of hospital and reported high levels of satisfaction from general practitioners and patients.[73]

However, we should be careful not to view efficiency savings as an easy solution. Making significant savings in a system as complex as a public health system is a challenging task. We should not expect that this will be enough to meet future demand for extra spending.

CAN WE STOP PEOPLE NEEDING EXPENSIVE HEALTHCARE?

Increased focus on preventative medicine is often suggested as a way to control healthcare costs. It is true that many conditions that are ultimately very expensive to treat are also preventable. However, we should be wary of assuming we can get significant savings through preventative treatment. Preventative treatment is notoriously difficult to target effectively. And even when it is effective, it can sometimes end up costing more than the treatment for the prevented disease. That isn't a reason not to explore preventative care – it's better if people don't get sick – but we shouldn't assume that prevention always saves money.

LOOKING INTO PREVENTION

EXAMPLE 1

A recent study in Mexico found that, overall, community and public health interventions for alcohol use, tobacco use, and cardiovascular risks tended to have lower cost-effectiveness ratios than many clinical interventions.[74]

EXAMPLE 2

While recent OECD analysis on interventions to prevent obesity has found favourable cost effectiveness and distributional impacts,[75] programmes aimed at keeping individuals fit and in good health as they age rarely appear to be cost effective, or lead to overall reductions in healthcare costs.[76]

EXAMPLE 3

A US study that reviewed preventive services recommended by the US Preventive Services Task Force or the Advisory Committee on Immunisation Practices found only five out of 25 services to be cost saving.[77] They were: aspirin use, childhood immunisation, tobacco counselling and pharmacotherapy, pneumococcal immunisation, and vision screening.

[73] Harley Aish, Peter Didsbury, Paul Cressey, Janice Grigor, and Barry Gribben (2003). Primary Options for Acute Care: general practitioners using their skills to manage "avoidable admission" patients in the community. *New Zealand Medical Journal*, 116(1169).

WHAT OTHER CHOICES MIGHT WE NEED TO MAKE?

Given that we can't rely on efficiency savings and preventative treatment to eliminate spending pressures in the health system over the next 40 years, we will probably need to make choices about what the public health system provides and the way it is funded.

These are choices we need to think about and plan together. Constraints on the growth of public healthcare spending imposed without public support are unlikely to be sustainable over the medium term. That could result in a boom-and-bust cycle for healthcare spending that would make planning difficult and be unlikely to deliver optimal health outcomes. Equally, a sharp reduction in healthcare spending in response to a fiscal crisis is undesirable and would likely affect more vulnerable groups the most.

Figure 13 depicts a scenario – the dashed orange "Spending path with lower growth in public health spending" line – in which government spending on the health system increases more slowly than it would if it followed a historical growth pattern. Under this scenario, there would be a widening gap between what is provided free by the public health system and the full range of health services and treatments that are medically possible and that New Zealanders will want to access when they become unwell. This would have important equity implications.

It could mean that, as new treatments become available, the public system does not provide them – or at least not all of them. Some discipline in this area is sensible anyway. Not all new treatments represent good value for money. However, limiting the coverage of the public health system may increase the tendency for wealthier people to purchase additional healthcare or faster access privately.

Another way the Government could manage future costs would be to introduce partial payments from patients for more things. Partial payments might also reduce demand by making sure that only people who actually need medical help seek it. If we didn't have to partially pay for our doctor's appointments, we might go to the doctor whenever we have a cold, straining the system further.

LIVING STANDARDS IMPLICATIONS

Adopting a lower public healthcare spending growth track would improve the Government's long-term fiscal position, but there might be trade-offs in terms of equity and – potentially – our social infrastructure.

These trade-offs arise because it may be hard to reduce the growth in public healthcare spending significantly in a way that doesn't increase the gap between what is medically possible and what is publicly funded, meaning that those who have the means to purchase some treatments (either outright or through insurance) will do so. Other people may not be able to access those treatments.

Whether a lower public healthcare growth track is desirable ultimately depends on what New Zealanders want from the health system relative to other government services.

Getting the level of partial payments right is tricky though. If we introduce partial payments for a service for which there is a free alternative, people might use that alternative instead. For example, hospital admissions are free and it costs money to go to the doctor. This may result in more people going to the hospital with minor medical issues, compromising the efficiency of the health system. Also, partial payments could discourage people from seeing a doctor when they really need to. As a result, their quality of life may be diminished. They might also end up needing acute care for untreated conditions that could have been dealt with at lower cost if they had been addressed earlier. Partial payments can also be difficult for some people to pay, although this problem can be reduced by having no charge or lower rates for people on lower incomes.

[74] Joshua Salomon, Natalie Carvalho, Cristina Gutiérrez-Delgado, Ricardo Orozco, Anna Mancuso, Daniel Hogan, Diana Lee, Yuki Murakami, Lakshmi Sridharan, María Elena Medina-Mora, and Eduardo González-Pier (2012). Intervention Strategies to Reduce the Burden of Non-communicable Diseases in Mexico: Cost-effectiveness Analysis. *British Medical Journal*, 344(e355).

[75] OECD (2010). *Obesity and the Economics of Prevention*. Paris: OECD.

[76] Howard Oxley (2009). Policies for Healthy Ageing: An Overview. *OECD Health Working Paper* No. 42. Paris: OECD.

[77] Michael Maciosek, Ashley Coffield, Nichol Edwards, Thomas Flottemesch, Michael Goodman, and Leif Solberg (2006). Priorities Among Effective Clinical Preventive Services: Results of a Systematic Review and Analysis. *American Journal of Preventive Medicine*, 21(1), 52-61.

PART 2: HOW COULD WE GET NEW ZEALAND'S FINANCES ONTO A MORE SUSTAINABLE PATH?

I. Option: Government responds to demographic change

The ageing of our population is driving many – although not all – of the future financial costs that governments will face. One area of spending where this impact is particularly stark is NZ Super. Almost all New Zealanders are eligible for NZ Super payments once they turn 65. The changing structure of our population means that in the future there will be an increasing proportion of the population aged 65 and over relative to the rest of the population.

Over time, NZ Super payments will consume an increasing share of government spending if current legislative settings are retained. This leads many to question whether the legislative settings are the right ones for the future. The environment is also changing – in future more over-65s will be better placed to support themselves, both through better health and as a result of accumulating wealth through KiwiSaver and other voluntary saving. Over-65s are also more likely to be still working than they were in the past.[78]

This section examines two ways we could alter settings for NZ Super to make its fiscal impact more manageable in the future:

- raising the age of eligibility, on the grounds that people are living longer so they will still receive retirement income support from the Government for a long period, and
- slowing the rate of growth of NZ Super payments, on the grounds that since people will be receiving NZ Super for longer than their predecessors, the value of each individual payment should be reduced.

These are not the only ways NZ Super settings could be changed to manage long-term fiscal pressures, of course. For example, we could directly offset some NZ Super payments against accumulated KiwiSaver balances (although KiwiSaver would need to be compulsory, because otherwise people would be discouraged from contributing to KiwiSaver). Annex 1 of this Statement – "Supplementary material on the future path of government spending and tax: NZ Super" – considers this option in more detail, as well as a wider range of options for managing future costs.

Nor is changing NZ Super settings the only way governments could respond to the fiscal implications of demographic change. For instance, as the elderly are heavy consumers of long-term care, this area of government spending is expected to increase sharply in the future, as discussed in Annex 1 of this Statement – "Supplementary material on the future path of government spending and tax: Healthcare". We could reconsider the model for funding long-term care, so that individuals pay more of the costs themselves.

[78] The labour force participation rate among males aged over 65 rose from 11% to 21% between 1989 and 2009. See Department of Labour (2010). *Labour force participation in New Zealand: Recent trends, future scenarios, and the impact on economic growth*.

WHAT IF WE RAISED THE AGE OF ELIGIBILITY FOR NZ SUPER TO 67?

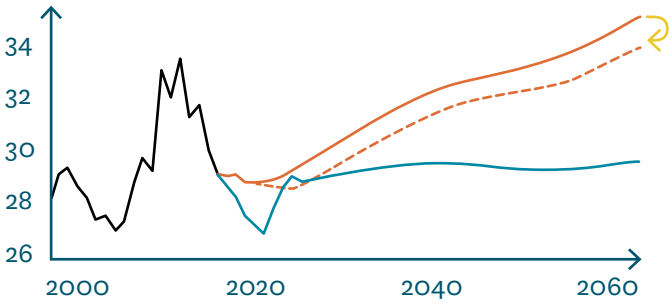
Many other countries that are experiencing population ageing (eg, Australia and the United Kingdom) have raised the age of entitlement for a state pension.[79] It makes sense to consider the fiscal impact if we did this in New Zealand.

Figure 14 shows how raising the age of eligibility to 67 would affect the long-term fiscal position. It assumes that we gradually increase the age by six months each year, starting in the 2019/20 fiscal year.[80] So after four years 67 would be the age of eligibility for everyone. Figure 14 has three lines:

- **Our standard blue "Spending path that maintains 20% net debt" line,** which tracks the average spending path that would allow us to keep net government debt at an average of 20% of GDP from 2020, assuming our tax take remains constant at 29% of GDP.
- **Our standard orange "Spending path under 'Resume Historic Cost Growth' scenario" line,** which tracks the average spending path that we would see if expense areas grow at the rates we have seen historically, also taking into account current legislative settings and demographic changes.
- **The dashed orange "Spending path under 'Resume Historic Cost Growth' scenario but with NZ Super age at 67" line,** which shows how far raising the age of eligibility for NZ Super to 67 would bend the "Spending path under 'Resume Historic Cost Growth' scenario" line down.

The difference between the solid orange line and the dashed orange line represents the amount we save by increasing the age of eligibility for NZ Super from 65 to 67. Raising the age of eligibility reduces future expected costs to some extent, but not by nearly enough to get us all the way to a sustainable long-term fiscal path.

Figure 14 Three government spending paths – the impact of raising the age of eligibility for NZ Super to 67



An increase in the age of eligibility for NZ Super would be felt differently by different people, raising equity considerations. Working past 65 would be difficult for some people, especially those in physically demanding jobs who are unable to find other work or who have insufficient savings to tide them over the extra years before they are eligible for NZ Super. These people are more likely to be on lower incomes, and Māori and Pasifika are over-represented. These people would be eligible for income-tested working-age welfare benefits, but the rate of those benefits is currently lower than NZ Super, and the rates are not expected to converge.

However, these issues already exist under our current NZ Super system. People die before and after any age of eligibility, and lower-income people are more likely to die earlier than those on higher incomes. Raising the age of eligibility would reflect that lives are getting longer across all groups in New Zealand, so that the distribution of outcomes would be broadly maintained rather than made worse.

[79] For a discussion of trends across the OECD for managing costs associated with state pension schemes, see Simon Upton (2012). Long Term Fiscal Risks – New Zealand's case in the context of OECD countries. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

[80] We chose the 2019/20 fiscal year – ie, seven years from now – as it is likely that any change to NZ Super would be announced some years prior to coming into effect.

The economic growth impacts of raising the NZ Super age are difficult to predict, but seem more likely to be positive than negative.

Retirement income policy settings can affect economic growth in several ways:

(1) By affecting people's incentives to save or not save. If people save more, it could:

- reduce our reliance on borrowing from overseas to fund our domestic investment needs, and
- put downward pressure on domestic interest rates, thus reducing upward pressure on the exchange rate and encouraging a rebalancing of economic activity towards the production of exports.

(2) By affecting people's incentives to work.

It is hard to say whether an increase in the age of eligibility for NZ Super would cause people to save more over the course of their lives. Our past experience of raising the age gradually from 60 to 65 suggests that it had little effect on saving behaviour.[81]

On the other hand, raising the NZ Super age probably would encourage people to work for longer than they would otherwise.[82] All else being equal, more people working for longer would be positive for New Zealand's economic growth and in many cases for people's own health and wellbeing.[83]

WHAT IF WE DECREASED THE RELATIVE VALUE OF NZ SUPER PAYMENTS?

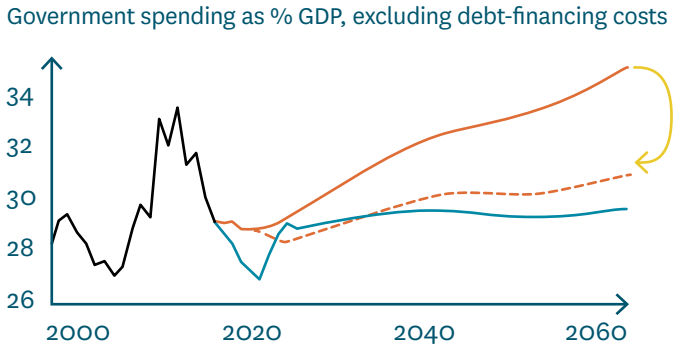
We could make a larger cost saving by raising the eligibility age to 67 and also slowing the rate of growth in the value of NZ Super payments. Currently, payments increase each year to keep up with inflation but also at a pace that ensures that couples receive at least 65% of the net average wage.[84] Because wages tend to grow faster than prices, payments usually grow at the same rate as the average wage. Pegging the rate of increase to price inflation instead would reduce the projected future cost of NZ Super.

This would mean that while the purchasing power of NZ Super payments would remain the same over time, their value relative to average wages would decrease. NZ Super payments pegged to price inflation might not be enough for some superannuitants as a sole source of income, particularly for those who rent accommodation or are still paying off a mortgage. So we might expect to see more take-up of other benefits – like the Accommodation Supplement – if the relative value of NZ Super payments was reduced.

Figure 15 is a revised version of Figure 14, but adds the impact of indexing the value of NZ Super payments to price inflation, again from the 2019/20 fiscal year.

As Figure 15 shows, the fiscal impact of indexing NZ Super payments to price inflation plus raising the eligibility age is considerably greater than the impact of just raising the age.

Figure 15 Three government spending paths – the impact of raising the age of eligibility for NZ Super plus indexing growth in payments to price inflation



HOW WOULD CHANGING THE RELATIVE VALUE OF NZ SUPER PAYMENTS AFFECT LIVING STANDARDS?

Adopting a lower growth rate for NZ Super payments would mean that the living standards of superannuitants whose only source of income is NZ Super would decline relative to the rest of the population (although – because their income would grow with inflation – their living standards would not decline in absolute terms). To some extent, this impact might be addressed by the rest of the welfare system, through the use of benefits like the Accommodation Supplement, as stated

[81] Roger Hurnard (2005). The effect of New Zealand Superannuation eligibility age on the labour force participation of older people. *New Zealand Treasury Working Paper 05/09*.

[82] Hurnard, above note 81.

[83] We have not modelled it here, but as those workers would be paying more tax than they would pay if not working, this extra tax would also add to the amount of revenue we collect.

[84] In fact, current practice is for NZ Super payments to couples to be tagged to 66% of the net average wage. 65% is the minimum value set in legislation, however, and in projecting the future costs of NZ Super we use 65%.

above. Of course, that would mean that the fiscal benefits of indexing NZ Super payments to price inflation would be reduced, as costs in other areas of government spending would rise.

However, there is a question around the number of people for whom NZ Super will be the sole or main source of income in the future. Currently, NZ Super is the sole source of income for around 40% of superannuitants.[85] But the introduction of KiwiSaver, which has around two million members, suggests that in the future more people will enter retirement with private savings.

This logic only applies, of course, if the amounts saved in KiwiSaver accounts are actually "new" saving, rather than money people would have saved anyway, now using KiwiSaver as a vehicle. One evaluation suggests that around a third of the money currently in KiwiSaver accounts is new savings that would not have been saved otherwise.[86] For those with higher levels of education or who own their own home, amounts saved in KiwiSaver accounts are less likely to be "new" savings.

The same evaluation found that certain people probably would have saved less for retirement if KiwiSaver didn't exist. They are:

- people with more children,
- people expecting NZ Super to be their main source of income in retirement,
- people in poor health, and
- women.[87]

These results were gathered fairly early in the history of KiwiSaver, so further research will be necessary to see if the initial results are borne out over time. But this initial evidence suggests that the group of people for whom NZ Super is their sole source of income in retirement may be smaller in the future.

Reducing the relative value of NZ Super payments theoretically could encourage people to save more, as they will need more private resources to have their desired standard of living in retirement. It could also encourage people to keep working for longer. However, evidence on both these points is scarce.

A proposal to change the rate of growth of NZ Super payments might encounter some resistance. The pegging of NZ Super payments to 65% of the average wage has been part of our retirement income system for some time. Some might view this feature as part of our implicit social contract, so changing the system could be viewed as challenge to our social infrastructure.

However, people's ideas about what exactly NZ Super should do might change in the future. In particular, the uptake of KiwiSaver and accumulation of KiwiSaver balances may mean that people will see the role of NZ Super differently. Also, the increasing costs of NZ Super could influence what people see as the government's role in retirement income provision.

LIVING STANDARDS IMPLICATIONS

$ Raising the age of eligibility for NZ Super and reducing the growth in the value of payments would produce a significant improvement in the Government's long-term financial position, although it would create other costs that might somewhat reduce its fiscal benefits.

The main trade-offs these options involve are in terms of equity and social infrastructure. The impacts of these options would fall mainly on people whose sole or primary source of income is NZ Super. It is possible that some people might regard these changes as challenges to New Zealand's social infrastructure. However, KiwiSaver might make a difference to how different people feel these impacts.

Economic growth impacts are hard to predict, but any impacts seem likely to be positive, by encouraging people to work for longer and to save more.

[85] Bryan Perry (2011). *Household Incomes in New Zealand: Trends in Indicators of Inequality and Hardship 1982-2011*. Wellington: Ministry of Social Development. Available at www.msd.govt.nz/about-msd-and-our-work/publications-resources/monitoring/household-incomes/index.html.

[86] David Law, Lisa Meehan, and Grant M Scobie (2011). KiwiSaver: An Initial Evaluation of the Impact on Retirement Saving. *Treasury Working Paper 11/04*.

[87] Law, Meehan, and Scobie, above note 86.

Conclusion

New Zealand society has changed dramatically over the past 40 years and we know there will be significant changes over the next four decades.

There are some things we can be reasonably confident about when looking ahead.

We know, for example, that the ageing of our population experienced in recent decades will continue. We can also reasonably anticipate that the majority of our population mid-century will be richer and healthier than today, just as we are on average richer and healthier than we were four decades ago.

We have started and will continue to face upward cost pressures on the Government, primarily from the rising costs of public healthcare services and NZ Super.

This Statement has shown that we have choices about how we manage these cost pressures. There is no one perfect answer and anything we might do will have pros and cons.

The options people will prefer will depend on their judgements and what they see as the appropriate role of government. For example, whether people think that taxes should increase to address future increases in healthcare spending will depend on the level of public healthcare provision each individual sees as part of the Government's core role.

No matter what policy changes we decide on, it is important that we decide on them early. Fiscal pressures are already starting to build, and the sooner we can address them the easier it will be. The next step in managing fiscal pressures is deciding what choices we will make to achieve a prudent level of government debt by the end of this decade and maintaining it beyond that date.

This Statement is an important part of the Treasury's efforts to explain and share information about how we might afford our future.

ANNEX 1

Supplementary material on the future path of government spending and tax

This Annex sets out further material on how different areas of government spending are projected to grow if historic rates of growth resume, as those growth rates interact with changing demographic and economic variables, and also legislative settings – the "Resume Historic Cost Growth" scenario. Not all areas of government spending are projected to increase. Some are projected to decline as a percentage of GDP. This Annex also goes into more detail about the assumptions we have made about taxes, and provides further examples of how we could collect more tax.

This Annex also considers fiscal pressures in the natural resource area. Natural resources are not generally thought of as an "expense" category so are not singled out for their own line in Table 1, but they potentially have important long-term implications so are addressed as a separate section here.

The material in this section is drawn from a series of papers the Treasury produced as part of the Long-Term Fiscal project. These papers are all available on the Treasury's website, at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Tax

Taxes fund the services the Government provides. Taxation is a constraint on what the Government is practically able to provide: governments cannot increase taxes indefinitely without hurting economic growth or discouraging people from living in New Zealand.

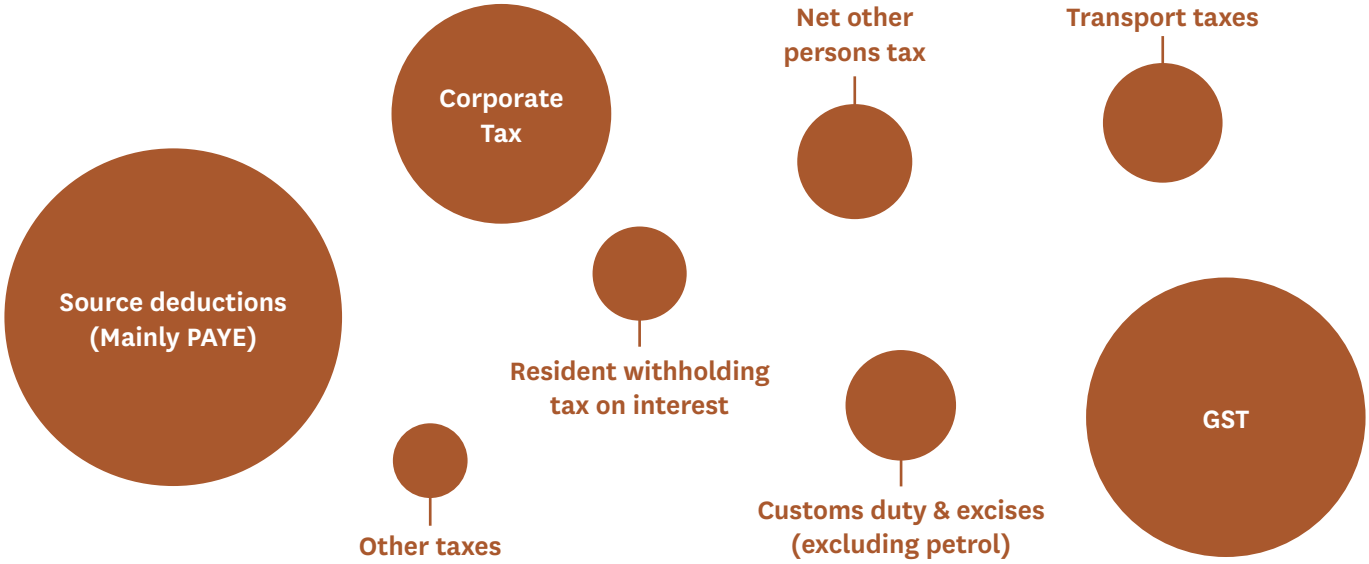
The discussion in this section draws on the Treasury (2013). The Role of Tax in Maintaining a Sustainable Fiscal Position. Background paper prepared for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Taxes make up a significant proportion of the revenue the Government receives. In the 2011/12 fiscal year, over 90% of core Crown revenue was tax revenue.

Our tax system comprises income, consumption, and excise taxes. Income taxes include personal and company income tax, as well as taxes on certain other specific entities. Their generally broad coverage provides a large amount of revenue at a low tax rate. GST, a tax on consumption, is also broad-based, applying to almost all goods and services at a single rate. Excise taxes, such as those on petrol, tobacco, and alcohol, have specific purposes such as funding our roads or discouraging consumption of goods that have high social costs.

Figure 16 shows the high-level breakdown of the different kinds of taxes the Government receives.

Figure 16 Core Crown Tax Revenue in 2011/12 fiscal year - major categories



Our projections in the "Resume Historic Cost Growth" scenario hold tax revenue constant at 29% of GDP until 2060. That is roughly consistent with the average tax take in the recent past, although in the last few years our tax take has been somewhat less than that average, as tax revenues can be very sensitive to economic downturns.

Perhaps counter-intuitively, holding tax revenue constant as a proportion of GDP actually involves assuming that governments will make some changes to personal income tax. People's pay rises over time, through the combined effect of inflation and real wage increases through economic growth. And as that happens, their tax rate rises, as they will move into higher tax brackets. For example, currently we pay income tax of:

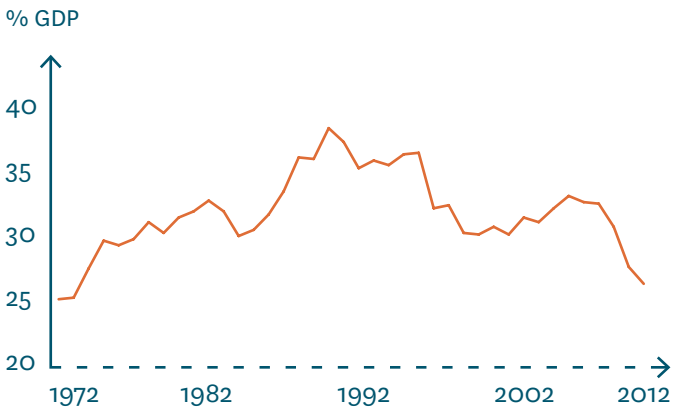
- 10.5% on income up to $14,000
- 17.5% on $14,001 to $48,000
- 30% on $48,001 to $70,000, and
- 33% above $70,000.

As people move into higher tax brackets owing to price inflation and real wage growth, governments collect more money. People sometimes call this effect "fiscal drag" or "bracket creep".

Our "Resume Historic Cost Growth scenario" projections, which have the tax take remaining as a constant percentage of GDP out to 2060, implicitly assume that governments will continue to make periodic adjustments to compensate for fiscal drag. If they did not, the tax take would rise as a share of GDP over time.

The 29% of GDP level is not intended to be a prediction. Rather, it is a modelling device to show the increasing gap between revenue and expenses. In the future, governments may wish to collect more tax revenue than 29% of GDP. Collecting, say, 2% of GDP more in tax would go a long way to meeting future spending pressures and also would not be particularly out of step with historical trends. Figure 17 shows that the ratio of tax to GDP has fluctuated over time.

Figure 17 Ratio of tax revenue to GDP in history



Just because we could meet future financial pressures by increasing taxes does not mean we should. Higher taxes would have drawbacks:

- People would have less income to spend on things for themselves. This could cause real hardship for people already on low incomes. For that reason, tax increases in the past have often been accompanied by some sort of compensating measure for people on low incomes.
- Whether tax increases are intergenerationally fair depends on where the taxes come from and what they are used for. The costs of personal tax increases, for example, would fall mainly on working-age people. If those tax increases were used to fund benefits that go primarily to older people, that would raise questions of intergenerational fairness. Other taxes are different – GST, for example, tends to be paid by people of all ages, as everyone has to buy things. And there are several services that go to people of all ages such as policing.
- Taxes tend to have economic costs, although these costs vary by kind of tax. For example, personal tax increases may discourage people from working. Corporate taxes also have efficiency costs. But other taxes might not have such significant economic costs, depending on how they are designed. Taxes on the value of land, for example, are considered to be very efficient compared with other options.

OPTIONS FOR COLLECTING MORE THAN 29% OF GDP IN TAX REVENUE

In terms of avoiding legislative changes, the simplest way for the Government to collect more tax is just to allow fiscal drag. The effect of people being pushed into higher tax brackets would mean that most of our future financial pressures could be paid for that way. However, although straightforward in some ways, governments may not view letting people drift into higher tax brackets as a viable long-term solution to future financial pressures. For one thing, fiscal drag is not very transparent. For another, as explained earlier, it ultimately would mean that even people with low incomes relative to the rest of the population would be paying the top tax rate on some of their income. Our tax system would become less progressive, relative to our current system. Also, rising marginal tax rates would decrease work incentives.

An intermediate option would be to index tax brackets to inflation, so the tax system compensates for inflation but not for real wage growth. Section G of this Statement considered this option.[88] This approach would still mean that people are pushed into higher tax brackets as they experience real wage growth, but it would not be as dramatic as "full" fiscal drag. This approach would still push lower income people into higher tax brackets, and would decrease work incentives, but not to the same extent as "full" fiscal drag.

However, governments have many options to increase tax beyond allowing fiscal drag (or a version of it) to run. We might broadly classify the different options as:

- increasing the rates of an existing tax
- extending the base to which an existing tax applies, and
- introducing a new tax.

COULD WE INCREASE THE RATES OF AN EXISTING TAX?

Three existing taxes might be candidates for increases in their rates: personal income tax, corporate income tax, and GST.

If we raised each **personal income tax** rate by 2 percentage points, we could raise extra revenue of around 1% of GDP. However, raising personal tax rates would probably be very inefficient, discouraging people both from working, and from saving or investing. The effects of people working, saving, and investing less could mean that we do not collect as much extra tax as we thought. Changing the personal tax rate scale could potentially be either progressive or regressive – it depends on the new rates.

If we raised the **company tax rate** from 28% to 35%, we could raise around another 1% of GDP.[89] Note, however, that this estimation assumes that raising company tax involves no behavioural responses, which is unlikely to be correct. Raising company income tax would have adverse efficiency effects because it would reduce incentives for investment. In practice the company tax rate could not be raised much because it would incentivise multinational companies to structure profits away from New Zealand. This might have implications for the New Zealand economy more generally, beyond just how much tax we can collect. Furthermore, the size of the increase in the company tax rate necessary to collect an extra 1% of GDP is much larger than the corresponding increase required for other taxes.

GST is the final major existing tax base that we would increase the rate of in order to collect more tax. Section G of this Statement analysed the impacts of increasing the rate of GST to 17.5%.

COULD WE BROADEN THE INCOME TAX BASE BY INCLUDING DIFFERENT KINDS OF INCOME?

If we started taxing income in the form of **capital gains** at the same rate we tax other forms of personal income, we would raise around 1% of GDP of extra tax revenue (this number varies depending on exactly what kinds of capital gain income are included). Introducing a capital gains tax has an efficiency cost in terms of increasing the tax on capital overall. But it could improve the allocation of savings by altering incentives so less investment would be made in real property and more in other forms, such as financial assets. Depending on the precise base the tax is applied to, it could also increase the progressivity of the tax system, as better-off people tend to hold more investment assets. It would probably also cause real property prices to be lower than they otherwise would be, which might reduce international vulnerabilities by reducing the demand for foreign borrowing. Capital gains taxes are complicated to design and implement, with many design options and second-order efficiency issues that would need to be considered.

COULD WE INTRODUCE A NEW KIND OF TAX?

We could introduce a national **land tax**, that is, a tax on the value of land (as opposed to a tax on the increase in the value of land), similar to our system of local body rates. A land tax of 0.7% of the value of unimproved land could raise around 1% of GDP in the first year. Land taxes are generally considered to be very efficient, causing little reduction in economic performance. The main disadvantage of a land tax is that its introduction would cause land values to fall, meaning that people owning land at the time would experience a one-off loss. It is questionable whether a land tax would be sustainable over time, as experience suggests that there would likely be pressure to exempt certain kinds of land from its ambit.

THERE IS NO PERFECT REVENUE-RAISING OPTION

All possible ways of increasing our tax take have trade-offs, and different governments will think that different aspects are more important. Some governments, for example, might be willing to sacrifice some efficiency for a tax system that is overall more progressive. Increasing revenue could certainly be an option for addressing future pressures in different spending areas, but – just like options for reducing growth in spending – all the possible options have trade-offs.

[88] This approach was also considered in Gemmell and Creedy, above note 68.

[89] "Company tax rate" in this context includes the top Portfolio Investment Entity (PIE) tax rate and the trustee tax rate. We would also align the top individual income tax rate with the company tax rate.

WHAT ABOUT ENVIRONMENTAL TAXES?

It is sometimes suggested that New Zealand should introduce environmental taxes, for example a tax on carbon emissions or pollution. It is true that relative to GDP, total tax revenue, and population, New Zealand's environmentally related tax revenues are below the OECD average (although most of this gap is due to New Zealand's lower petrol taxes).

Taxes of this kind are not usually thought of as primarily a revenue-raising option, as their intention is generally to discourage some sort of "bad" behaviour. Having said that, environmental taxes can and do raise revenue. However, mixing revenue-raising objectives with objectives to discourage certain behaviours can lead to poorly designed and inefficient taxes.

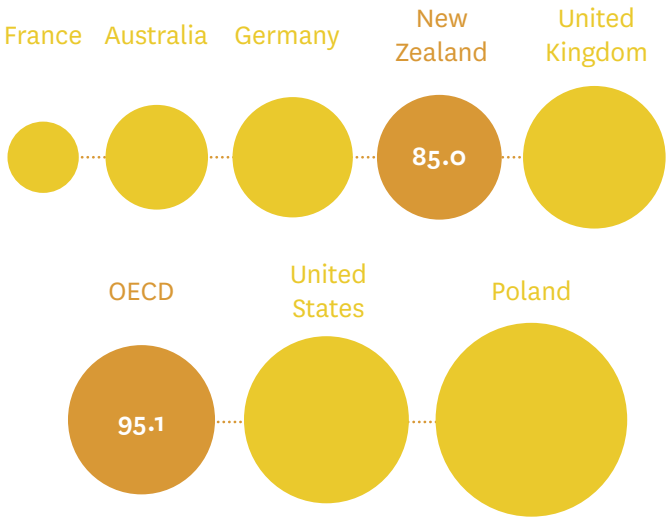
Healthcare

About 80% of the total amount spent on healthcare in New Zealand is spent by the Government. We value healthcare because of its capacity to improve the length and quality of our lives and provide support and dignity for the sick. The health system also supports our economy by enabling greater participation in the workforce and higher productivity.

The discussion in this section draws on two Treasury background papers for the 2013 Statement on the Long-Term Fiscal Position: The Treasury (2013). Long-Term Health Projections and Policy Options and the Treasury (2013). Long-Term Care and Fiscal Sustainability. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

New Zealand's health system is fairly good at achieving its primary purpose: keeping people healthy. One way of measuring this is to look at rates of "avoidable" mortality; that is, deaths that shouldn't have happened given timely and effective medical intervention.[90] Figure 18 shows how New Zealand compares to other OECD countries. The lower the number the better, as the number shows how many deaths relative to population size could have been avoided with better healthcare.

Figure 18 Avoidable mortality in OECD countries



Over the past 40 years or so, technological developments have meant that more and more health conditions are treatable. Very few other areas of technological development have led to such a significant improvement in global living standards. Diseases that were once a death sentence can be cured or managed.

These developments are important drivers of the increases in life expectancies we have seen over these years. But new and more effective treatments tend to cost more money. That is not always the case – sometimes technology reduces costs through efficiency gains, or through health improvements that reduce the need for further care. But more frequently, public expectations of the health system increase as technology extends the range of possible treatments. Medical improvements may also increase the need for ongoing treatment of chronic conditions, as people live longer.

[90] Juan G. Gay, Valérie Paris, Marion Devaux, and Michael de Looper (2011). *Mortality Amenable to Health Care in 31 OECD Countries: Estimates and Methodological Issues*. Paris: OECD.

Past experience also suggests that higher incomes tend to increase healthcare spending. As our incomes have increased, we have chosen to spend more on healthcare services. At the same time, economic growth leads to higher wages across the economy, including in the health sector. So it can become more expensive over time just to maintain existing levels of services.

Population ageing matters too. We do not think our ageing population will be the only significant driver of future spending pressures, but it does affect healthcare spending, since older people tend to need more healthcare. Partly as a result of population ageing, and partly for other reasons such as people's lifestyles, the demands on the health system are changing. In future, we expect that chronic, long-term conditions such as diabetes and age-related diseases will be increasingly important. This may also contribute to rising healthcare costs.

The combination of demographic and technological change, increased demand and rising costs has meant that government spending on healthcare has increased as a share of GDP for most of the last 40 years. Since 1950, New Zealand's real per capita GDP has increased by 144%, while real per capita government spending on healthcare has increased by 412%. We think this trend will continue.

It is important to remember that public healthcare spending is driven in the first instance by decisions governments make each year about how much money to allocate to it. Those decisions in turn are influenced by demand for healthcare and what treatments are available. If governments let healthcare costs grow in response to all the pressures outlined above, the projections in our "Resume Historic Cost Growth" scenario suggest that healthcare costs would grow from around 6.8% of GDP in 2010 to more like 10.8% in 2060, a big change. And some people might see even that projection as conservative.

Ultimately, how much public healthcare expenditure grows will depend on choices governments make, and those choices will be influenced by society's preferences. There are ways we might be able to achieve a lower spending growth path while still preserving the core of our publicly funded system. Section H of this Statement outlined some of those ways.

> WE NEED TO CONTINUE TO REORIENT THE HEALTHCARE SYSTEM TO DEAL WITH CHRONIC CONDITIONS BETTER

We cannot predict all (or even most) future changes to the healthcare system. One emerging issue that we can be fairly certain we will need to respond to, however, is the rising proportion of chronic health conditions, such as diabetes.

Our healthcare system (like the healthcare systems of other developed countries) was designed to deal best with acute conditions in a hospital environment. As the prevalence of chronic conditions rises, work is underway to shift the centre of gravity of our system so that it is better able to address these changing healthcare needs in a way that is both effective and cost efficient. We need to continue the momentum around this shift.

This is not just a fiscal issue. It is also about ensuring that our healthcare system delivers high-quality care and the best possible health outcomes for New Zealanders. One issue is that people often have multiple chronic conditions, rather than just one. And some conditions are best addressed on a number of fronts, including lifestyle factors like smoking as well as things that can be treated medically, like high blood pressure. This points to a need for more integration of care, with the patient as the focus, and better coordination between different health and social service providers.[91]

[91] Nicholas Mays (2012). Reorienting the New Zealand health care system to meet the challenge of long-term conditions in a fiscally constrained environment. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference (revised 15 January 2013). Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

CHARACTERISTICS OF A HIGH PERFORMING CHRONIC CARE SYSTEM[92]

1. Universal coverage
2. Care is free at the point of use or at a cost that does not act as a major deterrent
3. A delivery system that focuses on the prevention of ill-health and not just the treatment of sickness
4. Emphasis on patient self-management
5. Priority is given to primary health care, particularly multi-disciplinary team work in chronic care led by nurses
6. Support is commensurate with clinical risk
7. Primary health care teams can access specialist advice and support easily
8. Information technology is used to improve chronic care
9. Care is effectively coordinated, particularly for people with multiple conditions who are at greater risk of hospital admission
10. The nine characteristics above are linked as part of a strategic approach to change

New Zealand's health system is well on the way to having some of these characteristics, but there is room for improvement.

LONG-TERM CARE PROVISION WILL BECOME INCREASINGLY IMPORTANT

As the population ages, the way long-term care is organised and funded is also likely to become increasingly important. "Long-term care" means services that are provided to people with enduring physical or mental disabilities, who are dependent on assistance with the basic activities of daily living, like washing, dressing, or using the bathroom. It may be provided together with medical assistance, such as medication, health monitoring, or palliative care, and can include help like housework and cooking assistance. It combines elements of medical and social services, and may be provided formally or informally, in people's homes or in an institutional setting.

People of all ages access long-term care, but the majority of those who need it are over 85. An ageing population – particularly growth in the 85+ age group – will put pressure on long-term care financing, in addition to the problems of rising wage costs and low productivity growth discussed earlier. Currently, we spend around 1.5% of GDP on long-term care, of which over 90% is funded by the Government. Public expenditure on long-term care could double over the next 50 years.

It makes sense that the Government should be involved in long-term care. But projected increases in expenditure of this magnitude should prompt us to think whether we want the Government to spend this much on long-term care and, if not, whether there are ways to reduce it. One approach would be to change parameters within existing programmes, for example stricter income and asset testing for subsidised care services.

[92] From Chris Ham (2010). The ten characteristics of the high-performing chronic care system. *Health Economics, Policy and Law* 5: 71-90, as cited in Nicholas Mays, above note 91.

NZ Super

New Zealand has had a state pension system, of sorts, for over 100 years. In 1898 the Government introduced the first publicly provided pension, which was means-tested and available to those over 65. At the time, people who reached 65 could expect on average to live another 12 or so years.

The discussion in this section draws on the Treasury (2013). The Future Costs of Retirement Income Policy, and Ways of Addressing Them. Background paper for the 2013 Statement on the Long-Term Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Since then, New Zealand has experimented with a number of different pension systems. We have had a two-tier system (a means-tested pension available from age 60, and a universal pension available from age 65), a compulsory contribution scheme (very briefly), and a means-tested system (via a tax surcharge on other income). But essentially we have nearly always had some kind of universal system. The key elements of the system we have now – NZ Super – were introduced in 1977, although we have changed the age of eligibility and also the payment rates since then.

Population ageing will drive increases in NZ Super in the future. Our projections in the "Resume Historic Cost Growth" scenario suggest that the cost of NZ Super could rise from around 4.3% of GDP in 2010 to around 7.9% of GDP in 2060.[93] We might be able to afford that, but we would have to either cut other government spending or increase taxes. This approach would raise intergenerational questions – is it reasonable for taxes collected from working-age people to fund the costs of NZ Super indefinitely, given the projected expansion in those costs?

WHY HAVE A RETIREMENT INCOME SYSTEM?

Different people have different views about the purpose of retirement income systems in general and New Zealand's in particular. Retirement income systems try to achieve a number of aims, which sometimes conflict. The Commission for Financial Literacy and Retirement Income has identified the following eight objectives of retirement income policy (the quotes after the bold headings are the Treasury's interpretations):[94]

Income support

No one wants to see elderly people unable to afford food

Wellbeing in retirement

Older people have a right to participate fully in community life

Personal responsibility and choice

People should be encouraged to provide for their own future

Longevity risk pooling

Who knows who will live to 70 and who to 103? We should share the risk

The citizenship dividend

Every New Zealander is entitled to retirement income

Intergenerational equity

Each generation should pay its fair share

Fiscal restraint and investment

We need to make sure government has enough money to spend on other things, too

[93] These are "gross" numbers, ie, they just measure how much is paid out in NZ Super and do not take into account how much some recipients pay back in tax.

[94] See www.cflri.org.nz/retirement-income/policy-positions.

To adapt our NZ Super system to the long-term trend of population ageing, there are a number of options we could explore. Section I of this Statement set out some specific options, but this section explores a broader range of possibilities.

COULD WE RAISE THE AGE OF ELIGIBILITY?

Currently, New Zealand residents are eligible for NZ Super payments at the age of 65. This is not a retirement age. Many people work past 65, which does not affect their eligibility for NZ Super. However, the fact that NZ Super is available from age 65 sends a signal that 65 is the age at which society expects most people will want to stop working. Now that people are living longer than ever, and working longer than ever, there are obvious questions about whether 65 remains the right age.

Section I of this Statement modelled and analysed the option of increasing the age of eligibility for NZ Super to 67. But we could, of course, make 67 a first stop on the way to a higher age. A few countries plan to link increases in their pension ages to increases in life expectancy.

COULD WE REDUCE THE RELATIVE VALUE OF PAYMENTS?

NZ Super payments increase each year, to ensure that they keep up with inflation and that couples receive at least 65% of the net average wage (in practice, in recent years the rate has been set at 66%). Because wages tend to grow faster than inflation, the payments usually grow at the same pace as the average wage, broadly maintaining the relative income position of superannuitants in line with the working population.

Instead, the growth rate could be set at the rate of inflation. The real purchasing power of NZ Super payments should remain the same, while the real purchasing power of wages would increase. Doing this would remove most of the projected increases in the cost of NZ Super. Section I of this Statement explicitly modelled and analysed the option of indexing NZ Super payments to inflation from the 2019/20 fiscal year.

Other, less drastic variations of this approach include:

- The rate of growth could be set at some mid-point between price inflation and wage increases.[95]
- The rate of growth could be the same as wages until 2030 (or some other date) but then inflation thereafter.
- The rate of growth could be set at the rate of inflation, but with periodic reviews to increase its value from time to time.

SHOULD WE LIMIT NZ SUPER TO THOSE WHO NEED IT?

Raising the age of eligibility for NZ Super and changing the way payments are indexed would have the biggest impacts on retirees with lower incomes. An alternative would be to means-test NZ Super so that only some people receive it, based on some calculation of "means" (potentially including an asset test and/or an income test). Different types of means-tested systems are used overseas. Obviously the fiscal savings from this option would depend on exactly how many people would no longer be eligible to receive NZ Super. As two extremes, the test could be set so that:

- only the 10%, say, of superannuitants in the lowest income decile receive NZ Super, or
- only the 10%, say, of superannuitants in the highest income decile don't receive it.

There are several ways of achieving a means-tested system. As well as applying a direct eligibility test based on some measure of "means", we could also apply a means-test by using the tax system.[96]

There are some problems with means-testing. One of the benefits of our current universal system is that it involves little disincentive to keep working or to save. Means-testing is likely to introduce such disincentives.

[95] The Retirement Commissioner recommended a version of this approach in the 2010 *Review of Retirement Income Policy*, available at www.cflri.org.nz/retirement-income/policy-reviews#s3.

[96] For an analysis of an option that would apply a means test to NZ Super payments by using the tax system, see Susan St John (2012). Fiscal Sustainability in an Ageing Population: Adapting Universal Provision Paper presented at the Treasury – Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

Means-tests are usually complicated to apply in practice, as people sometimes hold houses and other assets in trusts. The Government would have to examine people's private arrangements carefully to get a clear picture of their "means". Further, some people are likely to spend effort and money trying to avoid means tests, which would be both expensive and unproductive. So while some people might find a means-tested retirement income system appealing on the grounds that it directs the state's resources to those who need them the most, the practical barriers are difficult to get around.

WOULD PRE-PAYING THE COSTS OF NZ SUPER BE FAIRER TO DIFFERENT GENERATIONS?

Currently, we pay for most of NZ Super as we go. Tax is collected, mainly (although not entirely) from working-age people, to pay for NZ Super benefits. An alternative approach would be to prepay for NZ Super. People pay while they are working, then get that money back when they are ready to retire. Once a prefunding system was fully established, each generation would fund its own retirement costs, rather than being funded largely by the generation following it.

A pre-pay approach is not really intended to save costs, just to change the way we pay for them – pre-paying versus our current system of paying as costs arise. But it might well actually save money in the long run, as we could earn a return on our money so that we would not have to contribute as much. Also, pre-paying should build up a large stock of savings, assuming that the savings are actually "new" and not just money that would have been saved anyway. New Zealand's current low national saving rate makes us more vulnerable to economic shocks. So a system that increased national savings would have benefits beyond the immediate fiscal ones.

Another rationale for a pre-paid approach is that some people might see it as fairer, or perhaps more transparent, for each generation to pay for its own NZ Super, rather than relying on generations coming later. However, there is still a fairness issue – transitioning to full prepayment means the current working age generation would pay taxes that would help to pay for NZ Super for the current generation of people aged 65 and over, and pay contributions towards their own NZ Super for the future. These costs could be spread over several generations by slowing the speed of transition, or reduced by introducing only a partial transition.

WHAT ARE THE ROLES OF THE NZ SUPER FUND AND KIWISAVER?

THE NZ SUPER FUND

In 2001, the Government created the New Zealand Superannuation Fund. Many people called it the "Cullen Fund", after Michael Cullen, Minister of Finance at the time.

The Super Fund was designed to save up money for the future cost of NZ Super. Current tax dollars are placed in the Fund, where they earn investment returns. The Fund will eventually be used to help cover some of the costs of NZ Super.

If we continue to contribute to the NZ Super Fund at the rate planned, drawdowns from the Fund are expected to cover about 8% of the cost of NZ Super in 2050. We could increase contributions to the Fund, but that would mean either increasing taxes or finding savings from somewhere else.

Our "Resume Historic Cost Growth" scenario assumes that contributions to the NZ Super Fund will resume from the 2020/21 fiscal year. In 2031/32, we stop making contributions and start making drawdowns. These amounts are not reflected in the "NZ Super" line in Table 1, as that line simply shows gross expenses, and not how they are funded. But drawdowns from the NZ Super Fund do affect the "Net government debt" line.

KIWISAVER

KiwiSaver is not directly connected to our NZ Super system. It is a parallel system that helps people save for their retirement beyond what they would get from NZ Super. Individual KiwiSaver accounts are run by banks and other financial institutions, not the Government. Employed KiwiSaver members have a certain amount deducted from their wages each payday and put into their KiwiSaver account. By law, their employers also have to contribute an equivalent amount (up to a set level). The Government also makes some ongoing contributions. Anyone can put as much of their own money as they like into their KiwiSaver account. When people reach age 65, they are able to access the money in their account.

KiwiSaver does not save the Government any money. People are entitled to receive NZ Super regardless of how much they have saved in their KiwiSaver accounts (or anywhere else). In fact, owing to the subsidies paid to KiwiSaver members, KiwiSaver costs the Government money.

WE COULD PRE-FUND BY USING THE NZ SUPER FUND

There are a couple of ways we could build up a prefunded scheme. The simplest would be to increase contributions to the NZ Super Fund. This would allow us to preserve most of the current NZ Super architecture and would probably be relatively efficient to run. However, it would require the Government to cut back on government spending or increase taxes (this is the transitional problem described above). Further, there is a risk that the Government may be tempted to spend this money on non-Super related things in the future.

OR WE COULD MOVE TO A SYSTEM OF COMPULSORY PRIVATE RETIREMENT SAVINGS ACCOUNTS

A different approach would be to replace our current NZ Super system with a system of mandatory private retirement savings accounts, a kind of compulsory KiwiSaver. Unlike the option of using the general tax system to pre-pay for the future costs of NZ Super, which essentially means keeping our existing system, adopting mandatory private savings accounts would be a major change. It could eventually remove most of the pressure from government costs of the retirement income system, but some of those costs (and risks) would be transferred to individuals.

There are many different design options for compulsory private retirement savings systems, but the core of any system would be mandatory deductions from people's wages, to be placed in personal retirement income accounts. The funds would be locked up, earning returns, until a designated age.

Upon the account holder reaching the designated age, the funds accumulated in the account could be wholly or partly annuitised. NZ Super payments could then be abated against the amount of the annuity. The total amount individuals would receive in annuitised pensions plus NZ Super payments would depend on how much they had managed to save over their working lives.

There would be many details to be worked out, of course. For example, what to do about people whose incomes are so low that requiring them to contribute to a retirement savings scheme would create a real burden. Or what to do about people who have no income at all for periods. Exemptions might need to be made for people in these categories.

Relative to using the NZ Super Fund to pre-pay the costs of retirement income, a mandatory private retirement savings system has some advantages. With retirement savings building up in private accounts, there is less risk of a future government deciding to spend the money on something else.[97] Also, although a mandatory deduction from wages is in effect a tax, it might not feel like a tax if it is directed towards a personal retirement savings account.[98]

Such a system has drawbacks, however. Individual retirement savings accounts expose people to the risk that, at the point they are eligible to receive their funds, the market is going through a downturn. There are also questions about risk to the Government. If something goes wrong, and people lose most or all of their savings, will the Government feel obliged to step in to rectify the situation?

Also, a mandatory contribution system might require some people to save more than they need or force them to save in a way that doesn't suit them. It might, for example, deprive people of money they would otherwise use to start a business, pay down personal debt, or undertake further study. These drawbacks need to be weighed against the benefits.

[97] Instances of governments "raiding" earmarked public pension funds are fairly uncommon, but not unheard of. See, for example, "Irish pension fund to be tapped for €12.5bn", *Financial Times*, 29 November 2010.

[98] Phillippe Karam, Dirk Muir, Joanna Pereira and Anita Tuladhar (2010). Macroeconomic Effects of Public Pension Reforms. *IMF Working Paper 10/297*.

COULD WE USE KIWISAVER BALANCES TO FUND THE FUTURE COSTS OF NZ SUPER?

Under current policy, KiwiSaver and NZ Super are completely separate. Governments may not use KiwiSaver balances to help fund the costs of NZ Super.

Some have suggested that this could change, however. Hon Dr Sir Michael Cullen, presenting at the Treasury-Victoria University of Wellington *Affording Our Future* conference in December 2012, suggested two alternatives for how KiwiSaver balances could be used:[99]

- Require people to annuitise half of their accumulated KiwiSaver balances on reaching the age of eligibility. The Government would then top up the annuities of those whose balances were not high enough to receive an annuity of the same value as NZ Super. This option is essentially a version of switching to a private pre-funding model.
- Introduce a withdrawal tax on accumulated KiwiSaver savings when a saver reaches the age of eligibility to receive them. The additional revenue collected could be used to fund the future costs of NZ Super, perhaps even by being explicitly tagged to it.

Both these options would require enrolment in KiwiSaver to be made compulsory.

[99] Michael Cullen (2012). The Political Economy of Long-Term Fiscal Planning from a Social Democratic Perspective. Paper presented at the Treasury-Victoria University of Wellington *Affording Our Future* conference. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

Education

New Zealand's education system is the means by which people develop skills and knowledge. People improve not only their own living standards but also the living standards of the country as a whole, through increased productivity and economic growth. Our predominantly state-funded system enables social mobility – reflecting the belief held by many New Zealanders that access to a basic education should be largely independent of parental means.

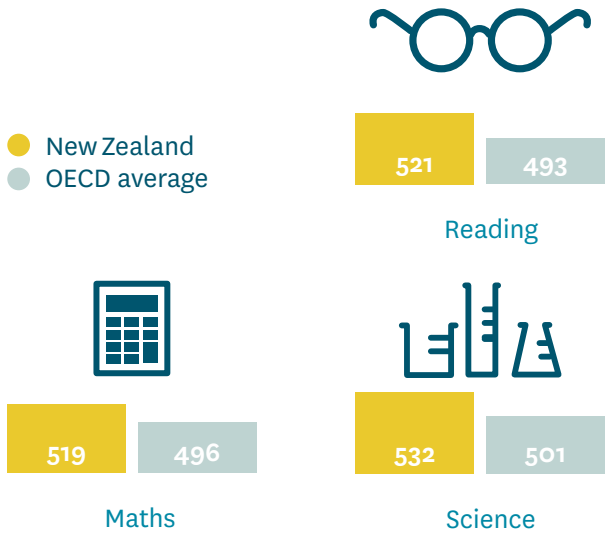
The discussion in this section draws on the Treasury (2013). The Education Sector Over the Long Term. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013.

Most education funding in New Zealand comes from the Government, although there is still a significant role for private funding, particularly in early childhood and tertiary education. Total government spending in education – early childhood, primary, secondary, and tertiary – was 6.1% of GDP in 2010, having risen from 5.1% of GDP in 2001.[100]

Some growth in education spending reflects positive trends. For example there is more use of early childhood education, which is increasingly recognised as the foundation for success at later levels, and also increased participation in tertiary education, making our workforce more skilled. And some of the growth in education spending reflects discrete policy choices. The introduction of the "20 Hours" early childhood education subsidy is a good example of this. This policy transferred part of the cost of early childhood education from families to the Government, with little immediate impact on participation rates.

Our education system performs well relative to our OECD counterparts. The Programme for International Assessment (PISA) provides comparable data on the knowledge and skills of 15 year olds, the age at which most students are nearing the completion of compulsory schooling. As Figure 19 shows, New Zealand's PISA scores are comfortably above the OECD average:

Figure 19 New Zealand PISA scores versus OECD average



[100] The 6.1% of GDP figure for 2010 is rather higher than we might normally expect it to be, as student loan write-offs were considerably higher than normal in that year.

Although the overall PISA story is positive, there are some concerning points that this table does not show:

- Despite our relatively overall high scores, the scores for Māori and Pasifika students are below the OECD average.[101]
- Other than in science, our average PISA scores have not improved over time.

In spite of the rise in education spending over the past decade, education is unlikely to be a particular area of spending pressure in the future. But it is unlikely to be a significant source of savings either. There are forces pulling in both directions:

- Younger people, who are the recipients of almost all education spending, will shrink as a percentage of the population (although their actual numbers will grow slightly).
- But we think that more young adults are likely to take up tertiary study in the future.

These two trends are expected almost to cancel each other out. The projections in our "Resume Historic Cost Growth" scenario show education spending declining from around 6.1% of GDP in 2010 to more like 5.2% of GDP in 2060.

It may be that future governments wish to reduce education spending below this projected level to allow other spending areas to grow. And there might be ways of doing this without sacrificing educational outcomes. For example, subsidies for early childhood education are currently universal. Some of these subsidies may be going to families that would send their children to early childhood education regardless of the subsidy. There could be ways to target early childhood education spending, ensuring it goes to those who need it.

Similar targeting would be possible in tertiary education. Currently, the Government funds about 70% of the costs of tertiary study, leaving students to fund the remaining 30% themselves. We could, for example, move to a 60-40 split, alongside targeted assistance for lower-income students to ensure they still have access to higher education.

Productivity gains – that is, better education at no extra cost, or the same services at less cost – can also play a part. Our "Resume Historic Cost Growth" scenario assumes productivity gains similar to what we have had in the past, but there may be ways to increase these gains. For example, technological gains could reduce costs or back office support and leadership teams could be clustered. To the extent that these represent genuine productivity gains they are a good idea regardless of whether there are immediate fiscal pressures. But fiscal pressures can provide an impetus to seek gains where otherwise the status quo might prevail.

[101] The OECD's 2013 Economic Survey of New Zealand noted that the dispersion of New Zealand's PISA results is concerning, particularly the sizeable group of underachievers, who tend to come from already disadvantaged groups. *See OECD Economic Surveys: New Zealand*, June 2013.

Welfare

New Zealand's working-age welfare system provides support to those whose incomes are not sufficient to satisfy their basic needs. Usually, recipients are unable to work, or they are working but their incomes are relatively low. Most welfare is delivered via direct payments, although some significant benefits are delivered via tax credits (eg, Working for Families) or reduced rates for certain services (eg, state housing).

The discussion in this section draws on the Treasury (2013). The Future Costs of Working-Age Welfare. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013. Note that in this section we use the word "welfare" to exclude NZ Super.

New Zealand's welfare system has changed considerably over time. The period from the 1950s to the early 1970s is often referred to as the "golden age of welfare". There was a relatively generous Unemployment Benefit, but few took it up as unemployment was low. While not typically thought of as part of the formal "welfare" system, full employment was an implicit or explicit goal of almost every government. The family was the basic unit the welfare system recognised, via the Family Benefit. Family-friendly welfare policies coincided with the baby boom, a two-decade lift in the birth rate following World War II.

The late 1980s and early 1990s was a period of considerable reform across most areas of government services, welfare included. In 1991, many working-age benefits were reduced and the universal Family Benefit was abolished.

From the point of view of the Government's finances, the major change to the welfare system from the mid-1990s to the present was the introduction of Working for Families benefits in 2005.

When talking about New Zealand's current welfare system, we tend to divide benefits into three categories:

- Main benefits: eg, the Unemployment Benefit, Domestic Purposes Benefit, Sickness Benefit, Invalid's Benefit.
- Supplementary benefits: eg, Accommodation Supplement, Disability Allowance, Childcare Assistance, Working for Families tax credits (despite the "supplementary" name, this category is sizeable).
- Other benefits: a small category encompassing a range of benefits, eg, hardship assistance such as the Special Needs Grant and Temporary Additional Support, and other benefits received by relatively few people.

In 2010, welfare payments amounted to around 6.7% of GDP. Spending on the "main benefits" – the Unemployment Benefit, Domestic Purposes Benefit, Sickness Benefit, and Invalid's Benefit – accounts for less than half of total welfare expenditure. Working for Families, a "supplementary" benefit, is the biggest single benefit class.

Projections of how welfare costs will change over the next 40 years depend on what we think will happen to the value of each welfare payment and how many people will receive them.

NEW BENEFIT CATEGORIES

The Social Security (Benefit Categories and Work Focus) Amendment Bill was enacted on 16 April 2013. On 15 July 2013, certain benefit categories will be renamed and in some cases consolidated. At a high level:

- Unemployment Benefit becomes Jobseeker Support
- Sickness Benefit becomes Jobseeker Support
- Domestic Purposes Benefit becomes Sole Parent Support
- Invalid's Benefit becomes Supported Living Payment.[102]

We think the dollar amounts of the main benefits are likely to increase with price inflation. This is what has happened over the past 40 years, and inflation indexing is actually required by legislation. This will mean that their value relative to the average wage declines, as wages tend to grow faster than prices. One implication of this is that people who receive only one of the main benefits will see their incomes decline relative to average wages, leading to a likely increase in relative inequality.

The supplementary and "other" benefits, on the other hand, have tended to grow faster than the main benefits over recent years. Our projections in the "Resume Historic Cost Growth" scenario therefore assume that some of these benefits will grow in line with average wage growth – faster than inflation. Overall, we think benefit rates will grow at a rate that is somewhere between price inflation and wage growth. This means benefit rates would decline relative to average wages.

Future recipient numbers also affect projections. In general, we think the proportion of people claiming benefits will decrease slightly relative to the population as a whole. That is because the working-age population itself will be proportionally smaller. However, some individual benefits might show increased growth – for example the Invalid's Benefit – as the population ages.

WILL WE WANT TO SPEND MORE ON WELFARE IN THE FUTURE?

The shrinking of total welfare expenditure, as a percentage of GDP, is striking. It shrinks almost as much as spending on each of healthcare and NZ Super is projected to grow. This stark decline should prompt us to consider whether these projected numbers are realistic, or whether future governments will want to spend more on welfare. Here are some examples of areas where we could imagine governments wanting to spend more:

> SPENDING DIRECTED AT REDUCING CHILD POVERTY

The 2012 Children's Commissioner's report *Solutions to Child Poverty in New Zealand: Evidence for Action* highlighted concerns about the living standards of some New Zealand children. It is possible that, in the future, governments will use the welfare system to address some of these concerns.

> SPENDING RELATED TO ELDERLY RENTERS

Home ownership rates have been declining in New Zealand since the 1990s.[103] In the past, most people entering retirement owned their own mortgage-free home, so they had limited accommodation costs. But this is starting to change. It may be that elderly people will need more help with accommodation costs in the future if they are still renting or paying off mortgages.

[102] This is a simplification – for example, not every single current recipient of the Invalid's Benefit will go onto the Supported Living Payment. Some categories of recipient might go onto other new benefit categories, such as the Jobseeker Support. Also some minor benefit categories, such as the Widow's Benefit, are not mentioned here but have been consolidated into the new benefit classes.

[103] Although widespread use of trusts means it is sometimes difficult to know exactly what current or past home ownership rates are.

The combination of a decline in recipient numbers as a proportion of the population and benefit rates that grow more slowly than the economy means that we project welfare spending to decline as a proportion of GDP. The projections in our "Resume Historic Cost Growth" scenario show welfare spending declining from around 6.7% of GDP in 2010 to only around 3.8% of GDP in 2060.[104] There is of course considerable uncertainty around these numbers: a future government could increase the rates of the main benefits, or add a new benefit category. And particularly good or bad economic performance is likely to affect benefit recipient numbers. But there's no way of accurately predicting such events.

COULD WE BE WRONG ABOUT WHAT WILL HAPPEN TO RECIPIENT NUMBERS IN THE FUTURE?

COULD CURRENT WELFARE REFORMS REDUCE WELFARE RECIPIENT NUMBERS IN THE FUTURE?

The working-age welfare system is currently being reformed. The current reforms have two main parts, (1) increased work expectations associated with most benefit classes and (2) an "investment approach" to welfare spending.

The investment approach looks to identify welfare recipients who are most likely to benefit from being helped back into the workforce because they are at higher risk of remaining on a benefit in the long term. Once identified, those recipients receive more support.

These current reforms may mean that the future welfare recipient numbers decline more than we have assumed in our projections. But since these reforms are still new, and we have not really seen their results yet, we have not taken them into account in our projections.

COULD WELFARE RECIPIENT NUMBERS ACTUALLY INCREASE, LIKE THEY HAVE IN THE PAST?

Since the 1980s, the number of people claiming welfare benefits in New Zealand has tended to increase each year. This increase has been largely owing to more people receiving the Sickness and Invalid's Benefits. The proportion of the working-age population receiving these benefits increased from around 1% in 1980 to about 5% in 2009. This trend has tailed off and flattened in recent years. We think this flattening is likely to continue and have built that into our projections, but there is of course no way to be sure.

[104] These are "gross" numbers, ie, for direct income transfers, they do not take into account how much is paid back in taxes. Note also that the 6.7% of GDP number in 2010 is affected by the economic downturn at the time, meaning that more people than usual were taking the Unemployment Benefit.

Law and order

The justice sector contributes to society by protecting civil and property rights, as well as providing a fair and effective way to resolve disputes.

In the criminal justice area, the sector aims to:

- maintain law and order, focussing on minimising harm and victimisation
- bring perpetrators to justice with appropriate punishment, and
- provide rehabilitation for offenders to reduce reoffending.

The question is how to deliver these aims to maximise the benefits to society.

The discussion in this section draws on the Treasury (2013). Window of Opportunity to Deliver Better Justice Sector Outcomes over the Long Term. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013/affordingourfuture

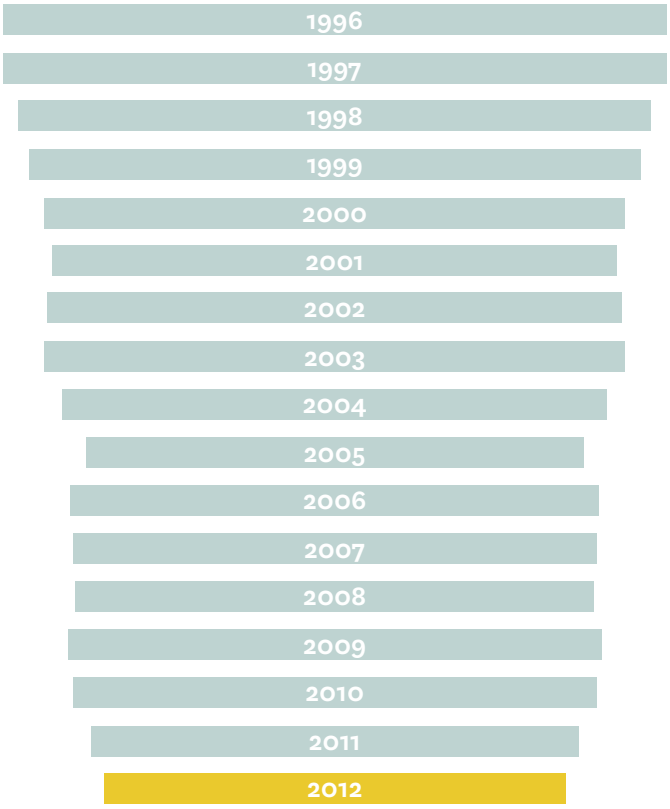
Criminal justice can be viewed as a pipeline. Once arrested and prosecuted, individuals move through the system, managed by Police. From there they flow into the court system and potentially through to Corrections. Decisions by one agency – for example, to prosecute more people – can have a significant impact on the other agencies.

Law and order costs were around 1.7% of GDP in 2010. They are therefore a fairly small proportion of total government spending compared to the other areas this Statement discusses.

> WE THINK THERE WILL BE RELATIVELY FEWER PEOPLE IN THE JUSTICE SECTOR PIPELINE IN THE FUTURE

Contrary to what may be the general perception, New Zealand's recorded crime rate has been falling since the early 1990s[105] – similar to trends around the world. Although we are not sure of the exact reasons for this fall, the recent focus on crime prevention and rehabilitation in New Zealand may have helped.

Figure 20 Recorded crimes per 10,000 people



[105] NZ Police, *New Zealand Crime Statistics 2011/12*.

This crime rate reduction has only recently translated into a reduction in forecast prisoner numbers. But the sector is now forecasting reductions in both people entering the criminal justice system and prisoner numbers. This is a significant change from forecasts prior to 2011, which projected large increases in prisoner numbers.[106] Changes to the sector's operations appear to have helped this reduction in numbers. For example, Police are now using warnings and other forms of deterrence, instead of prosecutions, to tackle low-level offending where appropriate.

The crime rate – and the number of court cases and prisoners – may decrease further in the future, as the population ages. This is because young men are the largest offender group. More than 40% of sentences were handed down to 17-30 year old men in 2011. And in future there will be relatively fewer young men in the population.

We are uncertain if this fall in crime will reduce justice costs. But our projections assume that it will, and we have built this assumption into our "Resume Historic Cost Growth" scenario. This scenario shows a reduction in costs, from 1.7% of GDP in 2010 to 1.4% of GDP in 2060.

DOES LOWER CRIME AUTOMATICALLY MEAN LOWER JUSTICE COSTS?

No. In fact, despite the fall in the crime rate, justice sector costs have more than doubled in the past decade.

The connection between crime and justice sector costs is weak. For example, spending on law and order is driven by decisions on crime response, including:

- how many Police officers we want in our community
- the number of courthouses, and
- the severity of sentences imposed.

These are only weakly linked to how much crime there actually is. Perception of crime is much more important.

The types of crime committed may also change. In the future, we might have fewer crimes frequently committed by young men, but more of other types of crime. If society sees those crimes as more serious and wants offenders to be severely punished, the cost reduction may be less than expected.

HOW DO WE BEST TAKE ADVANTAGE OF THIS REDUCTION IN CRIME?

The current and expected reduction in crime and the fall in the number of people entering the criminal justice system create an opportunity for the sector. Resources previously needed to keep up with increasing numbers in the system can be used to improve services and efficiency instead. The sector can make use of this opportunity to create a virtuous cycle of improved services and greater efficiency. The virtuous cycle is the result of two elements:

- Policy and operational settings that reduce crime and reoffending. The sector may benefit from considering the settings along the criminal justice pipeline. Examples include: how to deal with at-risk groups (crime prevention and support for victims), which penalties are appropriate for each offender, and which rehabilitation services are most effective and efficient to reduce reoffending. Doing this will help reduce numbers entering the criminal justice system and achieve the appropriate response to crime to benefit society.
- Delivering better public services through modernisation and reinvestment. Policy and operational settings matter hugely in terms of achieving improved outcomes, including reducing numbers in the criminal justice system. Translating this reduction into savings will help achieve the virtuous cycle, for example by closing buildings that are underutilised. The savings and resources freed up can be redeployed into areas that will deliver the highest benefits to society. If the savings are cashable, they could also be used in other areas of public spending, or to reduce taxes or government debt.

This cycle will not happen automatically. Decisions involve a number of different players, some of whom are independent from the sector (eg, judges), and may involve competing interests. Consensus across the sector and among the wider public about what society wants to achieve with justice services and how to measure sector performance will be critical to success.

To help achieve this consensus and deliver on their objectives, the sector may benefit from:

- Collaborating even more across the sector to achieve results. For example, justice sector agencies will co-locate in a Justice and Emergency Services Precinct in Christchurch. There are other ways to increase co-operation, including developing shared strategic policy objectives as well as joint capital planning and prioritisation.

[106] Ministry of Justice (2012), *Justice Sector Forecast*. www.justice.govt.nz/justice-sector/statistics/forecasts.

- Focussing resources on the most effective interventions to reduce crime, based on evidence. The sector can use off the information it already has to further improve outcomes for society. This may include knowing more about when, where and how best to intervene to improve public safety and reduce harm. This will maximise the benefits from reinvesting the resources freed up from fewer people entering the criminal justice pipeline. This may include decisions about whether to provide more support for people who are at the greatest risk of becoming offenders or to invest in rehabilitation services for those who have already committed an offence.
- Telling a clear and compelling story on justice sector performance, focussing more on what is being achieved and less on how services are provided. Current measures of service performance tend to focus on inputs (eg, the number of courthouses, Police stations and officers). We should hold justice sector agencies to account for what really matters: the quality of service the public experiences (eg, how quickly Police respond, how safe we are, and how easily we can access justice services). This matters more than the number of buildings or people. Measuring what is achieved will remove a critical handbrake on service improvements. It will allow the sector to take advantage of technological advances and better operating practices, such as Police using mobile communications technology. This will result in better services for New Zealanders.

The outlook for the sector has changed significantly since the last Statement on New Zealand's Long-Term Fiscal Position in 2009. The current and expected reduction in numbers entering the criminal justice pipeline creates an opportunity for the sector. To take full advantage of this opportunity, the sector may benefit from a consensus on what we want to achieve with justice services.

Natural resources

New Zealand has plentiful, clean water; clean air; productive soil and a climate well-suited to humans, trees, livestock, and agriculture; long coastlines and significant aquaculture resources; significant mineral and petroleum reserves; and extraordinary biodiversity on our land and in our water bodies. The World Bank estimates that New Zealand ranks eighth out of 120 countries, and second out of OECD countries, in natural capital per capita. We are outranked only by petroleum-exporting countries.[107]

The discussion in this section draws on the Treasury (2013). Long-Term Challenges and Opportunities in the Natural Resource Sector: Three case studies. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Although it is only one aspect of the overall value of our natural resources, the pure economic value we derive from those resources is significant. In 2011, export revenue from the primary industries amounted to over 70% of total merchandise export revenue. Agriculture directly contributes over 6% and may indirectly contribute over 15% to our GDP.

The way we use our natural resources affects our economy, and accordingly affects the Government's financial position. There are also more direct ways in which natural resources affect the Government's financial position. For example, the Government incurs expenses for natural resource management and regulation, collects royalties for the extraction of petroleum and minerals, and owns the conservation estate.

For now, we will focus on three case studies: climate change; oil and gas; and fresh water.

> CLIMATE CHANGE

Climate change could have fiscal consequences for New Zealand in two ways:

- the effects of a changing or less predictable climate could affect our economic performance and living standards, and
- future international agreements on climate change, and the domestic policies that we use to achieve those commitments, could require direct financial transfers.

Average temperatures could be 1°C higher by 2040 and 2°C higher by 2090, relative to average temperatures in 1990.[108] Weather patterns and events could change or become more frequent. As an island nation with an economy that relies on primary production we are more vulnerable to climate changes and weather events than some other countries.

There is little we can do directly to stop climate change from happening. New Zealand emits only 0.2% of global greenhouse gas emissions. In common with most other countries, our mitigation policies will contribute most effectively to a global reduction in emissions to the extent that they encourage larger-emitting countries to take action.

[107] World Bank (2010). *The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium*. Washington D.C.: World Bank.

[108] Ministry for the Environment (2008). *Projections of Future New Zealand Climate Change, Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in New Zealand*. There is, of course, a certain amount of debate around these numbers.

International agreements to reduce carbon emissions will also have a fiscal impact. Negotiations are currently underway on an international deal on emission reductions that would come into force by 2020. Although we can't be sure yet, that deal may involve New Zealand's committing to reducing its greenhouse gas emissions to a certain level by a certain date. If we did not reach that target, the Government would most likely have to pay a financial penalty.

It will be challenging for New Zealand to reduce its greenhouse gas emissions from business as usual. In many countries most emissions come from fossil fuel use and industrial processes, where there are some straightforward ways of reducing emissions. But over 70% of New Zealand's electricity comes from clean, renewable energy sources and nearly half of New Zealand's emissions come from the agricultural sector and there are fewer options for reducing emissions from livestock and soil. The fact that our population is still growing adds a further level of complexity.

There are nevertheless ways we could lower our emissions. When the opportunity arises, government and the private sector can tailor investments in energy and transport infrastructure towards lower-emitting outcomes. But there will be economic growth consequences of aggressive action to lower emissions, as well as inequalities, as the costs of emission reduction will fall disproportionately on some industries, socio-economic groups, and generations. These costs will need to be balanced against the potential financial cost to the Government of meeting future emission reduction commitments.

> OIL AND GAS

In 2009, the oil and gas industry (exploration, production, supply chain) directly contributed to 1.5% of New Zealand's GDP. Accordingly, royalties and taxes from the industry make up a significant revenue stream for the Government – around 0.2% of GDP. It could be an even more significant revenue stream in the future, depending on two factors:

- how much oil and gas we choose to extract, and
- how and how much the Government charges in rents, taxes, or royalties.

There is some uncertainty around the extent of our oil and gas reserves, but we think they are quite significant – the challenge is whether oil and gas can be extracted profitably and in a way acceptable to New Zealanders. It seems likely that we can enable more extraction in the future and that the oil and gas industry will be able to contribute more to government revenues.

The Government could also increase royalty rates or change the fiscal regime altogether. However, this could also discourage exploration, meaning that the overall amount the Government collects could stay the same or even decrease.

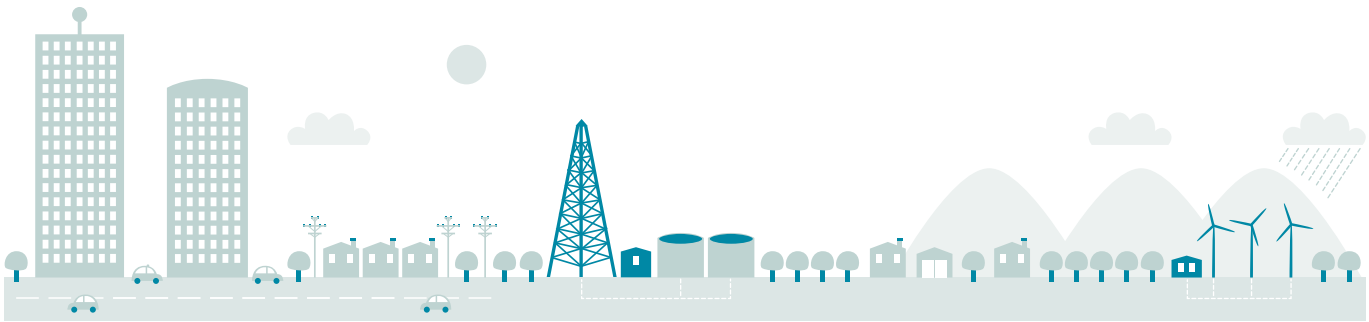
Whether we want to encourage a bigger role for the oil and gas industry, particularly in the light of climate change concerns, is another question. Oil and gas are finite resources, so extracting them now means there will be less in the future. And we might not want to pay the environmental price of increased extraction.

FRESH WATER

New Zealand has a lot of useable water. This is one of our great advantages, both economically and in terms of our quality of life more generally, especially in a world where there are likely to be severe water shortages in some areas. The OECD ranks New Zealand fourth among OECD countries for volume of fresh water per capita. And water is very important to our economy, as a key input to primary production. In 2004, charges for water supply by local authorities, value-added from irrigation, and value-added from water in hydroelectric power generation amounted to nearly 1.4% of GDP.

Despite this, some regions experience problems with both the quantity and quality of water available. We are already using some economic tools to increase water quality and improve availability, like trading schemes for nutrient discharges and transfer and trade of water permits in Canterbury. In a number of regions, people already pay for water (although this charge is for reticulation and other services, rather than for the water itself).

Managing current and future pressures on our freshwater resources, whether through market-based mechanisms or rules and regulations, will be crucial to the economic performance of many of New Zealand's regions.



ANNEX 2

Key modelling assumptions

This Annex sets out the key modelling assumptions that we used when producing our "Resume Historic Cost Growth" scenario. We also set out the corresponding assumptions we used when producing our 2009 Statement on the Long-Term Fiscal Position. In some cases our assumptions have changed.

For more detail on how we produce the "Resume Historic Cost Growth" scenario, see Paul Rodway (2013). Long-Term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives. Background paper for the 2013 Statement on the Long-Term Fiscal Position. Available at www.treasury.govt.nz/government/longterm/fiscalposition/2013

Issue	2013 Statement	2009 Statement
Demography		
Base case	50th percentile 2011-base, 2012-2061	Series 5 2008-base,
Fertility	Falls to 1.9 babies per woman from 2032	Falls to 1.9 babies per woman from 2026
Life expectancy at birth	Rises to 88.1 (M), 90.5 (F) in 2061	Rises to 85.6 (M), 88.7 (F) in 2061
Net migration	Reaches and holds 12,000 from 2015	Reaches and holds 10,000 from 2011
Economy		
Real output per hour worked	1.5% from 2020	1.5% from 2014
Participation rate	50th percentile labour force (2012); participation rate in 2061: 65% (This assumes 25% to 33% of 65+ group in labour force from 2020)	Series 5 medium labour force (2010); participation rate in 2061: 63%
Unemployment rate	4.5% from 2019	4.5% from 2015
Annual CPI inflation rate	2%	2%
5-year government bond rate (average)	5.5% in 2020s, rising to 6% from 2030s	Holding 6% throughout projection
Fiscal		
Revenue (largely tax) as ratio to GDP	Core Crown tax building to 29% around 2020 and holding there (base case)	Core Crown tax 31% to 2023, then 30% (base case)
Expenditure	Growth controlled by operating allowances for three years (to 30 June 2015, near end of Parliamentary term)	Growth controlled by operating allowances for four years
	Bottom-up projections begin in 2015/16	Bottom-up projections begin in 2013/14
Healthcare (non-demographic growth in spending in projection period)	Real per person growth 1.5%; non-demographic total real spending growth of 2.4% a year. Healthy ageing effects modelled	Real per person growth 0.8%; non-demographic total real spending growth 1.7% a year. Healthy ageing effects not modelled

Education (non-demographic growth in spend in projection period)	Real per person growth of 1%; real growth in spending rate 1.9%	Real per person growth of 0.8%; real spending rate 1.7%
Other spending (non-demographic growth in spend in projection period)	Real per person growth of 0.8%, real growth in spending rate 1.7%	Real per person growth of 0.8%, real growth in spending rate 1.7%
Transfers: NZ Super	Per recipient spending indexed by nominal wage growth	Per recipient spending indexed by nominal wage growth
Transfers: Welfare (excluding NZ Super)	Main benefits adjusted by CPI, some supplementary benefits adjusted by CPI and others by nominal wages	Indexed by CPI
Debt-finance costs	Average of opening and closing stock this year times an effective interest rate; this year's interest cost is proxied by last year's to avoid circularity	Last year's closing debt times this year's 5-year bond rate
NZ Superannuation Fund	Capital contributions resume in 2021; drawdown from the fund begins in 2032	Capital contributions resume in 2021; drawdown from the fund begins in 2032

ANNEX 3

The process of producing this Statement

Affording Our Future is the third Statement on the Long-Term Fiscal Position the Treasury has published. Our process for preparing this Statement was very different from our past processes, however. The process leading up to this publication was particularly open and collaborative, and involved contributions from a broad range of people.

Our process included:

- In conjunction with the Victoria University Business School, establishing an External Panel to test our analysis as we went along. We held four Panel sessions in 2012 and two in 2013. Most of the Panel sessions were followed by the release of a summary of the Panel's discussion and the papers that the Panel considered. For details of the Panel's membership and summaries of its discussions, see www.victoria.ac.nz/sacl/about/chair-in-public-finance/events/long-term-fiscal-external-panel.
- Running a competition for high school students to write essays and give presentations on how to address New Zealand's long-term fiscal challenges. A team of four students from James Hargest College, Invercargill, was the winner. The Victoria University Business School co-sponsored this initiative. A competition for high school students (on different topics) is now an annual Treasury event. Details about the 2012 competition are available here: www.treasury.govt.nz/government/longterm/schoolschallenge.
- Running the *Affording Our Future* conference with the Victoria University Chair in Public Finance in December 2012. The conference involved New Zealand and international speakers addressing the sustainability of different areas of government spending and revenue. The conference programme and papers presented are available here: www.victoria.ac.nz/sacl/about/chair-in-public-finance/events/affording-our-future-conference-2012.
- Commissioning policy work from a range of sources (internal and external to the Treasury) and making that work publicly available on our website prior to publication of this Statement. This policy work has now been collected in one place and is available on the Treasury website at www.treasury.govt.nz/government/longterm/fiscalposition/2013.
- Supporting the McGuinness Institute in running the LongTermNZ workshop. The LongTermNZ workshop brought together a group of young New Zealanders, who attended the *Affording Our Future* conference then produced their own Youth Statement on the Long-Term Fiscal Position. The Youth Statement is available here: longtermnz.org/workshop-2012/youth-statement-2012.