



The Future Costs of Retirement Income Policy, and Ways of Addressing Them

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LONG-TERM FISCAL EXTERNAL PANEL

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The future costs of retirement income policy, and ways of addressing them

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The Future Costs of Retirement Income Policy, and Ways of Addressing Them

Key points

New Zealand Superannuation is a universal pension paid at a flat rate. It is effective at poverty prevention, relatively inexpensive and simple to administer. However, with the proportion of the population aged over 65 years increasing rapidly over the next 50 years there is expected to be a steep rise in the costs of the scheme.

The future cost of NZS is therefore a major driver of New Zealand's longer term fiscal challenge. Other parts of the Long Term Fiscal Statement to be published next year examine ways of addressing this broader fiscal challenge through other means instead of, or as well as, retirement income policy, for example through higher taxation or reductions in other areas of public spending.

This paper examines a range of broad choices for addressing this fiscal challenge directly through retirement income policy. These include options around:

- Coverage - who receives the payment, for example changing the age of eligibility
- Generosity - the level of payment, for example, changing the rate of indexation
- Financing and funding - changing the way that retirement incomes are funded

We model examples of these options in order to bring out some of the key differences and similarities between different possible retirement income policy settings. In practice, approaches can be developed that would combine two or more these elements to balance different policy objectives. While affordability should be one important dimension, there are other important policy objectives that also need to be considered. These include:

- providing protection for low income older New Zealanders
- enabling New Zealanders to have reasonable retirement incomes
- supporting savings, labour force participation and economic growth
- optimally managing risks faced by the economy and individuals.

While we do not propose a recommended way forward for retirement income policy in New Zealand, we conclude by highlighting some key judgements that could underlie a preference for each of the policy ‘types’ identified:

- Judgements about where NZ’s tolerance for old-age poverty should lie and how welfare in old age should be weighed against welfare for other life stages.
- How the need to lean against poor individual decision making should weigh against individual autonomy and preferences.
- The degree to which we consider that saving-investment imbalances are holding back economic growth and exacerbating macro-economic risks.
- The degree of confidence we have with respect to whether rates of return on investment are likely to continue to outpace rates of growth in the economy.
- The extent to which we think greater accumulation of assets on the Crown’s balance sheet via public pre-funding increases the risk of looser-than-otherwise fiscal policy.
- Views about the degree to which each cohort should be self-funding and the extent to which future generations can and should be pre-committed.

1 Introduction

1.1 New Zealand's retirement income system¹ is centred on New Zealand Superannuation, a universal government-funded pension intended to assure a basic standard of living for the elderly. Subject to a residency requirement, all residents are eligible to draw NZS from age 65.

1.2 As such NZS is qualitatively different from other, working-age benefits, which are more stringently targeted. NZS is also significantly higher than other benefits, due to the fact that they are indexed to price inflation rather than wage inflation as NZS is. This implies a value judgement that poverty prevention is more important for this age group than for others, implying in turn a judgement that older people require more support because they are reliant on payments for a relatively long period, and are less likely to be able to obtain income for themselves, than younger individuals.

1.3 Another value judgement implied by the flat-rate, universal nature of NZS is that the principal objective of retirement income policy is to ensure the prevention of poverty in old age rather than, for example, to reward contributions made by individuals (which might entail payment levels targeting an income replacement rate) or to target individual needs (which might entail means-testing). This contrasts with the social insurance model used in many other countries, which was explicitly rejected when the basics of New Zealand's approach to welfare were put in place in the 1930s. It was deemed stigmatising and marginalising that those who could not contribute to a social insurance scheme had to apply separately for assistance involving an intrusive means-test and a model involving universality of welfare, available as a right of citizenship, was preferred (Goldsmith, 2008).

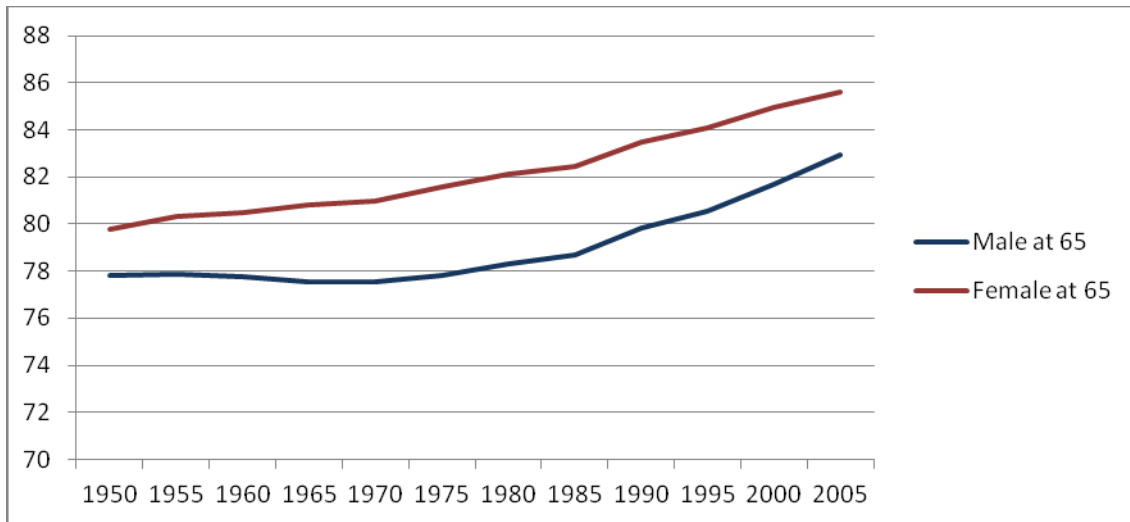
1.4 Anything beyond the communal responsibility for old-age poverty prevention – seeking to maintain standards of living in retirement, or lifetime consumption smoothing - is left to individuals, who may choose (or not) to supplement that basic allowance, by continuing to earn an income, by greater reliance on support from their families, or by saving during their earlier years. Many other countries take a different approach, targeting an income-smoothing approach by requiring individuals to save for their own retirement, often accompanied by tax incentives, or through dedicated taxes which are used to build up an individual pension entitlement.

1.5 New Zealand's different approach implies a value judgement that individuals are best placed to determine, in light of their individual circumstances and preferences, how best to manage their personal lifetime income and expenditure. It also implies that individual financial management decisions – over and above the safety net provided by welfare benefits - are a matter of individual rather than public interest. The Government's responsibility, under this approach, extends only as far as poverty prevention and stops short of ensuring that older individuals are as well off as possible or that private finances are optimally managed over individual lifetimes.

¹ Annex 1 describes the components of retirement income in New Zealand in more detail.

1.6 Perceptions and reality about New Zealanders over the age of 65 are changing rapidly. The Social Security Act of 1938 defines its purpose as “to safeguard the People of New Zealand from Disabilities arising from Age ... or other Exceptional Conditions” - but today, being over 65 is neither a disability nor an exceptional condition. The number of years that people can expect to live past their 65th birthday is significantly greater than even a few decades ago.

Life expectancy at 65 in New Zealand, 1950 - present



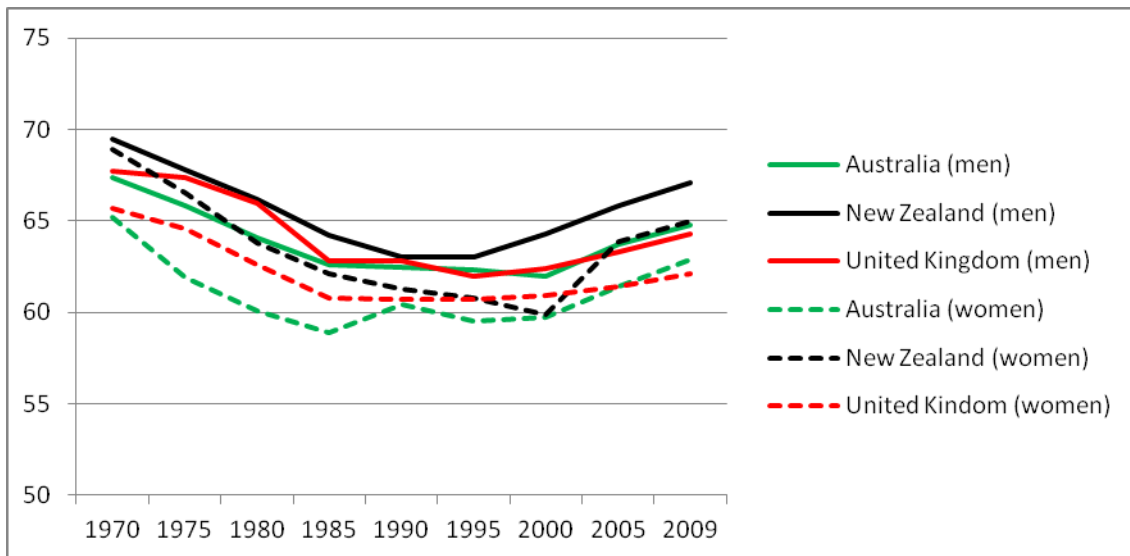
Source: Statistics New Zealand (2012b)

1.7 A key element of this shift towards a larger number of healthy life years is that many New Zealanders are now working, either full-time or part-time, past their 65th birthday and this trend is expected to continue as healthy life years increase (Rodway, 2012). This brings both economic and social benefits. Over-65s now pay about 8% of all income tax in New Zealand, and 58–64 year olds 10% of all income tax (Statistics New Zealand, 2010)². Evidence suggests that continued attachment to the labour force is good for both individual wellbeing and for the economy.

1.8 Further, the introduction of KiwiSaver to encourage individual saving for retirement is likely to mean that more and more people will reach the age of 65 with additional wealth, while less money is available for consumption in earlier years.

² Treasury analysis of the Household Economic Survey 2009/10.

Effective retirement ages³



Source: OECD (2010)

1.9 Nevertheless, NZS continues to be provided to all over-65s, subject to certain residency requirements, and this demographic change will also therefore translate into increased costs to future generations of providing NZS. Under present settings, the increasing proportion of older people in the population means that each pension will have to be provided for out of the taxes of fewer people.

Projected ratios of different age groups		
	15-64 years	65+ years
2006	♂ ♂ ♂ ♂ ♂	♂
2020	♂ ♂ ♂ ♂	♂
2030	♂ ♂ ♂	♂
2050	♂ ♂	♂

1.10 Maintaining the present course may therefore lead to increasing pressure on the implied social contract under which each generation pays for the pension costs of previous generations and expects to be paid in a similar way by subsequent generations.

1.11 Advances in behavioural economics have shed more light on the difficulties and challenges that face individuals trying to determine and act consistently with their own longer term interests (Barr & Diamond, 2008). This is in part recognised in the introduction of KiwiSaver, which seeks to make use of behavioural factors such as inertia to overcome individual barriers to long term savings such as myopia, risk misjudgement and hyperbolic discounting.

³ OECD defines the “effective retirement age” as the average effective age at which older workers withdraw from the workforce. In many OECD countries this age is well below the official age for receiving a full old-age pension.

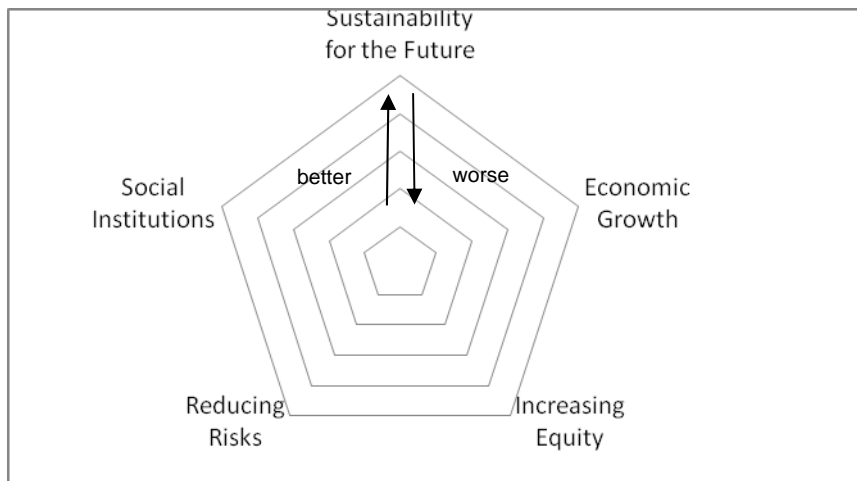
1.12 Finally, New Zealand’s private savings rate remains low and this has the effect of exacerbating macro-economic challenges as well as threatening individual well-being in retirement. There may therefore be a public as well as a private welfare policy case for a more active approach to encouraging higher levels of household saving.

A framework for comparing options

1.13 This chapter evaluates New Zealand’s current retirement income policy settings, and examines the impacts of four broad options for reducing the future fiscal costs, in more depth.

1.14 We base our assessment around Treasury’s Living Standards Framework (Karacaogolu, 2012). The framework enables different aspects of a particular policy or policy proposal to be graphically represented on a pentagon. Where a policy has a positive impact against a given criterion, this is represented by placing it further out along that axis. A negative impact is represented by placing it more towards the centre.

The Living Standards Framework pentagon



1.15 The table below outlines what we see as the main ways in which these criteria apply to the specific case of retirement income policy. We use these criteria to assess the present system and possible options for reform below. As will become apparent, in many cases a given system will not be unambiguously superior to the status quo for a given criterion.

1.16 This approach cannot therefore be used to determine which approach, or combination of approaches, is “best”. Views on that will continue to depend on individual value judgements about what are the general objectives of retirement income policy, and how they are to be prioritised against other calls on public resources. We have set out in this section some of the judgements that explicitly or implicitly inform the present approach. In the final section of this paper we attempt to identify some of the judgements that would need to be taken to reach a view on reform options.

Key impacts	
<p>“Sustainability for the Future”: Fiscal sustainability</p>	<p>In this analysis, we limit consider the direct fiscal cost of each option. All alternative options evaluated are chosen and calibrated to generate a significant reduction in the fiscal cost of NZS</p>
<p>“Economic growth”: National per capita income</p>	<p>The extent to which a policy: Increases labour force participation and through this, economic output Increases national savings, facilitating capital deepening, productivity growth, higher output per capita and higher living standards</p>
<p>“Reducing Risks”: Reducing macro vulnerability Reducing micro-economic risks</p>	<p>The extent to which a policy leads to increased national savings (government and private savings) and hence reduces NZ’s reliance on foreign borrowing for a given level of investment Impact of change on the nature and incidence of: Longevity risk – impacts on those living longer or shorter than average Investment risk – the risk that rates of return on investment will be higher, or lower, than the growth rate of the economy</p>
<p>“Increasing Equity”: Distributional impacts</p>	<p>Impact of a policy on: Old age poverty rates The relative burden borne by different age cohorts (inter-generation) The impact on different groups within a cohort (intra-generation)</p>
<p>“Social Institutions”: Reliability Administration and compliance costs</p>	<p>The probability of a policy being sustained into the long term, enabling confidence and long term planning by individuals Impact of a policy on: Costs to government of administering the scheme, including regulatory costs Costs to individuals e.g. of administering and monitoring their own savings.</p>

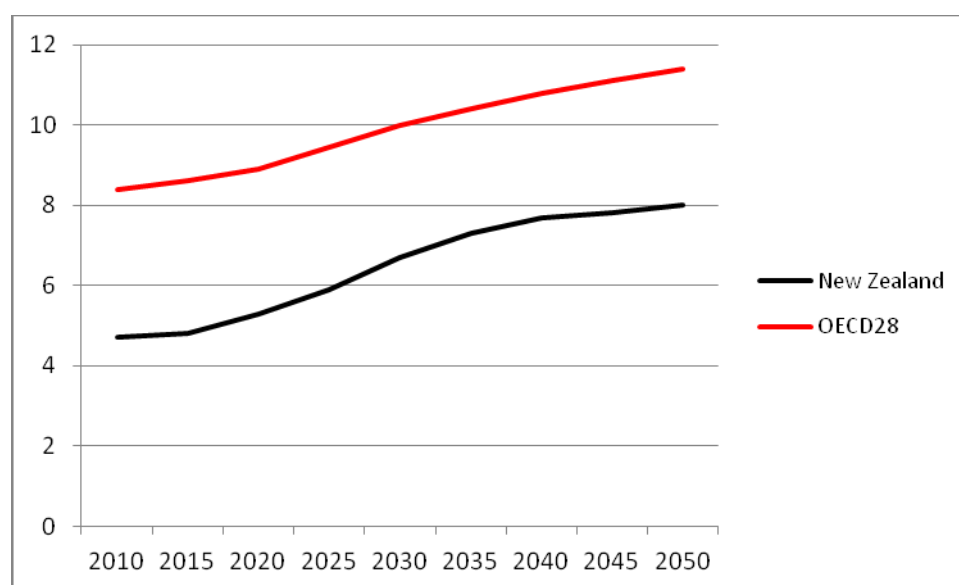
2 Evaluating current NZS

We explain more fully how we see the relevance of retirement income policy to each of these policy objectives below. We do this first by assessing the current approach, and then by comparing and contrasting the potential contributions of different possible options for reform; under each of the criteria.

2.1 Evaluating NZS: Fiscal sustainability

2.1.1 Consistent with the low cost/low benefit nature of New Zealand's current retirement income policy settings (relative to those in other countries), the public cost of New Zealand Superannuation is, and is expected to remain, low by comparison to many other advanced economies.

Gross cost of public pension payments as a percentage of GDP



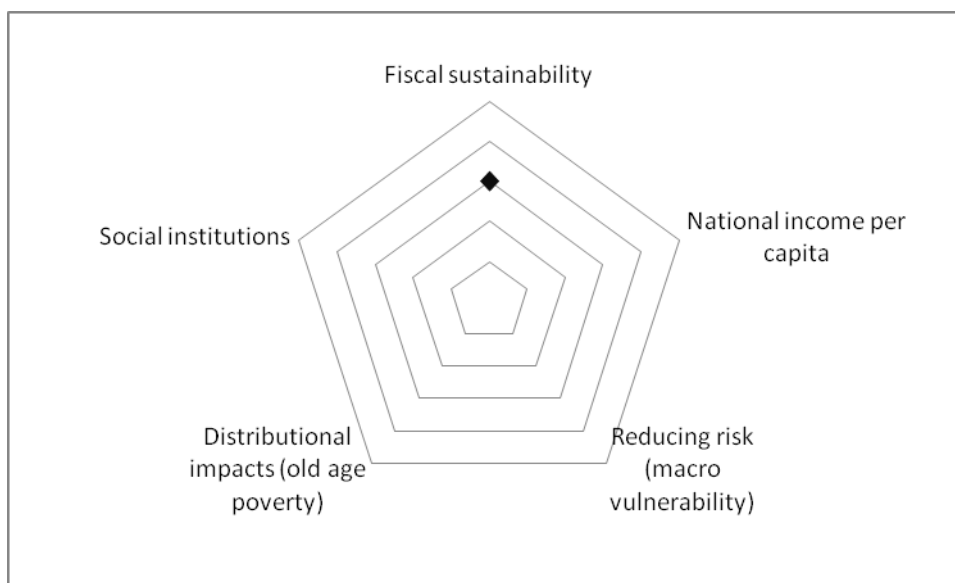
Source: OECD (2012a)

2.1.2 The increase in the cost of NZS is driven entirely by demographic factors, particularly the projected increase in life expectancy.

2.1.3 This demographic shift is broadly similar across countries, although some do have a more favourable demographic outlook. However, the cost is expected to rise more steeply in New Zealand than in many other countries. This is because several other countries are seeking to meet the cost in ways other than simply allowing the cost to future taxpayers to increase, for example by raising the age of pension eligibility. Further, other systems, with lower or no flat-rate universal pensions, have a less direct relationship between the number of people of pensionable age and the cost of providing their pensions.

Summary

2.1.4 We therefore regard the present policy as having scope for improvement in terms of its fiscal sustainability.



2.2 Evaluating NZS: National per capita income

2.2.1 The impact of retirement income policy on a country's trend economic output can be evaluated by considering separately its impact on two components of GDP: productivity and labour input.

- **Productivity:** Retirement income policy can affect trend productivity through its impact on incentives to save and invest. To the extent that higher national saving facilitates capital deepening (e.g. by putting downward pressure on average real interest rates and the cost of capital), which boosts productivity, this will contribute to a higher level of output in the medium-term.
- **Labour input:** Retirement income policies also influence work-force participation, as any public pension will tend to reduce both the *need* to work, for those over the age of eligibility, and the *rewards* for work (because it requires a higher overall tax rate to fund it) for the population as a whole. Some pension systems will have stronger disincentive effects here than others.

2.2.2 The impact of the government's broader fiscal strategy is also important. All else equal, lower government spending will imply lower demands on taxpayers, boosting incentives to save (the impact of lower taxation on hours worked is ambiguous, depending on whether the income effect dominates the substitution effect). To the extent that the different reform options have a different impact on the sustainability of the government's fiscal position (examined under "Sustainable fiscal cost" above) they will also impact differently on income per capita, via the productivity and labour input channels discussed above.

2.2.3 The short-term and long-term impacts of different reform options may go in opposite directions. For example, a policy that encourages higher saving at the expense of consumption would tend to have a negative impact on GDP in the short-term but a positive impact in the longer term.

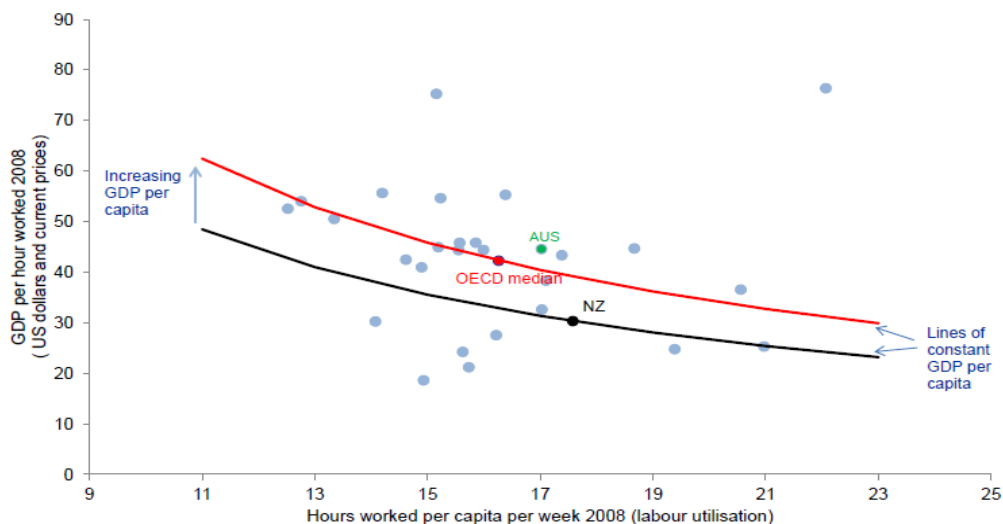
New Zealand stands out as having relatively low productivity and relatively high labour input by international comparison

2.2.4 As illustrated by the chart below, New Zealand has a relatively high rate of labour utilisation (horizontal axis) and a relatively low level of productivity (vertical axis) by comparison to both the OECD average and Australia. The negative impact of a flat rate universal benefit like NZS on labour force participation is relatively small compared to that of other pension systems (Hurnard, 2005). This is because the incentive to work for a more comfortable lifestyle in later life is not diminished by means testing.

2.2.5 Our relatively high rate of labour utilisation is particularly noticeable among older people, and this effect has been increasing (Khawaja & Boddington, 2009). For example, the labour force participation rate among males aged 60 – 64 rose from 34% to 78% between 1989 and 2009; and from 11% to 21% among males aged over 65 in the same period (Department of Labour, 2010). This implies that evolutionary changes in employer attitudes and employment practices are already under way.

2.2.6 While this is positive for economic output and is likely to continue as a trend, the chart shows that even very dramatic increases in the number of hours worked (a shift to the right) would not bring New Zealand's GDP per capita up to OECD levels.

International comparison: Contribution of labour productivity and labour utilisation to income levels, 2008



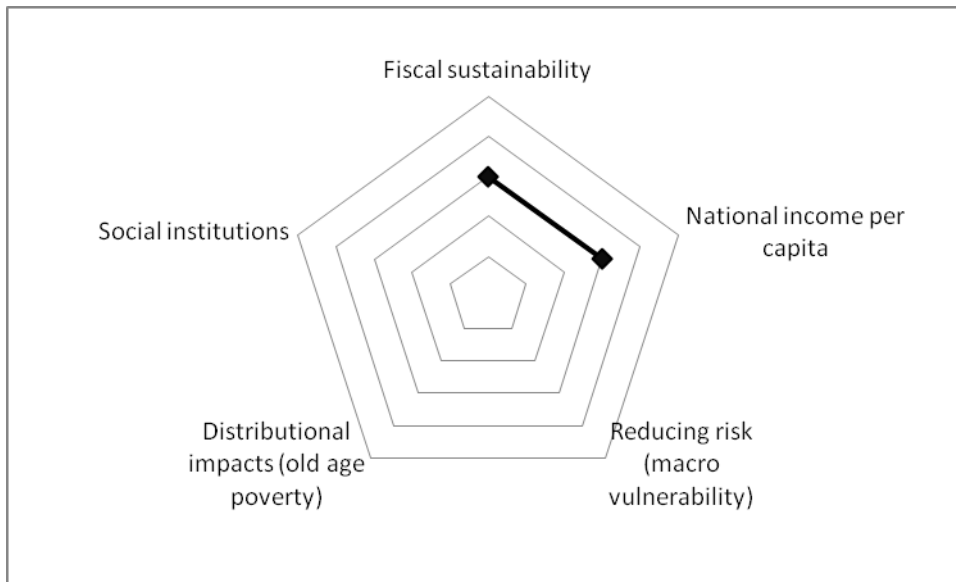
Source: OECD (2012b)

2.2.7 On the other hand, the fact that New Zealand's capital intensity is low compared to many others suggests that there is significant scope to raise per capita income through policy reform that boosts savings behaviour and capital intensity. Higher saving (and lower consumption) in New Zealand would most likely dampen average real interest rates, and so reduce the cost of capital, raising net returns to investment.

This in turn would encourage a higher stock of productive capital which would be expected eventually to boost productivity levels, moving New Zealand's performance upwards on the chart above.

Summary

2.2.8 Overall, we judge that the present policy has scope for improvement in terms of its impact on national income per capita.



2.3 Evaluating NZS: Reducing risks

2.3.1 This section considers two main types of risk: risks to the macro-economy, and risks to the eventual adequacy of pensions for the individual.

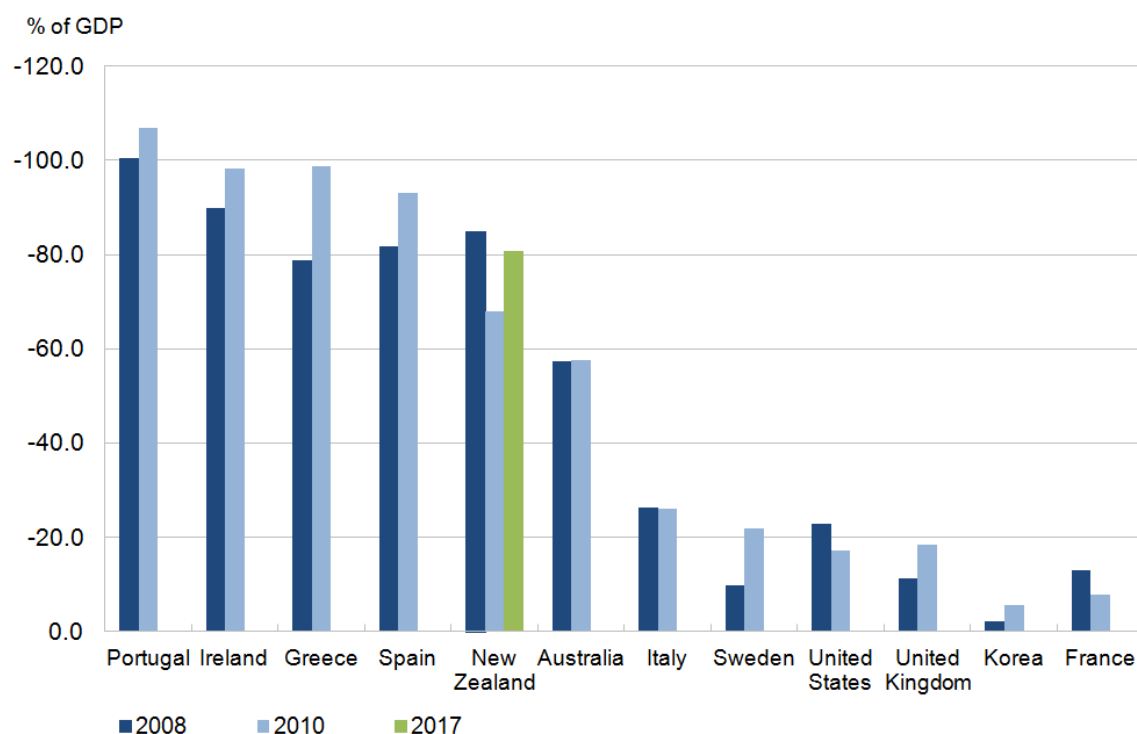
As macroeconomic imbalances have persisted, the role of retirement income policy settings in influencing individual saving behaviour and macro-economic imbalances has received increased attention.

As discussed above, the New Zealand economy is relatively capital-shallow, and so increased savings are likely to contribute to economic growth via capital deepening. At the same time, higher savings are likely to reduce macroeconomic vulnerability. New Zealand's low rates of private saving have necessitated relatively high rates of borrowing from overseas savers to fund New Zealand's investment requirements (Savings Working Group, 2011). This has contributed to a large net foreign liability position, making the New Zealand economy vulnerable to shocks.

All else equal, increases in national savings relative to investment, and increasing GDP growth for a given supply of capital, will act to reduce vulnerability or serve to mitigate the impact of an increase in net external liabilities, other things equal.

2.3.2 As illustrated in this chart, New Zealand's long-standing large net external liability position was at a level in 2008 that was comparable with many of the countries that have since suffered severe economic crises, as markets came to doubt their ongoing solvency. Since then, NIIP positions in those other countries have deteriorated further, while New Zealand's current account deficit has narrowed. This, together with reinsurance inflows, has seen a decline in our net external liability position. However, much of the recent reduction in the NIIP is expected to be temporary and further narrowing would be desirable.

2.3.3 Net International Investment Positions: selected countries, 2008 and 2010⁴

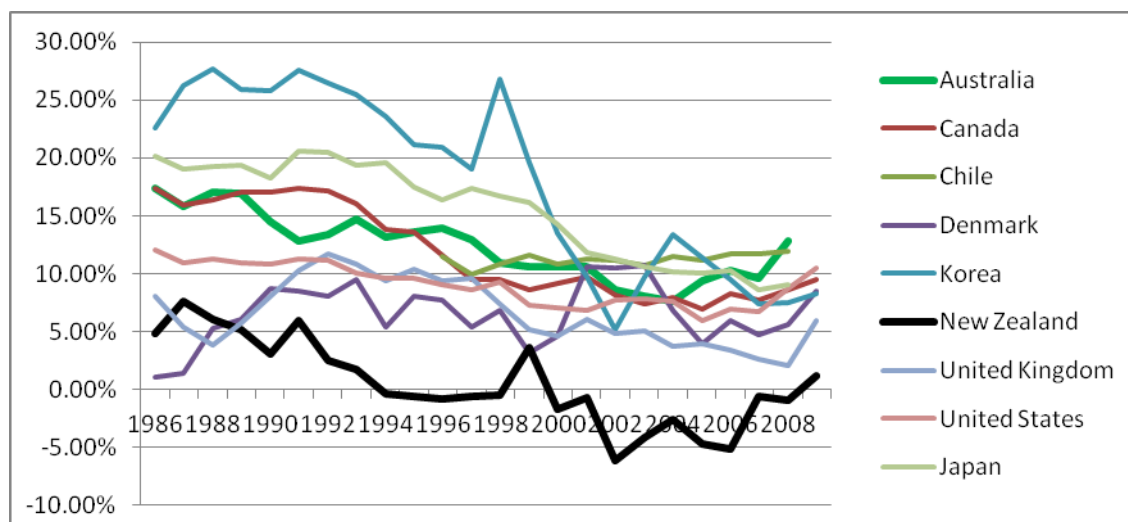


Source: New Zealand Treasury (2011)

2.3.4 Compared with the other high NIIP countries shown in the chart above, New Zealand is notable for having a relatively low government net debt position. Indeed, this is partly a response to the high level of private debt, as successive governments in New Zealand have now for a number of years taken the view that the best contribution the government can make to national savings is to keep its own debt low. As the macroeconomic imbalances in the economy have persisted, however, Treasury has increasingly emphasised that the role of the government in reducing macro-vulnerability is not just about ensuring the government has a public net debt buffer for dealing with shocks, but also about providing the policy frameworks and incentives to ensure that individual decisions produce a more sustainable macro outcome.

⁴ Update of Figure 6 from the Brief to the Incoming Minister of Finance: Increasing Economic Growth and Resilience 2011 which can be found at <http://www.treasury.govt.nz/publications/briefings/2011>

International comparison of household savings rates as a percentage of household disposable income⁵



Source: Savings Working Group (2011)

2.3.5 Retirement income policies have been identified as one of the key areas (along with tax) where policy settings are likely to influence private sector savings behaviour. In theory, we would expect the availability of a basic level of income support as a safety net to reduce the precautionary savings motive. There is less need for individuals to save money to provide for their retirement, and the taxation required to pay for pensions may also diminish the ability of individuals to save, and their incentives to work, during their working lives (Sefton, van de Ven, & Weale, 2008).

2.3.6 However, empirical analysis of cross-country policy settings and saving rates does not find clear evidence of a relationship between public pension provision and private savings rates (Hurd, Michaud, & Rohwedder, 2012). This may reflect the fact that savings rates are determined by a myriad of factors, making it difficult to isolate the role of retirement income policies. It is therefore difficult to assess in practice how household saving in New Zealand might be affected by the presence of NZS, given the absence of a counterfactual. Further work currently being undertaken by Treasury will shed more light on the relationship between retirement income policy settings and national savings. This paper draws on some of the preliminary results from that work, in section 4.3 below.

Longevity risk is borne by the Government under current settings...

2.3.7 Longevity risk is the risk that an individual, or a cohort, lives longer than expected, and therefore needs more funding than he or the Government had planned for. It is therefore driven by expectations of longevity, actual longevity and the cost of funding additional years of life.

⁵ Statistics New Zealand update of Figure 2.13 from the Savings Working Group's 2011 report which can be found at <http://www.treasury.govt.nz/publications/reviews-consultation/savingsworkinggroup/finalreport/>

2.3.8 Under the present system, this risk is largely borne by the Government through NZS, which continues to be paid throughout a pensioner's life.

... while investment risk is largely borne by individual savers

2.3.9 Investment risk is the risk that retirement savings do not generate the level of returns expected. This may come about because of poor investment decisions, or inadequate levels of saving, or because of mismatches between an individual's life cycle and market cycles. For example, if a downturn in the stock market coincides with an individual's retirement, they may be forced to accept losses which younger savers would have time to make up for.

2.3.10 This risk is carried by individuals with regard to their voluntary savings, but NZS forms a safety net, meaning that sub-optimal individual investment outcomes need not lead to (relative) poverty in old age. There is also some investment risk for the Government, in that the ability of the New Zealand Superannuation Fund to take on part of the cost of funding future NZS entitlements will depend on the investment returns it makes in the meantime.

NZS levels are wholly exposed to macroeconomic conditions ...

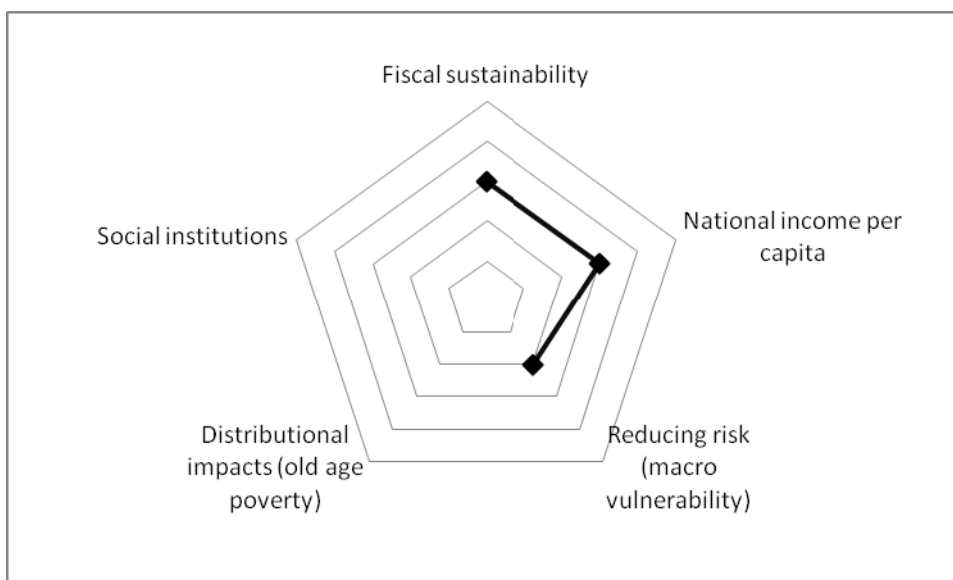
2.3.11 Since the level of NZS is set by reference to contemporary wages, which are in turn dependent on economic conditions within New Zealand, pensioners who rely solely on NZS for their income are exposed to the risk that economic conditions will be poor. Those who also have capital accumulations in retirement can diversify this risk outside of New Zealand through investments in overseas assets. This risk is therefore greater for those who have no income other than NZS in retirement.

... and their affordability depends on relative cohort sizes

2.3.12 Since NZS is paid by generations of (mostly younger) taxpayers to older generations, its affordability in terms of cost per person is wholly driven by the respective sizes of the generations who pay and those who receive. This risk is reduced to the extent that generations pay for themselves, for example through the New Zealand Superannuation Fund.

Summary

For reasons of simplicity, we focus our evaluation of risk with respect to the pentagon on the macro-economic risks discussed above. i.e. we focus our evaluation on the impacts of policy changes on private and national savings. Because private savings are low and net international liabilities high and projected to deteriorate further, reforms with the potential to impact positively on national savings should be given attention.



2.4 Evaluating NZS: Distributional impacts

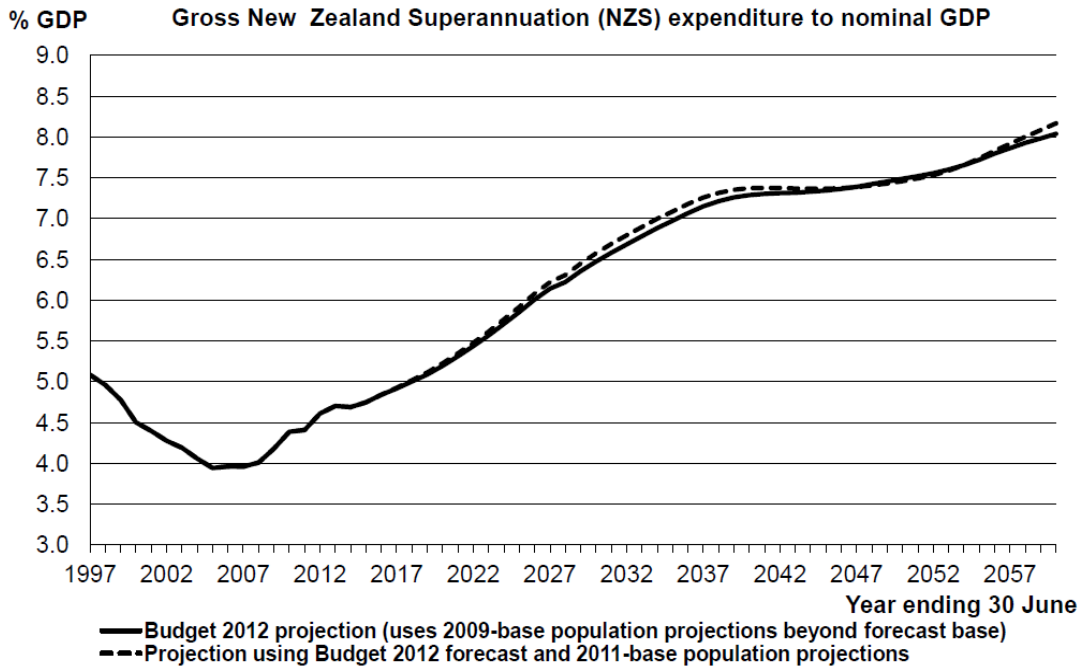
2.4.1 Different dimensions of equity are important in consideration of retirement income policy.

2.4.2 One is inter-generational. This may mean comparing the amount that each generation pays in tax to support its elders; the amount which each generation receives in NZS from younger tax payers; or the impact that retirement income policy has on the distribution of wealth between younger and older people.

2.4.3 The other is intra-generational – comparing the amounts paid, and received, by people of the same age, but who differ according to for example, their income levels, gender, ethnic backgrounds, family circumstances, occupation types etc.

Distribution of costs between generations of taxpayers

2.4.4 As noted earlier, in the last four decades, reasonably high population growth has meant that working age taxpayers have not had to pay much toward NZS support because there have not been very many old people compared to the number of taxpayers. By 2050, this population structure will have changed. By then the fraction of the population over 65 will have doubled from its current value, meaning that the taxes necessary to pay for pensions will need to approximately double, all else equal.



2.4.5 Favourable demographics experienced up to now mean that under current policy settings, cohorts born before 1980 stand collectively to receive twice as much from NZS, funded by younger generations, as they themselves paid to fund the pensions of older generations (Coleman, 2012). Cohorts born after 1980 are also expected to receive a “good return” on their current contributions to fund NZS, although to a reducing extent.

2.4.6 Looking ahead, however, this rate of return for more recent and future cohorts will be becoming less and less favourable on average, as the proportions of people receiving and paying for pensions change. Put another way, today’s taxpayers are supporting about a quarter of a pensioner each; future taxpayers will have to support half a pensioner each.

2.4.7 If current settings continue, then, each individual pensioner will continue to receive a similar individual pension as members of previous generations have done. However, present generations in aggregate will receive a higher transfer from future generations than they themselves have made to generations before them.

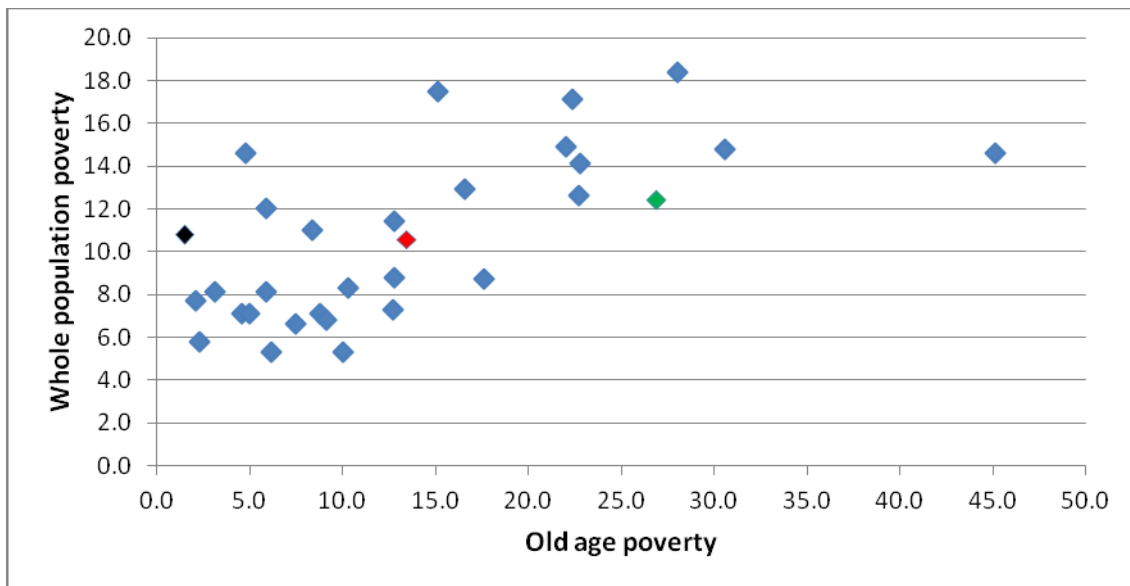
Distribution between older and younger

2.4.8 As a flat-rate universal benefit, New Zealand Superannuation is extremely effective at ensuring that older people do not fall below a certain minimum income level. That level currently sits very close to 50% of the median household income, which is often taken to represent a national “poverty line”. NZS alone suffices to keep people in the third and fourth income deciles for New Zealand as a whole.

2.4.9 Thus in 2008, the most recent year for which the OECD provides comparative data, New Zealand’s rate of poverty among over-65s appeared very low by comparison to other OECD members. It is also low by comparison to poverty rates across New Zealand as a whole.

Poverty rates in the whole population and among older people in OECD member countries

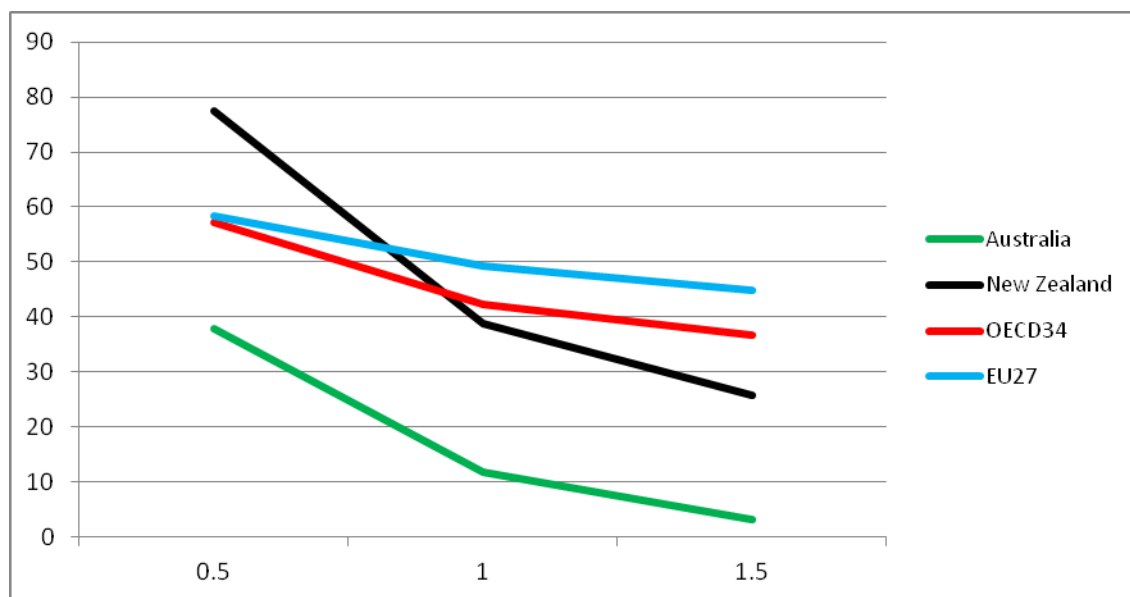
(New Zealand black; Australia green; OECD average red)



Distribution within generations

2.4.10 Another way of looking at how well pensions meet any distributional objectives is the replacement rate, which calculates how a pension compares with an individual's pre-retirement income. In some countries, pensions are calculated to ensure that those who paid more taxes, or otherwise contributed more towards their pension during their working life, receive a higher pension. This leads to a relatively constant replacement rate. Where the pension is flatter, such as in New Zealand, or where means-testing is applied, replacement rates are higher for lower-income people. As such, NZS is more favourable to people with lower lifetime incomes – for example, women who have spent time out of the workforce – than are systems with a more actuarial basis.

Replacement rate given by public pension for individuals who earn 0.5, 1 and 1.5 times the median wage



Source: OECD (2012a)

2.4.11 As a flat rate universal entitlement NZS has a Gini coefficient of zero and scores 100% on the World Bank/OECD progressivity index⁶.

Lifetime entitlement

2.4.12 Any pension which depends on a periodic entitlement rather than a one-time lump sum award will mean that people with shorter lifespans will receive less over their lifetimes, even though they may earlier have made the same contribution to their elders’ pensions as longer-lived contemporaries. In the case of New Zealand, some ethnic groups appear generally to have shorter life expectancies and thus lower lifetime NZS receipts. By contrast, women generally have longer life expectancies and thus higher lifetime NZS receipts.

Adequacy

2.4.13 People in different circumstances, however those circumstances come about, have different needs and this means that an income level which is adequate for one individual may not be so for another. For example, people who do not own a home are likely to face higher accommodation expenses; people in ill-health may also face higher expenses, and are less likely to be able to supplement their income through work. This difference is only partly addressed through NZS, through the different rates payable to

⁶ The Gini coefficient is a measure of statistical dispersion, with a score of zero indicating complete equality while a score of one indicates complete inequality in dispersion. NZS’s Gini coefficient of zero reflects the equal pension amount for all eligible people, regardless of their personal/financial circumstances. The World Bank/OECD progressivity index indicates where a pension system is positioned along a continuum of different configurations. A score of zero would indicate a pure insurance system and a score of 100% would indicate a “pure basic” system i.e. a system with a flat rate universal entitlement.

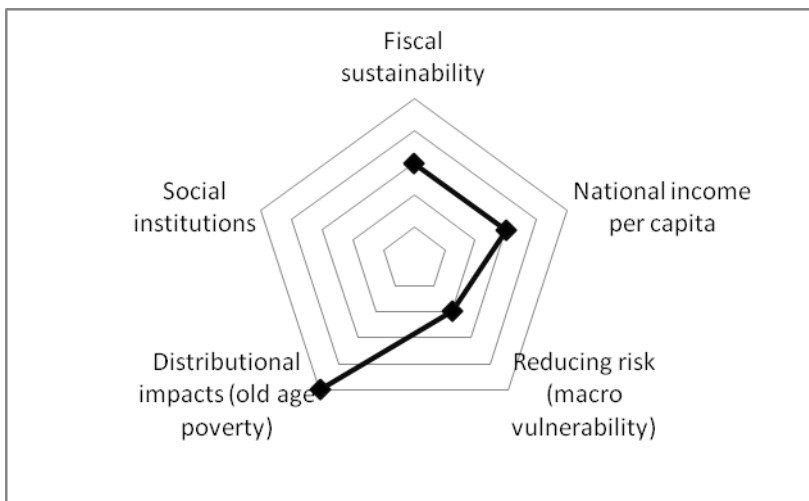
people living on their own, living together as a couple or sharing accommodation. Other drivers of differing individual costs are met through other policy areas such as health and accommodation and hardship benefits, or left to individuals to address themselves as they think best.

Cost distribution

2.4.14 Since it is funded through general taxation, the distribution of the costs of NZS is as progressive as the tax system as a whole. This is considered in more detail in a separate Treasury paper⁷ for the Panel.

Summary

2.4.15 It is difficult to reach a single conclusion about the equity of the present approach. For reasons of simplicity, for the purposes of evaluation against the pentagon, we focus our attention on the criterion of prevention of old age poverty, under which we regard the current approach as highly effective for the present.



2.5 Evaluating NZS: Social institutions

2.5.1 As a flat-rate universal benefit New Zealand Superannuation is very simple to understand, making it easy for individuals to know what their entitlement will be, and hence to plan how to prepare through saving for the lifestyle that they want, in retirement. It is also easy to administer, minimising the risk of administrative error, compared to many other systems under which individual benefits differ according to individual circumstances and choices, and unpredictable external factors such as market returns. Its independence of individual circumstances means that it does not penalise pensioners' saving and labour force participation decisions and hence enables them to retain greater autonomy and self-responsibility.

2.5.2 However, meeting the cost increases implied by the present settings, and keeping New Zealand's public finances on a sustainable track, will require reductions in

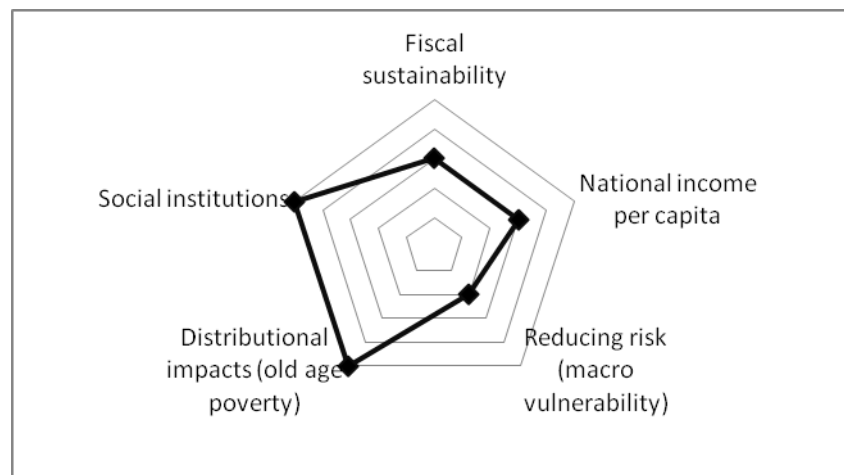
⁷ "The Role of Tax in Maintaining a Sustainable Fiscal Position" – Steve Mack.

other areas of public spending or increases in taxation, which will impose costs on future generations and make it more difficult for them to maintain living standards during their working lives and – if they are unable to save due to higher taxes – in retirement. To the extent that any contributions to the NZSF and to individual KiwiSaver accounts add to present levels of Government borrowing, this will also impose costs on future generations in terms of debt repayment.

2.5.3 This is reflected in the relatively low rating given above under “Fiscal Sustainability” but also has a potential impact under this heading as it raises the political risk of inter-generational tensions. While future generations are likely to be richer than present ones, this does not necessarily mean that they will be willing, or can be expected, to continue to make ever greater sacrifices for their elders (proportional to their income) than present generations have done. They may prefer to make drastic and rapid adjustments to retirement income policy, with substantial impacts on pensioner welfare (McHale, 2001), or to opt out altogether by leaving for overseas.

2.5.4 Nevertheless, because of its simplicity and clarity we see the current approach as highly effective under this criterion, for the present, but note likely risks to political sustainability in this area going forward.

2.6 Evaluating NZS: Overall Assessment



3 Options

3.1 In the previous section, we argued that continuing with the present approach as demographic changes take place is likely to lead to greater fiscal costs, with implications for growing intergenerational inequity which may force substantial changes later on with little scope for allowing individuals time to adjust and prepare. We also argued that present retirement income policy settings may be contributing to New Zealand’s macroeconomic vulnerability and low productivity; and. We therefore examine options which would reduce the cost to future taxpayers and consider how different approaches might impact on other aspects.

3.2 New Zealand’s present approach is a PAYGO (pay-as-you-go) system, using current tax revenue to finance the pensions of current NZS recipients. This is in contrast to a SAYGO (save-as-you-go) approach which involves building up funds in advance which are later used to fund pension costs. Any option that shifts away from the present “Government-arranged PAYGO” approach must move it towards either a SAYGO or a privately-arranged PAYGO approach.

	Pay-as-you-go (PAYGO)	Save-as-you-go (SAYGO)
Government Arranged	<p>Government raises taxes that are transferred to older people as pensions.</p> <p>Taxpayers receive a pension from younger taxpayers when they are old.</p> <p>(NZS in the New Zealand context)</p>	<p>Government raises taxes that are accumulated into a Government retirement fund. The contributions are sold, normally to young contributors, to pay pensions</p> <p>(The NZSF in the New Zealand context)</p> <p>The government mandates people to accumulate private savings which are subsequently used to fund their pensions in full or in part.</p> <p>(Not a feature of current NZ system)</p>
Privately Arranged	<p>Older people support themselves through work; or are supported by their families.</p> <p>Sometimes the resource transfers are linked through the education adults provide to their children.</p>	<p>Adults voluntarily accumulate assets for their own retirements, selling them to younger adults when they are old.</p> <p>(KiwiSaver and other private asset accumulation in the New Zealand context)</p>

3.3 In practice, New Zealand’s present approach already includes elements of other approaches, as shown above, and it is likely that any reform would need to build on one or more of those elements to continue a hybrid approach.

3.4 We have excluded, for these purposes, reform options which will increase, or have no or little impact *in themselves* on, the future fiscal cost of NZS. These include flexibility around the age of retirement in return for an actuarially age-fair NZS, changes to the current differentiation between single, single sharing and married couples' allowances, and changes to the residency requirements for eligibility (see box). All of these, however, are options that could be combined with one or more of the reform options examined here in a package approach.

Changing the NZS residency criterion

New Zealand's residency criterion to qualify for New Zealand Superannuation is less stringent than most other OECD countries. Further, because NZS payments are not dependent on the level of individual contributions made, those who have lived in New Zealand for a short period of time receive more from the government than do people in the same situation in most other OECD countries, where a greater proportion of entitlements are linked to contributions.

While there may be other reasons, such as administrative simplicity and fairness, for reconsidering the length of residency requirement, it is difficult to show that significant fiscal savings would result. There is a large number of factors that make projecting future savings difficult to estimate, for example, changing population mobility. Back of the envelope estimates suggest that if the residency criteria is significantly tightened, or the level of pension entitlement is adjusted for those who have spent a significant portion of their lives overseas, then small but nontrivial savings may be achieved.

There are four broad options for reducing the future fiscal costs of NZS ...

3.5 Option 1: Raise the age of eligibility for New Zealand Superannuation

3.5.1 This would reduce the overall future cost of NZS, compared to what it is currently expected to be, by reducing the number of individuals that NZS would be payable to, although the level of payment would remain as it is under present settings and its universal, flat-rate nature would be retained.

3.5.2 There are various ways in which this can be implemented in practice. It could be done according to a pre-established timetable; for example, the age could rise by two months per year from 2020 until it reached 67, or by six months per year until it reached 70, or by any other pre-fixed rate and target age.

3.5.3 Alternatively, the age of entitlement might be objectively linked to changes in longevity, rather than set at an arbitrary level which may or may not need to be changed again later. For example, the age of entitlement could be set such that each cohort would on average expect the same number of years of life, or the same proportion of their total lifetime, after the age of entitlement. This would be likely to mean that an individual's expected age of entitlement would change during their lifetime, and so the methodology would have to ensure that the age of entitlement for any given individual or cohort was fixed in time to allow them reasonable opportunity to adjust their savings patterns or workforce participation plans.

Longevity and pensionable age in Denmark

The pensionable age is currently 65 but will be increased to 67 in steps of 6 months per year over the period 2024-2027. From 2025, the pension age will be linked to life expectancy at age 60. There will be a five-year lag between the time of the change in life expectancy and the adjustment to the pension age to allow for some catch-up in the pension age for past life-expectancy gains.

The rising pension age is intended to ensure the average length of time spent on early retirement and public pension will be around 19 years. If life expectancy does not change, the early retirement age will stay at 62 years and the pension age at 67.

3.5.4 Effectively, this would represent a shift away from “Government-arranged PAYGO” and towards private provision. Individuals would be encouraged either to continue working for longer; or to live more frugally or rely more on their families for support (“Privately arranged PAYGO”) during the additional years before they can access NZS; or to increase their savings at younger ages (“Privately arranged SAYGO”) so that they can continue to retire at 65; or some combination of the above. This might be supported through initiatives focused on financial education and through action to support and encourage employers in facilitating continued participation in the labour force by older workers.

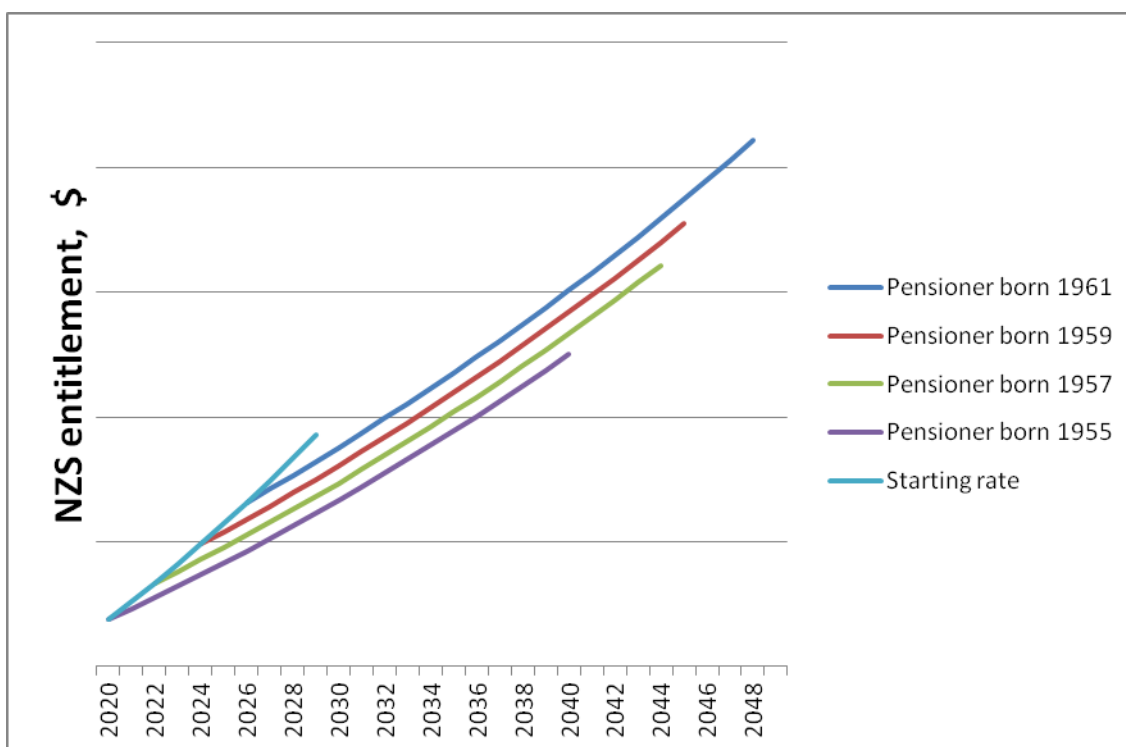
3.6 Option 2: Slow down the rate of increase of New Zealand Superannuation entitlements

3.6.1 This would reduce the overall future cost of NZS, compared to what it is currently expected to be, by reducing the relative value of individual NZS entitlements over time, while retaining the flat-rate, universal nature of the payment.

3.6.2 NZS is currently effectively indexed to wage inflation, maintaining pensioners’ purchasing power in relation to that of working people. Since wages generally increase at a higher rate than consumer prices, this also means that pensioners’ absolute purchasing power increases. Reform could be done on a bottom-up basis, by reforming the methodology by which individual NZS entitlements are calculated, for example moving from the current approach of effectively indexing NZS to wage inflation, towards indexing it to price inflation, or to some average of the two.

3.6.3 This in turn could be applied to all pensioners, both current and future; or only to future pensioners. It could be designed such that the relationship between salaries and an individual’s starting pension remains the same (through continued wage indexation) while pension levels for existing pensioners could be linked to a greater extent to prices. This would mean that successive cohorts of people transitioning from work to pension would continue to experience the same impact on their living standards, while people already in retirement would maintain that same purchasing power from year to year.

Illustrative: Pensioners of different ages receive different pensions, reflecting the increased wages achieved during their working lives, while maintaining their individual purchasing power



3.6.4 An alternative, top-down approach might involve establishing a cap on the total cost of NZS as a percentage of GDP and dividing that among however many people it needed to be divided among.

3.6.5 This approach might lend itself particularly well to combination with an option for individuals to delay claiming their pension in return for a higher entitlement. Effectively then, this would enable individuals to combine options 1 and 2 to suit their own circumstances and preferences. If this option were not available, or people were unable to make use of it, individual savings would have an important role in enabling people to continue to support themselves. This option might therefore be combined with a stronger focus on encouraging individual voluntary saving, through financial education and perhaps more use of behavioural signals such as the default rate of saving under KiwiSaver.

3.6.6 Again, this would effectively entail a shift away from “Government-arranged PAYGO” and towards private provision. Individuals would be encouraged either to increase their voluntary savings at younger ages (“Privately arranged SAYGO”) or to rely more on their families for support, or to continue working for longer (“Privately arranged PAYGO”).

3.7 Option 3: Mandatory private pre-funding + means testing

3.7.1 Under this approach, the Government mandates private saving, some of which is later used to part-fund an individual’s own NZS. This reform would entail a shift from the present Government-arranged PAYGO towards Government-arranged SAYGO. It

would effectively involve applying a means-test to NZS, within a specific and narrow definition of “means”.

3.7.1 We have excluded means-testing other than the specific case of means-testing against savings accumulated under compulsion, in view of the administrative complexity and unproductive avoidance behaviours that such an option is likely to entail. Thus voluntary savings, including those already accumulated under KiwiSaver, would not be included, and nor would income earned from other sources.

3.7.3 The extent of fiscal savings, and the impact on individual pension wealth, would depend on the rate of offset and the length of time for which it might be applied. In the version modelled below, individuals are required to annuitise 50% of their compulsory savings and this is used to offset their NZS for the full length of their retirement. Where individually-funded annuities are sufficient to fully offset individual NZS entitlements, those individuals are not required to annuitise any more of their savings.

3.7.4 Other variations might involve, for example, a higher level of offset over a shorter period (Financial Services Council, 2012).

3.8 Option 4: Communal pre-funding

3.8.1 Under this option the Government raises taxes, or reduces public spending in other areas, and puts the money into a Government retirement fund. In the New Zealand context this would most likely be a further extension of the New Zealand Superannuation Fund over and above the contributions already intended. This, and the investment returns that the fund would earn, would subsequently be used to cover all, or part, of the costs of NZS, which would continue to be paid at the same level and on the same universal, flat-rate basis. This too would shift the balance further towards “Government arranged SAYGO”.

... and they all have their merits and problems

3.9 The options set out here should be considered as potential candidates for inclusion within a reform package. As we show below, all of them have strengths and weaknesses such that a packaged approach is more likely to deliver a balanced outcome than would the implementation of a single option. However, we discuss them separately so as to bring out the contrasts and comparisons in an informative way.

3.9 In the analysis that follows we discuss the impacts of each of these options against our living standards criteria as defined at paragraph 1.15 above. For illustrative purposes we have modelled the fiscal cost impacts of different variants of each approach – some extreme, some more moderate – to show how the likely impact of the policy change depends on the settings chosen as well as to draw out the key differences and similarities between the options. In reality there is a spectrum of variation within each option.

4 Assessing the options

We compare and contrast how the options look under each of the criteria identified above and find that each has strengths and weaknesses, sometimes differing over different timescales.

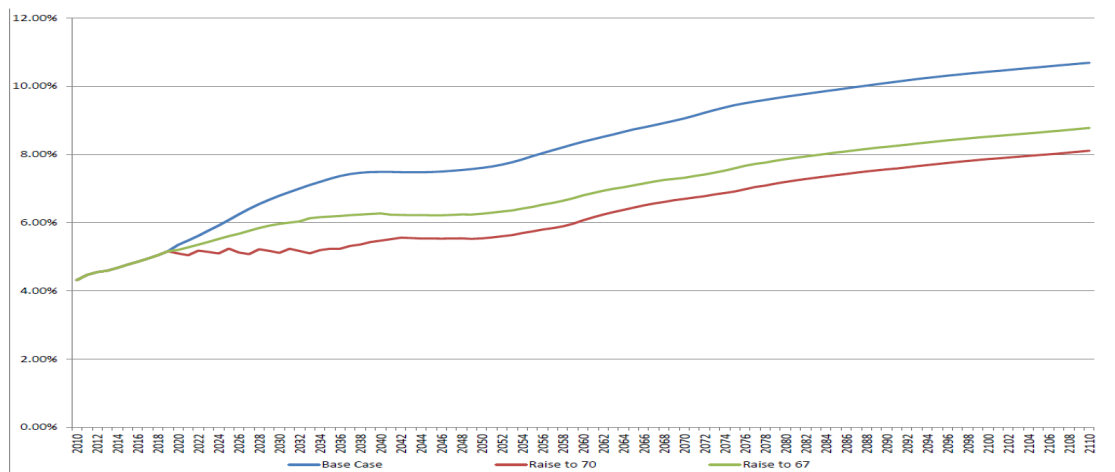
4.1 Assessing the Options: Fiscal Sustainability⁸

The extent of the reduction in future PAYGO costs would in each case depend on how far the proposed reform goes.

Option 1: Raising the age of entitlement

4.1.1 We show here the modelled fiscal cost of NZS following an increase in the age of eligibility to 67, with the increase phased in slowly (by two months per year from 2021); and an alternative, more radical approach involving an increase phased in by six months per year from 2021 until it reaches 70.

Projected fiscal cost of NZS under present settings, and under alternative settings with higher ages of eligibility (% GDP)



Where there is a single new age of eligibility, the fiscal cost eventually settles on a path parallel to and below the current projection. This pattern would be repeated whatever eventual age and rate of change were adopted. An approach based on longevity indexation would be more likely to continue to diverge from the current projected path.

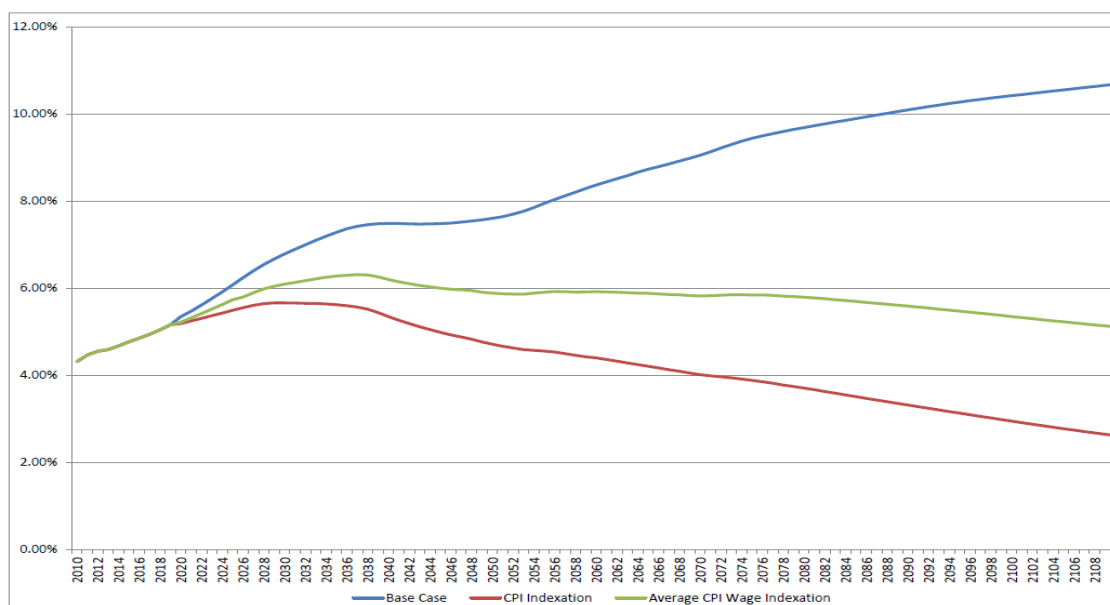
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The charts in this section show costs projected forward than in other parts of the Long Term Fiscal Statement. This is because in the case of options involving pre-funding, the cost saving benefits take a longer time to come through. Projections over such time periods are of course subject to considerably greater uncertainty

Option 2: Reducing the level of entitlement

4.1.2 In the following chart we show the modelled fiscal costs of NZS re-indexed on two different price measures from 2021: indexed to consumer price inflation; and indexed according to an average of wage and price inflation (Commission for Financial Literacy and Retirement Income, 2010).

Projected fiscal costs of NZS under present settings, and under alternative settings with different indexation methodologies (% GDP)



4.1.3 In each case, the total cost reduces indefinitely as a proportion of GDP despite the expected increase in the number of pensioners. In practice it is likely that political pressure arising from increasing levels of old-age poverty as the real value of the NZS reduced, would prompt a reversion to wage indexation or upward ad hoc adjustments in the level of NZS at some point. In such a case the fiscal costs modelled here would understate the actual outcome.

4.1.4 An approach under which each successive cohort started their pension at a new level, as described in paragraph 3.6.3 above, would keep the average pension closer to contemporary wage levels, particularly for younger pensioners, but could also come under political pressure if the gap between older and younger pensioners became very wide.

4.1.5 In the case of both options 1 and 2, reductions in the cost of NZS would be likely to be offset to some extent by an increase in the cost of other welfare benefits claimed by over-65s unable to fund their living costs through continued work, savings or reliance on family resources. However, it is not possible to assess with any confidence how great this effect is likely to be.

4.1.6 About 15% of 64-year-olds currently claim the main working-age benefits⁹ and at least this proportion of over-65s would be expected to do so if they were unable to access NZS payments as a result of an increase in the age of eligibility. Decreasing

⁹ Unemployment, sickness, disability and the Domestic Purposes Benefit.

the indexation of NZS would potentially put pressure on supplementary forms of welfare assistance such as the accommodation supplement, the disability allowance and hardship payments.

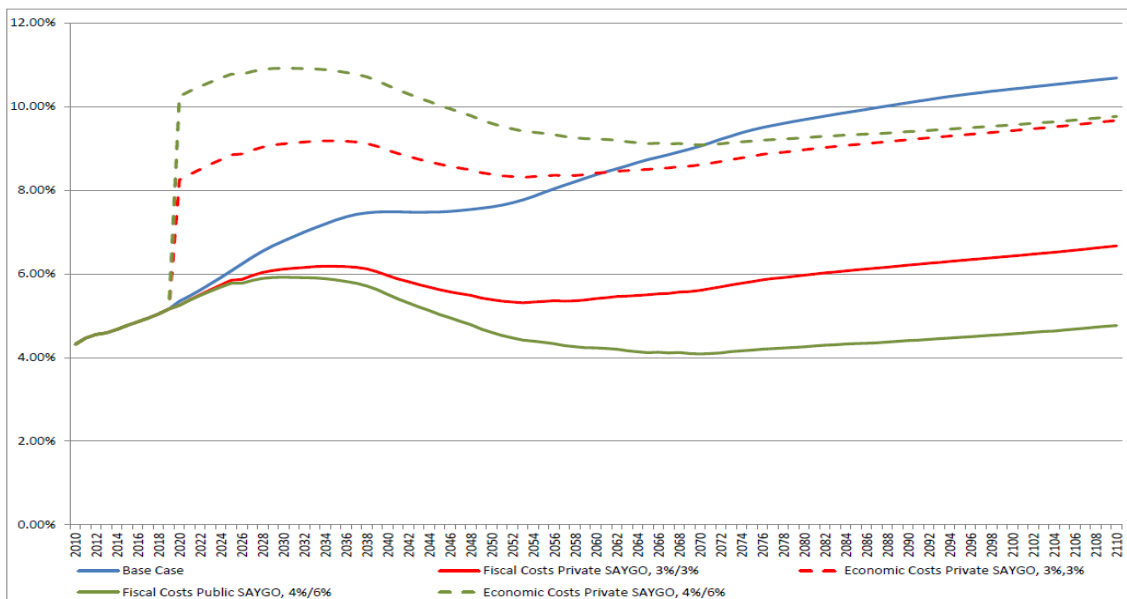
Increasing SAYGO would increase costs in the short term and reduce them later

Option 3: Mandatory private SAYGO

4.1.7 We show here two alternative versions of an approach under which employees are required to save, and employers are required to contribute, a proportion of their pay into an individual retirement account. The alternative options shown here involve compulsory contributions by employees of either 3% or 4% of salary, plus compulsory contributions by employers of either 3% or 6% salary. The government does not tax these contributions but also does not provide any other subsidy. On reaching the age of eligibility for NZS, individuals are required to annuitise the savings accumulated in this way. Their NZS is then abated by 50% of the income that they receive from the annuity. In effect, for employees, the employer's contribution goes towards pre-funding the individual's NZS.

4.1.8 Introducing a private SAYGO scheme leads to savings for the Government but increases the costs faced by individuals, who must reduce either their consumption or their voluntary saving rate, during a transition period. The subsequent offset to NZS means that this is in part a real cost, not simply a redistribution from earlier to later in an individual's life. Therefore, the chart below shows both the fiscal cost and the additional cost to the individual of the means testing these compulsory savings schemes (on the graph below we label these combined costs 'economic costs').¹⁰

Projected fiscal costs of NZS under present settings, and under alternative settings with compulsory saving (% GDP)



¹⁰ We recognise this cost in the year in which the individual contributes to the scheme, although the saving to the Government does not occur until later when the NZS offset takes effect.

4.1.9 A key feature of any transition towards SAYGO, therefore, is that economy-wide costs will initially increase before they decrease, as in the early years existing pensioners continue to be paid their NZS entitlements on a PAYGO basis while working cohorts must at the same time make contributions to the SAYGO fund. Effectively, transitional generations pay both for some proportion of their own pensions and for the full cost of the pension entitlements of earlier generations.

4.1.10 The higher the required saving rate, the faster and the higher are the eventual cost savings achieved, compared to what would have been the cost otherwise, as more of the cost of pensions is met from private savings, plus the returns on investment that they make, and less of the cost is met from taxation. Thus, some of the increased costs of NZS brought about by increased life expectancies are transferred from future generations to current generations. This may be seen as appropriate since current generations are the ones whom benefit from increase life expectancy.

4.1.11 In practice, regardless of the scheme's explicit structure, the precise share of the up-front cost falling on employers and employees is likely to be determined by labour supply and labour demand. Where labour supply is tight, employers are likely to be more prepared to take on some of the costs of funding employees' retirement savings through reduced profits; whereas in a looser labour market, employees may be more prepared to accept lower pay increases to enable their employers to afford the cost of their contributions.

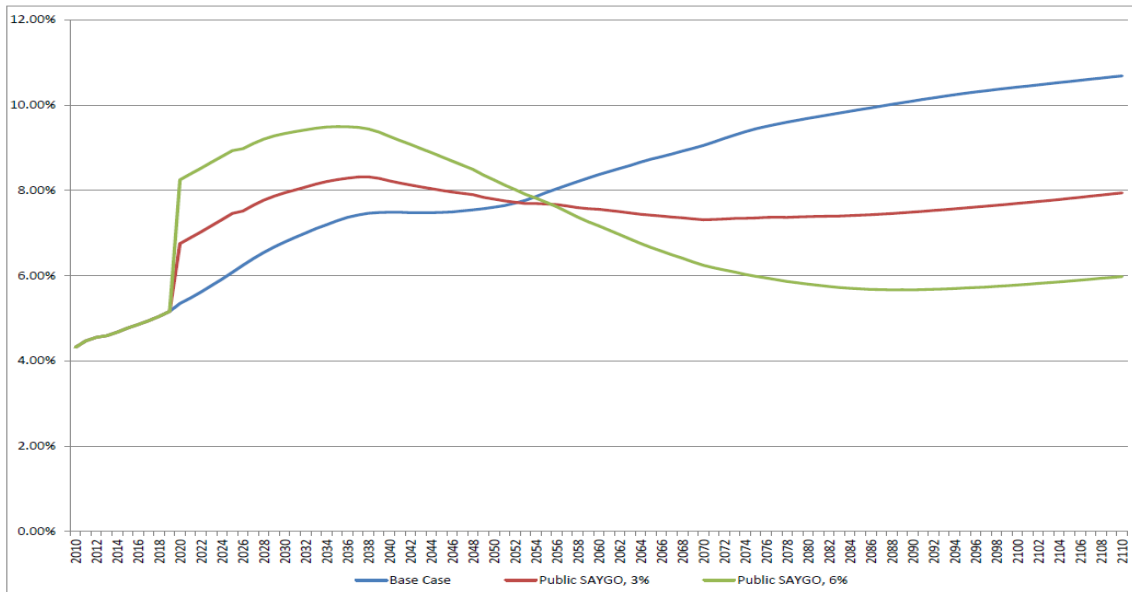
4.1.12 Fiscal savings from this approach may be offset to the extent that the Government finds it necessary to offer tax breaks or other forms of incentives to encourage saving. The favourable tax treatment afforded to retirement savings in Australia, for example, is likely in due course to enable fiscal cost reductions via the means testing of the basic pension there, but currently costs the Government there nearly as much as pensions payments themselves. Much of the benefit of this has gone to the highest income brackets, although measures taken in the Australian Budget 2012 are intended to reduce this effect (Australian Parliamentary Library, 2012).

Option 4: Communal SAYGO

4.1.13 The scale of eventual cost reductions achievable through a communal version of SAYGO would similarly depend on how much additional cost transitional generations were able to fund. New Zealand's public finances are already under considerable pressure as the Government seeks through its fiscal strategy to reduce long term debt funding costs and to return to surplus through spending restraint. If additional cuts in other areas of spending are not considered feasible then additional taxation would be required to significantly increase the contributions that the Government is already intending to make to the NZSF.

4.1.14 Having said that, the fact that the communal approach would be intended to fund only the flat-rate universal NZS, rather than enabling a higher replacement rate for those who earn more, would mean that similar long term fiscal savings could be achieved for a lower up-front cost (conversely, that higher fiscal savings could be achieved for the same up-front cost), compared to a private SAYGO approach.

Projected fiscal costs of NZS under present settings, and under alternative settings with public SAYGO (% GDP)



Summary: Fiscal Sustainability

4.1.15 All of the reform options are capable of achieving fiscal cost savings in the long run.

	Increase age of eligibility	Reduce level of NZS entitlement	Greater private pre-funding (compulsory private saving plus means-testing)	Greater public pre-funding (expand NZSF)	
Fiscal sustainability				Short term	Long term

Legend: Colour codes

<i>Much worse</i>	<i>A bit worse</i>	<i>About the same</i>	<i>A bit better</i>	<i>Much better</i>

4.2 Assessing the Options: National Income per capita

4.2.1 As explained in section 2 above, retirement income policy can have an indirect effect both on national income levels and on macroeconomic vulnerabilities via its impact on national savings, which is in turn the result of the interaction of private and fiscal savings. However, the mechanisms are complex and involve internal feedback loops and also interactions with, and between, factors external to retirement income policy such as risk premia, interest rates and the exchange rate.

Impacts of pension policy reforms on the savings behaviour of working-age individuals

Option 1: Raising the age of eligibility

4.2.2 Previous increases in the age of eligibility for NZS do not appear to have had much of an impact on private saving behaviour. Experience in other countries where the age of eligibility has been raised is similar. From the individual's point of view, they now have a longer working life to save for a shorter period of retirement and so the amount they need to save per year reduces.

4.2.3 However, empirical evidence suggests that raising the age of eligibility for NZS does seem to encourage higher levels of labour force participation among older workers. While some might have chosen to keep working anyway, in other cases the age of eligibility for NZS can act as a signal which individuals use to inform their decision to retire. The impact of this increased participation on GDP and on tax revenue might be constrained by the possible lower productivity (Samorodov, 1999) and fewer working hours of such workers, but could still be quite significant.

4.2.4 One objection sometimes raised to increasing retirement ages is that it may increase unemployment and prevent access by younger people to the jobs market. International evidence does not support this contention. On the contrary, increases in the employment of older people are often correlated with increases in employment rates among younger individuals, and where countries have sought to encourage early retirement they have not seen decreases in youth employment as a result (Jousten, Lefèbvre, Perelman, & Pestieau, 2008).

Option 2: Reducing entitlement levels

4.2.5 Like increasing the age of entitlement, reducing the real level of entitlement is also likely to encourage greater labour force participation by older people, as they decide to make up at least some of the shortfall by increasing their time in work. However, Option 2 seems more likely than Option 1 to encourage an increase in saving among working age people.

4.2.6 This is because people are more likely to think that they can work for a few more years to fill the shortfall caused by a delay in their access to full NZS, than they are to think that they can work or rely on their families for the whole of their retirement to fill the shortfall caused by a reduction in the real annual value of their periodic NZS receipts throughout their lives in retirement. The more drastic the reduction in the publicly provided safety net, the greater the increase in private savings we would expect to see.

Options 3 and 4: SAYGO

4.2.7 A transition towards a SAYGO system, whether on an individual or a communal basis, would similarly be expected to cause income to be diverted from current consumption to saving to meet future retirement costs, and therefore to produce a transitional reduction in the consumption/GDP ratio. This would result in:

- A permanent increase in the working age saving rate.
- A temporary increase in the national saving rate (temporary because at some point the first cohorts with higher savings would begin to dissave).
- A permanent increase in the stock of capital - to the extent that the increased savings are invested domestically.
- A permanent increase in the level of output as the economy's productive capacity increases as a result of the higher capital stock.

4.2.8 The scale of this would depend on how much additional savings were made, over and above private saving that would have been made anyway, and how productively it was invested. It is difficult to know how large the increase in private savings would be as this will depend heavily on how different the 'SAYGO' rate of savings is from individuals' current saving behaviour.

4.2.9 Treasury has undertaken analysis of early survey evidence about household saving in the presence of KiwiSaver and this suggests that many individuals have more retirement savings than they would have had without KiwiSaver (Law, Meehan, & Scobie, 2011). However, the contributions to KiwiSaver balances do not add to private saving one-for-one, as the evidence suggests that only around a third of the private savings in KiwiSaver is additional, with the rest being re-directed from private savings that would otherwise have been made by other means. This is consistent with findings on the impact of subsidised and/or compulsory saving schemes in other countries.

4.2.10 International evidence provides little conclusive evidence on the scale of the increase under savings compulsion but suggests that it is usually directionally positive. Given New Zealand evidence that about a third of New Zealanders are under-saving for their retirement under current policy settings (Le, Scobie, & Gibson, 2007), our assessment is that a move towards more SAYGO would likely lead to an increase in the level of savings.

4.2.11 The bulk of the savings increase typically comes from lower-and middle-income households (Davis & Hu, 2006). Higher-income households are typically already saving at or above the compulsory rate, and so are likely to respond to savings compulsion by diverting their voluntary saving rather than forgoing consumption.

4.2.12 International comparison suggests that compulsory savings which have a direct impact on the level of income received in retirement (such as under a private SAYGO approach), are more likely to substitute for voluntary private savings than is a public SAYGO system, under which an individual's pension remains unrelated to the scale of his contribution to it (Disney, 2006). However, the increased taxes which would be likely to be necessary to fund an increase in contributions to the NZSF would be likely to reduce individuals' ability to save voluntarily, even if it did mean that their motivation remained unchanged.

4.2.13 It is even more difficult to know to what extent higher savings will translate into increased productive capital stock in New Zealand. But again our judgement is that it is likely to be directionally positive for capital stock, productivity and output in the longer-run. As of September 2012 about a quarter of the New Zealand Superannuation Fund, some \$3.6 billion, was invested in New Zealand assets (New Zealand Superannuation Fund, 2012), excluding cash and foreign exchange hedging instruments; while just over half of KiwiSaver funds and about a third of other superannuation funds were invested in New Zealand assets (Reserve Bank of New Zealand, 2012).

4.2.14 It is possible that a public SAYGO approach involving investment into a single large fund would deliver higher returns in the long run than a private SAYGO approach involving a large number of individual funds. This is because a large fund will benefit from economies of scale and a longer investment horizon, enabling investment in higher-risk growth-oriented assets, whereas individual accounts face proportionately higher fees and may be more conservatively invested (Dyck & Pomorski, 2011) in view of individual investors' shorter time horizons.

4.2.15 While we argue that a move towards a greater degree of pre-funding would be positive for growth in the long run, through its impacts on capital deepening, there will be some offsetting negative growth implications in the short run. Most obviously, consumption would be dampened as saving picks up. However, these effects would be consistent with a healthy rebalancing of the economy.

4.2.16 A move to greater pre-funding may also have a negative impact on labour force participation as the immediate rewards for work reduce. However, international evidence suggests that this labour disincentive effect would most likely be less in the case of a private SAYGO approach. In the case of private SAYGO, contributions are less likely to be perceived as a tax, but rather as an increase in individuals' overall lifetime wealth (Karam, Muir, Pereira, & Tuladhar, 2010). Experience in Australia suggests that phasing in the implementation to provide time for the labour market to adjust, and providing information on the benefits of contributions to discourage perceptions of compulsory saving as a tax, may help to minimise such adverse consequences (Fitzpatrick Associates, 2006).

Summary: National income per capita

	Increase age of eligibility	Reduce level of NZS entitlement	Greater private pre-funding (compulsory private saving plus means-testing)		Greater public pre-funding (expand NZSF)	
Private Savings						
Labour force participation			 Short term	 Long Term	 Short term	 Long term

Legend: Colour codes

<i>Much worse</i>	<i>A bit worse</i>	<i>About the same</i>	<i>A bit better</i>	<i>Much better</i>

4.3 Assessing the Options: Reducing risks

Impacts of retirement income policy reforms on macro-economic risk will depend on how individuals adjust their savings behaviour and on broader fiscal policy settings

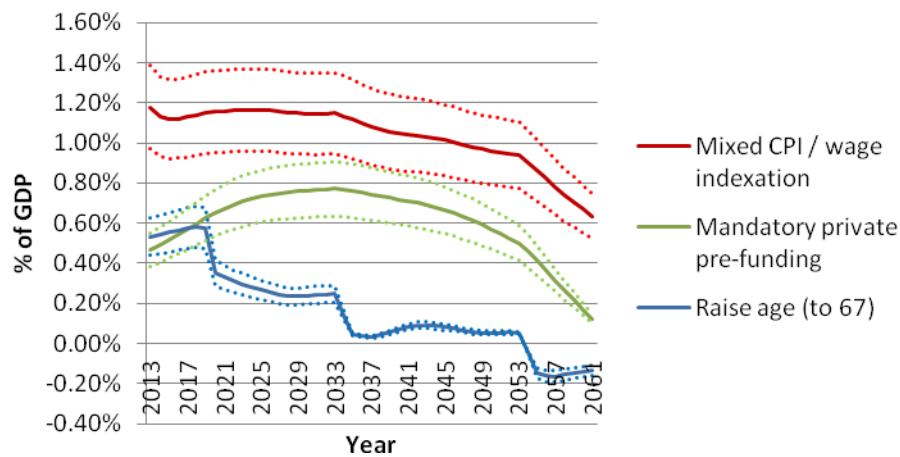
4.3.1 As noted earlier, Treasury is concerned about the risks posed by New Zealand's large net external debt position. Moreover, we have also pointed out that a higher rate of domestic investment is likely to be needed to boost GDP per capita via higher capital intensity. Taken together, these two points suggest that a higher rate of domestic saving will be required if the economy is to transition to a higher GDP path without exacerbating external vulnerabilities.

4.3.2 In the previous section we noted that the different options would be expected to have varying impacts on private savings behaviour. Impacts on overall household savings are therefore difficult to quantify as this requires assumptions about how different people will respond, over many years, to the reduction in their expected lifetime income. This will include some combination of increasing their rate of saving, continuing to work for longer than they would otherwise have done or living more frugally in retirement. The proportion of each of these behavioural responses will depend on individual circumstances including age, income, household expenses, home ownership, employment type etc.

4.3.3 Our methodology for modelling the impacts on savings will be explained in more detail in a forthcoming working paper. A brief summary is also provided in Annex 2. The analysis available to date is not yet complete, as the impact of cumulated returns has not yet been incorporated into the estimates. Thus, the charts below are likely to have underestimated the potential saving effects of these policies (both national and household). This underestimate effect will not be substantial in the early years, but toward the end of the modelling period savings are likely in each case to be significantly higher than shown here. The relative ranking of the three options modelled, however, is not expected to change. Broadly, we would expect that the greater the reduction in lifetime income expectations, the more people are likely to respond by cutting back on consumption and increasing saving. This suggests that the different impacts on household savings of the different reform options depend more on the settings of the policies themselves than on behavioural responses to them.

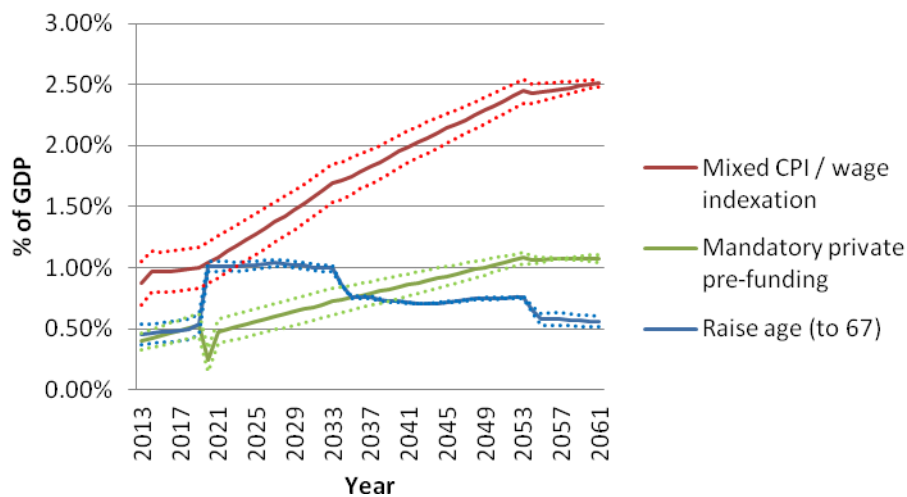
4.3.4 Even allowing for a wide range of potential responses, differences between different reform options are still clear. In all cases the annual additions to total household savings eventually slow down as additional savings by working-age people start to be balanced out by decumulation as retired people start to run down their savings.

Increase in total household savings flows, over and above business-as-usual projections, under representative retirement income policy reform options



4.3.5 Sustained increases in private savings behaviour will contribute positively to reducing New Zealand’s macro-economic vulnerabilities. However, the overall impact on national savings would be significantly greater if the government were to use the fiscal savings to reduce deficits (increase surpluses) rather than using the savings to finance spending elsewhere or to reduce taxes.

Increase in total national savings flows, over and above business-as-usual projections, under representative policy reform options, if fiscal savings are realised



4.3.6 New Zealand’s strong fiscal frameworks, which require the government to take a long-term approach to fiscal strategy, help manage this risk in the New Zealand context.

Micro-economic risk

4.3.7 In deciding where a risk should lie, we should consider both whether and how it can be managed and who is best placed to bear it. We identified various risks to the adequacy of pension incomes under the present approach in section 2.3 above.

Longevity risk

4.3.8 There may be scope to improve people's understanding of their own likely life expectancy (Statistics New Zealand, 2012a) and so reduce the probability that their expectation is unrealistically low, but it is hard to envisage welfare-enhancing ways of managing life expectancy itself.

4.3.9 This risk is particularly difficult for an individual to bear as, by the time he or she is aware that they will live longer than expected, it may be too late to do anything about it. Therefore, it seems inappropriate for the individual to bear the bulk of longevity risk. The Government, however, is well placed to hedge individual longevity by pooling risk across entire cohorts.

4.3.10 Options 1, 3 and 4 ensure that individuals continue to receive at least as much as they do under the present approach throughout their pensionable lives, and therefore do not change the allocation of longevity risk. In the case of option 3, the Crown may – depending on the finer details of the scheme – be able to transfer some of the longevity risk onto the individual or the broader private sector through annuitisation arrangements.

4.3.11 Under option 2, NZS is still paid throughout an individual's retirement; but people are more likely to need additional savings to supplement the reduced entitlement, and the consequences are worse if they are not able to manage those savings in a way which delivers them an adequate income throughout their pensionable life. Part of this risk is still retained by Government also, since individuals who run into hardship as a result of living longer than their savings do, or not having enough to sustain themselves, are likely to turn to additional welfare assistance.

4.3.12 None of the options directly addresses the opposite risk – that individuals who live less long after retirement will receive less in total. Broadly, this risk is better addressed directly through policy interventions aimed directly at reducing health-related disparities in life expectancy. However, it can also be mitigated to the extent that an individual's retirement wealth is his own to consume (or bequeath) at the rate he chooses. Options which encourage individuals to build up larger independent retirement savings as well as, or even instead of, a life-long entitlement may therefore be preferable from this perspective.

Investment risk

4.3.13 Under options 1 and 2 the individual retains investment risk as regards their voluntary private savings and continues to benefit from the safety net of NZS.

4.3.14 Under option 3, mandatory private SAYGO, both the amount of retirement income available to the individual and the NZS payable by the Government depend on total accumulations of private savings. This means that both the Crown and the individual take on a higher level of investment risk.

4.3.15 Individuals have a range of options to manage their investment risks and allowing them to manage this risk themselves will allow them to select a risk level which is optimal for their individual circumstances. On the other hand, transferring risk to the government allows risk to be managed over a greater time horizon, reducing the risks posed by short term financial market fluctuations. A balance would need to be struck between protecting individuals from risks that they are not well-placed to manage and avoiding the encouragement of inappropriately high-risk investment approaches by individuals relying on Government to rescue them if risks do not pay off.

4.3.16 Under option 4, the communal SAYGO option, the Crown takes on a greater level of investment risk – the NZSF may or may not deliver the returns on investment necessary to enable it to pay future pensions to the extent intended. The individual's risk does not change (although his indirect risk may increase, as the Crown is likely to pass on the cost of investment underperformance through increased taxes or reduced benefits) (Whitehouse, D'Addio, & Reilly, 2009). A publicly managed retirement fund may also be at less risk of fraud or theft than individual accounts.

Economy risk

4.3.17 Options which increase the share of the costs of pensions met from capital accumulation, rather than from contemporary taxation, help to diversify risk away from dependence on contemporary economic growth levels. This would include options 3 and 4 which have an explicit SAYGO element - and also options 1 and 2, to the extent that they encourage private voluntary saving in addition to reliance on NZS entitlements. We showed earlier that this may be more likely in the case of option 2, but either option could also be accompanied by measures to encourage more voluntary saving.

Cohort risk

4.3.18 The risk to affordability arising from the risk of mis-matched cohort sizes is mitigated to the extent that a cohort pays for its own pension costs and is therefore addressed by these options to the same extent as is the economy risk outlined above.

Summary: Reducing Risks

	Increase age of eligibility	Reduce level of NZS entitlement	Greater private pre-funding (compulsory private saving plus means-testing)	Greater public pre-funding (expand NZSF)
Private savings				
Public savings				
Individual longevity risk				
Individual investment risk				

Legend: Colour codes

<i>Much worse</i>	<i>A bit worse</i>	<i>About the same</i>	<i>A bit better</i>	<i>Much better</i>

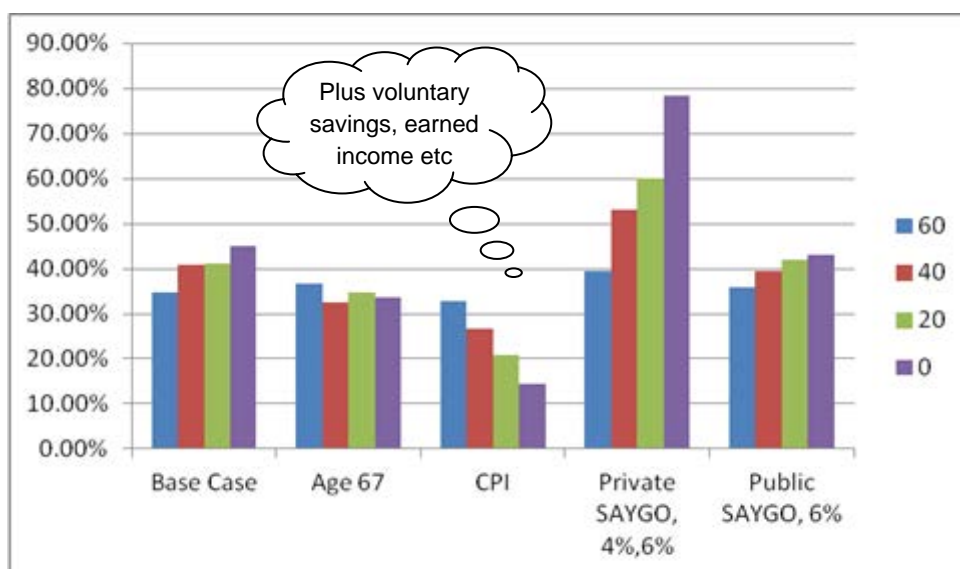
4.4 Assessing the Options: Distributional Impacts

Different people will experience different impacts on their total pension wealth under different reform options, depending on their age ...

4.4.1 This chart shows total projected formal pension income (ie, not including KiwiSaver, other voluntary savings or income earned from work) under the present approach and under the reform options under consideration here, for individuals who are now of different ages. All of the individuals are projected to spend their working lives on average around the middle of the income distribution.

4.4.2 Pensioners at this income level currently derive about 80% of their income from NZS, but as discussed above, policy reforms may change this over the coming decades.

Annuitised pension wealth post-65, as a fraction of contemporary average wages, (individuals of different ages but similar lifetime incomes)



4.4.3 Under the present arrangements (“Base Case”), younger people can expect to receive more formal pension in total due to their increasing life expectancy. This would remain the case under a “communal SAYGO” arrangement which would retain the universal flat-rate nature of NZS entitlements.

4.4.4 However, the effect is temporarily reduced if the age of eligibility is increased. Under this scenario, those presently approaching middle age will face the largest reductions in the length of time they can expect to receive NZS after having reached the eligibility age. Younger people's increasing life expectancy will bring their total expected lifetime NZS entitlement back upwards. The overall impact of these distributional issues is dependent upon the speed and extent of the adjustment.

4.4.5 As the real level of NZS entitlement reduces under a changed method of indexation (“CPI”), younger individuals can expect to receive substantially less than they would under present arrangements.

4.4.6 The “CPI” approach would therefore be likely to mean that although the purchasing power of NZS would be maintained, recipients’ NZS income would fall relative to wages earned by contemporary workers. Unless people respond to the change in policy by voluntarily building up more assets in preparation for their own retirement, this approach would therefore be likely to undermine the effectiveness of the present approach at preventing poverty in old age and enabling older New Zealanders to share in increases in national wealth which their labour and investment has helped to create.

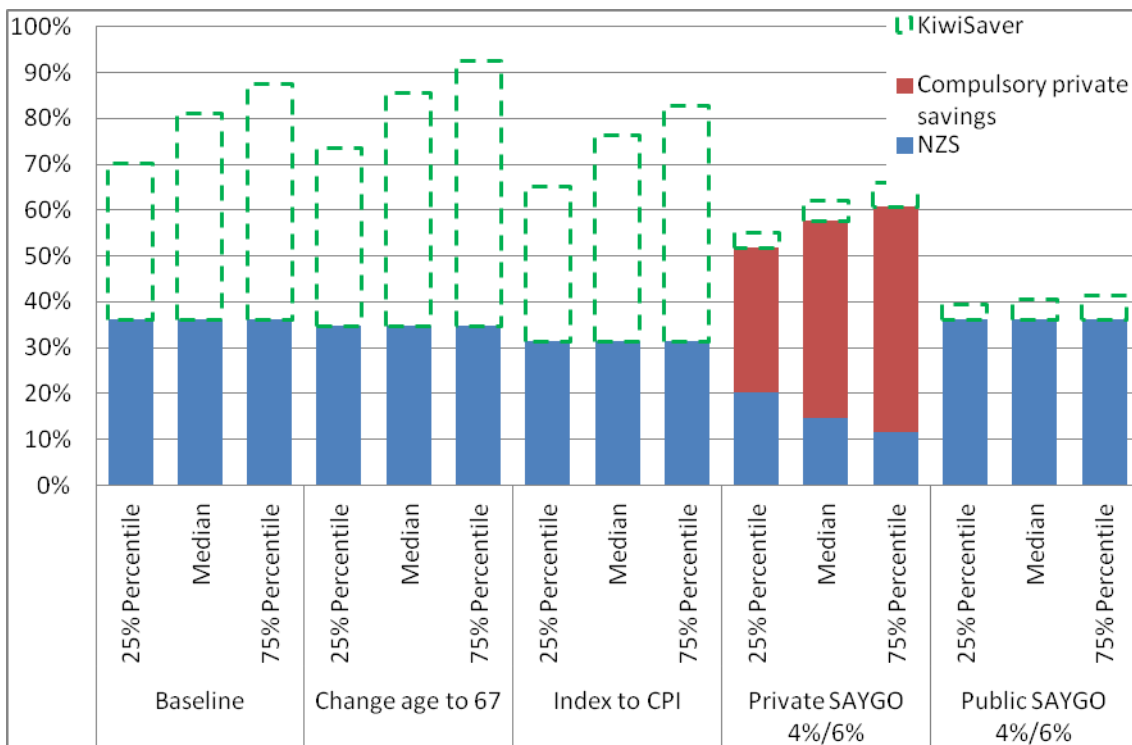
4.4.7 Finally, under a private SAYGO arrangement, younger individuals have more time to build up their own savings and therefore have greater retirement wealth. Older people would be less affected as they would not have time to build up significant mandatory savings.

... and their lifetime income

4.4.8 As well as having different impacts on people of different ages, the potential options for reform also have different impacts on people of different income levels. This chart shows total expected pension income, including KiwiSaver but not other forms of private retirement wealth (ie, other voluntary savings and income earned from work) for individuals now aged 20 whose projected lifetime income is in the 25th, median and 75th percentile for their age group.

4.4.9 Given women’s greater likelihood of spending extended periods out of the workforce, they would tend to fall into median and lower lifetime-income groups while higher ranges are more likely to be dominated by higher-income men.

Annuity wealth post-65, as a proportion of contemporary average wage (individuals now aged 20 from various lifetime income deciles)



4.4.10 As we show in section 3.7 above, a private-SAYGO approach would mean that higher-income individuals enjoy a higher formal pension. Thus, an approach which relies more on private savings will establish more of a formal relationship between contributions made and pension received, and hence be more “actuarially fair” in terms of being a closer match between contributions and benefits.

4.4.11 However, the offsetting mechanism also means that they receive less publicly-funded NZS. It may therefore mean lower total pension wealth than would be the case for individuals who voluntarily save for their own retirement anyway. Where their savings would be additional to the full NZS entitlement under the present approach, under this alternative approach their savings part-substitute for NZS.

4.4.12 As such this approach would be the equivalent of a delayed tax on lifetime earnings. There is a cap on the amount by which an individual’s private savings can be offset – once they have paid in full for their own NZS, no further offsetting takes place. Thus the effective tax is proportionately lower for the very richest individuals than for middle and lower income people, although still higher in absolute terms.

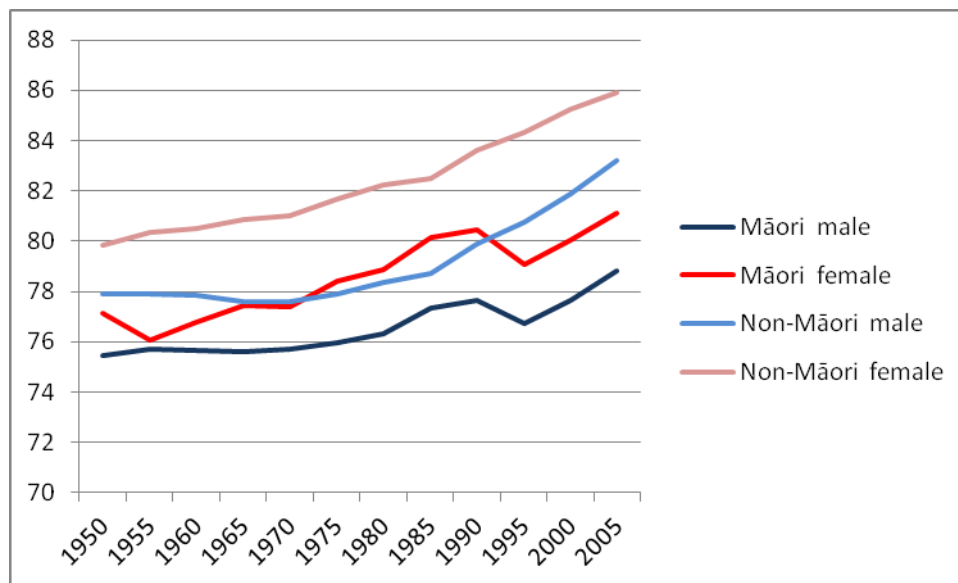
4.4.13 Individuals who are not presently saving for their retirement, would be better off in retirement than they would be under the present system, but possibly at the expense of shorter term welfare as we show below.

Lifetime income

4.4.14 Under the present approach, wealthier people tend to receive more NZS overall due to their longer life expectancies. This difference remains about the same under an across-the-board reduction in NZS entitlements under changed indexation.

4.4.15 However, the difference in lifetime expectation of pension receipts is exacerbated if the age of eligibility is increased. This is likely to disproportionately impact certain sections of the population, for example lower skilled workers, those who have spent most of their working lives in manual labour and groups with lower life expectancy (notably Māori and Pasifika).

Life expectancy at age 65 in New Zealand, 1950 - 2005¹¹



Source: Statistics New Zealand (2012b)

4.4.16 While the main policy response to differences in life expectancy would be to directly address the causes of those differences, a private prefunding approach can help to address the pension inequities that arise. Depending on annuitisation requirements, a private-SAYGO approach could enable individuals who expect a shorter lifetime to manage the decumulation of savings accordingly. Further, unspent funds intended for an individual's pension remain with their whānau or families after their deaths, which is not the case with NZS entitlements.

All of the options reduce the projected costs on future taxpayers, but they redistribute that cost in different ways

4.4.17 As shown above, options which reduce the total amount of pension received will reduce the cost to future taxpayers - but at the expense of all future pensioners, who will have to work for longer, or save more on a voluntary basis, or live more frugally in retirement.

4.4.18 SAYGO options reduce that individual choice by requiring the shortfall to be met in advance through compulsory saving or from public funds. Early generations would bear the bulk of the costs of the transition as they are required to build up some proportion of the funds required for their own pensions while also continuing to fund existing pensioners. Depending on how much up-front cost they take on and how long it takes for funds to build up, some people now of working age would pay the transitional costs without experiencing the later benefits in terms of lower pension

¹¹

The 1995–97, 2000–02, and 2005–07 period life tables for Māori and non-Māori have been derived using data from the new ethnic question on the birth and death registration forms (introduced in September 1995), and therefore are not comparable with earlier life tables. Life tables for other ethnicities, such as the broad Pacific and Asian ethnic groups, have not been produced because of the small size of these ethnic populations, relatively few deaths, and the general uncertainty associated with ethnic identification and measurement.

costs. The charts at paragraphs 4.1.8 and 4.1.13 above show that this transition period could take many decades.

4.4.19 This cost is likely to have quite significant welfare impacts on working-age households which are currently not saving, or not saving very much. These welfare impacts may be positive or negative, depending on the optimality of households' current saving behaviour. Positive welfare effects will result for those households who could save but are currently "under-saving", due for example to myopia or uncertainty about what investment products are available.

4.4.20 Negative welfare effects will result for those households for whom it is optimal to not save in financial assets. For example, there will inevitably be some individuals whose lifetime income would be higher if they were to invest in a business or in upskilling, but who will be prevented from doing so by being compelled to save in a prescribed vehicle over their working lives. Similarly, some households may be better off repaying their mortgage faster, rather than building up financial assets. This effect may be mitigated by allowing compulsory savings to be used for other long term purposes such as house purchase, but going down this road takes the Government further towards a position where it takes on the responsibility for individuals' lifetime financial management.

4.4.21 Low-income households who are financially constrained may also not experience an overall welfare improvement if they are forced to transfer resources from the short term to the long. It may be possible to design a compulsory savings scheme to mitigate these effects, for example by exempting earnings below a certain threshold or individuals below a certain income. This may be welfare improving, but would also be likely to reduce the overall impact on national savings, since these are the households whose saving under compulsion would be most likely to be additional to private saving that would have taken place anyway.

4.4.22 While we do not have a scalar of how many people fit in each category (Colmar Brunton, 2010) (Le, et al., 2007), it is a certainty that a 'one size fits all' approach to life-time saving will not be in the short term individual interests of all, and possibly not the lifetime interests either.

How the impact of compulsory saving depends on individuals' current behaviour

Currently:	Saving	Not saving
Rationally	Compulsion will be at best neutral and possibly negative for the individuals concerned and for private savings overall. May reduce national savings through fiscal cost of superfluous incentivisation	People with better uses for the money, or who expect NZS to maintain their standard of living in retirement anyway. Compulsion will raise private savings by this group, but at the expense of individual welfare and other, preferred/more productive uses of the money
Irrationally	People who are super-cautious or pessimistic about future prospects. Compulsion may raise their savings rates (they will want to maintain precautionary savings as well as meeting compulsory obligations), but not improve their welfare	People who do not give any thought to the future. Compulsion will be beneficial to the individual and raise private savings

4.4.23 The transitional generation, in funding part of its own pension as well as that of contemporary pensioners, would get a worse deal than earlier generations, who funded only older people's pensions. However, if we act quickly and impose some of the transitional costs on the generation that is currently at middle age, this generation will still get quite a "good deal" in absolute terms because the older cohort that the current generation must fund is relatively small.

4.4.24 This point emphasises the importance of an early start, if this transition is to be made. A taxpayer who is supporting a quarter of a pensioner, as current cohorts are doing, will be better placed to contribute towards his own pension as well than will one who is supporting half a pensioner, as future cohorts will be doing.

4.4.25 A communal approach to SAYGO has a different intra-generational distributional effect. Broadly, the effect of a shift in this direction would be to redistribute resources from richer people earlier in their lives, to poorer people (within the same age bracket) later in their lives.

4.4.26 Once established, therefore, this approach is largely progressive in the same way as the present approach under which higher income individuals pay more through their taxes, but everybody receives the same annual NZS payments.

4.4.27 Under the reformed system, those with the highest incomes continue to receive roughly the same as lower-income people (again allowing for the fact that they tend to live longer and therefore receive more over their lifetimes). Over time, and depending on how the additional public savings are funded, the difference between the contributions made by different income groups is likely to expand significantly.

Summary: Distributional impacts

	<i>Increase age of eligibility</i>	<i>Reduce level of NZS entitlement</i>	<i>Greater private pre-funding (compulsory private saving plus means-testing)</i>		<i>Greater public pre-funding (expand NZSF)</i>	
<i>Intergenerational equity</i>						
<i>Intragenerational progressivity</i>						
<i>Actuarial fairness</i>						
<i>Working age welfare</i>			 Short term	 Long term	 Short term	 Long term
<i>Pensioner welfare</i>						

Legend: Colour codes

<i>Much worse</i>	<i>A bit worse</i>	<i>About the same</i>	<i>A bit better</i>	<i>Much better</i>

4.5 Assessing the Options: Social Institutions

Any reform is likely to be effective only to the extent that the policy change is sustained through to the long term.

4.5.1 Policy change is unlikely to engender confidence and trust, and hence will not bring about the desired behavioural change, if people do not believe that the change is permanent, or cannot see how it will affect them well into the future. This is a high hurdle since savings policy has undergone numerous changes in New Zealand and this has the effect of reducing confidence in the longer term reliability of policy settings.

4.5.2 Reform therefore needs to be not only fiscally sustainable but also clear, easily understood and seen to command broad political support. For this reason it is important that an approach should be capable of adaptation if factors such as longevity outcomes, or economic growth, or investment returns, are greatly different from expectations; but in a way which is transparent, predictable and objective so as to reduce the risk of politically-motivated change and the incentive for interest groups to seek to influence it.

4.5.3 In the case of reforms to the age of entitlement, an approach objectively linked to an external factor such as longevity might be more politically sustainable than a revised age of eligibility set at an arbitrary level which may or may not need to be changed again later.

4.5.4 In the case of reforms to the way in which NZS is calculated, a system under which the relationship between salaries and an individual's starting pension remains the same (through continued wage indexation) while pension levels for existing pensioners were linked to a greater extent to prices, would mean that successive cohorts of people transitioning from work to pension would continue to experience the same impact on their living standards, while people already in retirement would maintain that same purchasing power from year to year. However, it would mean different pension levels for pensioners of different ages and this may prove difficult to sustain politically.

4.5.5 In the case of SAYGO options, where a large public fund is built up, it may be difficult to sustain the ring-fencing of increasingly large amounts of resource for retirement funding if more immediate, or politically attractive, requirements emerge. Some form of institutional arrangement might be put in place to ensure that future Governments could not divert the funds to alternative uses. An analogy for the private savings approach would be to protect compulsory savings from increases in effective marginal tax rates through fixing the rate at which NZS entitlements are offset.

4.5.6 However, seeking to increase the certainty that retirement savings will only be available for the purpose of funding retirement raises quasi-constitutional questions about the extent to which one Government can take steps to constrain another, future Government's freedom of action in response to the social and economic preferences of those who elected them.

Options which retain the flat-rate universal nature of NZS are likely to be easier to administer; but requiring greater self-reliance will raise compliance costs for individuals.

4.5.7 Options 1, 2 and 4 all retain the universal flat-rate nature of NZS. As such, it would be similarly simple and low-cost for public agencies to administer the payment under these approaches. Option 2 may, however, involve higher public administrative costs if poorer pensioners become entitled to more welfare payments than at present.

4.5.8 Approaches which rely more on individuals making their own arrangements (options 1 and 2) increase the private administrative cost as well as the risks for those individuals. It is not straightforward for individuals to calculate how much they need to save and how to invest it, and to maintain the necessary self-discipline. Nobody knows how long they will be able to keep working, how much they can expect to earn, or what return they can expect on their investments, several years into the future. Further, it is difficult to calculate how quickly to draw down one's savings on retirement in view of the fact that nobody knows how long he or she will live.

4.5.9 The approach to individual SAYGO described here (Option 3) is intended to minimise avoidance opportunities and compliance and administration costs, compared to an approach under which more or all of an individual's assets and income were included in a means test. But it is nevertheless inevitable that any system which involves different entitlements for different people will be more complex, require more individual monitoring, and so be more expensive to administer and more prone to administrative error than a flat-rate universal pension. Issues such as whether and how the offsetting should apply to couples, and to people who had spent many years outside New Zealand and therefore not been required to make compulsory savings, would have to be worked out and would be likely to create individual cases of apparent unfairness.

4.5.10 Depending on the nature of the savings compulsion, this approach may also involve higher compliance costs for individuals.

Summary: Social Institutions

	<i>Increase age of eligibility</i>	<i>Reduce level of NZS entitlement</i>	<i>Greater private pre-funding (compulsory private saving plus means-testing)</i>	<i>Greater public pre-funding (expand NZSF)</i>
<i>Stickability</i>				
<i>Public administrative cost</i>				
<i>Individual compliance cost</i>				

Legend: Colour codes

<i>Much worse</i>	<i>A bit worse</i>	<i>About the same</i>	<i>A bit better</i>	<i>Much better</i>

5 Key Judgements

5.1 The goal of this paper has been to promote understanding and debate about the pros and cons of different potential approaches to reforming New Zealand's retirement income policy settings, taking into account not only the likely impact on individuals, but also the broader context of New Zealand's macroeconomic challenges.

5.2 As set out in section 1, New Zealand's present approach to retirement income policy implies a number of judgements; for example, about social priorities, the ability of older people to support themselves, the right and capacity of individuals to manage their own lifetime wealth and the macro-economic implications of individual decisions in this area.

5.3 To settle on a preferred reform option would similarly require making judgements. Some of these are largely a matter of individual values. These may include not only those variables that were used to quantify the illustrative pentagons shown in the previous section, but also the broader set of assessment criteria summarised in the tables at the end of each section. Different people are therefore likely to reach different conclusions about which reform option, or combination of reform options, would be preferable.

5.4 Judgements are also required about the likely impacts of each reform on the assessment criteria discussed earlier, which is less about individual values and more amenable to empirical testing and analysis. There is nevertheless uncertainty around our evaluation of the likely impacts on each criterion, and significant uncertainty in some cases. There are few or no international or historical examples to draw on, and where there is such evidence it may not be wholly relevant to New Zealand's present and future circumstances.

5.5 Below we highlight some of the different judgements that would result in different rankings of the policy options.

A A judgement that prevention of old age poverty is paramount, would argue against Option 2 (re-indexation of NZS).

As illustrated earlier, re-indexing NZS to CPI inflation or to an average of wage and price inflation would result in a shrinking of the purchasing power of the pension relative to the living standards of the population as a whole. If poverty is measured relative to the median wage, then the incidence of old age poverty would increase significantly among those older people who rely predominantly on NZS for their income.

B A judgement that individuals should retain the freedom to make decisions for themselves would argue for Options 1 and/or 2 (raise age and re-index NZS) and against Option 3 (compulsory saving); whereas a judgement that individuals are likely to make decisions against their own best interests, would argue for Option 3 (compulsory saving)

5.6 By reducing NZS entitlements for older people, Options 1 and 2 both imply a judgement that individuals are able to take greater responsibility for their own welfare in old age, through some combination of saving more voluntarily during their working life and/or working for longer, or simply tightening their belts instead (consuming less).

5.7 This judgement would argue against Option 3 (compulsory savings) on the grounds that rational individuals may be prevented from saving in their own preferred form (e.g. investing in a business, or paying off their mortgage) and others would be forced to “over-save” in aggregate. Some individuals may end up with substantial resources in their old age which they would have preferred to consume earlier. Thus, Option 3 would be likely to impose a welfare cost on agents with a different view from Government as to where their own best interests lie.

5.8 However, there is plentiful evidence that many individuals find it difficult to determine long term savings choices that are in their own best interests. The key question is not so much whether rational or short-sighted individuals exist (it is likely that both do), but whether or not the overall welfare gains from compelling short-sighted individuals to save dominates the reduction in freedom and the loss to overall welfare costs that compulsion would impose on rational individuals.

C A judgement that saving-investment imbalances are imposing an important limitation on economic growth and exacerbating risks, would argue for Option 2 (re-indexation), Option 3 (private SAYGO) or Option 4 (communal SAYGO)

5.9 The argument that imbalances between savings and investment are contributing to low productivity and macro-economic vulnerabilities, is linked to the view that these imbalances are an important contributor to New Zealand’s relatively high average real interest rates, and therefore relatively high cost of capital and high real exchange rate. As illustrated above, Options 2, 3 and 4 are judged to all have potential to significantly raise national savings, to different degrees depending on their design characteristics. If addressing macro-economic vulnerabilities is seen as important, then, this may tip the balance of the judgement between individual liberties and savings compulsion set out under judgement B above.

D A judgement that the rate of return on capital is likely to exceed the rate of growth in the economy in the future, would suggest that future generations will eventually be better off if Option 3 or Option 4 is adopted.

5.10 As discussed above, when the return to capital is higher than the growth rate of the economy, an established SAYGO system delivers more pension benefits for the same cost (or the same pension benefits for lower cost) than a PAYGO system. Under such circumstances, future generations would derive considerable benefits from an early decision to start a move towards a SAYGO system.

5.11 However, the transition would impose an additional cost on nearer-term generations and a further judgement would therefore have to be taken as to how much value present decision makers should attach to the wellbeing of different generations.

E In considering the differences between Options 3 (private SAYGO) and 4 (communal SAYGO), judgement would be necessary as to whether the greater vulnerability to short-term political re-prioritisation outweighs the greater likelihood of higher returns and economic growth impacts of a public fund

5.12 Both Options 3 and 4 involve a transition to more of a SAYGO-funded government pension scheme. They two options differ, however, in terms of the custody of the accumulated savings. Because the government, rather than private individuals, would own the funds under Option 4, there may be a greater chance that the funds will result in a “looser-than-otherwise” fiscal strategy, due to the higher net worth position of the government balance sheet. In the latter event, the benefits in terms of national savings would likely be dampened.

5.13 On the other hand, a single public fund with the benefits of economies of scale and a long investment horizon may be better able to deliver higher returns and make a greater contribution to growth than a large number of individual accounts. Both factors will depend on design details and institutional arrangements.

F A judgement about the extent to which it is fair for future generations to bear the full extent of the expected increases in costs of the present system will inform decisions about how much pre-funding to target

5.14 The demographically-driven expansion in the proportion of over-65s in the population will, under present settings, lead to an increase in the total cost of providing them all with NZS. This means that the next generations of taxpayers will bear a heavier burden in terms of transfers to older cohorts than taxpayers up to now have done. A judgement that this is not fair, or not realistic, would argue in favour of sharing the burden of the cost increase by bringing some of it forward.

Annex 1: Details of New Zealand’s present approach to retirement income policy

The system is a hybrid, but relies more heavily than most on public PAYGO for basic income protection

New Zealand’s current approach to the public provision of income for the elderly mainly falls into the “Government-arranged PAYGO” category.

Public provision

The main pillar of public retirement income policy in New Zealand is **New Zealand Superannuation**¹² (NZS). This is a pension paid by the State to most New Zealand residents from age 65 until death. Recipients must be a legal resident of New Zealand and have lived here for ten years since age 20, of which five of those years have to be since the age of 50.

The level of payment is reviewed each year and is adjusted to take account of increases in cost of living (inflation) and wages. Under s 16 of the New Zealand Superannuation and Retirement Income Act 2001, the standard weekly amount of New Zealand superannuation (after the deduction of standard tax) payable to a couple who are married or in a civil union or in a de facto relationship, both of whom are qualified to receive New Zealand superannuation, is not less than 65% or more than 72.5% of the average ordinary time weekly earnings (males and females combined) as determined by the last Quarterly Employment Survey of wages published by the Department of Statistics before 1 March in each year (after the deduction of standard tax and the earner levies payable on those earnings). The calculation of single rates is also set out in the Act as 65% of the couples rate (for singles living alone) or 60% (for those not living alone). In practice, the current Government has adopted a policy that for couples both over 65, their pensions, after tax, will not fall below 66% of the average ordinary time wage after tax.

As a flat rate entitlement NZS is not subject to means testing or income testing (other than with respect to pension payments from overseas Governments). Neither is it related to pre-retirement earnings. Supplementary help for housing and living costs is also available in some cases.

The cost of NZS is met from general taxation. New Zealand’s retirement income policy is therefore mainly a Government-arranged PAYGO scheme, as explained above.

Anything beyond NZS is left to individuals, who may choose to supplement that basic allowance either by continuing to earn an income or by greater reliance on support from their families (“privately-arranged PAYGO”). They may also use assets that they have built up over their earlier lives (“privately-arranged SAYGO”). In New Zealand,

¹² Details of NZS are available from Work and Income New Zealand at <http://www.workandincome.govt.nz/individuals/65-years-or-older/superannuation/superannuation-overview.html>

unlike in many other countries, this is not mandatory; but it is encouraged through KiwiSaver¹³.

Voluntary provision

KiwiSaver is a voluntary, work-based savings initiative to help New Zealanders with long-term saving for retirement. It is designed to make it easy to maintain a regular savings pattern. Contributions are deducted from pay at the rate of either 2%, 4% or 8% of gross pay (at the individual's choice) and invested in a KiwiSaver scheme managed by private sector companies. Members can choose which KiwiSaver provider to invest with.

There is a range of membership benefits. These include a \$1,000 kick-start, employer contributions and an annual member tax credit paid by the Government.

KiwiSaver savings are generally locked in until a member is eligible for NZ Super (currently 65), or, if they joined over the age of 60, until they have been a member for at least five years.

Having a KiwiSaver account does not affect a member's eligibility for NZ Super or reduce the amount of NZ Super that a pensioner would be eligible for.

About 9% of New Zealanders are members of an occupational pension plan and many have other forms of investments and assets to further boost their wealth in retirement. These are not considered further here.

New Zealand has also begun to move in the direction of a Government-arranged, communal version of SAYGO through the establishment of the New Zealand Superannuation Fund.

Public pre-funding

In 2001 the Government created the **New Zealand Superannuation Fund**¹⁴ (NZSF). Investment commenced in September 2003 with an initial capital contribution from the Government of \$2 billion. Thereafter the Government made further capital contributions to the NZSF of about \$2 billion per annum up until 2009, at which point a decision was made to suspend further contributions until 2020. The Fund is intended to help smooth the future cost of NZS over time – up to about 8% of the expected net cost of NZS in 2050.

The Government's decision in 2009 to suspend contributions to the Fund until 2020 (with the possibility of earlier resumption when the Government returns to surplus) does not in itself change the level of NZS entitlements. It does mean that the point where the Fund starts to be drawn down will be later than originally intended (2031 under current projections), and when contributions resume they may need to be larger, and/or more of the future cost of NZS payments will need to be covered by tax.

¹³ <http://www.kiwisaver.govt.nz/>

¹⁴ Further information can be found on the NZ Super Fund website <http://www.nzsuperfund.co.nz>

Annex 2: National Saving Quantification of Retirement Income Policies

Introduction

Below are some indicative estimates of national saving effects and some of the fiscal consequences that may result from the implementation of three different retirement income policies:

1. Lifting the age of eligibility for New Zealand Super (NZS) from 65 to 67
2. Changing the indexation of NZS from wage to mixed wage & cpi
3. Mandatory private pre-funding by making savings compulsory. Accumulations are then used to reduce NZS entitlements (with an abatement rate of 50%)

General Approach

The general approach stems from a desire to model the three policies in a consistent way and the insight that each will result in a loss of an individual's current expected NZS entitlements (to varying degrees depending upon one's age cohort, income, taxes etc). These losses are quantified for different individuals who then adjust their behaviour in some combination of three approaches: saving more over their working life; working longer; or consuming less after retirement¹⁵. The effects are then aggregated over the relevant population in each year between 2013 and 2061.

The relative weighting across these three adjustment mechanisms is allowed to vary with age. Generally more weight is given to adjustment via additional saving for younger cohorts who have a greater proportion of their working lives to save over. Older cohorts adjust relatively more via working longer and consuming less in retirement. Further, compared to say the indexation policy, more weight is given to adjustment through working longer for all cohorts when the age of eligibility for NZS is raised. Under compulsory saving, more weight is given to adjustment through saving.

We also make some effort to consider effects on taxation. In particular, as far as the government is concerned, effects on GST and income tax revenue are calculated. With respect to the third policy (compulsory savings with abatement), different tax rates play an important role in individual accumulations. For instance, these, together with the way the MTC works, mean that as a proportion of their income those on low incomes contribute around 1.8 percentage points more to, and earn about 0.75 percentage points higher returns on savings accounts, than those on high incomes.

Finally, we have made allowance for the eventual decumulation of savings in line with the effects of each policy. To ensure comparison of policies rather than differences in timing of implementation, in each case it is assumed that respective policy is announced in 2013 and implemented in 2020.

¹⁵ This would include reducing bequests.

Though the first two policies are self explanatory, the third is a little more complicated and requires a number of assumptions about the design details and first-order impacts:

- All those aged between 25 and 64 inclusive who either are salary / wage earners or are self employed must contribute (this equates to about 70% of the 25-64 year old population).
- The settings initially looks like those applying to KiwiSaver once the most recent set of policy changes takes effect i.e. employees contribute 3% of their salary and employers a further 3% (before ESCT deductions), while the Government contributes Member Tax Credit (MTC) up to \$521 and a Kick-start of \$1000 for new members.
- The MTC and Kick-start move in line with wage growth
- An income distribution is used to generate variation in KiwiSaver accumulations and individuals' tax circumstances are taken into account.
- All tax thresholds move in line with wage growth.
- Compulsion results in more people saving than would otherwise have been the case – this imposes some additional fiscal costs on the government, compared to the present voluntary approach.

Results

Some indicative results are presented in the following four graphs which compare national saving and fiscal saving outcomes under the three policies. Results are *marginal changes* due to the policy change, not what we expect (for example) total national saving to be in each of the next 50 years.

Note that the results presented are not yet complete as the impact of cumulated returns is yet to be incorporated into the estimates. Thus, the charts below underestimate the potential saving effects of these policies (both national and household). This effect will not be substantial in the early years of the estimates, but toward the end of the modelling period, savings are likely in each case to be significantly higher than shown here. The relative ranking of the three options modelled, however, is not expected to change.

The dotted bands in each graph represent 'high' and 'low' savings responses by individuals to the policies – derived from altering relative responses to the reforms through working more, saving more, or consuming less in retirement (for interest these parameters are included at the end of this note).

The other particularly important assumption is around how the government responds to any savings it makes from these policy changes. Hence, we illustrate the two extremes for national saving, the first where the government saves everything (i.e. runs larger than otherwise surpluses, or smaller than otherwise deficits) and the second where the government saves nothing (i.e. it either spends on other policies or reduces taxes). This second version of national saving results therefore also illustrates the household sector saving response.

Figure 1: Potential National Saving Impact (When the Government Saves)

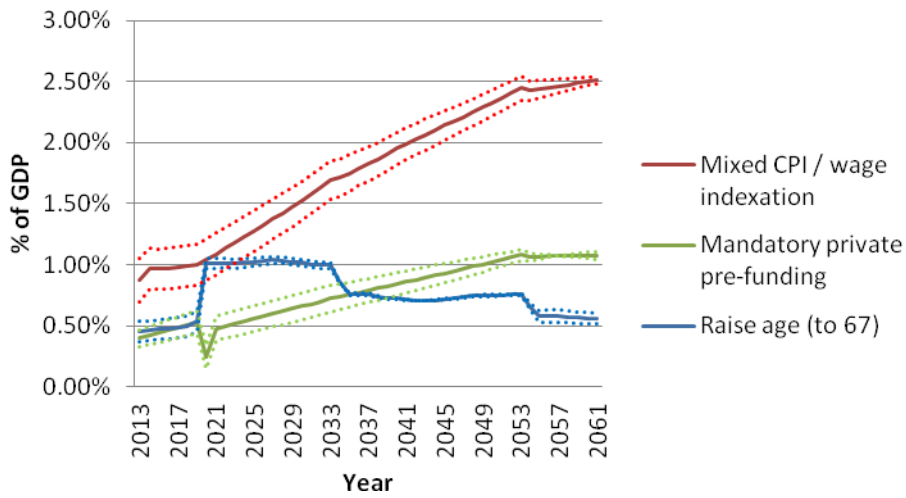


Figure 2: Household Saving Response (Also National Saving if Government Maintains Balanced Budget)

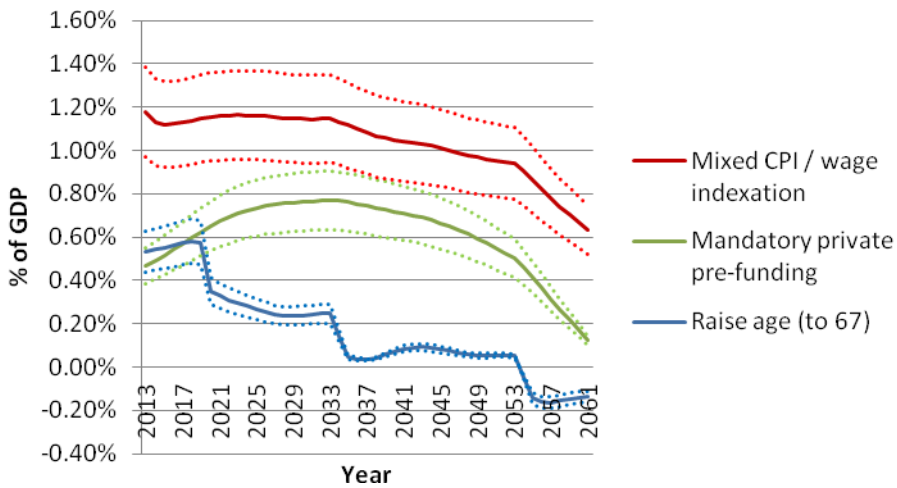


Figure 3: Fiscal Savings (Total)

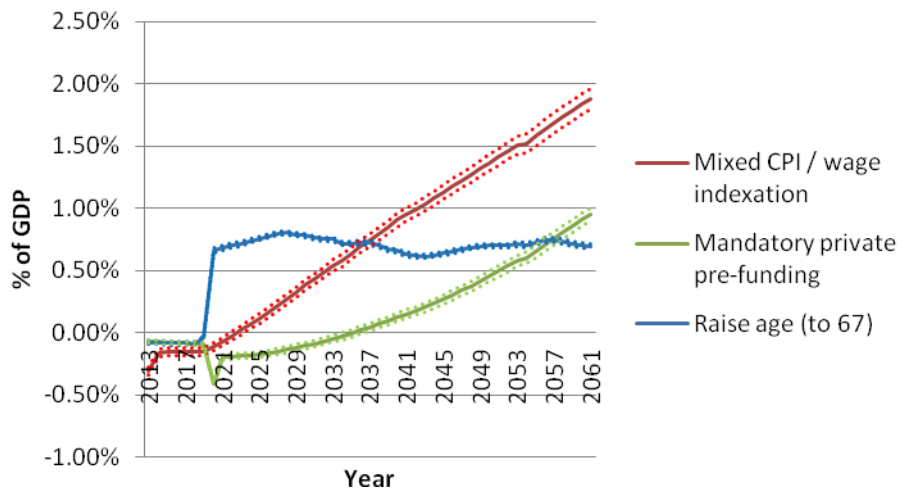
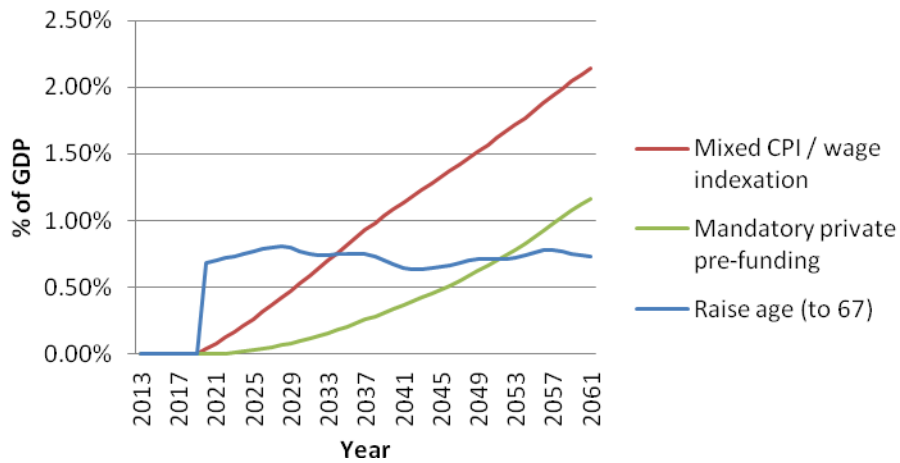


Figure 4: Fiscal Savings (From New Zealand Super Reductions Only)



Some Starting Parameters

Age group	Policy change Response	Base		
		Change indexation	Raise age of eligibility	Mandatory private pre-funding
Young	Save more	0.8	0.775	0.85
	Work more	0.1	0.15	0.075
	Consume less	0.1	0.075	0.075
Middle	Save more	0.6	0.55	0.7
	Work more	0.2	0.3	0.15
	Consume less	0.2	0.15	0.15
Older (but not old)	Save more	0.4	0.3	0.6
	Work more	0.3	0.5	0.2
	Consume less	0.3	0.2	0.2

Adjustment for High / Low saving = $(1-0.85)/0.85$ since S can't exceed 1 =17.6471%

Age group	Policy change Response	Change indexation		Raise age of eligibility		Mandatory private pre-funding	
		High S	Low S	High S	Low S	High S	Low S
Young	Save more	0.94	0.66	0.91	0.64	1	0.7
	Work more	0.03	0.17	0.08	0.22	0	0.15
	Consume less	0.03	0.17	0.01	0.14	0	0.15
Middle	Save more	0.71	0.49	0.65	0.45	0.82	0.58
	Work more	0.15	0.25	0.25	0.35	0.09	0.21
	Consume less	0.15	0.25	0.10	0.20	0.09	0.21
Older (but not old)	Save more	0.47	0.33	0.35	0.25	0.70	0.49
	Work more	0.26	0.33	0.47	0.53	0.15	0.25
	Consume less	0.26	0.33	0.17	0.23	0.15	0.25

Young = those -23 to 24 years of age @ 2013

Middle = those 25 to 44 years of age @ 2013

Older = those 45 to 64 years of age @ 2013

Thus, we consider about 88 age cohorts who can respond to policy changes. In addition in the case of changing indexation those already retired (65 to 99 years old in 2013) are also considered – but only respond by lowering consumption.

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