The Second International Workshop on
The Balance Sheet of Social Security Pensions

New Zealand: prefunding Tier 1 pensions -lessons from New Zealand[1]

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Abstract
New Zealand is relatively young (for a developed country); the cost to taxpayers of pensions (both public and private) is relatively low and, although that cost is expected to about double in the next 45 years, is less than what many developed countries pay now in total (including the cost of tax incentives for private provision). New Zealanders are at present neither forced, nor encouraged through tax incentives, to save privately for retirement.

There is some evidence that New Zealanders are behaving rationally and that they will have adequate retirement incomes, including the Tier 1 pension.

Despite all this, the government decided in 2001, without debate, to set up the "New Zealand Superannuation Fund" (NZSF) to build financial assets in public ownership. The NZSF aims to partially smooth the cost of the state pension as the population over age 65 about doubles.

This paper suggests that the NZSF is an unnecessary public intervention and fails to address the issues that really matter. It also introduces some avoidable economic and policy risks.

New Zealand has yet to fully appreciate the significance of what is one of the "universal truths" of the financing of retirement benefits but is not alone in that. The cost of retirement benefits is the benefits that are actually paid when they are paid, not contributions that may be set aside in a fund to help pay for them; nor any actuarial estimates today of what might happen decades hence. This "truth" applies no matter who makes the promises, how those promises are calculated or how they are secured.

It also has considerable significance in any debate about the economic impact of ageing populations. Until there is agreement about the amount of future pensions and the basis on which they are paid, there is little

[1] This paper is an extract from a fuller examination of the retirement income environment in New Zealand, including private provision, taxation and the lessons that other countries might learn from New Zealand's experience of the last 30 years.

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- a member of the New Zealand Prime Minister's Working Group on Superannuation 1990.
- a member of the New Zealand Task Force on Private Provision for Retirement, 1991-92.
- author of *How to Create a Competitive Market in Pensions – the International Lessons*, Institute of Economic Affairs (London) 1998.

point debating how to pay for those pensions. The government avoided that issue when it introduced the NZSF.

The paper suggests that governments should intervene in retirement incomes to satisfy their welfare obligation to those who, on account of age, need income. Decisions about how to supplement any state-provided income (and other benefits) and how to pre-fund those, should be left to individual citizens and their employers.

Definitions

The following expressions are used in this paper in a particular way:

> **NZS** – New Zealand's Tier 1 pension, "New Zealand Superannuation". A non-contributory, taxable "Citizen's Pension", payable to all over 65 who have satisfied modest residency requirements and without regard for assets or other income.
>
> **NZSF** – the New Zealand Superannuation Fund, set up by the New Zealand Government and that will partially pre-fund future payments of New Zealand's Tier 1 pension, NZS.
>
> **PAYG** – Tier 1 schemes throughout the world are largely financed on the "pay as you go" principle that sees current taxes (or "contributions") collected and paid in that year to current pensioners. Some countries (UK) have a notional "fund" but the future benefits are not pre-funded in any meaningful way. Other countries have "proper" funds (Ireland, New Zealand) but they will make only a modest contribution to expected future costs.
>
> **State Pension Age** – the age from which public pensions are payable, without adjustment for early or late payment.
>
> **Tier 1** – the state normally provides retirement income that is available to all citizens, usually on an income-tested basis. There may also be contribution, work or residence requirements. Generally, Tier 1 is a subsistence level, guaranteed income provided on a **PAYG** basis though there may be the fiction of a fund through which special tax payments (sometimes also called "contributions") flow. No country has a fully funded Tier 1 – some are partly funded (Ireland, New Zealand).
>
> **Tier 2** – employment-related schemes form a second layer of retirement income. They can be voluntary or compulsory (Australia, Chile); private or public (France, Germany) or both public and private (US). Because of tax concessions, they are usually required to provide pension benefits.
>
> **Tier 3** – after accounting for Tiers 1 and 2, Tier 3 is everything else that a country (through, for example, tax policies) or individuals might do as preparation for retirement income needs. Tier 3 encompasses a variety of things from building a business for eventual sale (or income), paying off debt, saving through a collective vehicle, direct investment in stocks and bonds, trading down a large family home for a smaller one appropriate for retirement etc. Tier 3 can be tax-favoured as a matter of public policy but that usually only applies to collective investment vehicles such as IRAs in the US.

Section 1. NZS – the present design

Every New Zealand resident qualifies for NZS on reaching age 65. The only test is that the person is actually resident and has been resident in New Zealand for at least 10 years after age 20, with at least five of those years being after age 50. If the test is not satisfied at age 65, the pension will start as soon as the residency qualifications are completed.

There are three main rates of pension payable at Tier 1:

- For a **couple**, the annual amount is a net 65% of the net average wage[3] and is divided equally, with half being paid to each. Each of the couple must satisfy the residence tests independently.

- For a **single person, sharing accommodation**, the annual amount is 60% of the couple's rate (a net 39% of the net average wage).

- For a **single person living alone**, the annual amount is 65% of the couple's rate (a net 42.25% of the net average wage).

The grossed up equivalent of the net pension is taxed as ordinary income in each recipient's hands. It changes each 1 April in line with changes in the national average wage.

There is no adjustment mechanism for early or late "retirements". The pension starts after claiming while other aspects of the welfare system (disability and unemployment) deal with those who stop work before the State Pension Age[4].

Entitlement to NZS ceases if the recipient is out of New Zealand for 13 weeks.

The pension is paid from the government's general funds (including the NZSF described in the next section), there being no identified contribution or tax that specifically supports the payments.

In summary, NZS is a simple, relatively generous, liveable[5] age-based, "Citizen's Pension" that has significantly reduced poverty in old age[6].

Because NZS is paid regardless of other income or wealth (no income-testing[7] or asset-testing, such as Australia uses), any private provision delivers extra income and so gives New Zealanders the best incentive of all to save privately for retirement. They will be better off and can easily see that. There is some evidence that New Zealanders seem to be reading that signal quite effectively.

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[3] Temporarily 66% as a result of the 2005 coalition government negotiations.

[4] The before-tax total cost of unemployment, sickness and invalidity benefits at all ages (not just before retirement) was 1.6% of GDP in 2005/06 (Source: The Treasury's *Long Term Fiscal Model*, 2005).

[5] As long as a retiree owns a debt-free home. There is an income-tested, additional "Accommodation Supplement" for any recipient of a state benefit (young or old). It can apply to both home-owners with a mortgage and renters. The Accommodation Supplement is both income and asset-tested.

[6] About 4% of all aged 65 or more have financial hardship that is officially measured as facing "severe financial difficulties" (from a survey conducted by the Ministry of Social Development in 2001 - *The Living Standards of Older New Zealanders*). By contrast, the equivalent figure for the UK's complex system is 22% (Department for Work and Pensions *Pensioners' Income Series*, available: http://www.dwp.gov.uk cited in *Lessons from New Zealand, a Pension Reform Option for the UK*, Alison O'Connell, Pensions Policy Institute, London (2004).

[7] A spouse/partner under age 65 may qualify before age 65 but only on an income-tested basis where all household income is included.

Section 2. Pre-funding public provision – the NZSF

2.1 The partial pre-funding approach

When Labour replaced National as the main party of government in 1999, one of its election promises was the establishment of a central, government-controlled fund to help pay for the future costs of the Tier 1 NZS. Ahead of the decision, there was no public debate on the proposal and no significant economic discussion of the impact or value of the initiative. Despite this, the operative law was passed in 2001.

The NZSF is administered under the New Zealand Superannuation and Retirement Income Act 2001. All money required in respect of NZS (both current benefits and the pre-funding component) flows through the NZSF[8].

The amount contributed each year is calculated on a rolling 40-year projection of expected pension payments (after allowing for the NZSF itself and its investment income). The Appendix gives the operative section of the Act that sets the annual amount payable[9].

During the early years, more taxes will be taken from New Zealanders than will be needed to meet the year-by-year cost of NZS. In that way, the NZSF will build up.

The assets not required to meet the NZS payments in any year are invested by the "Guardians" of the NZSF. There are currently six and they are appointed by the government.

Here is what the Guardians themselves say about their role:

> "While accountable to Government, the Guardians operate at arm's length from Government. Under the law, the Minister of Finance may give directions to the Guardians regarding the Government's expectations as to the Fund's performance, but must not give any direction that is inconsistent with the duty to invest the Fund on a prudent, commercial basis. The Guardians must have regard to any direction from the Minister. Any direction given by the Minister must be tabled in Parliament."[10]

The NZSF's assets were $NZ6.6 billion at 30 June 2005 (about 4.4% of GDP[11]) and are expected by 2035-37 to grow to about 42% of GDP (about $63 billion in today's terms). That is not a lot less than the value of the entire New Zealand share market ($66 billion in November 2005[12]) and about 40% of the current net financial assets of all New Zealand households.

The question is whether the NZSF will help or hinder future taxpayers as they pay for the rising costs of an ageing population. Before we look at the asset side of this question (the NZSF's operation), we need to understand the liability side – the expected costs of NZS itself.

2.2 Cost projections for an ageing population

Until the 1992 Task Force on Private Provision for Retirement, no one had done any work on the future impact on all government spending of New Zealand's ageing population. The 1997 Periodic Report Group refined that 1992 work. Chart 1 shows the results of both the 1992 and 1997 projections.

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[8] "Funding of superannuation entitlements under section 45 of the Act amounted to $6,083,189,000 during the year (2004: $5,888,739,000) as set out in the Crown financial statements. These capital contributions from the Crown are to meet the expected net cost of superannuation entitlements as determined by the Ministry of Social Development. Against these capital inflow transfers, capital outflow transfers were made to the Ministry of Social Development who [sic] are responsible for the administration of superannuation entitlements." (Financial Statements, NZSF, 2005 – Note 7)

[9] The mathematics of the calculation process and outcomes can be seen in *Financing New Zealand Superannuation*, Treasury Working Paper 01/20 Brian McCulloch and Jane Frances (2001).

[10] From the NZSF's 2005 Annual Report – available on the NZSF's web site at www.nzsuperfund.co.nz.

[11] GDP to 30 June 2005 was $NZ149.2 billion.

[12] At 29 November 2005; figure from the NZX – it includes foreign companies that are locally listed.

Chart 1

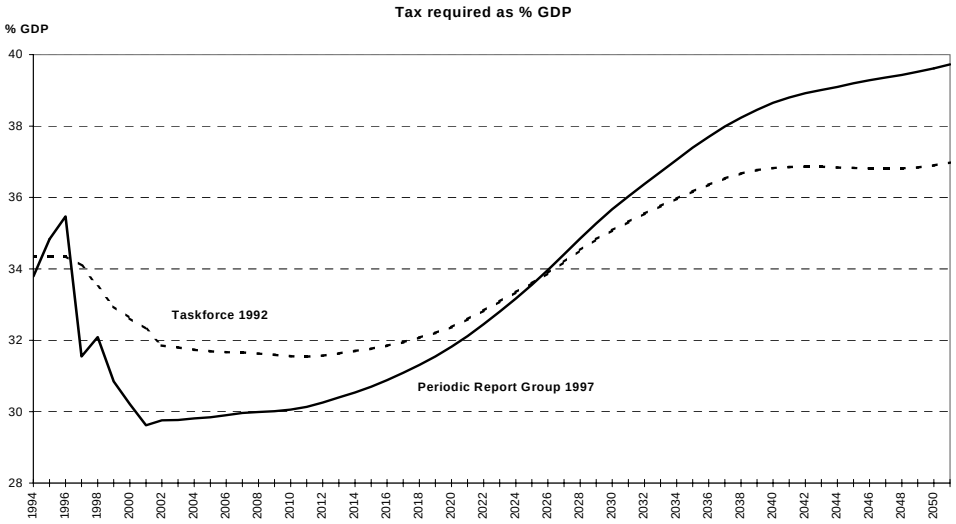
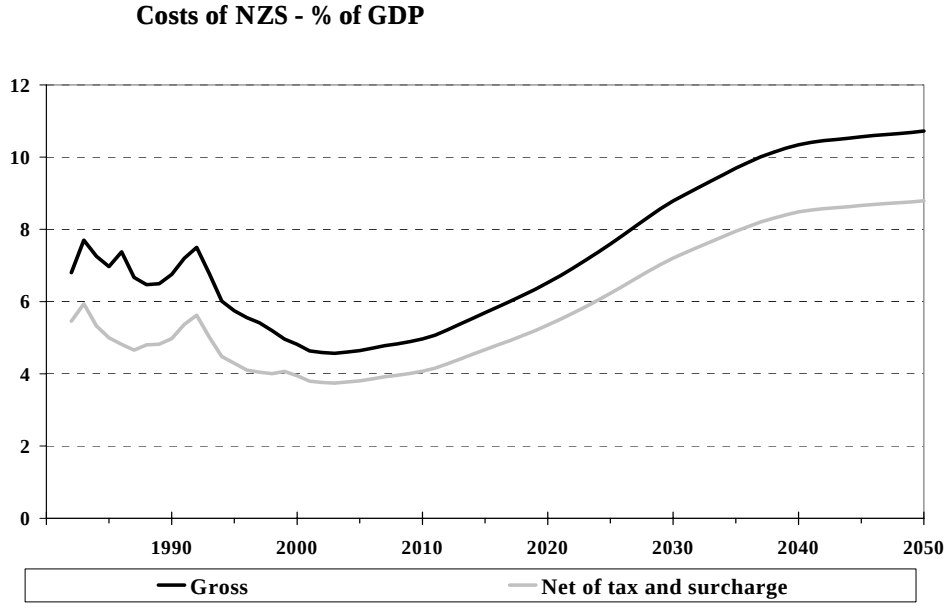


Chart 1 tried to guess what would happen to all government spending (including pensions, education and health) that will be affected by changes in the age structure of the population over the period to 2050. Had the spending patterns of the period to 1996 persisted, we would now be collecting taxes of about 30% of GDP, about 8% of GDP (or $12 billion) less than now.

However, the introduction of the three yearly MMP political bargaining cycle has changed things since 1997. The increased spending patterns of MMP governments mean that taxes are now higher than were expected even by the 1997 Periodic Report Group. This is an important issue in the context of the NZSF because it goes to the heart of the real reason for the NZSF. Section 3 below has more on this.

The two most significant cost influences for future taxpayers are health and NZS. Chart 2 on the next page (from the 1997 Periodic Report Group) looked at the cost of just NZS.

Chart 2



NZS is taxed as ordinary income so the lower line (the after-tax costs) in Chart 2 is the one that matters.

In 1997 (when the chart was produced) the "surcharge", or income test, also affected the net cost. Both the 1992 Task Force and the 1997 Periodic Report Group recommended the retention of the relatively "gentle" income test that the surcharge represented. The politics of MMP, however, saw to its demise.

The 1997 Periodic Report Group emphasised that projections over such long periods should be treated with caution:

"……we know that it is difficult to project with accuracy even a few years out. Projections over the time frames here give an indication of the probable size and scope of the fiscal impact of an ageing population. They are not intended to be a precise measure of expected future outcomes."[13]

New Zealand's expected public pension costs are relatively low by comparison with other OECD countries. On a gross basis, Table 2 on the next page shows that four countries (France, Germany, Italy and Poland) now pay more than 10% of GDP for state pensions[14]. The average unweighted cost in the 21 countries is now 7.4% of GDP and will peak at 10.9% by 2050. Today's champion (Italy) pays 14.2% of GDP.

The chart shows overall patterns for both 2000 and the expected position in 2050:

Table 2

OECD estimates of spending on old age pensions
Expressed as a percentage of GDP – changes in percentage points

	2000 (rank: lowest cost =1)	Percentage points change: 2000-2050 (rank of total cost)
Australia	3.0 (2)	+1.6 (2)
Austria	9.5 (17)	+2.2 (13)
Belgium	8.8 (15)	+3.3 (14)
Canada	5.1 (7)	+5.8 (11)
Czech Republic	7.8 (11)	+6.8 (19)
Denmark	6.1 (10)	+2.7 (7)
Finland	8.1 (14)	+4.8 (16)
France	12.1 (20)	+3.0 (20)
Germany	11.8 (19)	+5.0 (21)
Hungary	6.0 (9)	+1.2 (4)
Italy	14.2 (21)	-0.3 (18)
Japan	7.9 (12)	+0.6 (6)
Korea	2.1 (1)	+8.0 (9)
Netherlands	5.2 (80	+4.8 (8)
New Zealand	**4.8 (5)**	**+5.7 (10)**
Norway	4.9 (6)	+8.0 (17)
Poland	10.8 (18)	-2.5 (5)
Portugal	8.0 (13)	+4.5 (15)
Spain	9.4 (16)	+1.6 (12)
United Kingdom	4.3 (3)	-0.7 (1)
United States	4.4 (4)	+1.8 (3)
Average	7.4	+3.5

The lowest total 2050 costs, as shown in Table 2, are the United Kingdom (3.6% of GDP) and Australia (4.6% of GDP).

However, international comparisons of this kind need to be very carefully done and interpreted.

[13] From the *Interim Report*, Periodic Report Group, July 1997.
[14] According to *OECD Economic Outlook 69* (June 2001). New Zealand is expecting to pay about 10.5% (gross) by about 2050 as Chart 2 shows.

For example, New Zealand's numbers are the pre-tax cost. NZS is taxed as ordinary income so, as Chart 2 shows, the net cost is the only important number. Some countries' state-provided pensions are either not taxed or are taxed on a preferential basis.

Next, Table 2 projects costs based on a continuation of current policy settings. This is an heroic assumption. The 2050 "champion" is an example. It is clear from the debate currently going on in the UK that the current regime is politically unsustainable and will change.

Also, even directly comparing individual countries' "top line" numbers is really not possible or requires great care as differences can be subtle. To take one example - we can't directly compare Australia's numbers (an expected total 4.6% in 2050) with New Zealand's (10.5%). The Australian numbers exclude the subsidised services that come with pensioner status (worth presently more than an annual $A1,400 a pensioner). Australia's numbers also ignore the cost of the compulsory Tier 2. That is an important exclusion because Australia's relatively cheap Tier 1 would probably be politically unacceptable if it were not "taxing" its citizens through the compulsory Tier 2. Through income and asset tests, future Australian governments expect to reduce the direct costs of Tier 1.

Finally, Table 2 also takes no account of the cost of tax subsidies given to savers for private retirement provision at Tiers 2 and 3. That exclusion applies to all the other OECD countries in this comparison but not New Zealand. New Zealand's numbers by comparison are relatively "clean" and count all the current costs of state intervention in retirement income provision[15].

However, Table 2 says that New Zealand isn't alone in facing the issues that the pre-funding regime of the NZSF is intended to address.

2.3 The very long-term projections

The Super 2000 Taskforce[16] built a modelling tool that was based on the Treasury's Long Term Fiscal Model ("LTFM") used by the 1997 Periodic Report Group. The Taskforce wanted the LTFM refined to include feedback mechanisms into the modelling process.

A new tool (the Policy and Retirement Income Stability Model or "PRISM") was created for that purpose. This let aspects of retirement income policy settings that affect spending, taxes, debt, interest rates, the balance of payments, investment, saving and growth be captured. If done fairly, this can highlight some of the trade-offs implicit in pension decisions and made some key assumptions explicit.

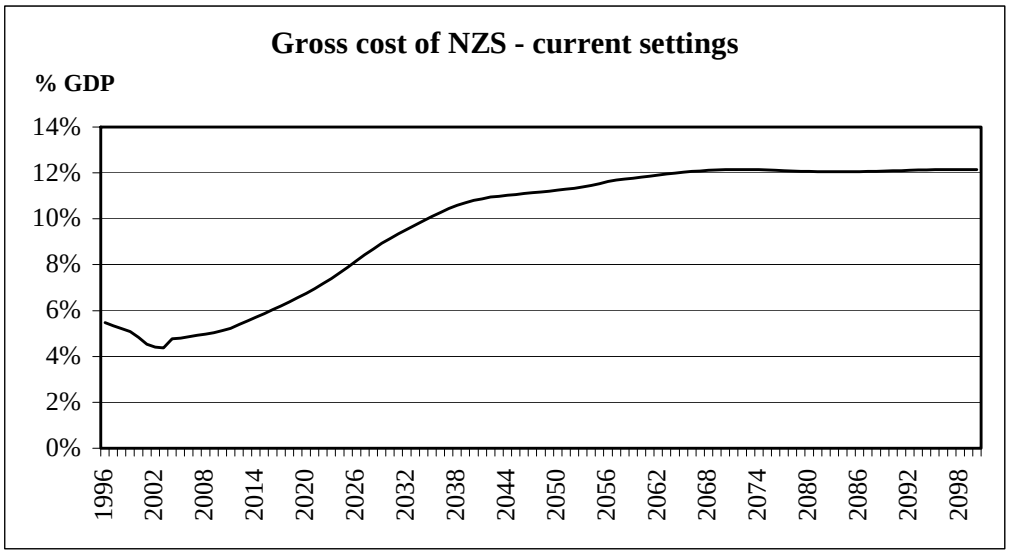
The mere presence of the NZSF will change things in ways that the direct contributions to (and investments by) the NZSF and its distributions cannot directly account for.

For the purposes of the discussion in this section, PRISM allowed the cost of NZS to be modelled through to the year 2100. Chart 3 extends Chart 2 until the end of the century.

[15] Nor the income and asset tested "Accommodation Supplement" that applies to all beneficiaries.

[16] Appointed unilaterally (without regard to the Accord's provisions) by the National/New Zealand First government in 1999 but disbanded before it reported by the Labour/Alliance coalition elected in 1999.

Chart 3



Source: PRISM model.

In the absence of the NZSF, PRISM shows the gross cost of NZS, that peaks at 12.1% of GDP in 2070, doesn't change over the following 30 years as the NZSF is run down to zero (by 2100, as was originally intended)[17].

In introducing the legislation to establish the NZSF, the Minister of Finance said:

> "[The proposed legislation] will finally give superannuitants some certainty about what the government will be able to provide for them."

For the sake of this discussion, let's put the next 100 years to one side because the NZSF won't change the cost of NZS (the benefits paid – see the next section 3) but will change, relatively temporarily, the source of money required each year to pay for NZS.

Any 100-year projections must be heavily qualified. However, the real question we should be discussing in relation to Chart 3 is whether, as a country, we feel comfortable with about one tenth (net) of the country's entire output eventually being transferred from the working population to the retired through taxes and NZS. The answer to that may be "yes" but we should at least discuss it and we have not. The presence or absence of the NZSF doesn't affect that central question. In the very long term, the NZSF will, in any event, have no effect on this question after the investments have been entirely paid out.

So, will the working population of future generations allow such a transfer to take place? Or will older voters force that transfer on workers? Change in this area will probably happen regardless of both the decisions made in 2001 and the presence, or absence, of the NZSF. The only issue of substance is the pace of change and the impact that change will have on the saving and retirement decisions of future older New Zealanders.

If the NZSF doesn't change the cost of NZS in the face of an ageing population, then unless it makes a measurable addition to economic growth that might not otherwise have been achieved, its provisions cannot increase certainty over the next 100 years, as claimed by the government.

2.4 Some alternative strategies

[17] The net cost (allowing for tax paid by superannuitants on NZS) was estimated at nearly 2% of GDP less at about 10.3% of GDP by the end of the century.

The two biggest influences on the future cost of NZS will be the State Pension Age and the proportion that NZS bears to the national average wage. PRISM allowed us to see the dramatic influence that manipulating just these two elements of the benefit design could have on future costs.

Chart 4 on the next page compares three possibilities with the current arrangements:

2.4.1 Increasing the State Pension Age: Chart 4 allows for the State Pension Age to increase by five years (from age 65 to age 70) starting in 2020. The modelled increase in age is six months a year over a ten-year period (as happened when the age was lifted from age 60 to 65 over the period ending in 2001).

2.4.2 Lowering the pension: Chart 4 also shows the impact of an immediate reduction in the married couple's pension from 65% of the national average wage (net to net) to 55%. In practice, any such reduction should not be immediate but should be phased in from, say 2020. Unfortunately, PRISM does not allow that kind of deferred change to be modelled.

2.4.3 Combined age and pension change: Chart 4 then shows the effect of increasing the State Pension Age by three years (from 65 to 68) from 2020, combined with an immediate reduction in the pension from 65% to 60%. In practice, both of these changes should, again, be phased in from, say 2020.

The point of these projections is that the effect of any of them (or any other combination) will eclipse the NZSF as to their impact on the year-by-year call on taxes from future generations of taxpayers (see paragraph 2.7). The chart shows that each of them would reduce the gross cost of NZS from 12.1% to about 10% by 2100.

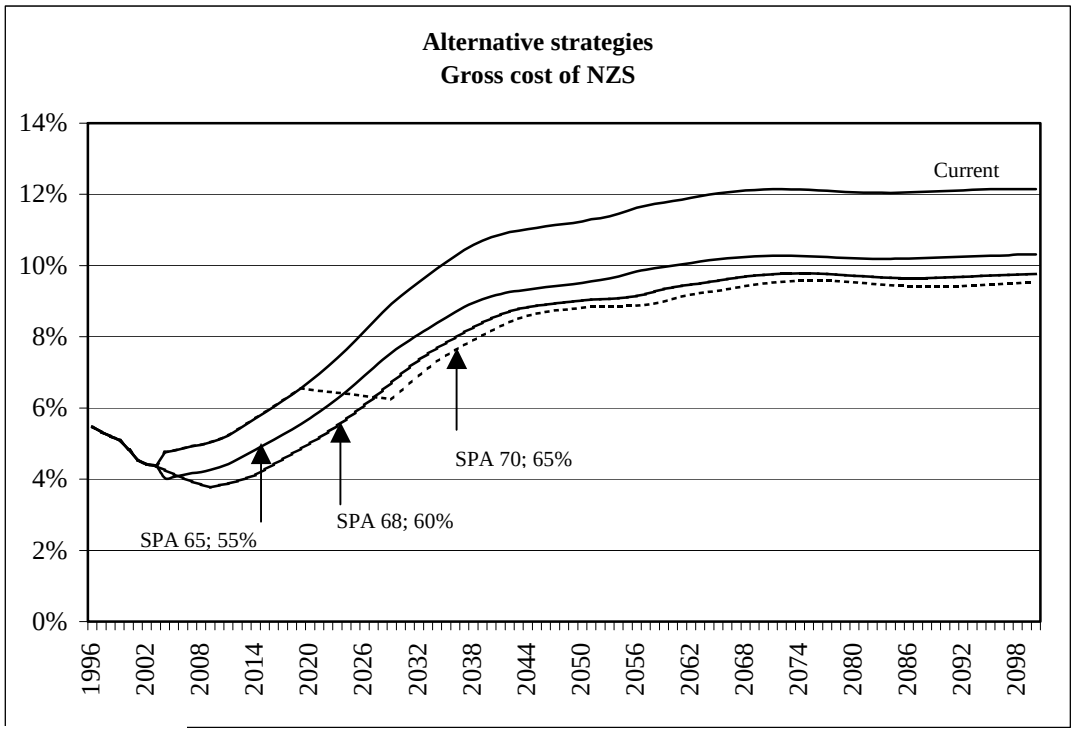


Chart 4

Notes: source – PRISM. "SPA" is the State Pension Age; the percentage figures (55%, 60% and 65%) refer to the proportion that the married couple's NZS bears to the national average wage (net to net).

Putting aside cost considerations, such benefit design changes may actually be sensible proposals in their own right. Why, for example, would we persist with a State Pension Age of 65 if we knew (or expected) that people didn't want to stop working at age 65 or knew that they were capable of working beyond that age and

didn't need the support of NZS? [18] Why again would we persist with 65% as the married couple's pension if we discovered that, to satisfy the government's welfare obligation (whatever that is), only 60% were needed? Or perhaps 70% may be needed – either way, we should have decent evidence and a proper debate to support the amount settled on.

New Zealand has not yet had that debate.

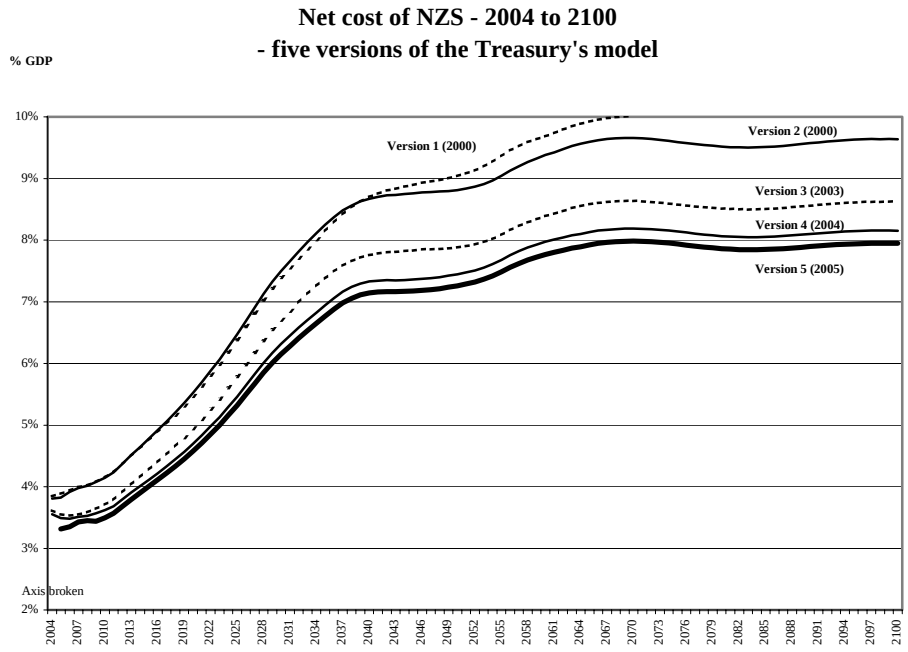
Even if we agreed only that the State Pension Age should increase gradually from age 65 to age 68 over the period between 2020 and 2026, that would cut a gross 1.6% of GDP off the cost of NZS by the time it is fully implemented in 2026[19]. That single change of three years in the State Pension Age will cut the gross cost of NZS by nearly 20% in 2026. As the underlying cost of NZS increases, the saving reduces (12.5% reduction by 2050; 12.4% by 2100).

As both the 1992 Task Force and 1997 Periodic Report Group emphasised, these kinds of projections give us an indication of overall cost trends and don't need to be analysed on a "line item" basis. The things we should be talking about are, however, clear.

2.5 Further versions of the Long Term Fiscal Model

The New Zealand Treasury has refined the original 1992 model that the Task Force on Private Provision for Retirement developed. Each year, it releases an updated version of the model as part of its Budget processes and provides "best estimates" of all government income and expenditure over the coming decades[20]. Chart 5 shows the development of the model's estimates of the future real cost of NZS (after tax) over the last five years:

Chart 5



The "net cost" was taken before the impact of the NZSF was calculated. In the absence of any change to NZS itself, the "net cost" of NZS will be unaffected by the workings of the NZSF, as explained in the next section 3.

[18] The US, for example, is increasing the qualification age for Social Security progressively from 65 to 67 between 2002 and 2027. Denmark, Iceland and Norway have also adopted age 67 as their State pension ages.

[19] Robert L Brown in *PAYG Funding Stability and Intergenerational Equity*"(Transactions of the Society of Actuaries, Volume XLVII, 1995) says that lifting the State Pension Age is the most powerful potential change governments can make to restore "balance" to the funding of PAYG state schemes.

[20] See http://www.treasury.govt.nz/ltfm/ to download the Treasury's "Long Term Fiscal Model".

While the returns received by the NZSF will significantly alter the contribution made by the NZSF each year to the cost of NZS (from both tax and capital – see paragraph 2.1 for the way in which this is calculated), it won't change the overall cost of the benefit, only the source of that cost – the cookie jar that the government of the day reaches into to meet each year's outgo.

2.6 The significance of modelling

The New Zealand long-term modelling work, first started by the 1992 Task Force, is an important part of informing the public about the long-term implications of change. If a country were starting any sort of discussion on the pensions "problem", the production of believable long-term numbers on all of a government's expected costs would be the first priority. Pension costs are part of the picture, but only a part.

Even after 13 years, New Zealand still does not fully appreciate the significance of these projections. Financial service providers still call for action to meet the cost impact of the ageing population. Many politicians also don't understand the issues because otherwise we would not have the NZSF. The next section 3 analyses why that is so.

2.7 So how is the NZSF going?

The NZSF has now been in place for about three years. The first part of that period was spent putting in place the governance and management structures to satisfy the obligations of the "Guardians" under the New Zealand Superannuation and Retirement Income Act 2001.

The Guardian's 2005[21] annual report summarised their responsibility as follows:

> "The Guardians' principal duty is to invest the Fund in a prudent, commercial manner. They must maximise investment growth without undue risk to the Fund as a whole, in a manner which avoids prejudice to New Zealand's reputation as a responsible member of the world community, and using best practice portfolio management."

Here, again from the 2005 Annual Report, are the key highlights for the 2004/05 year:

> "**Financial Overview**
> • Fund assets grew from $3,985.4 million to $6,613.5 million;
> • Net contributions of $2,107.0 million;
> • Investment income of $726.1 million (after costs, but before tax).
>
> **Investment Performance**
> • Rate of return of 14.13% [before tax], against risk free rate of return of 6.33%;
> • Annualised rate of return since inception of 12.50% p.a. [before tax] against risk free rate of return of 5.88% p.a."

Charts 6 to 8 on the next page are derived from equivalents in the NZSF's 2005 Annual Report.

[21] Available on the NZSF's web site at www.nzsuperfund.co.nz.

Chart 6

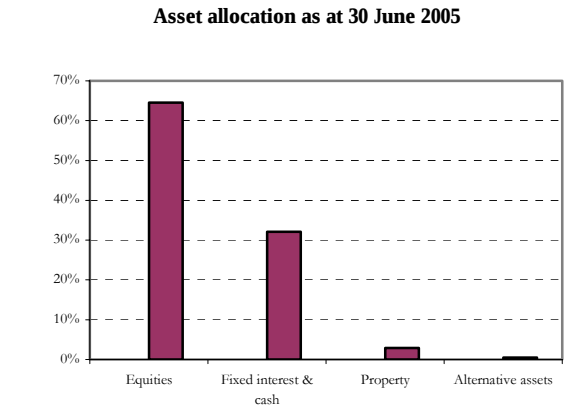


Chart 7

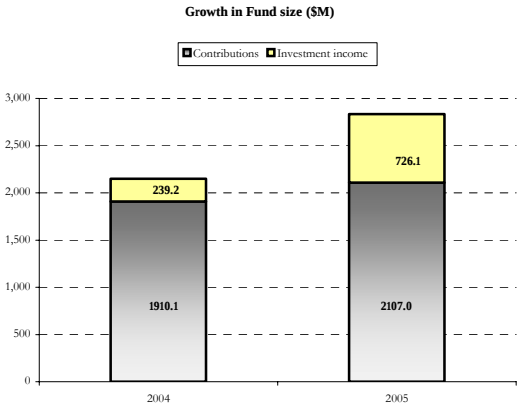


Chart 8

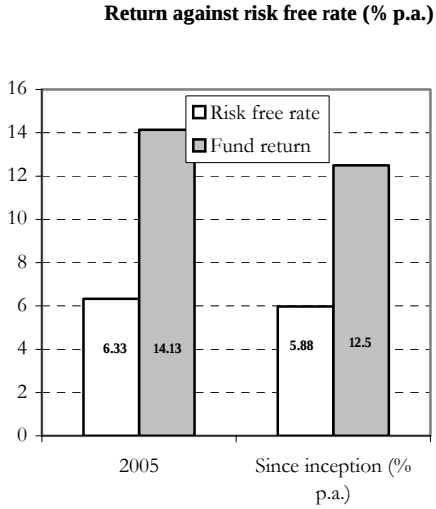
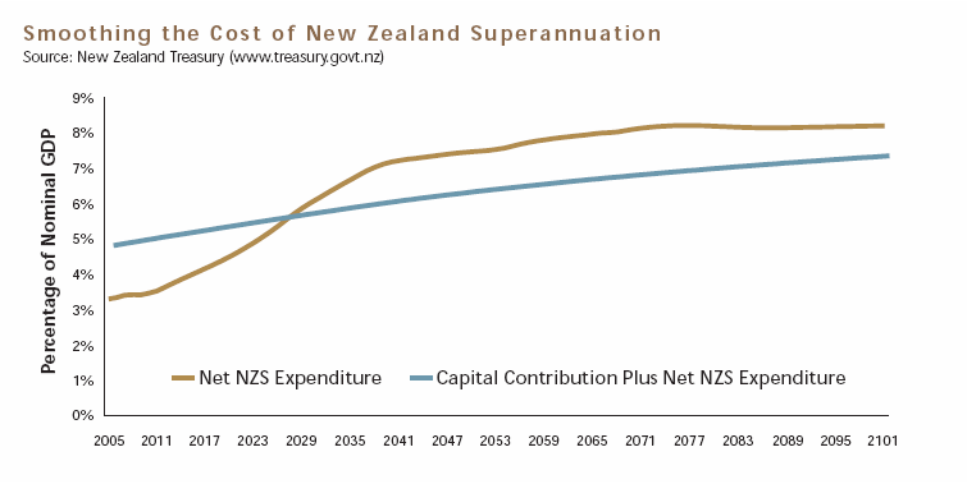


Chart 9 (again from the 2005 report) shows how the build-up and draw-down are expected to work from 2005 to 2101. The difference between the top and bottom lines before 2029 represent the contributions being accumulated. The difference after 2029 represents the draw-down from the NZSF's assets over the following years.

The calculation process described in paragraph 2.1 produces the relatively smooth contribution line that starts at a little less than 5% of GDP and ends at about 7.5%. by the end of the century. That pattern is shown in Chart 9 on the next page.

Chart 9



The projections are expressed in nominal dollars and that explains the apparently "unbalanced" nature of the chart (seemingly more being paid out than in).

2.8 The expected long-term return

The expected cost of NZS in Chart 9 (the "net NZS Expenditure") is unaffected by the NZSF's investment returns but the smoothed cost is. The Guardians themselves estimate the expected returns over the long-term to be a nominal, compound 9.2% per annum before tax. Though this sounds demanding, that will leave just 4.1% per annum as the net real rate (assuming tax at 33% and long-term inflation of 2% per annum). Given the NZSF's expected strategy (see next), this should be achievable. In fact, anything less will probably give an inadequate reward to taxpayers for the investment risks they have now assumed.

However, the next section 3 suggests that, no matter how estimable all this might seem, it will not deal with the main issues, if any, that New Zealand faces with NZS.

2.9 Where should the NZSF be invested?

Given the presence of the NZSF (and its current support by most political parties), its future investment strategy is of more than passing significance to New Zealand investment markets (and taxpayers!).

The NZSF's current strategy, summarised in Chart 6, seems to misunderstand its key role. Even its "longer term target portfolio"[22], although with significantly reduced exposure to bonds, is unlikely to achieve the NZSF's potential. Partly, that is a function of the NZSF's "constitution", as expressed in the Guardians' statement quoted in paragraph 2.7. Despite the stated "commercial" objectives, the Guardians need to adopt a different approach.

As a general principle, all the investments of the NZSF should be in businesses (or in direct business assets), not bonds and particularly not government bonds. That's because shares in businesses will, over the long-term investment horizon that applies to the NZSF's liabilities[23] produce the best long-term returns.

Next, there is the investment distinction between domestic and international investments.

[22] Broadly, 40.5% in overseas equities (a traditional strategy here is inappropriate), only 2% in emerging market equities (not enough), 7.5% in New Zealand equities (probably too much), 25% in "alternative assets" (some appropriate, some not), 10% in property (direct property inappropriate; listed shares could be appropriate) and 15% in bonds (inappropriate).

[23] The 2005 Annual Report describes the time horizon in the following terms "The Fund's key distinguishing features are: the long investment horizon (30-50 years); the lack of need for any liquidity (20 plus years before any withdrawal is envisaged)……"

2.9.1 Domestic investments: The only sensible New Zealand-based investments should be in businesses that aim to create new and genuine economic growth.

Those businesses will probably be unlisted and are likely to be what is sometimes called "venture capital".

The NZSF should largely ignore listed shares as buying those is not, in itself, a transaction of economic significance from the growth perspective. It simply replaces an existing owner of those shares by the NZSF (though what the previous owner then did with the proceeds might grow the New Zealand economy).

The NZSF should generally not invest in domestic corporate bonds and should certainly not invest in New Zealand government bonds for much the same reason[24].

Also, having such a large investor active in the local, quite small, bond market has significantly reduced liquidity. That creates problems for all other investors. There is only $8.5 billion (5.7% of GDP) on issue in New Zealand's corporate bond market[25]. Government bonds are only 23.5% of GDP so a large buyer in the bond market can both increase the market's vulnerability to adverse effects from financial shocks and reduce financing options for local firms[26].

The only possible justification for the NZSF to buy domestic corporate bonds would be if there were deficiencies in the local capital market. That does not apply to New Zealand.

Despite this, the 2005 Annual Report for the NZSF shows that 32.1% of the assets was in cash and bonds with 16% in New Zealand cash and bonds. The Guardians intend the medium term position to be a total of 20% in cash and bonds, falling eventually to 15%[27].

A large investor in a small market like New Zealand then creates a different problem when investments must be realised to make required payments to the government. Buyers have to be found in a relatively illiquid market. Even bonds that mature probably have to be replaced by alternative lenders. Realisation will probably affect asset prices for both the NZSF and other investors.

2.9.2 Overseas investments: Money not invested in New Zealand businesses should all be invested overseas and in shares. There are four possible reasons for this:

- **Returns** – the greater diversity of opportunities overseas is more likely to produce consistently lower-risk returns than are available in New Zealand.

- **Insurance** – the NZSF is, in a way, an insurance against the possibility that the local economy might not deliver the growth to support future payments of NZS. In that situation, the assets to support that "insurance" should be separated from the potential risk of any adverse effects of New Zealand's economic performance.

- **Indirectly imports labour** – as Nicholas Barr has pointed out[28], exporting capital to countries with a young labour force is a way of importing labour indirectly (without the

[24] Collecting higher taxes so that an arm of the government (the NZSF) can buy the government's own paper is a circular transaction that offers no prospects of additional growth. Nor does it add to the future security of NZS that, with respect to those bonds, still depends entirely on the ability of future governments to collect tax from tomorrow's taxpayers. The same argument applies, incidentally, to the special Treasury bonds issued to the Trustees of the US Social Security "Fund".

[25] According to Westpac Institutional Bank's monthly report for November 2005.

[26] For more on the importance of local bond markets, see *Pumping up the spare tyre*, The Economist, 19 November 2005.

[27] This is probably for the political and/or cosmetic reasons described on the next page rather than for investment returns. The higher volatility of share returns was given as a reason for a bond component. That component must be at the expense of the expected higher long-term returns from shares.

[28] *The Welfare State as Piggy Bank*, Oxford University Press (2001) at page 99.

difficulties that increased immigration might bring). However, the value of that overseas labour can be captured only by investment in businesses[29].

- **Liquidity** – very large overseas markets will provide liquidity for the relatively large NZSF (by comparison with the local market – the New Zealand share market is less than 0.2% of world markets). That will become important when strategy needs to change or when the draw-down begins.

Overseas investments should then be diversified by economic regions and economic activity to limit the potential damage created by local or industry-specific economic shocks.

Choosing the regions should also have some regard for the local demographic issues. For example, investments in a region that faces the start of the retiring baby boom generation within, say, the next 10 years require the Guardians to understand the economic risks involved in their eventual realisation (not just by the Guardians). Generally, this could rule out significant positions in the regions that represent demographically "mature" developed countries that will tend to reach their investment "tipping point" (from a demographic perspective) earlier than New Zealand.

All overseas investments should be on a "passive" basis. There are two main reasons for this:

- There is little evidence that active managers can consistently add value to index-based returns when measured on an after-fees, after-transaction costs basis;
- Passive strategies are much less expensive to run.

In this context, "passive" does not mean buying the index. It means buying and holding, not buying and selling.

Although the suggested strategy makes economic sense, the NZSF's Guardians are unlikely to adopt it because of political considerations. The Guardians' performance will be closely watched and compared with that of local retirement saving schemes that should have quite different investment objectives. Any suggestion of under-performance in a year will become a political issue. Despite the very particular role that the NZSF has in the government's balance sheet, the Guardians cannot afford to produce returns that under-perform the "market" (other retirement saving schemes).

The Guardians' own expressed target is:

> "The success of the Fund's investment strategy will therefore be measured by how much the national balance sheet has grown over and above what a risk free investment programme would have delivered."[30]

The "expected minimum return objective" set by the Guardians is a more demanding 2.5% per annum over the yield on 90 day Treasury bills over "rolling 20 year periods". However, in the context of its actual strategy, this is a relatively "soft" target and therefore easily achieved. - That choice reflects the political risk already described. In fact, the target should aim to achieve the market returns for the sectors the NZSF invests in. Anything less than that should be cause for concern for both the Guardians and taxpayers.

The strategy suggested in this paragraph will have greater volatility than the NZSF's current strategy and that will inevitably mean a periodic, unacceptable level of discomfort for both the Guardians and the government.

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[29] New Zealand superannuation schemes already have a large proportion of their assets invested overseas. According to the Reserve Bank, 37.7% of total "managed fund assets" (including superannuation, unit trusts and life insurance arrangements) were invested overseas at 30 September 2005 (Reserve Bank *Managed Funds by asset category – Table C15* at www.rbnz.govt.nz/statistics/monfin/C15/data.html).

[30] From the 2005 Annual Report at page 12.

However, there are deeper problems with the very concept of the NZSF that section 3 discusses. Before looking at those, perhaps there are other ways of helping an ageing population to understand the financial implications of the pension issues it faces.

2.10 Another way of counting the expected cost – IAS 19

There is a good case for governments to run proper balance sheets (with assets and liabilities identified for the country as a whole) along with expenditure and income accounts[31]. Many developed countries use cash flow statements - and that's no way to run a country any more than it is to run a business.

The fact that partially pre-funding Tier 1 is a bad idea (see the next section 3) doesn't mean the government shouldn't know what Tier 1 might cost in the future. It might even want to express that total cost in today's money. The International Financial Standards Board's IAS 19 ("IAS 19") might offer governments a potential model to monitor those costs year by year.

IAS 19 requires companies to work out the cost of their defined benefit schemes within each year's profit and loss accounts. The company disregards the fact that an external trust might own the assets. The company is instead required to treat the assets and liabilities as if they belong to the company. It is forced to make best guesses about inflation, pay increases, investment income and the discount rate, and to report to their shareholders directly on the state of the scheme. There are rules about the way actuarial gains and losses are amortised (or spread) over longish periods, recognising the long-run nature of the liabilities. The standard also regulates the way that future costs of benefit improvements are accounted for.

IAS 19 has two main purposes. First, the people who pay for the benefits (the employer's shareholders) keep an accounting watch on a defined benefit scheme's liabilities – both those that have built up in the past and those that will accrue in the coming year. The second purpose is to work out how much the employer should be allowed to claim as a deductible expense for income tax purposes. That second purpose has no relevance to a government's monitoring the future costs of a defined benefit pensions, like NZS.

Applying the principles of IAS 19 to Tier 1 has some possible advantages:

> **2.10.1: Confidence:** Knowing that the government was maintaining a watch on year-by-year changes to the long term liabilities might give voters and beneficiaries confidence in the sustainability of Tier 1[32]. One of Tier 1's main objectives is to provide a believable foundation for employers and citizens to make appropriate decisions at Tiers 2 and 3.
>
> **2.10.2 Flexibility:** Tier 1 needs to be flexible because some change is inevitable over the decades. IAS 19 might allow decision-makers to see the long term implications of potential changes, and not just as beneficiaries are about to collect their changed entitlements.
>
> **2.10.3 Political constraint:** IAS 19 might impose financial constraints on the political process so that the true, long term costs of this year's political "bribes" would be known when change happens rather than, as tends to be the case, when the crisis is about to strike.

However, there are problems with calculations like IAS 19. Their sensitivity to relatively minor changes in the actuarial assumptions is the most obvious. The larger problem is that IAS 19 focuses on the wrong issue.

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[31] As far as I know, New Zealand is the only OECD country that has accounts prepared in accordance with Generally Accepted Accounting Principles ("GAAP") and audited by a private firm. It doesn't, however, use IAS 19 for its pension liabilities.

[32] That way, voters might not be surprised to learn the size of the so-called "implicit pension debt". According to the World Bank (*Pension Reform Around the World*, a presentation by Richard Hinz, 28 April 2003), these implicit pension debts range from as much as about 400% of GDP (Italy) through 350% for Germany, 325% for France, 300% for Japan, 160% for the US and 140% for the UK. Those levels may or may not comfort voters but they may affect their behaviour in any debate about change. On the other hand, those numbers may seem so large and potentially unmanageable that the more likely response is to do nothing.

While IAS 19 provides a potentially interesting dimension to the guesses about the future costs of Tier 1 and/or Tier 2 (if the government is involved there), voters should instead focus more on the kind of information produced in Charts 1 to 5 above – expected cash flows expressed in real terms. That's because governments are not companies with shareholders' needing, at any time, to have some idea of the "fair" present value of their investments.

Governments really need to know only that they can realistically extract tax from tomorrow's taxpayers without undue risk to the country's future economic position.

2.11 Generational accounting

On the other hand, so-called "generational accounting" may have some value. This measures the lifetime taxes of all kinds paid by a generation of taxpayers, including income taxes (both wage and non-wage), corporate income taxes, consumption taxes, excise taxes, and local taxes. Transfers are then deducted from this - retirement income, health and unemployment benefits, family and housing benefits and also education. All of these amounts are discounted to present values so that the "fairness" of relative burdens can be compared.

A report[33] compared 17 countries (including New Zealand) that have produced "generational accounts".

Many in New Zealand suggest that tomorrow's taxpayers will get a worse deal than today's retirees despite paying more tax today to support the currently retired. The numbers produced in the report don't support that. The report concluded:

> "Of the seventeen countries examined here, five (Japan, Italy, Germany, The Netherlands, and Brazil) have extreme imbalances. Another five (the United States, Norway, Portugal, Argentina, and Belgium) have severe imbalances. Three countries – Australia, Denmark, and France -- have substantial imbalances. Canada's appears to be essentially in generational balance. The remaining three countries – New Zealand, Thailand, and Sweden have negative imbalances; i.e., their polices, if maintained, would leave future generations facing lower lifetime net tax rates than current newborns."

Countries that have current policies placing large burdens on young generations are probably vulnerable to future change and it's as well to know that sooner rather than later.

Governments can use the generational accounting discipline to help explain the long-run impact of current policies and of proposed changes to those policies. It can be part of the confidence-building process that a government should lead.

However, a significant caution needs to be sounded. Long-run calculations of this kind are crucially dependent on both a continuation of current policies and on the financial assumptions adopted. The discount rate obviously has a crucial influence on the process and small changes in that rate will have considerable leverage on the outcomes. The findings must therefore be treated with considerable care.

2.12 Pensions are like bonds?

Having stated the potential advantages of having "proper" government accounts, a word of caution is necessary about the liabilities side of the balance sheet.

Some suggest that a government's current "promise" to pay a pension in the future is just like a government bond. They argue that the value of those future payments should therefore be included as debt on the country's balance sheet[34].

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[33] *Generational Accounting Around The World*, Alan J. Auerbach, Laurence J. Kotlikoff and Willi Leibfritz, Institute for Monetary and Economic Studies, Bank of Japan (1998).

Future promises to pay pensions are quite like government bonds bought by today's investors but they are not the same. Governments can and do change the rules on their pension "promises" of all kinds. Also, the "bond holders" of a Tier 1 pension "promise", even if the rules do not change, have to reach State Pension Age before they start to collect on them. If they die beforehand, the "promise" is usually extinguished. Actuarial calculations can allow for early death in the population as a whole but that will still not turn them into bonds. Putting the two types of liability into the same category actively interferes in a proper discussion as to what might happen to the pension scheme's design for the future.

The real difference between the two liabilities is one of principle.

Bond markets are at the heart of market-based economies. Bonds are based on formal contracts. Their reliability is crucial to the effectiveness of financial markets. In an open market, bonds issued by a government are "marked to market" on what amounts to a 24 hour, rolling poll of the market's views on a government's actions. Governments therefore renege on a bond promise at the risk of significant damage to their local financial markets. Markets see that for what it is: a breach of contract.

Not so for pension "promises". They function in the political market place. Reneging on a pension promise will probably cause political damage[35] but need have no effect on financial markets. It may, in fact, improve a government's standing in those markets.

A pension is not therefore an instrument with the same characteristics as a bond. In any "competition" between a bondholder's expectation of receiving future interest payments (and repayment of capital on maturity) and a citizen's expectation of receiving a pension, even if "promised", the bondholder will have the upper hand. Citizens will probably understand that just as well as financial markets. That explains why, despite New Zealand's favourable demographic position, many younger New Zealanders say that NZS "will not be there when they make it to age 65".

So, while the "promise" to pay a pension in the future is quite like the promise to pay bond holders back, it is not the same so there is no need to treat it in the same way on the government's balance sheet as a sum borrowed, on which interest payments may be due in the meantime and that must eventually be repaid.

It is much more important to understand the expected future cash flows in relation to pensions (and other government programmes such as health, education, defence) than to know what the net present value of all those liabilities (including pensions) might be today. That's what Charts 1 to 5 illustrate in paragraphs 2.2 to 2.5.

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[34] See Laurence J Kotlikoff's "What Determines Savings?" - Chapter 8 *Economic Impact of Deficit Funding* (The MIT Press, 1989) for a discussion on the various ways that governments dress up taxes, funding and deficits.

[35] As New Zealand has notably proved – most recently in 1984 (when income-testing on Tier 1 was introduced) and 1991 (when the government tried to introduce the "clawback"). See paragraph 3.1.4 for the explanation of these.

2.13 Political support

The New Zealand government can justifiably claim that most political parties now support the NZSF. The major opposition party (National) fell into line ahead of the 2005 election after having previously opposed the idea. However, that change in policy seems to have political expediency rather than principle as its basis.

As is the way with pension politics in New Zealand, we must not necessarily expect the NZSF to have the 100 year life that the government might like. That is because there are some difficulties of principle with the idea.

Eventually, New Zealand will have the debate about these issues that we missed in 2001 when the legislation setting up the NZSF was passed. The NZSF will probably not survive the open debate that New Zealand needs. The next section 5 explains why.

Section 3 The problems with pre-funding Tier 1

3.1 What's wrong with the NZSF?

All the money needed to pay for the future costs of NZS will flow through the NZSF. This is described as a "smoothed pay as you go" way of providing for NZS rather than the "pure" PAYG system that was used for, effectively, 104 years.

There are many things wrong with the NZSF – from the economic to the political. This section analyses the issues. The analysis takes, as its starting point, the previous fully PAYG arrangement. It does not argue, for example, that a fully funded scheme should become PAYG.

3.2 Economic strength matters

The material living standards of people in retirement are largely determined by their ability to consume goods and services. Retirees cannot consume the money represented by public or private savings directly. Those savings must be used to buy goods and services that are produced by New Zealand's working-age population or by workers of other countries (imports). The British economist, Nicholas Barr, memorably expressed this point in these terms:

> "Pensioners *do not* eat pound note 'butties' – they use the pound notes to purchase consumption, and it is consumption that matters."[36]

It's New Zealand's capacity to create wealth that matters. The ability to produce goods and services and to buy imports is the key to the living standards of present and future retirees. That doesn't mean that we shouldn't save for retirement; only that financial savings by themselves won't help. It's what's done with those savings (investment and then growth) that matters. The NZSF will probably not help increase the capacity of tomorrow's New Zealand workers to produce more for tomorrow's retirees to consume.

3.3 How do we support the growing elderly population?

An increasing elderly population can continue to be supported at current real income levels only by:

- Boosting future output by increasing the working-age population relative to the dependent population. This can be done in a number of ways such as:
  - immigration[37];
  - lowering the impact on the retirement/work decisions of NZS by having an income test or by allowing a more flexible State Pension Age[38];

[36] Nicholas Barr, *Myths My Grandpa Taught Me*, Three Banks Review, No 124, pp 27-55 at p 35 (1979).
[37] However, immigration tends to import other countries' demographic problems.

- increasing the State Pension Age from its present 65;
- increasing the participation rate in the labour force (such as by reducing unemployment, persuading more citizens to work, lowering the unemployment benefit or making it more difficult to get).

- Constraining current consumption and investing overseas with a view to financing imports in the future.

- Constraining the consumption of the working-age population in future, for example through higher taxes, to make more goods and services available to retirees.

- Improving productivity through investment in education and training. Our government argues that as productivity rises so do wages (and, therefore NZS because of its link to wages). On this view, increasing the size of the economic cake doesn't help. There are two answers to this. First, increases in capital productivity and innovations raise total factor productivity and can let GDP increase without increasing wages and, therefore, NZS (see the next bullet point). Secondly, the link between real wages and NZS could change as relative incomes increase[39].

- Increasing the capital stock and its quality (robots have the advantage of not needing pensions) to compensate for the potential labour shortage.

The NZSF does not address the problem of the sustainability of NZS with an ageing population. The NZSF's presence will probably not boost output, raise productivity or constrain the consumption of future workers (once the retired population peaks).

Unless the NZSF takes a significant position in new ventures to build New Zealand's capacity[40], the only direct objective that the NZSF might achieve is constraining consumption and investing overseas to finance future imports. In fact, a future historian might discover that this was the main, political reason for the NZSF's establishment.

As Chart 2 above shows, the cost of NZS was still falling when the government took office in 1999 because of the then increasing State Pension Age. Given the Budget surpluses that recent New Zealand governments were already running, the then Minister of Finance (a relative conservative) probably saw the NZSF as a way of constraining a potentially free-spending, left-leaning coalition government. The NZSF essentially took about $2 billion of tax revenues off the table[41].

Some might argue that, regardless of the cost issue, a funded state pension arrangement is more likely to stimulate growth than PAYG scheme providing similar benefits. However, the counter-factual in the case of the NZSF, given the higher taxes that are needed to create the fund, is what taxpayers would have done with the extra taxes they have to pay now. At least some of those taxes would have been saved in ways that might make a greater contribution to growth than the NZSF. Then there are the behavioural effects of the NZSF's

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[38] NZS is relatively "neutral" from an efficiency perspective as it is paid whether a person works or not. However, it still influences that decision in ways that might not be in the country's best interests.

[39] In fact, employees' compensation as a proportion of GDP has fallen from about 55% in 1980 to 45% in 1998 (down 18% in only 18 years).

[40] According to the NZSF's 2005 report, "alternative assets" (not necessarily in New Zealand) comprised 0.5% of all investments. The Report noted that this proportion is expected to build to 13% by 2007 but eventually will be as much as 25% of assets. "Alternative investments" include infrastructure, private equity (1% of the 2007 13%), commodities, forestry and "absolute return strategies". See paragraph 2.9 for more on this issue.

[41] Chart 1 above shows the expected costs of all government programmes based on the first costing model produced for the 1992 Task Force (of which I was a member). In public presentations, the Task Force emphasised that 1992 costs were likely to continue reducing slowly after 2001 (when the State Pension Age reached 65 and until 2011 when the first baby boomers started to reach age 65. The cost would not return to 1992 levels until 2030. We emphasised the dangers of future governments' "filling in the trough" in what we described as the "wavy blue line". Perhaps the NZSF is one way the present government saw of limiting, but not acknowledging, that risk.

presence, the deadweight costs of the extra taxes collected, the political and investment risks, the debt versus investment issue, all of which are covered below.

3.4 Where will the money come from?

The NZSF is used as an accounting device to pass through all the money that is then paid to both existing and future superannuitants. What is not needed to pay for pensions today will be left behind to build up into a fund. The transfer to the NZSF of a dollar of tax revenue to pay a dollar of NZS to an existing pensioner involves no change of substance. Total tax, spending and the operating surplus are not changed. In fact, given that the NZSF is one of the government's "pockets", this accounting exercise is pointless.

The transfer to the NZSF of a capital contribution of a dollar (that is, an amount not needed to pay pensions today), assuming no change in overall tax or spending, does not affect the government's operating surplus as such transfers are made after the surplus has been determined. The transfer means that a smaller amount of operating surplus than otherwise would be available to fund capital spending. So, if capital commitments are unchanged, the government's borrowing will be higher than otherwise.

The government's operating surplus is therefore unchanged by either annual expense payments or capital contributions. The surplus is transferred from one government cookie jar to another. The apparent partial funding of NZS is matched by an equal reduction in money available to fund other activities in the future. For instance, general government debt may increase (or not reduce); health capital spending may reduce or there may be less available for education facilities. Peter is robbed to pay Paul. Again there is no change in substance.

3.5 Current workers pay twice

A change from the PAYG approach to a partially funded basis requires workers during the transition to pay twice. Those workers must meet, through their taxes, the costs of NZS for current retirees as at present. In addition, they must fund surpluses that, together with related investment income, will provide partly for their own NZS when they retire. So it is impossible to have a partly funded NZS without increasing taxes and/or reducing spending on NZS or other goods and services like education, health and welfare.

It might be argued that, for the generation that pays twice, there is no real burden as those taxpayers are paying extra to secure their own retirement income. However, that is no answer as they would be the first generation to do that. Something has therefore changed for them, compared with the present (and past) generations. In any event, justifying the double burden on that basis begs the question as to the appropriateness of the current level of NZS for the future.

Nor can the double burden be justified by saying that this would happen with a change from PAYG to a largely privatised system, as occurred in Chile. This argument assumes that the state's obligation should be privatised. After 25 years, the Chilean model now demonstrates some obvious flaws in the principle of relying on private provision to satisfy the state's welfare obligation. Again, the state should make its welfare decisions based on the relative weights that it accords to the various claims on taxpayers of the day. The "right" to future retirement income support at Tier 1 is something that can be satisfied only by tomorrow's taxpayers (and tomorrow's economy) not by today's workers (and other savers).

Anyway, asking today's workers to pay twice (at least partially) for NZS does not help to grow the economy or deliver the other services that the government might want to increase spending on.

3.6 Costs will increase

The cost of any retirement benefit scheme (public or private; defined benefit or defined contribution; lump sum or pension; pre-funded or PAYG) is the benefits that the scheme pays. It doesn't matter how the scheme is paid for – whether from taxes, contributions paid in earlier years or from investment income, other things

being equal[42]. The government has recently increased the generosity of NZS[43] by raising its level relative to wages. That will increase its future cost both because of the increased benefits and the larger number of people who will receive them in the future. On the other hand, the government said it would not increase personal taxes further to finance the NZSF. These two commitments are potentially incompatible with the adoption of a partially funded scheme. The most likely outcome is higher debt than otherwise because surpluses that would be used to reduce debt would be transferred to the NZSF.

In the presence of the NZSF, spending on superannuation, even on a PAYG basis, will increase (or be higher than otherwise would have been the case) without the NZSF. Other spending will need to be cut, if personal tax is not increased. Without the required tax increase and/or cut in spending, the partial pre-funding imposed through the NZSF is essentially the previous PAYG scheme with higher superannuation payments, additional administration costs and a lower surplus than otherwise.

3.7 Funding or PAYG?

The partly funded scheme will not reduce the cost of NZS, other things being equal. A transfer to the NZSF of a dollar today that increases in value with net investment income of, say, 5% a year (before adjusting for inflation) to $7 in 40 years' time is exactly equivalent to a PAYG payment of $7 (plus an adjustment for inflation) in 40 years time. In the latter case the taxpayer can invest a dollar today and earn the same investment income as the NZSF to pay his or her tax bill in 40 years time.

Similarly, the transfer of a dollar of personal income tax to the NZSF which increases to $7 in 40 years time is matched by a dollar plus related forgone earnings elsewhere in the government sector which, other things being equal, can be expected to have an opportunity cost of $7 in 40 years time.

Contrary to the government's claim at the time the NZSF started, the NZSF provides no additional security about "where the money [for NZS] will come from." It will effectively continue to come from tax revenue. There is no separate source of funding for NZS. The best the government can argue is that the NZSF affects the timing of tax receipts.

There are no compelling grounds for partly funding NZS or similar non-contributory public programmes such as the invalid's benefit or health spending that are presently funded on a PAYG basis. The future funding of these schemes primarily depends on the prosperity of the economy and the government's power to tax[44].

Private superannuation schemes are not able to tax residents. This is the main reason why they seek to provide security for contributors by fully funding their schemes. Governments face no such problem because of their ability to tax.

The NZSF is in fact an example of a "fallacy of composition". It's a good idea for individuals or employers to put aside money for future superannuation payments. However, it does not follow that what's right for an individual is necessarily right for the country. Building up the NZSF will re-arrange claims on today's economy between earners and non-earners but does not necessarily increase the security of either. Only a stronger economy can do that.

In New Zealand, we do not need to concern ourselves with the argument about whether the rate of return on social security “contributions” is likely to fall in the future because of the demographic changes. We have no

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[42] There could be feedback effects from, for example, the deadweight costs of collecting more tax than is needed.

[43] From a net 65% of the net national average wage for a married couple to 66%. This followed negotiations with New Zealand First to form the 2005 MMP coalition government. The increase is, apparently limited to the life of the current government – a maximum of three years.

[44] The Ministry of Health thinks that health will cost more than 8% of GDP by 2051. By 2100, health spending will be about the same as the net cost of NZS (according to the results from the modelling tool PRISM – see paragraph 2.3 for more on PRISM). If the government is concerned about the future affordability of health care, why is there no similar "smoothed pay as you go" approach to rising health costs? There is no effective distinction between these two demographically influenced programmes.

separate "contribution" that is, in truth, just another form of tax. However, there is a related issue that needs dealing with.

It might be argued that the NZSF could reduce the cost of NZS if the future population growth rate is less than the rate of return earned on the NZSF's assets. This confuses two ideas. Given that the cost of NZS is the benefits paid, the only effect of the return on the NZSF's assets is to alter the incidence of cost, not change it.

However, the presence of the NZSF may, in fact, raise the overall cost of NZS (including the NZSF) by more than the previous, purely PAYG arrangements for the following reasons:

- There are the direct risks of investment losses;
- Then there are the administration costs of running the NZSF itself (last year, 0.48% of assets[45]);
- Next, there are the indirect costs such as the dead-weight costs on the economy of collecting more tax today than is needed to meet the government's immediate obligations. In New Zealand, this has been estimated to be 18% of labour taxation (from the "diminished incentives to work, save, invest and take risks")[46].
- Finally, there are the direct costs of administering the tax system and compliance/avoidance costs that need to be added.

In fact, given that the country's capacity to meet the economic obligations to superannuitants (both public and private) depends on the strength of the contemporary economy, the NZSF will partly disguise one of the safety valves that should regulate the relative equities of competing contemporary claims on that economy.

The annual budget process carried out by the government of the day is the most practical example of the way in which those relative equities are resolved year by year. The NZSF will provide a partial barrier for that on-going, self-balancing process. The fiscal and policy pressures imposed on governments by "entitlement-based" programmes illustrate the barriers to needed change.

Changing the funding basis of NZS will not save money over the current PAYG arrangements. The NZSF is no more "secure" than the capacity of future governments to tax; rearranging economic claims in today's economy will not better prepare future New Zealanders for the impact of a growing aged population.

3.8 Where will the money be invested?

The extra amount of tax required each year to achieve the government's objective will average about $2.2 billion a year in today's money during the build up period of the next 20 years. For the reasons described in paragraph 2.8, nearly all of that money should be invested overseas. In fact, at 30 June 2005, a surprisingly high 25.5% was invested locally (with 16% in local cash and bonds).

Over the long term, the New Zealand market will not be able to absorb much of that significant annual amount but, even if it could, there are two main reasons for investing outside New Zealand:

- New Zealand doesn't have sufficient local diversification. We don't have the range of companies and industries in sufficient quantities that such a large pool of assets will require.
- Aside from the modest intergenerational cash flow effects of the "smoothed pay as you go" system introduced by the new arrangements, the NZSF could also help to partially insulate the New Zealand

[45] From the 2005 Annual Report of the NZSF already referred to.

[46] W Erwin Diewert and Chris A Lawrence (1994) *The Marginal Costs of Taxation in New Zealand*, New Zealand Business Roundtable, Wellington. Cited in *Some Issues in the Current Tax Debate*, Roger Kerr, New Zealand Business Roundtable, 8 September 2005.

economy from internal shocks. On that basis, it could act as a form of economic insurance fund. Just as it makes no sense for the New Zealand's Earthquake Commission's Fund to be invested in New Zealand[47], so too the NZSF should be diversified away from the economy that could most directly affect the future affordability of NZS.

Investing such a large amount overseas raises a number of issues:

3.8.1 Balance of payments impact: First, there is the immediate impact on New Zealand's balance of payments as the money flows overseas[48]. Then, the impact will be reversed as the money comes back into New Zealand to help finance the consumption of tomorrow's retirees.

3.8.2 Timing of draw down: Next, the citizens of all other developed countries face similar but, in most cases, more serious ageing issues than New Zealand. Just as we will want to be drawing down on the NZSF to meet payments to superannuitants, other baby boomers around the world will already have started their draw-downs.

Some commentators say that such a co-ordinated withdrawal of money from markets to pay for retirement consumption will have a significant, negative impact on asset values around the world. Shifting the investment response to the ageing issue from individuals to the government, as the NZSF arrangement suggests, doesn't change that risk but could magnify it. Individuals are more likely to respond rationally with their own money to this issue than can governments that make decisions about taxpayers' money and that aren't directly accountable for the outcome.

3.8.3 Helping other countries out: Lastly, investing overseas in portfolio investments might help other countries grow their capital stock. That may help those countries to deal with their own ageing populations but shouldn't New Zealand prefer to grow its own capacity rather than those of its competitors? If we wanted to do that, shouldn't we be letting New Zealanders themselves invest that money in their own businesses? It is unlikely that political appointees (the NZSF's Guardians) will make better, more relevant investment decisions with other people's money than New Zealand citizens would make with their own.

In fact, it could be argued that the government has actively decided not to allow citizens to invest in New Zealand Inc. (at least to the extent that they would have done so with their own money) because it concluded either that the required rates of growth will not be available in the local economy or that it wants to limit the risk of inadequate growth resulting from individual decisions. Only other economies will offer the needed returns so the NZSF will withdraw potential investible capital from taxpayers.

On the other hand, it is possible that the government did not consciously make that decision. Needless to say, it was not debated.

The final investment issue concerns the "debt versus investment" argument. For individuals, paying off debt before investing for retirement income is a sensible strategy. In New Zealand, the most important reason for that is tax – under the TTE regime (see the next section 6), it's very difficult for future after-tax investment returns to exceed the cost of personal debt that is probably not tax-deductible. However, reducing risk is also important. Given the volatility impact of gearing (and the need to pay the debt holder a fixed return), paying off debt also reduces a family's exposure to risk. Reducing debt is akin to obtaining a guaranteed net return on investment equal to the cost of debt.

[47] Because the New Zealand economy's ability to meet compensation for earthquake losses could be compromised by the earthquake itself.

[48] There has been recent local concern about the high value of the New Zealand dollar and the adverse effects that is having on our export sector. Were it not for the extra selling pressure created by the NZSF's investments going overseas, it is possible that the dollar could be even higher than now.

Much the same arguments apply to the NZSF but this time, in the government's balance sheet. Investment logic says that returns from investing in shares should be higher over the long term than the cost of debt. However, they might not be. The risk that after-tax returns might be less than the cost of debt should favour the repayment of debt over portfolio investment. This argument should also preclude the inclusion of any government debt (bills or bonds) in the NZSF's portfolio. Maintaining debt in the government's balance sheet while investing in other governments' debt (or especially New Zealand government debt) through the NZSF just doesn't make investment sense.

Anyway, maintaining existing debt in the government's balance sheet while, at the same time, building up the NZSF is the same as borrowing to invest. If it's a good idea to maintain sovereign debt at 20% of GDP (as the government intends), why not double the amount of debt to, say, 40% of GDP and invest it all through the NZSF? If that doesn't sound sensible then neither is the government's decision to leave debt at 20% while building the NZSF.

Like most "single answer" solutions to public policy issues, the unintended consequences of the NZSF are that:

- It will probably increase New Zealand's exposure to risk in the short run (balance of payments; interest rates vs. portfolio returns) and also in the long run as we reach our peak retirement income demand period later and less severely than most other developed countries.

- Its indirect investments in other countries' businesses are more likely to produce lower returns for New Zealand than would be produced for the country if New Zealanders made their own decisions with their own money.

3.9 The investment process

The government requires that the NZSF be managed independently of the government on a "commercial" basis. All the risk will, however, remain with the government in the first instance (and ultimately with taxpayers) because the level of NZS payments will continue to be determined by the government. The cost of those future payments will not be directly related to the level that would be actuarially prudent, given the levels of the NZSF and income tax.

Over time, political pressures will influence the NZSF's investment strategy. For example, will the NZSF really be allowed to invest unlimited amounts overseas? Will it be required to hold New Zealand government debt (a silly idea), or will it be allowed to invest in companies that engage in politically controversial businesses like strip mining, unsustainable logging or stem cell research? How many worthy local "investments" like new bridges, schools or motorways will eventually form part of the NZSF's portfolio, regardless of the current rules (which may preclude those)?

The government directly acknowledged this potential. In introducing the enabling legislation, the Minister stated:

> "Because the Board will be independent from the Crown, it will be required to *have regard to* rather than *give effect to* directions from the government."

Despite the apparent independence of the so-called "Guardians"[49] it doesn't take much imagination to see the potential for the politicisation of the investment process.

[49] The same speech stated "[The Guardians] will be required to manage the Fund on a prudent commercial basis - in a manner that is consistent with best portfolio management techniques, and consistent with maximising the Fund's returns without bringing undue risk to the Fund as a whole."

In a separate illustration of this, one fund manager told me at the time that it would not publicly criticise the legislation that introduced the NZSF, despite what it thought, because of the potential fund management business that the NZSF represents in New Zealand's tiny market.

Because of almost inevitable political interference and the potentially politicised nature of the NZSF, the returns from the NZSF are likely to be lower than they should be. It is too early to say whether that will be so. The most recent year's return was 14.1% before tax. Although the Guardians thought that was a very good result, it was not markedly different from the results of other much smaller retirement funds (to the extent it is possible to rank the NZSF in the small New Zealand market). It also fails to account for the wider deadweight costs of higher taxation incurred by the economy in creating the contributions paid to the NZSF.

3.10 Another version of compulsion

Labour, the main coalition partner in the present government, campaigned vigorously against the proposed Compulsory Retirement Savings Scheme in 1997[50]. It objected to the idea that the government should force New Zealanders to save particular amounts in specified ways.

The NZSF is compulsory retirement savings in another guise. The government is still telling New Zealanders where their retirement savings should be invested. But this time, the government knows better than New Zealanders who should invest the money and who should own that. The 1997 proposal at least had the virtue of letting savers have some choice over the money manager for their savings – not so with the NZSF.

The government cannot explain any fundamental difference in principle between the NZSF and what Labour opposed in 1997.

3.11 The lessons of history

History is also against the NZSF. The 1938 social security "charge" (1/- in every £1 or 5%) was intended to fund the contributory health and welfare programmes that were charged to the Social Security Fund in terms of the Social Security Act 1938. Legislation passed by Labour in 1958 credited the successor to the charge (the Social Security Income Tax of 1/6 in every £1 or 7.5%), to the Consolidated Fund to which social security and all other spending was then debited.

The separate tax was eventually abolished on the recommendation of the Ross Committee because it reflected "an artificial splitting of tax receipts" and social security spending had consistently exceeded the level of the tax[51]. History will eventually be repeated with the NZSF. Despite current political support, the NZSF is vulnerable because it was imposed with no substantive debate about its merits.

3.12 The impact on individual saving decisions

People are more likely to save for retirement themselves if they doubt the future sustainability of NZS or if they think it won't be enough. The government has said that the NZSF would put an end to that uncertainty.

Increased certainty on the future shape of NZS is an essential part of any retirement income framework (both public and private provision of all kinds). However, in another example of the law of unintended consequences that often afflicts modern government, the mere existence of the NZSF and its seemingly

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[50] In the 1997 Referendum, the compulsory proposal (that looked quite like the Chilean model) was defeated 92% to 8% on an 80% turn-out of the electorate (the turn-out in the 1996 election itself was only 78.4%). The idea of having the Referendum was the result of a post-election deal done between National (that was opposed to the idea but needed the votes of its smaller coalition partner) and New Zealand First (that still supports compulsion). The alternative to the Referendum was apparently a compulsory scheme with no choice about whether it would proceed. New Zealand got off lightly with only a referendum.

[51] Ross, L N and others (1967), Taxation in New Zealand: Report of the Taxation Review Committee, Government Printer, Wellington, pp 108-110.

substantial appearance may induce New Zealanders to save less than they would otherwise have done. The Treasury gave that advice to the government when the NZSF was introduced.

The problem in this connection is that the NZSF is no answer to the NZS affordability issue for the reasons already stated. So, the existence of the NZSF may lead New Zealanders to save less while at the same time it fails to address the issues of sustainability that really matter. If we want New Zealanders to save more and if we want more certainty on the shape and sustainability of NZS, then the NZSF is unlikely to help.

Total "saving" (in financial investments of the kind the NZSF buys) may therefore, despite conventional wisdom, be less in the presence of the NZSF than if it did not exist.

3.13 The macroeconomic issue

Economists might argue that, from a macroeconomic perspective, a pre-funded public pension is the same as a pre-funded private pension system with no public pension. This then suggests that, if there is to be a Tier 1 pension, it is better for it to be pre-funded because, it seems, that is what the equivalent private arrangements would have done.

That assumes both public and private provision have the same role at a microeconomic level. In fact, Tier 1 is really little different from the state's other welfare obligations (health, housing, other income support payments). As with those programmes, state-provided pension should be PAYG.

The state should instead concentrate on doing the things that only it can do. Deciding on the level of welfare support from time to time and extracting taxes to deliver that support is a proper government function. Financial savings for the retirement income needs of citizens is not. A government that competes with the private sector in this function misunderstands its role. Adverse, unintended consequences (some of which have already been described) are likely to make things worse for tomorrow's retirees, despite the government's best intentions.

3.14 Politicising the problem

David Thomson has argued[52] that the history of the welfare state since the 1930s has been a direct response to the needs of the baby boom generation and its parents. From birth, education, household formation, housing, health care and retirement income provision for their parents, David Thomson says that the baby boomers are the "selfish generation".

Arguably, the NZSF could be seen by future taxpayers as the last roll of the dice by the baby boomers. A group of self-interested politicians (almost all of whom are members of the "selfish generation") attempted to lock in benefits that the country may subsequently discover it can't really afford, or simply doesn't want to pay.

The growing NZSF will be the most visible manifestation of that last gasp. As it becomes by far the largest pool of investment capital in the country[53], it will be an ever-present symbol of what is already the largest single claim on taxpayers' resources. The NZSF will, in fact, become an impediment to any needed change and that is probably what the government intended.

The NZSF will tend to politicise the whole issue of a sustainable NZS. In other words, as the most visible flagship of the selfish generation, it is more likely to increase uncertainty than reduce it.

[52] In his book *Selfish Generations; The Ageing of New Zealand's Welfare State*, Bridget Williams Books, 1991.
[53] It is expected to reach about 42 % of GDP at its peak.

Appendix

The NZSF – calculating the annual contribution

Section 43 of the New Zealand Superannuation and Retirement Income Act 2001 specifies the amount which the government must contribute to the NZSF each year.

Here, in full, is the section concerned:

"43 Amount of required annual capital contributions

The required annual capital contribution for each financial year is –

$$\frac{a}{100} \text{ x that year's GDP-b}$$

where

a	is the percentage of that year's GDP that, if the same percentage of the GDP that is projected for each of the next 40 years were contributed (by way of either or both of annual required capital contributions and annual expense payments under section 45) each year for the next 40 years, would be just sufficient, taking into account the Fund balance at the start of that year and projected Fund investment income over the next 40 years, to enable the Fund to meet the expected net cost of New Zealand superannuation entitlements payable out of the Fund over the next 40 years
GDP	is the projected annual gross domestic product of New Zealand
b	is the expected net cost of New Zealand superannuation payments payable out of the Fund in the year
Net cost	is the net cost of New Zealand superannuation entitlements net of any tax deduction made or required to be made under the PAYE rules in the Income Tax Act 2004
Next 40 years	means the financial year for which the required annual capital contribution is being calculated plus each of the following 39 financial years."