

A Welfare Reform for New Zealand: Mandatory Savings not Taxation

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Abstract

Many nations are seeking to reform their welfare states so that costs to the government can be reduced and the quality of outcomes improved. In this paper we show how mandatory savings accounts can be established in order to turn a publicly funded welfare system into one that relies more heavily on individuals funding welfare payments out of their own accounts. To our knowledge, showing how a tax and welfare reform can be jointly designed to enable this transition to occur in a way that minimizes any effect on the current disposable incomes of workers has not been done before. The paper takes a new unified approach to the funding of health, retirement and risk-cover, using New Zealand as a case study. Our proposed reform relieves the fiscal pressures which an ageing population is forecast to place on the government budget in the coming decades.

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I. Introduction

Across many countries publicly funded health-care and retirement programmes are forecast to put rising pressure on government budgets. For health and finance ministries, the search for ways to treat and prevent illness more cheaply without sacrificing quality is becoming urgent. Even in those nations where private funding has been relied on more heavily, as in the United States, health-care costs have been rapidly rising. In 1960, the total of both public and private health spending accounted for less than 4% of GDP, on average, across OECD countries.¹ By 2009, it had risen to 9.6%. The increase was particularly rapid in the US, where the total grew from about 5% of GDP in 1960 to 17% today. Projections of public health expenditure done by the OECD forecast an increase of up to another 7.7 percentage points of GDP by 2060.² The cost of public pension schemes are also predicted to rise significantly over this same period.

Many different reasons have been proposed to explain why health-care costs, in particular, have been rising faster than output across much of the world. Some commentators blame the rapidly expanding population of the elderly, compared to the young who must support them, pointing out that the cost of caring for the former far exceeds that for the latter. Others blame the use of more expensive technologies. Another reason may be the relatively slow productivity growth experienced by the health-care sector, possibly due to it needing a continuing labor content in which labor saving innovation is difficult to achieve.³

Some argue that the rise in health-care costs has been exacerbated by the reliance of many users of health-care services on a third party to fund their expenses, whether it be the government or their employer. Ensuring that there are adequate mechanisms to contain rising costs in the absence of direct monitoring by the users can be fraught with difficulty. In this instance, a single government payer might have the advantage of preventing differential pricing for the same services, and may even be able to drive down prices, especially for purchases of drugs, through the use of its own single-buyer (or ‘monopsony’) power.⁴ Due to these kinds of raging debates, reform of the welfare state, and in particular health-care, has become fraught with controversy, making change politically difficult.

One of the few nations that has successfully controlled health-care costs, whilst maintaining one of the highest quality services in the world, is Singapore. The cornerstone of its system is the mandatory ‘Medisave’ account into which workers and their employers make contributions set by the government. The funds help pay for health-care costs. Medisave has kept costs low by promoting more transparent pricing of services and by shifting a portion of expenses to individuals and

¹ See “Health at a Glance”, OECD Indicators (2011).

² See OECD (2013a).

³ This phenomenon has been referred to as the “Cost-Disease-Effect”, as outlined by William Baumol (2012).

⁴ See Kenneth Arrow’s Stigler Centre Blog, at the University of Chicago’s Booth School of Business, 15 March, 2016.

employers.⁵ Government assistance is provided for those unable to pay. Singapore’s universal health-care system was ranked first out of 148 nations by the Legatum Institute in 2018. The country was also ranked as being the 8th healthiest out of 169 nations by Bloomberg in 2019.⁶ William Haseltine, founder of Human Genome Sciences, has lauded the Singaporean model for its remarkable success.⁷

In this paper, we present a policy reform which shows how mandatory savings accounts for health, retirement and risk-cover can be established to enable a publicly funded welfare system to be replaced by one relying more on individuals spending out of their own accounts.⁸ Rather than increase taxation, the most sensible way to fund this expenditure is to seek savings elsewhere in the government budget. One source is ‘corporate welfare’ payments to special interest groups. Our accounts also receive part of the funds that were previously spent by the government on welfare, but which now are made available for spending directly by individuals. These changes give people more choice over how funds are spent and replace some of the diverse public schemes that have developed over the past century.

We use a case study of New Zealand, where most welfare spending is funded out of general taxation on a “pay-as-you-go” basis, to show how the reform works. The mandatory accounts that we propose can be used to pay direct for medical bills, cover events like job-loss or accident, purchase insurance plans, as well as to build up retirement savings. Taxes currently paid on earnings up to \$NZ 50,000 for single tax-payers go directly into the accounts. They are supplemented by contributions from employers, whose taxes are cut as compensation. Total spending levels are maintained across most welfare categories and more transparent pricing of health-care services introduced. The government also retains sufficient revenues to fulfil the role of ‘insurer of last resort’, helping pay for those individuals who cannot meet their own welfare expenses out of their savings accounts.

More broadly, our reform aims to change beliefs away from a culture of dependence to one of personal responsibility, whereby low income earners, in particular, are given the means to build up their own capital from which they can fund a range of affordable services, save for the future and make progress for themselves. The most recent NZ census reported, for example, that 59.7% of “at least two or more family households” receive some of their income from government transfers. Meanwhile, 56% of family units in the UK are estimated to receive “some kind of government welfare support”.⁹ Such figures do not include receipt of the publicly funded health services available to all residents in both of

⁵ Private health-care expenditures accounted for 65 per cent of total national health expense in Singapore in 2008.

⁶ The Legatum index measures a country’s “*basic physical and mental health, health infrastructure and preventative care*”. The Bloomberg Global Health Index grades nations based on variables “*including life expectancy while imposing penalties on risks such as tobacco use and obesity. It also takes into consideration environmental factors including access to clean water and sanitation*”. Singapore also operates the world’s second most efficient system, according to Bloomberg’s Health-care Efficiency Index (2018). Meanwhile, the country was ranked as having the 6th best health-care system out of 191 nations by the World Health Organization in 2000 (the last time WHO conducted such a study). Other World Health Organization (2000) rankings included France at 1st, US at 37th, United Kingdom at 18th and New Zealand at 41st.

⁷ See *Affordable Excellence: The Singapore Health-care Story* by William Haseltine (2013).

⁸ Some of our new regime’s features are similar to the Singaporean system. Other aspects, like the establishment of an individual risk-cover account for events like unemployment, and the retention of a tax-financed state pension, differ markedly.

⁹ See Statistics NZ Census (2013) and Government Statistics UK (2018). The transfers included in the NZ figures are “*unemployment benefits, sickness benefits, domestic purposes benefits, invalids benefit, student allowances and other government benefits, payments or pensions*”. For more details on the UK figures, see <https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/benefits/state-support/latest>.

these countries. Our mandatory savings accounts offer a way to lessen this degree of reliance by serving two distinct purposes. First, especially in the case of health-care, they enable people to make payments for bills on their own, instead of the State, as a third party, on their behalf. This feature opens the way for potential efficiency gains, along Singaporean lines. Second, our funded individual accounts enable people to build up sizeable savings balances, whilst experiencing little change in disposable incomes.¹⁰ They provide people with a personal source of compounding wealth that helps them to meet future welfare costs, without depending as much on the State. This second feature becomes more significant to the extent that population ageing is forecast to put rising pressures on publicly funded health and retirement systems, exposing people to the threat of future cuts in the generosity of these schemes.

Our estimates of the reform's impact do not assume efficiency gains. However, a reason for optimism is that total health-care spending, by both the government and private sector, is 4.5% of GDP in Singapore, compared to 16.9% in US, 9.8% in UK, and 9.3% in NZ.¹¹ Consequently, efficiency gains may not only be achievable, but large enough to compensate for any small drop in current consumption due to the creation of savings accounts. On the other hand, it may be argued that there are other causes of health outcomes and expenditures in countries, unrelated to the design of their health-care systems. For example, income and social status, education, the physical environment including access to safe water and clean air, social support networks, personal behaviors like balanced eating and exercise, genetics, as well as gender, also play important roles.¹²

The paper is structured as follows. Section II summarizes the challenges faced by publicly funded welfare states. It also discusses how Singapore has circumvented many of them. Section III describes our reform using a case study of New Zealand. It estimates the impact on the government's fiscal position, now and in the future, and some individual-level effects. Section IV concludes.

II. The Long Run Viability of Publicly Funded Welfare

A large literature has described the challenges faced by many nations that have publicly funded welfare states. For example, Kotlikoff (2013) estimates the 'fiscal gap', which is the present value of projected future government expenditures, net of the present value of future taxes. Using this approach, he argues that the true U.S. public debt is not the \$US 13 trillion usually reported, but instead is over \$US 200 trillion. Indeed, the future of health-care and superannuation programmes, in particular, have become two of today's most hotly debated economic issues.

¹⁰ Whereas 'disposable income' is usually defined as being net of taxes and transfers, for the purposes of this paper we define it as being net of taxes, transfers and contributions to one's mandatory savings accounts.

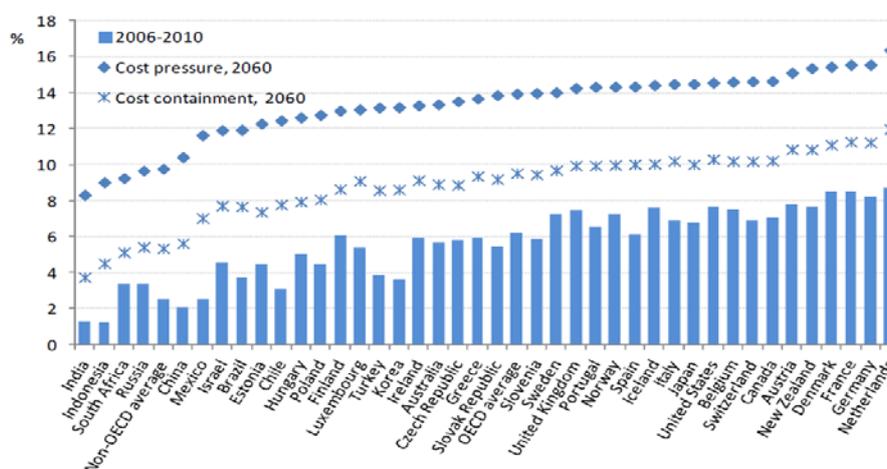
¹¹ The US, UK and NZ figures are for 2018 (see OECD, 2019) and Singapore's figure is for 2016 (see World Health Organization, [Global Health Expenditure Database](#), 2018).

¹² See [Social Determinants of Health: the Solid Facts](#), R. Wilkinson and M. Marmot, eds., 2nd edition, World Health Organization.

II. a. Health-care

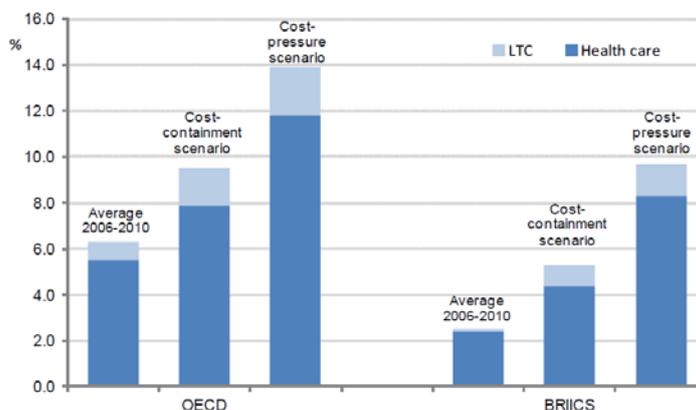
The ratio of public health and long term care (LTC) expenditure to GDP has been steadily rising. Since 1970, across OECD nations, public health spending has increased by 3.5 percentage points, reaching 6% of GDP in 2010. In the OECD’s upside ‘cost-pressure’ projection, public health and LTC expenditures are expected to double, reaching 14% of GDP by 2060. Even in a ‘cost-containment’ scenario, public spending is projected to rise to 10% of GDP.¹³

Figure 1a:
Public Health and Long Term Care Spending as a % of GDP in 2006-10 and Forecasts to 2060:
Range of Estimates using Sensitivity Analyses for Individual Nations (*Source:* OECD, 2013a).



For the ‘BRIC’ nations (Brazil, Russia, India, Indonesia, China, South Africa) public health spending is at a lower level than the OECD, at 2.5% of GDP (in 2010). However, under the ‘cost-pressure’ scenario, it is forecast to increase by four times, on average, to become 10% by 2060.¹⁴

Figure 1b:
Public Health and Long Term Care Spending in OECD and BRIC Nations as a % of GDP in 2006-10 and Forecasts to 2060 under “Cost-containment” and “Cost-pressure” Scenarios (*Source:* OECD, 2013b).



¹³ The OECD (2013a) considers two scenarios for predicting future public health spending: a ‘cost-pressure scenario’ in which growth in expenditures unrelated to demographics or income is assumed to continue at the same average rate as in the past; and a ‘cost-containment scenario’ in which policy actions are assumed to make the spending drift fade away (from 1.7% to 0% in 2060).

¹⁴ Under the alternative “cost-containment” scenario, it is forecast to double, to above 5% of GDP.

Given the competing pressures from other spending programmes, these trends in public health spending are likely to be a major source of strain for many governments. A particular challenge associated with publicly funded health-care systems concerns how to efficiently allocate resources when services are not transparently priced to the users. Attempts to estimate values have been made using tools like cost-benefit analysis. However, as is well known, comparing the benefits of different treatments using such methods is fraught with difficulty. The OECD (2013a) comments how “... *it is difficult to determine the appropriate supply of health and long-term care services without market signals - but at the same time, health and long-term care are areas where market failure is rife*” (see page 37).

Even in countries that rely more heavily on private funding of health-care services, the design of their systems has often not been successful at containing costs. In the US, the tax subsidy which (third-party) employer-purchased health insurance plans receive is often blamed for contributing to the 16.9% of GDP that Americans spend on health-care (in 2018).¹⁵

II. b. An Alternative: Affordable Health-care and the Singapore Model

We now discuss how Singapore has circumvented many of the above issues. Its health-care system provides universal coverage, achieving ‘First World’ standards at lower cost than any other high-income nation. By most measures, such as infant mortality and life expectancy, outcomes have been excellent. For example, Singapore’s adult mortality rate (i.e., the chance of dying between 15 and 60 years old per 1,000 people) is the lowest in the world. Yet the total of public and private spending on health-care is nearly one-quarter of the proportion spent in the US, and about one-half of the UK and NZ.¹⁶ The quality, efficiency and fairness of the Singaporean system is remarkable.

(i) Background

By the early 1990s, health-care costs in Singapore were growing at a potentially unsustainable rate. A Ministerial Committee was set up to review the role that the government could play in containing costs whilst ensuring high quality care. A White Paper called ‘Affordable Health Care’ was issued which became the blueprint for the future system. It set out five objectives: “1. *Become a healthy nation by promoting good health; 2. Promote individual responsibility for one’s own health and avoid over-reliance on state welfare or third-party medical insurance; 3. Ensure good and affordable basic medical services for all; 4. Engage competition and market forces to improve service and raise efficiency; 5. Intervene directly in the health-care sector when necessary, where the market fails to keep health-care costs down*”.

¹⁵ Since employer payments for health insurance are tax-deductible for employers but not taxed to employees, current US tax rules encourage employees to want their compensation to include comprehensive ‘first dollar’ insurance. Brot-Goldberg, Chandra, Handel and Kolstad (2017) provide evidence which shows how health insurance plans without deductibles dramatically pushes up health-care spending.

¹⁶ See OECD (2019).

(ii) The 'MediSave', 'MediShield Life' and 'MediFund' Accounts

'MediSave' is a mandatory medical savings account which plays a crucial role in the achievement of the above goals. It was the first of its kind in the world and is based on the idea that people should be helped to save for their own health-care expenses. The government regards MediSave as a way to ensure that everyone has the funds to do so. Workers and their employers are required to contribute a specified portion of wages into each individual's account. The accounts are held within the government-managed Central Provident Fund (the 'CPF'). All of the savings are tax exempt. As of 2012, the total contribution for 50 year-olds amounted to nine percent of their wages.

Although dollars put into a MediSave account belong to the contributing worker, the government has tight (and continually revised) guidelines as to how the money can be spent. Its aim is to balance affordable health-care against over-consumption and to prevent the premature depletion of funds. Haseltine (2013) argues that MediSave has allowed the government to focus assistance programmes on the very needy who are unable to pay for their own care.

People can choose between five ward classes in the public hospitals, called 'A', 'B1', 'B2+', 'B2' and 'C', ranked from most to least expensive. 'A' patients have a private room with bathroom and access to private doctors of their choice. 'C' patients are in open wards, sharing a bathroom and with doctors assigned to them. Aside from amenities, the quality of care remains the same across classes. There is no government subsidy for 'A' patients, whereas those in 'C' wards receive up to 80 percent of their charges. Financial means-testing is used to determine eligibility for subsidies. No-one is obligated to stay in publicly subsidized wards if willing to pay for more than what is offered. Furthermore, means-testing does not prevent patients from choosing any ward class. For example, high income earners can choose the 'C' class ward although their level of subsidy would be less.

For large and ongoing bills that could otherwise drain a person's MediSave funds, medical insurance schemes are available. The government has created a low-cost one called 'MediShield Life' under which all individuals are automatically enrolled.¹⁷ Annual premiums are not expensive and MediSave funds can be used to pay for them. As a catastrophic health insurance, MediShield Life focuses its benefits on helping people pay for serious illnesses. Whilst MediSave and MediShield Life cover most bills without patients needing to pay cash for hospitalization, Singaporeans can obtain additional coverage by buying private insurance, especially if wishing to stay in higher ward classes.

The third 'M' of Singapore's system is 'MediFund', which is a safety net. It is a multi-billion dollar endowment fund created by the government to help the lowest income individuals receive a level of care that they otherwise could not afford, even in the most highly subsidized wards of public hospitals. MediFund is the safety net for those who are unable to pay for health-care, after using their

¹⁷ This scheme was made compulsory for all Singaporeans in 2015, with opt outs no longer being allowed. See Ministry of Health, Singapore: <https://www.moh.gov.sg/medishield-life/medishield-life-faqs#TopFaq>

MediSave money and MediShield Life coverage. Individuals can apply to this fund for assistance. The amount of aid dispensed depends on the person's social and family circumstances, medical condition and health bills incurred. MediFund is one reason why there are no documented cases in Singapore of a person being forced into bankruptcy due to being unable to pay for their health-care bills.

(iii) Controlling Costs

When governments struggle to support their health-care systems they have to resort to various forms of rationing, including limitations and even denial of service, as well as waiting lists for appointments, testing and treatment. Haseltine (2013) believes that the MediSave account is central to avoiding these kinds of problems, whilst at the same time keeping health-care affordable, because *“perhaps when people have to spend their own money, as the Singapore system requires, they tend to be more economical in the solutions they pursue for their medical problems, In contrast, in countries with third-party reimbursement systems ... since someone else is paying - government programs, insurance companies - there is little incentive to be prudent”*.

The Singaporean government owns and operates sixteen hospitals. Although public and private hospitals coexist, the government directs most health-care toward the public side, which dominates in the sense of offering a high quality of care at affordable prices. It sets the ethos for the entire system, although the private sector is seen as necessary to challenge it. The public system, in turn, serves to keep private costs in check. The public-private balance works successfully now, but it took time and significant changes were made over time as failures were encountered.¹⁸

Although people purchase health-care services out of their own savings accounts, the government helps to set uniform and affordable prices, avoiding a problem of the US system in which differential pricing is prevalent due to individuals facing dominant private suppliers. To ensure transparency, the Health Ministry publishes prices on its website for medical conditions, surgeries, procedures, ward classes and more. The aim is to empower patients with information for making decisions regarding high-quality, low-cost care and to encourage competition between institutions.

(iv) Criticisms, Dependence on Culture and Political Systems

The Singaporean welfare system has its critics. Some argue that these institutions depend on cultural values and beliefs that are not able to be transferred elsewhere.¹⁹ For example, strong family ties are presumed to exist in the sense that those family members with adequate resources are expected to help pay for the care of poorer relatives out of their MediSave accounts. Of total withdrawals, 56% of

¹⁸ Between 1973 and 1979 the annual increase in real per capita total health-care expenditures was 7.9 per cent. In 1981 total health spending in Singapore was 2.5 per cent of GDP and rose to 3.5 per cent of GDP by 1986. In the aftermath of the reforms, health-care spending fell to 3 percent of GDP by 1995. See Meng-Kin (1998).

¹⁹ See Gadiel and Sammut (2014) who argue that *“it may be unwise for Australia to borrow a model found simply to work in Singapore’s unique social and city-state geographical setting”* (pg 16). Dong (2006) describes how some of the ideas behind medical savings accounts have been used in Shanghai but their effectiveness has not been emulated. Barr (2001) states that *“the heart of the Singapore system of health funding, with its financial discipline, is government control of inputs and outputs and strict rationing of health services according to wealth”*.

funds came from patients' own accounts and the remainder from the accounts of children, spouses, parents and grandchildren (in 2010). Cultures with weak family ties may be less able to take advantage of these kinds of informal risk-sharing arrangements.²⁰

However, although culture may affect the optimal design of formal State institutions, causality may also run in the opposite direction.²¹ Indeed, publicly funded welfare states are often blamed for fostering a 'culture of dependence'. This issue was acknowledged by the Singapore Government in its "Health-care Financing Philosophy" which is to "*offer universal health-care coverage to our citizens, with a financing system anchored on the twin philosophies of individual responsibility and affordable health-care for all*".²²

Another feature of Singapore that may influence the design of its welfare state, and transferability elsewhere, relates to its political system, which is not fully democratic. For example, the country scored only 19 out of 40 for its "political rights" and 33 out of 60 for "civil liberties" (see Freedom House, 2018). By contrast, for politicians facing strongly contested democratic elections, the high visibility of prominent areas of spending, such as health-care, may affect their decision-making.²³ Since welfare programmes involve redistributions across individuals, regions and generations, they lie at the core of political conflict. Alesina and Passalacqua (2016) identify reasons why democratic governments may have a tendency to pursue fiscal policies which lead to the accumulation of excessive debt. In particular, the level of public debt leading up to, and in the aftermath, of the Great Recession in 2018 has received much attention across the OECD countries.

Although voting may influence government policies in the democracies, Mulligan and Sala-i Martin (1999) argue that certain forms of welfare spending are also high in non-democracies, maybe since issues like population ageing and the numbers of young compared to the old matter under both regimes. That is, the political influence of these constituencies is important in non-democracies, as well as in democracies, even though the way in which their relative strength manifests itself differs.²⁴

II. c. Retirement (or "Superannuation")

Aside from the challenges coming from funding a high-quality health-care service, a large literature has also discussed the looming challenges faced by public pension schemes. The OECD Pensions Outlook (2014d) describes how "*Population ageing and the present economic environment characterised by low returns, low growth and low interest rates are creating serious problems with the sustainability of Pay-As-You-Go financed public pensions*". Public pension spending is forecast to grow from 9.5% of GDP in 2015 to 11.7% of GDP in 2050, on average, across OECD countries (see Figure 2a).

²⁰ See Di Tella and MacCulloch (2002a).

²¹ See Alesina and Giuliano (2015).

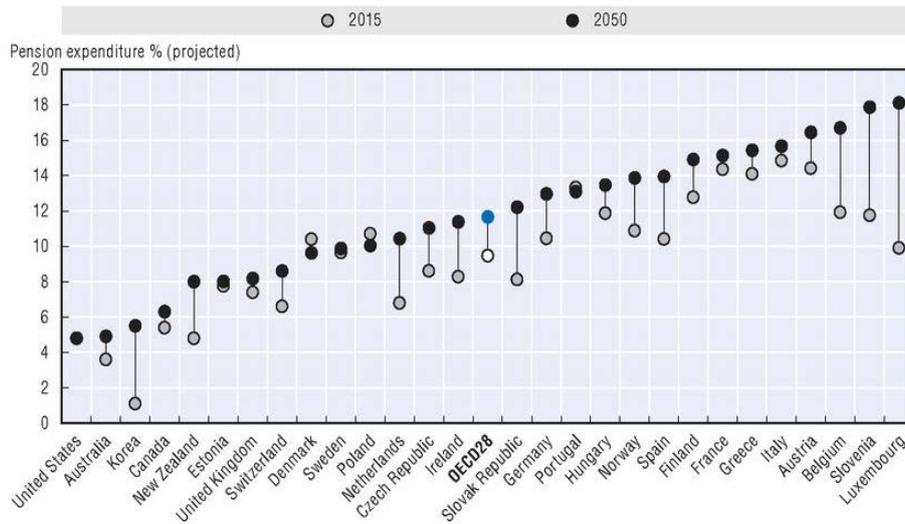
²² See https://www.moh.gov.sg/content/moh_web/home/costs_and_financing.html

²³ See, for example, Reeves, McKeeb, Basub and Stucklera (2014) and Pierson (1994). By comparison, Di Tella and MacCulloch (2002b) find that the per capita generosity of unemployment insurance programmes is frequently cut when the level of unemployment is high.

²⁴ How inter-generational tensions are resolved under differing political systems is a little researched topic.

Figure 2a:

Projections of public pension expenditure as a share of GDP from 2015 to 2050.

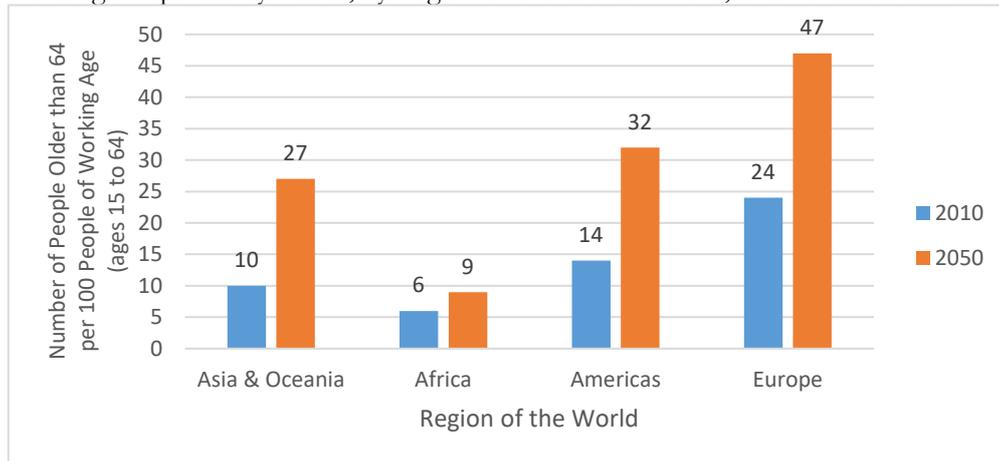


Source: OECD (2014a)

There are many ways of measuring how the population age structure is forecast to change. One metric relevant to the sustainability of public welfare schemes is the ‘dependency ratio’, which is the proportion of elderly people to younger, economically active, workers.²⁵ This ratio is predicted to nearly triple in Asia, from 10 to 27 seniors per 100 working-age people, more than double in the Americas (from 14 to 32) and nearly double in Europe (from 24 to 47) between 2010 and 2050.²⁶

Figure 2b:

Old-age Dependency Ratios, by Region of the World in 2010, and Forecasts to 2050.



Source: United Nations, Department of Economic & Social Affairs, *World Population Prospects*, June 2013.

²⁵ Sanderson and Sherbov (2015) argue that there are preferable alternatives to the dependency ratio for measuring important aspects of population aging. For example, they compute the ratio of people not participating in the labour force to those who are participating and show that the dependency ratio is often a poor approximation to that ratio. Another preferred measure which they advocate is based on comparing the net value of all transfers to and from people. Because people can simultaneously be receivers and also providers of transfers (via the taxes which they pay) Sanderson and Sherbov (2015) define financial dependency on the basis of net transfers.

²⁶ See United Nations (2013), as reported by Pew Research Centre (2014).

As the number of welfare recipients rises, governments may be forced to reduce the per capita generosity of their programmes to help fit their budget constraints. To prepare for this future, one might expect that private savings would have been rising in those Western countries with large publicly funded systems (as individuals seek to offset a potential drop in the generosity of public welfare payments as they get older). However, this trend does not appear to be happening.²⁷

In the US, the household saving rate was declining for more than 20 years leading up to the Global Financial Crisis in 2008.²⁸ In the aftermath of the Crisis, household savings have risen in the US, probably due to people seeking to rebuild their wealth, although it is still well below 1980s levels. To the extent that the decline in the savings rate in many Western countries is viewed as a problem, various solutions have been debated. For example, some economists advocate in favour of changes to the tax system (e.g., Feldstein, 1983). Others argue in favour of automatically enrolling people in savings plans, whereby one is joined up unless specifically electing to opt out. An example of such a scheme is New Zealand's "Kiwi-Saver" accounts which help to supplement retirement income. Nudging people in a desirable direction is sometimes referred to as 'libertarian paternalism'.²⁹

A stronger policy response is to introduce mandatory retirement savings accounts, which are a feature of the Singaporean system. Employers and their employees both make contributions into them. The Central Provident Fund (CPF) was first established when Singapore was under British colonial rule for the purpose of investing these contributions. It was later expanded in scope to include the health savings accounts. As of 2012, the annual contribution of a 50 year old into their retirement account amounted to eight percent of their wages. The account is described by the CPF as being available to "*provide you with a monthly income to meet your basic living expenses in old age. You are encouraged to supplement your retirement savings with your personal savings*".³⁰

Our new regime also introduces mandatory retirement accounts but differs from Singapore by retaining the NZ state pension (which continues to be funded out of taxation). In other words, it bears similarities to a preferred option outlined by Barr and Diamond (2010) who argue that "*with pure funded individual accounts, all of the risk falls on the worker, and modifications frequently leave the worker bearing a large fraction of the risk. Many (including us) regard this concentration of risk as undesirable. One way of sharing risk more widely is to buttress individual accounts with a tax-financed non-contributory pension*".

²⁷ For example, Robert Shiller notes that "*with so many more old people in coming decades, governments will be hard pressed to raise enough money to pay for their needs by taxing the young. None of this is news. But that is the point: despite the vast attention currently paid to the looming old-age crisis, household saving rates have been falling in most of the world's rich countries*" (see Project Syndicate, 2004). For a different view, see McDonald (2005) who projects that the continuation of current rates of saving in Australia will lead to considerably higher future levels of well-being than current levels, even when allowance is made for the ageing population. The reason is that the effect on living standards of productivity growth dominates the effect of ageing.

²⁸ It dropped from around 9 percent in the 1980s to approximately 5 percent in the 1990s and to almost zero in the first years of the new century (see Guidolin and La Jeunesse, 2007). On the other hand, an 'excess' of desired saving over investment, mainly coming from China, is argued to be causing the net inflow of foreign savings into the US (see Bernanke, 2005, 2015).

²⁹ See Choi, Laibson, Madrian and Metrick (2002) and Thaler and Sunstein (2003).

³⁰ See <https://www.cpf.gov.sg/Members/AboutUs/about-us-info/cpf-overview>.

II. d. Risk-Cover: Unemployment, Sickness, Invalid and Accidents

The two biggest categories of welfare spending are, by far, health and pensions. However, the welfare state in most Western countries also covers a wide range of situations which include becoming unemployed, or being unable to work due to sickness, disability or accident. Different schemes with different payments have typically been designed for each of these events. In 1980, across the OECD countries, unemployment benefit spending was equal to 0.6% of GDP, on average, and has since increased to 0.9% in 2013. By comparison, OECD countries spend 2% of GDP on sickness and disability benefits (i.e., over twice as much as what is spent on unemployment benefits). In some countries (e.g., the Netherlands and Norway) expenditures are much higher, close to 5% of GDP. More than half of OECD countries have seen a substantial growth in disability beneficiary rates in the past decade, with around 6% of the working-age population collecting these benefits in 2007.³¹

A striking difference of the Singaporean system to Europe and the US is that the government provides no unemployment benefit scheme. It instead funds programmes to support workers who are making an effort to get back into a job and who upgrade their skills. The zero unemployment benefit policy appears to stem from a cultural belief that progress is mostly determined by a person's own efforts and abilities. Consequently jobless individuals are expected to use their own endeavours to get back to work and not rely on hand-outs from the government. The primary backstop in the event of becoming unemployed is regarded as being one's own family.

On this dimension, our new regime instead continues New Zealand's tradition of funding unemployment benefits, although makes changes to the existing system. In short, a mandatory 'risk-cover' savings account is established to help pay costs for up to six months duration should one fall out-of-work, regardless of cause (e.g., redundancy, sickness, disability or accident). A catastrophic risk-cover insurance policy is paid out of this fund, with the government being 'insurer of last resort'.

III. An Economic Reform Package:

Designing the Shift to a "Savings-not-Taxation" Welfare System

We now address the question of how to design a policy reform that allows a publicly funded welfare system to be changed into one that relies more on funding payments out of personalized mandatory savings accounts. Whilst our reform creates institutions that share features with Singapore, especially with regard to health-care, there are also key differences. A distinguishing feature of the new regime is that it proposes a unified approach to the funding of health, retirement and risk-cover by establishing a set of savings accounts to provide for each of these needs. A case study of New Zealand is used to

³¹ See OECD (2009).

illustrate how the transition can be implemented.

Our reform is guided by a set of principles: (1) Quality decisions take precedence over quick-fix solutions; (2) Decisions relating to welfare should identify and exploit economic and social linkages, so that every action will improve the working of the system as a whole; and (3) Only large-scale reform packages provide the flexibility needed to demonstrate that losses suffered by a group of people from one policy change would be offset by gains for the same group in some other area.³²

III. a. Background

Otto von Bismarck created the first ‘modern’ welfare state in Germany in the 1880s, including the old age pension in 1889. New Zealand followed, introducing legislation in 1898, which was expanded in 1938. In the early 1950s, NZ had a GDP per capita ranking of 3rd out of 24 OECD countries. It began a steady decline to reach a rank of 18th in the early 1980s. A constitutional and foreign exchange crisis ensued in 1984. In that year, the newly-elected Labour Party government embarked on ‘supply-side’ reforms which encompassed macro-economic stabilization and structural change.³³

These included cutting personal income tax rates, introduction of a Goods and Services Tax (“GST”), privatization of state-owned enterprises, deregulation, elimination of agricultural subsidies, ending of trade tariffs and independence of the central bank (which was given a new objective of price stability). A range of public subsidies is still being granted to corporations, although at a far lower level than prior to the reforms. The personal income tax rate is presently 10.5% for incomes from 0 to \$14,000 and 17.5% between \$14,000 and \$48,000. Rates rise to 30% for incomes from \$48,000 and \$70,000. The top rate is 33% for incomes over \$70,000. The current rate of GST is 15%. In 2015, tax revenues were 30.0% of GDP and government spending was at a similar level.³⁴

The welfare state underwent few changes during the 1980s reform period. In the 1990s the National Party government reduced the generosity of several classes of benefits and introduced a greater degree of means-testing. Most welfare spending in NZ (of which health-care is the biggest item) remains funded out of general tax revenue on a non-contributory “pay-as-you-go” basis. At present, under its “single-payer” public health-care system, the government covers all of an individual’s hospital costs. Out-of-pocket expenses are presently only incurred for GP visits and prescriptions for adults. There are no charges for children (less than 14 years old) and heavily subsidized rates for adults who have a “community services card”.

A ‘universal’ pension is paid to nearly everyone over the age of 65 years who has completed modest residence requirements. It is “flat rate” (i.e., does not depend on a person’s previous income and is not means-tested). Although the pension is paid out of general taxation, a ‘Superannuation

³² See Douglas and Callan (1987).

³³ See Maddison (2001) for GDP per capita rankings. Evans, Grimes, Wilkinson and Teece (1996) summarize the reforms.

³⁴ See Executive Summary of the New Zealand 2015 Budget by the Minister of Finance, Hon. Bill English.

Fund³⁵ was established by the Labour government in 2001 to help partially pre-fund future payments. Estimates suggest that up to 8% of the expected cost of the pension in 2050 will come from this Fund. The Labour government also introduced “Kiwi-Saver” in 2007, which is a voluntary retirement savings scheme. Employees are automatically enrolled unless they choose to opt out and contribute a percentage of their gross earnings. The government and employers also make contributions.³⁵

Unemployment benefits in NZ are of unlimited duration. Meanwhile, people who were employed but have become unable to work due to an accident are paid 80% of their net wage by the government-sponsored Accident Compensation Corporation (“ACC”). Public support is also provided to those with a health condition, injury or disability. As a result of these different schemes for unemployment, accidents as well as sickness, the size of payments to an out-of-work individual varies depending on the cause of job-loss. In terms of more general welfare assistance, a programme called “Working for Families” exists, which consists largely of earned income tax credits.

The government funds primary and secondary schools in NZ, although families may opt for private education. It also helps fund “Early Childhood Education”. With respect to tertiary education, tuition fees were significantly increased in 1989, although a public subsidy, eventually amounting to around 75% of costs, was granted. In 1992 a “Student Loan Scheme” was introduced to help pay for tuition fees, course costs and living expenses. In 2006 loans were made interest-free. The annual cost of this subsidy is included in the public accounts under the Social Welfare budget. The capital value of loans owing from students is included as an asset in the Crown Balance Sheet. Starting in 2018, the present Labour-led coalition enacted a “free-fees” policy for tertiary students for their first year of full-time study and have stated an intention to extend the programme to three years of study.³⁶

III. b. Fiscal Pressures on Health-care and Pensions in New Zealand

In addition to the OECD reports, there is a significant NZ-based literature on the fiscal challenges arising from public health and pensions spending. For example, the NZ Treasury’s “Commentary on He Tirohanga Mokopuna: 2016 Statement on the Long Run Fiscal Position” states that *“population ageing is projected to apply pressures through slower revenue growth (resulting from less participation) and increased expenses (primarily through NZ Superannuation and health-care)”*.³⁷

The Treasury predicts pension spending will rise from 4.8% of GDP in 2015 to 7.9% of GDP in 2060 and health expenditures from 6.2% to 9.7% of GDP over this same period. Buckle and Cruickshank (2014) argue that fiscal pressures in NZ, stemming mainly from population ageing, may eventually lead to net government debt increasing from 25% of GDP in 2012 to levels in the 2060s

³⁵ Total Kiwi-Saver assets were \$28.5 billion in 2015. The savings are privately managed in funds chosen by each individual. See the Financial Markets Authority (NZ) (2015).

³⁶ See “History of tertiary education reforms in NZ” by Ron Crawford, *Productivity Commission*, Research Note, 2016/1, January, 2016.

³⁷ See also Bell (2012).

“well beyond what is currently regarded as prudent”.³⁸

On the other hand, Creedy and Gemmell (2014) show how these predicted increases in public spending can potentially be funded solely out of fiscal drag (which occurs when real tax brackets are not adjusted in line with increases in real incomes). The authors note, however, that this may not be an optimal solution. Rosenberg (2017) argues that the affordability of the pension depends on *“what NZ society wants and what it is prepared to pay in the way of taxes”*. For a related view, see Littlewood (2013).

Coleman (2011a) advocates the use of compulsory or voluntary schemes to supplement NZ Super. He explains how the transition to a “save-as-you-go” scheme can be funded by the new cohort paying temporarily higher taxes (as they continue to fund the elderly’s “pay-as-you-go” pension, as well as building up their own savings).³⁹ The reform advocated by the present paper instead draws part of its’ funding from the removal of a range of subsidies that disproportionately benefit more affluent individuals, as well as from grants paid to businesses.

Other authors have focussed on how the existing NZ pension system could be modified. St John (2016), for example, discusses increasing the qualifying age, cutting pension generosity by indexing increases to the inflation rate (rather than to wages) and introducing a means-test. Meanwhile Ball, Creedy and Scobie (2016) argue that uncertainty regarding future projections of health and pension spending, as well as productivity growth and interest rates, implies an option value to waiting before implementing a policy change that involves costs that cannot be reversed.

III. c. How to Implement the Reform

Under our proposed reform, the government sets up mandatory accounts and enables them to be funded for all workers. The accounts can then be used to help people pay for their welfare needs, as well as build up savings. The government supports those who are unable to pay for welfare services.

In this section, we show how the accounts can be funded from the existing government budget, without requiring most people to do so out of their own disposable incomes. Our proposal may be viewed as an example, since other variations are possible. We use the 2015-16 financial year as the basis for our proposed budgetary comparisons with the existing system.

Finding the Funds

(i) Removal of “Privilege”

Existing public spending could be reduced by ending a range of subsidies that disproportionately benefit more affluent New Zealanders (called “privilege” in the present paper). These include

³⁸ The NZ Treasury’s projection for health spending is similar to the OECD’s ‘cost-containment’ scenario. Under their alternative ‘cost-pressure’ scenario, health spending in NZ is expected to increase to 15.3% of GDP by 2060.

³⁹ See Coleman (2011b).

“corporate welfare” payments and consist of a range of subsidies for Ultra-Fast Broadband/fibre connections, production of movies that are internationally focussed and produced in NZ, offshore market development assistance to business, and public support to ‘Callaghan Innovation’ (which has sought to maintain the strategic capabilities of chosen industries).⁴⁰ In addition, a range of ‘accelerated depreciation’ tax allowances are available to businesses in the forestry, farming, bloodstock and research industries. Favourable tax treatment is also being offered to the owners of rental housing. These subsidies and allowances are discontinued under the new regime.

Our reform also changes spending on tertiary students. It introduces a means-test to restrict interest-free loans, fee subsidies and grants to students from low income, low capital families. The aim is to target assistance where it is needed, as well as to release an annual flow of funding that can be paid into the savings accounts of all workers.

A total of around \$NZ 6.4 billion becomes available upon the ending of these kinds of payments to businesses and students from wealthy families.

(ii) Substitution of Welfare Expenditures: Mandatory Accounts instead of Government Payments

Several other forms of existing government spending can be redirected once our savings accounts are introduced. For example, current welfare spending of \$7.5 billion on public health programmes could be paid into them. The types of spending redirected into the accounts would focus on those where individuals are better placed to allocate the funds themselves, rather than the State on their behalf.

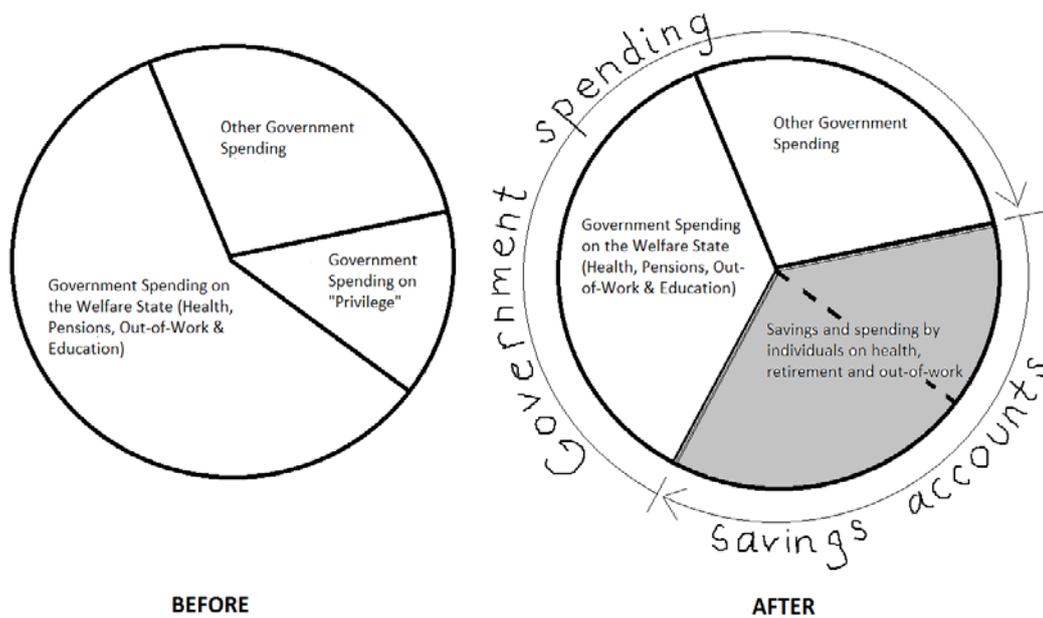
Allocating the Funds

The above funds are now paid into our set of mandatory savings accounts. Since a similar level of funds continues to be deducted from gross incomes, this reform can be viewed as changing the nature of government intervention. Instead of spending on “privilege”, the government now helps people build up savings in their own accounts to ensure that their welfare needs will not be threatened by cuts in the future. Consequently, even without efficiency gains, a greater level of security should result.

In addition, the accounts receive a portion of funds that are presently being spent by the government on existing welfare services, such as health-care, but which are now made available for spending directly by individuals. An overview of how the composition of welfare spending changes due to the reform is depicted below in Figure 3.

⁴⁰ The total cost of these programmes, administered by the Ministry of Business, Innovation and Employment, was \$1.35 billion in 2015. See “Estimates of Appropriations 2015/16 - Economic Development and Infrastructure Sector”, B5, vol.1, NZ Treasury (2015). Some of these programmes are also referred to as “industrial policies” in the economics literature.

Figure 3: How Government Spending Changes: Before and After the “Savings-Based” Reform.



Under the reform, the government hands people greater control and choice over expenditures which are presently done on their behalf. Instead of being the primary funder of welfare services, the government now acts more as a regulator, information provider (to ensure transparency in the pricing of services) and insurer of last resort. In the case of Singapore’s health-care system, adjustments have been made to each of these areas over time by the Ministry of Health, which operates the savings scheme, in order to maintain a quality level of care at affordable levels. Relying on direct payments by individuals alone out of their accounts has not been sufficient to ensure good outcomes. In this sense, our reform can be viewed as changing the role of government, which now takes on a different form.

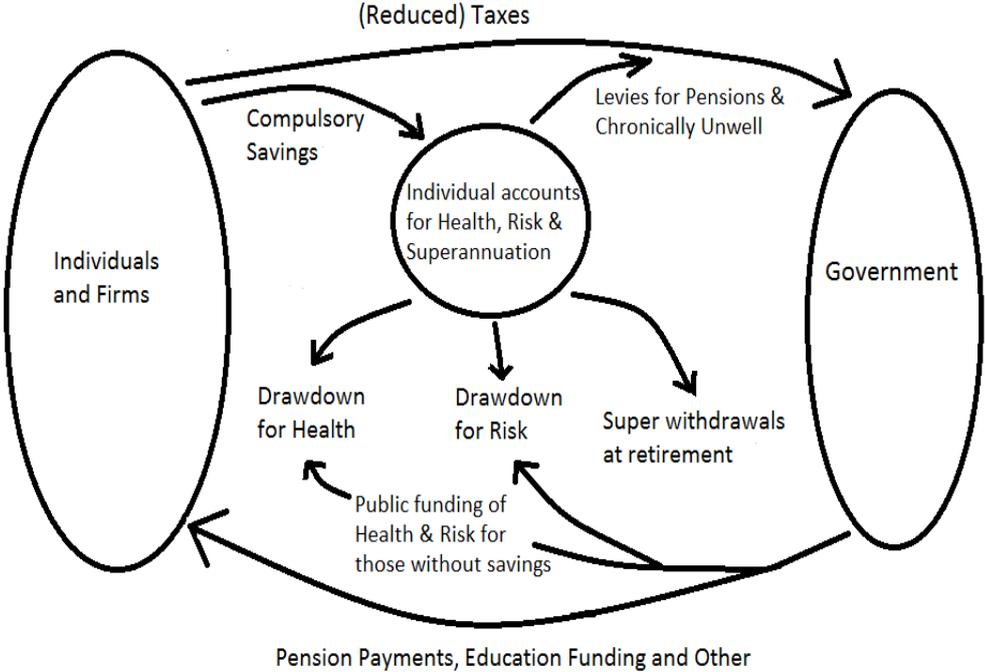
Put another way, Singapore provides an example of how greater market disciplines can be introduced for health-care services via the use of mandatory accounts, as well as the new types of government interventions which then become necessary. These interventions have included adjusting the rules of medical savings programmes, sponsoring insurance schemes, putting price controls on different treatments, determining the number of beds and their distribution across ward types in the public hospitals, regulating and limiting the type and number of private insurance programmes, as well as subsidizing medical schools and hospitals. Although it may be questioned whether such a system could be operated as successfully in New Zealand, which is currently dominated by the government as the single-payer of health-care services, the Singaporean model at least shows what is possible when the market plays a far greater role in the allocation of services than at present.

As for the \$20.6 billion of funds allocated to the savings accounts under our proposed reform, this sum could be paid into them by the government without a change in the tax system. Alternatively, a reduced portion of people’s income could become subject to taxation, with a separate

portion now earmarked as mandatory savings to help fund the accounts. We present an example below as to how the tax system could be changed to implement the new policy, since there are advantages. Aside from offering greater transparency, it allows for different rules to attach to the part of one’s income paid as taxation, compared to the part paid as mandatory savings. One such rule could allow for contributions to be reduced, or even stopped, upon the balance on an individual’s savings account reaching a certain threshold, meaning that the only deductions from one’s gross income would subsequently take the form of a lowered rate of taxation. This design may help improve economic incentives to work and accumulate savings.

Figure 4 shows financial flows under the new system. Strikingly, the flow of funds into the health savings accounts enabled by the ending of “privilege” (and the subsequent compounding of interest on these funds) is sufficient to absorb the forecast increases in health-care spending. Put another way, although the grants to corporates and wealthy individuals that we identified above appear quite small, they add up over time to create a large opportunity cost. Whilst some of these programmes may create benefits in terms of promoting economic growth (although a portion is potentially captured by interest groups) a core proposition of this paper is that social welfare would be higher if the money was instead transferred to savings accounts for all workers.

Figure 4
Financial Flows in the “Mandatory Savings-not-Taxation” System:
 Revenues from Existing Taxes are diverted to help fund the accounts.



(i) Changes to Taxation

Our proposal drops the personal income tax rate (“PIT”) to zero for single tax-payers (i.e., a single person or couple with two incomes) earning less than \$50,000.⁴¹ It becomes 17.5% for incomes between \$50,000 and \$70,000, and 23% on income beyond \$70,000. (For one-income families with dependent children, the PIT falls to zero for incomes less than \$65,000). Corporate taxes are cut from 28 to 17.5 cents out of each dollar of profit whereas the Goods and Services Tax rate rises from 15% to 17.5%. These changes result in total taxes being cut by \$21.9 billion in the first year.⁴² We note that other changes in the tax system could also be designed in order to implement the new regime.

Consequently, the funds that were being paid as taxes on income below \$50,000 (or \$65,000 for families with children) now go directly into the accounts. They are supplemented by contributions from employers, as well as a small personal contribution. Employers pay 12½% of their employees’ income up to \$50,000, with a further employee contribution equal to 5% of earned income. These payments add up to savings of \$17,500 per year for a single tax-payer earning \$50,000 or more (and \$22,750 for a one-income family with children on \$65,000 or more).⁴³

Table 1 summarizes the effects of the new regime on the government budget in the 2015-16 year. Before the reform, total government revenues and expenditures were equal to \$75.2 billion, leaving a balanced budget (see NZ Treasury, 2016). This represents 31.4% of GDP. Under the new savings-based system, tax revenues drop, with the shortfall becoming a mandatory payment into the health, retirement and risk savings accounts. The “overall budget balance” (for both the government and the accounts) equals \$7.25 billion. Most of this surplus is attributable to the ending of “privilege” which creates an annual flow of savings that compound over time and become available for future welfare payments. Appendix II contains a more detailed set of accounts.

(ii) Changes to Health-Care

Under our new regime, each person builds up a ‘Medi-Health Savings Account’ which receives 45% of the \$17,500 mandatory contributions to each person’s savings account (our “base case”). It is out

⁴¹ This cut-off is chosen since it is close to average earnings. Our proposed reform is designed to help all workers establish significant personal savings, however assistance stops at \$50,000 for single tax-payers. Note that the higher threshold for those with dependent children introduces a risk of discrimination in the labour market due to the differential employer contributions across these groups. If higher income earners wish to spend additional funds on their welfare needs, above what is held in their mandatory accounts, then it is paid out of their own pockets.

⁴² Note that although total taxation falls, the rise in GST implies some people may pay more taxes (to the extent that their higher GST payments are not compensated by lower personal income taxes).

⁴³ The issue of how savings in the accounts should be invested is somewhat beyond the scope of this paper. Reducing management fees has been a focus of the recent literature on this topic. For example, Kotlikoff (2008) blames “exorbitant” pension fund fees for undermining the past reforms in Chile due to the “influence that bankers, insurance companies, brokers, investment companies, and other players in the financial sector have on government policy. Once the subject of personal accounts comes up, they each want a piece of the action”. He argues that a global index fund that is free of fees should be used. The Singaporeans took the approach of establishing the Central Provident Fund to invest mandatory savings, which is run by a statutory board operating under the Ministry of Manpower. In the Australian context, Morris (2018) highlights the extent to which the financial services industry there has extracted rents from pensioners, following the introduction of compulsory individual retirement accounts in 1992. Contributions to the Australian accounts are mandatory for employers and voluntary, although tax deductible, for employees.

of this account that most medical bills are paid. A prescribed level of savings is set and once it is attained, the level of required savings is cut, increasing disposable incomes. The government regulates and subsidizes the system to help lower income earners, as well as acting as “insurer of last resort”.⁴⁴

Table 1
New Zealand Government and Mandatory Savings-Based Budgets for 2015-16
 Column (1) reports the existing ‘taxes only’ system and column (2) the ‘mandatory savings-not-taxation’ one.

Row	(1) Government budget (\$NZ millions)	(2) Savings-based budget (\$NZ millions)
	Revenue Budget	
1	Taxation (personal, corporate, goods and services tax)	75,200
2	Funds paid into private savings accounts for current and future spending on health, risk cover, and retirement	0
	Total Income	75,200
	Expenditure Budget	
3	Health spending paid by the government	15,600
4	Health spending paid out of the savings accounts	0
5	Risk cover, retirement, education, and other government spending	53,200
6	Risk cover, and retirement paid out of savings accounts	0
7	Corporate Welfare and Grants to High Income Earners	6,400
	Total Expenditure	75,200
	Overall Balance	0
		7,250

SOURCE: NZ Treasury (2016): “Financial Statements of the Government of New Zealand for the Year Ended 30 June 2015.”

An annual catastrophic health insurance policy must also be taken out to cover medical bills costing more than \$20,000 (in 2015 dollars) in any one year, paid from one’s account. Individuals can choose to insure themselves at a higher level than the basic cover.⁴⁵ Those earning more than \$65,000 pay for a part of their own health-care, before drawing down on their accounts. A 12.5% levy on the

⁴⁴ This safety net may come at a cost of undermining work incentives, due to increasing marginal effective tax rates. On the other hand, the new funding paid into the savings accounts of workers leads to a build-up of wealth, providing a greater incentive to be employed.

⁴⁵ In addition to a government-run (catastrophic) health insurance scheme, private insurance would also be offered if people wished to supplement their (required) basic coverage. However, the number and type of private schemes would likely require tight regulation, along Singaporean lines. Although we have not provided details of the institutional design in the present paper, the aim would be to avoid the failures of the US private insurance market, where over-consumption of care by patients and over-delivery of services by doctors is common, as neither group is incentivized to keep costs in check. Public schemes are regarded in the economics literature as being necessary, in particular, due to adverse selection problems in private insurance markets which can leave many people without coverage. In the case of unemployment insurance, private markets are seldom observed. Two recent papers on this topic are Hendren (2013) and Hendren (2017).

annual health contributions is made to help pay for the chronically ill, retired and beneficiaries.⁴⁶

Table 1 shows how the reduction in public funding of health services, equal to \$7.5 billion, is fully offset by spending out of the mandatory accounts. As a result, total spending remains the same at \$15.6 billion. Importantly, the health accounts accumulate a savings balance at the end of the first year of \$5.1 billion, as the flow of funds into them exceed the spending outflows. This balance, which compounds at the going interest rate, becomes available for future health expenditures.

Note that there is evidence in many countries of a health gradient whereby lower incomes are often associated with worse health outcomes. The cause of this gradient is much less clear.⁴⁷ How would our proposed reform ensure that low income individuals receive a high quality service?

First, there are no cuts in total funding to health-care under our proposal. Quite the opposite, present levels of spending are maintained and future costs are pre-funded. Consequently, the generosity of the system is unlikely to be curtailed compared to the current system, helping lower income earners most to the extent that they are the ones most vulnerable to cuts.

Second, our regime gives the government a significant role in terms of providing help to those who cannot fully fund their insurance, or afford smaller bills, or both.⁴⁸ Government assistance can be drawn on by individuals, whilst at the same time payments are made out of their own savings accounts. For example, in Singapore patients can stay in the 'C' wards in public hospitals and receive up to 80% of their charges from the government, leaving only 20% to pay out of their own accounts.

Third, since higher earners do not receive subsidies and instead pay for a part of their health-care without using mandatory accounts, greater public assistance can be focussed on lower earners.

Fourth, the levy used to provide additional care for the chronically ill and beneficiaries constitutes a redistribution in favour of those lower down the income-health gradient. Fifth, low income and low-capital retirees receive an annual government grant to their savings account, enabling them to take out a catastrophic health insurance policy and have extra funds available to supplement their other expenditures on health.

In summary, the government increases the resources available to the country's health-care system under our reform. It subsidizes a major portion of patient care costs, based on ability to pay. The mechanisms outlined above help address the problem that many of those on lower incomes experience worse health outcomes. As noted earlier, at least in Singapore, the government has been able to successfully achieve the twin goals of individual responsibility and universal coverage, but it has required constant adjustments and monitoring over time to meet changing conditions.

⁴⁶ In practice, this levy, as well as a proportion of the other \$8.1 billion public funding of health-care, may be paid into a fund, similar to the MediFund account in Singapore, from which it would be dispersed.

⁴⁷ See Case, Lubotsky and Paxson (2002) and Marmot (1999). Interestingly, Case, Lee and Paxson (2008) argue *"that the adoption of a Canadian-style universal health insurance program in the US would do nothing to reduce the differences in health status between poor and rich children"*.

⁴⁸ Whereas the Singapore government spent 2.0% of GDP on health in 2014, our budget allows for public spending of 3.4% in the 2015-16 year (= \$8.1b/ \$239.5b).

(iii) Changes to Retirement (or “Superannuation”)

A new approach to retirement policy also occurs. Each person builds up their own ‘Superannuation Fund’ account, which receives 35% of their total mandatory savings, and is accessed at the legal age of retirement. The rules governing contributions and withdrawals would be set by the government. For most people, these contributions would simply replace their existing Kiwi-Saver contributions (with the current balances in Kiwi Saver accounts being added to the new mandatory accounts). Retired people would continue to receive the existing public pension, whilst at the same time also being able to spend out of their own ‘Super’ account.

Our new regime also extends the retirement age from 65 to 70 years old over the next 20 years (i.e., by 3 months per year). Although the pension remains at the current rate, its source of funding changes. Whereas at the start of the reform, it is funded by general taxation, the pension’s cost will increasingly be covered by the 25% tax levied on the size of each person’s Superannuation Fund on the date of their retirement. These changes are made to ensure that the ageing population will not result in fiscal deficits over the longer term horizon.⁴⁹

Total contributions to the Super Fund accounts are \$9.8 billion in the first year of the reform. Of this total, a pension levy of \$2.5b (in 2015 values) is paid upon retirement. The remaining \$7.3b becomes savings that individuals are free to spend. In the reform’s first year there are no withdrawals from the accounts, whereas the government spends \$10.6b on the pension. Government spending on retirement subsequently falls under the new regime when compared to the present one.

(iv) Changes to Risk-Cover: Unemployment, Sickness, Invalid and Accident Cover

Under the new policy, each person has a ‘Risk-Cover Fund’, which receives 20% of total mandatory savings. A prescribed level of savings is set for the fund and, once reached, required contributions fall. Should one become out-of-work, a drawdown occurs. If still out-of-work after 26 weeks, then a weekly payment is received from a catastrophic risk insurance policy (purchased by the fund). If one has insufficient funds in the savings account, or becomes long-term unemployed, leaving one without insurance cover, then government assistance is given.

Total contributions to the risk accounts amount to \$5.6 billion in the first year of the reform. For employers, their contributions are offset by the ending of the levies that they currently pay to support the Accident Compensation Corporation. Estimated drawdowns in the first year of the reform equal \$1.5 billion and the government funds a further \$8.4 billion. Payments which each person receives no longer vary depending on the reason for being out-of-work.

⁴⁹ Under the new system of individual retirement accounts, the government would no longer need to make contributions to its own “Cullen Superannuation Fund”. The existing balance in the Cullen Fund could be retained for its current purpose of helping to pre-fund future government superannuation payments.

III. d. Political Feasibility

The question arises as to whether this type of reform could be feasibly implemented. Perhaps its most important feature is that not only are current levels of health-care funding maintained, but the reform also secures the ability to pay for the projected increases over time by building savings (thereby avoiding the fiscal deficits or higher taxes forecast to occur under the present system). In addition, workers are able to retire with a higher level of wealth than they currently are achieving.

However, political time horizons may not weigh long-term outcomes highly and may instead promote short term opportunistic behaviour. For example, in the US context, Kotlikoff (2015) argues that *“successive Congresses, whether dominated by Republicans or Democrats, have spent the post-war accumulating massive net fiscal obligations virtually all of which have been kept off the books Spending six decades raising or extending transfer payments and cutting or limiting taxes helped members of Congress get re-elected”*.

In the context of the reform proposed in this paper, unless efficiency gains are assumed, together with a mechanism to compensate any losers out of the gains of the winners, then not everyone benefits. Furthermore, a newly-created group of losers may lobby to stop the reform.

The political difficulties associated with addressing long-run fiscal concerns are highlighted in the various attempts to change the public pension. For example, the National Party-led government in NZ announced in 2017 that they would extend the age at which people could start claiming the pension from 65 to 67 years old, but with the changes only being phased in from 2037. However, they lost the subsequent election to a Labour-led government (whose policy is not to make any changes). In Australia, the pension age is gradually being increased by six months every two years from 65 to 67 years old, which it will reach for everyone in 2023. However, in the 2014 Federal Budget, it was announced that the eligibility age would rise further to 70 years old, a policy that was officially scrapped by the Prime Minister in 2018.⁵⁰

(i) Winners and Losers

In terms of earnings, the main losers stemming from the reform are the owners of firms who receive subsidies from the government, as well as tertiary students coming from high income, high capital families who no longer qualify for assistance and interest-free loans. On the other hand, high earners not in receipt of “privilege” would gain from the tax cuts, although may lose out due to higher out-of-pocket health-care costs. To improve the reform’s political feasibility, the existing Working-for-Families budget can be reoriented to support low and middle income families with children (since this scheme consists mainly of earned income tax credits, which are unnecessary once tax rates are cut to zero for low earners).⁵¹ However, young people without dependents and no Kiwi-Saver scheme see a

⁵⁰ Note that for the (mandatory) private superannuation scheme that exists in Australia, the preservation age at which one can access one’s fund, whether one chooses to remain in the work-force or not, remains at 65 years old.

⁵¹ The Working-for-Families budget totalled \$2.4 billion in the 2015-16 year.

fall of up to five per cent of disposable income due to their mandatory account contributions.

Students from low earning families who are enrolled in tertiary education should not see a change in their circumstances due to the targeted support which they would receive. Furthermore, those coming from affluent families who have to pay more for their education would have these costs offset by the lower taxes they would pay in the future, provided they got higher paid jobs. However for those students who no longer qualified for support due to their family circumstances and then went into lower paid jobs, the extra costs of their education would likely result in them losing out.

Whereas our mandatory savings scheme particularly benefits those with spouses and strong families (since they can share resources by making use of accumulated dollars in others' accounts) such advantages may not be open to single people. This could be of concern given that, across OECD countries, the risk of poverty amongst singles and single parents remains disproportionately high (although it has decreased by 25% percent since the mid-1980s). In 2011, singles and single parents were between two and three times more likely to be poor than others. There is also evidence across OECD countries of a rise in “assortative mating”, implying that those with ample savings may be more likely to partner with a person who also has significant savings.⁵²

Turning to the effect of the reform on wealth, the recipients of the savings accounts, which are set up for every worker, are winners due to the build-up in capital which they achieve. Note that there is a redistribution of wealth away from those in receipt of “privilege” in favour of all account holders. If one assumes a real rate of return of 3.5% per annum, then the balance in the retirement savings account on reaching 65 years old, for a person who is presently 20, would be \$536,000 (or \$1.1 million for a couple). This example assumes earnings of \$40,000 (i.e., below the average wage).⁵³

On the other hand, for young people saving to buy a house, their account contributions may divert funds away from this purpose. In Singapore, although mandatory accounts were initially used to provide funds only for retirement, the scheme was subsequently changed in 1968 so that a portion of savings could be used to buy property (and medical costs were added later). A dedicated “ordinary account” was established for this purpose, distinct from the “special account” which is only for retirement. Whilst not a focus of the present paper, the specific rules governing our savings accounts could also be designed to permit investments in housing assets.

Estimates of the reform’s impact across several different kinds of people are reported in Appendix III. There are, however, people in many other types of situations for which we have not been able to estimate the impact. For example, there is uncertainty as to how the effects of the reform may depend on a person’s gender. One way Singapore has dealt with this issue is to cater for the differing health-care needs of women and men by offering specially subsidized rates for particular

⁵² See OECD (2011) and OECD (2014b).

⁵³ However, due to the long time horizon, these calculations are very sensitive to the interest rate. If the rate is assumed to be 2% per annum then the amount would only be \$359,000, whereas if the interest rates is 5% then it is \$822,000.

procedures, like mammogram screening. To reduce disparities, the health accounts also allow spouses and other family members to share in the benefits of the program, as well as the burden of costs, by pooling risks amongst themselves.

(ii) Effect on Inequality

The present reform is designed to help workers build up their own capital in the mandatory accounts, whilst trying to minimize any impact on disposable incomes. Although earnings inequality will change to the extent that there are “winners” and “losers”, as outlined above, the effects on wealth inequality are likely to be more dramatic. At present, households in the bottom quintile of the net wealth distribution in NZ have less than \$43,000, with a median of \$9,000 (mostly held in mortgaged real estate).⁵⁴ Since our reform enables a build-up in savings by people who had little or no savings before, the potential exists for a reduction in overall wealth inequality.

Note that rising inequality in nations like the US and UK (led by the “top one percent”) has recently been blamed on the return to capital exceeding the economic growth rate (together with a high concentration of capital amongst the rich). It has consequently been suggested that capital taxes should be raised (see Piketty, 2014). The present article offers an alternative - namely, the ending of subsidies for businesses and more wealthy families so as to release a flow of funds for the savings accounts of all workers, enabling them to establish their own compounding source of wealth.

Several countries have already built sovereign wealth funds in order to pre-fund future welfare liabilities. The best known example is Norway. Since its establishment in 1990, the “Government Pension Fund of Norway” has amassed around \$US 1 trillion of wealth from the revenues of the country’s oil wells. The purpose of the fund is to pay for the pensions of future generations, when Norway’s population ages and its wells run dry. A proposal to establish an “American Solidarity Fund” to help meet future welfare payments and reduce inequality has also been made, funded by higher capital taxes (see Breunig, 2018). The difference between these kinds of funds and the proposal in this paper is that our accounts are individual, not sovereign, and fulfil, in the case of health, the dual purpose of building up savings as well as allowing for direct payments of bills. We also provide a way to fund the accounts without drawing on revenues from a natural resource.

III. e. Other Economic Outcomes and Long-run Fiscal Forecasts due to the Reform

(i) Macroeconomic impact

How would the introduction of mandatory accounts affect a small open economy with a flexible exchange rate, like New Zealand? There are two parts to the reform. First, payments for welfare purchases out of the accounts replace a proportion of government purchases. Second, the accounts

⁵⁴ See Statistics NZ (2018), Household Net Wealth Statistics: Year ended June 2017, Wellington.

also build savings to help pay for future welfare purchases, mostly funded by cuts in “privilege”.

A standard approach for predicting the (short-run) macro consequences of a policy change in the NZ context is the small open economy flexible exchange rate model of Mundell-Fleming (1968). Some predictions are as follows: (a) To the extent that national savings increase, then net capital outflows rise; (b) Downward pressure is exerted on the exchange rate, which in turn increases net exports; (c) The drop in government spending is replaced by purchases of welfare services out of the savings accounts.⁵⁵ Domestic investment, which is determined by the world real interest rate in this model, stays the same. Appendix IV provides more details.

(ii) Long-Term Forecasts

Estimates of the future impact of the new regime on government revenues and expenditures, as well as on the mandatory accounts, are reported in Table A6 in the Appendix. It shows how our reform avoids the large future predicted fiscal deficits associated with funding the welfare state based on the existing system.⁵⁶ At present, the government’s cash deficit is forecast to rise to \$19.3 billion by 2035 (or 4.9% of GDP) due to rising health-care and pension expenditures. However it reduces to a \$2.7 billion deficit under the new regime as future liabilities become funded out of the savings accounts.

A consequence of the reform is that tax rates can be maintained over time, without the future increases that would likely be needed under the present system. However, due to the long forecast horizon, our results do depend on uncertain assumptions as to future rates of growth of GDP, rates of return at which the savings balances compound, rates of growth of per capita health-care costs, as well as how the age structure of the population changes. For example, the higher is the rate of return on the health accounts, the more funds become available to meet these future costs.

It should be noted that the assumptions underlying long-run forecasts of this nature, which are a feature of the ‘generational accounting procedures’ developed by Auerbach, Gokhale, and Kotlikoff (1991) are much critiqued. For example, Williamson and Rhodes (2011) point out that the size of the discount rate chosen is problematic, since even a small change can have a major impact on the projected burden of current spending on future generations.⁵⁷ These authors also comment that sometimes separate calculations by gender are done, “*but this is rare*”.

Generational accounts compute a ‘lifetime net tax rate’, which measures the burden of taxes minus transfer payments on a generation over its lifetime. The generational accounting criteria

⁵⁵ Note that national savings may not necessarily increase to the extent that private voluntary dissaving crowds out the additional compulsory savings. Indeed, Australia, which does mandate contributions to superannuation funds, had a level of gross household debt relative to disposable income of 190% in 2018, high relative to many other advanced economies (see Reserve Bank of Australia, 2018). On the other hand, Connelly and Kholer (2004) find evidence that only part of compulsory superannuation contributions have been offset by reductions in voluntary saving (see also Gruen and Soding, 2011).

⁵⁶ A complete set of long-term forecast government accounts is available upon request. Our budgetary comparisons of the present system and the new mandatory savings system assume that total GDP and per capita health-care expenditures grow at 3.5% under both regimes. See Buckle and Cruikshank (2012) for some alternative fiscal forecasts.

⁵⁷ Haveman (1994) also discusses the pros and cons of generational accounting methods.

presumes that the net tax rate for current and future generations should be the same. If it is higher for future generations than for new-borns, then fiscal policy is not “generationally balanced”. However, McDonald (2005) argues that smoothing tax rates as a response to population ageing, whilst having favourable long-run efficiency implications, may not promote intergenerational equity since the young will have higher lifetime incomes, on average, due to the secular increase in labour productivity.

IV. Conclusion

Many countries are forecast to struggle to publicly fund their welfare states over the coming decades. Although governments will be hard pressed to maintain present levels of welfare generosity through taxation, private savings rates have been falling. Inefficiencies have also become rife. As a potential way to pre-empt these problems, rising attention has been paid to the Singaporean model. It features mandatory savings schemes and transparent pricing of health services which have yielded some of the world’s best health-care outcomes, delivered at a cost that is the lowest amongst high-income nations.

In this article, a reform is proposed that enables the funding of mandatory savings accounts out of which individuals can make payments for their welfare needs, instead of the government on their behalf. The accounts can also be used to build up significant capital. A New Zealand case study is used, although the reform could be applied elsewhere. Rather than increase taxation, we show how funding can instead be raised by seeking savings elsewhere in the government budget, in particular by the removal of subsidies and grants to high earning families and businesses, so as to minimize the effect experienced by most people on their current disposable incomes. The reform helps secure the fiscal viability of the welfare state, whilst retaining ample public resources to ensure universal coverage.

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Appendix I

Summary of the “Savings-Not-Taxes Policy”

1. Taxation and Mandatory Savings: Objectives and Policy

- a. The corporate tax rate on profits is set at 17.5%.
- b. The goods and services tax rate (GST) is set at 17.5%.
- c. A tax free personal income up to \$50,000 for a person classified as a single taxpayer (single/couple with two incomes). Current taxes paid on the first \$50,000 of income, including Accident Corporation Compensation (ACC), equals \$8,750. This sum goes directly into the personal saving accounts.
- d. A tax free income of \$65,000 for a one income family with dependants. (Current taxes paid including ACC equal \$13,250). The extra \$4,500 in tax savings in the case of a two adult family goes directly into the Health and Risk Cover accounts of the non-working spouse, whereas in the case of a single parent family it will be available for the family’s child-care costs to enable the single parent to work.

These tax savings are supplemented by individual’s own, and employers’, contributions, as follows:

- e. An individual contribution of 5% on any earned income up to \$50,000 and an employer contribution of 12½% on income up to \$50,000 brings the total savings level to \$17,500 a year for those on an income of \$50,000 (or above) and \$22,750 for a one income family with children on \$65,000.

In summary, the \$17,500 savings contribution is made up as follows. (i) Individual = 50% via government collection, instead of personal tax and ACC contributions on the first \$50,000 of income (i.e., \$8,750). (ii) Individual = 14.3% instead of Kiwi-Saver contributions and other payments (i.e., \$2,500). (iii) Employer contributions = 35.7%, instead of ACC, superannuation and via a 37½% reduction in the corporate income tax rate from 28c to 17½c in the dollar (i.e., \$6,250). Note that subsidies for ACC and superannuation contributions on income >\$50,000 are no longer mandatory.

- f. For individuals earning <\$50,000 (or one-income families with dependent children earning <\$65,000):

A reduction in savings of 35 cents in the dollar for every dollar < \$50,000 (or < \$65,000 for a one income family with dependent children) occurs. For a single taxpayer earning:

- \$45,000 → savings of \$15,750 per annum or 35% a year of gross income
- \$40,000 → savings of \$14,000 per annum or 35% a year of gross income
- \$35,000 → savings of \$12,250 per annum or 35% a year of gross income
- \$30,000 → savings of \$10,500 per annum or 35% a year of gross income
- \$25,000 → savings of \$8,750 per annum or 35% a year of gross income.

Note: Many low-income families will have two incomes and therefore have savings in normal circumstances of at least \$25,000 a year per family.

- g. An individual’s savings to be allocated on the following basis:
 - Superannuation savings account 35% (i.e., \$6,125)
 - Health savings accounts 45% (i.e., \$7,875)
 - Risk savings account 20% (i.e., \$3,500)
- h. Income savings and contributions to be indexed to an appropriate inflation index (e.g., superannuation indexed to wage increases).
- i. Low-income working families with dependants will, in addition to any savings they get, receive a guaranteed minimum income that ensures cash in the hand income of at least what they get today.

- j. Personal Income greater than \$50,000 is to be taxed as follows:

\$50,001–\$70,000	17.5c in the dollar (currently 30c, so a reduction of 42%)
\$70,001+	23c in the dollar (currently 33c, so a reduction of 30%)

These reductions in personal tax allow taxpayers in these categories to more easily cover what are now their own costs on income above \$50,000 for out-of-work insurance (ACC, sickness, unemployment) and extra costs for superannuation, health and tertiary education.

- k. Superannuation savings are to be shared equally between the partners each year.
- l. Employers' contributions to employees' individual savings accounts is limited to the first \$50,000 of income. Any contributions on income above \$50,000 is voluntary.

2. Health-care: Objectives and Policy

- a. *Base Case:* \$7,875 savings per year (inflation adjusted) to go into each individual's 'Medi-Health Cover Savings Fund'.
- b. *Variances from Base Case:* For one income families with dependants, \$12,375 to go into their savings account per year (inflation adjusted) (i.e., \$4,500 over and above base case which goes to the partner's health-care savings or, in the case of single parent family, towards child care). Low income earners (i.e., below \$50,000) savings reduce by 15.75 cents per dollar.
- c. A prescribed level of savings set for each person (i.e., a Medi-Health Savings Fund, equal to 1.5 times a contributor's current age, measured in '000s of 2015 dollars). For example, for 40 year olds, the savings objective is \$60,000 + inflation).
- d. Once the Medi-Health Savings Fund objective is achieved, required savings for health-care are reduced by 40% (i.e., \$3,150 = 40% * \$7,875 per year) thereby increasing a contributor's disposable income by that amount.
- e. A contributor can, at any time, put a lump sum into their Savings Fund in order to achieve a reduction in their contribution level.
- f. A 12 ½% per annum levy is charged to the fund, as a contribution to the health costs incurred by the retired, beneficiaries and chronically ill. This levy will be reduced from year 11 of the reform onwards, as the retired pay an increasing proportion of their own health-care costs.
- g. A catastrophic insurance policy to be taken out each year to cover medical costs above \$20,000 (inflation adjusted) in any one year.
- h. A government underwrite, if the amount in an individual's savings fund is insufficient.
- i. Those individuals earning more than \$65,000 will be expected to pay for their own health-care (up to 3% of income) before they drawdown on their savings account. Note that these individuals will receive a tax reduction of between 10 and 12½ cents per dollar on income above \$50,000.
- j. Individuals have the option to insure themselves at a higher level than the basic cover provides (e.g., their own hospital room).

Table A1: Example of a Medi-Health Cover Fund

Example	1	2	3
Age	24	36	50
Prescribed level of savings	36,000	54,000	75,000
Yearly savings (inflation adjusted)	7,875	7,875	7,875
Balance at start of year	10,000	42,000	85,000
Yearly contribution	7,875	7,875	4,725
Voluntary contribution	-	12,000	-
Gross Total	17,875	61,875	89,725
<i>less</i> Cost of catastrophic cover for health & risk	(800)	(1,400)	(3,000)
Levy for chronically ill and long-term out-of-work (12½%)	(988)	(988)	(988)
Withdrawals for health-care cost	(512)	(812)	(3,012)
Outgoings	(2,300)	(3,200)	(7,000)
Net Balance at end of year (=Gross-Outgoings)	15,575	58,675	82,725
Amount required to reach prescribed savings level	20,425	Over prescribed by \$4,875, reducing payment next year	Still over prescribed by \$7,725

- k. *Health-care during Retirement:* The objective, after 20 years of contributions to the Medi-Health Cover Fund, is to retire with at least \$80,000 in that Fund. Those individuals of retirement age who keep working continue to save for their own health-care, take out a catastrophic insurance policy and meet the first 5% of their health-care costs (out of earnings and/or their own capital).

For those not working in retirement, a person may expect to have:

- (i) A Medi-Health Cover Fund on retirement of at least \$80,000 (in 2015 dollar values).
- (ii) A catastrophic health insurance policy.
- (iii) Sufficient income and/or capital to pay for their own health-care needs (i.e., income from existing government benefits and from their own capital, consisting of both the Medi-Health Cover Fund and the Retirement Super Fund).
- (iv) A government underwrite if for any reason the amount of savings and/or yearly income of an individual is insufficient to pay for approved health-care needs.
- (v) Any balance in the fund on death is transferred to the surviving spouse's fund or the individual's estate.

Expenditure during Retirement Years:

- (i) A catastrophic insurance policy to cover any health-care costs above \$15,000.
- (ii) Health-care costs up to 5% of income paid by oneself before any drawdown on one's Fund.
- (iii) Drawdown on the Medi-Health Cover Fund.
- (iv) A government underwrite.

3. Superannuation

- a. *Base Case:* \$6,125 savings per year (indexed to wages) to go into each person's 'Superannuation Fund'.⁵⁴
- b. A 25% tax on the size of the Superannuation Fund on the date of retirement.
- c. Moving the date of retirement from 65 to 70 over 20 years (i.e., by three months a year).
- d. Individuals can still retire at 65 provided they drawdown the equivalent of the government pension from their own fund.
- e. A government pension equivalent to what is paid today plus a Superannuation Fund the size of which will depend on the number of years' contributions and income earned. What is a person likely to receive in retirement (assuming savings of \$6,125 a year indexed to wages)?

Table A2: Funds Received upon Retirement assuming a 3% Real Interest Rate

Estimated Net Size of Superannuation Fund for a Person Earning \$50,000 (in 2015 dollars)	
Years of contributions	3% return
10	\$64,586
20	\$158,321
30	\$300,391
40	\$511,094
50	\$818,561

Note: These figures are net of the 25% tax paid on the size of the fund upon retirement so are funds received “in the hand”.

4. Risk-Cover (Unemployment, Sickness, Invalid and Accident Cover): Objectives and Policy

- a. *Base Case*: \$3,500 savings per year (indexed to wages) to go into each person’s Risk-Cover Fund.⁵⁸
- b. The prescribed level of savings is set for the Risk Cover Fund, equivalent to what each individual would currently be paid if unemployed, plus 10% of that amount, for 40 weeks.
- c. Once the above level is reached, individual contributions are reduced by 70% (or \$2,450=70%*\$3,500) thereby increasing a contributor’s disposable income by that amount.
- d. A catastrophic insurance policy to cover being out of work for more than 26 weeks.
- e. A government underwrite (if funds insufficient to cover the first 26 weeks of being out of work).
- f. An insurance policy to cover the next 130 weeks.
- g. A government underwrite beyond three years (i.e., 156 weeks).
- h. Ability to insure oneself for more than the basic cover (i.e., unemployment benefit + 10%) but only at one’s own cost, not out of the Fund. (High income earners will likely do this out of their tax cuts).
- i. If out-of-work, then a weekly drawdown from the individual’s Risk-Cover Fund (for weeks 1-26). If still out of work, then a weekly insurance company payment (for weeks 27-156). If still out of work, then weekly government payments for weeks > 156 plus additional payments if extra insurance has been taken out by individuals.

⁵⁸ This figure applies to more than 1 million New Zealanders. It varies around this base for nearly another 1 million.

Appendix II

Table A3
New Zealand Budget (Government plus Savings Accounts) for 2015-2016

Notes		(1) Government Budget (\$ millions)	(2) Savings Based Budget (\$ millions)	(3) Variance (\$ millions)
	Revenue Budget			
1	Personal income tax	30,800	10,500	20,300
2	Company tax	10,800	6,750	4,050
3	Interest & dividend tax	2,600	1,900	700
4	GST tax	18,300	21,500	(3,200)
5	Other direct & indirect tax	9,200	9,200	
6	Other revenue	<u>3,500</u>	<u>3,500</u>	
	Sub Total			
7	Government cash income for year	75,200	53,350	21,850
	Income paid into Savings Accounts			
8	Current & Future expenditure for Super, health and risk cover	-	20,650	20,650
9	Total Income	<u>75,200</u>	<u>74,000</u>	<u>1,200</u>
	Expenditure Budget			
10.a	Health - Government	15,600	8,100	
10.b	- Ex savings accounts		7,500	
11	Superannuation	12,200	10,600	1,600
12.a	Social welfare - Government	12,600	8,400	2,950
12.b	- Ex savings accounts		1,250	
13	Education	13,100	11,900	1,200
14	Other expenses	7,300	3,800	3,500
15	Core government expenses	4,800	4,700	100
16	Finance costs	3,700	3,700	
17	Law and order	3,600	3,600	
18	Transport and communication	2,300	2,200	100
19	GST compensation		1,000	(1,000)
20	Total Expenditure	<u>75,200</u>	<u>66,750</u>	<u>8,450</u>
	Comprising:			
21	Government cash outlays for year	75,200	58,000	17,200
22	Savings accounts cash outlays for year		8,750	8,750
23	Government Cash Balance (=row7-row21)	0	(4,650)	(4,650)
24	Savings Based Budget Balance (=row8-row22)	—	<u>11,900</u>	<u>11,900</u>
25	Overall Balance	0	7,250	7,250
26	Allowance for what is owing by government for this year's retirees	<u>10,000</u>	<u>10,000</u>	
27	Deficit/Surplus	(10,000)	(2,750)	7,250

Sources: NZ Treasury (2015-16): "Financial Statements of the Government of New Zealand for the year ended 30 June 2015", "2015 Tax Expenditure Statement", "Vote Social Development: The Estimates of Appropriations 2015/16 - Social Development & Housing Sector", "NZ Economic & Financial Overview 2016", "Budget Economic & Fiscal Update: Forecast Financial Statements 2015".

Notes: Explanation of Budget Variances

1) Personal Income Tax (PIT)

<u>Per Capita Income</u>	<u>Total Income</u>		<u>Tax rate</u>		<u>PIT (Savings Based budget)</u>
\$50,000 - \$70,000	\$16,564 million	*	17½ cents	=	\$2,900 million
\$70,000 +	\$26,208 million	*	23 cents	=	\$6,030 million

Plus Tax on non-residents/citizens; Part-time workers < 20 years; Over 65s \$1,570 million

Total Personal Income Tax \$10,500 million

The variance of \$20,300 million equals the drop in Government PIT revenue of 66% (i.e., \$2 out of \$3).

- \$14,000 million of the cut goes directly into New Zealanders' Personal Savings Accounts. The maximum savings for any individual = \$17,500.
- \$4,300 million of the cut goes to those earning more than \$50,000 via a reduction in personal tax rates on income above \$50,000. These reductions in tax are offset by increased expenses (GST, Risk Cover and Tertiary Education).
- \$2,000 million of the cut is due to welfare benefits no longer having tax added to them (a “contra”, see notes 11 and 12).

2) Company Income Tax (CIT)

\$4,050 million is the cut in corporate tax by 37½%. Along with lower mandatory superannuation and risk cover contributions on incomes over \$50,000 earned by their employees, this cut is offset by higher contributions for super, risk cover and health-care on the first \$50,000 of income earned by all employees.

3) Interest and Dividend Tax (IDT)

\$700 million equals the reduction in taxes on interest and dividends by 37%, as a result of the drop in personal tax rates (from 33 cents to 23 cents and 30 cents to 17½ cents).

4) Goods and Services Tax (GST)

\$3,200 million equals the increase in tax receipts due to the 2½ percentage point increase in the GST tax rate (i.e., from 15% to 17.5%).

5) **Other Direct & Indirect Tax** and 6) **Other Revenue:** No changes.

7) Government Cash Income for Year

\$21,850 million is the total reduction in the government's income of 29% for the year (see notes 1-4).

8) Income Paid into Savings Accounts for Future Government Expenditure

This is calculated as follows:

Table A4: Yearly Savings (by individual New Zealanders)

(1) No. of People	(2) Income, \$	(3) Individual Savings	=(1)*(3) Total Savings (\$ millions)
1,115	50,000+	17,500	19,500
321	40,001-50,000	15,750	5,050
318	30,001-40,000	12,250	3,900
210	25,001-30,000	9,625	2,020
Total	1,964	Total Savings	30,470
Less Non-residents & Over 65s (who do not need to save)			(2,470)
Net Savings			28,000

Source: Hon Bill English, Minister of Finance (2015). See the total personal taxable income that all individuals contribute to each band, as reported in [New Zealand 2015 Budget, Executive Summary](#)

Table A5: Where Do the Savings Go?

		(1) Savings, \$ Millions	(2) Years spending	=(1)-(2) Balance, \$ Millions
Superannuation	35%	9,800	50	9,750
Health	45%	12,600	7,500	5,100
Risk Cover	20%	5,600	1,250	4,350
	100%	28,000	8,800	19,200

Transferred to Revenue Account for Current and Future Expenditure:

25%	Superannuation Account	\$2,450 million
100%	Health	\$12,600 million
100%	Risk Cover	<u>\$5,600 million</u>
		<u>\$20,650 million</u>

9) Total Income

\$1,200 million is the difference between the reduction in existing government income and the funds paid into savings accounts.

10) Health-care Expenditure

There are \$7,500 million estimated withdrawals from the Health-care Fund accounts, which includes the \$1,500 million levy on these funds for the retired, beneficiaries and the chronically ill, leaving the government to contribute \$8,100 million.

11) Superannuation Expenditure

No tax on benefits (“contra”: see note 1)	\$1,500 million
Change in retirement age and tax on super funds on retirement	<u>\$ 100 million</u>
<i>Total Savings</i>	<u>\$1,600 million</u>

12) Social Welfare Expenditure

a. No tax on benefits (“contra”: see note 1)	\$ 500 million
Reduction in the number of beneficiaries paid by the Government replaced by private insurance cover	\$ 350 million
Student Loans: decline in borrowing (due to income & asset test)	\$ 700 million
Interest on student loans	\$ 600 million
Early repayment of student loans	\$ 600 million
Administration savings	<u>\$ 200 million</u>
<i>Total savings</i>	<u>\$2,950 million</u>

b. There are \$1,250 million estimated withdrawals from the Risk Savings Account.

13) Education

Reduction in grants (due to income and asset test)	\$1,000 million
Reduction in administration costs	<u>\$ 200 million</u>
<i>Total savings</i>	<u>\$1,200 million</u>

14) Other Expenses

Kiwi-Saver subsidies	\$ 720 million
Working for Families (reduction in payments to high income people who have received tax reductions)	\$ 380 million
Corporate welfare	<u>\$2,400 million</u>
<i>Total savings</i>	<u>\$3,500 million</u>

15) **Core Government:** Reduction in administration costs \$ 100 million

16) **Finance Costs** and 17) **Law & Order Costs:** No change.

18) **Transport and Communications:** Reduction in administration costs \$ 100 million

19) GST Compensation: For low income earners. **\$ 1,000 million**

20) Total Expenditure Variance

\$8,450 million equals the sum of rows 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19.

21) Government Cash Outlays Variance

\$18,200 million equals the sum of rows 10, 11a, 12a, 13, 14, 15, 16, 17, 18 and 19.

22) Savings account withdrawals

The total of \$8,750 million equals the sum of rows 11b and 12b.

It comprises \$1,250 million of welfare and \$7,500 million of health spending.

23) Government Cash Balance for Year (=row 7-row 20)

Existing = 0 and Savings Based = (\$3,650 million) deficit

24) Savings Based Budget Balance: Revenue \$20,650m - Expenditure \$8,750m **\$11,900 million**

25) Overall Budget Balance

For existing government budget: Revenue \$75,200m - Expenditure \$75,200m

For savings based budget: Revenue \$74,000m - Expenditure \$65,750m **\$ 8,250 million**

26) Unfunded Liabilities for 2015/16

This figure is the increase in liabilities of the government due to the rise in the number of retired people in the current year. It can be estimated as follows:

25,000 additional retired NZ'ers at \$25,000 a year less a time discount **\$10,000 million**

27) Budget Surplus/Deficit

Government Budget (Deficit) **(\$10,000 billion)**

Savings Based Budget (Deficit) **(\$1,750 million)**

Appendix III

Impact of the “Savings-not-Taxes” Policy on Representative New Zealanders

1. Existing Retired

The current retired (of 700,000 people) will see little change in their income as a result of the move from a tax-based system to a savings-based one:

- a. The government pension remains (i.e., with the same yearly adjustment as present along with a one-off adjustment for the GST increase of 2½%).
- b. Low-income, low-capital retirees will receive a yearly grant into their Health-care Fund Account. This grant enables them to take out a catastrophic health insurance policy and have additional funds available to supplement their normal expenditure on health. The grant is funded from the levy on yearly savings paid by those in work and a drawdown on the ‘New Zealand Superannuation Fund’.
- c. A government underwrite for health will ensure retirees receive the health-care they need.
- d. Greater security that superannuation benefits and health-care will be sustainable into the future.
- e. A more efficient health-care system with higher quality outcomes.

2. New Zealanders Within 20 Years of Retirement

- a. The government pension equal to what is paid today and on the same terms will continue.
- b. In addition, individuals will hold capital in their Medi-Health and Superannuation savings accounts upon retirement.
- c. The size of these accounts depends on number of years to retirement and earnings. Estimated fund size at retirement will be, for example, between \$15,000 and \$60,000 in the health-care account; and \$28,000, \$65,000, \$102,000 and \$158,000 for a person who is 5, 10, 15 and 20 years from retirement, respectively, in their Super Fund.
- d. A more efficient health-care system with higher quality outcomes.
- e. An increase in retirement income.

3. New Zealanders More Than 20 Years From Retirement

- a. The government pension will continue.
- b. In addition, individuals will hold capital in their Medi-Health and Superannuation savings accounts.
- c. Estimated fund size at retirement will be, for example, \$80,000 in the health-care account; and \$218,000, \$300,000, \$385,000, \$510,000, \$630,000 and \$820,000 for a person who is 25, 30, 35, 40, 45 and 50 years from retirement, respectively, in their Super Fund.

4. Impact of a Savings Based Welfare System on Out-of-Work New Zealanders

- a. Benefit levels and other assistance remain at present levels and will be adjusted on the same basis.
- b. Increased support by way of specialist training for all that need it, with the aim of:
 - (i) Improving life skills.
 - (ii) Putting jobless NZ'ers in a position where they have the necessary skills to get a job & maintain it.
 - (iii) New support structure (one-on-one).
- c. Responsibility of those who are out of work - where required attend practical training sessions.
- d. Improved incentive to find a job.

5. Working - Low Income (earning under \$50,000 a year)

- a. With dependants: Income in the hand at least what it is today (under tax-based welfare) due to the Guaranteed Minimum Family Income.
- b. No dependants: With a current Kiwi-Saver scheme, disposable income 1-2% less than now. With no Kiwi-Saver, disposable income 5-6% less than now (due to required payments into Super Fund).
- c. Superannuation:
 - (i) *With Kiwi-Saver Scheme*: increase in savings per year for a person on \$50,000 of \$80 per week, or \$4,125 a year, increasing their retirement lump sum by \$540,000 in 2015 dollars (for a person saving at this rate for 40 years at an interest rate of 3%)
 - (ii) *With no Kiwi-Saver Scheme*: increase in savings per year for a person on \$50,000 of \$118 per week, or \$6,125 a year, increasing their retirement lump sum by up to \$650,000 in 2015 dollars (for a person saving at this rate for 40 years at an interest rate of 3%).
 - (iii) *Married Couple Both Working*: Likely to retire with around \$1 million dollars.
- d. Health and Risk Cover:
 - (i) For a person earning \$50,000, savings of \$11,375 per year (i.e., health=\$7,875 and risk=\$3,500).
 - (ii) *Health*: catastrophic insurance policy for costs > \$20,000 per event. *Risk*: catastrophic insurance policy (covering unemployment, sickness and accident) for being out of work > 26 weeks.
 - (iii) *Health*: reduction in required savings rate of 40%, increasing disposable income, once savings reach 1,500 times one's age (e.g., 30 years old requires savings of \$45,000). *Risk*: reduction in required savings rate of 70% once savings reach 40 weeks at the person's benefit rate.
 - (iv) A government underwrite, which is important for the chronically ill.
- e. Housing: Access to housing improved for low-income earners, including use of a percentage of one's own superannuation. Government funding of development & regulation of section development.
- f. Improved incentives and rewards for low-income earners (no personal tax up to \$50,000; government underwrite of health, risk and retirement income).

6. Working middle-income (earning between \$50,000 and \$90,000 a year)

- a. Single income with dependants: disposable income likely to be \$1,000-\$4,000 higher than at present.
- b. Two incomes with dependants and/or single income individuals: disposable income likely to be higher than now though offset by increase in GST and extra risk cover costs.
- c. Super, health and risk cover: same as for someone earning \$50,000, plus any extra cover individuals take out on their own account.
- d. Improved incentives as marginal tax rates decline.

7. Working higher income (earning \$90,000 and above a year)

- a. Disposable income likely to be \$4,000-\$5,000 more than now (plus 10 cents more for each dollar earned over \$100,000). Offset by increased costs of GST, health and risk cover costs.
- b. Superannuation, health and risk cover are the same as for a person earning \$50,000, plus any additional cover individuals take out on their own account.
- c. Individual's current tax rate brackets fall (i.e., from 33% to 23%, and from 30% to 17½%).

8. Employers

- a. Corporate tax rate reduced from 28 cents in the dollar of profit to 17½ cents.
- b. Reduction in compulsory employer support for: (i) Employee Superannuation on income > \$50,000 (ii) Employee Accident Cover beyond the basic level to all those employees on income > \$50,000.
- c. Increase in existing costs due to 12½% contribution on income up to \$50,000 for super, health-care and risk cover of employees. These costs are offset by the reductions in (a) and (b).

Appendix IV

A Simple Model

Assume a small open economy with a floating exchange rate. Let:

$$GDP = Y = C + I(r) + G + NX(e) \quad (1)$$

where GDP is Gross Domestic Product, C is consumption, I is investment, G is government purchases and NX is net exports. The world real interest rate is r and the exchange rate is e .

The New “Mandatory Savings-not-Taxes” Policy

Assume a balanced government budget (i.e., $G = T$ where T is taxes). Let G be comprised of spending on general welfare, $G^{welfare}$, as well as on support to chosen industries, $G^{privilege}$ (i.e., $G = G^{welfare} + G^{privilege}$).

Under the new regime, the government ends “privilege” and reduces spending on general welfare. Let the new level of spending be $G^{welfare} - M$. The government also cuts taxes to $G^{welfare} - M$, maintaining budget balance. A mandatory savings scheme is introduced, which offsets the rise in disposable income from the tax cuts (i.e., contributions to the scheme, $C^{mandatory} = G^{privilege} + M$). Mandatory savings can be used to purchase welfare services, $C^{welfare}$, as a substitute for the reduced level of welfare purchases by the government (i.e., $C^{welfare} = M$).

Net personal income before the reform is $Y - T = Y - G^{welfare} - G^{privilege}$. Under the new regime, net personal income (post-tax-and-mandatory savings) is unchanged. Instead of government spending on “privilege”, however, these funds become savings held in individual accounts to help pay for future welfare bills.

Result 1

Under the new “Mandatory Savings not Taxation”, the Mundell-Fleming model predicts an unchanged level of GDP, fall in the exchange rate and increase in net exports.

Proof:

The change in savings when one shifts to the new regime, ceteris paribus, is:

$$\Delta \text{Savings (New Regime - Old Regime)} = \Delta S = G^{privilege} \quad (2)$$

Equation (1) implies:

$$\Delta S = \Delta NX(e) \quad (3)$$

where $\Delta NX(e)$ is the change in net exports. Hence the exchange rate must fall to allow net exports to rise. #

The intuition is as follows: the creation of the mandatory accounts lifts national savings (provided there are no offsetting effects due to private dissaving). Since domestic investment (which is determined by the world real interest rate) stays the same, the additional domestic savings lead to higher levels of net capital outflows. This puts downward pressure on the exchange rate which lifts net exports. Meanwhile the fall in government consumption is replaced by welfare purchases out of the accounts.

Appendix V

Table A6
New Zealand Budget (Government plus Savings Accounts): Forecasts from 2015 to 2035.

	Current Year: 2015		10 Year Forecast to 2025		20 Year Forecast to 2035	
	(1)		(2)		(3)	
	Gov't Budget (\$ millions)	Savings Budget (\$ millions)	Gov't Budget (\$ millions)	Savings Budget (\$ millions)	Gov't Budget (\$ millions)	Savings Budget (\$ millions)
Revenue Budget						
Personal income tax	30,800	10,500	38,500	13,120	54,200	18,500
Company tax	10,800	6,750	15,220	9,520	21,510	13,430
Interest & dividend tax	2,600	1,900	3,660	2,680	5,160	3,780
GST tax	18,300	21,500	24,590	30,330	33,050	42,780
Other direct & indirect tax	9,200	9,200	12,360	12,360	16,530	16,530
Other revenue	<u>3,500</u>	<u>3,500</u>	<u>4,710</u>	<u>4,710</u>	<u>6,410</u>	<u>6,410</u>
Sub Total						
Government cash income for year	75,200	53,350	99,040	72,720	136,860	101,430
Income paid into Savings accounts						
Current & Future expenditure for Super, health & risk cover	-	20,650	-	27,800	-	36,500
Total Income	<u>75,200</u>	<u>74,000</u>	<u>98,360</u>	<u>100,522</u>	<u>136,860</u>	<u>137,930</u>
Expenditure Budget						
Health - Government	15,600	8,100	25,600	11,800	41,000	16,000
- Ex savings accounts		7,500		13,800		25,000
Superannuation	12,200	10,600	18,100	13,640	28,060	17,400
Social welfare - Government	12,600	8,400	16,260	10,800	21,850	14,450
- Ex savings accounts		1,250		2,000		2,500
Education	13,100	11,900	18,480	16,790	26,070	23,680
Other expenses	7,300	3,800	9,810	5,580	13,180	7,500
Core government expenses	4,800	4,700	6,450	6,300	8,660	8,467
Finance costs	3,700	3,700	4,970	4,820	6,680	6,480
Law and order	3,600	3,600	4,850	4,700	6,520	6,220
Transport and communication	2,300	2,200	3,090	2,890	4,150	3,883
GST Compensation		1,000				
Total Expenditure	<u>75,200</u>	<u>66,750</u>	<u>107,610</u>	<u>93,120</u>	<u>156,170</u>	<u>131,580</u>
Comprising:						
Government cash outlays for year	75,200	58,000	107,610	77,320	156,170	104,080
Savings account cash outlays for year		8,750		15,800		27,500
Government Cash Balance	0	(4,650)	(8,570)	(4,600)	(19,310)	(2,650)
Savings Based Budget Balance		<u>11,900</u>		<u>12,000</u>		<u>9,000</u>
Overall Balance	0	7,250	(8,570)	7,400	(19,310)	6,350
Allowance for what is owing by government for this year's retirees	<u>(10,000)</u>	<u>(10,000)</u>	<u>(10,000)</u>	<u>(10,000)</u>	<u>(2,000)</u>	<u>(2,000)</u>
Deficit/Surplus	(10,000)	(2,750)	(18,970)	(2,600)	(21,310)	4,350

Sources: NZ Treasury (2012-16): "Health Projections & Policy Options for the 2013 Long-term Fiscal Statement", "Financial Statements of the Government of New Zealand for the year ended 30 June 2015", "2015 Tax Expenditure Statement", "Vote Social Development: The Estimates of Appropriations 2015/16 - Social Development & Housing Sector", "NZ Economic & Financial Overview 2016", "Budget Economic & Fiscal Update: Forecast Financial Statements 2015". Calculations and assumptions on which these forecasts are made are available on request.