

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

New Zealand Superannuation (NZS) is a universal pension paid at a flat rate. It is effective at poverty prevention among the elderly, relatively inexpensive and simple to administer. However, with the proportion of the population aged over 65 years set to increase rapidly over the next 50 years, there is expected to be a steep rise in the costs of the scheme. The future cost of NZS is therefore a major driver of New Zealand's Longer-term Fiscal Challenge. The Treasury's statement on New Zealand's long-term fiscal position (Treasury, 2013a) examines ways of addressing this cost, as well as other possible responses to the broader fiscal challenge such as higher taxation or reductions in other areas of public spending.

Options for reducing the future cost of NZS are examined in more detail, and compared to present settings, in a Treasury background paper, *Future Costs of Retirement Income Policy, and Ways of Addressing Them*, which was published at the same time as the statement. This article takes the analysis in that background paper as its base.

Assessment criteria

The assessment is based around the Treasury's Living Standards Framework (Treasury, 2012). The present approach and four broad possible alternative approaches to retirement income policy are considered here in terms of their likely impact on the components of that framework. Retirement income policy can, to a greater or lesser extent, affect outcomes under each of those components:

- sustainability for the future: via impacts on direct fiscal costs;

- economic growth: via impacts on labour force participation and national (private and public) saving;
 - increasing equity: via impacts on old-age poverty rates and inter- and intragenerational distribution;
 - social infrastructure: via confidence engendered by the dependability of political reform, and via public and private administrative and compliance costs;
 - reducing risks: via the potential impact of private savings levels on New Zealand's high levels of international indebtedness, and the impact of different approaches to pension funding on individual longevity and investment risk.
- level of payment or the universal, flat-rate nature of NZS.
 - Changing the way in which NZS levels are indexed to slow down the rate of increase would reduce the relative value of individual NZS entitlements over time, while retaining the flat-rate, universal nature of the payment. Effectively NZS is currently linked to wage inflation; we model shifts to price inflation and to a composite index.
 - Making private saving compulsory and later using some of that saving to part-fund an individual's own NZS would effectively involve applying a means-test to NZS, within a specific and narrow definition of 'means'. Voluntary savings, including

proposed reform goes. However, there is a clear difference in the paths by which the different approaches reach future reduced costs.

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

Where the indexation methodology is changed, the total cost reduces indefinitely as a proportion of GDP despite the expected increase in the number of pensioners. In practice it is likely that political pressure arising from increasing levels of old-age poverty as the real value of NZS reduced would at some point prompt a reversion to wage indexation or upward ad hoc adjustments in the level of NZS. In both cases, reductions in the total cost of NZS would be likely to be offset to some extent by an increase in the cost of other welfare benefits claimed by over-65s unable to fund their living costs through continued work, savings or reliance on family resources.¹

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

A private SAYGO scheme leads to savings for the government but increases the costs faced by individuals, who must reduce either their consumption or their voluntary saving rate, during a transition period. The subsequent offset to NZS means that this is in part a real cost, not simply a redistribution from earlier to later in an individual's life. Fiscal savings from this approach may be offset to the extent that the government finds

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Reform options

New Zealand's present approach is a government-arranged PAYGO (pay-as-you-go) system, using current tax revenue to finance the pensions of current NZS recipients. Any option that shifts away from that approach must move it towards either a privately-arranged PAYGO approach, under which an individual would need to earn more of his or her own keep at later ages, or towards a SAYGO (save-as-you-go) approach, which involves building up funds in advance which are later used to fund pension costs.

Broadly, then, four options are identified for reducing the demand on future taxpayers to fund future pensioners.

- Raising the age of eligibility for New Zealand Superannuation would reduce the overall future cost of NZS, compared to what it is currently expected to be, by reducing the number of individuals that NZS would be payable to. On its own this policy change would not affect the

those already accumulated under KiwiSaver, would not be included in this approach to means-testing, nor would income earned from other sources, in view of the administrative complexity and unproductive avoidance behaviours that broader means-testing is likely to entail.

- Communal saving could be undertaken through further extension of the New Zealand Superannuation Fund over and above the contributions already intended. This, and the investment returns that the fund would earn, would subsequently be used to cover all, or part, of the costs of NZS, which would continue to be paid at the same level and on the same universal, flat-rate basis.

Comparing the options

Fiscal sustainability

The extent of the reduction in future PAYGO costs by any given future date would in each case depend on how far the

it necessary to offer tax breaks or other forms of incentives to encourage saving.

A communal approach intended to fund only the flat-rate universal NZS might be cheaper. This is because if everybody is required to contribute at the same rate, some individuals will contribute more than is needed to fund their own NZS. Under a communal approach, this 'surplus' is then redistributed towards meeting the shortfall for individuals who do not contribute enough to cover their own NZS. Under a private approach, the 'surplus' would remain with the high-income individual and shortfalls would have to be met otherwise.

Economic growth

Retirement income policy can have an indirect effect both on national income levels and on external borrowing requirements via its impact on national savings, which is in turn the result of the interaction of private and fiscal savings. However, the mechanisms are complex, depending on internal feedback loops and factors external to retirement income policy, such as risk premiums, interest rates and the exchange rate. We look here at the likely first-order impact on national saving.

Previous increases in the age of eligibility for NZS do not appear to have had much of an impact on private saving behaviour. From the individual's point of view, they now have a longer working life to save for a shorter period of retirement and so the amount they need to save per year reduces. However, empirical evidence suggests that raising the age of eligibility for NZS does seem to encourage higher levels of labour force participation among older workers.

Reducing the real level of entitlement is also likely to encourage greater labour force participation by older people, as they decide to make up at least some of the shortfall by increasing their time in work. However, people are more likely to need to increase their saving as well. While they can work for a few more years to fill the shortfall caused by a delay in their access to full NZS, they are less likely to be able to work, or rely on their families, for the whole of their retirement.

A transition towards a SAYGO system, whether on an individual or a communal basis, would be expected to cause income to be diverted from current consumption to saving to meet future retirement costs, and therefore to produce a transitional reduction in the consumption/GDP ratio. A move to greater pre-funding may also have a negative impact on labour force participation as the immediate rewards for work reduce.

International evidence provides little conclusive evidence on the scale of the increase in private saving under compulsion, but suggests that it is usually directionally positive.² The bulk of the savings increase typically comes from lower- and middle-income households. Higher-income households are typically

in higher-risk growth-oriented assets, whereas individual accounts face proportionately higher fees and may be more conservatively invested in view of individual investors' shorter time horizons (Dyck and Pomorski, 2011). On the other hand, the labour disincentive effect could perhaps be less in the case of a private SAYGO approach. Contributions are less likely to be perceived as a tax, but rather as an increase in individuals' overall lifetime wealth (Karam et al., 2010).

Reducing risks: macro

A higher rate of national saving will be required if the economy is to increase overall investment without increasing overseas debt. The impacts of retirement income policy reforms in this area

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already saving at or above the compulsory rate, and so are more likely to respond to savings compulsion by redirecting their voluntary saving than by forgoing consumption to increase their overall saving rate (Davis and Hu, 2006).

It is even more difficult to know to what extent higher savings will translate into increased productive capital stock in New Zealand. But again our judgement is that it is likely to be directionally positive for capital stock as it is likely that some part of the higher savings will be retained within New Zealand. The effects on productivity and output are uncertain.

It is possible that a public SAYGO approach, involving investment into a single large fund, would deliver higher returns in the long run than a private SAYGO approach involving a large number of individual funds. This is because a large fund will benefit from economies of scale and a longer investment horizon, enabling investment

therefore depend on how individuals adjust their savings behaviour in response, and on broader fiscal policy settings. We have shown that behavioural effects may vary between different approaches, but broadly we would expect that the greater the reduction in lifetime income expectations, the more people are likely to respond by cutting back on consumption and increasing saving. This suggests that the impact on household saving of retirement income policy reform may not depend on what the government does so much as how hard it does it.

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

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

Reducing risks: micro

The risk that individual will live longer than they had expected, and so run out of savings, is particularly difficult to bear as, by the time they are aware that they will live longer than expected, it may be too late to do anything about it. Therefore, it seems inappropriate for individuals to bear the bulk of longevity risk. The government, however, is well placed to hedge individual longevity by pooling risk across entire cohorts.

Raising the age of eligibility and SAYGO approaches ensure that individuals

None of the options directly addresses the opposite risk – that individuals who live fewer years after retirement receive less NZS in total. While this risk would ideally be addressed through policy interventions aimed directly at the fundamental issue – health-related disparities in life expectancy – this is neither straightforward nor likely to deliver significant improvement in the short term. However, it can also be mitigated to the extent that an individual's retirement wealth is his or her own to consume (or bequeath) at the rate he or she chooses. Options which encourage individuals to build up larger independent retirement savings as well as, or even instead of, a life-long entitlement may therefore be preferable from this perspective.

hand, and avoiding the encouragement of inappropriately high-risk investment approaches by individuals relying on government to rescue them if things go wrong on the other.

A publicly managed retirement fund may be at less risk of fraud or theft than individual accounts. Under this option, the Crown takes on a greater level of investment risk: the New Zealand Superannuation Fund may, or may not, deliver the returns on investment necessary to enable it to pay future pensions to the extent intended. International experience shows that large funds managed on behalf of the public do not always deliver good returns, and some have suffered substantial losses. The individual is also indirectly exposed to this risk, with less scope to manage it, as the Crown is likely to pass on the cost of investment underperformance through increased taxes or reduced benefits (Whitehouse et al., 2009).

Under the present arrangements, younger people can expect to receive more formal pension in total than will older people, due to the former's higher life expectancy.

continue to receive at least as much as they do under the present approach throughout their pensionable lives, and therefore do not change the allocation of longevity risk. Under a compulsory individual saving approach, the Crown may – depending on the finer details of the scheme – be able to transfer some of the longevity risk through annuitisation arrangements.

A slower-growing NZS entitlement is still paid throughout an individual's lifetime after the age of eligibility; but people are more likely to need additional savings to supplement the reduced entitlement, and the consequences are worse if they are not able to manage those savings in a way which delivers them an adequate income throughout their pensionable life. Part of this risk is still retained by government also, since individuals who run into hardship as a result of outliving their savings, or not having enough to sustain themselves, are likely to turn to additional welfare assistance.

Options which increase the share of the costs of pensions met from capital accumulation, rather than from contemporary taxation, help to diversify risk away from dependence on contemporary economic growth levels.

Under compulsory private savings, both the amount of retirement income available to the individual and the NZS payable by the government depend on total accumulations of private savings. This means that the Crown and the individual share investment risk. Individuals have a range of options to manage their investment risks, and allowing them to manage this risk themselves will allow them to select a risk level which is optimal for their individual circumstances. On the other hand, transferring risk to the government allows it to be managed over a greater time horizon, reducing the risks posed by short-term financial market fluctuations. A balance would need to be struck between protecting individuals from risks that they are not well placed or competent to manage, on the one

Equity: distributional impacts

Different people will experience different impacts on their total pension wealth under different reform options, depending on their age and their lifetime income. Treasury has undertaken modelling to try to quantify these impacts, but these must come with a heavy caveat as they are so dependent on assumptions, and outcomes are so dependent on many individual variables.

Under the present approach, people who live longer receive more NZS overall. This difference remains about the same under an across-the-board reduction in NZS entitlements under changed indexation. However, the difference in lifetime expectation of pension receipts is exacerbated if the age of eligibility is increased.

Under the present arrangements, younger people can expect to receive more formal pension in total than will older people, due to the former's higher life expectancy. This would remain the case under a 'communal SAYGO' arrangement, which would retain the universal flat-rate nature of NZS entitlements. However, the effect is temporarily reduced if the age of eligibility is increased.

Under a changed method of indexation, younger individuals can expect to receive substantially less than older people will, and less than they would under present arrangements; by the time they reach pensionable age, the value of the pension will be less. This approach would be likely to mean that although the purchasing power of NZS would be maintained, recipients' NZS income would fall relative to wages earned by contemporary workers.

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

In terms of the impact on people at different income levels, a private savings approach will establish more of a formal relationship between contributions made and pension received, and hence be more 'actuarially fair' in terms of being a closer match between contributions and total benefits. Notably, in view of the tendency for women to experience lower lifetime earnings due to their greater probability of spending time out of the workforce, such an approach is likely to increase gender inequality in retirement.

The upfront cost of a private SAYGO approach is likely to have quite significant welfare impacts on working-age households, depending on their present approach to saving. Positive welfare effects will (eventually) result from compulsion for those households who could save but are currently 'under-saving' due, for example, to myopia or other cognitive biases. Negative welfare effects will result for those households for which it is optimal to not save in financial assets. For example, there will be some individuals whose lifetime income would be higher if they were to invest in a business or in upskilling, but who will be prevented from doing so by being compelled to save in a prescribed vehicle over their working lives. Similarly, some households may be better off repaying their mortgage more quickly, rather than or before building up financial assets. Low-income households who are financially constrained may also not experience an overall welfare

improvement if they are forced to transfer resources from the short term to the long term.

A communal approach to SAYGO has a different intragenerational distributional effect. Broadly, the effect of a shift in this direction would be to redistribute resources from richer people earlier in their lives, to poorer people (within the same age cohort) later in their lives. Once established, therefore, this approach is largely progressive in the same way as the present approach under which higher income individuals pay more through their taxes, but everybody receives the same annual NZS payments.

The transitional generation, in funding part of its own pension as well as

Policy change is unlikely to engender confidence and trust, and hence will not bring about the desired behavioural change, if people do not believe that the change is permanent, or cannot see how it will affect them well into the future. Reform therefore needs to be not only fiscally sustainable but also clear, easily understood and seen to command broad political support. For this reason it is important that an approach should be capable of adaptation if outcomes are greatly different from expectations; but in a way which is transparent, predictable and objective so as to reduce the risk of politically-motivated change and the incentive for interest groups to seek to influence it.

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

This point emphasises the importance of an early start, if this transition is to be made. A taxpayer who is supporting a quarter of a pensioner, as current cohorts are doing, is better placed to contribute towards his or her own pension as well, compared with one who is supporting half a pensioner, as future cohorts are likely to be doing (Coleman, 2012).

Social institutions

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

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

In the case of reforms to the way in which NZS is calculated, one possible variation would be a system under which the relationship between salaries and a new pensioner's entitlement would remain the same (through continued wage indexation), while pension levels for existing pensioners were linked to a greater extent to prices. Each superannuitant would receive weekly NZS payments set relative to the average wage as it stood at the time when they personally reached the age of eligibility. Over time the value of each individual superannuitant's NZS payments would be indexed to keep up with inflation, but would decline relative to the average wage. This would mean

that each cohort transitioning from work to pension would continue to experience the same impact on their living standards as previous cohorts, rather than each cohort successively experiencing a greater difference between wage and pensions on transition. However, it would mean different pension levels for pensioners of different ages and this may prove difficult to sustain politically.

In the case of SAYGO options, where a large public fund is built up, it may be difficult to sustain the ring-fencing of increasingly large amounts of resource to fund pensions if more immediate, or politically attractive, requirements emerge. In a system in which Parliament is sovereign and parliaments cannot bind their successors, it would be difficult to design a public SAYGO system that would avoid this risk.

The approach to individual SAYGO described here is intended to minimise avoidance opportunities and compliance and administration costs, compared to an approach under which more or all of an individual's assets and income were included in a means test. But it is nevertheless inevitable that any system which involves different entitlements for different people will be more complex, require more individual monitoring, and so be more expensive to administer and more prone to administrative error than a flat-rate universal pension.

Approaches which rely more on individuals making their own arrangements, either by encouraging or making compulsory a higher personal contribution to total retirement wealth, increase the private administrative cost as well as the risks for those individuals.

Getting from options to a choice

While the Living Standards Framework enables a systematic comparison of options, it cannot on its own be used to determine which approach, or combination of approaches, is 'best'. Views on that will continue to depend on individual value judgements about what are the general objectives of retirement income policy, and how they are to be prioritised against other calls on public resources; Questions such as the following need to be asked.

- How socially tolerable is old-age poverty, weighed against welfare for other life stages?
- How can the need to lean against poor individual decision-making be balanced with the desirability of individual autonomy and preferences? Is there a public interest in increasing private saving which affects this balance?
- How confident can we be that rates of return on investment are likely to continue to outpace rates of growth in the economy?

- Does greater accumulation of assets on the Crown's balance sheet via public pre-funding increase the risk of looser-than-otherwise fiscal policy?
- Is it acceptable to continue to push costs forward onto future generations?

Treasury hopes, through the publication of the Statement on the Long-Term Fiscal Position and accompanying analysis, to inform and provide a framework for public debate on these and other pertinent questions of public values.

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- 1 About 40% of New Zealand pensioners currently have no income other than NZS. See Ministry of Social Development, 2013, section 1, 'Income trends for older New Zealanders, 1982–2012'.
 - 2 Survey evidence suggests that about a third of private contributions to KiwiSaver represent savings which would not otherwise have been made (see Law et al., 2011).

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References

- Coleman, A. (2012) *Pension Payments and Receipts by New Zealand Birth Cohorts, 1916–1986*, Motu working paper 12-11, Wellington: Motu Economic and Public Policy Research
- Davis, E.P. and Y. Hu (2006) 'Saving, funding and economic growth' in G.L. Clark, A.H. Munnell and J.M. Orszag (eds), *The Oxford Handbook and Pensions and Retirement Income*, Oxford: Oxford University Press
- Dyck, A. and L. Pomorski (2011) *Is Bigger Better? Size and performance in pension plan management*, Rotman School of Management working paper 1690724
- Karam, P., D. Muir, J. Pereira, and A. Tuladhar, Toronto: University of Toronto (2010) *Macroeconomic Effects of Public Pension Reforms*, IMF working paper 10/297
- Law, D., L. Meehan, and G.M. Scobie (2011) *KiwiSaver: an initial evaluation of the impact on retirement savings*, Treasury working paper 11/4, Wellington: Treasury
- Ministry of Social Development (2013) *Household Incomes in New Zealand: trends in indicators of inequality and hardship 1982 to 2012*, Wellington: Ministry of Social Development
- Treasury (2012) 'Improving the Standards of New Zealanders: moving from a framework to implementation', paper presented to the Wellbeing and Public Policy conference, Wellington
- Treasury (2013a) *Affording Our Future: statement on the long-term fiscal position*, Wellington: Treasury
- Treasury (2013b) *Future Costs of Retirement Income Policy, and Ways of Addressing Them*, Wellington: Treasury
- Whitehouse, E.R., A.C. D'Addio and A. Reilly (2009) *Investment Risk and Pensions: impact on individual retirement incomes and government budgets*, social, employment and migration working paper 87, Paris: OECD