

Flexi-Super not really such a great idea

This article is an abridged version of an IGPS working paper of the same title published October 2013. The working paper was commenced earlier in the year, but completion became timely after the government put out a discussion document outlining the Flexi-Super concept and invited submissions. Accordingly, this is not a response to the discussion document per se, but rather a holistic review of the policy option of letting people select starting dates for New Zealand Superannuation (NZS).

Conceptual basis for New Zealand superannuation

Behind the idea that individuals can have a choice about the age at which their New Zealand Superannuation commences is the notion that NZS is an individual entitlement: a pot of money, if you will. This is unambiguously wrong. The object of NZS, simply put, is to ensure that all New Zealand residents above a certain age

(currently 65) have sufficient income to be able to participate in society, to at least a certain minimum acceptable extent.¹ The level of NZS is therefore intentionally above that which might be considered necessary to alleviate poverty, certainly in the sense of destitution.²

Behind this policy lies an egalitarian solidarity which requires a minimum equal income to be provided to each and

every older New Zealander as of right.³ It takes the form of an income stream, expressed in statute. A change in statute can change the income, and indeed this has happened at different times in the past. A change can be challenged politically, but it cannot be challenged legally because there is no property right; that is, there is no entitlement enforceable in a court of law.

Some countries do offer flexibility of eligibility age and a consequent adjustment in pension payments. However, most of these, such as Sweden, feature an individual pension entitlement based on individual contributions. Only Ireland is like New Zealand in having a level universal pension regardless of paid employment history, and Ireland offers no flexibility.

The United Kingdom is moving towards a flat-rate pension (operating alongside a voluntary but strongly tax-favoured private pension system), and has a deferral arrangement which permits any pension not taken to be accumulated and paid later either as a taxed lump sum or as additional pension. The

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Australian means-tested flat-rate pension, which operates alongside tax-favoured compulsory superannuation savings, can also be deferred. But neither of these state pension schemes is strictly comparable to New Zealand's, and neither offers early pension at a reduced level.

For completeness one should record that there are issues in respect of the affordability of NZS, important to its continuation. These are not, however, the focus here, and Flexi-Super does not purport to address them in any case.

In short, there is no legal or moral

at ages 60, 65 and 70 is broadly 25, 20 and 15 years, taking the population as a whole and ignoring gender differences. Looking at early uptake first, the trade-off is a lower pension for 25 years against the standard pension for 20 years. The proportion is 20/25; that is, ignoring all other considerations, the pension payable from age 60 should be about 20/25ths or 80% of the standard pension payable from age 65.

Similarly, for deferring the standard pension from age 65 to age 70 the proportion is 20/15, suggesting that

pension than the lesser long-lived group. Conversely, deferral is more advantageous for those who live longer, because they have greater time to enjoy their relatively higher pension, and a lesser percentage of the standard pension should apply for them compared to those who can be expected to die earlier.

The extent to which mortality has been decreasing has been different for different groups – male/female, higher or lower SES group. Overall, however, ongoing decrease in mortality rates means people live longer, and thus, compared to not making any allowance for improving longevity, a greater percentage of the standard pension would apply for early uptake and a lesser percentage for deferral.

Someone at age 65 earning \$70,000 or more who can defer their NZS until they cease to be taxed at the highest rate will cause government to collect less revenue.

basis within NZS to posit an individual pension pot to support exercise of choice. Further, the core principle and purpose of NZS would disappear were any group to receive a lower amount of benefit than others, or were any group to receive more.

Technical issues

Background

The working paper on which this article is based sets out a detailed actuarial approach to establish the price of early uptake or deferral of NZS, and readers wanting that detail are referred to that paper. Here I discuss one by one the relevant factors in pricing, and then present the actuarially derived results from the working paper at the end.

The basic trade-off for early uptake (taking pension at age 60 instead of age 65) is a longer period of payment against a lower pension. Similarly, the basic trade-off for deferral (taking pension at age 70 instead of age 65) is a shorter period of payment against a higher pension. A simplistic way of calculating the trade-off is to use New Zealand life expectancy, ignoring a small technical adjustment.⁴ From the New Zealand 2010–12 life tables,⁵ life expectancy⁶

the deferred pension, ignoring all other considerations, could be payable from age 70 at a level of 20/15ths or 133% of the standard pension.

This gives the general idea: early uptake from age 60 would get 80% of the age 65 pension, deferral to age 70 would give 133% of the age 65 pension. However, it is overly simplistic. To calculate the cost-neutral percentage adjustments properly requires other factors to be taken into account.

Different rates of mortality

As is generally known, on average women live longer than men. Also reasonably well-known is that on average people of higher socio-economic status (SES) live longer than those of lower SES. Possibly less appreciated is the way in which mortality rates by age have declined, particularly in the last 30 years, something like 2% per annum, thereby giving rise to appreciably greater longevity.

The impact of differential mortality for different groups works as follows. If one group lives longer on average than another, then early uptake is less advantageous because the reduction goes on for longer and hence they can have a greater percentage of the standard

Discounting

If NZS is deferred, an income stream is delayed. If NZS is taken early an income stream is brought forward. Making allowance for this requires calculating the net present value of the different income streams at some appropriate discount rate, and then setting the percentage of the standard pension payable for early uptake or deferral as the figure required to equate to the net present values.

The impact of discounting on the early uptake percentage is to lower the percentage, because the immediate payments are of greater relative value than those further in the future. For the same reason, the impact on deferral of discounting is to increase the percentage. In other words, whichever option gives more right now – taking early uptake rather than waiting for the standard pension, taking the standard pension rather than deferral – is favoured by discounting.

Lost income tax receipts

Someone at age 65 earning \$70,000 or more who can defer their NZS until they cease to be taxed at the highest rate will cause government to collect less revenue. Since there is no apparent policy advantage from allowing this tax advantage, the percentage adjustment for deferral should be calculated to ensure that there is, in fact, no lost revenue.

Assumptions

The future is unknown (even to actuaries), so some reasonable assumptions are needed to calculate and discount the income stream options. The assumptions used in the working paper are:

- Mortality follows New Zealand life tables 2010–12 rates, with a compound decrease in mortality rates of 1% per annum.⁷
- The impact of socio-economic differences is modelled by taking Māori and non-Māori mortality as proxies for lower and higher SES, with mortality rates in the higher SES group decreasing as above, 1% per annum, while rates in the lower SES group will decrease at a slightly greater rate so as to maintain the current differences in period life expectancy.⁸
- The impact of income tax reduction in deferral is modelled by reducing NZS payments from age 65 to age 70 for the maximum difference in tax.
- A reasonable approach to setting the discount rate would be to begin with a nominal risk-free rate of 5% p.a., reducing to 4% after tax. The payments of NZS are indexed to the greater of price inflation and wage growth; the Treasury in its long-term fiscal forecast assumes NZS will grow around 3.5% p.a., made up of 2% inflation and 1.5% real wage growth. This would suggest a discount rate of 0.5% p.a. However, to give some sense of the significance of this assumption, calculations are made using both a zero discount rate and a relatively high 3% discount rate, noting only that the latter assumes a rather higher nominal risk-free rate and/or lower price inflation and average wage growth than is currently the case.⁹

Results

The results based on these assumptions are shown here for both a discount rate of 0% p.a. (Table 1) and a discount rate of 3% p.a. (Table 2). Each table shows early uptake and deferral percentages in relation to the age 65 pension for higher SES and lower SES groups within male and female.

Table 1: relativities by gender and SES: zero discount

Discount: 0%	Male		Female	
	High SES	Low SES	High SES	Low SES
Early uptake (from age 60)	80%	77%	82%	78%
Deferral (to age 70)	123%	138%	120%	134%

Table 2: relativities by gender and SES: 3% discount

Discount: 3%	Male		Female	
	High SES	Low SES	High SES	Low SES
Early uptake (from age 60)	73%	69%	75%	71%
Deferral (to age 70)	133%	153%	130%	149%

What may we take from this?

Firstly, male/female differences for the same SES group seem small, and could be averaged without any great concern, which is useful to know. Secondly, the rate suggested in the government discussion document for early uptake was 73% of the standard pension. The results above for the lower SES group, the presumed target for early uptake, are either side of that figure, being around 77–78% at the 0% p.a. discount and 69–71% at the 3% discount. Something like 75% at age 60, being 5% for each year before 65, appears not unreasonable.

Thirdly, the 160% proposed in the discussion document for deferral to age 70 appears much too generous, and it is unclear how this figure could have been arrived at. The focus needs to be on the higher SES group (since one may reasonably ask who else is going to contemplate deferral), and the range of results then is between 122% (0% discount over wage indexing) and 132% (3% p.a. discount over wage indexing).¹⁰

In my judgement, the highest discount rate appropriate at the current time for costing early uptake and deferral relativities should not exceed 1% pa in excess of wage indexation. It follows that the work here supports a relativity of 75% for early uptake and 125% for deferral as tentative best estimates, assuming no selection effects other than in respect of SES group.¹¹

An immediate implication is that responses to the discussion document in favour of a deferral option based on a relativity of 160% will unfortunately be unreliable and of no utility from a policy development perspective. Were the

discussion document to have put forward the 125% that analysis here suggests, or even a tax-favoured 130%, say, it seems likely that enthusiasm for having choice to defer NZS would be considerably muted. A less obvious but important implication is the need for the government to set aside contingency reserves on its balance sheet should the proposal go ahead. There is clearly uncertainty in any ‘best estimate’ of relativities, and a private company would be required to hold regulatory capital sufficient to ensure promises to pay will be met in all reasonably foreseeable circumstances.¹²

Outcomes and fiscal neutrality

Rational behaviours

When pricing options allow people to make voluntary choices, anyone from an insurance background will be very conscious of adverse selection. Customers for life insurance, for example, who are in poor health will get better-than-average value if they can obtain the insurance on normal terms. A person in very good health conversely may not consider life insurance worthwhile. In the section above on technical issues I assessed the rate for the early uptake option on the basis that it would appeal to low SES groups, and assumed a proxy mortality to get a rate which would be about right on average for that whole population. However, consider a 60-year-old diagnosed with motor neuron disease. Age 60 is a not uncommon onset age, and death before age 65 is almost a given in such circumstances. Someone in this position will opt for early uptake regardless of their SES group because they will get something rather than nothing.

Fortunately motor neuron disease is not very widespread. However, it illustrates the point that when people can make a voluntary choice on an option priced on an average, then choice will give rise to a bias against whomever is making the offer. Diagnosis of terminal illness in one's early 60s would almost invariably trigger exercise of an early uptake of NZS were it available with no offset.

As another example, suppose the deferral relativity was set higher than the estimated cost-neutral 125% arrived at above. Deferral would then become advantageous to those still in employment

government could carry out a cost-benefit analysis. This would, however, be a rather hypothetical exercise, and possibly comes into the 'how long is a piece of string?' category of enquiry. Whether loading additional costs onto NZS would ever be sensible must be doubtful when NZS cost pressures are increasing; much better to deal directly with concerns, as outlined later here.

Poor or constrained decision-making

The above discussion on choice has assumed rational agents, with a good knowledge of their own longevity pros-

section of the government superannuation scheme. This section was compulsory and required members to contribute 8.5% of their salary in return for a pension from age 58 of 1.875% of final average salary. In 1992 the government made the scheme optional, allowing members to withdraw their own contributions, plus meagre interest. At the same time, subsidised rental housing was withdrawn. For most rank and file prison officers their GSF contribution became too onerous now that they had to pay market rents, and the lump sum was attractive, so they 'chose' to withdraw. The number in the scheme fell from about 1,700 in 1989 to a little over 600 by 1994. For most this was a necessary but financially disadvantageous 'decision'.

One could not unreasonably argue that those who arrive at 60 with no reasonable prospects of work and no other resource deserve better support than they obtain currently. But attempting to provide this by rearranging NZS provision is not giving meaningful choice. And it means we are abrogating our current policy of ensuring that those over a certain age have enough to live on in order to participate in society at least to some extent.

Individual versus financial discounting

The technical section earlier identifies the significant effect of the discount rate in measuring value. The work of David Laibson and others has shown that many people (and not just lower SES groups) apply hyperbolic discounting: that is, a low discount for immediate payments but a very high discount for delayed payments. For those who make financial judgements in this fashion, early uptake will appear very attractive even when not financially sensible from a more informed viewpoint. Deferral, on the other hand, unless at a fiscally ruinous relativity will not be attractive even if, again, it would be financially sensible.¹³

Other considerations

It could be argued that not many people will exercise a choice away from age 65 entitlement, and certainly this has been the experience of Australian and UK deferral arrangements. It could then be argued that the additional NZS costs

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and earning over \$70,000 p.a., and the people who took advantage would create a direct additional cost on provision of NZS.

In the case of insurance, companies underwrite applicants in order to weed out the more extreme cases of adverse selection. It is difficult to see, however, how the government can underwrite the offer of either early uptake or deferral. Even carrying out pricing on the basis of the sub-groups most likely to take up the option, as done in the previous section, will not eliminate adverse selection. It follows then that the government will inevitably lose money if people behave rationally, by which is meant:

- those who are broadly average for their group may or may not take up the option, depending on their circumstances;
- those who have characteristics which make the offer poor value to them will not take it up;
- those who have characteristics which make the offer of particular value to them will take it up.

If Flexi-Super has other benefits to offset the adverse selection cost, then the

pects and high financial literacy. It is particularly necessary to focus on the early uptake choice with a different lens because the target, the lower SES group, generally have lower financial knowledge than the higher SES group: refer, for example, to the 2006 ANZ/Retirement Commission Financial Knowledge Survey. It is reasonably clear that a not insignificant number will fix on a guaranteed income to the exclusion of any other factors, including comfort in old age. Use of a low-enough percentage adjustment for early uptake may result in broad fiscal neutrality in respect of NZS cost alone, but either other welfare benefits will have to rise or greater poverty in old age become generally acceptable. And people who arrive at age 60 with no prospect of finding work, or are indeed unable to work, having been in arduous occupations and worn out (or poisoned in their work places, as were some Bay of Plenty timber mill workers), will not really have options. They will feel compelled to exercise early uptake, in the absence of any other resource. This is not choice.

A parallel is the case of Prison Service officers, who used to have a separate

described above may be insignificant in the scheme of things. Whether or not experience in New Zealand will follow that in Australia and the UK will depend on where relativities are set, especially for deferral. However, there will be significant fixed costs in establishing Flexi-Super. Apart from the cost of putting it in place, including the legislative process, rate-setting mechanisms and accounting changes, there will need to be changes to payment systems to cater for different rates. The current Ministry of Social Development benefit payments system is efficient at what it does, but any change to what it is currently designed to do – such as more than three basic NZS rates – could be extremely expensive. A figure of \$25 million was quoted to me when I worked at the ministry. The issue is the need for exhaustive testing of alterations, since interdependencies within the system are imperfectly understood. It follows, then, that if there are only a few who exercise a choice under Flexi-Super the overhead cost per head will be considerable, and it may be questioned whether this is a sensible use of taxpayer funds.

Alternatives

Deferral

If receiving NZS while working is seen as an issue for some, facilitating diversion of it into a KiwiSaver account would seem a low-cost option. Payments would be subject to PAYE as usual, and the accumulation uplifted when paid work ceases or reduces. Work and Income would need to offer the facility, and legislation may be needed to enable those who had attained age 65 without a KiwiSaver account to open one. (Whether or not a kickstart \$1,000 would be available to anyone who had not already obtained one is worth consideration; there is an equity argument in favour.) The accumulation should be available to be taken on a drawdown basis, i.e. as regular non-taxable (as income) instalments until the money runs out.

It may be that some in favour of Flexi-Super have promoted it because it effectively provides additional, wage-indexed and government-guaranteed annuity payments in return for those forgone payments. If such annuity

provision is seen as desirable from a policy perspective, one would think it should be provided openly, rather than through some backdoor method, and subject to full scrutiny and regulation.¹⁴ Be that as it may, some greater attention by government to the management options in retirement of accumulated KiwiSaver funds does appear necessary, and was included in the retirement commissioner's recent review of retirement income policy.

Early uptake

There is good argument for greater resources to be provided for the worn-out and the structurally unemployable than are at present available. There is no obvious solution to that problem other than a targeted benefit at or around NZS levels, requiring higher taxes or diversion of other spending.

However, for those with KiwiSaver balances there is an argument for relaxing eligibility to some extent. Allowing payment of a regular monthly drawdown payment from age 60 or later when not in work would seem worth exploring.

Conclusion

The basic problem with Flexi-Super is that it attempts to apply a financial market mechanism to something for which financial market mechanisms are just not appropriate. As well as being wrong in principle, it will inevitably cause difficulties for a government in application, due to the impossibility of guaranteeing accurate pricing, the impacts of adverse selection, the absence of true choice for those with income constraints, and the likelihood of behaviours rather different from those assumed for rational agents.

The opportunity to exercise 'choice' is held as a benefit of the proposal, but in this instance 'choice' is meaningless, unless one means (in the case of early uptake) choice between poverty now and poverty later, or (in both cases) the choice to exercise a financially advantageous option against the government. The first of these is really still no choice at all, and the second will inevitably add to NZS cost, with no other discernible benefit.

If the main problem is receipt of NZS while still working, this article and working the paper on which it is based

put forward a pragmatic solution that will not disrupt NZS and will increase the utility of KiwiSaver. If, however, the underlying problem is the absence of any opportunity to obtain additional, wage-indexed annuities, then note: Wage-indexed annuities are just not practicable as financial market instruments.

Annuity products generally are certainly desirable, but are very difficult to provide on a cost-neutral basis because of the tendency for individuals to apply hyperbolic discounting, making annuities appear unattractive on price. Also, for prudential reasons contingency reserves need to be established and held as segregated funds (whether provided publicly or privately),¹⁵ adding to cost.

It is not unreasonable to wonder why Flexi-Super has been proposed at all. It will do nothing positive for lower SES groups, and will be of utility only to those in robust good health with sufficient private wealth that they can allocate part to increasing their state pension, to be underwritten by all taxpayers. One might suppose a certain myopia in those responsible for policy development, and, at the least, a woeful lack of understanding of insurance principles.

- 1 Refer to the 1972 Royal Commission of Inquiry into Social Security, p.65: 'beneficiaries to enjoy a standard of living "much like" that of the rest of the community and which would enable them to participate in and belong to the community'. This was further supported in the 1988 Royal Commission on Social Policy. It may be noted that the extent to which this conceptual approach has been applied to benefits other than NZS is arguable.
- 2 NZS is quite successful in alleviating poverty among the elderly, and ranks very highly in this regard in international comparisons of social security systems (using a 50% of median income comparison). As measured by standard of living surveys, domestically far fewer of our over-65 population are in hardship compared to families (parents with children under 18).
- 3 One of the ways New Zealand exercises the solidarity principle is to require NZS to be offset by any social security pension received by a New Zealand superannuitant from another country. This is logical in terms of the policy objective of NZS, but again runs counter to the idea of a pension pot, which may be why some confusion exists on this aspect of NZS policy as well.
- 4 Strictly speaking it should be life expectancy at age 65 assuming one has survived from age 60 to age 65, and life expectancy at age 70 assuming one has survived from age 65 to age 70.
- 5 Statistics New Zealand 2010–12 life tables, while based on actual deaths over the period 2010 to 2012 as the numerator, necessarily use estimates of the population as the denominator in the absence of census information delayed by the Canterbury earthquakes. They show greater relative improvement in male mortality than in female mortality.
- 6 These are period life expectancies, assuming no change in mortality rates in future years.
- 7 This might be seen as too low by a number of experts; for a comprehensive discussion in the New Zealand context refer to O'Connell (2012).
- 8 There is no direct investigation of the impact of socio-economic differences on New Zealand mortality rates, but the work by Blakely et al. in the Decades of Disparity series identifies that some 50% of the difference between

mortality rates for Māori and non-Māori can be put down to socio-economic factors. In a presentation, an author suggested that, given the limitations of their study (the only socio-economic factors available were those that can be derived from census information), rather more of that difference could be due to socio-economic difference. Using published mortality rates for Māori and non-Māori as proxies for low and high socio-economic status groups is likely to be conservative, as non-Māori rates include some lower SES non-Māori lives, and Māori rates include some higher SES Māori lives. The difference in period life expectancy for males between higher SES and lower SES groups on this approach is 3.8 years, and for females is 4.6 years.

9 In considering what is an appropriate discount rate the context is the 'safe' investment open to individuals in relation

to the NZS income stream amounts, not government or corporate finance.

- 10 These results incorporate the advantage from lower tax in deferral. Without this, the range would be 129% to 142%. Even so, the likelihood that those choosing deferral will be longer-lived than others even within the same SES group counsels caution in using a higher range, even if one were not convinced of the need to exclude tax advantaging.
- 11 Selection effects in deferral, i.e. that those choosing deferral will do so in the belief they will be long lived, might suggest a lower relativity than 125%.
- 12 Government will also need to record on its balance sheet: (1) a credit, under early uptake, for anticipated reduced NZS from age 65 in respect of those who elect that choice; (2) a debit, under deferral, for anticipated increased NZS from

deferral age in respect of those who elect that choice. This will be needed to ensure transparency of NZS cost.

- 13 This may explain the low take-up of deferral in the UK and Australia.
- 14 As referred to earlier, pricing can never expect to be accurate, and the government would need to set aside reserves on the same basis as private annuity companies.
- 15 The cost of holding contingency reserves necessarily has to be included in the annuity price, and hence products such as annuities deferred to a later age, by reducing uncertainty, are the most promising for investigation since they require lower reserves.

References

ANZ/Retirement Commission Financial Knowledge Survey (2006), available at <http://www.cflri.org.nz/research-and-reports/financial-literacy>

Blakely, T., M. Tobias, J. Atkinson, L-C. Yeh and K. Huang (2007) *Tracking Disparity: trends in ethnic and socioeconomic inequalities in mortality, 1981–2004*, Public Health Intelligence occasional bulletin 38, Wellington: Ministry of Health

Johnson, B. (2007) *Trends in Life Expectancy by Social Class 1972–2005*, London: Office for National Statistics,

Laibson, D., A. Repetto and J. Tobacman (1998) 'Self-control and saving for retirement', *Brookings Papers on Economic Activity*, 1998: 1, pp.91–196

Langford, A. and B. Johnson (2010) 'Trends in social inequalities in male mortality, 2001–08: intercensal estimates for England and Wales', *Health Statistics Quarterly*, 47, London: Office for National Statistics

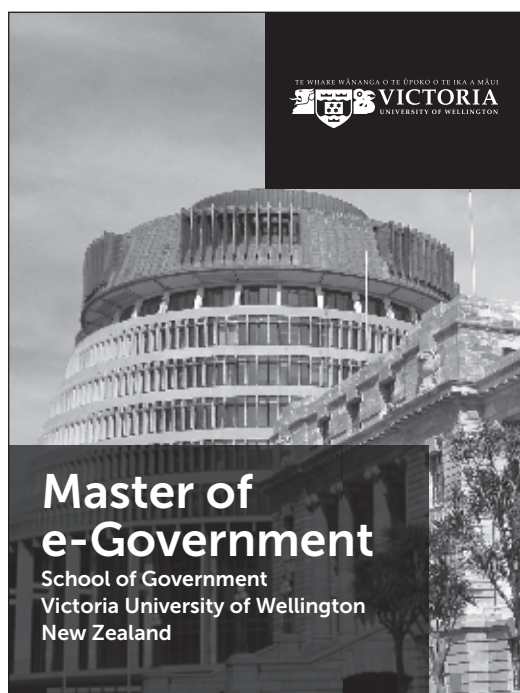
Monk, C., J.A. Turner and N.A. Zhivan (2010) *Adjusting Social Security for Increasing Life Expectancy: effects on progressivity*, working paper 2010–9, Boston: Center for Retirement Research

Rashbrooke, G. Flexi-Super: not really such a good idea. IGPS WP 13/04 <http://igps.victoria.ac.nz/publications/publications/show/348>

O'Connell, A. (2012) 'Underestimating lifespans? Why longevity risk exists in retirement planning and superannuation policy', <http://researcharchive.vuw.ac.nz/handle/10063/2135>

Statistics New Zealand (2013) Population life tables 2010–12, <http://www.statistics.govt.nz/~media/Statistics/Browse%20for%20stats/NZLifeTables/HOTP10-12/nzplt2010-12tables.xls>

Treasury (2013) 'Long-term Fiscal Projections: Reassessing Assumptions, Testing New Perspectives', <http://www.treasury.govt.nz/government/longterm/fiscalposition/2013/pdfs/lfts-13-bg-ratna.pdf>



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