

Managing assets and income in retirement

An issues paper prepared for the Retirement Commission

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Introduction

This issues paper has been prepared as an input into the review of retirement income policies being conducted by the Retirement Commissioner. It is concerned with the problems facing New Zealanders wishing to use the assets they have accumulated pre-retirement to meet the need for regular and predictable income at different stages of aging. In particular it considers whether there are particular concerns with the market for annuities that the government should address.

Analysis and debate around retirement income policies in New Zealand typically focus on two aspects: the central role played by New Zealand Superannuation (NZS) and the adequacy of savings accumulating under the voluntary saving regime. The issues around how such savings can be translated into retirement income seem to be accorded a much lower priority in the debate. For example, the earlier independent reviews of retirement income policies in 1992, 1997, 2000 and 2003 devoted relatively little space in their reports to consideration of the way retirees might manage their assets and incomes over and above NZS.

This low level of attention paid to annuitisation of individual savings balances and other options for managing the decumulation of assets should not be too surprising in the New Zealand context. Retirement income policy has rested on the cornerstone of NZS as the predominant means of providing basic income security in old age and dealing with 'longevity risk' with gender-neutral, inflation protected pension payments. Furthermore, ever since the 1993 Multi-party Accord on Retirement Income Policies, governments have made it clear that individuals should assume the responsibility for choosing whether to top up their incomes from their own private savings, and if so, how best to do this without special tax-favoured treatment of retirement savings¹.

One exception to this 'benign neglect' of annuity issues occurred in 1997 when the then government developed a proposal for a compulsory retirement savings scheme to be put to a national referendum². In that case, the need for a workable system of annuities was particularly important because the scheme was designed to eventually replace NZS with a similar stream of retirement income based on annuities.

Although the compulsory saving proposal was rejected by the electorate, its annuity component offers an informative insight into the issues that need to be considered when designing a practical working scheme. The details are described later in this report. They prescribed a major role for the government, including the assumption of some fiscal liabilities, in order to guarantee protection while trying to limit the efficiency costs associated with compulsion.

¹ The introduction of KiwiSaver from 1 July 2007 might signal the start of a shift in this position.

² New Zealand Government (1997)

Outline of the paper

In order to prepare the ground for discussing the role of annuities in retirement income provision, this paper starts by looking at the way people go about accumulating wealth and the factors that might influence both saving and retirement decisions. It then discusses the decumulation decision itself and the role that NZS might play in that decision.

The paper then moves on to focus on the constraints affecting annuity markets. It discusses the design of the 1997 RSS annuity proposal as a case study.

The paper argues that there is an implicit social contract in New Zealand relating to roles, values, responsibilities and expectations about retirement income provision and that this needs to be factored into any consideration of what can reasonably be achieved in the way of a better functioning annuity market. Some options are suggested for such an improvement, but a plea is also made for consideration to be given to facilitating the development of other decumulation strategies, should annuities still prove unattractive.

Accumulating assets

As people move through their working life they tend to accumulate wealth. Some of the most important forms of wealth are not the financial assets one typically associates with saving, but human and social capital and an owner-occupied dwelling. These forms of wealth can be drawn on either to generate income or to substitute for having to pay someone else to provide shelter, and they need to be kept in mind when considering the decumulation decision, below. It also needs to be remembered that acquiring these assets is frequently associated with taking on financial liabilities for a period, such as education loans and mortgages.

The other major asset to bear in mind is the prospect of receiving NZS as a regular income from age 65. Unlike the balances in defined contribution saving schemes, the accumulating value of the NZS 'promise' is difficult to convert into a present value wealth-equivalent for each person, since individual life expectancy is not known.

When it comes to considering the accumulation of other, financial, assets, saving has many possible motives³. Each comes with associated expectations for return, timing of need for drawdown, flexibility of drawdown etc. Many individual bouts of saving are used for purposes other than financing retirement, although economists often find it helpful to assume that people treat money as fungible. So-called 'retirement saving' may

³ In its 1998 report on retirement savings "A Wake-up Call", the Investment, Savings and Insurance Association of New Zealand (ISI) suggested ten possible reasons why people save. These may be summarised as: precaution, foresight, calculation, improvement, independence, enterprise, pride, avarice, custom and accident. The first eight of these are attributable to J M Keynes.

be just one of many potential savings streams, with several motives and associated issues that can arise at certain key times in the process.

The life-cycle model of saving

The standard life-cycle theory model of saving in economics treats saving and dis-saving as a means towards the objective of smoothing consumption over a person's expected lifetime, since maintaining a uniform rate of consumption is deemed to be the way rational decision makers can maximize the utility of that consumption⁴.

The work of Scobie *et al* analysing the saving patterns of New Zealanders is broadly in the spirit of this theory and approach, although they recast it as a benchmark for testing the 'adequacy' of individuals' current saving rates. If a worker on a given income is currently saving at the 'prescribed' saving rate, then, assuming this pattern continues, their accumulated wealth at age 65 would be just the right amount to purchase an annuity that, together with NZS, would give them enough net income over the remainder of their life to experience the same level of consumption that they have today⁵.

Having calculated a theoretical 'prescribed' saving rate for each individual, Scobie *et al* can then report how many people are actually saving above or below this rate. By implication, those saving below the prescribed rate will, on the model's assumptions, face a lower living standard in retirement than they experience today, unless they start to increase their savings rate.

The results reported by Scobie *et al* are that, particularly among older age cohorts, typically the actual saving rates do in fact exceed the rates needed for maintaining current living standards into retirement. A major contributing factor to this result is the existence of NZS, which provides a floor of retirement income to protect basic living standards. This means that the prescribed saving rate for lower income earners is low because they will not require a large annuity as a top-up.

Scobie *et al* allow for the possibility that housing wealth is regarded differently from other retirement wealth but also explore the implications of relaxing that assumption by including home equity in the pool available to be converted into extra income in retirement⁶.

⁴ The simple life-cycle model can be modified slightly to take into account the uncertainty of life expectancy; in this case, consumption will tend to rise until a person's retirement and fall subsequently.

⁵ It is important to note that annuities are used in these models as a theoretical device, a means of converting wealth at retirement into a regular flow of income for the purposes of comparing consumption today with consumption in the future. No claim is made that everyone will buy such an annuity at age 65, nor that annuities in the form modeled are actually available in New Zealand. The results, while based on empirical data on households' current incomes, saving and consumption, are hypothetical and conditional with regard to people's future saving and decumulation behaviour and options.

⁶ Scobie *et al* (2007). They conclude that even if half of housing equity is converted to retirement income, the reduction in the prescribed saving rate is still modest.

Human judgment and decision-making

Behavioural economics is a relatively new discipline in the social science field⁷. It involves the empirical study of how people think, choose, decide and act in real-life settings and challenges the validity of assuming fully rational behaviour in some of these settings.

“Real people do not follow logically consistent choice and decision protocols. By now abundant experimental and real-world observed evidence – buttressed by common sense – confirms that individuals do not always think and act in ways consistent with the standard, and limited, axioms of rational choice”⁸

More recently, behavioural economics has been applied in the context of public finance to create a new field of study known as behavioural public finance. Describing this emerging field of study, McCaffery and Slemrod (2005) argue that public finance models that aim for real-world relevance ought to take behavioural insights into account, but this does not mean completely abandoning traditional public finance or the consumer sovereignty principle⁹.

A number of these behavioural insights apply when considering the saving (accumulation) behaviour of individuals. For example:

- When deciding whether to save now or later, people act as if they do not have the self-control to resist behaviour that has short term benefits but longer-term costs (myopia)
- Many people mis-forecast their own future preferences (hyperbolic discounting)
- The way in which a savings choice is presented can affect the choice that is made (framing effects)
- People often react as if different sources of wealth need to be applied to different uses (mental accounts)
- People tend to react to a loss more harshly than the failure to gain an equivalent good (endowment effect)
- People have difficulty in integrating a number of components to form a consistent global judgment, for example the cumulative effect of a number of tax and benefit components (disaggregation effect)
- People’s perceptions of the ‘fairness’ of rules and the competence and willingness of the government to enforce them can, in some contexts, affect the prevalence of ‘free-riding’ over and above the risk of being caught.

What this implies for public policy is debatable. If people appear to be making ‘poor’ judgments about their financial futures, do they need paternalistic protection, even though this would seem to infringe the consumer sovereignty principle? Is there a half-way

⁷ Much of the early underpinning research was undertaken in the 1970s.

⁸ McCaffery and Slemrod (2005)

⁹ “Consumer sovereignty” is the normative principle that the basis for evaluating social policies should be the well-being of society’s members, as they judge this well-being to be.

house of “cautious paternalism” with interventions that are valuable for people who are making errors, but with relatively small costs for people who are fully rational?

An example of the latter is the use of default rules, such as the ‘opt out’ feature of KiwiSaver, which is expected to help employees to lock themselves into a saving habit.

The 1992 Todd Task Force considered some of these issues when evaluating the different options for private provision of retirement income – voluntary, tax favoured or compulsory saving. Their advocacy for the voluntary provision option revealed a desire to maximize people’s choice and flexibility, even though this could result in greater dependence by some on the public pension. The benefits were seen to come from having more competitive financial markets and, potentially, higher economic growth.

The Todd Task Force’s implicit support of the principle of consumer sovereignty suggests that they did not consider that there was a strong case for paternalistic interventions over and above the national superannuation scheme itself. They did recommend improved product disclosure and financial education, but while savers might benefit from having better information, there is little suggestion in the report that they are inherently biased in their decision making.

A similar set of considerations arise when we look at the issues around decumulation later in this paper. Are people basically rational in this area, or are they likely to make such poor decisions in managing their assets and income in retirement that the government should mandate certain products or behaviours? Is there a case for “cautious paternalism” with regard to influencing the evolution and operation of certain markets?

Retirement as a life-stage transition

What is commonly referred to as ‘retirement’ can, of course be one of many possible transitions in a family’s pattern of work, income and other activities. In terms of earnings, ‘retirement’ may involve a change of job, a reduction in hours worked in a current job, a shift to self-employment or a decision to take time out from the labour market for a period or permanently.

Transitions like these are often accompanied by changes in expenditures. The costs of working change, there may be relocation to a new house, travel or simply a search for another life-style.

Thus a new pattern of income and expenditure is likely to emerge, requiring a reassessment of financial circumstances and some drawdown of capital for lump-sum items or conversion of assets to income to rebalance the family budget.

Ideally, a life-stage transition is something that has been financially planned for and the timing of the transition has been deliberately chosen to suit the needs and circumstances of family members. There is a growing literature that seeks to explain the timing of

individuals' retirement decisions in terms of changes in the financial disincentives to remain working an extra year. Cross-country comparisons of retirement behaviour show that the design of pension scheme entitlements is clearly associated with the proportion of older people still in the work-force at a given age¹⁰.

In the case of New Zealand, Hurnard (2005), noting the rising employment rate of older people in recent years, analyses the retirement incentive structure. He concludes that public policy design contains several features that create stronger incentives on older workers to remain in the workforce than exist in most other OECD countries.

Essentially, these features are:

- No compulsory age of retirement;
- NZS is neither work-tested nor income-tested;
- No early eligibility option for receiving NZS;

When the age of eligibility for NZS was being progressively raised from 60 to 65 in the 1990's many older people found that they had little financial capability to retire early. This was because private saving for retirement had been discouraged by the relatively generous national superannuation system from 1977 and the operation of the surcharge in the early 1990s.

Hurnard argues that some of the factors depressing private retirement saving are likely to be less relevant to the first wave of post-war baby boomers who are now approaching retirement age and have a higher rate of wealth accumulation. Some of these may draw down savings to finance early retirement or periods out of the workforce for lifestyle reasons. Other high earning workers may seek to continue accumulating capital so they can top-up their NZS entitlement with extra private income when they eventually decide to leave the workforce.

The point to note here is that we can expect there to be a great deal of variation among families in the timing and circumstances of a 'retirement-like' transition in their lives. It may be just a re-jigging of income flows, employment or location, or it could involve a complete re-casting of these following a significant re-assessment of future prospects in the light of health, spouse or other family crises, redundancy and enforced unemployment etc. Of course, positive shocks can also trigger these sorts of re-assessments, e.g. bequests received.

The decumulation decision

Important decisions may be triggered by the prospect of a changing income and lifestyle. Translating one's income and assets at the time of a life transition into a new mix of retirement income and assets involves people making a number of choices and weighing up competing options. For example, there are choices to be made between the desire for certainty versus flexibility, consumption now or later, spending time at work or not, splurging the children's inheritance or setting aside something extra for them.

¹⁰ For example Gruber and Wise (2002)

Above these decisions hangs the uncertainty of not knowing how long one will live, what special costs might arise in the future, future changes in interest rates and asset prices, and so on. At the psychological level, people may not know how to strategise, whether to trust a financial adviser, or may resist facing the prospect of their own mortality. All of these uncertainties can make financial planning daunting and difficult, which may be why many people avoid it.

Retirement income planning is commonly seen as the search for a regular stream of income for the rest of one's life, where the level of income is high enough for the retiree to achieve a comfortable standard of living. This is essentially the back end of the life-cycle model of saving discussed earlier. Being able to purchase an annuity at an actuarially fair price could be seen as a way of dealing with many, but not all, of the risks inherent in an uncertain future.

The need for regular and predictable income will not, however, always be everyone's predominant consideration. A nest egg for special consumption occasions and gifts (family bonding?) may be important to some. Also, having a stock of liquid assets to meet sudden shocks and lumpy costs is useful for a rainy day. So there may be a risk that too large a proportion of assets are converted into a regular flow of income, so that people then have to re-embark on accumulating a pool of funds for these purposes, or rely on borrowing or a reverse equity mortgage. In fact, needing a lump-sum in an emergency might be a more appropriate use of a reverse equity mortgage than some of the other uses that are sometimes promoted in the marketing of these products.

Before turning to the options for asset decumulation, it is worth considering the role that NZS plays in the retirement income planning decision.

The role played by New Zealand Superannuation

NZS is the major mechanism for providing regular and predictable income for older people. In terms of the World Bank's revised classification of multi-pillar pension systems, NZS sits in Pillar 0: a basic or social pension funded from budgetary revenues. However, its rate of payment is higher than one would normally expect of a system that is intended solely to prevent poverty, which is the objective behind most other countries' lowest tier components.

In terms of helping reduce the risk of financial hardship in old age, NZS has some real strengths:

- Almost universal coverage of people over age 65;
- Inflation protection of payments (at least, and likely to be more as a result of the wage floor linkage);
- Covers the longevity risk efficiently, especially for women;
- Funding on a PAYG basis out of general taxation means it does not (appear to?) penalize individuals with shorter than average life expectancies who might, under compulsory contributory schemes, cross-subsidise the rest;

- The amount of NZS income is set at basic needs, so there is less need for a comprehensive layer of targeted supplementary assistance than if NZS were set at a poverty alleviation level;
- Avoids administrative costs associated with compulsory defined contribution schemes;
- Standard guaranteed amounts for all eliminate uncertainty, signal fairness and promote social cohesion;
- No income test means that voluntary top-up forms of income are not penalised;
- Similarly, no work test means that the option to supplement the pension with earnings is not penalised.

The disadvantages of NZS alongside a voluntary savings environment are:

- The projected future cost of NZS, particularly with an aging population, could impose rising tax burdens on the next generation of workers and limit the growth potential of the New Zealand economy;
- People expecting to get NZS when they retire may take little or no responsibility for their own financial planning for old age;
- People who rely solely on NZS and choose not to enter another superannuation scheme may find that their living standards are lower than they anticipated;
- Having a standard age of entitlement could be seen by some as unfair on people/groups with lower than average life expectancy, eg Maori – they get fewer benefits but pay the same earner taxes to fund payouts to the cohort of retirees under PAYG and contribute to NZS Fund accumulation.

There is room to debate the weight one should attach to these advantages and disadvantages. However the key point here is that, with NZS in place, the problem of choosing how and when to decumulate assets remains for many individuals, but it becomes much less critical. People already have a reliable basic income, so the risk of underachieving the next tier of income has that much less cost associated with it. In other words, if annuity markets are failing, this failure is less costly than if there was no underlying retirement income coverage.

Furthermore, from a public policy perspective, whether middle and higher income people achieve and maintain their own pre-retirement standard of living is usually seen primarily as an issue of personal choice falling in the private domain and therefore a matter of lower priority for public policy than the social protection of vulnerable groups¹¹.

One must be careful not to exaggerate this point. For example, Rashbrooke (2006) estimates that NZS would replace only about 44% of the median income of earners aged 50-65, when a rule of thumb is that about 70-75% replacement of pre-retirement gross income is needed to maintain the same living standard (allowing for some economies from not working). He concludes that NZS on its own will fall short for many people and that some viable mechanism for wealth management and longevity insurance is essential.

¹¹ Of course, political dynamics can change the relative weight given to these considerations, and has probably influenced the evolution of pension systems in many countries.

St John (2006) argues in a similar vein that, in comparison with other OECD countries, the level of NZS is relatively low for all but the lowest income earners. She argues that other countries have income replacement as a much more explicit goal of policy and that there are still a number of risks, particularly around escalating end-of-life health care costs, that mean the state has a role to play in promoting new solutions, such as a public/private insurance partnership.

The market for annuities

In a recent OECD working paper discussing annuities markets¹², Fiona Stewart noted that in many countries there is a growing need for annuity products. Key drivers of this trend are increasing longevity, decreasing state pensions and a rise in defined contribution pension plans. At the same time, societies and employers have begun to rethink how much they are willing to underwrite annuity risks, and annuities markets remain underdeveloped in many countries. The paper went on to explore why annuity markets have not developed further, and what policy options exist for encouraging them to expand.

Stewart suggested that reasons for the lack of annuities products are to be found on both the supply and demand side of the market.

Supply side constraints

- **Pricing**
Insurance companies are finding problems in pricing their annuities, largely because of difficulties of forecasting changes in mortality. Many countries have limited demographic data and no suitable model to help predict reliably the rate of longevity increase. They also have difficulties in distinguishing between mortality rates in different segments of the population and in their own annuity pool, information that is important for countering the problem of adverse selection. National restrictions on differentiating risk groups on some characteristics other than age (gender, race or genetic test outcomes for example) mean that even if information were available it could not be used.
- **Matching assets**
Insurers have difficulty finding suitable assets to match the structure of their annuity liabilities. For example, many countries have limited supplies of long-term government bonds and index-linked securities. Furthermore, there are few instruments for hedging longevity risk. Where insurers are forced to operate with a mis-matched position, for example by investing in other classes of assets, then they will require a higher rate of return, but will also have a correspondingly greater requirement to hold prudential capital so that they can make up for any short-falls that may arise as a result of the mis-match.

¹² Stewart (2007)

- **Solvency**
Regulators tend to adopt a conservative stance when setting reserve requirements and specifying what is an adequate level of capital. Too conservative a reserve requirement eats into profitability and can dry up the supply of annuities.

Demand side constraints

- **Complexity of products**
Surveys across many countries reveal that annuity products are generally unpopular among consumers. This may be due to their perceived poor value for money, the lack of transparency in their pricing, or perhaps the absence of accurate, tailored financial advice available. People may be unaware of a number of specialized products designed to address different aspects of risk, for example “impaired life annuities” for those with demonstrated lower life expectancy.
- **Lack of understanding**
People are also subject to the biases that were discussed earlier in the section on human judgment and decision making. Many find it difficult to decide what they want or understand the trade-offs e.g. protection vs. greater flexibility. The concept of a longevity risk-sharing pool can be difficult to grasp.
- **Taxation and regulation**
Adverse tax treatment of annuities can present a significant barrier to their take-up in comparison with the, possibly tax-favoured, tax treatments of other assets (particularly housing). As mentioned above, other heavy-handed regulation of the annuities market can affect the pricing of annuities and depress demand.

The New Zealand situation

Many of the supply and demand constraints identified by Stewart are relevant in the New Zealand context. Insurers face the same difficulties in trying to judge trends in mortality rates. Government bonds are available for only medium terms, not long enough to match the length of some annuity streams. If insurers have to look overseas for really long term securities, they would effectively substitute currency risk for longevity risk.

There appears to be a consensus that the market for traditional annuity products cannot provide accessible longevity insurance in New Zealand¹³. The well-known inefficiencies due to the inherent structural problems of uncertainty, information asymmetry and interest rate volatility mean that insurers are forced to build in a considerable margin when pricing their products.

¹³ Rashbrooke (2006)

In addition, the current tax treatment of annuities would appear to have “killed off” the annuities market¹⁴. The 2003 Periodic Report Group considered that the tax treatment of annuities, including house equity reverse annuity mortgages, was a significant barrier to their development¹⁵

This view has also been expressed by the officials who are presently looking into life insurance tax reform:

“The annuity market, while well developed overseas, is very small in New Zealand. A major impediment is that the majority of potential annuitants are on a 21% effective tax rate rather than 33%. Therefore the product is not perceived to offer value to clients” (*Life Insurance Tax Reform, Officials paper no 1 – scope of the review, 26 Sept 2006*).

Unfortunately it appears that this aspect may not be addressed in the immediate future. The officials have suggested a new model for taxing components of life offices’ income, but are not proposing to apply it to annuity products. In their follow-up discussion paper they say:

“The taxation of annuities presents unique problems, and the methodology discussed in this paper does not at this stage extend to these products.” (*Life Insurance Tax Reform, Officials paper no 2 – suggestions for reform, 27 Feb 2007*)

Annuities assume particular importance when a mandatory contributory saving scheme is the central component of a country’s retirement income system¹⁶. It is commonly a requirement under such systems that at least a proportion of the accumulated individual balances be converted into an annuity at retirement, since the whole objective of these systems is replacement of earnings with a comparable level of pension in retirement. Ensuring that suitable annuities are available is therefore an obligation on the government that mandates the system¹⁷.

In a recent book on New Zealand’s retirement income policy, Richard Hawke argues that the current system is unsustainable and advocates supplementing a basic universal public pension with a compulsory, fully-funded, defined contribution (DC) saving scheme comprising individualized accounts, and constrained choice of investments to help control administration and marketing costs.

When it comes to considering the role of annuities in his proposal, however, Hawke is circumspect. He notes that mandating the purchase of annuities limits adverse selection, but on the other hand, “annuity market regulation is pervasive, important and

¹⁴ Personal communication with Charles Hett, consulting actuary. In a similar vein, Susan St John has described the tax treatment of annuities as their “death knell”.

¹⁵ Periodic Report Group (2003), p89.

¹⁶ These schemes fall into tiers 1 and 2 of the World Bank’s classification of multi-pillar schemes.

¹⁷ There are some notable variations among countries where there is resistance to taking annuities. Australia permits people to receive their contributions as a lump-sum and still potentially access the age pension. The UK justifies the requirement to purchase an annuity as a quid pro quo for a favourable tax treatment provided during the accumulation phase.

problematic”¹⁸. He suggests it might be preferable to let individuals decide what to do: both how they save and how they spend.

Having a ‘captive’ pool of annuity purchasers helps insurers to overcome some of the difficulties mentioned earlier, particularly adverse selection. Nevertheless, governments may want to design a range of additional special subsidies and conditions around mandatory annuitisation in order that it meets a range of public policy objectives.

Example – The compulsory RSS annuity proposal

A good example of the design of such an annuity-based set of policy rules was included as part of the proposed compulsory retirement savings scheme (RSS) that was put to a public referendum in New Zealand in 1997¹⁹.

The proposed RSS was a compulsory retirement saving scheme designed to eventually replace NZS. At the start of the scheme individual contributions would be 3% of earnings, eventually rising to 8%, and would be placed in an investment account. The savings target, in 1997 dollars, was \$120,000²⁰. The idea was that this amount would be enough to purchase, at age 65, a tax-free annuity equivalent to 33% of the after-tax average ordinary time weekly wage (i.e. 66% per couple)²¹. The annuity would thereafter be adjusted annually by the consumers’ price index²². The government would review the standard annuity price every year in line with the market.

People were required to purchase their annuity at age 65 but could elect for it to be deferred.

However, many low-income earners might not achieve the target of \$120,000. Therefore the government promised to top up any shortfall in individual savings at age 65 to enable the full annuity to be purchased. Furthermore, the government would give all women the actuarial difference to equate with men, regardless of their savings total. Government top-ups would be proportional to the time a person had spent tax-resident in New Zealand. Foreign workers departing NZ would have to wait to age 65 to get an annuity.

RSS standard annuities would be

- Whole of life
- Income guaranteed for 10 years or until reaching age 75. On early death, payments arising from personal savings that would have been made to age 75 would go into the estate. Government would retain its proportion of any top-up.

¹⁸ Hawke (2005), p144.

¹⁹ NZ Government (1997) “You and Your Retirement Savings: the proposed compulsory Retirement Savings Scheme”

²⁰ Any excess above the savings target could be taken as a lump sum.

²¹ Single person supplements would be paid out separately.

²² Note that this CPI indexation would over time produce a somewhat lower level of pension for older cohorts than under today’s NZS 66% wage floor indexation provisions, which amount to de facto wage indexation. Also, each age cohort would receive a different amount of annuity.

- Inflation adjusted. The annuity providers would bear the risk up to 3% (or NZRB inflation target) and the government would pay a supplement to providers if inflation is higher than this.
- Income would be tax free.

The proposal had transitional arrangements as NZS was to be phased out. The cost of NZS would fall from about 9% to 2% of GDP over time.

As part of the proposal, regulation of annuity providers (private commercial organizations), would be reviewed and strengthened. Options for strengthening the existing framework were listed as:

- Strengthening solvency requirements for retirement income products;
- Products to be backed by investments of a minimum quality;
- Review capital adequacy requirements
- Require greater disclosure to a supervisory agency
- Reviewing fiduciary obligations.

Despite the proposal being rejected in the 1997 referendum, it received favourable comment from overseas pension system designers, such as the World Bank.

The key point to note in the context of this paper is that in order to ensure that the annuities market could operate well the government designed a proposal that:

- had the government itself assume a proportion of the overall risk (for example, of inflation running above the policy target rate, or of low investment returns causing a higher number of savers to not reach the saving target),
- incurred a significant fiscal cost in terms of single person supplements, savings top-ups and subsidising gender-neutral annuities,
- placed some of the longevity and investment risk back with individual age cohorts, by re-pricing annuities and revising the savings target each year, and
- introduced elements that helped to limit potential distortions, for example by capping the amount that savers had to put into an annuity and by investing in regulatory reforms.

Even with this degree of intervention, the scheme was going to provide only a modest degree of income replacement, similar to that provided under NZS. Although contributions were to reflect people's 'ability to save' according to their own incomes, the return on those savings was hardly related to their contributions, because of the government top-up to a standard pension amount. In effect, the proposal was not a full DC scheme in the traditional sense of getting back a return proportional to your contributions.

One is led to ask whether this degree of government intervention and assistance in the annuities market would be warranted in today's environment, given that annuities are one way to supplement NZS, not replace it and that their use is voluntary, not mandatory. The following section explores whether there is an implicit social contract that suggests that New Zealanders would support such intervention.

The implicit social contract

Any description New Zealanders' attitudes and values with regard to retirement income provision is bound to be controversial²³, but this is attempted here in order to bring out the likely points of tension and debate should various initiatives be considered to improve the operation of annuities. The views are those of the author, informed by two decades of exposure to the policy debates and the 'wobble-doll' phenomenon²⁴.

- People accept that NZS provides an important income protection guarantee for older people and are willing to concede the role of financing this via general tax revenue to the government, albeit with some dispute over the trade-off between average tax burden and the level of protection.
- People accept that there is a degree of inter-generational cross-subsidy implicit in the PAYG system. However, rising individualism, wage linking NZS payouts and widening distributions of incomes and social/ethnic diversity are probably starting to put pressure on the implicit inter-generational agreement.
- A partially offsetting factor might be the reduced social obligation placed on children to financially and physically care for their elder parents. (i.e. quid pro quo is to pay a higher tax rate for the state to provide NZS and to subsidise rest-home care). The setting up of the NZ Superannuation Fund could be interpreted as another way to ease some of this pressure by getting baby boomers to partially pre-fund the future cost of their NZS pensions.
- Having a standard, universal entitlement amount of public pension is valued for fairness reasons, despite the implicit differences in people's lifetime "contributions" through taxes, because it signals common citizenship and social cohesion and 'corrects' for inequalities within a cohort's human capital, opportunities, luck and expected longevity, especially with regard to Maori and women. Tightly targeted retirement income support programmes are likely to be regarded as undesirable, despite their potential to reduce the cost to the taxpayer.
- People do not want to be obliged to support a compulsory contributory scheme that seeks to raise earnings replacement rates, especially if it results in different sized payouts. Decisions on the work/savings/ retirement interface are seen to be the responsibility of individuals interacting with and responding to market signals.

²³ Other commentators, particularly those advocating reform of the current system, are likely to have a more sceptical view of the degree of social consensus. For example, Hawke (2005) comments "an overall societal view was consistent with the "cradle to grave" protectionist policies of the 1970s; however this is not consistent with the growth in individual determinism and allocation of risk between both the individual and the government" (p 132).

²⁴ This is a reference to the pattern noted by Susan St John whereby attempts to push superannuation policy sharply in one direction are followed by a countervailing 'bounce back' towards some sort of equilibrium position..

- People are likely to be receptive to government initiatives that open up new options for retirement income management and help people to make better informed decisions, with the proviso that these are not seen as redirecting significant funds away from core government business, creating unfair loopholes or entrenching privilege.

If this picture of Kiwi attitudes is reasonably accurate, then three questions need to be considered:

1. Are there policy changes that the government could adopt that might reinvigorate the market for annuities?
2. What are the chances of these policies succeeding?
3. If these changes involved additional fiscal cost and risk bearing by the government/ taxpayer, would they be justifiable, given that this would tend to crowd out other public policy options?

The next section attempts to find some policies that would offer a favourable answer to these questions.

Some options

The growth in defined contribution plans (including the government's own sponsored voluntary KiwiSaver scheme) that pay out lump sums at maturity, suggest that without a well-functioning annuities market, people would have little option but to figure out their own capital draw-down strategy in retirement²⁵. In particular, they will need to consider whether NZS provides sufficient longevity insurance and if not, how much of their lump-sum payout needs to be committed to addressing that risk and how much can be devoted to other objectives.

There are some ways in which the government might help in this situation without itself incurring major fiscal risks and these are suggested below.

Tax treatment of annuities

A reconsideration of the current tax treatment of annuities with the aim of achieving more neutrality vis a vis other asset holding options would seem likely to remove a significant impediment. However, it is worth noting that as long as investments in housing continue to maintain a tax favoured position, the gains might be limited.

Better data and analysis of longevity risk

Stewart suggests that improved statistical data, for example segmented mortality data, would allow for more flexible pricing of products by insurers, address adverse selection

²⁵ Rashbrooke forecasts a substantial decline over the next 40 years in Government Superannuation Fund and other pension payments. He comments "It therefore appears the older population, absent any change in current attitudes to pension provision, will become increasingly reliant on managing accumulated financial assets to supplement NZS income, without the benefit of longevity insurance."

and increase trust in pricing. There may be ways in which the government could assist, either directly or by facilitating the exchange of information on analytical and forecasting techniques from other administrations. But care is needed in considering which kinds of risk-categorisation should be permitted, encouraged or prohibited.

Asset – liability matching and risk pooling

There may be regulatory restrictions or financial penalties associated with certain private sector initiated products, such as longevity bonds that help hedge longevity risk, or with the sharing of longevity risk between annuitants and providers, or with the formation of extreme risk pools among providers (and internationally). Some further investigation of whether these options are unreasonably restricted could be worthwhile.

The World Bank suggests that sharing investment and longevity risk with annuitants as one approach for dealing with the question of who should bear the risk of rising life expectancy and uncertain future investment income²⁶. This would be done using variable annuities, whose value varies annually depending on actual longevity and investment outcomes. The problems this approach could pose for low-income pensioners are less relevant in the New Zealand context, where this group would be unlikely to purchase them because of the presence of NZS. Nevertheless, as the World Bank notes, the government has a large responsibility for providing consumer information and for standardizing the terms of payout variation to facilitate comprehension and comparability.

In one variant of the variable annuity idea, Rashbrooke recommends setting up an annuitised fund as a suitable mechanism for delivering effective asset management in conjunction with longevity insurance. This would require a certain amount of government intervention, including:

- Investigating risk classification and setting differential mortality rates for population subgroups, along the lines suggested above;
- Accepting lump sums from each year's entry cohort and paying the pensions that have been purchased;
- Adjusting payments in the light of mortality experience (under the re-pricing version of Rashbrooke's option);
- Administering a stop-loss insurance arrangement;
- Terminating a cohort's fund and returning the remaining assets once the cohort has shrunk to a certain size²⁷. The survivors would then need to obtain an annuity from another source or manage their own capital draw down.

²⁶ World Bank (2004), p167. The Bank also lists heavy regulation of the industry and placing greater direct risk-bearing responsibility on the government as two other possible approaches. They comment that the "best" solution for the annuity dilemma remains an unresolved and controversial issue.

²⁷ Without this provision, the scheme would resemble a tontine under which the last surviving member collects all the remaining asset pool.

While this proposal has some theoretically attractive features, it seems difficult to justify this degree of government involvement when the government's major investment in old age income support is in NZS.

Regulation and consumer protection

Stewart, writing in the context of advising on underdeveloped annuities markets in the OECD generally, advises that capital requirements may be prudently reduced on products that offer less comprehensive guarantees than conventional annuities, for example investment linked products. Generally, solvency regulation should avoid being so strict that it unreasonably impedes the supply of annuity products.

Similarly she argues that regulations should be carefully crafted to encourage competition between providers and avoid restrictive practices and opaque pricing and product information. A range of product types should be permitted, including risk-sharing products, but with easily understood and comparable information to be published, with adequate disclosure and transparent pricing.

It may be that the regulatory environment in New Zealand is less restrictive than in the places Stewart is referring to, but this should be further explored.

Financial education

As well as forming part of the content of general financial literacy education courses, the key features of annuities should be part of more targeted education and information resources available to people approaching retirement age. These would help address some of the public misconceptions about what constitutes 'fair value' when buying an annuity and perhaps go some way towards counter-balancing some of the other 'irrational' evaluative and decision-making behaviours that were described earlier in this paper.

Remaining issues

The list of options presented above is relatively short and unspecific. This reflects a view that there are limits to what can be done to overcome the basic structural problems with annuities. These problems relate to both longevity and investment risks.

Over the past century, lengthening life expectancies and earlier retirement ages have combined to place a much greater strain on the annuity product, which must now cover some people for 30 or more years of retirement. In terms of matching securities, the longest New Zealand bond term is currently 10 years, which is more like the term envisaged when annuities were first developed and people worked later and died earlier. Furthermore, no new issues of inflation indexed bonds have been made since 1999.

The industry has struggled to adapt to lengthening years of retirement and the difficulty in assessing how much and how quickly it will continue to change. It is tempting in this

situation to seek high returns by investing in a widely diversified equities portfolio, rather than matching expected cash flows with term bonds, and to build in an additional price margin. Some suppliers got burnt when equities collapsed.

Traditional annuity products are inflexible and this is increasingly problematic as life expectancy lengthens. There are variable annuities that adjust payouts in the light of emerging experience. Some companies do this by starting with a low basic annuity and adjusting it upwards (not down) via the issuing of bonuses as conditions permit. But there is room for game-playing e.g. by limiting the extent to which profits are passed on into bonuses, so guaranteeing transparency would be an important regulatory consideration. It is worth remembering that once a long-term contract is signed you are locked into it, so that reduces competitive pressures later on and raises the potential returns from upfront marketing of these sorts of products²⁸.

Annuitisation at a later age

Longevity and investment risks would be alleviated if people bought annuities at a much later age rather than at the start of retirement. This would shorten the average length of annuities, reduce the variance of expected age of death and allow risk to be matched with shorter length securities. A greater income stream could be purchased per \$10,000 of outlay as a result. The same principle applies to reverse equity mortgages.

Buying an annuity at a later age implies that other income generating mechanisms (in addition to NZS) would typically be used by people aged say 65-75, including working, capital drawdown for lumpy consumption, living off interest etc. They would of course need to husband their assets to have some capital left at the end of this period, if they are still living, to purchase an annuity. However they would retain the option to draw down their assets more rapidly and fully (and forego a future annuity) should circumstances make this a more sensible arrangement.

Mitchell et al (2006) describe some recent theoretical work that analyses so-called “self-annuitisation” paths that involve phased withdrawal rules and similar strategies that combine phased withdrawal with deferred annuitisation. They note that these are becoming popular in Europe and the Americas. For example, Germany offers tax-preferred investment choices in some individual retirement accounts, but some of the assets must be used to purchase a deferred annuity payable from age 85.

It is not clear whether there are any particular impediments here to the promotion of later age annuities, but they would seem to offer some considerable potential attractions.

²⁸ It has been noted that the world is increasingly being contractualised, and people feel less guilty about enforcing a contract that may become unfair.

Integrating NZS and annuities

The previous section suggested that one way to reduce the cost and improve the operation of annuities is to shorten their expected length. Another way to do this is by offering fixed term annuities that expire at a certain age, say 80 or 85 years, and then for the government to set a higher rate of NZS for people above that age²⁹.

A number of commentators have advocated making NZS more flexible by allowing people to trade-off when they take it against the amount they receive. Thus for example someone who intends to continue working beyond age 65 could choose to defer the start of NZS and instead receive a greater amount from a later age. In this way some people might be able to achieve a higher level of guaranteed income from the time they actually chose to retire. Offering this option might also encourage people to remain in the workforce longer, contributing to the country's growth potential.

Another option, proposed by Susan St John, is for the government to permit people to purchase a top-up to their standard NZS entitlement.

These suggestions have some attractions. They offer a way of circumventing a poorly functioning annuities market. However this is achieved by increasing the overall amount of longevity and investment risk to be met by the general taxpayer. Furthermore, in terms of the implicit 'social contract' outlined earlier, such an option would risk infringing the 'ideal' of NZS being a standard weekly entitlement for all. The last two suggestions would also raise difficult fairness issues around how to price such options and in particular whether the government should use risk profiling that discriminated among population subgroups.

Proposals to adapt NZS to make it a more flexible financial entitlement risk confusing its basic policy purpose and rationale. This could undermine the broad social and political consensus that NZS currently enjoys.

Decumulation strategies

Rather than devoting resources to propping up an inherently shaky annuities market, the government could consider whether there are bigger gains to be made from ensuring that there is a wide choice of financial products and services that help people to manage their assets at different stages of their retirement.

This might be described as a layered approach to managing retirement finances.

A safe, protected basic income stream is the first layer. NZS provides this.

²⁹ Rashbrooke's proposal for using an annuitised fund with expiring cohort annuities is a variant on this idea.

For a middle income earner who has accumulated assets, the desire for a higher income stream is subject to several influences. For example:

- Should I set aside a nest egg for special consumption or emergencies (with the option to annuitise some or all later)?
- Should I retain all my financial assets and invest them at a higher point on the risk/return frontier for top-up income, since once basic income is secured I am less risk-averse over the size of the next layer of income?
- Should I start to systematically liquidate a proportion of my investments to finance the lifestyle I want over the next 10 years and review my options then?
- Should I continue earning some income through employment or self employment as a means of maintaining my lifestyle and protecting my capital?
- Should I keep my high-value residence that provides its own consumption benefits plus some asset protection for later? (Note that income needs are much less if housing is already covered and that the reverse equity option is most attractive when one has dire needs or low income, which may not currently be on the horizon).

Given this menu of choices, the absence of a reasonably priced annuity product may not be a major concern. The issue then is whether a government should become more involved in influencing this second tier of retirement financing decisions.

There is potentially a wide range of policies that influence, directly or indirectly, these decisions. For example:

- restrictions on the employment of older people (New Zealand has already made considerable progress in removing such restrictions)
- financial disclosure and financial adviser regulations
- financial education
- health and rest home care subsidies that reduce some of the uncertainty around future costs
- tax neutrality of investment choices
- policies to bring more price stability to the housing sector
- protections for individuals that are incapable of making decisions.

Summary and conclusions

Building up assets during working life and drawing them down in retirement is one way for people to manage the evolution of their material living standards as they age. People approach this activity in different ways, with different personal endowments, preferences and life prospects.

New Zealanders have evolved a particular approach to retirement income provision that emphasizes collectively funded, universal, basic social protection. As a corollary this places the responsibility for financing additional income for retirement with individual citizens. Their choices are made in an environment of relatively light regulation, general

tax neutrality, supportive education and information programmes, but few direct subsidies.

Recent government initiatives, notably the ‘opt out’ feature of KiwiSaver, represent some movement towards “cautious paternalism”, using insights from the literature on behavioural finance, with the intention of raising saving rates. Less attention appears to be paid to issues affecting decumulation choices, in particular the apparent structural problems with the annuities market.

Problems with annuities are apparent in many countries. New Zealand is probably under less pressure to solve these problems because we have no compulsory savings scheme that requires accumulated balances to be annuitised. (We know from our own recent experience with the RSS design proposal that ensuring that annuity markets function effectively could involve a great deal of government intervention and, probably, risk-sharing). Furthermore, the initial layer of well-protected, indexed, income for life provided by NZS makes it easier for middle income retirees to consider a wider range of reasonable decumulation strategies, should they find annuities unattractive.

Attempts to adapt NZS entitlement rules to make it more like an annuity product should be resisted because this could destabilize the underlying social consensus supporting it.

There are some steps that could be taken to encourage the annuities market to function better, notably a more tax-neutral treatment and facilitating the emergence of a greater range of products, including risk-sharing, variable rate annuities. Focusing attention on other factors influencing people’s decumulation strategies might also, however, be a fruitful way to proceed.

References

- Gruber, Jonathan and David A Wise (2002) "Social Security Programs and Retirement Around the World: Micro Estimation" National Bureau of Economic Research, Working Paper 9407
- Hawke, Richard (2006) "Retirement Income Provision in New Zealand: A Way Forward" Institute of Policy Studies, Victoria University, Wellington
- Hurnard, Roger (2005) "The effect of New Zealand Superannuation eligibility age on the labour force participation of older people", New Zealand Treasury Working Paper 05/09
- McCaffery, Edward J. and Slemrod, Joel B (2006)., "Toward an Agenda for Behavioral Public Finance", in E McCaffrey and J Slemrod (eds) *Behavioural Public Finance*, New York, Russell Sage Foundation.
- Mitchell, Olivia S, John Piggot, Michael Sherris and Shaun Yow (2006) "Financial Innovation for an Ageing World", NBER Working Paper No 12444.
- New Zealand Government (1997) "You and Your Retirement Savings: the proposed compulsory Retirement Savings Scheme"
- Periodic Report Group (1997a) "A Review of the Current Framework", July 1997
- Periodic Report Group (1997b) "Building Stability", December 1997
- Periodic Report Group (2003) "Retirement Income Report 2003"
- Rashbrooke, Geoffrey (2006) "Asset decumulation: optimizing income needs for retirement", MCA Thesis, Victoria University of Wellington
- Scobie, G. M., Gibson J. K. and Le T. V. T. (2005) "Household Wealth in New Zealand", Institute of Policy studies, Wellington
- Scobie, Grant, Trinh Le and John Gibson (2007) "Housing in the Household Portfolio and Implications for Retirement Saving: Some Initial Finding from SOFIE", New Zealand Treasury Working Paper 07/04
- Stewart, F (2007) "Policy Issues for Developing Annuities Markets", OECD Working Papers on Insurance and Private Pensions, No 2, OECD Publishing
- St John, Susan (2006) "The Policy Implications of Decumulation in Retirement in New Zealand", Retirement Policy and Research Centre, University of Auckland.

Task Force on Private Provision for Retirement (1992) “Private Provision for Retirement: The Options,

Thaler, Richard H (1992) “Savings, Fungibility and Mental Accounts”, in *The Winner’s Curse: paradoxes and anomalies of economic life*, Princeton University Press

World Bank (1994) “Averting the Old Age Crisis”, Oxford University Press

World Bank (2004) “Old-age income support in the 21st century: an international perspective on pension systems and reform”, Washington