

# The annuities market in New Zealand

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## **Introduction**

Much attention has been paid to the accumulation of retirement savings in New Zealand but very little to the decumulation process facilitated by drawdown and annuity products. KiwiSaver has changed the landscape. From 2012 people will come into retirement with increasingly larger tax-subsidised lump-sums that must be managed over an uncertain lifespan, in an uncertain investment climate, including unknown levels of inflation.

A number of reports prepared during the past decade for various Retirement Reviews on the role of annuities as part of a decumulation strategy summarise the problems of annuities markets (Hurnard, 2007; Rashbrooke, 2006; St John, 2003, 2006). Mercer actuaries have also recently discussed the nature of annuities as part of possible ways of creating “a viable and efficient market in retirement income products” (Mercer, 2009).

In countries where annuity markets are significant, the state may compel the annuitisation of either part or all of certain tax-subsidised retirement savings. There may also be special tax advantages applied to the annuity itself, or some favourable treatment granted such as under the means test for a state pension in Australia. The evidence of substantial state intervention in countries that have a viable annuities market reflects the obvious and widespread ‘market failure problem’ of annuities. Conversely, the almost complete absence of a New Zealand annuities market reflects the reality of market failure when there is no explicit state intervention<sup>1</sup>.

## **The New Zealand annuities market**

In its simplest form, an annuity is an exchange of a capital sum for an income stream. In New Zealand, on-going retirement income streams have arisen from pensions paid in company defined benefit schemes; government employee schemes, ie the National Provident Fund (NPF) and the Government Superannuation Fund (GSF); and certain superannuation schemes’ trust-deed requirement that emerging lump-sums be used to buy an annuity. The majority of the 53,226 pensions currently in force are from the GSF (Government Actuary, 2008b). NPF public schemes’ annuities are of small value only (St John, 2003). With members not yet retired numbering only 13,200, the GSF will be far less significant for new cohorts of retirees. Three quarters of GSF pensions in payment are less than \$19,000 pa

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<sup>1</sup> But it is noted that the provision of New Zealand Superannuation is also a factor.

(Government Superannuitants Association, 2007). Pensions paid to members of private occupational schemes fell from 34,644 in 1990 to just 22,971 in 2007 with an average pension of \$14,021. Membership of defined benefit schemes fell to 65,506 in 2007 from 101,217 in 1990 (Government Actuary, 2008a).

The shift to defined contribution plans from defined benefit plans in New Zealand, as shown in Table 1, reflects the OECD-wide trend, which in turn has focussed increased international attention on the annuities market (Stewart, 2007).

**Table 1: Membership of defined benefit and defined contribution schemes**

Defined Benefit Year	1990		2007	
	1990	2007	1990	2007
Total assets (\$m)	6,691	5,268	2,817	8,956
Total members	101,217	66,506	209,524	224,83

Source: Government Actuary (2008a)

Rashbrooke (2006) calculates that by mid-century private pension payments in New Zealand will have virtually disappeared, leaving a handful of GSF pensions of annual value of only about \$100 million. Today, no new superannuation schemes require the purchase of an annuity, and the market for purchased annuity products has virtually collapsed. Thus, without a policy change, the older population “will become increasing reliant on managing accumulated financial assets to supplement New Zealand Superannuation without the benefit of longevity insurance” (Rashbrooke, 2006, p 74).

## **Historical operation of the market in New Zealand**

Over the 1990s the demand for annuities from superannuation schemes fell. By 2003, there were only 3 providers of annuities, down from 9 in 1993 (St John, 2003). During the previous decade the level of annuities purchased for a given capital sum showed a considerable variation: by company, by gender, and by timing. Making the purchase in 2003 compared to 1994 would have been a costly mistake (St John 2003). Small annuities were more expensive and hence less attractive, reflecting the overheads of annuity provision.

In 2009, Fidelity Life is the only provider left in the market with most purchases either from wound-up schemes or people aged 80 or 90 taking out an annuity to pay for rest-home fees<sup>2</sup>. Fidelity Life figures show annual sales to 10 September 2009 of only 17 annuities totalling \$2.07 million, to clients aged 65 to 80. Some insurance companies however use a product that

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<sup>2</sup> Personal communication.

pays the surviving partner an income stream, as set up in the client's will. These may not be classified as life annuities, because they are done 'in house' possibly to avoid the need for provision of an investment statement and a prospectus.

Annuities data collected by ISI from members as at January 2008 shows the following profile of annuitants:

<b>Age Band</b>	<b>Policy Count</b>
Up to 65	194
66 – 69	155
70 – 74	408
75 – 79	861
80 – 84	1008
85 – 89	441
90 +	196
Other (Joint Lives)	14
<b>TOTAL</b>	<b>3277</b>

Of the 3277 current annuitants, the majority are over 75 and the total value of assets supporting these annuities is just \$200 million (Investment Savings and Insurance Association (ISI), 2008, p. 26)

## **A summary of the barriers to the development of the annuities market in New Zealand**

Choosing the precise interventions that would be successful in revitalising the annuities market demands a sound analysis of why the market fails.

**Taxation and regulatory issues:** Providers frequently claim that customers avoid annuities because annuity levels look unattractive compared to bank returns. In part this reflects the life office tax rate on investment income at the company rate of 30% (annuity is tax-paid), which is often higher than the purchaser's marginal tax rate, usually only 21%. The taxation of annuities has not been addressed in the recent reforms to life insurance taxation (Investment Savings and Insurance Association (ISI), 2008). A more fundamental tax issue is the lack of neutrality between investing in an annuity and in property, managed funds, or Portfolio Investment Entities (PIEs). Of concern to the industry is the requirement to provide investment statements and a prospectus, adding to the overall costs (Mercer, p, 33).

**Market failure** can however be attributed to systemic issues that arise in a voluntary annuities market. These are:

**Adverse selection:** An individual may know better his/her longevity risk than the insurance company. If she expects to live longer than the average of mortality rates of the entire

population on which annuities are priced, she will find annuities more attractive than those who might expect to have a shorter life span. Ex post, premiums would have to rise if the insurance company is to remain solvent. This subsequently decreases the attraction for those with a shorter life expectancy, and their demand drops further. The company is left with the 'lemons' or bad risks (the long-lived). Eventually it may no longer be viable for the insurance company to stay in the market. The greater the adverse selection, the higher the premium cost of a given annuity, and the greater the total welfare loss for society<sup>3</sup>.

Life insurance companies use their own annuitant mortality tables to price annuities, rather than whole of population life tables. While the obvious way to reduce adverse selection is to discriminate by gender because the average life expectancy of women is higher than for men, the two populations show considerable overlap in mortality experience (Wadsworth, Findlater, & Boardman, 2001). About 80% could be considered to have an indistinguishable experience, making gender a crude discriminator.

Adverse selection may be overcome by compulsion, and regulations may be used to force provision of gender-neutral annuities, but at the expense of some choice and flexibility. The Net Present Value (NPV) of a given annuity stream using population-wide mortality data is lower than the actual cost of the annuity. The ratio of the NPV, i.e. the actuarially fair price, to the actual capital cost of the annuity, the Money Worth Ratio (MWR), has been of the order of 70-80% for New Zealand annuities (St John, 2005). The low MWR reflects both adverse selection and high overhead costs.

**Mortality risk:** Higher than projected longevity outcomes, or 'excess longevity', is regarded by many as the main annuity market failure problem (Antolin, 2008). If people live longer on average than the mortality experience factored into annuity prices, the insurance company could become insolvent. If insurance companies make allowance for probable improvements in longevity, their products are likely to be perceived as poor value by purchasers who may not understand the risk they face. In the case of data in New Zealand, the pattern has been increasing longevity improvements, with the gains being concentrated at older age groups (Statistics New Zealand, 2006). The question is whether these trends will continue.

In general, improvements in mortality are not predictable and represent more of an uncertainty than a risk. This makes pricing an annuity much harder. In the US a variable annuity, called the College Retirement Equities Fund (CREF), passes on the aggregate

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<sup>3</sup> Meaning that members of society are less well off than they would be with the security of insurance if they could buy it on actuarially fair terms.

mortality risk to annuitants by varying the annuity payouts with the mortality experience of the annuitant pool (Congressional Budget Office, 1998). Improvements in longevity may occur randomly through simple measures such as an ‘aspirin a day’ to prevent cardiovascular disease. Without the ability to protect from such unforeseen improvements, providers must either price risk into their contracts thus making annuities more expensive, or withdraw from the market. Even if the government assists by producing a reliable longevity index, there is little evidence that there will be a private market solution to hedging longevity risk (Antolin, 2008; Antolin & Blommestein, 2007; Thomsen & Verner Andersen, 2007).

*Longevity bonds* issued by the government could transfer some of the aggregate or systemic longevity risk to the general population, and the aggregate mortality risk can be spread across generations (Brown & Orszag, 2006). In essence, longevity bonds are government bonds whose return is linked or indexed to the actual survival experience of a given cohort. Compared to a benchmark, if the cohort survival is low (high) the return is lower (higher), thus the risk is shifted to general taxpayers. As trading in these instruments develops, some of the risk is also shifted to capital markets (Blake, Boardman, Cairns, & Dowd, 2009).

There does not yet appear to be an example of a country internationally that has longevity bonds issued by the state but there is an increasing interest in them. In the UK, actuaries are urging their introduction, arguing that the government alone can help hedge this risk that is leaving many pension and annuity providers with ‘massive longevity exposure’ (Blake et al, 2009).

The systemic risk in the uncertainty of longevity outcomes is particularly significant from ages 75 to 90. Blake et al (2009, p 34) recommend the introduction of longevity bonds for newly retired 65 year-olds with cash flows based on the proportion surviving each age, with a 10 year deferral. Bonds specify birth year, gender, issue date, and date of first and last payment.

***Inflation risk:*** Typically, an annuity is priced on the day of purchase with reference to expected nominal interest rates, thus locking in both purchaser and provider. While the interest rate used will reflect expected rates of inflation, fixed nominal annuities will fall in real value over time. In principle, indexed annuities are possible but the provider must achieve the assumed real rate of return. For the purchaser the initial annuity level will be lower and hence less immediately attractive. It is not usually feasible for a provider to

guarantee full indexation however as future real interest rates are uncertain and inflation, like improvements in longevity, is a systemic not a stochastic risk<sup>4</sup>.

In New Zealand, escalation of the annuity at a fixed amount of 2% or 3% is occasionally requested as a de facto CPI adjustment. This is perceived as a costly option, and more so by younger annuitants, and does not address unexpected inflation. If the government provides *inflation-indexed long bonds*<sup>5</sup>, indexation of annuities becomes possible but, in this case, the government carries the cost of uncertainty. With no formal capital gains tax and high short-term interest rates, there are other avenues for hedges against inflation in New Zealand such as the residential property market or short-term roll-over deposits (Watt & Reddell, 1997). Nevertheless, new, more favourably taxed, retail inflation-linked bonds have been proposed (Gordon, 2002).

This issue is part of a wider concern that there is a general lack of suitable long-term financial assets (long bonds) to underpin the long-term nature of annuity liabilities. This mismatch demands that higher reserves are required with further upward pressure on annuity prices (Mercer, 2009). In New Zealand, the longest government bonds on issue mature in 2021, and typically bonds are not issued for longer than 12 years (Bowden & Lorimer, 2008). Internationally, long bonds are those issued for upwards of 15 years, with 30 and 50 year issues becoming popular in some OECD countries (Bowden & Lorimer, 2008).

***Investment risk:*** An annuity may lock in a conservative investment strategy. Over time, as living standards improve with economic growth, the nominal annuity falls relative to both prices and wages. If an annuity is to keep pace with improving living standards, the investment policy should favour growth assets. In particular, ‘participating annuities’ which allow annuitants to participate in the profits earned by insurance companies are available in some countries. These profits may arise from better investment results, more administrative efficiency, or changes in longevity that are favourable compared to assumptions.

***The bequest or precautionary motive:*** A lump-sum for expensive medical costs may be another reason for maintaining non-annuitised wealth, especially long-term care in the absence of social or private insurance (Wallister, 2000). The fear that annuitisation will penalise early death can be addressed by life annuities that guarantee minimum payments, typically for 10 years.

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<sup>4</sup> A random event is an insurable risk as opposed to an event such as unanticipated inflation that is experienced widely ie is systemic.

<sup>5</sup> Bonds whose returns are inflation-adjusted.

*Informational failures* include underestimating the probability of extended life expectancy; ignorance; mistrust of insurance companies; inflexibility of products and their variability; and suspicion about the financial standing and viability of the insurance provider over what could be a lengthy retirement. In a country the size of New Zealand, competing insurance markets have a small pool of annuitants and little reliable actuarial data on annuitants' mortality on which to base their pricing.

The combination of poor products, financial illiteracy, and aversion to the concept of annuities may be addressed by appropriate education. Brown (2008, p. 205) highlights the value of inculcation of an income mentality during the accumulation phase so that people are not so sensitised to giving up control over their wealth. While he cautions against compulsion as for some it could be non-optimal, eg with terminal illness, annuitisation could be used as a default option.

**Summary:** From the individual's point of view traditional annuities are largely seen as illiquid, inflexible products that offer little room for movement when circumstances change, and that can be poor value for money. From the provider point of view they are low profit and unattractive products to price accurately. The systemic risks of inflation and excess longevity are unlikely to be insurable in private markets suggesting a clear role for the state.

## **International annuities markets**

Annuities markets remain undeveloped in many OECD countries. They are most evolved in Australia, Canada, Switzerland, the US and the UK (Stewart, 2007). Chile and Singapore have well developed annuities markets as an integral part of their compulsory savings schemes. Other countries with reformed defined contribution savings schemes, eg Hungary and Poland, are now focusing on decumulation issues including annuitisation of these savings (Antolin, Pugh, & Stewart, 2008)

The UK annuities market, underpinned by compulsory purchase, is substantial and growing with sales of annuities expanded 3 fold between 1991 and 2004 (Cannon & Tonks, 2006). However, annuities have not been popular. Life Insurers have tended to make losses as annuities are 'low margin' and difficult to price for the reasons given above. A survey of older people showed 60% would not annuitise if not forced to do so, citing issues of inflexibility, lack of trust in the providers, and poor value (Gardner & Wadsworth, 2004). In the US, annuitisation is voluntary and even when it might be rational to annuitise, few choose



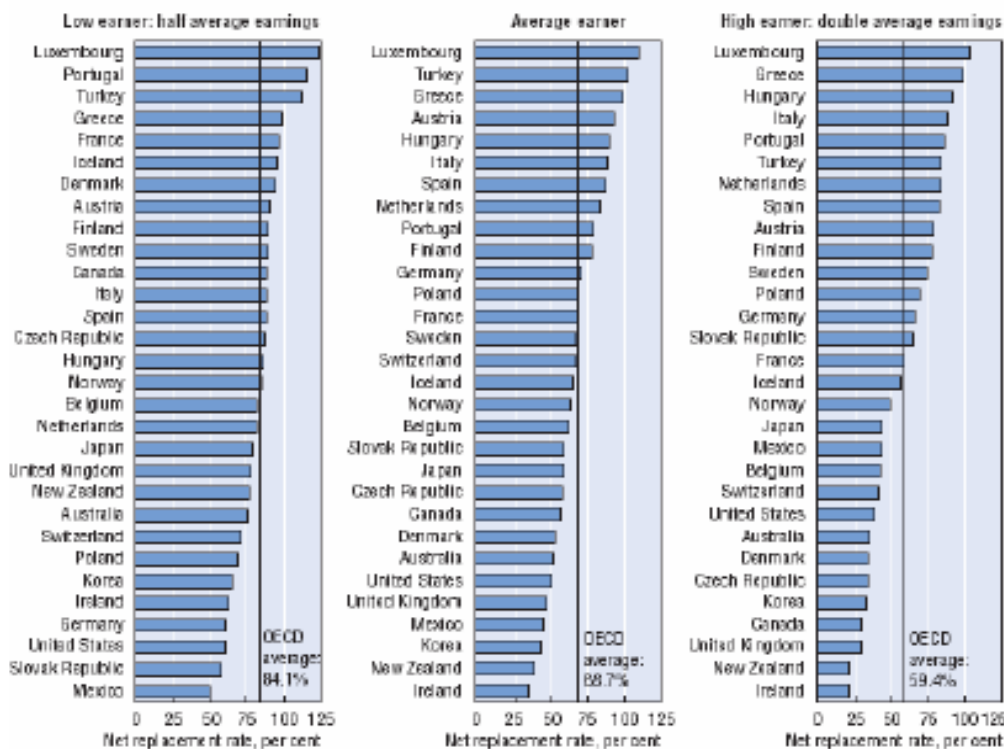
this option (Butrica & Mermin, 2006; Poterba, 2001). Even with annuities favoured or subsidised as in Australia, lump-sums are the prevalent structures for retirement benefits.

As markets develop it can be expected that more options and more flexibility will emerge. For example, rather than a flat annuity at age 65, the longevity risk could be hedged by purchase of a deferred annuity that starts at age 80 or older but is purchased at young age so that more of the lump-sum is managed in early retirement (Antolin et al., 2008; Gong & Webb, 2007). Such an approach is gaining international attention as a low cost method of providing longevity insurance (Bateman & Piggot, 2001; Wadsworth et al., 2001).

### Implications for development of the annuities market in New Zealand

New Zealand's basic inflation- and wage-adjusted, gender-neutral New Zealand Superannuation (NZS) is often cited as a factor in the lack of interest in annuities both from an individual and a policy viewpoint. However, while NZS is effectively a perfect annuity in design, few middle-income people perceive it as an adequate hedge against longevity. Figure 1 shows that the replacement rate for earners on half average earnings is just below the OECD average. There is however an issue for middle-income earners for whom NZS provides a much smaller replacement rate. These people may value additional longevity protection in the form of an annuity.

**Figure 1. Net replacement rates at different earning rates**  
Percentage of individual pre-retirement earnings



(OECD, 2005)

To argue that there is a role for the state in either facilitating and/or in subsidising the provision of annuities may require that there are also social advantages in subsidisation. One potent argument is that annuitisation prevents the consumption of the lump-sum too early in retirement, and provides for ongoing income to meet future healthcare costs, including long-term care that may otherwise become a cost to the state. Where there has been tax-subsidisation of the accumulation as with KiwiSaver, it is legitimate to ask for a return of some kind to society. Unfortunately, KiwiSaver was introduced without any requirement to annuitise, so that the policy issue is now how to make voluntary annuitisation attractive.

The lump sums which will emerge from KiwiSaver accounts will have been substantially tax-subsidised, especially if the member tax credit and “Kickstart” are inflation proofed (St John, Littlewood, & Meehan, 2008). In the absence of compulsion, there still remain a range of policy issues to consider. For example, as suggested in St John (2006, p.22), an attractive annuity product to supplement NZS for middle income New Zealanders might have all or most of the following features:

- Be good value for money;
- Be inflation-proofed;
- Provide flexibility including special consideration of impaired life/deferred annuity options;
- Be much less of a lottery than has traditionally been the case;
- Allow, in suitable cases, the use of part of the equity in owner-occupied housing for the annuity purchase;
- Be gender neutral, given that the majority of both men and women do not experience the extremes of longevity;
- Include insurance for catastrophic care costs;
- Insure to some degree against growth in living standards.

It is clear for an annuities market to thrive, substantial state involvement is required (Impavido, Thorburn, & Wadsworth, 2004). Retrospective changes to require compulsory annuitisation of KiwiSaver lump-sums may not be a feasible option. Annuitisation of KiwiSaver lump-sums may therefore require tax reform, state subsidisation, inflation and longevity underwriting, regulation or even state provision to be attractive. Among the options to be considered, Mercer (2009, p. 42) argue that allowing the purchase of an

increment to the life annuity NZS itself at an actuarially fair price may be a cost-effective and attractive policy.

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