Post retirement funding in Australia

By the Retirement Incomes Working Group

Anthony Asher (Convenor), Patricia Berry, Andrew Boal, Richard Boyfield, Mike Callan, Jules Gribble, Curtis Heaser, Jeff Humphries, Graham Kelly, Wade Matterson, Tony Miller, Cathy Nance, Jim O’Donnell, Paul Scully, Paul Swinhoe, Brnic Van Wyk

15 May 2013

1 Introduction 3
2 Background 4
  2.1 The Australian annuity puzzle 4
  2.2 A Multi-Pillar Architecture 5
  2.3 Current level of pensions 6
  2.4 Asset holdings 8
  2.5 Housing 9
  2.6 How consumption in retirement is funded 10
  2.7 Some retirement issues 11
3 The needs of Australian retirees 12
  3.1 Classifying needs 12
  3.2 Quantifying needs 16
  3.3 Vulnerability and dementia 19
  3.4 Financial Advice 20
  3.5 Reasons for not annuitizing 23
4 Products available 27
  4.1 Current superannuation and insurance strategies 27
  4.2 Bank accounts and term deposits 31
  4.3 Share investments and dividend strategy 31
  4.4 DB benefits 31
  4.5 Packaged strategies 31
  4.6 Pooled annuities 32
  4.7 Deferred annuities 33
  4.8 Impaired life products 36
  4.9 Evaluation 37
5 Initiatives and obstacles 39
  5.1 Current initiatives to develop the Australian market 39
  5.2 Regulation 40
  5.3 Taxation 41
  5.4 Counterparty risk 42
  5.5 Benefit illustrations 42
6 Conclusion 43
7 References 43
Appendix 1 – Multi-pillar Pension Taxonomy 46
Appendix 2: Measurement of inflation 47
Abstract

This discussion paper reviews the needs of Australian retirees for financial products and services especially annuity products and financial advice; how they are currently met in Australia; briefly evaluate some alternatives; and identify obstacles to greater annuitisation. These obstacles include the failure to frame the objectives of the system as retirement incomes rather than lump sums and regulatory impediments to deferred and pooled annuities commonly used in other countries.

Keywords: retirement incomes, annuities

1 Introduction

The Actuaries Institute has identified “the pressing need to develop a more vibrant annuities market” as one of its major policy objectives.1

This discussion paper has been produced by the Retirement Incomes Working Group (RIWG) to bring to survey the issues with a view to obtaining wider input. We acknowledge that we have not done full justice to many of the issues and note that the paper does not necessarily reflect the final opinions of all the authors or that of the Institute.

We have interpreted the need as including the development of a market in annuities, but also other products and strategies that sharpen the focus on the issues annuities seek to address. We use the word annuity in its broader sense of meaning a regular stream of payments made over a long period. We put no specific constraint on the size or source of payments.2 We use the word retirement with an appreciation that the concept is increasingly elastic, with people working longer and transitioning from full time work over a period of time, sometimes with no intention of full retirement. Retirement incomes are, however, required by older people to the extent that their earned income is no longer sufficient.

This is certainly an area of actuarial expertise, where the profession can add, and is adding, value to the policy debate and the development of the annuity and retirement incomes market. The RIWG was set up as part of this contribution. Its terms of reference are to identify:

- the features within and types of products and strategies (including design and distribution considerations) that might be relevant
- different groups of retirees that require different products and strategies
- the regulatory and institutional obstacles to the development of the products and strategies, and how they might be addressed
- additional professional guidance and possible regulatory requirements that might be necessary
Post retirement funding in Australia

- additional educational requirements to equip actuaries to service such a market
- opportunities for further research
- other actions that might foster discussion and innovation

The paper reviews the needs of Australian retirees for financial products and services; how they are currently met in Australia; briefly evaluates some alternative products; and identifies obstacles to the greater use of annuity-based products. It does not consider investment strategies in any detail, other than to the extent that some product designs are intrinsically linked to particular investment strategies (e.g. guaranteed annuities linked to low risk bonds). It also makes no suggestions on appropriate tax regimes.

The next section starts with noting that the limited market in annuities in Australia is something of a puzzle. It provides background to the asset holdings of Australia retirees and the use of these assets, and the Age Pension, to fund retirement. It seems clear that for many, the Age Pension crowds out the need for annuitisation. Centrelink data, however, suggests that a significant proportion of Australian retirees are drawing down assets in retirement and thus could benefit from annuitisation.

The third section considers the needs of retirees, particularly the need for financial advice and notes how the current framing of the question of retirement funding in Australia militates against lifetime annuities of any sort.

Section four then discusses the investment and insurance products available for Australian retirees, and the pooled and deferred annuities that are available internationally but not in Australia. We compare the cash flows from different products and show the significant increase in consumption that can be achieved with different life annuities.

In the final section, we discuss the regulatory obstacles to product development and the reframing of the superannuation system as one providing for consumption in retirement rather than a lump sum. There is then a short conclusion.

2 Background

2.1 The Australian annuity puzzle

The major theme of the paper is to address the puzzle as to why we currently do not have a thriving post-retirement market that includes appropriate annuity products, as suggested by utility theory, and which does exist in other countries.

This puzzle should be seen in the context of the mandatory superannuation guarantee contributions (SGC), the arguments for which are:

- People are myopic and need (and indeed want) encouragement to save for retirement if they are to enjoy a reasonable standard of living in retirement
Post retirement funding in Australia

- Encouraging people to provide their own resources for retirement encourages self-reliance and relieves the state of the need to burden taxpayers with the full cost of provision for the elderly
- A properly regulated superannuation system provides protection to otherwise vulnerable individuals who know little about investment markets
- The development of a large pool of long term savings provides for a more stable and efficient capital market

The same arguments apply, sometimes with greater force, to the need for a vibrant annuity market:

- It is difficult for retirees to determine how much they can spend in retirement.
- Retirees can spend more of their accumulated assets on consumption if they are able to secure some protection against longevity risk. The other side of this benefit is that longer lived retirees (in which widows tend to predominate) are given protection against significant falls in consumption as their financial balances are eroded and so will not become totally reliant on state support
- A greater share of retiree assets will be retained within the superannuation legal structure where it offers better protection in the case of declining interest and in decision making skills, that may eventually include dementia.
- Assets within the superannuation system that are not required for immediate liquidity are available for the long term strategic investments required for a growing economy.

It needs to be acknowledged that none of the arguments for mandatory superannuation listed above is overwhelming in itself, but to the extent that they are valid, they would seem to lead to the need for greater encouragement to annuitise in retirement. In practical terms, the ability to annuitise is limited by the debts people have going into retirement, and the need is reduced by the existence of the Age Pension. The right to direct control of their superannuation money is also valued highly by many people. Any compulsion to annuitise would be a profound departure from our current system with significant ramifications, and is not the position of the RIWG. We note, however, that the philosophy underlying the existing system is not consistent with the practice of almost no annuitisation – as is widely recognised and reflected by current activity in the area.

2.2 A Multi-Pillar Architecture

The primary objective of a retirement system is to provide old-age financial security for all elderly people. The World Bank has proposed a conceptual architecture for the systems and resources within an economy that provide or support incomes in old age. This is known as the multi-pillar system. The table in appendix 1 sets out this architecture and describes its main features. The Australian system can be taken as spread across the pillars in the following manner:
Table 1: Pillars of the Australian Retirement System

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Description</th>
<th>Australian system element</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Flat benefit funded from general revenue</td>
<td>The Age Pension – a flat pension funded by government and means tested</td>
</tr>
<tr>
<td>1</td>
<td>Public pension plan</td>
<td>No compulsory state guaranteed earnings related benefits</td>
</tr>
<tr>
<td>2</td>
<td>Mandatory occupation based plans</td>
<td>Compulsory SGC with no guarantees or compulsion to annuitise</td>
</tr>
<tr>
<td>3</td>
<td>Voluntary pension plans</td>
<td>Contributions over and above SGC</td>
</tr>
<tr>
<td>4</td>
<td>Other</td>
<td>Various other sources on income</td>
</tr>
</tbody>
</table>

The Australian system is relatively unusual internationally (although less so in the British Commonwealth) in that there is no pillar 1: a publicly managed defined benefit or notional defined contribution scheme. It is almost unique, even amongst DC based systems, in not mandating annuitisation of pillar 2.

Many Australian funds were historically Defined Benefit (DB), some of which were paid as lifetime pensions – but even there lump sums were more popular, apparently mainly for tax or social security related reasons.

2.3 Current level of pensions

It is not that no income streams products are available. The relative proportion of benefits paid by lump sums and pensions does not appear to be available for years prior to 1997, but there has been an increase in the pensions that are being paid by the superannuation industry since then. APRA Annual Superannuation Bulletin statistics show that they exceeded lump sum payments for the first time in 2009.

Figure 1: Superannuation benefit payments

Source: APRA
It is difficult to identify the precise composition of the $35 bn in pension payments, but the following information can be extracted from APRA’s (2013b) Annual Performance Bulletin:

- $24 bn comes from larger funds with more than 4 members
  - $12 bn of which are paid by government funds – a large proportion of which are DB with guaranteed inflation linkages.
  - Another $12 bn is paid by other large funds – three quarters coming from retail funds
- $11 bn appears to come from SMSFs with fewer than 5 members.

The APRA statistics report over 1 million superannuation and pension accounts for people over 65, but there is no means of eliminating double counting. Bateman and Piggott (2010) provide Treasury estimates that these pensions are shared by some 20% of men and 11% of women over 65 (15% of the total over-65 year olds). This suggests an average of more than 2 accounts per person. It is not clear, however, whether these figures include the public service funds.

A further breakdown of the APRA statistics shows that some two thirds of the proceeds of public sector and self managed funds are paid as pensions, about one third in the case of corporate and retail funds, and 20% in the case of industry funds. This is noteworthy: the public sector funds have been in place for over a century in some cases, and the declining few with DB pensions are envied – anecdotally at least. New entrants are almost all DC members. The payment of pensions from self managed funds is probably tax driven largely, but does tend to confirm that retirees need a structured payment of a regular income (even though it is not annuitised).

In comparison with these pillar 2 pensions, FAHCSIA (2012) reports that $35bn was paid as Age Pension to 2.3 million pensioners. Of these, 40% are part pensioners as a consequence of the means tests. Anderson (2012) reports that 74% of those of pension age receive the Age Pension (including veterans’ benefits). Taken together this means that more than half of retirees (40% of 74% +26% = 55%) appear to have assets that reduce (or entirely eliminate) their eligibility for the Age Pension, through the means tests. Barely a quarter of these (15% / 55%) have taken up income stream products for even part of their income needs.

### 2.3.1 Level of annuitisation

Figure 2 below show that income stream payments from the Australian superannuation system are almost all account based pension that offer no longevity insurance. This is true for the retail and industry fund sectors. These figures clearly cover only those funds that offer members a choice at retirement and do not include the DB pensions paid from public sector and corporate funds. They also do not include self managed funds.
2.4 Asset holdings

The Australian Bureau of Statistics (2010) survey of income and housing provides a useful picture of the assets of Australians in retirement. Table 2 below has been extracted from this survey and the 2004 equivalent, to show percentage changes over the intervening six years. It can be noted that the average is a poor indicator of distribution, and that the highest quintile probably accounts for close to 60% of the assets (if wealth distribution amongst the retired is similar to that for the whole population as given by the ABS). This does mean that the balances of the lower quintiles are small and do not leave much scope for annuitisation.

The effects of the SGC can be seen in the increase of superannuation balances for the oldest groups. They are however reducing their exposure to other financial assets and borrowing more.

The figures show that superannuation is the largest financial asset for most people, with their own dwelling being the largest non-financial asset and clearly dwarfing financial assets, on average.
Table 2: Retirement asset holdings

<table>
<thead>
<tr>
<th>HOUSEHOLD MEAN VALUES</th>
<th>$’000 (Nominal)</th>
<th>Age of reference person</th>
<th></th>
<th>Age of reference person</th>
<th></th>
<th>Change since 2004</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of accounts held with financial institutions</td>
<td>33</td>
<td>45</td>
<td>47</td>
<td>63</td>
<td>68%</td>
<td>53%</td>
<td>10%</td>
</tr>
<tr>
<td>Value of shares (excl. own incorporated business)</td>
<td>27</td>
<td>26</td>
<td>28</td>
<td>61</td>
<td>82%</td>
<td>-21%</td>
<td>-3%</td>
</tr>
<tr>
<td>Value of Superannuation</td>
<td>136</td>
<td>231</td>
<td>176</td>
<td>64</td>
<td>45%</td>
<td>79%</td>
<td>162%</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>116</td>
<td>69</td>
<td>40</td>
<td>26</td>
<td>174%</td>
<td>-6%</td>
<td>-10%</td>
</tr>
<tr>
<td>TOTAL FINANCIAL ASSETS</td>
<td>312</td>
<td>370</td>
<td>292</td>
<td>214</td>
<td>88%</td>
<td>43%</td>
<td>56%</td>
</tr>
<tr>
<td>Value of own dwelling</td>
<td>431</td>
<td>464</td>
<td>454</td>
<td>417</td>
<td>49%</td>
<td>45%</td>
<td>59%</td>
</tr>
<tr>
<td>Value of other property</td>
<td>223</td>
<td>185</td>
<td>131</td>
<td>64</td>
<td>119%</td>
<td>87%</td>
<td>57%</td>
</tr>
<tr>
<td>Other non-financial assets</td>
<td>123</td>
<td>133</td>
<td>115</td>
<td>83</td>
<td>26%</td>
<td>39%</td>
<td>26%</td>
</tr>
<tr>
<td>TOTAL ASSETS</td>
<td>1088</td>
<td>1152</td>
<td>991</td>
<td>776</td>
<td>66%</td>
<td>49%</td>
<td>53%</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>-157</td>
<td>-101</td>
<td>-32</td>
<td>-7</td>
<td>78%</td>
<td>122%</td>
<td>118%</td>
</tr>
<tr>
<td>NET WORTH OF HOUSEHOLD</td>
<td>932</td>
<td>1052</td>
<td>960</td>
<td>769</td>
<td>64%</td>
<td>44%</td>
<td>52%</td>
</tr>
</tbody>
</table>

The comparisons with 2004 need to take into account that the CPI and the ASX increased by some 20% between mid 2004 and 2010; AWOTE by 40%, and the ABS capital cities house price index by 50%.

The value in superannuation accounts seems understated because the present value of government sector DB funds is not included. At over $200 bn⁴, this would add about 20% to average superannuation balances.

APRA statistics confirm the ABS sample, showing that 30% of the assets of larger funds are held in respect of members over 60. This has risen from a little under 25% five years ago. Most of the assets held in respect of retirees are held by the large public service funds and the self managed funds of higher net worth individuals. The rest are predominantly managed by retail groups – but growth in the SMSF sector is more rapid.

### 2.5 Housing

The ABS survey confirms that Australians hold a significant proportion of their assets in their homes as they age. Vidler and Finn (2010) report on more recent interviews with some 300 Australians who had recently withdrawn money from their industry superannuation funds:

- 40% of the respondents had debt to pay, in some cases exceeding the balances in their superannuation fund although it can be seen from the table above that this will become less likely in future as the SGC contributions accumulate.
The debt must be related to significant investment in housing, with the average value of their homes ($750,000) being five times what they had in superannuation.

The ABS survey suggests that this pattern is not universal and did not change that much between 2004 and 2010. Not shown in table 2 is an apparent trend toward greater borrowing for investment properties, which is presumably intended to generate an income in retirement and is encouraged by negative gearing.

### 2.6 How consumption in retirement is funded

Do retirees draw down a significant portion of their assets in retirement? The data suggests that pensioners are almost equally divided between those who do not spend at least some of their capital and those that do. The following table can be extracted from Anderson’s (2012) analysis of a 1% sample of pensioners paid by Centrelink, and shows the part pensioners in his sample surveyed between 2002 and 2008.

<table>
<thead>
<tr>
<th></th>
<th>Average assets</th>
<th>Increased assets</th>
<th>Reduced assets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First five years of retirement</strong></td>
<td>$140,000</td>
<td>51%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>Last five years of retirement</strong></td>
<td>$75,000</td>
<td>38%</td>
<td>35%</td>
</tr>
</tbody>
</table>

His numbers have not been adjusted for inflation. The tables do show however that those in the highest wealth quintile of his sample are more likely to draw down their assets, and he notes that the increase in property and share prices over this period would have contributed significantly to those who increased their asset values. Further analysis of this data set finds:

- Little evidence of people exhausting their financial assets whether to maximise their Age Pension or for other reasons. Over the eight year investigation, between 6% and 10% of retirees reported that assets had declined by more than 50%. This percentage was not much affected by age.
- Those who are drawing down their assets do so slowly as if they were annuitizing and so will have faced declining patterns of consumption as the assets slowly erode.
- The overwhelming majority appear to be conservative in their spending habits.

The majority of those on the Age Pension have minimal assets. It seems quite likely that, for many of them, the presence of the Age Pension has crowded out the need to accumulate sufficient assets to provide for a retirement income. For some on very low incomes, the Age Pension may even represent an increase in living standards.
2.7 Some other retirement issues

2.7.1 Default Superannuation Investment choice

APRA (2013a) reports that the total assets in the default option “ranges from 19% for retail funds to 67% for Industry funds”. The new MySuper legislation may impact the extent of default fund usage and the nature of the investment strategies offered and taken up by members.

There are two broad design axes for default funds – a single fund with a specified asset allocation or an age or period-to-retirement based asset allocation. The latter funds are known variously as lifecycle or target date funds. In general, Gerrans et al (2010) confirms that the share of defensive assets increases as the retirement date approaches for lifecycle funds, although the levels vary dramatically between funds.

We note that the investment strategy prior to retirement may influence the investment choices in retirement. The value of defensive assets is likely to move more in line with annuity premiums than growth assets will. The actual or implied return from an annuity is also closer to defensive asset expected returns. Greater proportions held in defensive assets prior to retirement may therefore make annuity products look more attractive when making a choice at or in retirement. The gradual reduction in growth assets as a default strategy may also raise awareness for members of the issues of risk and uncertainty.

2.7.2 Retirement Date Discontinuities

The Australian retirement system for the most part treats pre-retirement and post-retirement as distinct worlds not least because tax rates differ. In many, if not most, schemes members are transferred from the accumulation division to the pension division on retirement as if they are entirely distinct. Capital gains tax will often be payable on the actual or notional realisation of assets, which is then generally followed by the acquisition of replacement assets. The replacement assets should not necessarily be defensive assets. The expectation-of-life at age 65 is over 20 years so growth assets should still have a role for a post retirement investment horizon of this length.

2.7.3 Transition to Retirement

The transition-to-retirement (TTR) regime tries to deal with people who move from full-time to part-time work as they transition to retirement. In this phase they may need to draw income from both wages/salaries and post-retirement income products. However, a big driver of the use of the TTR regime has been tax minimisation, substituting taxable wages/salaries for tax-free retirement income streams.

It still deals with the ongoing accumulation fund and the pension fund as separate entities. The current regime has weaknesses that can result in very high marginal tax rates on earnings.
The policy objective was to reduce the loss of skills from the workforce resulting from the retirement of the baby boomer bulge. But it does not deal with employer attitudes that inhibit the employment of older workers, something that will be critical to the regime’s success as retirement and pension access ages increase.

3 The needs of Australian retirees

3.1 Classifying needs

The table below sets out one way of breaking down the various needs of retired Australians, the products that seem best designed to meet these needs and some comments about the risks and how we see them as being perceived.
Table 4: Matching products to needs

<table>
<thead>
<tr>
<th>Nature of Financial Requirement</th>
<th>Requirements of Product or Investment Strategy to meet this requirement</th>
<th>Product or investment available to meet need</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a1) Regular Expenditures on things deemed necessities required now and through life (regularly occurring – at least yearly). Note that deemed necessities will not change much with circumstances but will likely change (i) on death of a spouse or (ii) there is a move into an aged care facility, or a change in that facility, or home support engaged due to increased incapacity (either self or spouse).</td>
<td>Deliver a low risk/low volatility, regular cash flow, linked to expense inflation and immunized against changes in other investment market conditions, throughout life or for an extended period. Ideally can change in response to the step changes described. Note that the Age Pension provides a de facto floor for this need.</td>
<td>A guaranteed lifetime CPI indexed annuity is the only product meeting this need. If an adequate buffer is kept, other investments may go some way to meeting these needs over the long term. The buffer would be dependent on the circumstances but the probability of not meeting this financial requirement should be very small.</td>
<td>Un-anticipated periods of high inflation represent a significant risk for retirees as many asset classes typically experience high negative real returns during such periods. The opportunity cost of guaranteed annuities can be significant. Therefore great care is required, particularly by younger retirees, in classifying expenditures into category (a1). What are necessities required for a full lifetime, requiring the very securest of cash flows – having regard to possible changing circumstances? It is clearly not possible to be that confident in the answer. The amount of fully hedged lifetime income purchased must have regard to the fact that social security is expected to provide an inflation linked underpin, so it is not necessary to buy guaranteed income in excess of (a1) needs, less the Age Pension.</td>
</tr>
<tr>
<td>Nature of Financial Requirement</td>
<td>Requirements of Product or Investment Strategy to meet this requirement</td>
<td>Product or investment available to meet need</td>
<td>Comments</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>(a2) Regular Expenditures (other) – on things not included in (a1), or saved for the future to meet expenditures in categories (b), (c) and (d)</td>
<td>Able to deliver a regular cash flow either via automatic means (interest, dividends or rents) or a regular withdrawal facility. Cash flow does not have to be guaranteed and may reduce in response to adverse outcomes. In return for this there should be a strong likelihood of outperforming expense inflation in the medium to long term.</td>
<td>Products meeting requirement (a1) are generally suitable – the main difference for this category is that the probability of the requirement not being met due to adverse outcomes can be higher.</td>
<td>In addition to providing extra capability above tranche (a1) the assets providing tranche (a2) represents a buffer against income falling below the “necessities” level. The bigger this tranche (or tranche (b3) which serves a similar purpose), the more investment risk can be taken. This risk return trade-off is one of the most fundamental financial decisions of retirees. For this tranche (a2), which requires lifetime income but with tolerance for variability, pure longevity products without investment guarantees could have a place.</td>
</tr>
<tr>
<td>(b1) Lump Sum Expenditures (necessities – able to be planned)</td>
<td>Security and liquidity of capital at the planned expenditure date. Continuous liquidity not essential. Very strong likelihood that the investment keeps pace with expense inflation.</td>
<td>Cash, term deposits or short term annuities (with 100% RCV), with maturity dates chosen in advance of the planned lump sum expenditures. Reverse mortgage and other home equity release options may also be suitable.</td>
<td>Note that assets to meet category (b) requirements especially can be held in or outside superannuation. There is a minimum drawdown constraint for account based pensions, but apart from this, charges and convenience would drive the mix. There is a case for holding as much as possible of the family home “in reserve” given uncertainties.</td>
</tr>
</tbody>
</table>
### Post retirement funding in Australia

<table>
<thead>
<tr>
<th>Nature of Financial Requirement</th>
<th>Requirements of Product or Investment Strategy to meet this requirement</th>
<th>Product or investment available to meet need</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(b2) Lump Sum Expenditures - necessities – unforeseen or timing uncertain, such as house repairs or health expenditures.</strong></td>
<td>Continuous liquidity corresponding to a likely maximum single expenditure need. Reasonable stability of capital and keeping pace with inflation.</td>
<td>Cash or other highly liquid and capital stable investment medium. Reverse mortgage and other home equity release options may also be suitable.</td>
<td>The greater risk aversion of older people can lead them to keep too much in liquid reserves at a cost to investment returns. Medicare covers necessary medical expenses; although items like hip replacements require queuing.</td>
</tr>
<tr>
<td><strong>(b3) Lump Sum Expenditures - other. If money for this, it serves as a reserve against adverse outcomes in above categories.</strong></td>
<td>Relative to (b1) and (b2) the backing investments can be less liquid and a longer term investment perspective can be taken, depending on age.</td>
<td>Investment portfolio – held directly or via managed funds, in or outside the superannuation system. Reverse mortgages or other home equity release options may also be suitable.</td>
<td>While in reasonable and stable health there is a case for holding as much as possible of the family home “in reserve” given uncertainties.</td>
</tr>
<tr>
<td><strong>(c) Late in life – extra costs borne due to significant level of disablement</strong></td>
<td>Likely similar to (b3) Something of a mix between (b2) and (b3) dependent on age and state of health. If health is good then (b3) Immediate liquidity not essential, but should not be locked in for very long periods</td>
<td>Investment portfolio – held directly or via managed funds or within superannuation system. Reverse mortgage, other home equity release options, or full sale of family home may also be suitable.</td>
<td>Insurance may play a role here due to uncertainty of whether the need will eventuate, and its timing and amount. Insurance products not yet available, for example for advanced age disability, need to consider this aspect.</td>
</tr>
<tr>
<td><strong>(d) Bequest</strong></td>
<td>Significant discretion available to the extent all other financial requirements above are “fully reserved for”. Immediate liquidity not essential, but should not be locked in for too long.</td>
<td>Investment portfolio – direct, via managed funds or within super. Full sale of equity in home. Death benefits on guaranteed annuities, Life insurance, if kept in force.</td>
<td>In practice the bequest requirement is more complex as it is not separate from the above needs. There are objections to investments being “lost” to a longevity pool, especially if these are seen to be forfeited to an insurer.</td>
</tr>
</tbody>
</table>
3.2 Quantifying needs

3.2.1 ASFA living standards

“The ASFA Retirement Standard benchmarks the annual budget needed by Australians to fund either a comfortable or modest standard of living in the post-work years. It is updated quarterly to reflect inflation, and provides detailed budgets of what singles and couples would need to spend to support their chosen lifestyle.”

At the end of 2012, it included the following for those who own their own homes:

**Table 5 Retirement living standards**

<table>
<thead>
<tr>
<th></th>
<th>Modest lifestyle</th>
<th>Modest lifestyle</th>
<th>Comfortable lifestyle</th>
<th>Comfortable lifestyle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>– single</td>
<td>– couple</td>
<td>– single</td>
<td>– couple</td>
</tr>
<tr>
<td>Total per year</td>
<td>$22,585</td>
<td>$32,555</td>
<td>$41,186</td>
<td>$56,339</td>
</tr>
</tbody>
</table>

Gribble (2012) suggests that these figures should be placed in the context of average income at the time:

“We reflect amounts as proportions of (annualised) Average Weekly Ordinary Time Earnings (AWOTE) to allow comparisons and permit progress over time to be reviewed. At a high level:

- Current AWOTE (annualised) is approximately $69,000
- 95% of taxpayers have taxable incomes under 2 times AWOTE
- The median wage earner has taxable income of approximately 75% of AWOTE
- A median single wage earner has an effective tax rate of about 20%. So, at retirement, to maintain post-retirement disposable income may seek about 75% * 80% = 60% of AWOTE post-retirement.
- A single wage earner with taxable income of 2 times AWOTE has an effective tax rate of about 33%. So, at retirement, to maintain post-retirement disposable income may seek about 200% * 67% = 135% of AWOTE post-retirement.

The ASFA Retirement Income Standard provides an accepted view of ‘modest’ and ‘comfortable’ annual income needs for both individuals and couples on retirement. For a modest lifestyle, singles need about 32% of AWOTE and couples 46%. For a comfortable lifestyle, singles need about 58% of AWOTE and couples 80%.

The Age Pension is approximately indexed to AWOTE (formally to the Male Total Average Weekly Earnings (MTAWE)) and a full pension provides the comparative results of about 28% of AWOTE for a single and about 42% of AWOTE for a couple. The gap between the Age Pension and the ASFA Retirement Standard, or higher,
is for the super system to address. It is not as straightforward as making up the gap since the Age Pension declines as other income (super or not) increases and also depends on marital and home ownership status.”

### 3.2.2 Age pension

These targets can be compared with the Age Pension, which with automatic supplements and allowances is currently $21,018 for a single and $31,689\(^7\) for a couple. The social security safety net, which includes the Age Pension as well as Medicare and support for the frail needing care, therefore clearly provides a critical base underpin. It is both inflation and longevity proof, something which is only replicated by the relatively expensive guaranteed lifetime CPI indexed annuity products.

As also noted in Gribble (2012):

“The Age Pension provides some valuable benefits to its recipients as it:

- Addresses retiree longevity risk for the Age Pension component of retirement income
- Addresses retiree investment risk as it is guaranteed by the government
- Addresses retiree inflation risk as it is indexed. ...
- Addresses retiree liquidity risk as it is funded by the government
- Provides access to ancillary benefits for retirees
- Charges no fees and the government, as provider, is not required to hold explicit additional capital reserves
- Minimises counter party risk as the government is regarded as secure”

### 3.2.3 Replacement ratio

Replacement ratio means different things to different people and is not a clearly defined or understood term. A useful definition may be “the ratio of income required in retirement to pre retirement income”. This raises the question of what is “required”.

Post retirement needs are often framed as a percentage of final working income. This measure assumes a steady progression of salary for a full time worker who does not transition to retirement. It can overstate or understate the income required to maintain level real consumption over the lifespan. An alternative measure would be lifetime average income after deducting the cost of children and the repayment of mortgage – noting that both these costs may for a minority of people extend into retirement. The measure would also adjust for tax. This would proxy as lifetime average consumption, which is another alternative measure.

Retirement is often considered in three distinct phases: active, passive and frail. Many people also believe that the ideal replacement ratio falls as people move through these various stages.
3.2.4 Inflation

Strictly speaking the inflation hedge required for the targets set out above should be related to the retiree’s own necessities cost base. In practice such products do not exist as they would be difficult to measure and there are no assets to back them.

During the active phase of retirement, it is considered more likely that retirees will want to maintain a lifestyle that keeps pace with community living standards. In this case salary inflation linked to AWE would be a suitable deflator. However, it appears that in the passive and frail stages, it is more likely that retirees will spend less on discretionary items and more on medical costs. These have tended to increase faster than inflation and one possibility is that pensions in the later stages need to be indexed to the costs of care. On the other hand, these increases may be offset by the decline in discretionary spending. It may therefore be acceptable to target community living standards throughout retirement.

The Age Pension is indexed to average weekly earnings (AWE), which historically has exceeded CPI over the long term and are more closely linked to overall community living standards.

Appendix 2 discusses how the ABS measures inflation for different groups of individuals.

3.2.5 Supplementing the Age Pension

Interactions for the Age Pension are exceptionally complex and dependent on the individual circumstances of the people involved. Simple conclusions are hard to draw. The examples below provide broad indications of the interactions and assume the couple own their own home.

Modest Lifestyle Income Level

If we take the ASFA standards as a guideline, retirees require only around $800 of annual income to raise themselves from the Age Pension to the Modest Lifestyle income level.

For a newly retired couple, a joint life annuity with 60% reversion will provide initial income of around 5% of the purchase price even for a pure longevity product (i.e. no guarantee period or return of any purchase price on death). The $800 could in theory at least be secured with this annuity with around $16,000 although annuities of such small size may not be available. With up to $273,000 in assets the couple would receive the full Age Pension and income 40% higher than the Age Pension but still 20% short of the Comfortable Lifestyle level of income.

Investment returns outside a lifetime annuity varies can vary considerably. If returns are low the Modest Lifestyle income level might not be achieved. If returns are high the required income level can be exceeded.
Comfortable Lifestyle Income Level

For the retired couple above, the Age Pension is not available (at least initially) if the Comfortable Lifestyle level of income is desired. This is a function of the asset test and the low interest rate environment. If the retirees are willing to invest a proportion of their assets in equity type investments and risk low or negative returns, they may retire on a lower level of assets and be able to receive some Age Pension. This is because of the deeming rules that attach to the income test (which “bites” at lower asset levels), where assets are deemed to yield a low rate.

For lifetime annuities the assets (for asset test purposes) fall with time and the Age Pension will become available, possibly increasing income above the Comfortable Lifestyle level of income. This is an inappropriate pattern of income when compared with the needs of the retirees.

To receive income of $10,000 pa in excess of the Age Pension would require assets of the order of $250,000 or a $200,000 life annuity. The average household financial assets plus property other than the home, of around $500,000 (Table 2), together with the part Age Pension, would roughly produce income of $45,000. This still falls somewhat short of that required for a Comfortable Lifestyle income level. These balances however only apply to the wealthiest third of retirees leaving most retirees short of the Comfortable Lifestyle income level.

3.3 Vulnerability and dementia

The risks of falling prey to dementia and of unintentionally squandering assets are not often recognised. Ferri et al (2006) report the incidence of dementia increases with age to over 25% for those over 85 in developed countries. Earl et al (2013) report research that suggests that not only are those suffering from the initial symptoms not aware of the problem, but neither are their spouses or children – and there is anecdotal evidence of large financial losses as a consequence. Indications are that the vulnerability applies particularly to unreasonable charges, schemes offering high interest rates, and to a variety of fraudulent schemes.

Moreover, the research shows that better educated individuals with higher IQ scores are more confident about their abilities, and more subject to over-confidence in the face of cognitive decline. At least some of the Australian retirees, which the Centrelink data shows to have suffered a significant reduction in assets in retirement, probably fell into this category.

It should be recognised that all retirees are subject to declining cognitive capabilities. Kasten and Kasten (2011) present evidence that “otherwise healthy senior clients may experience substantial declines in cognitive function over time, even without clinical dementia.”

This risk applies to all assets not just those in superannuation. Mitigating the risk requires:
• Possible regulations to ensure that the cognitively impaired are not exploited with heavy penalties to act as a deterrent. If possible, there should be a review of financial arrangements by people who are independent (not only in relation to the advice but also in relation to future ownership of the assets), suitably qualified and experienced to provide the advice, and who understand the needs of the individual. The reviews would be expensive, and need to be on the basis of establishing that the current arrangements are not inappropriate rather than trying to establish what the reviewer believes is the most appropriate. This would avoid unnecessary conflict and the unfortunate position of needing a third opinion. The party reviewing the arrangement should act for and be directly remunerated by the person. Reviewers should not be potential beneficiaries (or associated parties) nor the current financial advisor. We note that these standards will be difficult to meet practically.

• Vigilance on the part of family members, friends (though if of the same age group this will be limited and maybe the blind leading the blind) and medical and financial advisors. The latter may not be consulted in time, while few family and friends have the medical, legal and financial ability or the empathy required to manage or help manage the often significant assets of their parents. In addition with differing views of the children, conflicts can arise. Earl et al (2013) find that the SMSF members they survey are reluctant to take advice from family members or other advisors.

Life annuities that cannot be surrendered offer the real protection against this risk. Given that most retirees now reach the ages of greater vulnerability and 25% or more may suffer some form of dementia, the management of declining ability needs much greater emphasis.

3.4 Financial Advice

3.4.1 What is required

Even without any cognitive decline, most retirees need assistance to balance their needs and inform their beliefs. Retirees receive advice along a continuum. On the one side this could include a full-scale review of their financial objectives and retirement, consumption and investment strategies – with consideration of tax and the application of the asset and income tests. On the other side is general advice on products and online calculators.

The adequacy of this advice depends inter alia on the assumptions and models built into the philosophy, information and software that support the advisory process. The following list some of the important questions the advisory process should seek to answer:

a) Income adequacy –
   i. How much do I need in retirement and how will my needs vary over time?
      • What are the savings when you do not work and qualify for pensioners’ discounts?
      • What are additional medical and other costs?
Post retirement funding in Australia

- When will my desire to spend money on travelling and other entertainment decline?
  
ii. How much do I need to save before I retire?
  - This involves decisions about both the amount to be saved and the retirement date – with additional information about how easy it is to continue to earn income and the risks of retrenchment and disability

b) How much should I keep in liquid assets for emergencies or bequests?

c) Inflation resilience – To what extent and by what process does income grow with inflation? Has account been taken of the differences between general community and retiree consumption and their potentially different inflation profiles?

d) Term – Is there sufficient allowance for community-wide longevity improvement (systematic risk) and/or individual genetic inheritance, state of health and lifestyle (idiosyncratic risk)?

e) Return distribution – Are tail risks adequately catered for?

f) Sequencing risk (of lower returns early in on in retirement and making withdrawals that are not sustainable) described for instance by Doran et al (2010) – Significant losses at particular times in the evolution of pre-retirement wealth or the retiree’s drawdown program (impact of tail risk) can affect later adequacy.

g) Investment choice and risk profiling – How individualised and comprehensive are the risk profiling tools used to match client preferences with investment and product solutions? In general a comprehensive approach would cover objective risk tolerance (age, wealth etc), subjective risk tolerance (attitudinal) and cashflow testing, and needs to be consider such long term risks as equity market underperformance over longer periods.

h) Appropriate protections against fraud and exploitation particularly in the event of significant cognitive decline.

These questions are not easy to answer. Questions (a) and (b) need to be answered by the individual, and may need a number of iterations before a satisfactory answer is obtained. The decision needs appropriate inputs from the answers to the other questions.

3.4.2 Current financial planning practice

The nature and type of advice currently given has not been widely researched, or at least not reported.

ASIC (2012) reports on a shadow survey of personal retirement advice, classifying only 2 out of their sample of 64 reports as good, and 25 as poor – either failing to meet basic standards or indicate the level of risk involved. More worrying, they found that the clients were unable to distinguish good from bad advice, which underlies the need for professional standards when clients have limited expert knowledge. More could be learnt about the nature of the full scale advice, and the view that financial advisors have on annuitisation, especially as, until recently, annuities were not available to most advisors.

It is however possible to see how online retirement calculators provide support to retirees.
The Australian Security and Investment Commission (ASIC) superannuation calculator\textsuperscript{8} calculate the impact of fees on the lump sum at retirement. It makes an undisclosed, but conservative investment return assumption – but has a default retirement age of 60. The website also includes a flexible and detailed “Retirement Planner”\textsuperscript{9} that does calculate retirement income to a default age of 90, shows an estimate of the Age Pension but shows higher pensions for more aggressive investment strategies.

Australian Super, the country’s largest fund\textsuperscript{10} suggests a more conservative age of 67 for retirement. Assumptions also appear conservative. The target retirement benefits are projected to run out at the target age, which is defaulted to 85 – although income is projected to 100.

Sunsuper’s “award winning calculator”\textsuperscript{11} is easier to use. It is also based on reasonably conservative assumptions, and illustrates benefits at the “50% life expectancy” (age 85) and “10% life expectancy” (age 95). These however not adjusted for projected improvements that imply a significant increase to expected life times, particularly for younger users. It also allows for government pension benefits and different investment strategies – but also illustrates higher pensions for more risky approaches.

AMP, the country’s largest life insurance company has a similar calculator, but fails to allow for government pension benefits and does not clearly set out its assumptions. It has a slide to show the impact of strong or weak investment markets. It has an ongoing sound commentary that tells you that “your aim is for the income to last until your life expectancy”\textsuperscript{12}

All approaches assume that the retirement account will be drawn down by a level amount that is planned to last more or less until some fixed age linked to life expectancy. This is not entirely surprising as annuities and pensions of this sort are recognised for various (grandfathered) concessions in regulations 1.05 and 1.06 in Superannuation Industry (Supervision) Regulations 1994. It is however what Nobel economist Bill Sharpe calls “financial planning in fantasyland ... One dies right on schedule. So much for actuarial science.”

The other issue is failing to warn older investors that taking higher risks to get a higher retirement income may be inappropriate and inconsistent with their risk tolerance, which may decline with age. Changing the retirement age or saving more are all that are available; investment risk should in most cases be reduced not increased.

It also needs to be recognised that while the current calculators provide useful information, there is a risk that this information is taken to be more precise than is really the case. Not only are the assumptions used in the calculators subject to debate, the actual outcomes - balances at a specified retirement age and the incomes projected – will certainly differ from the projections. Particularly in the case of equities and property investment, the range of possible outcomes is wide and increases if the projection is over long periods. The false accuracy of projections should be highlighted, and we would suggest that no projected results should be provided without some measure of the variance in those results.

Projections should be the beginning of an ongoing process of assessing potential future financial positions, either with support from a financial advisor or not.
Communicating uncertainty is a key actuarial challenge. Key stakeholders, including individual users, need to understand that specific outcomes are just points chosen from an underlying distribution of possible outcomes.

3.5 Reasons for not annuitising

An analysis of needs would suggest that there is a definite need for annuity type products at least for those with significant assets. They also have value for those with lower asset values, if the assets themselves, rather than just the investment income, are to be used to supplement consumption. This section considers some of the reasons why they are not seen as offering value.

3.5.1 Common misperceptions

Benartzi et al (2010), in a US context, summarises some of the misperceptions to which members of retirement funds are prone, and which lead to a failure to annuitise:

- When asked which numbers represented the biggest risk of getting a disease, 1 in 10, 1 in 100 or 1 in 1000, an astounding 29% of older adults (ages 65-94) could not answer the question correctly. People may therefore not grasp the real risk of outliving their savings, even if noting that the Age Pension provides a floor income in Australia.
- Half of participants saw digital images of their current selves in the mirror, while the other half saw age-morphed versions. Next, all participants were asked to allocate money toward a hypothetical retirement savings account. Participants who saw their older, future selves allocated over twice as much as those who saw their current images.
- Most people fail to gauge the impact of inflation on their nest-egg. When the possibility of losing “real” dollars (that is, dollars adjusted for inflation) was prominently featured, people tended to favor an inflation-indexed contract. However, when the possibility of losing nominal dollars was emphasized, a non-indexed contract was preferred. Interestingly, when contract information was presented in a neutral way, an individual’s preferences were similar to those when a possible loss of nominal dollars was presented. These findings suggest that people naturally think about risk in terms of nominal dollars.
- In the case of annuities, uninformed retirees appear to believe that an early death unfairly benefits the financial institution. While there is some debate as to whether annuities are fairly priced or not, experience over years suggests the risks of loss are high. When asked to choose, many retirees pick guaranteed lifetime income over a lump sum. When making this type of active decision, whether the decision is framed as a choice of consumption or investment is critical. When framed as a consumption plan, one study suggested that 70% preferred an annuity, but only 21% when it was presented as an investment (with a probability of loss to the family of all the money on death).
- Retirees displayed what one might call “hyper loss aversion.” They were up to five times more loss averse than the average person. Nearly half of the
Post retirement funding in Australia

Retirees said that they would refuse a gamble with a 50% chance of winning $100 and a 50% chance of losing as little as $10, which suggests they weighted losses about 10 times more heavily than gains. This may explain the resistance to the “loss” on death.

They point out that consequence of failure to annuitise is that “about one in five widows ends up in poverty”. Their results can be summarised:

“The so-called Annuity Puzzle may be no more than circumstantial. Active decision-making and a plan context which highlights monthly income could increase the attractiveness and adoption of retirement income solutions.”

Vidler and Finn (2010) give the following reasons given by Australian industry members for taking lump sum benefits from their funds.

**Table 6 Reasons for not annuitising**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not have sufficient funds to invest</td>
<td>83</td>
<td>29%</td>
</tr>
<tr>
<td>Needed / wanted money for short term consumption</td>
<td>46</td>
<td>16%</td>
</tr>
<tr>
<td>Preferred to repay debt</td>
<td>28</td>
<td>10%</td>
</tr>
<tr>
<td>I prefer to invest directly in a bank account(s)</td>
<td>24</td>
<td>8%</td>
</tr>
<tr>
<td>I do not trust having my money in superannuation</td>
<td>19</td>
<td>7%</td>
</tr>
<tr>
<td>I prefer not to plan in the long term</td>
<td>14</td>
<td>5%</td>
</tr>
<tr>
<td>I am not aware of any super income stream/pension product available</td>
<td>13</td>
<td>5%</td>
</tr>
<tr>
<td>I prefer to invest in property</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>My partner / family will be able to provide for me</td>
<td>6</td>
<td>2%</td>
</tr>
<tr>
<td>I will rely on the aged pension</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>I was advised by a financial planner / adviser not to</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>39</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>286</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

While the sample may not be representative, the answers do represent some misunderstandings of the options for annuitisation. In particular, it is not uncommon for richer people to opine that it is not worthwhile to retain or annuitise small amounts of money. It is clear from the Centrelink data that many retirees do retain some financial assets and use the income to supplement consumption. For those on the government pension of $20,000 pa, the interest on the median asset balance of pensioners of $70,000 can increase consumption by 15% (assuming real yields of 4%). Annuitising could increase this to 20%. This is not insignificant, although for those with less than the median assets, the amounts are small and the Age Pension may have crowded out the need for retirement income supplementation.
3.5.2 Framing

The issue of framing appears to be particularly important. Our approach to a problem, especially one in which we are not expert, will be based to a large degree on the way it is framed. The current approach to post retirement advice seems to give a number of inappropriate suggestions.

- Funds and the official ASIC website illustrate superannuation benefits as a lump sum; the conclusion that could be drawn is that lump sums are the intended outcome. (It is noted that ASIC does have a retirement benefit calculator that is in a separate section to superannuation, and it is conscious of the need to change, but its rules have currently made it impractical for funds to provide suitable illustrations.)
- Adding five years to current life expectancy is the suggested approach to allowing for longevity risk, and is included in the SIS Regulations governing the design of annuities and pensions; that must therefore be an acceptable risk margin.
- The calculators investigated earlier seem to suggest that increasing investment risk is a way of meeting retirement targets; this must be therefore be an acceptable approach to investment choice.
- Investment choice is related to your aversion to losing money in individual years, which is the way APRA requires risk to be reported; this must be what the experts believe and so must be important.
- Most companies do not offer longevity insurance: it is therefore not that important and certainly not necessary, and financial advisors are reluctant to discuss them.
- There is seldom any discussion that retirement assets belong to both members of a couple, and all illustrations are for individuals: presumably I should therefore not be considering my partner.

3.5.3 Long term nature of the product

Pensioners seem to focus on the loss of capital in the event of death prior to life expectancy and ascribe a value to flexibility that traditional lifetime annuity products have not provided.

Behavioural economics clearly demonstrates that investors have significant difficulty in assessing the value of long-term financial obligations and consequently focus on short-term outcomes. As a lifetime or deferred annuity provides its greatest value beyond life expectancy, individuals ascribe a low value to this benefit.

This seems to extend to financial advisers, who understandably avoid “set and forget” strategies for their clients, and who in any event do not always have an annuity to sell. This is likely to be entrenched under the recent FOFA reforms and adoption of a ‘fee for service’ model across the industry, as guaranteed annuities require no advice once initiated. Variable or pooled annuities with ongoing investment choice could however offer a reason to provide financial advice.
In addition, the long-term nature also results in a focus on annuity counterparty risk by investors and advisers.

3.5.4 Annuities are perceived as expensive

Ultimately, the question of whether an annuity is expensive or not depends on what it is being measured against and the requirements of the purchaser. In general annuities are priced based on the yield that can be obtained from government bonds (and other similar instruments). The increase in the cost of an annuity in recent years has been due to the sharp fall in bond yields as well as increased longevity assumptions.

The annuity price is dependent on financial markets and is based on the market’s view of returns and risk. Low bond yields reflect the appetite of investors to take risk. If there were other assets that made the bond yield look unattractive then money would flow to those assets and drive up the yield on bonds. One would need to make the argument that the supply of bonds was somehow artificially depressed to argue that their lower yields were unfair or unreasonable.

Retirees do seem to see other alternatives such as allocated pensions and term deposits as more attractive or “cheaper” relative to long-term annuity products. High dividend payout ratios combined with franking credits within the Australian stock market may also be perceived as an attractive means of securing income in retirement. They may not adequately take into account the costs of the guarantees inherent in guaranteed annuities.

Other costs relate to expense charges, longevity and reinvestment risk and capital required as a consequence, as well as allowances for anti-selection, although the latter can be mitigated by issuing impaired life annuities.

For members who are risk averse or attach a higher value to their individual longevity, then the annuity may still offer good value regardless of their current account balance or investment portfolio. If they are concerned about market volatility, uncertain over the return from other investments or of out-living their savings then an annuity can still be an appropriate option. Individuals may also be in the position where they are not able to withstand variations in income and want certainty for the future. The annuity can represent good value compared to retaining the risk that assets decline in value or are not sufficient to last a member’s lifetime.

3.5.5 Addressing these reasons

Beshears et al (2012) suggest how annuities should be promoted. Their recommendations are:

- Decisions to annuitise or not appear to be sensitive to whether the decision is framed as an investment (the return is higher if you live longer) or as insuring consumption plans (allows you to spend the capital for as long as
you are alive). The former is a more appropriate viewpoint for a family decision (including the heirs), while the latter is a more appropriate way for the pensioner to think.

- Flexibility is important and retirees are more likely to annuitise a portion of their retirement account if they are presented with a decision that includes partial annuitisation. The desire for flexibility can also be partly met by providing one or more additional bonus payments during the year.
- If presented with appropriate information, retirees do choose income streams that offer protection against inflation.
- Concern for counterparty risk are real, and could possibly be addressed by greater emphasis on the regulatory environment or by splitting annuity contracts between different companies, or potentially a government guarantee analogous to that offered on bank deposits.

Avanzi (2010) considers the Swiss retirement system where the two thirds of pension fund members take all their retirement as an annuity, and only a quarter take nothing. He suggests explanations that include:

- annuitisation is the default,
- there is a government guarantee,
- the benefits offer value for money and provide for dependents,
- 60% of retirees do not own their own houses and so need a regular income to pay rent,
- the benefits from the fund are always framed in the form of incomes.

4 Products available

This section briefly describes the products currently available in Australia, and then describes some products available internationally that could enhance the current local offerings. Each product meets some of the individual retiree’s needs more than others; a table at the end of the section makes a comparison.

4.1 Current superannuation and insurance strategies

There are significant advantages to holding assets within APRA regulated life insurance or superannuation funds.

- They are subject to APRA’s prudential standards on governance, capital and risk management.
- The assets supporting life insurance policies are held in statutory funds and are protected from creditors in the event that the life insurer faces financial difficulties.
- Superannuation members enjoy some protection against fraud or theft under part 23 of the SIS Act.
4.1.1 Account based pensions (previously known as allocated pensions)

Regulations 1.05 and 1.06 in the Superannuation Industry (Supervision) Regulations 1994 govern the annuities and pensions that can be paid in Australia. Regulation 1.05 11A (a) defines a very flexible annuity payable by a life insurer. Regulation 1.06 9A defines pensions paid by a superannuation fund with almost identical wording, which are defined as “account-based pensions”. In simpler language, Super Guide explains account based pensions as “a flexible retirement income stream that gives you unlimited access to your capital but no guarantees on how long the money will last.”

The amounts being paid should be adjusted on a regular basis for deviations from experience to utilise profits for higher consumption, or to prevent the balances from being exhausted. Retirees with allocated annuities who are drawing down a fixed amount regularly face the latter risk particularly. Schedule 7 of the SIS Regulations requires an increasing proportion of the account balance products to be withdrawn over time, which means that balances must ultimately reduce. These percentages are shown in the table below.

<table>
<thead>
<tr>
<th>Age</th>
<th>Minimum drawdown as % account balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 65</td>
<td>4</td>
</tr>
<tr>
<td>65 – 74</td>
<td>5</td>
</tr>
<tr>
<td>75 – 79</td>
<td>6</td>
</tr>
<tr>
<td>80 – 84</td>
<td>7</td>
</tr>
<tr>
<td>85 – 89</td>
<td>9</td>
</tr>
<tr>
<td>90 – 94</td>
<td>11</td>
</tr>
<tr>
<td>Over 95</td>
<td>14</td>
</tr>
</tbody>
</table>

Account based pensions do offer immediate liquidity and investment choice, and can offer relatively low fees.

4.1.2 Lifetime Annuities

Lifetime annuities are available in Australia with many options (e.g. guaranteed payment periods, reversionary annuitants, death benefits, nominal and inflation-linked payment, and more recently liquidity options).

Currently there are only two companies in Australia that sell lifetime annuities although there used to be as many as ten. Changes to the social security treatment of lifetime annuities in FY2005 changed the landscape of lifetime annuities making them less attractive to investors and subsequently, companies withdrew from offering the product.

Lifetime annuities do not offer investment freedom, but the current offerings provide a liquidity option that is not very different from that available from an allocated...
pension. There is no evidence however that the availability of the liquidity option has increased sales dramatically, although the graph below shows that there has been a resurgence in lifetime annuity sales in FY2013, albeit from a low level.

The following graph illustrates historic sales for lifetime annuities in Australia.

![Lifetime Annuity Sales](chart.png)

**Lifetime Annuity Sales (per financial year)**

Data: From Plan 4 Life

### 4.1.3 Term annuities

Term annuities pay a benefit amount for a specified duration with or without a return of capital. Term annuities are available with many options (payout frequencies, residual capital values, terms, etc.) They are, in some guises, identical to term deposits and are, in some ways, more of an investment choice than a post-retirement product. Term annuities provide liquidity as policyholders can gain access to their money if needed. The Life Insurance Act of 1995 imposes a minimum surrender value for this type of annuity.

Often, they are bought as short term annuities with return of capital, and rolled over when they mature. So the income paid varies with interest rates, but the customer retains control of the capital. Reinvestment and longevity risks are still borne by the policyholder.
4.1.4 Variable annuities with guarantees

Variable annuities give the investor some choice regarding the asset allocation underlying the investment. The available asset allocations may be limited and may use index tracking funds. Variable annuities come with riders (or guarantees) which protect the investor from downside risk. A common rider for retirees is a guaranteed minimum withdrawal benefit (GMWB), which guarantees a lifetime income if voluntary withdrawals are not made. The costs of these riders, along with the investment management and administration fees, are a cost to the customer.

Variable annuities have had significant traction in the US and Japan particularly, although Robinson (2008) explains that one reason has been considerably high sales commissions which have led to criticisms from regulators. The Global Financial Crisis (GFC) had a severe impact on a number of overseas companies offering these products.

These products directly address the problem of liquidity and offer a degree of investment choice that is generally a subset of that available for allocated pensions, and may well lean towards index based funds which are more straightforward to hedge. They have however not gained much market traction, and are regarded as expensive and complicated. In fact, it does not appear that charges for the guarantee are that much in excess of the average 1.9% pa reported in the Cooper Review (page 203) – which is probably less than the expected equity risk premium and so would justify the investment in the hope of some upside. It appears that objections to annuitisation go beyond the issue of liquidity.
4.2 Bank accounts and term deposits

Term deposits are deposits into Authorised Deposit-taking Institutions with a fixed term and interest rate. Deposits are guaranteed by the Australian Government up to $250,000\textsuperscript{14}. Term deposits are a savings product where a fixed rate of interest is earned over the term of the contract.

Term deposits offer liquidity; however, access to money before maturity is likely to incur a penalty.

4.3 Share investments and dividend strategy

In the current environment, the dividend yield on shares exceeds 5% with franking credits and would therefore outperform government guaranteed indexed linked stocks by some 4% pa if dividends merely retain their real value. Under these circumstances, investing in a portfolio of stocks that regularly pay dividends is attractive. As capital is retained, there is no need for longevity insurance.

Information on dividend strategies can be found at:


There are risks involved using a dividend strategy, which include the possibility that companies may change their dividend strategies or reduce the dividends they pay. There is no guarantee on the level or frequency of the dividends which makes this strategy less attractive, although historical Australian dividends have kept pace with inflation over the longer period. There is also the risk of capital loss when the shares are eventually realised.

4.4 DB benefits

A significant number of Australians (public servants predominantly) enjoy inflation linked DB pensions. Almost all Australians would accept that extending this benefit to others is not a realistic option – or at least too expensive to maintain at the current level. The point needs to be made that many developed counties have retained DB schemes that provide significant replacement rates, and a retirement system where the government bears a significant proportion of investment risk cannot be rejected completely out of hand. Ultimately, government guaranteed DB schemes are analogous to inflation linked lifetime annuities, and offer the same advantages and some of the disadvantages.

4.5 Packaged strategies

Recent developments are for packaged investment and annuity products that automatically shift clients from more aggressive strategies to safer guaranteed investments. These combine a target date investment strategy with a variable annuity with a guaranteed lifetime income. The GMWB allocation increases
automatically each quarter until the fund is fully invested in the GMWB, a few years before the fund’s target date.

These strategies offer diversification not only across asset classes, but across insurance providers to protect against the three risks of a single-insurer approach: pricing, capacity and default.

### 4.6 Pooled annuities

The term pooled annuities can be used to describe with-profit annuities in Europe and the Commonwealth (Rusconi, 2008), and variable life annuities in North America and Japan. Defined benefit (or “defined ambition”) pensions in some countries like the Netherlands and South Africa also operate as pooled annuities. While they are frequently issued with guarantees, the guarantees are not essential to the design.

The initial payment on pooled annuities is determined using an assumed interest rate (AIR) and a suitable estimate of mortality rates. The amounts actually paid are varied from time to time depending on investment returns and mortality experience. Deviations in investment returns from the AIR lead to a proportional change to amounts being paid. (E.g. 5% outperformance leads to an increase of 5% in the payments.) Deviations from mortality experience require more complex calculations, and a variety of rules can be applied. Usually the same percentage change is applied to all ages, although this raises fairly complex equity issues, which are beyond the scope of this paper.

The initial amount of the annuity can be calculated using AIRs from 3.5% to 8%. Vittas (2011, 6) reports an AIR range from 3% to 8% in Canada, 3% to 5% in the USA, with some flexibility to use a higher rate. The Swedish PPM annuities use a rate that has varied from 2.3% to 4%.

#### 4.6.1 With-profit annuities

With-profit annuities are common in the UK, South Africa and have recently been introduced into Europe – as new accounting and solvency rules have exposed the risks involved and increased the capital required for issuing guaranteed annuities. The life insurance companies issuing the contracts normally offer a minimum guaranteed annuity, with an annual bonus that usually increases the minimum guarantee.

- In South Africa, the guarantee is that the pension will not reduce. With higher rates of inflation and long interest rates that have ranged from 8% to 15% and more, it is possible to provide a guarantee of the nominal value of the pension and invest a considerable proportion of the assets in equities in the hope of higher returns. All bonuses therefore compensate for inflation. These annuities often include an annual bonus that can vary from nothing to over 20% of the annual amount paid.
- In the UK, Germany and Denmark, the guaranteed pension may decline over time (by as much as 5% pa), with the bonus used to maintain as much...
of the nominal value as possible. The initial value of the annuity is likely to be calculated using an AIR that varies from as little as 1% to perhaps 5%. With-profit policies evolved as being administratively tractable and as a source of capital for mutual societies. Their current justification is that they provide smooth payouts – while providing participation in equity returns. Guillén et al (2006) gives a mathematical algorithm that can used to smooth returns without the opacity and discretions inherent in the traditional with-profit design. This method is being used by some Danish insurers with some success – as reported in Guillén et al (2010). These papers do not however set out how solvency is assured in a long term bear market, but this should not be an intractable problem.

Vittas (2011, 15) suggests smoothing methods should be based on predetermined algorithms, but they still depend on insurer discretion. He reports that “little concrete evidence has been documented with regard to the actual policies pursued by different providers in different countries” although refers to the comparison by Cummins et al (2007) that gives an indication of the type of rule followed.

Given their complexity and the lack of transparency in smoothing, they seem unsuitable for Australia, and are not discussed further.

4.6.2 Variable annuities (non-guaranteed)

Non-guaranteed variable annuities have been offered for over 50 years in the USA. The variable annuity payments reflect the actual experience of the underlying investments and are also adjusted for unexpected changes in mortality. They offer a wide range of underlying investment options. The pensions therefore can be much more variable than with-profit bonuses. Annuities invested in cash portfolios have been much smoother and produced real returns for some years. Current low levels of interest rates mean that this is unlikely to have been the case over the past 2 years, or in the foreseeable future.

The annuities being paid by the Central Provident Fund in Singapore are also variable annuities.

4.7 Deferred annuities

Advanced Life Deferred Annuities (ALDA), as described by Milevsky (2005), are also known as longevity insurance or longevity annuities in the US. They are sometimes called Deferred Lifetime Annuities (DLAs) in Australia. In its April 2013 Superannuation announcement, the Australian Government indicated that deferred lifetime annuities would receive the same taxation concessional treatment that superannuation assets supporting income steams receive. This is to encourage the development of these products in Australia. The regulatory reform has been the result of numerous attempts by the industry advocating for the change e.g. Superannuation Roundtable, the October 2011 Tax Forum, the Henry Tax Review and the Actuaries Institute (2012).
DLAs are deferred annuities typically purchased around the time of retirement (e.g. age 65), as opposed to a regular premium product purchased during one’s working life. The annuity income only starts at an advanced age (e.g. age 85) and then is payable for life.

Conceptually DLAs can be viewed as insurance against outliving one’s savings. A new retiree could use a relatively small portion of the retirement savings to buy an advanced life deferred annuity. The remaining savings could then be drawn down over the deferment period with peace of mind, knowing that the annuity payments would kick in once past the chosen advanced age (say the age representing the life expectancy). It is analogous to an insurance policy with a high deductible, offering lower premium but benefits only payable upon a major event i.e. living past the life expectancy.

In its pure form, DLAs would not have any surrender value or death benefit during the deferment period. In this sense they are highly leveraged because the life company is essentially betting on a significant proportion of the policyholders not making it to the annuity starting age. This partly explains the attractiveness of the annuity amount relative to its initial purchase price. For example, based on the US market environment in 2010 a male aged 65 at the time of purchase with annuity payments starting at age 85 would expect to receive a benefit of $70,000 p.a. (nominal) for an initial purchase price of $100,000.  

Another version of this type of product offers greater flexibility. There would be a death benefit and a surrender value (say original premium with an interest adjustment) during the deferment period. The annuity starting age could also be changed subject to a minimum age and a maximum age (presumably with a corresponding adjustment to the annuity level). Obviously the flexibility comes at a cost by way of a lower annuity amount for the same purchase price compared with the less flexible version. For the same person in the example of the previous paragraph, he would expect to receive $40,000 pa along with the flexibility.

ALDA (or DLAs) have been available in the US for over a decade. They sit alongside immediate annuities and variable annuities in the retirement incomes product offering. The sales appear to have been slow. There are only a handful of life companies offering this type of products. With the current near-zero interest rate environment in the US, one would expect the pricing to be challenging, especially for a long term locked-in investment.

The major disadvantage of such an annuity is that it requires careful management to prevent a discontinuity between the last of the fixed payments and the first deferred annuity payment – a discontinuity avoided entirely by an immediate annuity with a guarantee that it be paid for a fixed term. The problem is illustrated by Corrigan and Matterson (2009), who provide the following graph which shows that at the 10th percentile of investment earnings, the allocated annuity is exhausted by age 80 and there are 5 years before the deferred annuity starts paying. At the 50th percentile there is a period of 5 years when income is double, and at the 90th percentile income doubles after age 85.
In reality, it is likely that the member will adjust their spending habits (to the extent possible or bearable) to take into account any adverse experience with the aim of making the balance last until at least the deferral age. The strategy may also be designed conservatively to allow for this type of event by establishing some overlap between the allocated pension and deferred annuity. Another approach would be to acquire a term annuity for the desired level of secured income.

The risk management aspect of deferred annuities would be of greatest interest to actuaries. For a life company developing and maintaining such a product, key risks include –

- **Longevity risk** – The risk of annuitants living longer than expected is more pronounced for deferred annuities than for standard lifetime annuities. Deferred annuities are highly leveraged. They carry the same tail risk as for the standard lifetime annuities but at much lower initial purchase price. Conceptually it is like being exposed to an option of a stock instead of owning the stock outright. In addition, it is almost impossible to forecast mortality with any degree of certainty 20+ years out. The systemic trend risk can be significant.

- **Asset-liability mismatch** – Similar to longevity risk, the investment mismatch risk and re-investment risk are greater for deferred annuities than for standard lifetime annuities due to the longer duration. The lack of widely-available and long dated bonds would make interest rate hedging more difficult.

- **Policy behavioural risk** – To the extent that the product offers other benefits or options such as surrender value, there would be additional uncertainties and potentially anti-selection. It could take a number of years before any significant volume of actual experience comes to hand.

- **Political / regulatory / taxation changes** – Due to the ageing population in Australia, the retirement income space is likely to attract political attention going forward and thereby increasing the risk of adverse changes to the underlying
welfare and taxation system. For the regulators coming to terms with new product concepts, there might also be changes to the regulatory framework including the required capital basis. These aspects add to the uncertainties of managing such a portfolio.

For the retirees, there are a few key risks -

- **Credit risks of the annuity provider** – Due to the very long term nature of deferred annuities, some argue that the counter-party credit risk is a real risk if deferred annuities are provided by the private sector. There can be understandably a fear that the annuity provider might not be around some 20 years on when the income stream falls due. The regulatory capital associated with the product is designed to minimise the risk of default.

- **Interest rate risk** – At the time of purchase, the retiree is effectively locking in the market interest rates on offer. If it happens to be at a low point of the interest rate cycle, the annuity purchased could represent a very poor deal. To partly alleviate the interest rate risk, one could stagger the purchase of a series of deferred annuities over a period of time (laddering technique) or consider a regular premium version if available.

- **Inflation risk** – Unless indexation protection during the deferral period is built in to the product, high inflation for a sustained period of time could erode the purchasing power of a fixed dollar amount considerably.

### 4.8 Impaired life products

An argument can be made, as in Hoermann and Ruß (2008) that impaired, or enhanced life annuities, would provide significant benefits to those in poor health and reduce the risks to annuity providers. The point is that those in poor health are quite likely to have earned lower incomes and retired early as a consequence of their poor health. They are therefore most in need of a higher retirement income. Enhanced annuities have been available internationally for over a decade – but are not yet available in Australia.

Rusconi (2008) reports that the only large market in enhanced annuities is in the UK, where they account for almost one third of sales. Gosden suggests that over half of all individuals would qualify.

Enhanced annuities require specialised underwriting, which is available in Australia through the professional reinsurers. The underwriting has become more sophisticated and refined over the years (e.g. assessment of co-morbidity) as competition intensifies in the UK. Apart from the additional attraction to potential annuitants, there are arguments from equity that those in a less fortunate position should be assisted if possible.
4.9 Evaluation

Table 7: Comparison of products

<table>
<thead>
<tr>
<th>Term annuities</th>
<th>Bank accounts and term deposits</th>
<th>Dividend strategy</th>
<th>Account based pensions</th>
<th>Guarantee Variable annuities</th>
<th>Lifetime Annuities – inf linked</th>
<th>Deferred annuities – inf linked</th>
<th>Pooled annuities – bond based</th>
<th>Pooled annuities – equity based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption * (Couple of 65)</td>
<td>4.8%</td>
<td>4.8%</td>
<td>5.5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Consumption * (Female of 75)</td>
<td>4.8%</td>
<td>4.8%</td>
<td>5.5%</td>
<td>6%</td>
<td>6%</td>
<td>7.5%</td>
<td>7.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Protection against market volatility</td>
<td>月亮</td>
<td>月亮</td>
<td>月亮</td>
<td>〇/〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Reinvestment risks</td>
<td>〇</td>
<td>〇</td>
<td>月亮</td>
<td>月亮</td>
<td>月亮</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Protection against Longevity risk</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>

* Consumption is based on current interest and dividend rates on the assumption that capital is not consumed in the first three columns. The account based pension is based on the minimum drawdown, and the Variable Annuity on current rates. The annuities are based on ALT 05/07 25 year projected life expectancies, with the lifetime and deferred annuities based on a real rate of 2.5%. The pooled annuities are based on real rates of 4% and 5.5% respectively.
### Post retirement funding in Australia

<table>
<thead>
<tr>
<th>Protection against Inflation risk</th>
<th>Term annuities</th>
<th>Bank accounts and term deposits</th>
<th>Dividend strategy</th>
<th>Account based pensions</th>
<th>G’teed Variable annuities</th>
<th>Life time Annuities – inf linked</th>
<th>Deferred annuities – inf linked</th>
<th>Pooled annuities – bond based</th>
<th>Pooled annuities – equity based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentially higher returns</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●/○</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>●</td>
</tr>
<tr>
<td>Liquidity or access</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bequest</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Simple to understand</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

● – meets criterion, ○ partially meets criterion, ○ does not meet criterion

The table illustrates the alternative strategies with increasing consumption possibilities from right to left. Account based pensions can follow a variety of investment options, the two alternatives in the volatility and possibility of greater return indicating this. The annuity options can all be redesigned to give greater liquidity and access to some capital, although all involve decreasing access with age. The absence of pooled annuities from the market clearly limits the options of Australian retirees.
5 Initiatives and obstacles

5.1 Current initiatives to develop the Australian market

5.1.1 Research

The ARC Centre of Excellence in Population Ageing Research (CEPAR)\textsuperscript{18} is the major current research initiative into retirement issues in Australia. Its five streams of multidisciplinary research all have some relevance to the issues discussed here.

- System-wide issues including fertility and mortality, and assessing the overall social and economic impact of demographic change
- Decision making by individuals, households and firms and consequences of aging that include the best retirement plan, aged care or health insurance policy
- Integrating public and private provision of age-related products and services
- How public education and policy initiatives can support behaviour change to support ageing well and productively
- International benchmarking of policy responses to aging

Many of the papers cover elements of the “annuity puzzle” as well as the mortality and investment risks related to annuities and reverse mortgages, and alternative instruments and techniques to price and manage the risks. Recent works of particular relevance to the development of annuity markets are:

- Bateman et al (2013) provides some suggestions for member education and refers to much other work on the subject of choice.
- Bateman and Piggott (2010) identifies a need for government policy co-ordination between the ATO, APRA, FAHCSIA and the Treasury.
- Evans and Sherris (2011) looks particularly at supply side innovations.

5.1.2 Government enquiries and Industry Submissions

There has been a torrent of reviews of the superannuation system over the last decade. Most recently, the Cooper Review\textsuperscript{19} was tasked specifically with “maximising of retirement incomes.” It specifically canvassed industry views on the development of a post retirement market. Specific issues canvassed included government issue of more CPI linked bonds (for which there was general support) and annuities (for which there was not) and whether the Chilean or Dutch systems should be followed. There was general (although not universal) support for the introduction of deferred annuities, and investigating the Dutch system, as long as cross-subsidies were limited.

The Actuaries Institute’s submission\textsuperscript{20} was perhaps most comprehensive. In summary:
The Institute would encourage the government to remove the barriers to the development of sound, annuity style products and voluntary purchase of these products, such as:

- Revising the SIS regulations (specifically Regulations 1.05 and 1.06 etc), which are unnecessarily prescriptive and limit the design of these annuities
- Allowing annuities and deferred annuities to be issued as a component of an account based pension,
- Changing the tax rules on deferred annuities such that, if taken out in the draw-down phase, the product is regarded as pension (rather than non pension for tax purposes).
- Removing unfavourable treatment of annuities under Aged Care and Social Security rules
- Issuing longer dated bonds.
- Developing a clear regulatory regime for variable annuity style products.
- We also encourage the government to create a lead regulatory group which would foster the development of new products, as currently, a potential provider has to negotiate with many different regulators with often conflicting requirements”

The Actuaries Institute (2012) went further and suggested that “intelligent defaults” be developed to assist disengaged members in choosing their post retirement products appropriately.

5.2 Regulation

The first area that cries out for reform is that of regulation. The complex regulations 1.05 and 1.06 in Superannuation Industry (Supervision) Regulations 1994 govern the annuities and pensions that can be paid in Australia. Neither of these regulations would appear to allow for:

- variable annuities with the pooling or guarantee of longevity risk
- with profit annuities, where investment and longevity profits and losses are shared with the annuitants/pensioners
- income stream packages that incorporate a deferred annuity from an advanced age.

The regulations should allow sufficient flexibility so that payments can be varied from time to time for example, to limit fluctuations in the combined payments from the pension/annuity and Age Pension.

[Regulation 1.05 11A (a) defines a very flexible account balance fund that could be seen to cover pooled annuities if they were issued by life insurance companies. There are two questions that need to be clarified by the ATO before they could be introduced with confidence.
Post retirement funding in Australia

1. Is there “an account balance attributable to the annuitant” given that the annuitant is only entitled to payments and not to the balance or any proportion of it?

2. Subregulation 1.05 (1) (a) (ii) does not permit “the capital supporting the annuity to be added to by way of contribution or rollover after the annuity has commenced”. Can it be confirmed that the longevity bonuses are not contributions?

3. It should be noted in case it becomes relevant that regulation 1.05 refers to “Registered Organizations”, which appears to have once referred to Friendly Societies, but does no longer given they are now registered under the Corporations Act.

Regulation 1.06 (9A) defines pensions paid by a superannuation fund with almost identical wording, and with 1.06 (1) (a) (ii) raises the same issues.

Neither of the regulations mentioned above envisages the payment of a deferred annuity, as the intention seems to be that the superannuation account be used to support the member and that only a residual amount be available for dependents. The superannuation system could otherwise be used as a perpetual trust on which no tax was payable. Schedule 7 of the SIS Regulations therefore provides for a minimum amount to be paid in any year, which does not currently allow for deferred annuities.

Deferred annuities could easily be accommodated in the regulations by allowing two or more annuity or pension contracts to be viewed together for the purposes of schedule 7. This would also address the problem raised by Stringer (2011), who gives an example of an ATO interpretation where one of the guarantees described in was regarded as a separate and deferred annuity contract.

While there is widespread agreement in industry that these rules are too complex, and the Henry Review and the Cooper Review both strongly recommended their simplification and relaxation. It is pleasing that in recent months the government has agreed to look at removing the restrictions on deferred annuities – though we have yet to see draft legislation.

5.3 Taxation

The current taxation rules are also an impediment to product development.

The tax rules on deferred lifetime annuities should be amended so that, if taken out in the drawdown phase, the product is regarded as a pension (rather than a non-pension) and therefore exempt from income tax. To minimise any tax avoidance issues, this tax treatment should only apply to genuine retirement deferred lifetime annuities purchased with superannuation monies.
5.4 Social security means tests

As discussed above in section 3.2.5, the asset test particularly makes it almost impossible to design a default strategy for a level retirement income. It would be possible to adapt the design of these tests to make it easier to design such a strategy.

5.5 Counterparty risk

One potential impediment to the demand for annuity products is counterparty risk. Lifetime and deferred annuities are long term contracts which are dependent on the provider or insurance company’s ability to meet future payments over a long period of up to 30 or more years. APRA prudential supervision reduces this risk for policy holders, as does holding the underlying assets in separate statutory funds, but does not remove it.

Just as the SIS Act provides financial assistance to members of superannuation funds in the accumulation phase who suffer loss to fraudulent conduct or theft (Pt 23, s 227 to 240), we believe that there should also be some form of protection for those same members who invest their retirement assets in long term annuity contracts. As with the existing financial assistance arrangements, this could be an unfunded arrangement that would be met via an industry levy if and when required. It could also be limited in scope to certain regulated entities and also in regards to the maximum compensation payable.

We note that the UK provides protection for annuitants through the FSCS, which is the UK’s compensation fund of last resort for customers of authorised financial services firms.

5.6 Benefit illustrations

The second area that cries out for reform is the framing of the objective of superannuation as aimed at retirement consumption. This was one of the conclusions of the Cooper Review, but their recommendations were limited to the Mysuper product and have been left as being too hard.

The major obstacle in this respect has been the ASIC rules (Class order 11/1227 and Regulatory Guide 229) that make it difficult to illustrate retirement benefits as incomes rather than lump sums. ASIC CP203, their most recent consultation paper and due for implementation in June 2103, is a further attempt to allow for illustrations of the retirement benefits and permits the inclusion of the Age Pension, which has been a problem previously. The revised RG229 does not allow for the projection using different investment returns for different investment strategies, but still requires it to use only one rate of return with the disclaimer that: “The actual money you get in your retirement may be very different from this estimate.” There is probably scope for a more helpful illustration of investment risks. It is too early to see the effects of this change.
6 Conclusion

The unusual absence of compulsory annuitisation and a vibrant annuity market in Australia cannot be entirely explained by the crowding out effect or a total lack of need. Other explanations would seem to be found in the regulatory environment which:

- frames superannuation as an accumulation of wealth,
- encourages the view that longevity risk can be managed by taking out income products that pay for five years more than the expected lifetime.
- prevents or inhibits the issuing of deferred and pooled annuities
- pays inadequate attention to the risk of dementia and poor financial decision making

The RIWG would welcome responses and comments on this paper, which it is hoped will provide a further resource to the Institute and policy making in the years ahead.

7 References


Australian Prudential Regulation Authority (2013b) Superannuation Fund-level Profiles and Financial Performance, Sydney


Post retirement funding in Australia


Scandinavian Actuarial Journal, Forthcoming, Available at SSRN: ssrn.com/abstract=1612931


Stringer R, 2011, Addressing the Market Failure in Post-Retirement Products – Legal Issues Presented to the 23rd annual conference held by the Law Council Superannuation Committee – Super - A Paradise Lost?


## Appendix 1 – Multi-pillar Pension Taxonomy

The following table is taken from Holz and Hinz (2005) p 10:

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Target group</th>
<th>Characteristics</th>
<th>Main criteria</th>
<th>Funding or collateral</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>X</td>
<td>&quot;Basic&quot; or &quot;social&quot; pension, at least social assistance, (universal or means tested)</td>
<td>Universal or residual</td>
<td>Budget or general revenues</td>
</tr>
<tr>
<td>1</td>
<td>X</td>
<td>Public pension plan, publicly managed (defined benefit or notional defined contribution)</td>
<td>Mandated</td>
<td>Contributions, perhaps with financial reserves</td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td>Occupational or personal pension plans (fully funded defined benefit or fully funded defined contribution)</td>
<td>Mandated</td>
<td>Financial assets</td>
</tr>
<tr>
<td>3</td>
<td>X</td>
<td>Occupational or personal pension plans (partially funded defined benefit or partially funded defined contribution)</td>
<td>Voluntary</td>
<td>Financial assets</td>
</tr>
<tr>
<td>4</td>
<td>X</td>
<td>Access to informal support (family), other formal social programs (health care), and other individual financial and non-financial assets (home ownership)</td>
<td>Voluntary</td>
<td>Financial and non-financial assets</td>
</tr>
</tbody>
</table>

Note: The size and appearance of x reflect the importance of each pillar for each target group in the following increasing order of importance x, X

This architecture provides a framework for international comparisons and widens analytical scope, e.g. by referencing such products as long term care and reverse mortgages under the retirement income heading.

The World Bank extended its previous three pillar approach because it felt the new system was better able to deal with multiple objectives and better reflects the diversity of approaches across countries and the reality for many people.
Appendix 2: Measurement of inflation

Inflation is measured by the ABS:

“The CPI measures the changes in price of a fixed basket of goods and services based on average household expenditure by capital city households across Australia, not of any specific family or individual. For example, it includes both rental and owner–occupier house purchase costs in the basket, which is impossible for a single household. It is unlikely that any individual experience will correspond precisely with either the national index or the indexes for specific capital cities. The CPI basket is based on actual household expenditure data, which is principally derived from the HES conducted by the ABS. The HES collects detailed information about the expenditure, income, assets, liabilities and household characteristics from a sample of over 7000 households resident in private dwellings the eight capital cities.

Households have been categorised based on the principal source of household income, derived from the 2009–10 Household Expenditure Survey (HES). The four household types in the scope of the HES account for just over 90% of Australian households. The four household types that have been identified as being appropriate for the construction of these indexes, are:

- employee households (i.e. those households whose principal source of income is from wages and salaries);
- Age Pensioner households (i.e. those households whose principal source of income is the Age Pension or veterans affairs pension);
- other government transfer recipient households (i.e. those households whose principal source of income is a government pension or benefit other than the Age Pension or veterans affairs pension) and,
- self-funded retiree households (i.e. those households whose principal source of income is superannuation or property income and where the HES defined reference person is ‘retired’ (not in the labour force and over 55 years of age).

The Pensioner and Beneficiary Living Cost Index (PBLCI) is designed to measure the impact of price change on the disposable income of households whose income is derived principally from government pensions or benefits.

<table>
<thead>
<tr>
<th>Weighted average of eight capital cities, All groups</th>
<th>Dec Qtr 2011 to Dec Qtr 2012</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selected Living Cost Indexes (LCIs) - Household type:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pensioner and Beneficiary LCI (PBLCI)</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>Employee LCI</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Age pensioner LCI</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Other Government Transfer Recipient LCI</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Self-funded Retiree LCI</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td><strong>Consumer Price Index (CPI)</strong></td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>
Post retirement funding in Australia

1 See http://www.actuaries.asn.au/Library/Submissions/MediaRelease/2012/Press%20Release-%202012%20Federal%20Budget_FINAL.pdf

2 We include annuities (life, term and deferred) as issued by life insurance companies and reflecting investment and the mortality experience of groups, with and without guarantees, allocated annuities and income streams provided by superannuation funds including those that rely on accumulated investments and those provided by Defined Benefit plans. We sometimes use the term pensions as interchangeable with annuities.

3 “Pensions” in this context includes pensions from account-based based pensions as well as more traditional pensions. Such account structures make drawdowns over time rather than as a lump sum and might be regarded as structures which simulate annuities.

4 Calculated by members from state and commonwealth budget papers

5 Information obtained from Anthony Asher on work being done in collaboration with Susan Thorp and Shang Wu of UTS and Ramona Meyricke of UNSW

6 http://www.superannuation.asn.au/resources/retirement-standard

7 Figures including the energy supplement can be found at http://guidesacts.fahcsia.gov.au/guidesActs/ssgguide5/ssguide5.1.8.10.html


10 https://www.calc.australiansuper.com/


12 http://www.stanford.edu/~wfsharpe/art/fantasy/fantasy.htm


Post retirement funding in Australia

15 See for instance: http://www.telegraph.co.uk/finance/personalfinance/savings/2783961/With-profits-bonds-smooth-out-the-shocks.html


17 http://europe.nxtbook.com/nxteu/posthaste/actuarialpost23/index.php#34


22 Taken from http://www.abs.gov.au/websitedbs/webfaq.nsf/home/consumer+price+index+faqs