

Henry on Super and Saving^{*}

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Henry makes recommendations for improving the progressivity of taxes on super and the adequacy of retirement incomes, but does not deal with problems of moral hazard and adverse selection in the super system. For example, the recommended 7.5 per cent tax on 'the earnings from assets supporting superannuation income streams' could interact with the existing system of minimum (rather than maximum) annual rates of drawdown so as to encourage asset switches by retirees out of the super system and into non-assessable (and means test exempt) assets such as the family home. Henry also recommends a 40 per cent discount for tax purposes of the income generated from assets held outside the super system. This proposal is promising but underdeveloped.

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1. Introduction

Australians save in a variety of ways. According to the Australian Bureau of Statistics, around 60 per cent of (gross) household savings is in housing and other property, 13 per cent in superannuation, 12 per cent in shares and trusts, 11 per cent in personal use assets and 4 per cent in financial assets (ABS 2007). However, there are considerable differences in the tax treatment of these assets. Owner occupier housing is excluded from the federal tax base and a specific and concessional tax regime applies to superannuation. Rental property, domestic and international shares and financial assets are taxed at marginal personal income tax rates subject to variously designed concessions.

Superannuation is taxed under a comprehensive income tax regime (TTE) with contributions taxed (T) at different rates by type of contribution, superannuation fund earnings taxed (T) at different rates by type of income (with a zero rate for some retirement income streams) and retirement benefits free of tax (E) for those aged 60 and over. A particular feature of Australia's retirement income arrangements is a disconnect between mandatory accumulation and freedom of choice in decumulation. While around 50 per cent of benefits are taken as account-based pensions (and the remainder as lump sums) very few Australians buy longevity products in the private markets. Australia's life annuity market has all but disappeared (Plan for Life 2010).

As a result, the starting point for the Henry review's consideration of the taxation of superannuation and saving was a system characterised by complexity, inequity and inefficiency, and one which had been subject to ad hoc and piecemeal changes. No doubt this motivated a key principle of the review: 'Savings should be taxed as consistently as possible to minimise tax arbitrage opportunities and to avoid biasing household and investor decisions about what assets best suit their needs and preferences'. (Australia's Future Taxation System 2010b, p. 64).

2. Henry on Super

The Henry review makes three sets of recommendations for changes to super taxes. The first, numbered 18 in the review as a whole, deals with super contributions. Henry wants to raise the compulsory contribution rate from an effective $9 \times (1 - 0.15) = 7.65$ per cent to a nominal and effective rate of 9 per cent. He also wants to treat employer contributions as employee income and replace the current flat tax of 15 per cent on employer contributions by a progressive rate scale comprising three steps. Candidate values for these steps are given as zero, 15 and 25 per cent.

The precise mechanism involves offsets to the contributor's marginal rate of personal income tax. Incomes below the tax-free threshold attract an offset resulting in no tax payable on super

contributions. Incomes between the tax-free threshold and those liable for the top marginal rate of personal income tax attract an offset of 20 percentage points to the 'standard' marginal rate. If that rate were the 35 per cent proposed elsewhere in the review then the tax on employer contributions would be $35 - 20 = 15$ per cent. Incomes liable for the top marginal rate of personal income tax attract an offset of 15 percentage points to the top marginal rate. If that rate were the 45 per cent proposed elsewhere in the review then the tax on employer contribution would be $45 - 15 = 30$ per cent. Finally, there would be caps on employer plus employee contributions of \$25,000 pa (indexed) for contributors younger than 50, and \$50,000 (indexed) for contributors aged 50 or older.

The resulting system for taxing contributions would partly resemble the one in operation during the era of the superannuation surcharge, which lasted from 1996 to 2005. The key difference is that progressivity takes the form of a low rate of tax on employer contributions on behalf of low income earners as well as high rates of tax on employer contributions on behalf of high income earners. Evidently the official family is more prepared to be generous with tax expenditures on this occasion, perhaps because the ratio of public debt to gross domestic product was much higher in the mid 1990s. Complementary changes would include the abolition of the government co-contribution and the spouse contribution tax offset with the result that all superannuation contributions (below the age-based cap) would be taxed in the same manner.

The review says: 'The recommendation [18] would integrate employer superannuation contributions into the personal income tax system'. This statement is true in the narrow sense of ensuring that a change in the overall scale of personal income taxes would automatically flow through to the contributions tax scale. But it is not true in the broad sense of ensuring that a change in the overall scale would entail equality of sacrifice, meaning comparable changes in utility across different sections of the community. Retirees supported by account-based pensions are one group who would continue to be disconnected (rightly or wrongly) from changes in the overall scale.¹

The second set of recommendations, numbered 19, deals with super fund earnings. Henry wants to lower the rate of tax on the earnings of workers' accounts from 15 per cent to 7.5 per cent. On the other hand he says: 'The 7.5 per cent tax should also apply to...the earnings from assets supporting superannuation income streams' (Australia's Future Tax System 2010b, p. 106). This particular recommendation is puzzling on two counts: the terms of reference required the review to 'preserve tax-free payments for the over 60s' (p. viii), and there is no information about the effect of this impost on retirement incomes or tax revenues. Henry also wants to change the tax on the capital

gains of superannuation fund from 10 per cent to 7.5 per cent, aligning it with his proposed earnings tax rate.

An earnings tax on account based pensions could be expected to interact with the existing system of minimum annual rates of drawdown so as to encourage asset switches by retirees out of the super system and into non-assessable assets such as the family home. Retirees could avoid a tax on 'earnings from assets supporting income streams' by upgrading the family home while placing more reliance on the Age Pension and family members for an income.

The final set of recommendations, numbered 20, would allow workers aged over 75 to contribute to super.

3. An Expenditure Tax by another Name?

The review lists and endorses three arguments for an expenditure-tax treatment of superannuation. First, superannuation is saving for the long term. As a consequence, a tax on the earnings of super accounts amounts to a cumulative impost on distant consumption. In other words, front-end taxes on super appear to be relatively inefficient because they are especially susceptible to the famous Judd (1987) critique of capital income taxes based on the notion of an 'exploding wedge' between the pre-tax price and post-tax price of increasingly distant consumption. Second is the equity argument that people generally experience a drop in income when they retire. Accordingly, fairness considerations warrant a drop in the marginal rate faced by most retirees. Third, many OECD countries apply the standard personal rate scale to retirement incomes while exempting super contributions and earnings from tax. In these ways and others, back-end taxes lay claim to represent international best practice.

These arguments have force. Yet the review recommends that Australia's unusual system of super taxation primarily at the front end be continued indefinitely. At the same time it is eager to claim the mantle for Australia of an expenditure-tax treatment. It resolves this tension by describing Australia's system of taxing super as a 'pre-paid expenditure tax' (Australia's Future Tax System 2010b, p. 97). In particular, contributions are taxed at a rate lower than the marginal tax rate on wage income, and earnings are also taxed at a low rate. As a consequence, the present value of taxes paid over the life cycle could in principle be similar to the present value of what is typically paid over the life cycle under back-end taxes.

This line of argument glosses over the distinction between income and substitution effects. Two taxes can have similar effects on the permanent income of a household yet have different effects on behaviour because of different effects at the margin. For example, you could re-badge Australia's personal income tax as a 'pre-paid expenditure tax', but that would not alter the likelihood that it discourages saving more than our Goods and Services Tax.

So far as front-end versus back-end taxes on super are concerned, front-end taxes have three troubling implications for incentives at the margin. First, back-end taxes enable an elderly worker to defer super taxation by delaying retirement but this is not the case with front-end taxes. It may be no coincidence that Australians retire at an age earlier than the OECD average. Second, back-end taxes combine with progressivity of the personal rate scale to perform a risk-sharing function. You have the consolation of dropping into a low tax bracket in retirement if your super investments perform badly. Third, ostensibly 'very small' earnings taxes of the kind favoured by Henry interact with ostensibly low rates of inflation to produce substantial effective tax rates on interest-bearing investments. For example, with inflation at 2 per cent pa and an interest rate of 5 per cent, a headline tax rate of 7.5 per cent is effectively a tax rate of $100 \times 0.075 \times 5/(5-2) = 12.5$ per cent.

The corresponding effective tax rate on interest earnings under our current system is $100 \times 0.15 \times 5/(5-2) = 25$ per cent. Fund members and their advisers may have been tempted to overweight growth assets carrying franking credits. For example, the template offered in 2008 by the Financial Planners Association of Australia to its members says the fact that share investments generate franking credits should be mentioned in order to help persuade clients to increase their exposure to growth assets.² It is probably no coincidence that super funds in Australia seem to allocate a higher proportion of their portfolios to stocks than super funds in any other OECD country.³ Defined contributions, growth assets and financial planners interact to create moral hazard for taxpayers obliged to pick up the tab (via the means-tested Age Pension) for retirees with downsized account-based pensions.

4. Henry on Retirement Benefits

On the role of longevity products, Henry's recommendations amount to little more than a 'wish list'. While acknowledging in its preliminary recommendations of May 2009 that the 'lack of products that retirees can purchase to insure against longevity risk is a structural weakness in the system' (Australia's Future Taxation System 2009, p. 4), the final recommendations fall short of a specific policy direction.

Recommendation 21 suggests that the ‘government should support the development of a longevity insurance market within the private sector’ by addressing possible supply-side constraints (as discussed in Purcal 2007). Specific proposals include government issue of long term securities, government development and maintenance of a longevity index and removal of regulatory barriers to retirement product innovation. Recommendation 22 is complementary and canvasses government provision of annuity products, as proposed by Evans and Sherris in their work commissioned by the review (Evans and Sherris 2010). In arriving at these recommendations, Henry concludes that ‘the private sector is in a better position to develop products that best meet the preferences of individuals’ while ‘the public sector may be in a better position to deal with the significant counterparty risk associated with longevity insurance’. Henry specifically rejects mandatory annuity purchase or a return to differential tax and Age Pension means test preference. The broad rationale for this approach appears to focus on providing retirees with the flexibility to ‘..... make decisions in accord with their own retirement needs’ (Australia’s Future Taxation System 2010b, p. 122) which is at odds with the overriding rationale for mandatory superannuation contributions. There appears little explicit consideration of efficiency, simplicity and equity in reaching these recommendations.

5 Efficiency and Life Annuities

During the era of high tariffs in Australia, economists at the University of Melbourne were in the vanguard of efficiency analysis based on triangles. Those diagrams were influential. Similarly, Freebairn (2010) applies Marshallian diagrams to environmental taxation. Much of the Henry review upholds this tradition of Marshallian analysis. When the review turns to retirement benefits policy, however, it does not raise efficiency questions and offers no diagrams. We try to fill this gap with a diagram explaining why the lack of an actuarially fair market for lifetime annuities is a source of inefficiency. The pre-existing literature on longevity insurance does not appear to have a counterpart of the familiar Marshallian portrayals of the gains from abolishing a tariff in the small open economy or the gains from internalising an externality.⁴

Model

Assume for simplicity that the economy is stationary. The retirees who populate it survive for either one or two periods. Each new cohort of retirees survives period 0 with probability one, period 1 with probability p , and period 2 with probability zero, $0 < p < 1$. Individuals have no bequest motive and a zero rate of time preference. The expected lifetime utility V of a new retiree is described by a quadratic and time-separable function

$$V(c_0, c_1) = -\frac{1}{2}(\bar{c} - c_0)^2 - \frac{p}{2}(\bar{c} - c_1)^2 \quad (1)$$

where c_0 is the consumption of an individual in early retirement, c_1 is the consumption of an individual in late retirement, and \bar{c} is the 'bliss' (saturation) rate of consumption per period.

Assume for simplicity that the real rate of return on retirement savings is zero. Absent a market for life annuities the lifetime budget constraint of a new retiree is

$$c_0 + c_1 \leq w + x \quad (2)$$

where w is the savings of a new retiree and x is transfers to new retirees from non-surviving members of the preceding cohort. This transfer can be interpreted as receipts via the government from deceased estates, unplanned bequests or (once we introduce life annuities) annuity payments from the deceased to the survivors in the same annuity pool. The reason for introducing this transfer is to ensure that comparisons between economies with and without life annuities are made between equally resourced economies.⁵

The problem of maximising (1) subject to (2) is straightforward. During early (period-0) retirement the new retiree spends up to the point that her marginal utility of consumption in early retirement, $\bar{c} - c_0'$, is equal to her shadow marginal value of wealth in the no-annuities economy:

$$\bar{c} - c_0' = \lambda' \quad (3)$$

where primes denote optimum values when markets are incomplete.⁶ Contingent on survival, and subject to a choke price of $p\bar{c}$ on late-retirement consumption (more on this below) she plans to consume in late (period-1) retirement up to the point that her expected marginal utility $\bar{c} - c_1'$ of consumption in late retirement is equal to her shadow value of wealth:

$$c_1' = 0 \quad \text{for } \lambda' \geq p\bar{c} \quad (4)$$

$$\bar{c} - c_1' = \frac{\lambda'}{p} \quad \text{for } \lambda' < p\bar{c}.$$

Aggregate consumption by early retirees, $C_0 = c_0$, plus aggregate consumption by survivors into late retirement, $C_1 = pc_1$, equals the total wealth w available to people entering retirement:

$$C_0 + C_1 = w. \quad (5)$$

Substitute equations (3) and (4) into the resource constraint (5) to get an expression for the equilibrium shadow value of wealth in the no-annuities economy:

$$\lambda' = \frac{(1+p)}{2} \left(\bar{c} - \frac{w}{1+p} \right). \quad (6)$$

Here and elsewhere we assume non-satiety, ensuring positive shadow prices. Substitute this expression for the shadow price of consumption in early retirement into the first order conditions (3) and (4) to get closed form solutions for individual consumption demands:

$$c_0' = \frac{\bar{c}}{2}(1-p) + \frac{w}{2} \quad (7)$$

and

$$c_1' = 0 \text{ for } w \leq \bar{c}(1-p), \quad (8)$$

$$= -\frac{\bar{c}(1-p)}{2p} + \frac{w}{2p} \text{ for } w > \bar{c}(1-p).$$

'You can't take it with you.' Faced by an incomplete market the new retiree plans to frontload her lifetime consumption towards the early period of retirement:

$$c_0' - c_1' = \lambda' \left(\frac{1}{p} - 1 \right) = \frac{(1-p)(1+p)}{2p} \left(\bar{c} - \frac{w}{1+p} \right) > 0. \quad (9)$$

Now suppose that there is an actuarially fair market for life annuities. \$p\$ in early retirement buys one unit of consumption in late retirement, conditional on survival. The new retiree annuitises all her wealth. Her budget constraint becomes

$$c_0 + pc_1 = w. \quad (10)$$

During early retirement the new retiree spends up to the point that her marginal utility of consumption in early retirement, $\bar{c} - c_0^*$, is equal to her shadow marginal value of wealth:

$$\bar{c} - c_0^* = \lambda^* \quad (11)$$

where asterisks denote optimum values when markets are complete.⁷ Contingent on survival she plans to consume in late retirement up to the point that the expected marginal utility $\bar{c} - c_1^*$ of consumption in late retirement is equal to her shadow marginal value of wealth:

$$\bar{c} - c_1^* = \lambda^*. \quad (12)$$

Hence she smooths her expected consumption through time:

$$c_0^* = c_1^* [\equiv c^*] = \frac{w}{1+p}. \quad (13)$$

Substitute $\bar{c} - \lambda^*$ into the resource constraint (5) to derive the equilibrium shadow value of wealth in the annuitised economy:

$$\lambda^* = \bar{c} - \frac{w}{1+p} \quad \left[= \frac{2\lambda'}{1+p} \right], \quad (14)$$

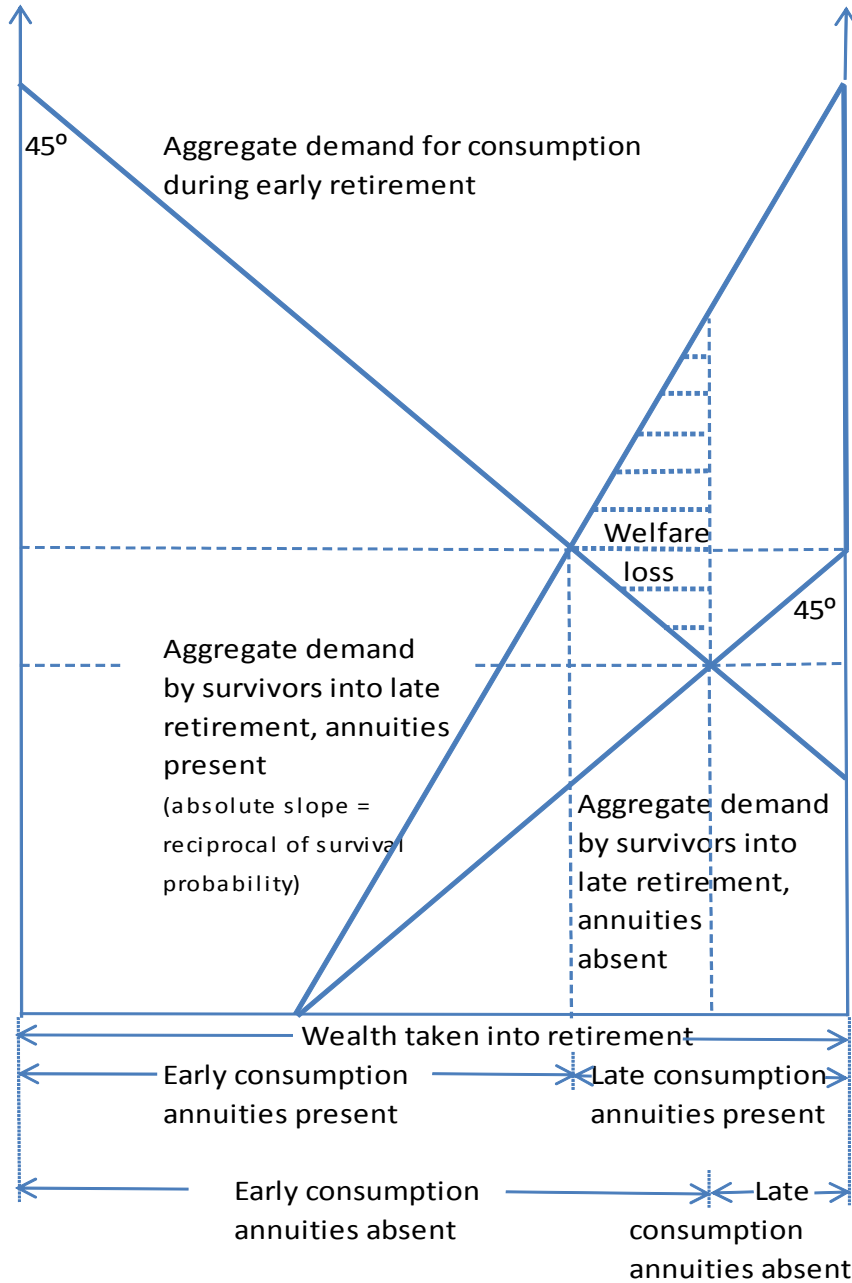
which is higher than its counterpart for the non-annuitised economy by a factor of $2 / (1 + p)$.

The following diagram portrays the efficiency cost of not instituting an actuarially fair market for life annuities. It should be self-explanatory at this point.

Efficiency and Life Annuities

Ex ante marginal utility of consumption in early retirement

Ex ante marginal utility of consumption in late retirement



Numeric Estimates

We estimate the efficiency gained by instituting a market for life annuities by calculating a compensating variation, namely, the minimum amount y a person in a non-annuitised economy would pay to have access to an actuarially fair market. This amount can be calculated by comparing

the value function $V^*(w)$ of an annuitised economy with the value function $V'(w+y)$ of the non-annuitised and compensated economy. In particular, y solves the equation

$$V^*(w) = V'(w+y). \quad (15)$$

Hence, from (1), (7), (8) and (14), y solves the equation

$$\begin{aligned} & -\frac{1}{2}\left(\bar{c} - \frac{w}{1+p}\right)^2 - \frac{p}{2}\left(\bar{c} - \frac{w}{1+p}\right)^2 \\ & = -\frac{1}{2}\left[\bar{c} - \frac{\bar{c}}{2}(1-p) - \frac{w+y}{2}\right]^2 - \frac{p}{2}\left[\bar{c} + \frac{\bar{c}(1-p)}{2p} - \frac{w+y}{2p}\right]^2 \end{aligned} \quad (16)$$

where we restrict attention to interior solutions. Rearrange (16) to facilitate application of the standard formula for solving a quadratic equation:

$$y^2 - 2(1+p)\left(\bar{c} - \frac{w}{1+p}\right)y + [(1+p)^2 - 4p]\left(\bar{c} - \frac{w}{1+p}\right)^2 = 0. \quad (17)$$

The standard formula gives

$$y = (1+p)\left(\bar{c} - \frac{w}{1+p}\right)\left[1 - \sqrt{1 - \left(\frac{1-p}{1+p}\right)^2}\right], \quad (18)$$

where we have discarded the positive root.

The coefficient of relative risk version in the annuitised economy, $\gamma^*(w)$, can be calculated from the associated value function $V^*(w)$ as

$$\gamma^*(w) = \frac{w}{c(1+p) - w}. \quad (19)$$

Hence the compensating variation as a proportion of wealth taken into retirement can be written as

$$y = \frac{w[1 - \sqrt{1 - \left(\frac{1-p}{1+p}\right)^2}]}{\gamma^*(w)}. \quad (20)$$

Table 1 tabulates compensating variations for two survival probabilities and three values of relative risk aversion. Wealth taken into retirement is \$100 so the variations shown there can be interpreted as percentages of wealth taken into retirement.

Table 1

Welfare Gain from an Actuarially Fair Market for Life Annuities

Survival probability = 1/2

Coefficient of relative risk aversion	1	2	4
<i>Welfare gain</i> , per cent of wealth taken into retirement	5.7	2.9	1.4

Survival probability = 2/3

Coefficient of relative risk aversion	1	2	4
<i>Welfare gain</i> , per cent of wealth taken into retirement	2.0	1.0	0.5

Evidently the welfare gains are appreciable, especially when risk aversion is low.

Discussion

The analysis here warrants further comment. First, it is stylised. The market for longevity insurance is not the only one that is incomplete. Retirees need lump sum assets in addition to income streams, to self-insure against a range of contingencies. Moreover, even in a complete market, the familiar distinction between active and inactive retirement suggests a case for spending more in early retirement than late retirement (apart from health expenditures.) The concern in Australia is not

front-loading *per se* but excessive front-loading of retirement spending combined with socially expensive reliance on ‘tail’ longevity insurance provided by the public Age Pension. Other real-world features abstracted from here are positive time preference (encouraging front-loading) and investment earnings on retirement savings (discouraging front-loading). Finally, the desire to leave a bequest is ubiquitous. It leads to reduced spending throughout retirement. Bequest motives interact with our lump-sum mentality to generate another motive for socially expensive reliance on the Age Pension.

Second, the review is sanguine about the issue of retirees who run down their assets quickly ‘in order to receive an Age Pension’ (Australia’s Future Tax System 2010b, p. 122). It says ‘research by Lim-Applegate et al. (2005) suggests that people in retirement are conservative in how they draw down their assets. This may be a result of them attempting to self-insure against longevity risk’. (Australia’s Future Tax System 2010b, p. 122).⁸ On closer inspection, however, Lim-Applegate et al. find that in 2003-04 the mean value of assessable assets of new entrants to the Age Pension was just \$57,000 – well short of what would have been necessary for meaningful self-insurance against longevity risk, as distinct from reliance on government insurance. The Age Pension is a valuable benefit. The Australian Bureau of Statistics (2009) summarises as follows a variety of estimates of present values of Age Pensions published under the auspices of the Australian Institute of Actuaries:

In September 2008, it was estimated that the current market cost of purchasing an annuity from a life company equal to the Age Pension was \$289,000 for a 65 year old man, \$344,000 for a 63 year old woman, and \$550,000 for a couple comprising a 65 year old man and a 63 year old woman. It was also estimated that lower amounts of \$240,000, \$277,000 and \$462,000 respectively would have been needed to purchase the Age Pension from the Australian Government if such a scheme existed. All of these dollar values would have been higher if they had included the value of the Health Card and other benefits in kind received by recipients of the Age Pension. (Australian Bureau of Statistics 2009, p. 44)

Lim-Applegate et al. proceed to analyse records for 517 individuals in the Longitudinal Data Set (LDS) compiled by the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). They track this group over the period 1999-2000 to 2003-04. Accordingly, a major problem is that the span of data available for analysis is just 4½ years. This falls short of the span needed for a meaningful assessment of typical drawdowns through the full term of a retirement. Lim-Applegate et al. point out that 26 per cent of their sample actually accumulated assets in real terms over the 4½ year period. It follows, however, that the remaining 74 per cent of the sample

ran down assessable assets. Notably, the group in the modal decile of those running down assets comprised 25.6 per cent of the full sample and finished with 80 to 90 per cent of starting assets, implying decumulation of 10 to 20 per cent of assessable assets in just 4½ years. So the evidence of Lim-Applegate et al. on conservative drawdowns in retirement is neither as informative nor reassuring as Henry suggests.

6. Henry on non-Super Savings

On the taxation of income from non-superannuation household saving, Henry ‘...aims to provide a more consistent treatment of savings income, to reduce opportunities for tax arbitrage and to reduce incentives for investors to take on too much debt, while broadly compensating for the effects of inflation, particularly for interest income’ (Australia’s Future Taxation System, 2010b, p. 71).

The proposals for the taxation of savings outside superannuation are addressed in recommendation 14. A 40 per cent discount on savings income is proposed for net interest income, net residential rental income (including related interest expenses), capital gains (and losses), and interest expenses related to listed shares. The proposed savings discount would not extend to dividends (from either domestic or international shares), other interest income or rental income from non-residential properties. The non-taxation of owner occupier housing remains unchanged. While this proposal would result in lower relative taxation of interest from financial assets and residential rental income, the income discount for capital gains (and losses) would fall from 50 to 40 per cent and the full deductibility for interest expenses relating to shares and rental property would be reduced to 40 per cent.

Further recommendations provided clarification with the 40 per cent discount for net residential rental income contingent on suggested reforms to the supply of housing (recommendation 15) and extension of the savings discount to dividend income in the event of the abolition of the dividend imputation system discussed elsewhere in the report (recommendation 16).

A final recommendation [17] proposed simplification of the capital gains tax.

These recommendations would make our tax system more consistent with recent theoretical arguments that efficiency requires capital income in the small open economy to be tax free (see Atkeson et al.1999). Even if one does not subscribe to this line of argument, the recommendations would amount to a partial inflation adjustment for income from interest-bearing assets held outside

the super system, as Henry notes. Indeed, when discussing saving outside the super system Henry is fully cognisant of the distinction between nominal and real interest income, in puzzling contrast to his discussion of saving within super. Moreover, the global financial crisis was a worrying reminder of the fact that our banking system relies on foreign lenders for about a third of its funding base. Lower tax on interest-bearing assets held either inside or outside the super system could be expected to reduce our banks' reliance on foreign loans. Finally, Henry is fully cognisant of the appeal of negative gearing strategies to Australian investors: 'Currently, around 70 per cent of individual investors in rental properties are in a net loss position' (p69). In short, Henry's recommended tax discounts could be expected to bring about a better balance between borrowing and lending strategies for building wealth in Australia.

On the other hand Henry signals that changes along these lines would be of the 'courageous' variety. There are extensive cautions about the need not to proceed until the current housing shortage eases. There is a lack of concrete illustrations of how the discounts would work, along with a lack of the international evidence (if any) for their effects. There are problems with Chart A1-19, which attempts to put numbers on the different effective tax rates associated with different saving strategies under the current system. One example is the disclaimer: 'The estimates do not model interactions with the transfer system' (p67). This is particularly relevant given the proposed single means test (see recommendation 88) which would see deeming extended from financial assets to all assets (including rental property and shares) but with continued exemption for the family home up to a 'high indexed threshold' (Australia's Future Taxation System, 2010c, p. 540). Yet such interactions are at the heart of our mainstream savings strategy of building up equity in the family home. Notably, the assets test of the Age Pension takes no account of the value of the family home. Another example is Henry's assumption that rental property is held ungeared and then sold after 7 years. This assumption is at odds with Henry's recognition elsewhere of the prevalence of negative gearing in the rental property market.

Moreover, Henry shows no recognition of the value of the real options associated with negative gearing which are central to understanding the value extracted from it. For instance, rather than selling and therefore becoming liable for capital gains tax the negative gearer can convert her rented property into a principal residence in retirement. This type of behaviour is clearly central to understanding the market for coastal property. Interestingly, Henry's proposal for a Resource Super Profits Tax displayed a similar disregard for the pattern of waiting for price rises before exploiting a mineral resource – another real option – that has long been recognised in the finance literature as

central to valuing and managing mines. Then there are vague statements such as this: ‘for many individuals saving in a super fund is treated more generously than it would be under an expenditure tax.’ How many is ‘many’? In short, it is hard to know how seriously we should take Henry’s discounting proposal, promising as it is.

7. Concluding Comments

The Henry review makes recommendations for improving the progressivity of taxes on super and the adequacy of retirement incomes. But it does not make recommendations for dealing with problems of moral hazard and adverse selection in the super system.

The review was required by its terms of reference to ‘make recommendations to create a tax structure that will position Australia to deal with the demographic...challenges of the 21st century’ (Australia’s Future Tax System 2010a, p. vii). Overcoming moral hazard is central to this task as our policy since 1909 of granting a safe (publicly provided) life annuity to retirees with limited assessable assets has tempted most households not to self-insure or to shift assets into less assessable forms such as the family home. Historically, our first pillar (Age Pensions) has overshadowed our second pillar (pre-funded retirement income at a basic level). A policy of enabling most retirees to rely on government for an income may well have remained affordable in the absence of population ageing. By 2050, however, 23 per cent of the population is expected to be aged at least 65. Enabling most people to rely on the Age Pension for primary support in retirement could lead to fiscal problems of the kind that already bedevil many developed countries in the Northern hemisphere.

Our policy since 1992 of compulsory pre-funded superannuation for nearly all workers could help counter the demographic dimension of the problem of moral hazard. The superannuation guarantee needs to perform a substantial pension-replacement function and not just the top-up function of improving the adequacy of retirement incomes. Yet Henry appears to be sanguine about demographic pressures on pension outlays. Take the case of a single male working for 37 years on three quarters of Average Weekly Ordinary Time Earnings and retiring in 2047. The review envisages that even if its recommendations were implemented and drawdowns were ‘conservative’ then roughly three fifths of his retirement income would come from the Age Pension rather than superannuation guarantee savings.⁹

The year 2008 was a reminder that moral-hazard problems extend beyond reluctance to self-insure against a straitened retirement. Defective regulations bedevilled the financial systems of many

Northern hemisphere countries. Notably, portfolio managers enjoyed asymmetric payoffs that rewarded socially excessive levels of risk-taking, and lenders enjoyed implicit government guarantees against losses from bearing excessive credit risk. Closer to home, elderly fund members and their advisers could shoot for the upside potential of growth assets in the knowledge that downside was limited by the availability of a safe life annuity from the government. In fact, in the three months following the collapse of Lehman Brothers in late 2008 new applications for the Age Pension increased by 50 per cent (Sawyers and Robertson 2009). High effective tax rates on interest bearing assets and lax regulation of advisers exacerbate the problem. The recommended 40 per cent discount on interest income provides a partial solution, but the review largely disregards tax, benefit and regulatory incentives for excessively risky retirement portfolios and their implications for pension outlays.

Then there is the problem of our moribund market for life annuities. Apart from the Age Pension the main institutional barrier to reviving it is adverse selection. The standard resolution of the problem of adverse selection is some combination of compulsion or a compelling tax preference. In a companion paper we make a case for introducing to Australia a new kind of superannuation account alongside the existing accounts paying lump sums to retirees (Bateman and Kingston 2010). The new accounts would be reserved for the purchase of life annuities.¹⁰ Like the existing accounts they would be subject to contribution limits. Unlike existing accounts they would be tax free until retirement, at which point annuity payments would be subject to the regular personal tax scale. Exposure to growth assets within the new accounts, once annuitised, would be capped at 50 per cent. Along with the elimination of earnings taxes this cap would mitigate the moral-hazard problems burdening taxpayers.

The authorities could gradually redirect most superannuation guarantee contributions away the old accounts and towards the new ones. For example, the new accounts could be introduced in tandem with the government's proposed phased lift in the compulsory contribution rate from 9 to 12 per cent of wages and salaries over the period 2013 to 2019 (Australian Treasury 2010). The extra 3 percentage points could be allocated solely to the new accounts. Also over the period 2013 to 2019, 3 percentage points of the existing 9 per cent contributions on behalf of workers aged between 40 and 50 could progressively be redirected to the new accounts, along with 6 percentage points of employer contributions on behalf of workers aged less than 40.

In this way Australia's system would gradually move closer to international best practice. There would still be a role for the old accounts, albeit an increasingly limited one as they asymptote down to one quarter of total compulsory super contributions. They would continue to be a source of lump sums for retirees and immediate revenue streams for governments. Moreover, they could continue to receive voluntary contributions over and above the minimum employer contributions mandated by the superannuation guarantee.

Finally, Henry also recommends a 40 per cent discount for tax purposes of the income generated from assets held outside the super system. This measure accords with recent theory on the optimal taxation of savings. Henry's proposed discount could also be expected to bring about a better balance between borrowing and lending strategies for building wealth in Australia. On the other hand, there are ample indications in the report, not the least the inadequate analysis of the relationship between this recommendation and another [88] to deem income on all assets other than the family home under a single means test for the Age Pension, that reforms along these lines are on the back burner.

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¹ Moreover, young contributors would only be loosely connected because the vagaries of investment returns and earnings taxes over a span of decades mean that a change today in the after-tax flow of contributions into their super balances is only loosely connected to a change in their living standards during a retirement planned for some distant date in the future.

² See Financial Planning Association 2008. "Simplifying Statements of Advice: FPA Example SOA".

³ See Organisation for Economic Cooperation and Development (2009).

⁴ This section builds on Kingston and Piggott (1999). By going to the case of quadratic utility it is able to address issues not covered there, including the construction of a Marshallian-style diagram.

⁵ Cf. Kotlikoff and Spivak (1981).

⁶ The associated Lagrangean is $L' = -\frac{1}{2}(\bar{c} - c_0')^2 - \frac{P}{2}(\bar{c} - c_1')^2 + \lambda'(w + x - c_0' - c_1')$.

⁷ The associated Lagrangean is $L^* = -\frac{1}{2}(\bar{c} - c_0^*)^2 - \frac{P}{2}(\bar{c} - c_1^*)^2 + \lambda^*(w - c_0^* - pc_1^*)$.

⁸ As will be apparent from our references we are in minor disagreement with the review on the date of the paper by Lim-Applegate et al.

⁹ See Australia's Future Tax System (2010b), p. 109, Chart A2-4.

¹⁰ Fixed costs of life annuities mean that account balances subject to mandatory annuitisation would need to reach some minimum size. On the other hand, if this size were high, workers would be tempted to retire early in order to avoid mandatory annuitisation. We suggest \$50,000 is in the ballpark of what would strike a balance between these factors.