CEPAR submission to the Retirement Income Review

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About CEPAR

The ARC Centre of Excellence in Population Ageing Research (CEPAR) is a collaboration between academia, government, and industry.

The Centre is based at the University of New South Wales with nodes at the Australian National University, Curtin University, the University of Melbourne, and the University of Sydney. It aims to establish Australia as a world leader in the field of population ageing research through a unique combination of high level, cross-disciplinary expertise drawn from Economics, Psychology, Sociology, Epidemiology, Actuarial Science, and Demography.

CEPAR is actively engaged with a range of influential government and industry partners to cooperatively deliver outcomes to meet the challenges of population ageing. It is building a new generation of researchers to global standard with an appreciation of the multidisciplinary nature of population ageing.

Mission

CEPAR's mission is to produce research of the highest quality to transform thinking about population ageing, inform product and service development and provision (private practice) and public policy, and improve people's wellbeing throughout their lives.

Introduction

There is an established evidence base to draw on

The Retirement Income Review process is explicitly seeking to establish an evidence base for policymaking. CEPAR has undertaken extensive primary research and developed supplementary material, in the form of research briefs, which provide such an evidence base.[1] CEPAR Briefs contain a wealth of information that point to certain policy actions, but deliberately avoid making recommendations. In contrast, CEPAR submissions to inquiries do make recommendations.

We also refer to three submissions to the 2014 Financial System Inquiry (FSI), relating to the retirement income system.[2] The first focused on decumulation; the second related to behaviour and guidance; and the third was on decumulation defaults. The FSI report contained many of CEPAR's recommendations. CEPAR has made other submissions, including to the Productivity Commission on default superannuation products and to Treasury on Comprehensive Retirement Income Products (CIPRs).[3]

We have also brought to bear additional evidence from three CEPAR-supported sets of research. These consist of: (1) the Kudrna-Woodland Overlapping Generations (OLG) model of the Australian economy and retirement system, which is an up-to-date, complete, and state-of-the-art model designed to capture the economic responses to retirement policy in Australia; (2) a large literature on lifecycle risks and retirement products led by Michael Sherris; and (3) an expanding set of literature that looks at financial decision making in superannuation led by Hazel Bateman.

This submission makes use of existing CEPAR evidence and comment on key aspects of the retirement income system under the following headings: (1) system structure; (2) parametric reforms; (3) decumulation; (4) decision guidance; and (5) equity.

The retirement income system is embedded in a wider economic and demographic context

Recommendations in this submission assume underlying long term macro-demographic expectations that:

- Australia will continue to grow, with significant skill-based immigration and a stable fertility rate of about 1.7 to 1.8, which in combination will generate a steady increase in population, a slow rate of ageing, and modest per capita real income growth;
- Interest rates will remain low in the medium to long term and investment returns may decline from historic averages along with some declines in productivity growth;
- Life expectancy will continue to increase, but probably at a reduced rate in the longer term;
- The mortality gradient will likely remain, and possibly increase, especially at mature ages (see Retirement Brief 2, Fig 4G and 4H). Clarke and Leigh (2011) estimate a 6-year gap between the lowest and highest income quintiles at age 20.

The retirement income system is affected by the broader economic context. But system settings can also affect the real economy (e.g., via investment and labour market effects), as shown in OLG modelling.

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[1] The following shorthand is used for key CEPAR documents referenced in this submission, which can be found at given links.
Retirement Brief 1: http://cepar.edu.au/sites/default/files/retirement-income-in-australia-part1.pdf
Retirement Brief 2: http://cepar.edu.au/sites/default/files/retirement-income-in-australia-part2.pdf
Retirement Brief 3: http://cepar.edu.au/sites/default/files/retirement-income-in-australia-part3.pdf
Housing Brief: http://cepar.edu.au/sites/default/files/cepar-research-brief-housing-ageing-australia.pdf
[2] FSI Sub 1: https://www.cepar.edu.au/sites/default/files/CEPAR_Submission_to_the_Financial_System_Inquiry.pdf
FSI Sub 2: https://www.cepar.edu.au/sites/default/files/CEPAR_Supplementary_submission_to_the_FSI.pdf
FSI Sub 3: https://www.cepar.edu.au/sites/default/files/CEPAR_Submission_Number_3_to_the_Financial_System_Inquiry.pdf
[3] Defaults Sub: https://www.cepar.edu.au/sites/default/files/bateman-thorp-superannuation-assessment.pdf
CIPR Sub: http://cepar.edu.au/sites/default/files/MdC-Submission-Treasury-Retirement-Income-Policy-Division.pdf

1. The overall structure of the retirement income system is sound

The Consultations Paper's statement about the purpose of the retirement income system should be supported. However, the breadth of assets and income flows that are considered part of the retirement income system, including housing, implies that the system should be thought to finance not only retirement income but also other needs, such as health and aged care and bequests.

For context, the overall structure of the retirement income system is depicted in Figure 1, derived from Bateman et al (2001), and reproduced from CEPAR Retirement Brief 1, Figure 3a.

Figure 1
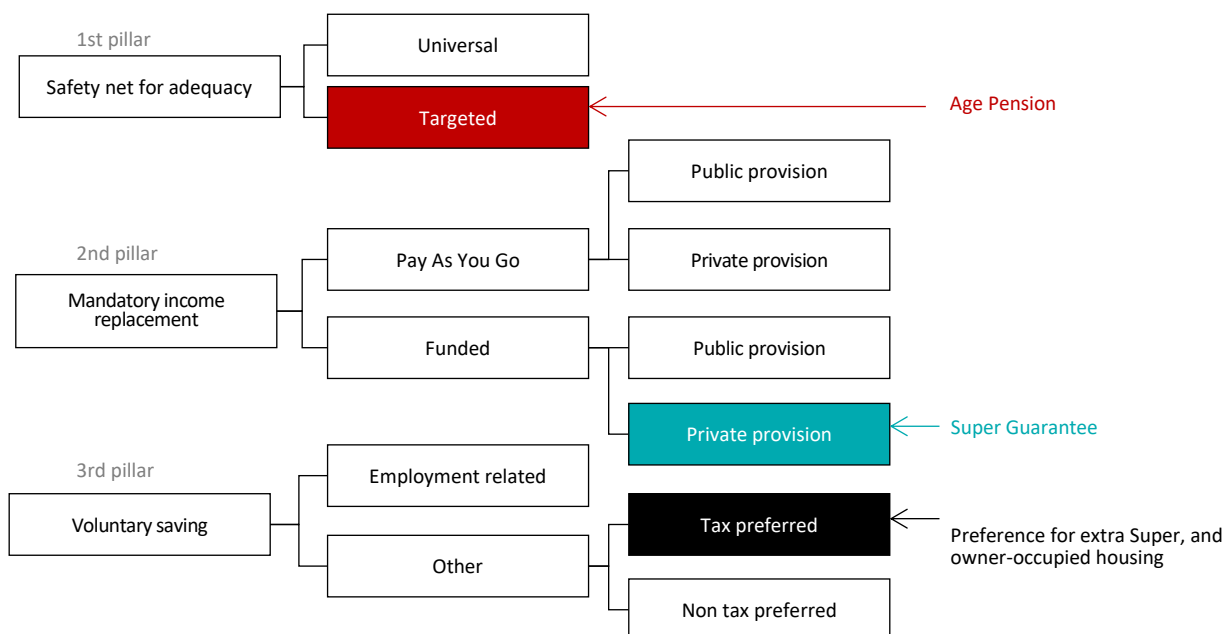
Each pillar in this structure is differentiated by function, rather than fund source (as is the case, for example, with the World Bank's multi-pillar structure). The first pillar in our schema prevents poverty in old age; the second addresses consumption smoothing; the third allows for additional savings for broader purposes (e.g., housing, aged care, and bequests).

Extensive empirical literature suggests that many people under-save unless compelled to do so (see FSI Submission 2). The Superannuation Guarantee addresses this challenge by mandating saving. As the scheme matures, its interactions with the Age Pension will become more potent, further ensuring the sustainability of the Age Pension.

The third pillar encourages voluntary saving in two main forms. First, for those able to do so, it provides an approximately expenditure-tax-based avenue for retirement saving through voluntary super contributions (i.e., whereby tax arrangements limit distortion between consumption in working age and retirement, up to a cap). Second, it provides a mechanism for the purchase of an owner-occupied home, again in the context of an expenditure tax base. Light taxation of returns to saving that avoids distortion between consumption in working age and retirement is common around the world.[4]

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[4] See Holzmann and Piggott (2018) for a comprehensive treatment of the taxation of pensions. The Australian system is less straightforward than many others, and below we have suggestions for its improvement. The complex interaction between taxes on contributions, taxes on fund earnings, and taxes on benefits are explored in Kingston and Piggott (1993), who show the conditions for the formal equivalence between contributions and benefit taxation, and some of the complexities introduced when fund earnings are taxed. Taxation of super is also touched on in Retirement Brief 3, Section 7.

On balance, this structure has worked well. The system combines relatively little misallocation of resources through price distortion with effective poverty reduction and sustainability. It is supported by a somewhat clumsy, but nevertheless effectively accommodating, taxation and regulatory structure. All these characteristics assume ever-increasing importance given population ageing.

Many countries look to the Australian system, and similarly designed retirement systems, as exemplars in reforming their own systems.[5]

Furthermore, there is strong evidence, based on a detailed Overlapping Generations Model built within CEPAR by Kudrna and Woodland (hereafter the KW model) that our retirement income system performs well in supporting strong and sustainable macroeconomic outcomes while delivering adequate and equitable retirement income support (Kudrna and Woodland 2013, Kudrna et al 2019).

> **Recommendation 1: The review should recognise the benefits of the existing retirement income system structure. The review and any resulting policy changes should resist large-scale structural reform and instead focus on parametric reform (see Recommendation 2).**
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> **Recommendation 2: Following from the previous recommendation, policy changes should focus on enhancing the effectiveness and role of the existing system via parametric reform. This could include modifying means-testing and taxation rates and thresholds and dealing with inequalities and inconsistencies (see recommendations in next section).**
>
> **Recommendation 3: Once a set of parametric settings are selected, these should be maintained as much as possible to build confidence in the system. As part of this, the Review should assess existing indexation arrangements of system parameters, including thresholds, caps, levels, and qualifying ages. Many of these are adjusted discretionarily or with an inappropriate index, which creates uncertainty, undermines confidence, and erodes the integrity of the system over time.**

2. Parametric reform of the three pillars

The first pillar design – The Age Pension[6]

The Australian Age Pension represents the main source of income in retirement for most retired Australians. It is mainly financed from current tax revenue on a pay-as-you-go basis, and is needs-based, with eligibility based on age and residency, but not on work history and past earnings.

The Age Pension is income and asset tested. The tests are shaped around: (1) the maximal benefit (that differs for single and couple pensioners); (2) the threshold up to which the maximal benefit is paid; and (3) the taper at which the pension benefit is withdrawn. Each of these is a parametric policy lever.

Australia's arrangements involve higher targeted pensions and slower rates of withdrawal than seen elsewhere (except Denmark, where means tested pensions reach further up the income distribution). Australia's asset test has a shallower taper than the few countries that apply such tests.

The income test distinguishes capital income and labour earnings, with the latter being partially excluded from the means test to encourage mature age labour force participation. Beyond the applicable income thresholds, the maximal pension is reduced at a rate of 50 cents for every extra dollar of assessable income.

The asset test is comprehensive, but owner-occupied housing is exempt. It also distinguishes between homeowners and renters, with the asset threshold being higher for renters. Still, few renters have the

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[5] See Retirement Brief 1, section 6, for detailed comparisons.
[6] Material in this section is reproduced from Kudrna and Piggott (2019). The complete paper also contains more general observations on the value of "affluence tested" means tested pensions. It is available on request to Panel and Secretariat.

assets to benefit from such higher thresholds.[7] Beyond the threshold, the maximal annual pension is effectively reduced at the rate of 7.8 cents for every extra dollar of assessable assets.

The Age Pension is expected to remain sustainable

As indicated in Figure 2, at just under 4% of GDP, Australia's public spending on pensions is one of the lowest among OECD countries and far below the OECD average. Note that this figure includes not only the age and service pensions (about 2.9% of GDP in 2013-2015), but also spending on other public pensions (e.g., defined benefit pensions for public servants, plans that are now closed). Importantly, the projected expenditure for 2050s is shown to decline slightly. This is mainly due to the means testing of the Age Pension and maturing mandatory superannuation with expected larger private savings post retirement. The low revenue requirement means that the scheme is sustainable.

Figure 2

Public Pension Spending in OECD Countries, 2013-2055 (% of GDP)

Source: OECD (2017).
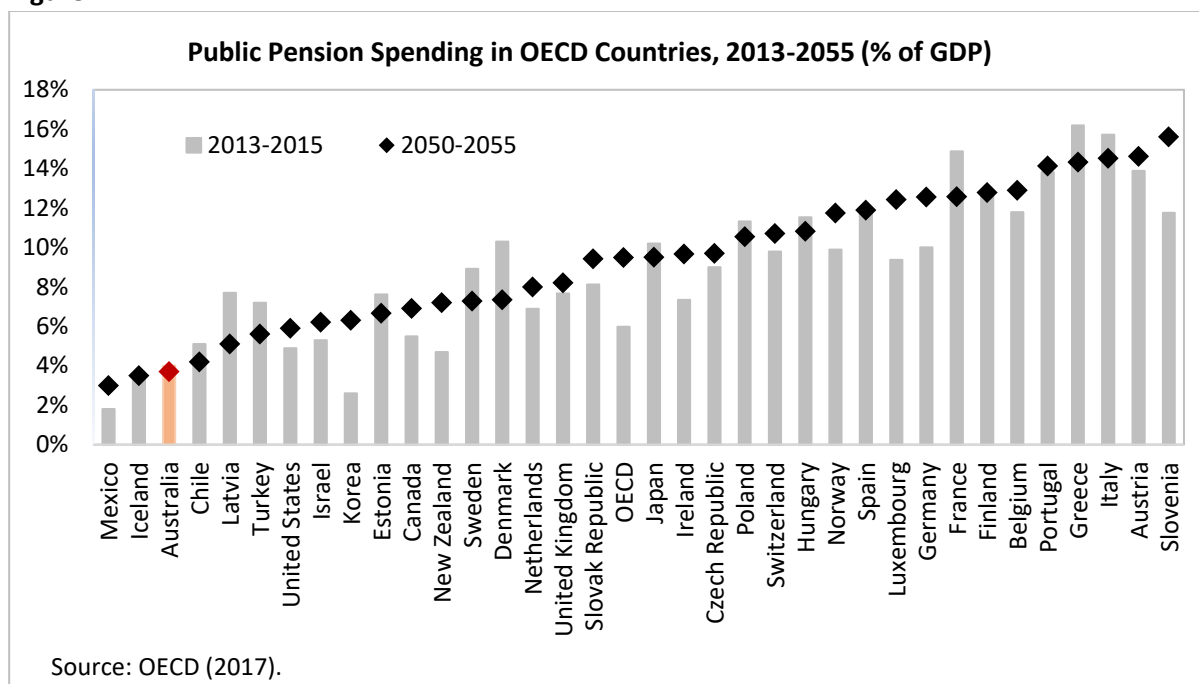
The Age Pension is adequate in alleviating poverty among homeowners

The OECD often reports a high old-age poverty rate for Australia (OECD 2017). But this is misleading. Importantly, when housing costs and imputed rent are included in the calculation (for both Australia and other countries), the Australian old age poverty rate more than halves to 10%, a rate that is similar to working-age poverty in Australian and similar to average old-age poverty across the OECD.[8] Thus, the Age Pension does a good job at poverty alleviation. Increasing the maximum pension benefit by a small amount would reduce head count old-age poverty rate significantly for very little fiscal detriment (see Retirement Brief 2, Figure 14G). While the benefit level is indexed to wages and prices, some related parameters are not, which erodes benefits for some groups, creates fiscal drag, and requires politically driven adjustments (e.g., see Retirement Brief 2, Figure 8B). Those who retire without having purchased a house do have high poverty rates as they are not adequately compensated by the Age Pension. This is addressed below under 'voluntary saving'.

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[7] See Housing Research Brief
[8] See Retirement Brief 2

Aggressively means testing the Age Pension is beneficial

A major Age Pension design issue relates to taper rates. Over the last decade, a substantial empirical literature has been developed that offers strong guidance on means-tested designs and illuminates the economic impacts of means testing.[9] Broadly, these show that a sharp taper is superior to a shallow taper, and any means testing is superior to a universal pension (i.e., a pension with no taper).

The key finding from these studies (e.g. Kumru and Piggott 2011, 2014, Kudrna 2016, Kudrna, Tran and Woodland 2020) is that means tested pensions outperform universal systems in relation to macroeconomic, welfare, and efficiency effects, particularly if progressive income tax changes are assumed to balance the government budget. For example, Kudrna (2016) shows that tightening the pension means test (i.e., increasing the income taper from 0.5 to one) results in increased total financial assets (by 4.3% in the long run), higher labour supply per capita, and reduced pension expenditure that allows a 6% income tax cut and long run average welfare gains. On the other hand, the effects of relaxing the means test and a policy shift to a universal system with zero taper rates results in the opposite effect.

These results are largely driven by lower tax rates needed to fund a means tested pension program, which encourage saving and labour supply of a much larger working-age population. These effects are also supported by the study of Iskhakov and Keane (2018) who estimated a structural lifecycle model with endogenous labour supply and human capital and show that the Australian Age Pension is relatively poorly targeted (both in terms of tapers and exemptions such as the family home).

The case for means testing public pensions strengthens under population ageing because of a mechanism embedded in means tested pensions that automatically adjusts the overall pension expenditure and distribution of pension benefits to demographic change (Kudrna at al 2020). People are expected to live longer on average, and therefore need to increase their private savings to fund longer lifespans. This asset accumulation impacts Age Pension benefits through the means tests, automatically limiting growth in public pension expenditure. In addition, widening life expectancy gaps mean that richer people work and save more for their longer lives. In turn, increased savings by wealthier households interact with means testing such that public benefits are redistributed to pensioners with fewer private resources and shorter life expectancies. This contrasts sharply with many social security systems in developed countries, which offer earnings related benefits to all employees from a single access age, generating regressive payout patterns once the mortality gradient is taken into account.

The research also suggests that there is economic benefit to apply the income test more leniently than capital income (see, for example, Hernaes et al 2016). In the Australian context, Kudrna (2015) shows that a hypothetical policy change embodying a 100% labour earnings exemption could increase labour supply of those of the pension eligibility age by 25%. This policy change is modelled to cost the government only a 2.6% increase in pension expenditure (driven by the fact that many of those working beyond the pension access age receive little or no pension because of superannuation accumulations). A corollary to this is that focusing the taper on income from capital amounts to a capital tax. Yet overall negative impacts are limited, because the relatively affluent, whose labour supply and saving is disproportionately important, receive no benefit, so their behaviour is not impacted. Retirement Brief 2, box 5 provides further details.

One caveat to bear in mind is that there is a non-linear relationship between the optimal taper rate and the value of the maximal pension (Tran and Woodland 2014). But for present purposes and settings, current rates of withdrawal appear to be well-chosen

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[9] These are summarised in Chomik et al (2015) and Kudrna (2016).

Second pillar design – Superannuation Guarantee

Mandated savings are a natural complement to a means-tested pension. Compulsion ensures that consumption smoothing takes place between work and retirement without weighing heavily on future taxpayers. That is, it prevents free-riding on the Age Pension by those who can afford to save for themselves.

The operation of the accumulation phase of superannuation has been extensively dealt with in the Productivity Commission Report (2018a). We will therefore not comment on the accumulation phase other than to comment on issues relating to the mandatory contribution rate. Issues relating to the drawdown phase are considered sufficiently important that these are treated it in a separate section, below.

Retirement income estimates of different mandatory contributions rates depend on uncertain assumptions

The appropriate rate of mandatory saving is a contentious issue. Some have argued that the existing level of contributions is substantial and that increasing contributions from 9.5% to 12% would come out of wage increases of workers who need resources now more than they will in retirement. CEPAR analysis (presented in Retirement Brief 1, box 2) suggests that the legislated increase of contributions to 12% would yield a replacement rate of 67% for the median worker – replacement rates would be lower with lower contributions. Also, such modelling is highly sensitive to assumptions about investment, employment, and lifecycle circumstances.

One argument in support of increasing mandatory rates is that these may be needed to offset negative effects of a combination of adverse economic and demographic circumstances. For example, it is sometimes argued that employment will likely become less secure in the future, implying an increased proportion of employees facing broken work histories, including primary earners (traditionally secondary earners, mostly women, were more affected by broken work histories). Other developments may include lower rates of return, longer life expectancies, labour market shocks, family formation and dissolution, or regulatory risk (e.g., lower public pension payments or higher super taxes). As such, an element of savings can be thought of as insurance against adverse shocks. Such uncertainty and risks are rarely considered in standard accumulation projections, some of which have a systematically positive bias of assumptions.

It's worth also emphasising that various withdrawals occur before the net sum arrives in the worker's account, including fees (which can be excessive), insurance charges (which perhaps should not come out of super anyway), and a 15-30% tax (levied on the gross withdrawal from payroll, not the deposit into the account). While these charges vary across fund type, a 12% legislated rate probably leads to a deposit into the superannuation fund account of under 10% (though such deductions are included in most analyses).

It is not obvious that higher mandatory contribution rates will reduce wage growth

The major argument against further increases in the rate relies on the proposition that super costs are effectively borne by labour (e.g., Henry et al. 2010), and that low-wage workers may be better off with current liquidity relative to future consumption opportunities.

There are two sets of considerations here. The first relates to the structure of the labour market. The idea that in the short term, increases in the SG rate will diminish wage growth depends on an assumption that the labour market is competitive. If this were true wages would track labour productivity. But since 2011, this has not been the case in Australia (and is often not the case elsewhere). If changes in labour market structure renders the underlying model invalid, then neo-classical theory is less useful in predicting whether increases in the SG will impact wage growth. Note that this observation simply implies that we cannot say what the wage impact of increased SG contributions might be; it does not suggest that wages will not be impacted by the increase.

A bargaining model of the labour market may be more helpful. The fact that the productivity gains are not passed on in wages may reflect greater bargaining (monopsony) power of employers. Such a circumstance may require intervention to help workers coordinate or to directly mandate wage increases, whether these take the form of wages or superannuation increases, or both. If employers have greater bargaining power, they can pass on superannuation costs to labour via lower wage rises, absent other interventions. The decisions and power of wage setting institutions (e.g., unions and the Fair Work Commission) will be relevant here to offset employer bargaining power at the bottom of the wage distribution.

There is a second, long term relationship between super and wages. It may be that capital accumulation within Australia is impacted by domestic saving, where neoclassical labour market theory is more likely to be supported. If there is "stickiness" in international capital markets, then increased domestic savings due to forced super savings will lead to a higher capital stock, driving up the marginal productivity of labour, and subsequently wages. OLG simulations where the international capital market is imperfect (based on the above "stickiness" idea) suggest that in the long term, only 11% of the SG payment is "paid for" by labour, because wages will have grown as a result of the higher saving rates generated by the SG causing the capital labour ratio to increase. Of course, this effect will be reduced to the extent that people are able to substitute out of saving in other forms. However, early estimates suggest that such substitution is of the order of 30% of total forced saving (Connolly and Kohler 2004; Connolly 2007).

KW OLG simulations indicate that the increased SG rate in a small open economy framework with an exogenous interest rate causes the wage rate received by households to decline (Kudrna and Woodland, 2013).[10] But the effect on the after-tax total wage rate (including higher SG contributions) is positive. The result is driven by the fact more wages are paid in super which means taxes are lower and people are incentivised to work more. It also results in higher accumulations, which leads some people to retire earlier.

Financial stress from mandatory savings is overstated[11]

Younger people do tend to experience greater financial stress (e.g., inability to pay bills on time). But a cross-section of financial stress levels by employment status and age shows that it is those out of work that are at high risk of financial stress, i.e. individuals who aren't contributing to super anyway.

Employed people do show a financial stress gradient which is higher at younger ages. But a split by tenure suggests that this is largely driven by employed renters, and therefore high housing costs (Retirement Brief 3, Figure 15B). Yet it's difficult to design a mandated savings policy around such groups who may be better targeted via rental assistance.

The concern about forcing low income households to save is not new in Australia or elsewhere. Indeed, there are good arguments that these households should not be forced to save more. In other retirement income systems this has been solved by not requiring contributions below a certain threshold of earnings. In Australia, this threshold has been $450 per month since the Superannuation Guarantee was introduced – the figure is unindexed. It could be raised and kept constant with wages (an example of a parameter change stemming from Recommendations 2 and 3).

Low-income workers may value the commitment device that comes with being forced to save

Low-income workers, like most of the population, may also experience behavioural biases against saving. If so, they would value the commitment mechanism of compulsion, and benefit from access to financial

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[10] Note that the long run decline in the take-home wage rate is much smaller in the endogenous interest rate framework, only 0.3% compared to the 2.68% decline fully offsetting the SG rate increase to 12% in the exogenous interest rate framework. This is because in the endogenous interest rate framework larger savings due to increased tax concessions results in lower domestic interest rates, which encourage investment and capital accumulation, generating capital deepening (larger capital per worker or hour of work) with positive effects on wages.

[11] This material is adapted from Retirement Income Brief 3, pp 18-21.

markets that comes with super. The bottom 20% of the lifetime earnings distribution are unlikely to experience lower pensions as a result since their smaller accumulations are likely to be too small for the means test to reduce their pension. For those in the middle, with otherwise less access to the wealth generating power of financial markets, superannuation offers a way to diversify their assets away from housing. Over the last decade the median value of superannuation across most age groups has come to represent the largest liquid asset (Retirement Brief 3, Figure 15C-15D) and super also represents the largest asset commanded by younger households in the bottom half of the wealth distribution (Figure 15E). This is important for younger people because small accumulations at an early age can compound into considerable sums by retirement. If wage growth does slow down as a result of extra contributions it may in fact be because that workers value super and are happy to give up some of their wages to get it, even though they may find it difficult to make these choices voluntarily.

Higher contribution rates also lead to greater self-funding in older age. As shown in Kudrna and Woodland (2013), pension expenditure declines by 4% in the long run as a result of the simulated increase from 9% to 12%. A higher mandatory SG rate therefore promotes greater intergenerational equity.

It is difficult to be definite in any recommendation about what should happen to the mandatory SG contribution rate, with retirement income outcomes depending on many unknowns. Therefore, any revision to the legislated increases should be considered carefully.

Housing investment is the main form of voluntary saving in Australia

Most voluntary saving, as conceived here, takes the form of the purchase of a principal residence. This is an integral part of the retirement system, and indeed the terms of the review reflect this. In contrast to housing, voluntary superannuation savings tend to be constrained by various caps and often high taxes.

A few observations about owner-occupied housing are relevant. More detailed analysis is available in the Housing Research Brief.

First, Australia, in common with other Anglophone nations, has a relatively high owner-occupier ratio among older cohorts. Housing therefore has a critical role in our retirement income system: it is a crucial part of poverty alleviation among retirees, as a store of wealth, and protection against risks related to inflation, rental price, and tenure.

Second, while unfiltered comparisons of home ownership by age band across time reveal that younger age groups have lower rates of ownership now than in the recent past, this may in substantial part be due to many life events – education completion, marriage, first child, retirement, death - also being delayed. In addition, a higher proportion of temporary migrants distorts the rate of ownership of the permanent population. So, while an unfiltered view of home ownership patterns might suggest major changes to our retirement system will be necessary, a more balanced view might suggest that may not be the case.

Third, lack of home ownership in retirement is associated with high poverty rates. This implies that the retirement income system safety net is insufficient. Age-Pension-specific rental assistance at a more generous level would do much to reduce old-age poverty. Because such a policy targets people who for the most part have limited earning capacity, its economic impact is much more modest than if it were to apply to the population at large. The Harmer Review (2009) also focused on this issue.[12]

A separate issue regarding home ownership relates to the exemption of the family home from the Age Pension asset test. Its inclusion should be supported above a high threshold. While some older people may be induced to move from a valuable house, the Pension Loan Scheme (PLS), would allow them to age in place. But including the home in the tests is unlikely to change the operation of the retirement income

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[12] Retirement Income Brief 2, Section 5, provides some examples of the impact on poverty rates of different levels of Age Pension linked rental assistance.

system in a major way. Most people with homes above a feasible threshold would not be eligible for the Age Pension anyway. While this is desirable in principle, we make no recommendation as such on this matter. Numbers are likely to be small for any acceptable threshold, and issues around the specification of the threshold, for example whether geographical location should be taken into account, would need to be carefully thought through.

Recommendation 4: Age Pension asset and income test tapers should not be made shallower and could be made steeper.

Recommendation 5: Consideration should be given to considerably extending the threshold for labour earnings from the income test.

Recommendation 6: The mandated Superannuation Guarantee contribution rate should increment to 12%, as currently legislated, unless there are solid reasons otherwise. Should the increases be revisited, a possibility would be to consider auto-escalation with an opt-out for low-income workers with respect to the increased amount, up to an earnings threshold.

Recommendation 7: Age Pension support should be expanded to include substantial rental assistance for Age Pension recipients who are private renters.

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3. Decumulation

The decumulation phase of Australia's retirement income system is under-developed and requires extensive attention. This should be one of the major focus of the Review.

Overwhelmingly, this section relates to the major welfare gains that could be realised through an effective market in retirement income products, either publicly or privately provided.

A concerted effort is needed to develop a successful retirement income product market[13]

Longevity and long-term care risks are major risks that retirement incomes and superannuation savings must address. In Australia these risks are mostly financed through the means-tested government Age Pension and aged care support and by individual out-of-pocket contributions. Private product markets for insuring and financing longevity and long-term care risks remain thin and lacking in innovation in effective risk managing product design. The Australian accumulation superannuation system has reached the stage where a focus on retirement income can produce significant welfare gains for many Australians.

Retirement income needs vary widely amongst individuals reflecting heterogeneity in wealth, longevity, and care needs. Because future mortality, morbidity, and aged-care needs are uncertain and involve substantial costs, in some cases catastrophic to the welfare of individuals in older ages, they are fundamentally suitable for insurance. For a range of individuals, there is a significant potential role for private or public market insurance and financing solutions in combination with the government provided Age Pensions and aged-care support, provided that the regulatory environment is supportive. It should not be assumed that because sales of longevity products are low, that Australian retirees do not want such products. There are many barriers to product take-up including lack of product awareness, behavioural biases and an absence of distribution channels (Bateman and Piggott, 2011). CEPAR research finds strong support for standard annuity products (Bateman et al., 2018) as well as novel products such as long-term care income insurance in the form of a life care annuity (Wu et al., 2019). What is needed is effective guidance for retiree financial decision making and a facilitating regulatory environment. It is however worth acknowledging that such markets can't fully replace government provision and are unlikely to operate well without public support. Measures to enable such a market to develop may include long dated and/or

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[13] See also Retirement Brief 3, pages 26-38.

inflation protected bonds, government issue infrastructure asset based bonds and mechanisms to protect providers from systemic shifts in longevity and government support or protection for customers from business failure, as currently occurs with Authorised Deposit-taking Institutions (ADI) deposits.

Retirement income stream design need to recognise the impact of individual health, retirement savings, housing as well as bequest considerations which interact in complex ways. There are obvious differences in the potential role of private market product solutions for lower, middle, and higher wealth levels. Housing is an important asset for current retiring cohorts since this can simultaneously meet bequest motives and provides a potential substitute for long term care financing. With substantial wealth in housing, many individuals are asset rich and cash flow poor, highlighting the potential for private market equity release products beyond the government-run PLS to support retirement needs.

There is a role for government, beyond providing financial support for Age Pensions and aged care needs, in more actively supporting the development of private markets for longevity risk and long-term care products on a viable, efficient, and fair-priced basis. There are significant potential welfare gains to Australians from a government agency coordinating and promoting retirement income products as well as taking an insurer/reinsurer role in product innovations and providing/creating a market for suitable investments to back these products. The broadening of the PLS is a step in the right direction, though few people are aware of its benefits (and it could benefit from better marketing as a 'home-based pension'). Government risk sharing has recently been expanded in the US, under the SECURE Act, by underwriting life annuity products.

Product innovation requires solid research and the removal of regulatory impediments

In order to develop product solutions and provide a sound private insurance market, it is critical to understand, quantify and determine who can best/most efficiently bear the related risks. The task is incomprehensible to the individual and complex for experts. It requires more sophisticated models and access to longitudinal data for Australians at an individual level. This remains relatively unexplored, partly because of data limitations, which remains an impediment to moving the field forward. CEPAR actuarial longevity research has focussed on these areas using mostly US data.

For longevity risk, CEPAR research has developed and assessed stochastic mortality models suitable for application to the design of retirement income product solutions capturing systematic trends (Blackburn and Sherris 2013; Xu, Sherris, and Ziveyi 2019), as well as considering mortality heterogeneity (Alai and Sherris 2012; Su and Sherris 2012; Meyricke and Sherris 2013; Xu, Sherris, and Meyricke 2019). We expand on this literature further in Appendix A. Pooled annuities, particularly in the form of Group Self Annuitisation, and deferred annuities have received some attention in Australia, but mostly from researchers (Piggott et al 2005; Hanewald, Piggott, and Sherris 2013; see also the Final Report of the Financial Systems Inquiry). There is also extensive work on equity release products. For example, lump sum equity release products have risk and profitability benefits compared to income stream products and home reversions have advantages over reverse mortgages (Alai, Chen, Cho, Hanewald, and Sherris 2014; Cho, Hanewald and Sherris 2015; Hanewald, Post, and Sherris 2016).

There are benefits from "combo" products such a combination of a lump sum reverse mortgage with long term care insurance (Shao, Chen, and Sherris 2019), a combination of a life annuity with long term care insurance, or life care annuity (Wei and Sherris 2019).

The demand for these product innovations depends on many factors. It's important to consider the level of an individual's wealth, the government provided means tested Age Pension and aged care support, as well as housing and other requirement income sources and savings (Xu, Alonso-Garcia, Sherris, and Shao 2019).

Recommendation 8: _A plan_: Government should formulate and pursue a coherent plan that will allow superannuation to provide a stream of resources in retirement that has sufficient risk management options and/or flexibility to allow for uncertain longevity and consumption patterns over retirement and to incorporate health and aged care. As part of this plan, impediments to product innovation for longevity risk should be systematically investigated and reduced as far as possible.

Recommendation 9: _An institution_: A supra-regulatory body should be established to facilitate retirement income product provision, allowing for a concerted effort, coordinated across responsible agencies, to prepare the financial and retirement income systems for an ageing population ageing. Such a body could also be responsible for ADI-like protections for individuals taking out long term retirement products.

Recommendation 10: _Public provision of underlying instruments_: The Review should investigate the options for government to provide underlying financial instruments that would support the longevity insurance market, including long duration longevity, infrastructure, and inflation linked bonds. As part of this, the government through its own agencies or an external provider should collect adequate longitudinal data to inform product and policy.

Recommendation 11: _Public provision of products:_ The Review should assess options for the government provision of longevity insurance products through existing distribution channels and payment systems (e.g. Centrelink or Australia Post) directly to consumers, exemplified by the PLS,hazl and/or private sector providers financial institutions.

4. Guidance and decision-making

Population ageing around the world has led governments to retreat from generous provision of retirement support. This, combined with the increasing emphasis on defined contribution accumulations (away from defined benefit pensions), has meant that individuals, households, and families, are increasingly having to make difficult choices to manage their affairs across the life course and between generations. Effectively supporting these decisions has become a major challenge in Australia and elsewhere. This raises questions around (1) the extent to which Australians engage with their superannuation and (2) whether, given the complexity of the retirement income system and its interaction with aged care and the health system, individuals are able to achieve good outcomes in the absence of formal financial advice.[14]

Many super members are disengaged but some choose to trust the defaults

The choice architecture of Australia's super system allows people to pay little attention to their super during the accumulation phase. That is, participation and minimum contributions are mandated and default MySuper products mean that investment choices need not be made.

Many may still be engaged with their super. Research using member account data combined with survey data collected to measure 'personal interest in super' and 'trust in one's super fund' suggests a complex interaction between non-default behaviour, interest and trust. Bateman et al. (2014) found that those who rated their personal interest in superannuation affairs as very high were no more likely to engage in non-default behaviour (such as increasing voluntary contributions or changing investment options) but more likely to be active online checking balances and searching for information.

In a follow-up study, Deetlefs et al. (2019) investigated the relationship between observable non-default behaviour, interest in super and trust in the fund. Cluster analysis revealed five specific groups of which two groups are of particular interest: the 'trustingly disengaged' (18% of the sample) who trusted the fund and were personally interested in super, but happy to stay in the defaults, and the

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[14] Retirement Brief 3, Sections 4 and 6, provides greater detail.

'mistrustingly engaged' (28% of the sample) who had low levels of trust, but high levels of engagement as measured by non-default behaviour.

Several strategies can help with financial decision making

Australia's retirement income arrangements are complex to navigate. As retirees contemplate how to draw down their accumulated superannuation they need to consider which products/strategies to use, how these interact with home ownership and the means tested Age Pension, and how to fund future expenses such as health shocks and aged care.

Three strategies can help with better retirement financial decision making: (1) improving the choice architecture (e.g., mandates and defaults); (2) improving financial skills and prescribed information provision (e.g., in-time financial product disclosure and key fact sheets); and (3) improving advice (e.g., skill requirements for advisers that include retirement issues, best interest duty, and online tools provided as 'intra fund advice' to complete financial plans).

Defaults are powerful but a single default will not be appropriate for everyone

The power of defaults has been investigated in the accumulation phase using super fund member data (Dobrescu et al. 2018) and in the decumulation phase using experimental surveys (Bateman et al. 2018). The overall finding is that defaults are 'sticky' and therefore effective but that it would be a challenge to design a universal retirement benefit default which did not lead to large welfare losses. Personalised defaults could be an option to facilitate 'appropriate' retirement benefit decisions, but there is neither international experience nor relevant experimental work to draw on. There is an increasing amount of development work on mass customised solutions that incorporate individuals' risk preferences, longevity, health status, etc., which has potential, but would need to be harnessed to move the field forward.

Existing information provision falls short but emerging approaches point to possible improvements

The use of prescribed (regulated) information has been investigated in the context of short form financial product disclosure statements (Bateman et al. 2016b) and the MySuper dashboard (Thorp et al. 2019). Both studies concluded that prescribed information was not always used as expected by regulators and that information simplification could not be guaranteed to assist decision making. A recent CEPAR study investigates the effectiveness of a retirement income product fact sheet (as advocated in a 2018 Treasury consultation paper) (Bateman and Eberhardt, 2020). Preliminary findings indicate that a proposed 'product rating' information item strongly sways choices towards the higher rated annuity products. Importantly, all studies were conducted in an experimental setting where participants were incentivised to read and pay attention to the prescribed information.

A related context is personalised information provided by superannuation funds. Australian workers rely on information from their superannuation funds in their regular member statements to work out if they are saving enough for retirement. Until recently, most funds gave members only their current balance, leaving the member with the complex task to convert this balance into a future lump sum or, more complex still, into an indicative income stream. ASIC regulations introduced in 2014 allow super funds to provide benefit estimates but this is not universally done.

CEPAR researchers worked with super fund Cbus (one of the first super funds to provide benefit estimates) to analyse the impact of presentation of the lump sum and income stream estimates (both are required under the ASIC regulations) on the behaviour of their members. By comparing carefully matched groups of members who received the estimates and an (observationally) identical group who did not, the impact of the projection information could be assessed. The impact was large: the proportion of Cbus members making salary sacrifice contributions was 33% higher among those who received the benefit estimates, the number of members interacting with Cbus increased by 46% and there was a small adjustment in investment choices towards more

aggressive options (Smyrnis et al., 2019b). A related experimental survey finds that both income projection and lump sum projections are important to motivate engagement and behaviour (Smyrnis et al. 2019a). A key implication of this work is the ability of the benefit estimates (calculated using generic assumptions set by ASIC, rather than as personalised financial advice) to motivate super fund members to become engaged, contact their fund and make beneficial changes to their super settings.

Facilitating better understanding of retirement income products through 'just in time' information provision and online tools

There is plenty of evidence that super fund members including those close to retirement have only modest levels of financial literacy (Agnew et al. 2013) and poor understanding of key features of currently available retirement products – specifically annuities and account-based pensions (Bateman et al. 2017; Bateman et al. 2018). However, experimental studies of retirement benefit decisions (specifically choice of lifetime annuities and/or account-based pensions) have identified approaches to enhance understanding of retirement products. Two examples follow:

- In a study of annuity and account-based pension decisions in an environment of increasing risk of ruin, Bateman et al. (2018) found that the insurance features of lifetime annuities relative to account-based pensions were better understood by those who took advantage of the 'just in time' product information provided at the time the decision was made.
- In a (related) study Alonso Garcia et al. (2018) found that a sample of Australian and Dutch pre-retirees were better able to compare and choose retirement income products with the use of simple a pre-populated online calculator which allowed them to vary key assumptions and therefore illustrated the impact of choosing different combinations of products.

> **Recommendation 12: Ensure that all people approaching retirement have access to and are encouraged to use standardised information to facilitate retirement planning – such as via MoneySmart, the DHS Financial information Service, or MyGov, to complement regulated information provided under financial product disclosure. Participation in a 'guidance' session could be a mandatory or 'opt-out' requirement for release of super funds.**
>
> **Recommendation 13: Mandate the provision of benefit projections with member statements, including both lump sum and income stream estimates.**
>
> **Recommendation 14: Superannuation funds should be encouraged (e.g., through regulatory change) to develop digital tools to facilitate general, scaled and intra-fund advice.**

5. Equity and the retirement income system[15]

The nature and measurement of the equity of the retirement income system in Australia is complex. It is not straightforward to articulate or measure what equity means in a system which remains active through the adult life course of most individuals. Several observations are in order.

It is important to take a holistic view of redistribution and equity of taxes and transfers, rather than focus on one particular policy, program, or tax. What is important is that poverty relief is delivered, and inequality addressed, overall. Accordingly, consideration of equity within the retirement income system is best cast in the context of the overall system of taxes and transfers.

Because of the nature of the Australian retirement income system, and in particular the SG, taxes and transfers over the life course should ideally be taken into account when assessing equity impact. This is

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[15] Retirement income Brief 2, Section 5, provides detailed information about the links between the Australian retirement income system and poverty among older age groups.

challenging empirically, because life events move people between income and wealth rankings in complex ways. For example, only 10 per cent of people remained in the same wealth decile over a 12-year period (Productivity Commission 2018b).

It is more instructive to examine the impact of taxes and transfers as they exist than to form estimates of equity based on 'what if' scenarios. Tax expenditures provide an example of the 'what-if' approach. They essentially try to measure not who pays what and who receives what, but what might have been paid under some alternative system. To see that this is misleading in forming an overall view of the equity of the system as it stands, consider Figure 4 of the Retirement Income Review Consultation Paper, and imagine how it would be modified if the top rate of the Personal Income Tax were to be increased, absent any other change. With this tax increase, overall equity is enhanced, since high income individuals now pay more tax. But Figure 4 would indicate that equity has gone backwards, because the top decile column on tax forgone has now increased. Essentially, real tax and transfer payments are not commensurate with 'what-if' estimates stemming from tax expenditure calculations and should not be combined into a single chart. Chomik and Piggott (2018) provide a comprehensive discussion of tax expenditures in the context of retirement policy, using Australia as an example. If tax expenditures are to be used in this context in the Review, it is recommended that that paper be consulted.

In benchmarking equity, it is important to decide between an income and an expenditure base. In the context of retirement, the expenditure base is often more appropriate because ultimately, the distribution of consumption is what matters; and because in thinking about the efficient operation of the economy and consumption smoothing between working life and retirement, it is important to minimise the price distortion that comes from the taxation of the return to saved capital, whether this is in the form of superannuation returns, or imputed income from and capital gains on housing.

Given these observations, we believe that the Australian retirement income system exhibits a high degree of equity, mainly because the Age Pension is means tested and because existing caps limit excessive tax-advantaged transfers into super. This means that wealthier retirees do not receive a public pensions, which distinguishes the Australian structure from most others around the world. The redistributive impact of means testing is reinforced by the presence of the mortality gradient, since the affluent live the longest. Many retirement transfer systems in the developed world are regressive because a uniform access age combined with a mortality gradient means that the relatively well-off receive more transfers over their retirement than do the less well off. Whiteford (2015) finds that the means tested pension is important in placing Australia as the most progressive of all OECD countries when transfers to the bottom quintile are quantified relative to those to the top quintile.

As we emphasised above, housing security is an important aspect of the welfare of older people in Australia. Once housing costs and tenure are considered, Australia has a poverty rate among older people less than the OECD average, even though public pension outlays are one of the lowest (Retirement Income Brief 2, section 5). Poverty among older Australians is concentrated among private renters. Recommendation 7, if implemented, has the potential to substantially eliminate poverty among older cohorts in Australia.

Taxation treatment of superannuation could be made more equitable by following the recommendations of the Henry Review (Henry et al. 2010). That review recommended a contribution tax regime which followed the marginal tax rate schedule with a constant rebate of 15 to 20 percentage points. It suggested that "the offset should be set so the majority of taxpayers do not pay more than 15 per cent tax on their contributions" (page 100).

Such a reform would also more closely align the taxation of superannuation with the taxation of housing. It would also go a long way to further promoting equity in the retirement income system, both substantively and in perception.

Recommendation 15: The Review should acknowledge that equity of the retirement income system needs to be considered in a holistic way rather than with respect to specific schemes and using simple scenario analysis.

Recommendation 16: The Review should revisit the Henry Review (Henry et al. 2010) discussion on taxation of superannuation and consider promoting the superannuation tax reforms that were recommended there.

6. Conclusion

The aim of this submission is to provide facts and evidence that may support and inform its deliberations. It also interprets the facts and evidence to suggest some specific ways, listed as a series of recommendations, in which Australia's already successful retirement income system might be improved. We would be happy to discuss our recommendations and/or supporting research in more detail should the Review Panel see it as valuable.

Appendix A: Understanding the risks (longevity, aged care, housing)

In order to develop product solutions and provide a sound private insurance market, it is critical to understand the risks and to be able to quantify those risks. This applies to the uncertainty in future longevity as well as levels of functional disability, including both Instrumental Activities of Daily Living (IADLs) and Activities of Daily Living (ADLs).

This requires more sophisticated models and access to longitudinal data for Australians at an individual level. This remains relatively unexplored because of limitations on data. CEPAR actuarial longevity research has focussed on these areas largely using US data.

For longevity risk, CEPAR research has developed and assessed stochastic mortality models suitable for application to the design of retirement income product solutions capturing systematic trends (Blackburn and Sherris 2013; Xu, Sherris, and Ziveyi 2019), as well as considering mortality heterogeneity (Alai and Sherris 2012; Su and Sherris 2012; Meyricke, and Sherris 2013; Xu, Sherris, and Meyricke 2019).

These models have been applied to better understand the pricing of products such as life annuities to take into account mortality heterogeneity (Su and Sherris 2012; Meyricke and Sherris 2013) as well the risk management and capital requirements for product providers (Sherris and Zhou 2014; Blackburn, Hanewald, Olivieri, and Sherris, 2017; Wong, Sherris and Stevens 2017).

Long term care risk requires allowances not only for different levels of future functional disability but also for the impact of trends in longevity. CEPAR research has used US HRS longitudinal data to quantify aged care risks, including systematic improvement, based on ADLs, a definition often used in long term care insurance contracts (Fong, Shao, and Sherris (2015), Li, Shao, and Sherris (2017)). Incorporation of health status as well as functional disability allows the quantification of risk related to both longevity risk as well as aged care risks (Wei, and Sherris, (2019)).

These models have direct application to Australian data and would provide a basis to form a better understanding of the requirements for private market products in terms of costing. Issues related to insurer pricing and solvency for long term care products have also been addressed in the CEPAR research (Shao, Sherris, and Fong 2017).

To incorporate housing into retirement income decisions it is necessary to understand the trends and risks in housing values and how to value products linked to housing values, such as equity release products.

CEPAR research has used Australian and US data to quantify and model these risks including house prices, rental yields, and interest rates (Sun and Sherris 2010; Shao, Hanewald, and Sherris 2017; Alai, Chen, Cho, Hanewald, and Sherris 2014; Cho, Hanewald and Sherris 2015).

The research has developed valuation models for application to equity release products incorporating mortality, long-term care move-out, prepayment, and refinancing, reverse mortgage "crossover risk", actuarial risk factors and stochastic discount factors for fair pricing (Alai, Chen, Cho, Hanewald, and Sherris 2014; Cho, Hanewald and Sherris 2015; Shao, Hanewald and Sherris 2015). It's important to recognise that a reverse mortgage is not a conventional housing loan since it is impacted by many risk factors similar to a life insurance product in terms of time of repayment and valuation of the guarantees on house values in these products require sophisticated financial and actuarial modelling.

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