

# **Balancing act: managing the trade-offs in retirement incomes policy**

**Submission to the Retirement Income Review**

Brendan Coates and Jonathan Nolan

## Grattan Institute Support

### Founding members



Australian Government



### Endowment Supporters

The Myer Foundation  
National Australia Bank  
Susan McKinnon Foundation

### Affiliate Partners

Medibank Private  
Susan McKinnon Foundation  
Veitch Lister Consulting

### Senior Affiliates

Cuffe Family Foundation  
Maddocks  
The Myer Foundation  
PwC  
Scanlon Foundation  
Trawalla Foundation  
Wesfarmers  
Westpac

### Affiliates

Allens  
Ashurst  
Corrs  
Flagstaff Partners  
Jemena  
McKinsey & Company  
Silver Chain  
Urbis  
Woodside

## Grattan Institute Working Paper No. 2020-03, March 2020

This working paper was written by Brendan Coates and Jonathan Nolan. Owain Emslie, Matt Cowgill, and Tony Chen made valuable contributions to the paper.

We would also like to thank a number of reviewers for their comments on this working paper.

Analysis in this paper used the R programming language (R Core Team, 2019), and a range of R packages including the Tidyverse (Wickham et al, 2019).

The opinions in this paper are those of the authors and do not necessarily represent the views of Grattan Institute's founding members, affiliates, individual board members, reference group members, or reviewers. Any errors or omissions are the responsibility of the authors.

Grattan Institute is an independent think tank focused on Australian public policy. Our work is independent, practical, and rigorous. We aim to improve policy outcomes by engaging with decision makers and the broader community.

For further information on the Institute's programs, or to join our mailing list, please go to: <http://www.grattan.edu.au/>.

This working paper may be cited as: Coates, B. and Nolan, J. (2020). *Balancing act: managing the trade-offs in retirement incomes policy*. Grattan Institute.

ISBN: 978-0-6487380-4-6

All material published or otherwise created by Grattan Institute is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License

## Overview

The Federal Government's Retirement Income Review is a welcome opportunity to set objectives for Australia's retirement incomes system and to assess how well the system is meeting them. This working paper sets out what the objectives of the retirement incomes system should be, and what pillars can best achieve those objectives. It also updates Grattan Institute's past assessments of the adequacy of retirement incomes.

The Review should set objectives for the retirement incomes system as a whole. Broadly, the system should guarantee some minimum 'adequate' standard of living for people otherwise at risk of poverty in retirement. And second, it should help people to maintain a more consistent standard of living across their lives. But these objectives need to be *balanced* against the costs of achieving them.

Crucially, the Review should clarify the role of superannuation within this system. Super today primarily aims to smooth incomes over a lifetime, making Australians better off. But the role of super shouldn't be overstated. Compulsory super should be set at a level that ensures middle-income earners replace their pre-retirement living standards – an objective which the current Superannuation Guarantee rate of 9.5 per cent, together with the pension and other savings, already achieves. Setting compulsory super policy for those Australians who would otherwise not replace their pre-retirement living standards would mean forcing everyone else to save more than they need (or are likely to spend), which is a recipe for larger inheritances.

Without clear objectives, the super system has also provided excessively generous tax breaks that cost the budget \$35 billion each year in lost revenue, with half the benefits flowing to the top 20 per cent of income earners, who already have enough resources to fund their

own retirement. These excessively generous tax breaks should be wound back.

Grattan Institute's 2018 report, *Money in retirement*, showed that Australia's retirement incomes system provides adequate retirement incomes for most retirees today and in future. The updated analysis presented in this paper confirms these findings. Retirees today feel more comfortable financially, and suffer less financial stress, than younger Australians who are working. And, on reasonable assumptions, most workers today can expect to be at least as well off in retirement as they are while working. Retirement incomes also remain adequate for most Australians even when they work part-time or take significant career breaks, such as to care for children. When careers are interrupted, workers save less super, but will tend to get larger part-pensions, offsetting much of any potential fall in retirement income.

Australia's retirement income system doesn't work for everyone. Senior Australians who rent in the private market are more likely to suffer financial stress than homeowners, or renters in public housing. Falling rates of home ownership among younger Australians mean more Australians will rent in retirement. A growing number of older Australians, including many women, are at risk of poverty and homelessness in retirement. And Australians who suffer from major shocks, such as forced early retirement due to illness, are not as well protected by our income support system as they should be.

These are the real challenges to ensuring our retirement incomes system lives up to its promises to all Australians. But the Age Pension and Rent Assistance, rather than superannuation, remain the best tools to help people at risk of poverty in retirement.

## Table of contents

Overview . . . . .	3
1 What should Australia's retirement incomes system aim to achieve? . . . . .	5
2 Does Australia's retirement incomes system prevent poverty in retirement? . . . . .	22
3 How should we assess retirement adequacy for middle-income earners? . . . . .	30
4 Retirement incomes are adequate for most working Australians .	53
5 How to improve Australia's retirement incomes system . . . . .	65

## 1 What should Australia's retirement incomes system aim to achieve?

Australia's retirement incomes system should ensure Australians have enough income to enjoy a reasonable standard of living in retirement. The system should guarantee every retiree a minimum standard of living to avoid poverty, and it should provide the opportunity for all retirees to smooth their standard of living across their lifetime. It should also help manage the risks that retirees face in achieving these objectives.

The four pillars of Australia's system each perform distinct roles in achieving these goals.<sup>1</sup> The Age Pension, along with other elements of the social safety net such as Rent Assistance, provides a guaranteed safety net for all retired Australians. For middle-income Australians, superannuation tops up the Age Pension so that living standards in retirement match those before. Most retirees own their homes, and that ownership also supports their living standards. In addition to these pillars, access to universal health and aged care services supports the living standards of all retirees.

But higher retirement incomes always come at a cost: either people have lower living standards while working; or governments give up more revenue for superannuation tax breaks; or taxpayers pay more for pensions. The key challenge for retirement incomes policy is balancing these trade-offs.

Policy makers should not overstate the role of any one pillar of the retirement incomes system, especially superannuation. Compulsory

---

1. The consultation paper for the Retirement Income Review identifies three pillars (Age Pension, compulsory superannuation, and voluntary savings), but we identify owner-occupied housing as a separate pillar of the system because of its substantial role in supporting retirement incomes, its broad coverage, and because of its distinct treatment in both the tax system and Age Pension means test.

super should aim only to smooth living standards for *most* people, lest it force other Australians to save too much for their retirement, lowering their living standards during their working lives. And super is poorly placed, compared to the Age Pension and the broader social safety net, to provide an adequate retirement for people on low incomes, or to manage many of the risks that retirees face.

This chapter outlines the four pillars of the retirement incomes system and articulates what policy makers should be trying to achieve with each.

### 1.1 The four pillars of Australia's retirement incomes system

Each pillar of Australia's retirement income system plays a unique role in ensuring Australians achieve an adequate retirement. The Age Pension aims to alleviate poverty. Superannuation and other forms of private savings are used to give people a more consistent standard of living across their lives. Finally, home ownership supports living standards for the majority of home-owning retirees who do not need to set aside income for rent.

The **Age Pension**, provided by government, helps poorer people avoid poverty in retirement. It guarantees a minimum 'safety net' income in retirement for people who earned low incomes over their working lives, including because they had periods of unemployment, caring responsibilities, or worked part-time. The Age Pension is targeted through age, residency, and means tests. Rent Assistance is paid to Age Pension recipients who rent privately or from community housing providers.

However, the pension does more than just alleviate poverty. It also contributes substantially to the retirement incomes of middle-income

Australians, both now<sup>2</sup> and well into the future. Together with the broader tax-transfer system, it redistributes income towards low- and middle-income retirees, reducing income inequality in old age.<sup>3</sup> And it supports people who live longer than expected and exhaust their private savings (i.e. it provides insurance against 'longevity risk').<sup>4</sup> Other elements of the income support system, including Commonwealth Rent Assistance, Newstart, and the Disability Support Pension also support retirement incomes for people who do not own their homes in retirement or are unable to keep working until retirement age.

Compulsory private saving via the **Superannuation Guarantee**, currently set at 9.5 per cent of workers' wages, supplements or substitutes for the Age Pension. Compulsory super requires Australians to give up a portion of their wages while working, in exchange for a higher standard of living in retirement.<sup>5</sup> The Super Guarantee is legislated to rise incrementally to 12 per cent of wages between 2021

2. About 60 per cent of Age Pension recipients started receiving payments within one year of reaching the eligibility age, although a larger share of retirees receive an Age Pension at older ages (Productivity Commission (2015a, p. 44)). More recent data suggests half of people aged 67 do not receive the Age Pension, but this includes those that are still working and therefore ineligible for the Age Pension as they are still earning substantial income. Mather (2019).
3. Whiteford (2014a) and Productivity Commission (2015b).
4. Longevity risk is the risk of a person living longer than expected, so that their savings run out. Longevity risk also encompasses the prospect that retirees die earlier than expected, leaving unexpected bequests.
5. Grattan's 2020 working paper, *No free lunch: higher super means lower wages* showed that, on average, about 80 per cent of the cost of increases in compulsory super is passed to workers through lower wage rises within the life of an enterprise agreement, typically 2-to-3 years. This finding is conservative: it ignores the prospect that employers pass on some of the cost of super into higher prices, or by reducing other non-wage benefits to workers. And the proportion of compulsory super that comes from wages is likely to be even higher in the longer-term. In practice, full pass-through from super to wages can't be ruled out. Coates et al (2020).

and July 2025.<sup>6</sup> Superannuation is also taxed concessional compared to most other savings.

**Voluntary private savings**, including pre- and post-tax voluntary super contributions, other financial assets, and investment property, provide people with additional resources for retirement and for other major purchases. Taxes are lower on some forms of savings, especially voluntary pre-tax super contributions, negatively geared investment property, and assets that accrue capital gains. These voluntary savings are large for many households, particularly the wealthiest 20 per cent.<sup>7</sup>

**Home ownership** supports living standards in retirement, because home-owning retirees do not need to set aside income for rent. The family home tends to be Australians' largest single asset. Home ownership also partly insures against longevity risk and rising housing costs, and is often used to fund aged care.

Retirement living standards also depend on other parts of the **social safety net** – especially subsidised health and aged care. The costs of specific health and disability needs are best met via targeted supports or universal health services, rather than by ensuring all retirees have the resources to meet these costs themselves.<sup>8</sup> Government already funds most aged care costs: more than three quarters of the \$23 billion spent annually on aged care services is funded by government.<sup>9</sup>

6. The Superannuation Guarantee was introduced in 1992, with compulsory contributions rising from 3 per cent of wages in that year to 9 per cent from 2002-03 and 9.5 per cent in 2013-14. The rate is scheduled to remain at 9.5 per cent until 2021, then increase by half a percentage point each year until it reaches 12 per cent in July 2025.
7. Daley et al (2018b, Appendix A).
8. Harmer (2009, section 3.4.3).
9. In 2017-18 government aged care expenditure was \$18.1 billion while consumer expenditure was \$4.9 billion (Aged Care Financing Authority 2019).

## 1.2 The objectives of Australia's retirement incomes system

The first priority of Australia's retirement incomes system should be to **alleviate poverty** among the aged. The system should provide a minimum, 'adequate' standard of living for people unable to fund their own retirement. The precise level of this minimum standard is the subject of much debate, and is discussed further in Chapter 2.

The system should also help people use their own money to **maintain a consistent standard of living across their lives**. People tend to focus too much on the short term, leading many to save less for their retirement than is needed if they want to consume at about the same rate across their lifetime.<sup>10</sup> And if people decide not to save enough, the government will be on the hook for the cost of their retirement through the Age Pension.<sup>11</sup>

The retirement incomes system should deal appropriately with **investment, inflation, and longevity risks**.<sup>12</sup> The combination of a means-tested public pension and privately held super and other retirement savings means those risks are spread between the public and private sectors.<sup>13</sup>

---

10. Financial System Inquiry (2015, p. 119).

11. Studies comparing pensions in different countries suggest that each dollar of pension decreases private savings by between 23 cents and 44 cents. Hurd et al (2012) and Alessie et al (2013). The Super Guarantee combats the potential problem that people capable of saving for their retirement will save too little on the expectation the government will foot the bill via the Age Pension, or what economists call 'moral hazard' (Drew and Stanford (2003, p. 22)).

12. Investment risk is the risk of lower investment returns. Inflation risk is the risk of higher inflation. Both risks result in a pot of savings at the point of retirement buying less than expected through retirement.

13. Relying too much on the public sector to insure against market and longevity risks can increase the cost of the system, affecting its sustainability. Relying too much on the private sector can expose people to excessive risks when saving for their retirement (Henry (2009a, p. 31)).

The retirement incomes system needs to be **fiscally sustainable**, especially in the context of Australia's ageing population. The federal government spends about 2.7 per cent of GDP on the Age Pension. In addition, governments today give up about \$35 billion a year – or 1.9 per cent of GDP – in superannuation tax breaks.<sup>14</sup> Age-related spending is also growing quickly, reflecting population ageing<sup>15</sup> and an increase in government transfers to older Australians.<sup>16</sup> Aged-care and health spending have been increasing much faster than welfare spending, and are expected to continue to do so.<sup>17</sup>

The retirement incomes system should **maintain reasonable incentives to work, save, and invest**. While means-testing the Age Pension targets support to those most in need, it also increases the effective marginal tax rates of older workers.<sup>18</sup> But international studies show that effective marginal tax rates don't really affect the decisions of older people to work.<sup>19</sup> And empirical evidence from around the world

---

14. Treasury (2018a) and Coates (2018). People often caution against simply adding together the Treasury's 'revenue foregone' tax expenditure estimates for contributions and earnings tax breaks. However, we estimate the degree of 'double counting' in combining the 'revenue gain' tax expenditure estimates from abolishing each of these tax breaks at less than \$1 billion a year over that period (Coates (2018)). The revenue gain estimates from Treasury estimate 'the impact of abolishing a benchmark variation taking account of the potential changes in taxpayer behaviour'. See: Treasury (2020, p. 3).

15. Australia's old-age dependency ratio was 25 in 2015 and will be 41 in 2050, compared to the OECD averages of 28 and 53 respectively: OECD (2017a) and Hockey (2015).

16. Daley et al (2015, p. 7); and Wood et al (2019).

17. Hockey (2015, p. XVI).

18. Ingles and Stewart (2015); and Daley et al (2016a, p. 23).

19. While lower taxes on wages encourage seniors to work more, the resulting increase in income and savings *discourages* further work. Evidence from Australia is thin because most Australian studies have focused on how taxes affect the choice to work of people under age 65 (Daley et al (2016a, p. 24)).

confirms that people on higher incomes tend to save about the same amount irrespective of the tax rate on savings.<sup>20</sup>

The retirement incomes system should also avoid **boosting inheritances**, because inheritances tend to increase wealth inequality<sup>21</sup> and to reduce incentives to work. It follows that policy should aim to provide adequate retirement income assuming that retirees will largely run down their savings through retirement, while acknowledging that some people will choose to have a lower retirement income, but leave a larger bequest.<sup>22</sup> Of course, if retirement income policy is set assuming substantial drawdown, then it needs a substantial safety net to protect the minority of people who significantly outlive their life expectancy.

### 1.3 These aims must be balanced

The various objectives of our retirement incomes system must be balanced. After all, higher retirement incomes always come at a cost.

While policy generally aims to provide a consistent standard of living for most Australians before and after retirement, there are costs to doing so. For instance, there are potentially big budgetary costs in boosting retirement incomes to ensure that people with very high incomes maintain their living standards after retirement. The government has formalised this idea by proposing that the objective of the super system is to ‘provide income in retirement to substitute or supplement the Age Pension’.<sup>23</sup> Implicitly, the super system, and super tax breaks in

particular, should not aim to provide additional savings beyond the point at which a person no longer qualifies for a part Age Pension.<sup>24</sup>

Retirement income policies should also pay close heed to the costs they impose on Australians’ living standards during working life. After all, higher compulsory super means working people will have less money to buy a home, invest in their children’s education, or start a business. And working-age Australians consistently report higher rates of financial stress than older Australians.<sup>25</sup> Self-assessed financial comfort is particularly low among students, renters, single parents with young children, the unemployed, and casual workers – groups that all tend to have less money.<sup>26</sup> Meanwhile living standards have increased much more slowly for working Australians today than for previous generations.<sup>27</sup>

And in practice, some parts of the retirement incomes system are better placed to manage these trade-offs than others. For instance, the Age Pension, and the income support system more broadly, is typically better placed to redistribute income to people who may otherwise have an inadequate retirement income. Therefore any objectives set for the retirement incomes system as a whole, or for specific pillars, should allow policy makers flexibility to use the right combination of policy tools – superannuation, the Age Pension, and others – to achieve these ends.

### 1.4 The role of superannuation today

The super system exists primarily to promote consumption smoothing – requiring people to save while they are working so they have more to spend in retirement. People tend to focus disproportionately on the

---

20. Daley et al (2015, figure 2.4).

21. The wealthiest 20 per cent of individuals of a given age receive 38 per cent of inheritance money, the poorest 20 per cent receive only 8 per cent. Wood et al (2019, Figure 6.3).

22. Other analyses of retirement income adequacy also make this assumption. For example, Rothman and Bingham (2004) and Rothman (2007, p. 5) measure replacement rates on the basis of *potential* net expenditure before and after retirement, assuming retirees leave minimal estate at average life expectancy.

23. *Superannuation (Objective) Bill* 2016, cl.5.

---

24. Daley et al (2015, p. 16).

25. Wood et al (2019, Figure 4.4).

26. ME Bank (2020).

27. Wood et al (2019, Figure 4.4).



short term, and so without a compulsory savings scheme, many would save less for their retirement than is required to maintain relatively consistent consumption levels across a lifetime. People save less of their disposable income because of superannuation, but it leads to higher total retirement savings overall.<sup>28</sup>

Super also requires workers to give up their wages today so that governments do not have to spend so much on the Age Pension in future. This encourages inter-generational equity, since each generation pays more of the costs of its own retirement, rather than imposing this burden on the next generation. Although these pension savings have to be balanced against the budgetary costs of extra super tax breaks.

A historic view was that super should ensure that capital is available for investment in Australia.<sup>29</sup> But this is a general consequence of a well-designed savings regime, rather than a particular aim for super. While Australian super funds played a significant role in financing the de-leveraging of corporate Australia during the Global Financial Crisis,<sup>30</sup> the Financial System Inquiry argued that ‘funding economic activity is a consequence of a well-designed long-term savings vehicle that invests in the interests of its members, rather than an objective in itself’.<sup>31</sup> Nor is super required to fund infrastructure. Only a small fraction of super is invested in infrastructure, and there is no shortage of funds for infrastructure assets with proven cash flow.<sup>32</sup>

So overall, the super system is designed to promote retirement savings so that people enjoy a higher standard of living in retirement, but with less support from government through the Age Pension, reducing the burden on future taxpayers.

28. Daley et al (2015, pp. 20–21).

29. Fitzgerald (1993).

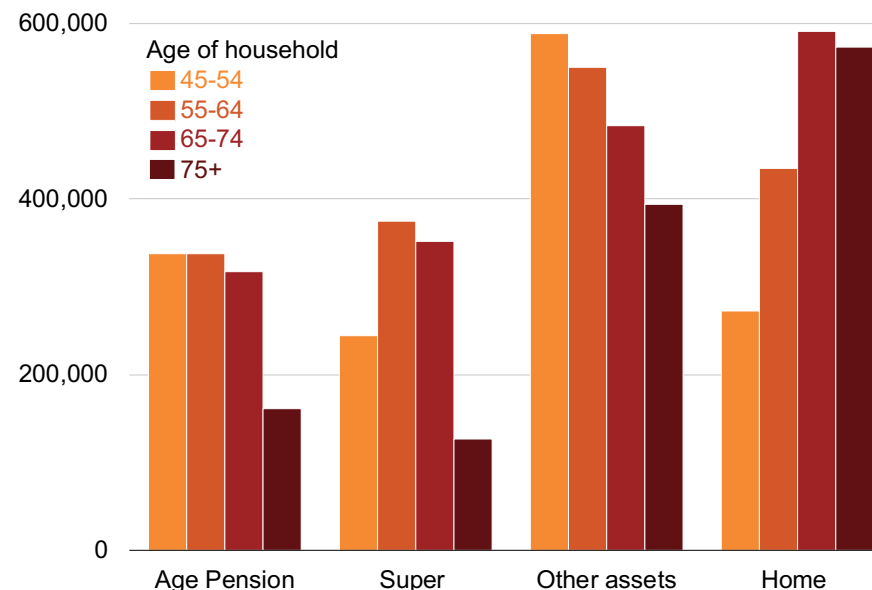
30. Daley and Coates (2016, p. 2).

31. Financial System Inquiry (2015, p. 98).

32. See Daley and Coates (2016, p. 2).

**Figure 1.1: Superannuation is only one part of the retirement incomes system**

Mean wealth per household by type and age (2017-18\$)



Notes: ‘Home’ is net of related mortgage liabilities; ‘other assets’ are net of other liabilities and exclude vehicles and household contents; ‘super’ excludes at least some defined benefit schemes. Net present value of Age Pension is based on average annual pension payments received by households in each age group in 2017-18. The annual average Age Pension payment is converted into a capital value using a discount rate equal to the Age Pension indexation rate of 3.5 per cent. The net present value of lifetime Age Pension payment assumes that the average real pension currently received by households in each age group continues to life expectancy. It does not account for future expected increases in private retirement saving before retirement, especially for households aged 45-54 and 55-64, where the bulk of households are not yet retired.

Sources: Daley et al (2015, figure 2.1), updated to 2017-18 using ABS (2019a) and ABS (2019b).

#### 1.4.1 The role of super should not be overstated

Superannuation plays an important role in helping Australians to save enough for their retirement. But the role of super should not be overstated. Many people do not rely on just their super savings to fund an adequate, or even a 'comfortable', living standard in retirement. Rather, most retired Australians draw on a range of assets to support their retirement – including housing, and other investments outside of super – in addition to at least some amount of Age Pension.

Nor should super seek to fulfil every objective of the broader retirement incomes system. In particular, super does not and should not aim to provide limitless support for savings that increase retirement incomes – either funded by workers (via higher super contributions) or government (via direct transfers and tax breaks for super). The benefits of higher retirement incomes must be balanced against the costs of achieving them.<sup>33</sup>

#### 1.4.2 Super remains only one part of the retirement incomes system

Many commentators equate retirement incomes with superannuation.<sup>34</sup> But superannuation (pillar 2 and part of pillar 3) remains the *least* important part of Australia's retirement incomes system for people who are retired or are approaching retirement (Figure 1.1 on the preceding page). Superannuation savings account for only 20-to-25 per cent of the wealth of households.<sup>35</sup> Even without counting the family home, many Australians save as much outside as inside the super system.

---

33. Daley and Coates (2018a, p. 3).

34. For example, see: Industrial Relations Victoria (2020).

35. Daley et al (2018b, Figure A.2).

While superannuation will account for a larger share of retirement savings as the system matures,<sup>36</sup> other sources of retirement savings will remain important. Even younger Australians hold a substantial share of their savings outside of super.<sup>37</sup>

The enduring importance of non-super savings should come as no surprise. While compulsory super forces people to save more via superannuation, there's little evidence that non-super savings have fallen much in response. A Reserve Bank of Australia study found that each extra dollar of compulsory super savings was accompanied by an offsetting fall in non-super savings of between only 10 and 30 cents.<sup>38</sup> As a result, compulsory super has added a lot to private savings in Australia – an estimated 1.5 per cent of GDP a year over the past two decades.<sup>39</sup>

There is little reason to expect this pattern of non-super saving to change radically. Households hold a material portion of their wealth outside of super so that they have an option to use it before turning 60. Meanwhile other asset classes, such as negatively geared property, are taxed lightly and so are likely to remain an attractive vehicle for accumulating wealth.<sup>40</sup> Whatever the motivation, many households heading towards retirement have substantial non-super, non-home assets to draw on.

The fact that many Australians save for their retirement through vehicles outside of super has important implications for the role of superannuation, and the amount of super people need for an adequate retirement.

---

36. Compulsory super only began in 1992, with compulsory contributions of 3 per cent of wages, rising to 9 per cent by 2002 and 9.5 per cent since 2014-15.

37. Daley et al (2018b, Figure A.2).

38. Connolly (2007). That is, there was only a small offsetting fall in other savings in response to the introduction of the compulsory Superannuation Guarantee.

39. Gruen and Soding (2011).

40. Daley et al (2016c).

### 1.4.3 Super should aim to smooth the lifetime incomes of middle-income earners only

Super, and especially the compulsory Superannuation Guarantee, should aim to smooth living standards for middle-income earners. It should not *force* the majority to have a higher living standard in retirement than when working. Policy makers can only justify forcibly lowering someone's living standards during their working life – by lifting compulsory super – if we are protecting them from even worse outcomes in retirement. And making Australians save more than they need (or are likely to spend) in retirement is a recipe for larger inheritances, which will exacerbate wealth inequality in the long term.<sup>41</sup>

Inevitably, compulsory super will not produce the best outcome for every person to whom it applies.<sup>42</sup> For example, given Australia's means-tested Age Pension, aiming to replace a given share of pre-retirement earnings for well-above-average income earners would mean forcing many low- and middle-income Australians to save enough to replace more than 100 per cent of their pre-retirement earnings (Figure 4.5 on page 56). Similarly, setting the Superannuation Guarantee at a level that ensures people who rent or have substantial periods out of the workforce still replace their living standards just before retirement would require home-owners and full-time workers to save much more than they need to replace theirs.

These trade-offs are why the Henry Tax Review recommended that compulsory super should be 'benchmarked by reference to moderate potential replacement rates for retirees with a full history of contributions at median to average earnings'.<sup>43</sup> Past Grattan work has aimed to ensure that all but the top 20 per cent of workers in the

earnings distribution retain their pre-retirement living standards, using a 70 per cent replacement rate of pre-retirement disposable income as a benchmark.<sup>44</sup>

This paper adopts a similar approach as the Henry Tax Review in aiming for a 70 per cent replacement rate for people on median to average earnings, albeit focused not only on people in full-time work (Chapter 3). This revised approach arguably better balances the needs of low- and high-income earners. It is much harder for Australians to respond to a higher-than-optimal rate of compulsory super, by saving less, than it is for them to top up their retirement savings voluntarily if the rate of compulsory super is set at a rate lower than what the rate that is ideal for their individual circumstances.<sup>45</sup>

### 1.4.4 Superannuation should not seek to replace the Age Pension as a goal in itself

Superannuation requires governments to give up tax revenue today so that governments do not have to spend so much on the Age Pension in future. This encourages inter-generational equity, because each generation pays more of the costs of its own retirement, rather than imposing this burden on the next generation.

But the super system should not seek to replace the Age Pension for most retirees as a goal in itself.<sup>46</sup> Given the Age Pension needs to be sufficient to avoid poverty in retirement for those with little other assets or income, and the means test should be set not to overly discourage incentives to save, it's inevitable that middle-income Australians will

---

41. Daley et al (2014).

42. For example, Khemka and Warren (2020) identifies how the optimal rate of compulsory super contributions varies by income.

43. Henry (2009a, p. 11).

44. Daley et al (2018b, p. 58). The top 20 per cent are unlikely to rely heavily on the pension and therefore there are fairer ways for government to intervene and require them to make different decisions about how to work, save, and spend.

45. Khemka and Warren (2020, p. 28).

46. For example, Rice Warner (2019) argue that a rate of compulsory super below 10 per cent would result in median-income earners relying on the Age Pension for more than half of their retirement income.

continue to receive at least some, and in many case much, Age Pension over the course of their retirement. And the means-tested Age Pension provides valuable public insurance against longevity, returns and a number of other risks for most retirees.

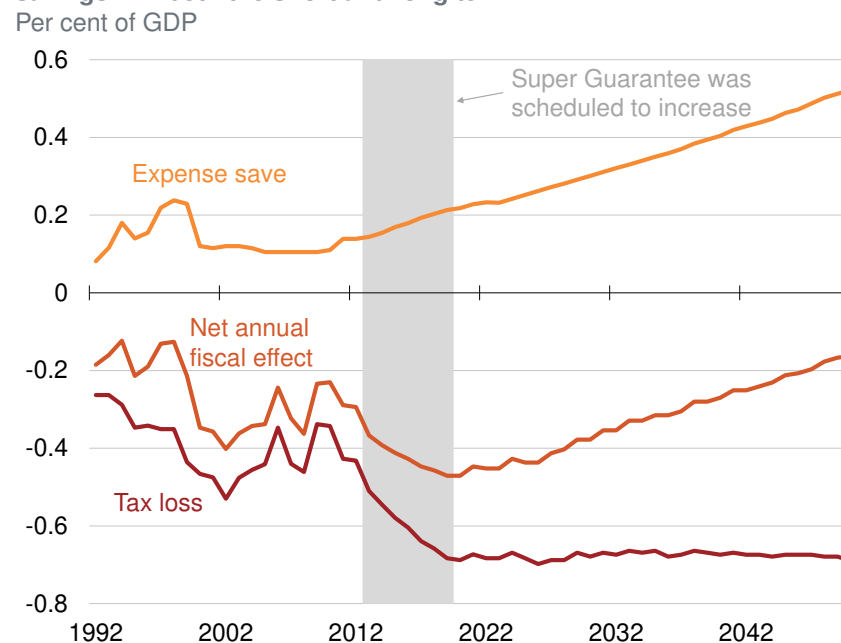
To ensure the majority of Australians saved enough via super to not rely heavily on the pension, the vast majority of Australians would be forced to save more than necessary to smooth their lifetime consumption. Lifting compulsory super to 15 per cent or even 18 per cent – the level required to push most people off the Age Pension – would result in the median worker replacing 92 per cent or 94 per cent of their pre-retirement earnings, well above the common benchmark of 70 per cent. And the bottom 30-40 per cent of workers would be forced to save for a retirement income that exceeded their wage pre-retirement. Therefore setting compulsory super to replace the Age Pension for most Australians would contravene a core objective of the retirement incomes system: to smooth lifetime consumption for most Australians.

The budgetary costs of raising compulsory super to replace the pension, via extra tax breaks, would exceed any pension savings for the foreseeable future. Treasury analysis in 2013 estimated that the revenue foregone from superannuation tax breaks as a result of moving to a 12 per cent Super Guarantee, together with past increases in the Super Guarantee, exceed the budgetary savings from lower Age Pension spending by 0.4 per cent of GDP a year.<sup>47</sup> Eventually – by 2050 – the net budgetary cost of super tax breaks will “only” be 0.2 per cent of GDP a year (Figure 1.2). The cumulative increase in Commonwealth public debt from a 12 per cent Superannuation Guarantee would exceed 10 per cent of GDP by 2050.<sup>48</sup>

47. Treasury (2013a, figure 2.1.).

48. Treasury (ibid, p. 11). Recent changes to curb super tax breaks and tighten the Age Pension assets test will reduce the annual budgetary cost of support for retirement incomes by around 0.1 per cent of GDP.

**Figure 1.2: The tax breaks from compulsory super exceed the budget savings – in both the short and long term**



Sources: Treasury (2013a, figure 2.1), Treasury (2010, p. 42) and Treasury (2014, p. 17), Grattan analysis.

More recent modelling from actuarial firm Rice Warner paints an even worse budgetary picture. It finds that lifting compulsory super contributions to 12 per cent ‘will not have much impact on the age pension for many years’, and will save the budget only about 0.1 per cent of GDP in lower age pension spending in the second half of this century. In contrast, the extra super tax breaks from higher compulsory super will cost an average of 0.22 per cent of GDP ‘throughout this century’.<sup>49</sup>

49. Coates (2019a). While tax breaks measured on a revenue foregone basis don’t accord precisely with their true budgetary cost, these estimates strongly suggest

#### 1.4.5 Super is the wrong tool to ensure low-income Australians have adequate retirement incomes

Some commentators – particularly those associated with the superannuation sector – advocate for super to help low-income Australians, especially women, to avoid poverty in retirement.<sup>50</sup> Yet super is poorly placed to boost retirement incomes for low-income Australians at risk of poverty. Super is a contributory system: you only get out what you put in. If you earn low wages, you will have small compulsory super contributions.<sup>51</sup>

For people on low and modest incomes, the cost of increasing the Super Guarantee would hurt them during their working lives, when they're typically under even more financial stress, by reducing their take-home pay (Section 2.2 on page 26). In fact the poorest 30-to-40 per cent of workers can expect a pay rise in retirement, because the Age Pension and the income they get from compulsory retirement savings will be higher than the wage they receive during their working life (see Figure 4.5 on page 56).

Previous attempts to use super to help low-income earners have given money to workers who we predict might end up with poor outcomes in retirement. Targeting those who may have low lifetime incomes on the basis of their incomes in a given year will never be as well targeted as using the Age Pension to target support to people otherwise at risk of poverty in retirement. Grattan Institute's 2017 paper *What's the best way to close the gender gap in retirement incomes?* showed that about a quarter of the government's support to low-income earners via the

---

that higher compulsory super is unlikely to improve budgetary balances for the foreseeable future.

50. Such advocacy often takes the form of calls for higher compulsory super, or more generous super tax breaks for low-income earners. For example, see: KPMG (2020), *Women in Super* (2020) and Dawson (2020).

51. See Millane (2020) for a detailed discussion of the historical debates about the gender implications of contributory pension schemes such as superannuation.

Low-Income Superannuation Tax Offset (LISTO) leaks out to support the top half of households.<sup>52</sup> Similarly, while there is a principled case to be made for paying compulsory super contributions on government-funded Paid Parental Leave, doing so is unlikely to make a noticeable difference to the retirement incomes of many middle-income women, and will do nothing for older women who have already had children.<sup>53</sup>

Instead the income support system, specifically the Age Pension (and Rent Assistance for renting retirees), is the best tool to prevent poverty in retirement. Eligibility for the pension is based on the income and assets of the whole household, including those of a spouse. And by assessing eligibility at retirement, the Age Pension better targets retirement incomes to those who need it most. Measures to boost the value income support payments for retirees, especially for renters, are likely to materially reduce the number of Australians, including existing retirees, suffering poverty in retirement.

#### 1.4.6 Super is often a poor way to insure against the risks retirees face

Australians face a range of risks and uncertainties during their working lives, and in retirement, all of which can affect their living standards

---

52. Coates (2018, p. 23). Of course some top-up is fair for low-income earners, because super compels people to lock-up some of their earnings as savings until retirement. High-income earners are compensated for this delayed access since their contributions are typically taxed at only 15 per cent, rather than at their marginal rate of personal income tax. Without the LISTO, many low-income Australians would receive little or no compensation for locking up their money in super. But super top-ups should not be expanded.

53. Coates and Emslie (2018) showed that a woman earning the median Australian income, who took two stints of leave in her early 30s, would get an extra \$73 a year – less than \$1.50 a week from compulsory super on Paid Parental Leave – or a boost to her average retirement income of just 0.14 per cent. Most of the value of the extra super contributions would be clawed back by the Age Pension assets test. Low- and high-earning women who took the same leave would end up with retirement incomes up to 0.5 per cent higher.

in retirement. During working life these risks include the prospect of unemployment or ill-health, which reduce incomes and therefore accumulated super. In retirement these risks include inflation, market risk, longevity risk, the prospect of forced early retirement due to ill-health or caring responsibilities, and unexpected expenditures during retirement.

Some commentators suggest that compulsory super should be set at a level sufficient for Australians to self-insure against these risks, including involuntary early retirement.<sup>54</sup> Yet using super, and especially higher compulsory super, to insure Australians against these risks inevitably forces most Australians who don't experience these problems to over-save, in order for a minority to self-insure against the risks of living longer or retiring early.<sup>55</sup>

In practice, the Age Pension already supports people who live longer than expected and exhaust their private savings (i.e. it provides insurance against 'longevity risk'), and it supports people who earned comparatively little over their working life due to periods of unemployment, caring responsibilities, or working part-time. The pension also protects many (but not all) retirees from the risks of lower investment returns, since they will qualify for a larger part-pension if they have fewer assets.<sup>56</sup>

Other elements of Australia's income support system have traditionally provided substantial insurance against the financial risks arising

---

54. For example, see Mercer (2019, p. 7); ASFA (2020, pp. 13–14).

55. For example, Khemka and Warren (2020) estimates that the optimal rate of the Superannuation Guarantee increases by 5 percentage points if Australians are expected to self-insure against the risk of retiring five years earlier, by 3 percentage points if they live to 102 years, and by 1 percentage point if investment returns are 1 per cent lower than otherwise.

56. Retirees already on the maximum Age Pension are not insured against the risks of lower returns, but private savings will account for only a small portion of their total retirement income.

from acquiring a disability, caring for a family member or periods of unemployment. People who are forced to retire early, such as carers or those with a disability, can get the Carer Payment or the Disability Support Pension. People without work can get Newstart.<sup>57</sup>

Yet the adequacy of these social insurance arrangements has diminished over time. The eligibility requirements for the Disability Support Pension were tightened in 2012, to the detriment of many near-retirees with musculoskeletal health problems.<sup>58</sup> In 2009, about 12 per cent of 55-64 year-olds were on the Disability Support Pension. By 2017 that number had fallen to 9 per cent. The decline coincides with an increase in the number of older people on Newstart (Figure 1.3).

Newstart has also become woefully inadequate as a safety net for unemployed Australians. Unlike wages or pensions, Newstart has not increased in real terms in more than 20 years. While the Age Pension is indexed to wages, Newstart only increases with inflation. This has 'squeezed' the living standards of people living on Newstart relative to the rest of the population.<sup>59</sup> A typical single person on Newstart receives just \$39 a day, about 18 per cent of average (male) earnings. Households of working age receiving welfare payments – primarily Newstart – are under much more financial stress than households receiving other welfare payments (Figure 2.5 on page 28).

The Retirement Income Review should therefore carefully consider ensuring that all Australians who are unemployed or live with a

---

57. For example, the Henry Tax Review estimated that an average-income earner would have a replacement rate of 70 per cent if they retired early and received the Disability Support Pension, or 65 per cent if they received Newstart: Treasury (2009, p. 111). But note that in the 10 years since this analysis was published, Newstart has fallen relative to community living standards, because it is benchmarked to inflation only: Daley et al (2019, p. 38).

58. Parliamentary Budget Office (2018).

59. Daley et al (2019, Figure 2.6).

disability that prevents them from working have access to appropriate benefits – regardless of their age.

Wealthier retirees may not be fully-insured against the financial consequences of disability or caring responsibilities, since neither the Disability Support Pension nor the Carer Payment will fully replace their pre-retirement earnings. And high-income earners may have higher medical costs, because they are more likely to take out private health insurance and to be ineligible for a Commonwealth Seniors Health Card. Yet super policy, and especially compulsory super, should not be set to compel *everyone* to save more just so that a wealthier minority can self-insure against these risks. Doing so would force low- and middle-income earners to save more via super to insure against risks already covered by the income support system. Instead relaxing the Age Pension asset test taper may extend longevity risk cover to more higher-income earners in retirement (Chapter 5).

### 1.5 Superannuation and age-based tax breaks remain excessive

Superannuation tax breaks mean that less tax is paid on super savings than is paid on other forms of income. Super is taxed very concessionally compared to other savings vehicles (Figure 1.4 on the following page).<sup>60</sup> And tax rates on super savings are often even lower than shown in Figure 1.4 on the next page, which doesn't take into account the fact that earnings on super attract no tax after retirement.

Three previous Grattan Institute reports – *Super tax targeting* in 2015,<sup>61</sup> *A better super system* in 2016,<sup>62</sup> and *What's the best way to close the gender gap in retirement incomes?* in 2018<sup>63</sup> – recommended that tax

60. For a detailed discussion of the tax treatment of superannuation see: Daley et al (2015, pp. 13–15).

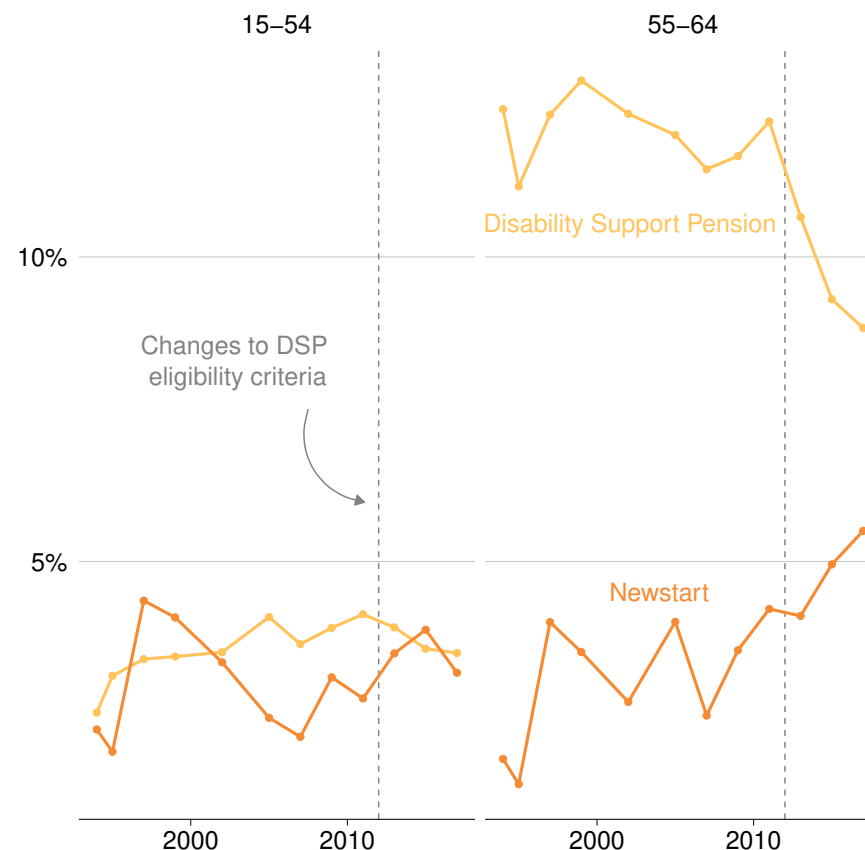
61. Ibid.

62. Daley et al (2016b).

63. Coates (2018).

**Figure 1.3: Changes to the Disability Support Pension have hurt people near retirement the most**

Share of Australians on each payment type by age group



Note: Estimates from ABS Survey of Income and Housing.

Source: Grattan analysis of ABS (various years).

breaks for super contributions and earnings should be targeted more tightly at their policy purpose. Half the benefits flow to the wealthiest 20 per cent of households, who already have enough resources to fund their own retirement, are unlikely to qualify for an Age Pension, and therefore do not need government support.<sup>64</sup>

Treasury projections in the consultation paper to the Retirement Income Review show that the lifetime value of super tax breaks to high-income earners remains much higher than the value of the Age Pension for low-income earners, even after recent reforms.<sup>65</sup> Although the benchmark adopted by the consultation paper for measuring super tax breaks has been contested, a comprehensive income tax benchmark remains the most appropriate for assessing the budgetary cost and distribution of super tax breaks (Box 1 on the following page). These projections are likely to be conservative since they ignore post-tax super contributions, which are largely made by high-income earners, boosting the super earnings tax breaks they receive.<sup>66</sup>

Some commentators argue that super should be taxed consistent with an expenditure tax benchmark where the return to saving is tax-exempt,<sup>67</sup> and suggest that the current tax treatment approximates an expenditure tax treatment over the lifecycle.<sup>68</sup>

Yet the case for an expenditure tax treatment of savings is contested. For example, the UK's Mirrlees tax review concluded that to avoid bias

64. Daley et al (2015).

65. Australian Government (2019, Figure 4).

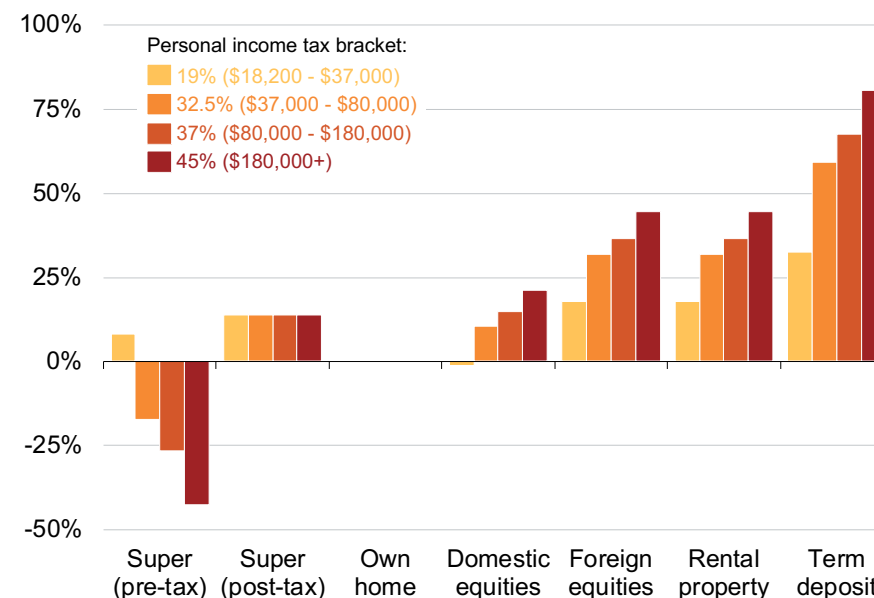
66. Different assumptions about life expectancy, drawdown and discount rates can generate much higher estimates of the lifetime benefits of super. Assuming a lower discount rate than 5 per cent boosts the net present value of both government support provided to low-income earners via the Age Pension, and earnings tax breaks for high-income earners.

67. For example, see: Keating and Podger (2020) and Carling (2020).

68. Keating and Podger (2020, p. 10). Although this conclusion is likely to depend on the assumptions adopted.

**Figure 1.4: Tax rates on earnings from savings through superannuation are lower than on other savings vehicles**

Real effective marginal tax rate on long-term savings vehicles, per cent



Notes: Effective marginal tax rates are presented relative to a pre-paid expenditure tax (i.e. TEE) benchmark. This approach is consistent with the approach to calculating real effective marginal tax rate rates adopted in the Henry Tax Review. For further details of the approach see: Daley et al (2015, Figure 2.3).

Source: Daley et al (ibid, Figure 2.3).



against savings, the normal return to savings should be untaxed.<sup>69</sup> Yet other recent analyses have concluded that even the normal return to savings should be taxed, albeit at a lower tax rate than other income.<sup>70</sup>

While taxes on the income from savings theoretically reduce the incentives to save, there is little evidence that *actual* savings rates are much affected by tax rates. Most studies have found that tax incentives for retirement savings have little effect on the total amount saved.<sup>71</sup> Arguably, the fact that people tend to save almost the same amount irrespective of the tax rate on savings means that savings should be taxed more. After all, if government collects less tax revenue from superannuation it must choose between reducing expenditures, raising other more economically-distorting taxes, or borrowing to fund the same provision of public services.

### 1.6 Too few Australians draw down on their savings in retirement

Most retirees could afford to spend substantially more than they do, and choose not to do so. Not only do most retirees not draw down on their savings, many are net savers through much of their retirement. Most retirees never spend a large part of the savings that they have on

69. Mirrlees et al (2011, p. 284). Taxes on the income from savings reduce the incentives to save. By taxing the returns to saving, income taxes make future consumption more 'expensive', since people will have less than otherwise to consume in the future if they save a dollar today. By definition, taxes on savings lead to consumption choices that differ from the choices people would prefer to make in the absence of taxation.

70. Banks and Diamond (2010). The authors point to evidence of a positive correlation between individuals' earnings capacity and their willingness and ability to smooth consumption over their lifetime by savings, as well as greater uncertainty about lifetime earnings for those with low earning capacity.

71. Instead those with higher incomes, and older savers, tend to switch their savings into whichever investment vehicle pays the least tax. Daley et al (2015, Figure 2.4).

#### Box 1: Measuring the value and cost of super tax breaks

The value of superannuation tax breaks, and their distribution among taxpayers, is traditionally measured against a comprehensive income tax ('TTE') benchmark.<sup>a</sup> Some argue that an expenditure tax approach – where no tax is paid on income from savings – is a desirable structural feature of the tax system, and so the cost of super tax breaks should be measured against this benchmark.<sup>b</sup> However, arguments about the best policy for taxing savings should not be confused with questions about how to measure their cost. The income tax benchmark remains the best measure of how much tax breaks cost. In the absence of super, savings would be taxed under this regime.<sup>c</sup>

Treasury has estimated that Australia's superannuation tax breaks *still* cost \$10 billion in foregone tax revenue when compared against a pre-paid expenditure tax (TEE) benchmark, which is recognised as a generous tax treatment for taxing savings.<sup>d</sup>

Treasury now also estimates the 'revenue gain' from abolishing super tax breaks, which takes into account behavioural change. If superannuation tax breaks were abolished, some people would move super savings into vehicles that pay less tax than marginal income tax rates. However, the revenue loss from tax breaks on super contributions is largely unaffected by behaviour change: there aren't many ways outside of super for taxpayers to reduce the tax payable on principal invested.

- a. Treasury (2020) estimates the 'tax expenditures' from super tax breaks by comparing the tax paid on contributions and earnings against the tax that would be payable if they were taxed at marginal rates of income tax.
- b. Carling (2020) and Keating and Podger (2020).
- c. Daley et al (2015, p. 25).
- d. Treasury (2013b). See also: Treasury (2013a, p. 15).

the day they retire. Many retirees seem reluctant to draw down on their capital, and instead live solely on the income their savings generate.

Grattan's 2018 report, *Money in retirement*, showed that retirees typically maintain their non-housing wealth through their retirement.<sup>72</sup> These findings are consistent with a range of other studies that also show that many pensioners don't draw down on their retirement savings. Australian Government data show that less than half of all pensioners draw down on their assets, and more than 40 per cent are net savers.<sup>73</sup> A recent study found that at death the median pensioner still had 90 per cent of their wealth as first observed.<sup>74</sup> Another study found that many Australian retired households – pensioners or otherwise – do not spend down much of their financial wealth as they age.<sup>75</sup> And the Productivity Commission found that people aged 75-79 had a higher net worth on average than people aged 50-54.<sup>76</sup>

It is difficult to disentangle the many reasons retirees don't spend down their savings. Some retirees might be concerned about longevity risk. But the effect of longevity risk on retirees' savings behaviour appears overstated.<sup>77</sup> One survey of people nearing retirement found that 'enjoying the best possible lifestyle while I am able to' is the number

one concern when considering spending in retirement.<sup>78</sup> The Age Pension provides close to full insurance against longevity risk for low-income retirees, and substantial, albeit incomplete, insurance for medium-income retirees, who can expect to receive at least a part-pension for most of their retirement years. Yet retirees of all incomes tend to save more as they age.<sup>79</sup> And demand for financial products that insure against longevity risk – such as annuities – remains very low in Australia.<sup>80</sup>

Other motives, such as concern about potential future health and aged care costs, appear to be important drivers of precautionary saving by retirees.<sup>81</sup> In the US and UK, where many must fund their own aged care, retirees do not draw down much on their wealth.<sup>82</sup> In contrast, retirees draw down on retirement savings much faster in countries with low out-of-pocket medical and aged care costs, such as Sweden, Norway, Denmark, Germany, and Austria, where the median person aged 86-90 has only 21 per cent of the net wealth of younger retirees.<sup>83</sup>

Australia's aged care system exacerbates these issues since accommodation costs in residential aged care are mostly funded by

---

72. Daley et al (2018b, Figure 3.8). This is true for high- and low-wealth households: the bottom third by wealth of the cohort born in 1930-34 increased their non-housing wealth from \$68,000 in 2005 to \$122,000 in 2015.

73. Morrison (2015a). About 45 per cent of pensioners were net savers in the first five years of receiving the Age Pension, while 43 per cent drew down on their savings. In the final five years of receiving the pension, 43 per cent of pensioners were still net savers, while just a third drew down on their savings.

74. Asher et al (2017) find that age pensioners preserve financial and residential wealth and leave substantial bequests. While younger, wealthier retirees tend to draw down on their savings, and some households do draw down heavily, particularly after a divorce, most pensioners are net savers later in life.

75. Spicer et al (2015).

76. Productivity Commission (2015a).

77. For example, Alonso-Garcia et al (2017b) find that actual exposure to longevity risks does not affect motives to spend and save in retirement.

78. Participants in this study also ranked 'To ensure my savings last my entire lifetime' as an important factor in superannuation spending, but did not separate out these longevity risks from aged care costs. Hobman and Reeson (2018).

79. Grattan analysis of ABS (multiple years-c).

80. Productivity Commission (2015a, p. 97). Low take-up of annuities reflects a variety of factors: annuities are less flexible than account-based pensions, especially in dealing with unexpected health costs; many retirees want to provide a bequest; annuities have been unfavourably taxed until recently; and the Age Pension is a viable alternative for many, particularly late in retirement.

81. Alonso-Garcia et al (2017a).

82. Love et al (2009); Banks et al (1998); Van Ooijen et al (2015). While the UK publicly funds health insurance via the National Health Service, not all aged-care costs are covered (Nakajima and Telyukova (2013)).

83. Nakajima and Telyukova (ibid). More recent research on draw down behaviour in the Netherlands finds slow drawdown of wealth during retirement. Alonso-Garcia et al (2017a).

aged care bonds.<sup>84</sup> These bonds are likely to be particularly salient to retirees, and often act as a de-facto guaranteed bequest since aged care facilities typically return the value of the bond to the estate when the aged care resident dies. Recent reforms have reduced the share of accommodation costs paid by bonds.<sup>85</sup> This may reduce retirees' motives in future to save in retirement. In addition, Australia's legislated minimum draw down rates from superannuation in retirement may 'anchor' retirees' expectations about how much they should spend.<sup>86</sup> At these rates, most retirees would leave very large legacies.

## 1.7 Housing is an increasingly unstable pillar

Most Australians own their own homes – both in retirement and beforehand. Home ownership has traditionally been a substantial pillar of Australia's retirement incomes system. But worsening housing affordability and lower rates of home-ownership now present big challenges to the retirement incomes system.

### 1.7.1 Fewer retirees will own a home in future

Owning a home increasingly depends on who your parents are, a big change from 35 years ago when home-ownership rates were high for

84. In 2015-16, 52 per cent of all bond-paying new residents paid by lump sum only, while 22 per cent paid by periodic payments, and 26 per cent by a combination of the two (Tune (2017, p. 98)).

85. Ibid (p. 97).

86. Retirees must pay tax on the earnings of a superannuation fund if they do not withdraw at least the legislated minimum each year. Hobman and Reeson (2018) find that people aged 55 to 74 who were advised of minimum drawdown rates reduced their intended drawdown from superannuation by 1 percentage point. In contrast, they did not reduce their intended drawdown when researchers focused them on the value of precautionary savings, or presented them with a scenario with children who were potential recipients of a bequest. Alonso-Garcia et al (2017b) use an online experiment of retirement saving and spending decisions in Australia and the Netherlands to show that drawdown behaviour is influenced by legislated minimum drawdown rates for account-based pensions.

all levels of income.<sup>87</sup> Home-ownership is falling among younger and lower-income Australians. As these cohorts age, it is likely that fewer older Australians will own their own home. Between 1981 and 2016, home-ownership rates among 25-34 year-olds fell from more than 60 per cent to 45 per cent, and to 22 per cent for the bottom quintile of income earners.<sup>88</sup> Home-ownership has also fallen for middle-age Australians. Grattan has previously projected that the share of over-65s who own their home could fall from 76 per cent today to 70 per cent by 2036, 64 per cent by 2046, and 57 per cent by 2056.<sup>89</sup> Updated projections will be released shortly to better account for temporary migrants who don't own homes but are less likely to remain in Australia, and to sensitivity-test for home-ownership catch-up among younger cohorts as they approach retirement.<sup>90</sup>

Falling home ownership is likely to increase inequality of incomes in retirement. Future retirees who rent are still likely to replace their pre-retirement living standards (Chapter 4). But more retirees are likely to be financially stressed if they rent, or to suffer poverty, particularly if Rent Assistance does not keep pace with future increases in rents paid by low-income renters (Chapter 5).

Fewer retirees in future will be in social housing. In the past, more than half of retirees who rented did so from housing authorities. In recent years that proportion has fallen to less than 40 per cent.<sup>91</sup> Just 11 per cent of *all* households that rent are in public and social housing.<sup>92</sup>

87. Daley et al (2018a, Figure 4.3).

88. Ibid (p. 70).

89. Grattan analysis of ABS (2006), ABS (2016) and ABS (2013). Assumes home-ownership rates of younger cohorts continue to rise in line with past increases as households age, but recognising that a smaller share of Australians aged 25-44 own their homes today than in the past. We project home-ownership rates to fall by 18 percentage points over the 40 years to 2056.

90. See McDonald (2019) and Chomik and Yan (2019) for discussion of these factors.

91. Eslake (2017, p. 13).

92. Grattan analysis of ABS (2017a).

Social housing subsidises housing more than Commonwealth Rent Assistance.<sup>93</sup> So retirees who don't own their home are more likely to feel the pinch in future. Measures to boost the incomes of retirees should focus on those who rent privately.<sup>94</sup>

### 1.7.2 Australians are spending more of their *lifetime* incomes on housing

Australians who purchase a home are spending more of their lifetime income to accumulate more valuable homes, either by paying down larger mortgages during their working lives, or using some of their retirement savings to pay off any remaining mortgage at retirement.<sup>95</sup>

House prices have outstripped growth in incomes. Median prices have increased from about four times median incomes in the early 1990s, to five times in the early 2000s, to more than seven today (and more than eight in Sydney) (Figure 1.5).<sup>96</sup> While rising house prices may be offset in part by lower interest rates, younger Australians are typically spending about 25 per cent more of their disposable income servicing their mortgage, compared to equivalent home purchasers 30 years ago.<sup>97</sup>

These trends drive the rising share of Australians approaching retirement with a mortgage, as well as using their super to pay off the balance at retirement.<sup>98</sup> Some may argue that the fact an increasing

number of Australians are retiring with larger mortgages means Australians should be compelled to save more to preserve their living standards in retirement. Yet when housing is accounting for a larger share of Australians' *lifetime* incomes there is no reason to expect higher housing costs to only affect living standards in retirement, not beforehand. This would be inconsistent with the objective of lifetime consumption smoothing. Unless Australians are willing to draw on their home equity in retirement, rising house prices mean Australians will be left with lower living standards both while working and in retirement.

Yet few retirees draw down the value of their home to fund their retirement, either by downsizing,<sup>99</sup> or by borrowing against home equity. That will need to change. Government policy should continue to encourage retirees to draw down on the equity of their home to help fund their retirement. The recent expansion of the Pension Loans Scheme is a step in the right direction.<sup>100</sup>

The rest of this paper assesses the adequacy of Australians' retirement incomes, and shows what policy changes are needed to ensure all Australians enjoy a comfortable retirement.

---

93. For example, people living in public housing in Victoria are about \$2,500 per household better off than if they paid market rent and received Commonwealth Rent Assistance (Productivity Commission (2018a, p. 177)).

94. Making housing more affordable will help. See Daley et al (2018a).

95. Daley et al (ibid, Figure 4.9).

96. Daley et al (ibid, p. 16).

97. A homebuyer purchasing the average house in 1990 spent less of their income paying it off as the years went by given rising wages and falling interest rates. A home-buyer today is likely to continue to spend a large proportion of their income on the mortgage for many years (Daley et al (ibid, Figure 2.10)).

98. Coates (2019b, p. 19).

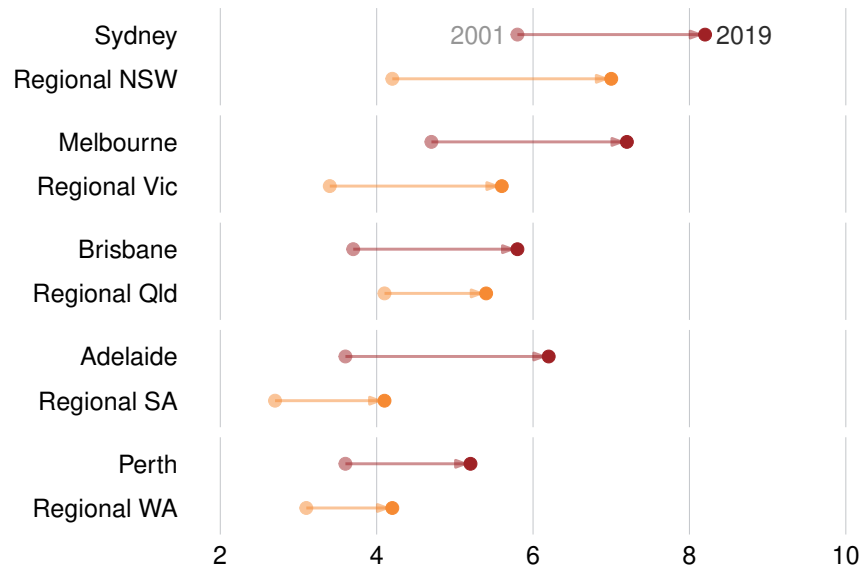
---

99. Daley and Coates (2017a).

100. The Pension Loans Scheme provides an additional income stream for pensioners by allowing them to borrow against the value of their homes. The loan must be repaid upon the sale of the home. Productivity Commission (2015c, p. 28) and Treasury (2018b, p. 175).

**Figure 1.5: Rising house prices mean Australians are spending more of their lifetime income paying off the home**

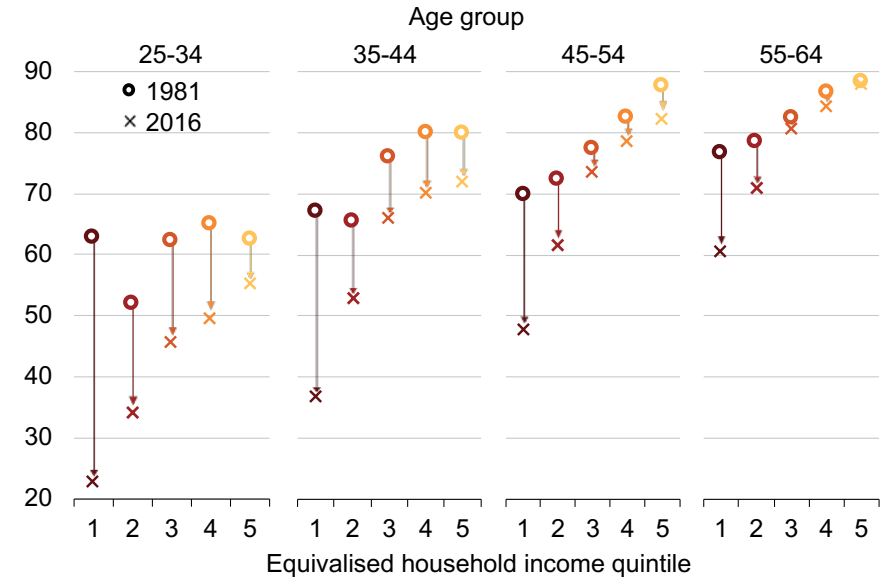
Ratio of median dwelling price to median annual gross household income



Source: Coates (2019b, Figure 17).

**Figure 1.6: Home ownership is falling particularly fast for younger, poorer Australians**

Home-ownership percentage, by age and income



Source: Daley et al (2018a, Figure 4.3).

## 2 Does Australia's retirement incomes system prevent poverty in retirement?

As outlined in Chapter 1, the first priority of Australia's retirement incomes system should be to alleviate poverty. The system should provide a minimum, adequate standard of living for people unable to fund their own retirement. The income support system, specifically the Age Pension (and Rent Assistance for renting retirees), is the best tool to achieve this objective.

This chapter canvasses the various approaches to evaluating whether retirees are suffering poverty in retirement. And it examines whether the Age Pension (and Rent Assistance) is currently sufficient.

Most ways of measuring poverty suggest that the Age Pension provides a modest, but adequate, level of income in retirement for people with little wealth. While some measures suggest old-age poverty is high in Australia, poverty is much lower once high rates of home ownership and the considerable wealth of many asset-rich, income-poor retirees are taken into account. These findings accord with the very low rates of financial stress reported by retired Australians, including home-owning retirees on the maximum Age Pension.

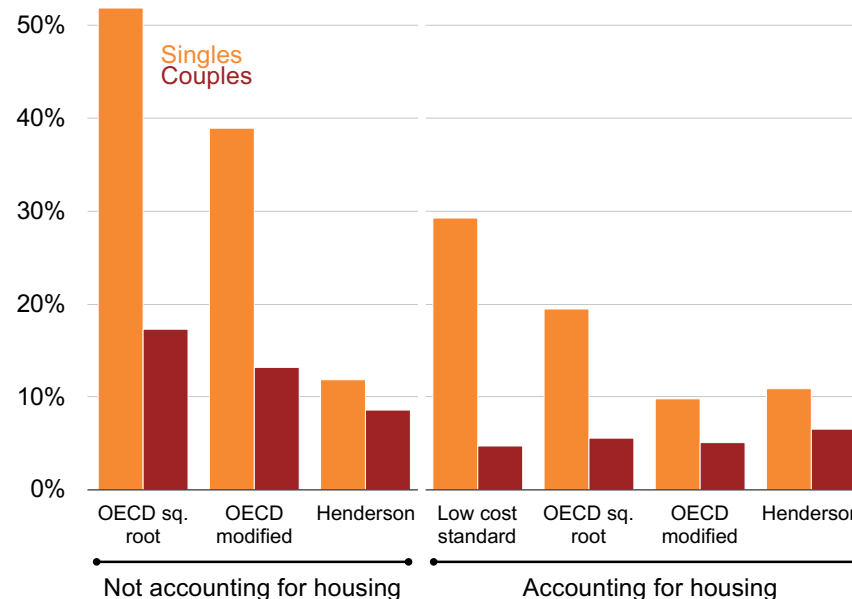
However, retirees who rent are suffering high rates of poverty and financial stress, as are younger renters who are likely to rent in retirement in the future. A growing number of older Australians are at risk of becoming homeless, particularly older women. These findings suggest that boosting Rent Assistance should be the priority to ensure Australians do not suffer poverty in retirement.

### 2.1 There are a number of ways to measure poverty in retirement

Minimum budget standards measure whether older Australians are living in poverty. Budget standards reflect community perceptions of

**Figure 2.1: Poverty rates in Australia vary a lot depending on the measure chosen**

Share of 65+ households in poverty by benchmark adopted, 2017-18



Notes: OECD poverty lines measured as half the median equivalised disposable income. After feedback from ACOSS this figure now excludes people with unincorporated business income, 0 or negative income, and is weighted using population weights multiplied by the number of people in each household. See Coates and Chen (2019) for an explanation of the differences between OECD poverty standards. Original Low Cost Budget Standard (LCBS) updated to 2018\$ using growth in total adult earnings. Private renter LCBS created consistent with Saunders et al (1998).

Source: Grattan analysis of ABS (2019a), Melbourne Institute (2019) and Saunders et al (1998).

what constitutes poverty.<sup>101</sup> Relative measures of income poverty, such as those produced by the OECD, evaluate poverty relative to the living standards enjoyed by Australians as a whole. The full Age Pension, with related supplements, is above most minimum budget standards according to most definitions.

### 2.1.1 Low Cost Budget Standards

Low Cost Budget Standards calculate the cost of a list of products that every Australian ought to be able to buy. The most prominent minimum budget standards in Australia are the Low Cost Budget Standards produced by the UNSW Social Policy Research Centre for Age Pension households.<sup>102</sup> These standards are designed to ‘allow social and economic participation consistent with community standards and [to] enable the individual to fulfil community expectations in the workplace, at home and in the community’.<sup>103</sup>

Low Cost Budget Standards have been defined for single and couple pensioner households who are homeowners, public renters, or private renters. The maximum Age Pension, supplements, and Rent Assistance (applicable only to private renters) are greater than the Low Cost Budget Standards for all types of retired households (Figure 2.3 on page 26).<sup>104</sup>

---

101. Harmer (2009, p. xiii).

102. The Commonwealth Department of Social Security (DSS) commissioned this work. See Saunders et al (1998). More recently, Saunders and Bedford (2017) developed a new set of ‘healthy living’ standards for unemployed and low-income working-age households, but following consultation with the authors these standards were deemed to not be appropriate for retirees.

103. Saunders et al (1998, p. v).

104. Daley et al (2018b, p. 37).

However, rental costs vary substantially depending on location. Many private renters in Sydney and Melbourne are likely to have living standards below the Low Cost Budget Standards.<sup>105</sup>

### 2.1.2 The Henderson Poverty Line

Another minimum standard often used in Australia is the Henderson Poverty Line, established by the Henderson poverty inquiry in 1973.<sup>106</sup> It set a minimum standard of disposable income for a family with two adults and two dependent children. Based on this standard, it also set benchmarks for other family types. The benchmark for a couple with the head not in the workforce was set in 1973 at \$38.84 per week. This has since been updated to maintain parity with growth in per capita household disposable income. In June 2019 the benchmark for a couple with the head not in the workforce was set at \$608.53 per week (or \$31,643 per year).<sup>107</sup> The maximum rate of the Age Pension remains above the Henderson Poverty Line for both single and couple retirees.

But the Henderson Poverty Line is an imperfect measure of a minimum standard of living, particularly for pensioners. It ignores accumulated wealth, which tends to be much higher for low-income pensioners than low-income working-age households. If part-pensioners do not draw down their wealth, they may be regarded as being in poverty under this standard, even though they have significant financial assets available to spend.

The standard also ignores the fact that four in five Australian households over the age of 65 own their own homes.<sup>108</sup> Even among

---

105. Rental stress tends to be higher, and is increasing faster, for low-income households in capital cities: Daley et al (2018a, pp. 26–27).

106. Melbourne Institute (2019).

107. Melbourne Institute (ibid). Includes housing costs.

108. Daley et al (2018a, p. 71).

the lowest-income quintile of seniors, home-ownership rates are above 70 per cent.<sup>109</sup> Home ownership provides them with big benefits: they have somewhere to live without paying rent, and they are insulated from rising housing costs. The benefits that a house provides to its owner-occupier – which economists call imputed rents – are worth more than \$21,000 a year to the median household aged 65 or older, roughly the same value as the maximum-rate Age Pension.<sup>110</sup>

### 2.1.3 OECD income poverty

Another common measure of poverty in retirement in Australia is the proportion of households with disposable incomes less than half of the median disposable income of all Australians.

Some advocate increasing the Age Pension<sup>111</sup> on the basis of OECD research using this measure, which finds that 26 per cent of Australians aged 65 and older suffered income poverty in 2013, compared to 13 per cent across all OECD countries.<sup>112</sup>

But there are a number of problems with the OECD measure. It does not take into account drawdowns on savings outside super, and does not adequately account for housing costs. And like other poverty benchmarks, small changes in income can produce radically different rates of poverty.

Old-age poverty in Australia under the OECD’s relative measure is extremely volatile from year to year, because the Australian Age Pension sits right on the edge of the OECD’s poverty benchmark. For example, old-age poverty in Australia apparently fell sharply from

109. Grattan analysis of ABS (2016). Home-ownership rates are above 80 per cent for all other income quintiles of over-65 households, rising to 90 per cent among the wealthiest 20 per cent.

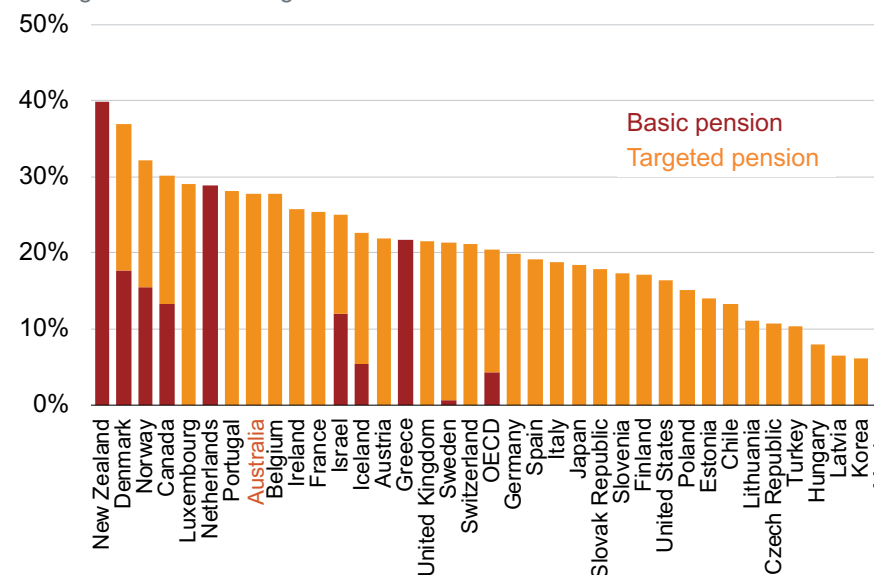
110. Grattan analysis of ABS (2019a).

111. W. Smith and Hetherington (2016).

112. OECD (2017a).

**Figure 2.2: Australia’s Age Pension is higher than the safety net benefits in many other OECD countries**

Value of basic and targeted pension benefits, per cent of economy-wide average full-time earnings



Notes: ‘Basic pensions’ include benefits paid to everyone irrespective of contributions, but often based on residence, as well as benefits that are paid based on years of contributions, but not related to past earnings. Eligibility for ‘Targeted pensions’ requires meeting some other criteria. In these plans, the value of the benefit depends on income from other sources and possibly also assets. The OECD calculates average earnings using Average Full-time Adult Gross Earnings, before deductions of any kind (including personal income taxes and social security contributions), and including overtime pay and other cash supplements paid to the employee. The corresponding metric from the ABS is Full Time Adult Total Earnings. For Australia, Average Full-time Adult Gross Earnings were \$88,145 in 2019.

Sources: ABS (2019c) and OECD (2019, Figure 4.2).



22 per cent in 2011 to 12 per cent in 2018.<sup>113</sup> But the big apparent shift merely reflected the maximum rate of the Age Pension (including related supplements) oscillating around the benchmark of 50 per cent of median incomes.<sup>114</sup> The minimum pension in many other countries is much lower (Figure 2.2 on the previous page) – and in some is available only to people who have been employed for most of the time while they were of working age. As a result, Australia has far fewer retirees in severe poverty whose income is much less than the OECD's benchmarks.<sup>115</sup>

This clustering close to the benchmark also means that outcomes on the measure depend a lot on somewhat arbitrary definitions. For example, the apparent poverty rate in 2017-18 changes from 14 per cent to 25 per cent,<sup>116</sup> depending on how households with different family sizes are compared.<sup>117</sup>

Even then, the income poverty measure can be misleading. The 14 per cent of senior Australians classified as living in poverty on the ABS preferred definition are often people of significant means who are ineligible to receive a maximum-rate Age Pension and whose

drawdowns of existing savings are not counted as income.<sup>118</sup> More than half of over-65s classified as living in poverty in 2017-18 based on the ABS preferred definition were among the wealthiest half of all retirees.<sup>119</sup>

Like the Henderson Poverty Line, a relative poverty measure based on disposable incomes tends to overstate poverty in old age because it ignores the fact that housing costs are low for the many Australian retirees who own their own homes.<sup>120</sup> One study found that Australia's old-age poverty rate in 2015-16 was 24 per cent before housing costs (the third worst in the OECD), but only 10-to-14 per cent after housing costs (around the OECD average).<sup>121</sup> Similarly, the Harmer Pension Review found that while 47 per cent of single people aged over 65 in 2005-06 were living in 'income poverty', just 7 per cent were living in 'income poverty' after taking account of housing costs.<sup>122</sup>

Consequently, both the Henderson Poverty Line and the OECD measures of relative poverty are imperfect guides to the adequacy of retirement incomes for low-income Australians. As the Harmer Pension Review concluded, neither of these measures is 'a particularly robust measure of well-being'.<sup>123</sup>

---

113. ACOSS (2016) and ACOSS (2018a, p. 21). ACOSS uses the ABS preferred measure of equivalisation: see Footnote 117 on this page.

114. OECD (2017b).

115. Analysis by Professor Peter Whiteford of ANU found that Australia has a large proportion of people identified as in poverty who are just below the OECD relative poverty line, whereas poor retirees in other countries are more likely to be far below the line. See: CSRI (2016).

116. Grattan analysis of ABS (2019a).

117. According to the ABS preferred definition of equivalisation, previously used by the OECD, households are 'equivalent' if they expend 0.5 times more for every extra adult and 0.3 times more for every child under 15 than a single household. According to the new OECD definition, households are 'equivalent' if a household of  $n$  members expends  $\sqrt{n}$  times as much as a single household. The choice of benchmark relative to median incomes is also arbitrary, but the most commonly used benchmark is 50 per cent of equivalised median disposable income.

---

118. Drawdowns on assets other than super are not captured as income by the ABS. Earnings (i.e. interest and dividends) on these assets are included in the definition of income, but many retirees earn low returns on their assets, especially when held in term deposits. Drawdowns on super *are* counted as income – an historical hangover from a time when most super was paid out as defined benefit pensions.

119. Grattan analysis of ABS (2019a). Results are similar when ranking retirees by net wealth or financial wealth only (excluding owner-occupied housing, vehicles, or personal effects). See also: Coates and Chen (2019).

120. For a similar conclusion, see Chomik and Piggott (2016, p. 18).

121. Chomik et al (2018, p. 23), using the new OECD measure.

122. Harmer (2009, p. 35).

123. *Ibid* (p. 34).

There are several ways of setting the threshold for an adequate income. The Age Pension, together with other payments that retirees can receive, exceeds most of these adequacy thresholds (Figure 2.3). While some measures suggest old-age poverty is high in Australia, poverty is much lower once high rates of home ownership and the considerable wealth of many asset-rich, income-poor retirees are taken into account (Figure 2.3). Similarly, the Harmer Pension Review concluded that the maximum rate of the Age Pension is ‘broadly adequate’.<sup>124</sup> The Henry Review also concluded that the Age Pension provides a sufficient safety net for living standards in retirement.<sup>125</sup>

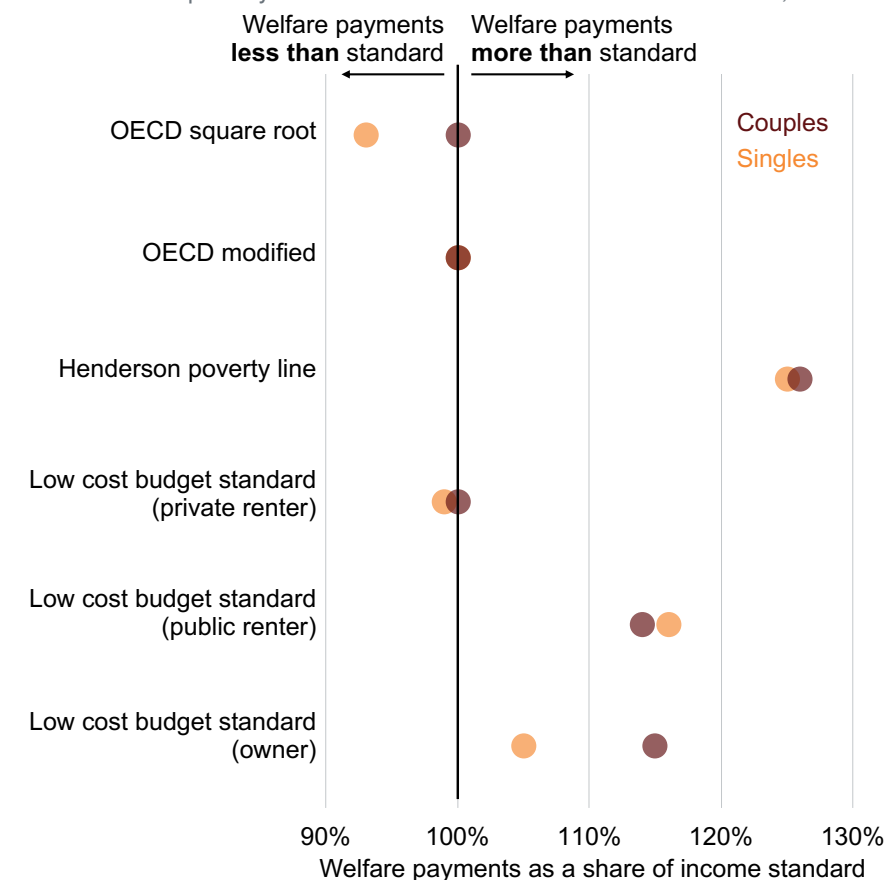
These findings accord with the very low rates of financial stress and high degree of financial satisfaction reported by retired Australians, especially those who own their own homes.<sup>126</sup> In fact, rates of financial stress among retirees whose main source of income is the Age Pension are lower than for working-age Australians in paid work (Figure 4.1 on page 53).

## 2.2 Renters are at much greater risk of poverty in retirement

While few pensioners overall appear to be suffering financial stress, many pensioners in private rental housing are struggling. Rates of financial stress among renting pensioners are much higher than among homeowners (Figure 2.5). This is not surprising – renters typically have lower incomes. Rental stress has increased slightly for

**Figure 2.3: The Age Pension appears adequate compared to almost all poverty benchmarks**

Standards and poverty lines relative to Pension and Rent Assistance, 2017-18



Notes: See notes to Figure 2.1 on page 22 for an explanation of low cost poverty standards and OECD poverty benchmarks. For owner healthy living standard and OECD benchmarks, the relevant welfare payment is Pension + supplements. For renter healthy living standard and the Henderson Poverty Line, the relevant welfare payment also includes Commonwealth Rent Assistance.

Source: Grattan analysis of ABS (2019a), ABS (2019c), Melbourne Institute (2019), Services Australia (2020a), Services Australia (2020b) and Saunders et al (1998).

124. The Harmer Pension Review found that pensioner couples had incomes above the stipulated Low Cost Budget Standards for all three tenure types of households in 2008 (homeowners, private renters, and public renters). But single age-pensioners had incomes below the budget standards, with the exception of single public renters whose pension (including the Seniors bonus) was just above the budget standard (Harmer (2009, pp. 33–34)). Partly in response, the maximum payment for singles was increased by \$30 a week in September 2009 (Daniels (2011)).

125. Henry (2009a, p. 1).

126. Daley et al (2018b, pp. 26–27).

renting pensioner households, particularly in the capital cities.<sup>127</sup> The proportion of renting pensioner households spending more than 30 per cent of their gross income on rent increased from 40 per cent in 2007-08 to 44 per cent in 2017-18.<sup>128</sup>

A more reliable measure of poverty for retirees, especially renters, is income poverty *after housing*. This is the proportion of households that have less than half the median disposable income once housing is taken into account. To account for housing, this measure uses a standard ABS estimate of the value home-owners get from not having to pay rent. The measure raises the income of home-owners significantly, while exposing the tough economic circumstances faced by many renters.<sup>129</sup>

On this measure, about 10 per cent of Australians aged 65 and older live in poverty after taking account of their housing costs, but results vary wildly by housing tenure. About 60 per cent of retired Australians who rent and live alone are in poverty after housing costs. In contrast to less than 10 per cent of retired homeowners without a mortgage (Figure 2.4).<sup>130</sup>

The National Shelter Rental Affordability Index found that private rentals were ‘severely’ or ‘extremely’ unaffordable across all of Sydney

127. Daley et al (2018a, pp. 26–27).

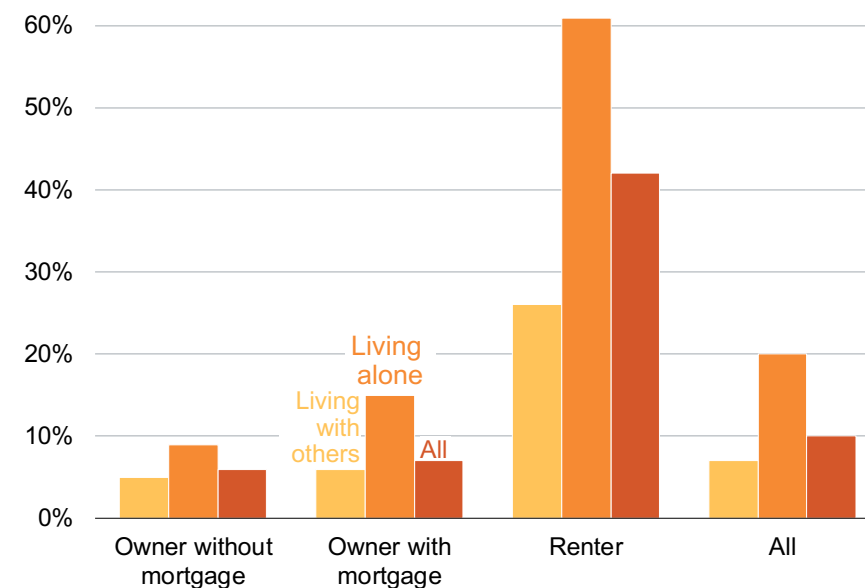
128. Includes pensioners renting from state housing agencies (ABS 2019a).

129. To calculate the after-housing costs poverty threshold, ‘imputed rents’ (the estimated market rent of an owner-occupied home) are first added to the incomes of all homeowners. Half of the median of this broader income measure is then taken, which gives the poverty threshold. Households with incomes, including imputed rents where applicable, of less than this threshold are classed as being in after-housing costs relative income poverty.

130. Of course this measure is not perfect either. Of the 10 per cent of Australians aged over 65 who are in poverty after housing, 38 per cent of singles and 53 per cent of couples are not among the poorest 40 per cent of that age group by net wealth. ABS (2019a).

**Figure 2.4: Nearly half of renting pensioners are in poverty after housing costs are taken into account**

Old-age poverty rate after including imputed rent, ages 65+, 2017-18



Note: Poverty rate is the proportion of people aged 65+ who have equivalised disposable household income (plus imputed rent) below 50 per cent of the population-wide median.

Source: Chomik and Yan (2019, p. 48).

and Melbourne, for single or couple pensioners.<sup>131</sup> In most cases the pensioner couple would need to spend at least 38 per cent of their total income on rent to secure housing in Sydney or Melbourne, and a single pensioner would typically need to spend at least 60 per cent.

Rental stress among pensioners in the private rental market has worsened for a number of reasons. First, Commonwealth Rent Assistance, which provides financial support to low-income renters, is indexed to CPI, and so it fell behind private market rents which rose roughly in line with wages.<sup>132</sup> Second, rents actually paid by low-income earners grew significantly faster than average rents.<sup>133</sup> Third, the stock of lower-rent social housing did not keep pace with population growth.<sup>134</sup>

If current trends continue, a greater proportion of people reaching retirement age will be renting – and more of them will depend on the private rental market rather than social and public housing. More households are under rental stress,<sup>135</sup> and these rates are likely to rise among retirees in future as fewer Australians own their homes (Figure 1.6 on page 21). Rates of homelessness are already on the rise among older Australians, including older women.<sup>136</sup>

131. Based on a single pensioner earning \$27,856 a year seeking a one-bedroom dwelling, and a pensioner couple earning \$47,970 a year seeking a two-bedroom dwelling. Housing is deemed 'unaffordable' where rents exceed 30 per cent of total income, 'severely unaffordable' where rents exceed 38 per cent of total income, and 'extremely unaffordable' where rents exceed 60 per cent of total income: SGS Economics & Planning et al (2019).

132. Daley et al (2018a, p. 25).

133. Productivity Commission (2018b, figure 6.1); and Daley et al (2018b, p. 76).

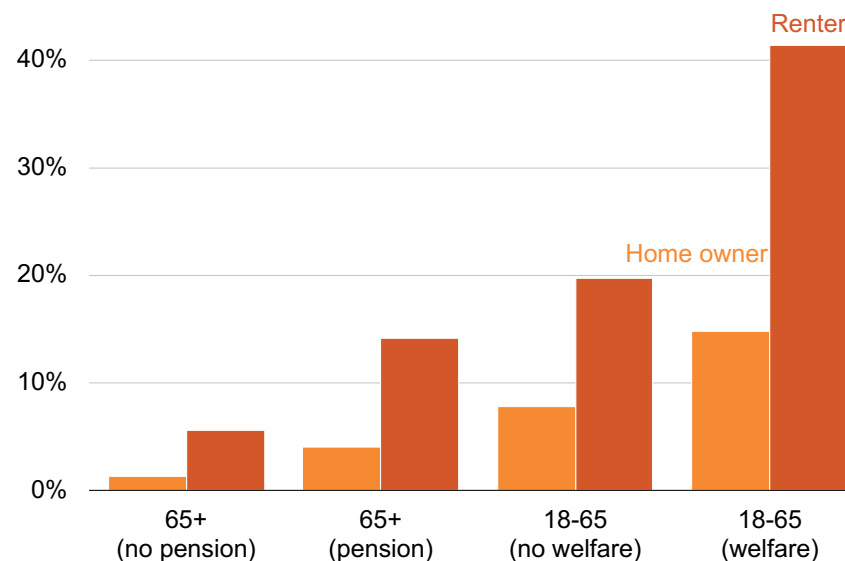
134. Daley et al (2018a, p. 62).

135. Ibid (p. 28).

136. Although rates of homelessness remain far higher among younger Australians. People aged 19-34 accounted for about two-thirds of the increase in homelessness in Australia over the five years to 2016. Chivers and Coates (2019).

**Figure 2.5: Renting pensioners are under more stress than home-owning retirees – but less than others**

Percentage of households facing at least one financial stress, 2015-2016



Notes: Financial stress is defined as whether, due to a money shortage, a household: 1) skipped meals; 2) did not heat their home; 3) failed to pay gas, electricity, or telephone bills on time; or 4) failed to pay registration insurance on time. 'Pension' includes everyone over the age of 65 who receives social assistance benefits in cash of more than \$100 per week. 'Welfare' includes people who receive more than \$100 per week from a disability support pension, carer payment, unemployment or student allowance, or other government pension. Financial stress can also be measured by asking whether households cannot afford goods and services that other survey participants evaluate as 'essential', as analysed in Saunders and Wong (2011), which produces similar relativities between the categories.

Source: Grattan analysis of ABS (2017a).

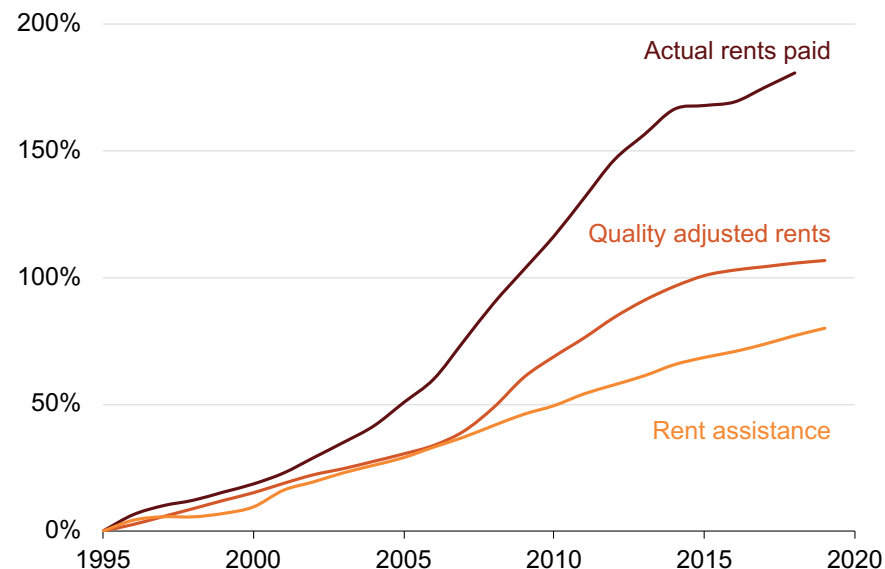
Home-owning retirees receive a significant financial windfall because most of the value of their home is effectively excluded from the Age Pension assets test (Chapter 5).<sup>137</sup> For pensioners who don't own their own home, Rent Assistance is a fortnightly payment that can help bridge the gap.

The maximum Rent Assistance payment is indexed in line with CPI, but rents have been growing faster than CPI over the long term. Between June 2003 and June 2019, CPI increased by about 46 per cent, while average (quality adjusted) rents increased by about 65 per cent (Figure 2.6).

The Age Pension is sufficient for most retirees to have an income above most measures of poverty. But it is not sufficient for renter households. Commonwealth Rent Assistance should be increased by about 40 per cent, to overcome its decline relative to average rents over the past two decades. This would be the most targeted way to alleviate poverty among retirees.

**Figure 2.6: Rents have risen faster than Rent Assistance**

Increase in actual rents paid, quality-adjusted rents, and Rent Assistance since 1995



Notes: Rents refers to actual rents paid according to the Survey of Income and Housing. Quality adjusted rents refers to the ABS's quality consistent measure of rent increases.

Source: Productivity Commission (2019).

137. Owner occupied housing is also exempt from capital gains tax and imputed rents are not taxable in Australia.

### 3 How should we assess retirement adequacy for middle-income earners?

A core objective of Australia's retirement incomes system is to ensure that most Australians enjoy a similar living standard in retirement as they enjoyed while working (also known as lifetime consumption smoothing).

As noted in Chapter 1, assessments of whether Australia's retirement incomes system is helping Australians to smooth their lifetime consumption should focus on the typical, or 'average' worker.<sup>138</sup> Modelling should also consider how retirement incomes will vary across the population, such as due to broken work histories. But such modelling can't ever be representative of the retirement incomes achieved by all Australians. And no set of policies will produce the best outcome for every person to whom they apply. Setting retirement incomes policy for those Australians who would otherwise not replace their pre-retirement living standards would mean forcing everyone else to save more than they need, making a large number of Australians worse off.

As with any modelling, projecting retirement incomes naturally involves making assumptions: when will people retire; how long will they live; and what living standard should they aim to sustain through their retirement? The real test here is to make assumptions that best reflect reality. Unlike much other work in this field, Grattan has spelt out our assumptions in substantial detail and how alternative assumptions change the results (Table 4.1 on page 62).

---

138. Recognising this challenge, the Australia's Future Tax System Review (Henry (2009b, p. 1)) suggested Superannuation Guarantee contributions be 'benchmarked by reference to moderate potential replacement rates for retirees with a full history of contribution at median to average earnings'.

#### 3.1 Replacement rates are the best way to assess whether retirement incomes will be adequate for most Australians

Choosing the right benchmark for retirement income adequacy is important because retirement incomes policies are not costless. Policy makers must balance the opportunity to consume while working, with compulsory saving for retirement. Of course, benchmarks should be tied to the objectives for the system – in particular, supporting lifetime consumption smoothing and avoiding poverty, as discussed in Section 1.2 on page 7.

Beyond avoiding poverty, replacement rates of pre-retirement earnings should be the principal benchmark of assessing the adequacy of retirement incomes. They help policy makers understand whether Australians of varying incomes and work patterns will be able to smooth consumption over their lifetime.

In contrast, budget standards apply a 'one size fits all' approach to retirement planning. While useful for ensuring no Australians live in poverty (Chapter 2), a single set of budget standards cannot be used to assess retirement income adequacy for the majority of Australians. In particular, the 'comfortable' retirement budget standards produced by the Association of Superannuation Funds of Australia (ASFA) would, if used as the basis for policy, require most Australians to save for a higher living standard in retirement than most Australians enjoy while working (Box 2 on page 32).<sup>139</sup>

---

139. ASFA also produces a 'modest' standard for retirement incomes. The original designers of the standard from the UNSW described it as a 'modest but adequate' standard, but ASFA now presents it as an income that is 'only able to afford fairly basic activities'. See: Daley et al (2018b, p. 37) and Rothman and Bingham (2004, p. 8).

If policy is set so that middle-income retirees all meet a single comfortable standard then some will be forced to save for a standard of living that is much higher than they ever had while working. Only 20 per cent of singles and 40 per cent of couples spend more when working than the ASFA comfortable standard (Figure 3.1 on the following page). High-income earners will face the opposite problem: if they shoot for the ASFA comfortable standard they will find their standard of living declines in retirement.

The benefits of having a single budget standard for a ‘comfortable’ retirement is that individuals can apply a simple figure to their own living situation.<sup>140</sup> In contrast to replacement rates, which are often too complex for individual savers to assess, budget standards are often more tractable and can help people decide whether they want to achieve a given savings level in retirement, fall short, or save more. But budget standards such as the ASFA comfortable standard remain an inappropriate benchmark for policy makers. And for individual savers, budget standards would be more useful if they were tailored to pre-retirement circumstances.

Formal measurement of replacement rates – for both current and future retirees – can be supplemented by subjective or behavioural measures of retirement adequacy. For example, surveys can tell us whether retirees today *feel* comfortable financially – a subjective well-being measure. Similarly, where retirees experience low rates of financial

---

140. ASFA’s calculations indicate that that a single person needs a lump sum of \$545,000 at retirement in order to enjoy the ‘comfortable’ standard in retirement, or \$640,000 in the case of couples. Yet ASFA uses an inflation rate of 2.75 per cent (to reflect growth in nominal wages) in projecting forward the superannuation balance required at retirement to achieve its comfortable retirement standards. This overstates the balance required, since the nominal cost of maintaining the ASFA retirement standard is likely to only grow at around CPI. Super Consumers Australia (2020, pp. 8–9).

stress, especially compared to working-age Australians, we should be confident that they are enjoying adequate retirement incomes.<sup>141</sup>

### 3.2 Retirement income modelling relies on assumptions

Modelling the retirement incomes that workers today will receive in future inevitably involves making assumptions. And those assumptions can be contested. The real test here is to make assumptions that best reflect reality, and to make clear what assumptions really matter for assessments of retirement income adequacy. This section outlines the assumptions used in the Grattan Retirement Income Projector (GRIP), why we’ve chosen them, and how important they are.<sup>142</sup>

The most important assumption in assessing adequacy is whether incomes are expected to continue to rise in retirement in line with

---

141. Of course, spending behaviour can also reflect other concerns, such as longevity risk – the risk that retirees may outlive their savings – or other unforeseen spending needs. See Daley et al (2018b, Section 3.4).

142. The Grattan Retirement Income Projector (GRIP) is a ‘cameo’ model that takes an individual who does not work between the age of 15 and 29, and begins working at age 30 in 2015-16. It projects their income after they retire at age 67 until death at age 92, leaving their home and a small bequest. Since *Money In Retirement*, GRIP has been updated in several ways. It now reflects new tax rates as legislated in 2019. Reflecting declines in average super fees, fees have been reduced from 1 per cent to 0.85 per cent of the total superannuation balance. Annual fees have fallen from \$320 to \$74 in \$2013-14, and insurance from \$360 to \$214. Both fees are now indexed to wages rather than CPI. GRIP now models that 80 per cent of any compulsory super increase comes from wages, although the long term pass through is likely to be higher (Coates et al (2020)). A 1 per cent decrease in wages as a result of any S.G. increase results in a 0.57 per cent increase in Male Total Average Weekly Earnings used to index the Age pension. down from 0.75 per cent previously. With these changes, our baseline replacement rate figure for the median worker has fallen by only 1 per cent from 91 to 90 per cent. To prevent ‘double counting’ of superannuation contributions, GRIP subtracts salary sacrifice contributions from the employer contributed amount when calculating the effective S.G. rate. For further details on GRIP see Daley et al (2018b, Appendix C).

**Box 2: The ASFA ‘comfortable’ standard is an inappropriate retirement benchmark for most Australians**

The retirement standards produced by the Association of Superannuation Funds of Australia (ASFA) are often used to measure retirement income adequacy. ASFA produces a ‘comfortable’ standard for both single and couple retired households aged 65 and 85 that own their homes outright. It updates these standards regularly to take account of changes in consumer prices.<sup>a</sup> ASFA argues that at least 50 per cent of retirees should achieve the ASFA ‘comfortable’ standard by 2050.<sup>b</sup>

But ASFA’s ‘comfortable’ standard is too high to be used as a benchmark for the average Australian. The original designers of the standard described it as ‘comfortable but affluent’, and designed it to reflect a lifestyle typical for the top 20 per cent of retirees today.<sup>c</sup> So it is unsurprising that ASFA’s ‘comfortable’ standard is more luxurious than the living standard of most working-age households today (Figure 3.1).

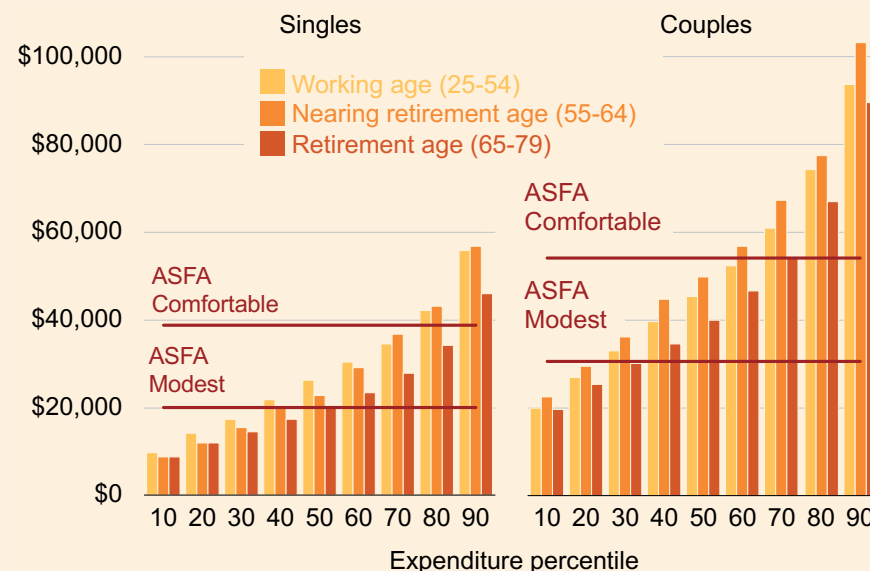
ASFA has since defended the ‘comfortable’ standard on the basis that it prescribes an *expenditure* level after housing costs in retirement that is lower than the *income* after housing costs of median couple households aged 55-64.<sup>d</sup> But this is a misleading comparison on three levels: it includes the income of adult children; it compares expenditure with income (ignoring the ‘cost’ of savings); and it ignores expenses on children, which are higher for households aged 55-64 than for retirees.<sup>e</sup>

With average living standards before retirement lower than the standard, the average household can only reach the ‘comfortable’

benchmark in retirement by living less than ‘comfortably’ before retirement. As the Productivity Commission concluded: ‘It is no more than an arbitrary benchmark that should be ignored in policymaking.’<sup>f</sup>

**Figure 3.1: ASFA’s ‘comfortable’ retirement standard is more affluent than most households enjoy either working or retired**

Annual expenditure excluding housing, \$2015-16



Source: Daley et al (2018b, Figure 3.9).

- a. ASFA also produces a ‘modest’ standard, which can ‘only [fund] basic family activities’. ASFA (2018a); see also Daley et al (2015).
- b. ASFA (2020, p. 1).
- c. Rothman and Bingham (2004, p. 8).
- d. ASFA (2018a, p. 5).
- e. For a more detailed discussion of these issues, see Daley et al (2018b, Section 3.5.1).
- f. Productivity Commission (2018c, p. 228).



wages. Grattan assumes that spending needs in retirement keep pace only with inflation in *prices*. Even this is conservative, because actual spending in retirement grows more slowly than this as retirees age (Section 3.2.4 on page 38).

Other important assumptions, discussed in this section, include:

- **What is the target replacement rate?**  
The target replacement rate is usually set as less than 100 per cent of pre-retirement resources. People usually have lower needs when they are retired compared to when they were working age – they are usually paying less for housing, don't have work-related expenses, and have more time to do things for themselves. And how should the target replacement rate vary for lifelong renters?
- **What resources should be compared?**  
Replacement rates can compare pre- and post-retirement *expenditure*, with or without housing costs; or they can compare *income*, before or after tax.
- **Over what period should resources be compared?**  
Replacement rates can compare income or expenditure over the entire working life, the last five or ten years before retirement, or the last year before retirement. And they can compare this with average resources over the entirety of retirement, or the first five years of retirement, or the first year of retirement.
- **At what age should people retire?**  
Projections of replacement rates must assume the age at which people retire. They can be calculated based on the *actual* age at which people retire today, or the age at which people qualify for the Age Pension today, and legislated changes to the Age Pension age in the future.
- **What assets should be taken into account?**

Replacement rates can be calculated on the assumption that only compulsory superannuation savings are used to support retirement, or they can take account of other assets such as voluntary super and non-super investments.

- **How fast are savings spent in retirement?**  
Replacement rates must make an assumption about what proportion of savings for retirement are spent each year. This drawdown rate requires assumptions about how long savings should continue to contribute resources, particularly if a person outlives typical life expectancy.
- **How are housing costs treated?**  
Home owners who have paid off their mortgage have much lower housing costs in retirement than renters, who typically need a higher replacement rate to maintain their living standards.
- **Which households should reach the target?**  
In setting retirement standards, is the aim for *every* household to meet a target replacement rate, or the *median* household, or some other proportion of households? And should modelling focus on adequacy for singles, couples or both?
- **What proportion of compulsory super comes out of wages?**  
When compulsory super goes up, employers may pass all or part of the cost on to workers in the form of lower wages. Modellers must make an assumption about the super-wages trade-off.

The following sections set out the key modelling assumptions we recommend in projecting replacement rates for future retirees.

### 3.2.1 What is the right replacement rate?

Retirees need less income than when they were working to enjoy the same standard of living.<sup>143</sup> Yet the current Federal Government has not nominated a retirement income benchmark.

In 2011, the then-Minister for Financial Services, Bill Shorten, nominated a target replacement rate of between 65 per cent and 70 per cent of average earnings prior to retirement as the ‘winning tape for adequate retirement’.<sup>144</sup> In 2013, a Charter Group advising the Treasurer and the Minister Assisting for Financial Services and Superannuation, noted a replacement rate of between 60 per cent and 70 per cent of pre-retirement income was a common benchmark for an adequate retirement.<sup>145</sup>

In this paper we use replacement rates of pre-retirement, *disposable* income – that is, income after tax, and including government benefits and draw down on savings. Ideally, we should be trying to replace expenditure – not income. But expenditure is typically harder to measure. And of course, the expenditure of future retirees is hard to predict, because it depends on how fast they draw down their savings. Consequently income is often used as a proxy for expenditure, and the target replacement rate is adjusted to take into account typical spending and savings patterns.<sup>146</sup>

---

143. Rothman and Bingham (2004, p. 6); and Chomik and Piggott (2016, p. 14).

144. Shorten (2011). Although not specified, it is likely that he was referring to a replacement rate of 65-to-70 per cent of disposable income over the retiree’s lifetime, and excluding non-super savings, deflated at CPI, because this was the modelling approach adopted by the Australian Treasury at the time. For example, see: Henry (2009a) and Rothman (2011).

145. Treasury (2013a, p. 21).

146. Even expenditure is not quite the same as consumption, because it does not include free or subsidised government services (which are worth much more in retirement), home production (such as cooking meals), and leisure. For a detailed discussion see: Daley et al (2018b, p. 50).

Grattan uses a benchmark replacement rate of 70 per cent of disposable income on the basis that most retirees own their own home, are no longer saving (beyond compulsory super) for their retirement, no longer incur expenses related to work, and substitute eating out for eating more at home.<sup>147</sup>

Retirees can also benefit from discounts on rates, electricity, and other services, and can use their free time to make other savings such as holidaying during non-school-holiday periods. A 70 per cent replacement rate benchmark has also been used by others, including the OECD.<sup>148</sup>

While we use a 70 per cent replacement rate, there are good reasons to also consider a lower figure. Most replacement rate targets were created more than a decade ago, and Australians are now saving more and spending much less of their income.<sup>149</sup> And rising house prices mean many Australians will be paying a larger share of their incomes to service their mortgages than those currently approaching retirement, despite lower interest rates than in the past, implying lower expenditure on goods and services for a given income while working than that enjoyed by previous generations (Section 1.7.2 on page 20).

Our benchmark replacement rate is measured by comparing retirement to disposable income in the 5 years before retirement. But if replacement rates are measured over full working life, including periods where people are paying to bring up children, there is a case for using an even lower replacement rate benchmark.<sup>150</sup> Most working-age Australians are still paying for the costs of children, whereas retirees

---

147. Retirees spend an average of 5 per cent of their incomes on housing (mainly council rates), compared to 20-to-25 per cent on average for working-age Australians (Figure 3.2 on page 36).

148. OECD (2012, p. 161).

149. Wood et al (2019, figure 4.5).

150. The OECD typically measures replacement rates in the first year of retirement compared to the last year of working life.

typically are not. In fact the spending of working-age Australians starts to decline from the ages of 45-50 onwards as children begin to leave home, declining by 15 per cent by ages 60-64 (Figure 3.11 on page 47).<sup>151</sup>

Of course some retirees may prefer a higher replacement rate than the 70 per cent target. Setting system defaults at a conservative level will result in some people saving less than they might hope, but gives flexibility for those who are especially worried about their retirement to save more. After all, workers can currently do little about a compulsory contribution rate that is set too high for them, but can add more if it is set too low.<sup>152</sup>

The Review should establish a benchmark replacement rate for the typical, or median worker, based on analysis of observed expenditure patterns pre- and post-retirement, as well as self-assessments of financial wellbeing and financial stress. Such a benchmark should vary based on whether the retiree owns their own home, or will rent in retirement.

Alternatively, different replacement rate benchmarks could be set for low-, middle- and high-income earners. For example, the UK Pension Commission in 2006 established a 'sliding scale' of replacement rates ranging from 80 per cent of pre-retirement earnings for the lowest earners, to two-thirds for average earners, and 50 per cent for the highest earners.<sup>153</sup> Yet in practice the combination of a minimum adequacy standard in the form of the Age Pension, and a 70 per cent replacement rate target for median to average earners, effectively

creates a graduated replacement rate benchmark similar to that adopted in the UK.

### 3.2.2 Replacement rates should be higher for renters

Housing costs are typically a household's largest single expense, and they can have a big impact on living standards in retirement. Implicit in the choice of a 70 per cent replacement rate target is the assumption that retirees will be home-owners.

Retirees who have paid off their mortgage spend much less on housing (on average 5 per cent of disposable income) than working home-owners or retired renters (25-to-30 per cent) (Figure 3.2 on the next page).<sup>154</sup> Consequently, a retiree who rents needs a higher replacement rate to achieve the same living standard as a retiree who owns their own home.

The right replacement rate for renters is about 90-to-100 per cent of their pre-retirement income. Middle-income retirees who rent spend about 33 per cent of their income on housing, 28 percentage points more than homeowners without a mortgage (Figure 3.3). A replacement rate of 100 per cent should therefore allow renters to enjoy a similar living standard in retirement as a home-owning retiree on a similar income enjoys with a replacement rate of 70 per cent. A higher replacement rate may be required for renters if rents outpace wages in coming decades.<sup>155</sup> This underscores the importance of benchmarking Commonwealth Rent Assistance to actual rents paid by low-income Australians (Chapter 5).

Renters at the lower end of the income distribution tend to spend more than 30 per cent of their income on rent. However the prime concern

---

151. In contrast, disposable incomes continue to rise faster than inflation (Figure 3.12 on page 47).

152. See also Khemka and Warren (2020).

153. These replacement rates are based on gross income. Replacement rates based on disposable income – such as those adopted in this report – would be higher. Department of Work and Pensions (2006, p. 46).

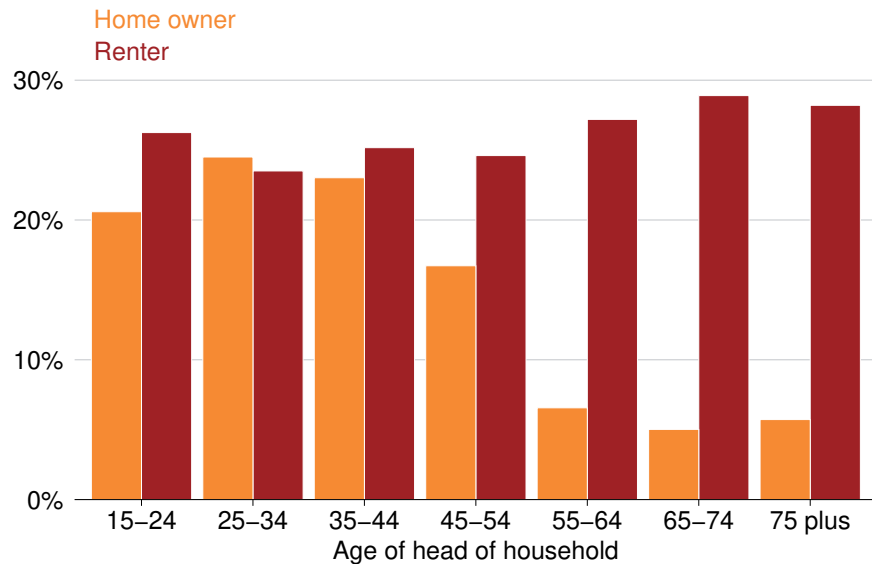
---

154. The main housing costs for home-owners are council rates and insurance.

155. Quality-adjusted rents have typically tracked wages over the past 20 years. Daley et al (2018a, Figure 2.12).

**Figure 3.2: Homeowners' housing costs decline sharply as they approach retirement**

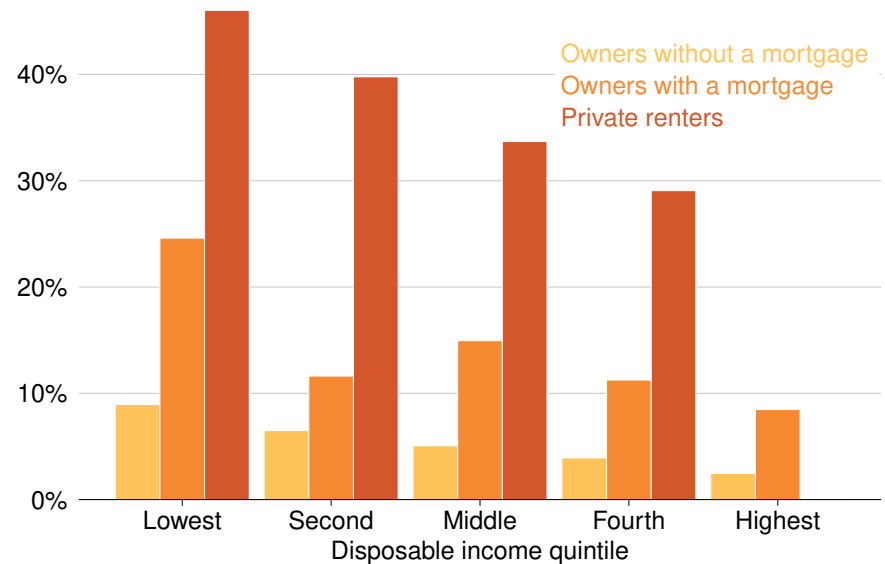
Median housing costs as a percentage of household disposable income by age and tenure type, 2017-18



Notes: Housing costs include mortgage interest and principal repayments and general rates for homeowners, and rental payments for renters. Does not include imputed rent.  
Source: Grattan analysis of ABS (2019a).

**Figure 3.3: Lower-income private renters spend more on housing than homeowners**

Median housing costs as a percentage of household disposable income for over 65s, 2011-17



Notes: Housing costs include mortgage interest and principal repayments and general rates for homeowners, and rental payments for renters. Does not include imputed rent. Excludes public and community sector renters. 2011, 13, 15 and 17 waves of survey included to ensure a sufficient sample size. Fifth-quintile retiree renters excluded due to sample size.  
Source: Grattan analysis of ABS (multiple years).

for low-income Australians is less whether they are smoothing their lifetime consumption, and more whether they are in financial stress and poverty, both in retirement and beforehand.<sup>156</sup>

Rents will also vary as a proportion of incomes across Australia.<sup>157</sup> Yet it is impractical to set different replacement rate benchmarks for renters across different Australian regions.

### 3.2.3 Target household

Replacement rates will vary depending on people's incomes. The combination of a single rate of compulsory super and Australia's means-tested Age Pension means that people with lower incomes will in general have higher replacement rates than the median income earner. High-income earners will typically have lower replacement rates than the median earner. It is generally accepted that the retirement incomes system should not seek to fully replace the pre-retirement living standard of the wealthiest Australians (Section 1.4.3 on page 11).

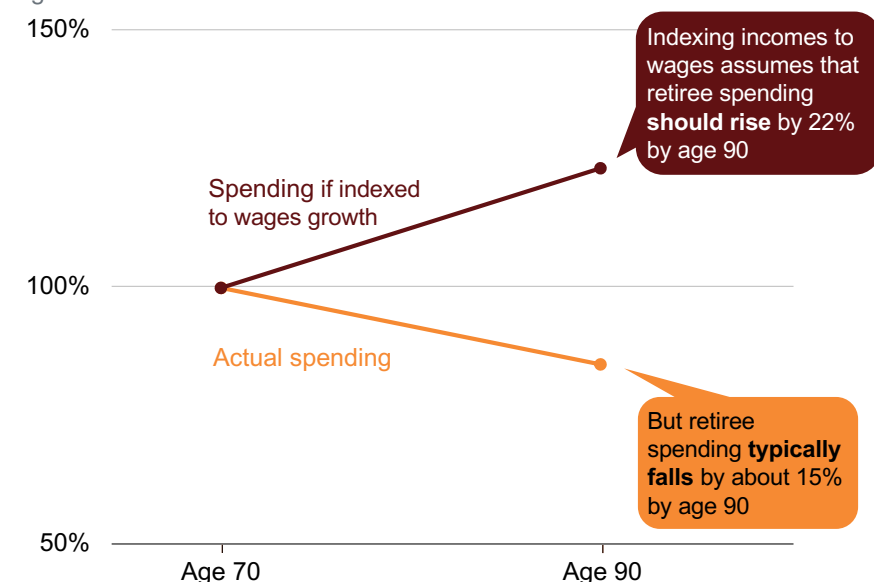
Retirement incomes policies, and compulsory super in particular, should also be set so they are appropriate for most people. That means balancing the trade-off between higher living standards when retired against lower living standards when working. Inevitably, policies will not produce the best outcome for every person to whom they apply.

Consistent with the objectives for superannuation set out in Chapter 1, our approach aims for a 70 per cent replacement rate for home-owning retirees, and 100 per cent for retirees who rent, for those on median to average earnings.<sup>158</sup> The typical worker earns about \$58,000 a year,

156. Low-income renters that avoid poverty in retirement are likely to have replacement rates well in excess of 100 per cent of their pre-retirement earnings.
157. Rents as a share of gross incomes for private renters vary from an average of 24 per cent in NSW to 16 per cent in the NT. Rent-to-income ratios are also higher in major Australian cities than in regional areas. ABS (2019d, Table 12.4).
158. Grattan's previous work targeted a replacement rate of 70 per cent for workers earning up to the 80th percentile of earnings. See Daley et al (2018b, p. 58).

**Figure 3.4: Retirees should expect their incomes to rise in line only with inflation, not wages**

Real (inflation adjusted) retiree spending as a proportion of their spending at age 70



Notes: Assumes annual real wages growth of 1 per cent. Stylized spending example taken from Daley et al (2018b, p. 29).

Source: Grattan Retirement Income Projector.

rising to \$78,000 for the typical full-time worker and \$90,000 for the average full-time worker, roughly equal to the average annual wage of workers at the 70<sup>th</sup> percentile of workers captured in GRIP.<sup>159</sup>

### 3.2.4 CPI vs wage deflation of retirement incomes

Retirement income modellers need to choose an index to compare the value of a dollar before and after retirement.

Given a core objective of the retirement incomes system is lifetime consumption smoothing (Section 1.2 on page 7),<sup>160</sup> and the consumer price index (CPI) measures the change in the cost of purchasing a given basket of goods and services over time, prices should be compared using CPI rather than a wage price index.

Some argue that replacement rates should use a wage price index instead.<sup>161</sup> This approach aims to ensure that retirees keep up with living standards prevalent as they age.<sup>162</sup> Because wages tend to grow faster than inflation, these approaches effectively aim for higher standards of living in retirement than during working age. They imply that 90-year-olds will spend 22 per cent more than they did at age 70. Yet targeting a replacement rate indexed to wages will encourage workers to save for a higher standard of living during retirement than

159. Coates and Cowgill (2019). Using OECD equivalence scales, the equivalent income for couples would be up to \$145,000 a year, or the 60th percentile of unequivalised gross incomes among couple income units aged 25-54 years. Grattan analysis of ABS (2019a).

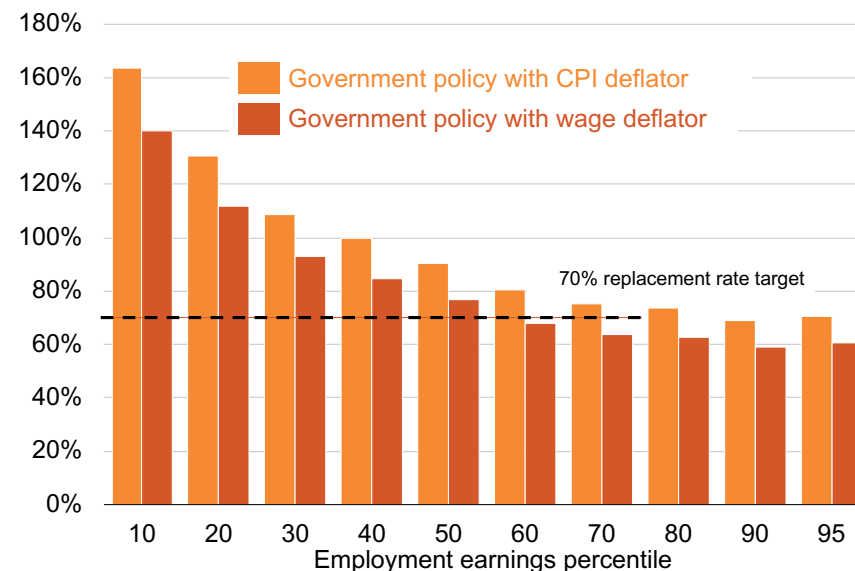
160. Historically, Treasury has deflated future expenditures by CPI. See Rothman and Bingham (2004, pp. 6–7), Henry (2009a, chart 4.1.) and Gallagher (2011, p. 4). For example, in evidence to the Senate Select Committee on Superannuation in 2002, then Treasury analyst Phil Gallagher noted that the appropriate way to deflate expenditure for the purposes of calculating replacement rates is CPI (Select Committee on Superannuation (2002)).

161. See Table 4.2 on page 64. ASFA's 'comfortable' standard increases by wages from the point of retirement until age 85, but the starting figure is adjusted on an ad-hoc basis, and has been rising roughly with inflation over the past two decades. The OECD deflates retirement incomes by wages, and assumes that wages will grow 1.25 percentage points faster than consumer prices: OECD (2017b, p. 100).

162. Clare (2008, p. 29); and OECD (2017b).

**Figure 3.5: The choice of CPI or wage deflation of retirement incomes makes a substantial difference to measured replacement rates**

Annual disposable income in retirement as a share of last 5 years of working life for a 30-year-old in 2015, deflated by CPI



Notes: See Daley et al (2018b, Figure 1.2). Based on current retirement income policy settings, including 12 per cent superannuation, and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages.

Source: Daley et al (ibid, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

their working life. Much of this money will never be spent, leading to larger inheritances and worsening inter-generational inequality.

In contrast, CPI inflation is consistent with retirees determining a living standard that can be afforded at retirement, and then seeking to maintain *that* living standard through the rest of their life.<sup>163</sup> And in reality, spending for current retirees is not flat – it falls. It is 15-to-20 per cent lower at age 90 than age 70 (Figure 3.4 and Figure 3.6).<sup>164</sup> Most international studies come to the same conclusion.<sup>165</sup> In particular, spending needs appear to fall fastest for high-income earners – the precise group for whom higher retirement incomes come at the most direct cost to their working-age incomes.<sup>166</sup>

These findings are not consistent with a report commissioned by the Australian Institute of Superannuation Trustees (AIST) based on the Household Income and Labour Dynamics (HILDA) survey.<sup>167</sup> But there are insurmountable problems with using the HILDA expenditure data in this way: because of excluded categories and incomplete surveying, it captures only half of the household expenditure identified by the Household Expenditure Survey.<sup>168</sup>

---

163. A HSBC survey found that only 22 per cent of workers expect their standard of living to increase in retirement: HSBC (2017).

164. Since replacement rates in GRIP are calculated by comparing retirement incomes over the entire retirement to the last five years of working, GRIP implicitly allows for wage deflation of working-age incomes, but CPI-deflation of retirement incomes.

165. For example, see: Blanchett (2014), Banks et al (1998) and Hurd and Rohwedder (2003). For a review of the Australian literature see: Cooper and Minney (2018).

166. Analysis of bank accounts shows that older households today spend much less than younger households today. Richer older households spend a lot less than richer younger households; poorer older households a little less. Even a retiree aged 85-plus among the top quarter of retirees by wealth is still spending at or below the Aged Pension. See: Daley et al (2018b, Figure 3.7) and Gebler (2018).

167. Auster and Maddock (2016).

168. Nolan and Coates (2019a).

And the choice of index makes a big difference. Using GRIP's base case assumptions, replacement rates for the median worker are 90 per cent using CPI, and 77 per cent using a wage price index (Figure 3.5).<sup>169</sup>

However the choice of deflator interacts with the period over which replacement rates are measured. Since Grattan compares retirement incomes to projected working-age incomes in the last five years leading to retirement, Grattan effectively deflates working-age incomes by wages, and retirement incomes by inflation. Our approach is consistent with most defined benefit pension plans in Australia which are typically bench-marked off a proportion of workers' final earnings before retirement, indexed to CPI rather than wages.<sup>170</sup>

Alternatively, working age incomes could be deflated by wages, and retirement incomes by CPI, with replacement rates calculated across the whole life cycle. Adopting this approach in GRIP produces replacement rates 10 per cent lower at the median relative to our baseline approach of CPI deflation and comparing retirement incomes to incomes in the last five years of working life.<sup>171</sup> Measuring replacement rates across a full lifetime complicates the assessment of retirement adequacy since it benchmarks living standards in retirement against periods where most people are spending a significant portion

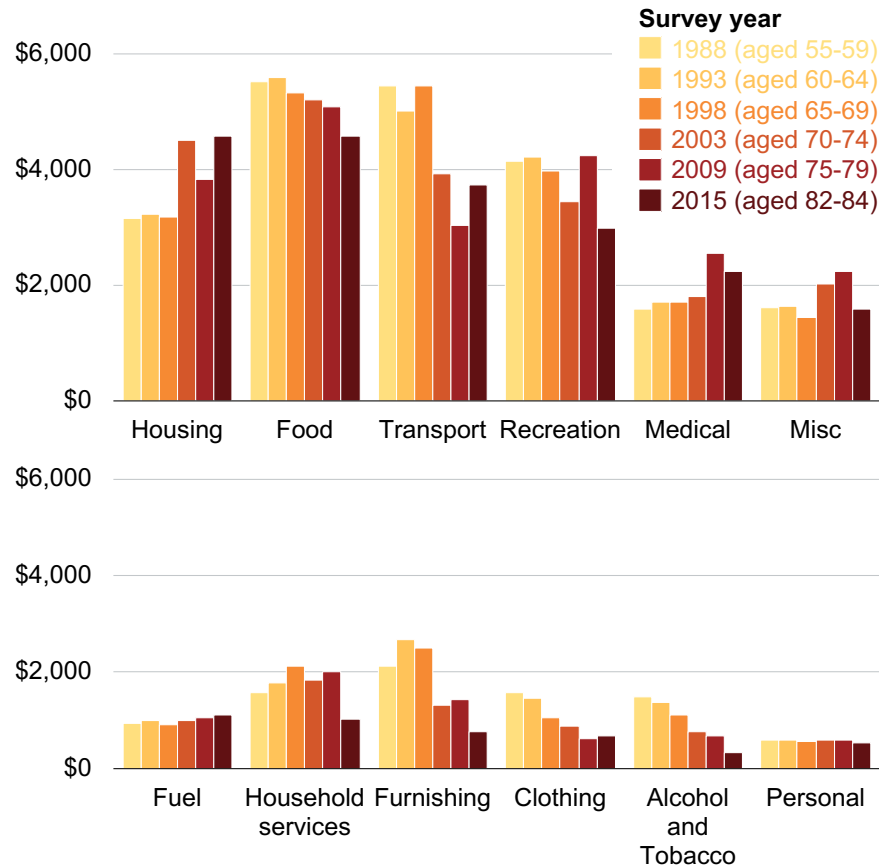
---

169. As noted above, the choice of index matters less if replacement rates are calculated on the basis of expenditure in the first few years of retirement rather than over the whole of retirement. But a wage deflator produces particularly low replacement rates if they are calculated by comparing income for the whole of retirement with income for the whole of working-age life. The wage deflator effectively reduces the value of income late in retirement, and *increases* the calculated value of income early in working-age life.

170. The OECD recommends that pension plans be indexed to inflation: Antolin (2009, p. 13). In calculating replacement rates, the World Bank also deflates future retirement expenditures by consumer prices: World Bank (1994, pp. 293–294).

171. Rice Warner (2019) deflates retirement incomes by CPI and working-age income by wages, producing similar replacement rates to GRIP.

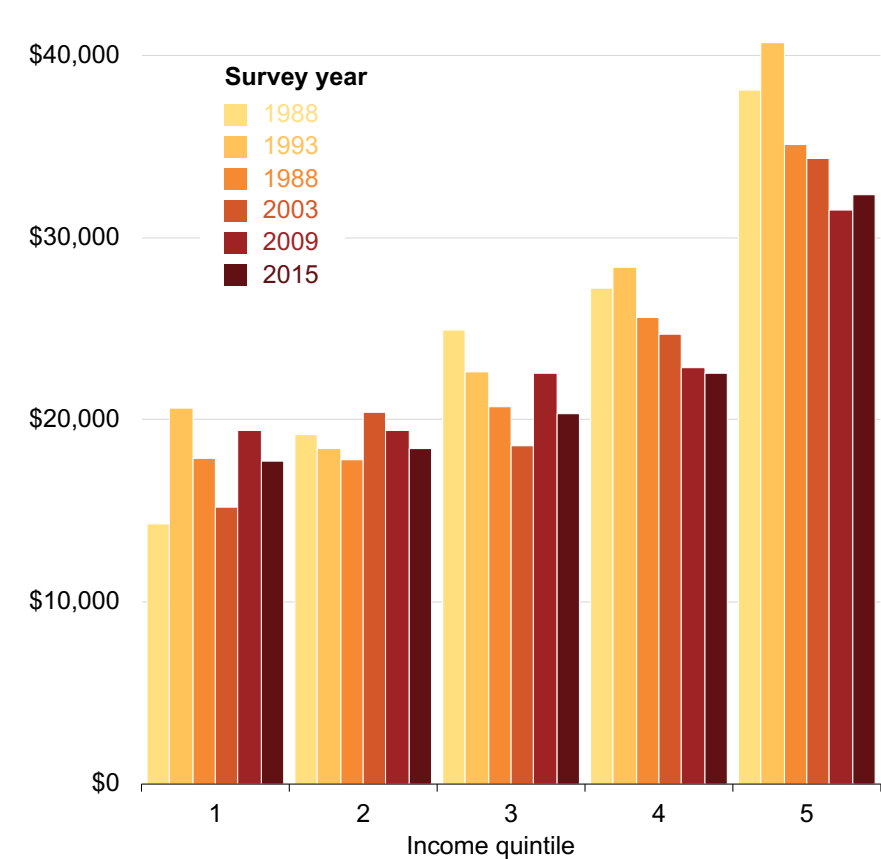
**Figure 3.6: Retiree spending on food, transport, and recreation declines**  
Average equivalised household annual expenditures for cohort born in 1929-33, 2015-16\$



Notes: See Figure 3.7. Because of small changes in the expenditure categories, these results are indicative only. Expenditure on housing does not include principal repayments on mortgages. The increase in expenditure on housing is largely due to more spending on rates and insurance, as well as rising rents for renting retirees.

Source: Grattan analysis of ABS (various years).

**Figure 3.7: Spending of high-income people falls most in retirement**  
Median equivalised household annual expenditures for cohort born in 1929-33, 2015-16\$



Notes: Uses the 1988-89, 1993-94, 1998-99, 2003-04, 2009-10, and 2015-16 Household Expenditure Surveys. While the age cohorts are five years apart, there was a gap of six years between the past three HES surveys. Spending deflated by CPI.

Sources: Grattan analysis of ABS (various years).



of their income raising children. If comparing retirement incomes to incomes over a full working life, and deflating working life incomes by wages, the actual replacement rate benchmark should also be reconsidered since retirement living standards are being compared against a period where most people are spending a significant portion of their income raising children, as discussed at Section 3.2.1 on page 34.

One concern is that CPI may not capture specific increases in the cost of living for retirees due to their different spending patterns to Australians as a whole. To address this concern, the ABS produces specific cost of living indexes for older Australians that reflects their different expenditure patterns: a cost of living index for pensioner households, and another for 'self-funded' retirees. There is almost no difference between the change in the cost of living for self-funded retirees, as measured by these indices, and growth in the CPI over the past 20 years. The two measures grow almost in lock-step, as shown in Figure 3.8. The CPI therefore is a good measure of changes in the cost of living for middle- and high-income earners that largely or wholly fund their retirement from their own savings.

### 3.2.5 Singles vs. couples

In judging a retirement incomes system, a key issue is whether to assess the means of each *individual* or each *household*.

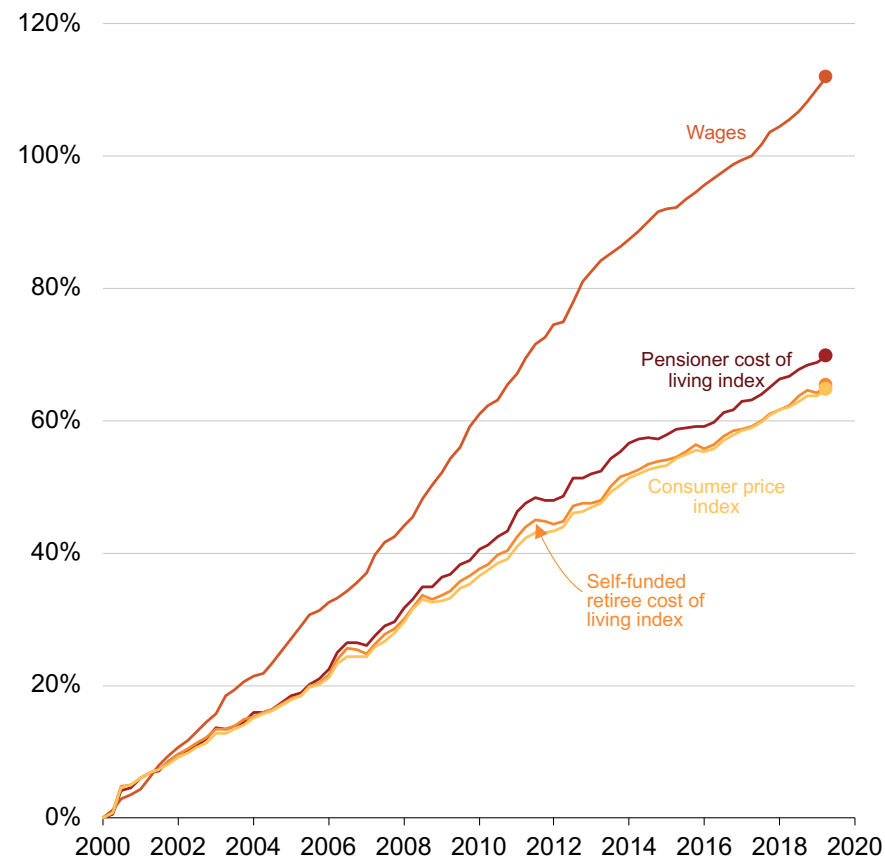
In retirement – and during working life – most Australians live with a spouse or partner, and the household pools resources.<sup>172</sup> That's why the Age Pension means test is based on household-level income and assets.<sup>173</sup>

172. Coates (2018).

173. Department of Human Services (2016). When people live together there are opportunities to share some items of expenditure and some economies of scale. For example, the 2009 Harmer Pension Review estimated the costs of a

**Figure 3.8: The CPI closely tracks changes in the cost of living for retirees**

Cumulative change since 2000



Notes: Pensioner households are households whose principal source of income is the Age Pension or veterans affairs pension. Self-funded retiree households are households whose principal source of income is superannuation or property income, and the household reference person is not in the labour force and over 55 years old. 'Wages' is average weekly ordinary time earnings of full-time adults.

Sources: ABS (2020a), ABS (2019c) and ABS (2020b).

### Box 3: The Age Pension should remain benchmarked to wages

Consistent with the purpose of lifetime consumption smoothing, retirement incomes are best deflated by CPI for the purposes of calculating replacement rates. Doing so is consistent with the objective of lifetime consumption smoothing, and the observed spending needs of retirees as they age.

Yet the Age Pension should continue to rise with wages. The primary purpose of the pension is not to ensure smooth lifetime consumption but to alleviate poverty. Poverty is not experienced relative to what retirees earned when working, but relative to the living standards enjoyed by all Australians today. The Age Pension is indexed to wages so that it keeps up with rising living standards as each generation reaches retirement.

The Age Pension must be indexed to wages so that retirees have the option to increase their spending in line with the community's expectations for what constitutes a minimum standard of living. For instance, a 95-year-old today is unlikely to have budgeted for a high-speed internet connection when they retired in 1990, and yet most minimum budget standards dictate that retirees should be able to afford such a connection.<sup>a</sup>

Indexing the pension to wages is also important because retirees at the bottom are less likely to reduce their spending as they age. Spending by 80-84 year-olds at the top of the income distribution fell by 20 per cent over the past two decades as they bought fewer luxuries such as holidays and furniture (Figure 3.7 on page 40). Low-income retirees tend to spend more on essentials such as council rates and electricity, and therefore their spending has kept up with CPI.

a. For one example, see ASFA (2018b, p. 13).

The pension also acts as a buffer for retirees who live longer. As the pension rises in real terms throughout retirement, it forms a larger share of retirees' income. The pension creates a form of longevity insurance for middle-income earners, ensuring they can maintain their consumption levels even if their savings dwindle. While it's unlikely that many 95-year-olds will spend the entirety of their pension every fortnight, older full-rate pensioners have fewer assets to rely on in the event of a sudden financial shock, and therefore benefit from the extra cushion that a wage-indexed pension provides.

Raising the pension in real terms every year throughout retirement is not without cost. Some of the extra money given to older retirees will likely flow through to inheritances. But the cost of excess pension spending is completely born by the government. In contrast, if target replacement rates are indexed to wages it is the workers of today who must endure a lower standard of living to save for a higher living standard in retirement than they enjoy while working – money that many will never spend.

Of course, CPI deflation of retirement incomes and a wage benchmark for the Age Pension does imply that the optimal private retirement income declines in real terms as the Age Pension increases with wages. But as noted in Chapter 1, the retirement incomes system aims to provide an adequate retirement income through the system as a whole, rather than with a single pillar. And drawdown of private savings over the course of retirement inevitably means that private retirement income will decrease in real terms for most retirees as they qualify for a larger part-pension under the income and assets tests for the Age Pension.

But in calculating replacement rates for people not yet retired, this paper assesses the adequacy of *individual* retirement incomes, because modelling relationship transitions over time is too complex and uncertain. Grattan is not alone in modelling retirement incomes for singles. Both the OECD's pension statistics and the Melbourne Mercer Global Pension Index model retirement incomes only for singles.<sup>174</sup>

Replacement rates for most Australians will be lower for couples than singles, because two people living as a couple usually have lower pension entitlements than the same people living apart.<sup>175</sup> For those on high incomes who are ineligible for the Age Pension, the replacement rate for a couple will by definition be somewhere between the replacement rates of the two individuals.<sup>176</sup> But as shown in Figure 4.7 on page 58, replacement rates for singles on lower incomes are typically much higher than the targeted 70 per cent. Replacement rates for couples, while lower than we report, would therefore still be higher than the benchmark replacement rate of 70 per cent used in this paper.

Nor should one assume most retirees are in a couple for their entire retirement. At age 65, about 70 per cent of Australians are in a couple. By age 80 it is only 50 per cent, and by age 92 it is down to about 25 per cent (Figure 3.9). Overall, about 54 per cent of Age Pension recipients today are in a couple.<sup>177</sup> Lower rates of marriage mean people in future may spend even less time in retirement as part of a couple.<sup>178</sup> Therefore the true replacement rates for those Australians

single-person household are 60-to-70 per cent of the costs of a couple household (Harmer (2009, p. 45)).

174. OECD (2017b); and Mercer (2018).

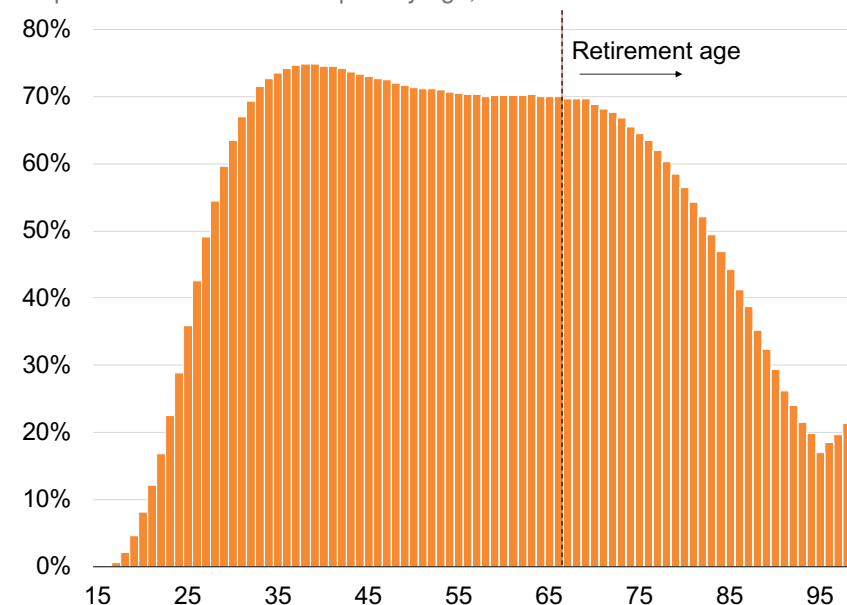
175. Coates et al (2019).

176. The replacement rate of the couple is the sum of their retirement incomes divided by the sum of their pre-retirement incomes.

177. DSS (2019).

178. ABS (2018, table 1). People approaching retirement today are somewhat less likely to be in a marriage (or de-facto relationship) than people aged 65 in

**Figure 3.9: Retirees are just as likely to be single as in a couple**  
Proportion of Australians coupled by age, 2016



Source: Grattan analysis of ABS (2016).

that enter retirement as part of a couple are likely to be somewhere between those modelled for singles and for couples.

And focusing on singles alone does not imply that couples will have inadequate incomes. Retired couples tend to be wealthier than singles even after adjusting for household size (Figure 3.10).<sup>179</sup> Recent retirement modelling by actuarial firm Rice Warner finds that median-income singles and couples would replace 70 per cent of their pre-retirement earnings in retirement, and all but the wealthiest 20 per cent of singles and 30 per cent of couples would achieve a 70 per cent replacement rate – and that’s ignoring all voluntary savings.<sup>180</sup> Similarly, while replacement rates among couples already retired are lower on average than for singles, they are still well above the 70 per cent replacement rate target adopted in our work.<sup>181</sup> And retired couples today are on average replacing a *higher* proportion of their pre-retirement expenditure than retired singles,<sup>182</sup> and are less likely than singles to suffer financial stresses or poverty in retirement.<sup>183</sup>

While couples models of retirement income have advantages, they introduce much complexity. Modelling choices should be made carefully by observing the real behaviour of Australian couples.<sup>184</sup>

2006. According to Census data, about 70 per cent of people aged 65 were in a relationship in 2016, compared to 73 per cent in 2006. The downward trend is likely to continue: people aged 45-60 were much less likely to be in a relationship in 2016 than people in that age group in 2006: ABS (2016) and ABS (2006).

179. ABS (2019e).

180. Rice Warner (2019, graph 6, graph 7).

181. Daley et al (2018b, Figure 3.11).

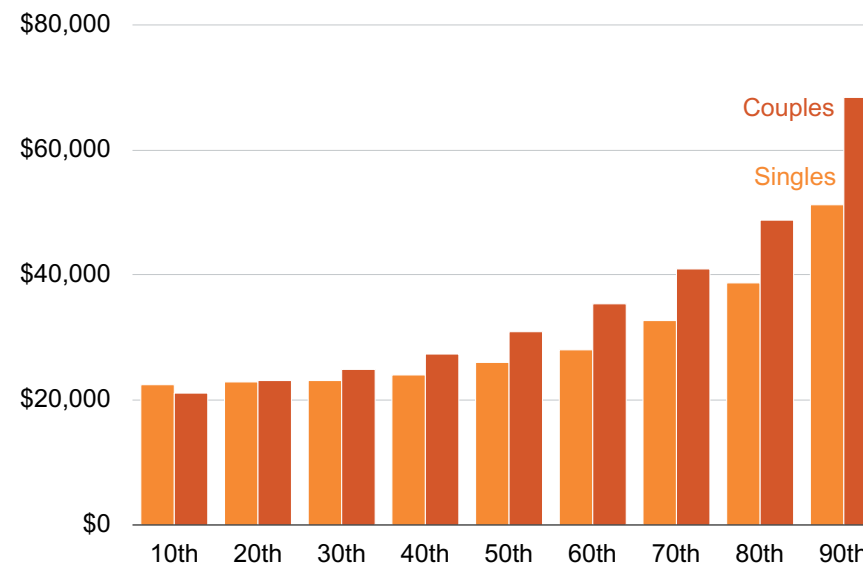
182. Ibid (Figure 3.12).

183. HILDA (2016, p. 30).

184. For instance, while Gallagher (2019) assumes that couples tend to partner with someone from the same point along the income distribution, our analysis of the Household, Income, and Labour Dynamics in Australia survey shows that high income-earners are just as likely to have a partner who earns in the middle or bottom of the income distribution. HILDA (2019).

**Figure 3.10: Couples tend to have more spending power than singles in retirement**

Equivalised annual disposable household income at top of selected percentiles, singles and couples aged 65+



Note: Includes households where reference person is aged 65+. Annualised from weekly figures.

Source: Grattan analysis of ABS (2016).

### 3.3 Employment patterns during working life

Retirement modelling should, as much as possible, reflect the actual work patterns of workers today. Grattan's model assumes that future retirees begin working at age 30, and the model tracks their earnings for 37 years until retirement at age 67.

Our approach is conservative: we assume a working life of 37 years from ages 30 to 66, whereas in reality most Australians start working well before age 30, thereby accumulating higher super balances than we project.<sup>185</sup> Our approach, in effect, builds in a career break of 5 years (or more) given most Australians start work by age 25. People who take longer career breaks than we project in our baseline approach can still replace their pre-retirement living standards (Figure 4.7 on page 58).

Models should also take into account how people move up and down the income distribution. The initial distribution of earnings for GRIP is based on wage and salary data from the ATO sample file of personal income tax returns for 2015-16. GRIP models these transitions by imitating how people of a given age and income actually moved between income bands in the HILDA survey between 2005-09 and 2010-14. Changes in position in the earnings distribution may be due to shifts from full- to part-time work, changing occupation or industry, or caring for children. When predicted in this way, there is less spread in lifetime incomes: fewer people are expected to have very low or very high incomes, and more are predicted to be close to the average.

Therefore GRIP predicts that a person who starts at the 10<sup>th</sup> percentile of workers at age 30 will earn about 29 per cent of average earnings over their lifetime, the equivalent of working three days a week at the minimum wage. If the person remained at the 10<sup>th</sup> percentile of workers

---

185. 63 per cent of 24-year-old Australians were working 15 hours or more in 2016, the same as for all 25-64 year-olds. ABS (2016).

for their whole working life, they would earn only about 20 per cent of average earnings.<sup>186</sup>

#### 3.3.1 At what age should workers retire in future?

GRIP models a retirement age of 67, based on the current legislated age for receipt of the Age Pension.<sup>187</sup> Older working-age Australians today already expect to retire at around age 67 – younger Australians, like those that we model, may expect to retire even later.<sup>188</sup>

Forcing all Australians to self-insure by saving even more for retirement, just in case they retire early, makes them poorer while working and is simply a recipe for larger inheritances.<sup>189</sup> The dangers of over-insurance are even greater given that low- and middle-income earners are already insured to some degree against the costs of an early retirement, because their lower superannuation at age 67 is offset by a larger Age Pension.<sup>190</sup> The Henry Tax Review was clear on this point when it argued against increasing compulsory super contributions beyond 9 per cent.<sup>191</sup>

---

186. Daley et al (2018b, p. 46).

187. Department of Human Services (2019).

188. The average age of retirement among people aged 45 and older today is 67 for men and 66 for women. ABS (2017b, Table 9.1).

189. As Khemka (2019, p. 28) notes, the benefit of self-insurance needs to be weighed against the possibility that members may end up over-saving if the risks of concern do not come to fruition.

190. For example, Khemka (ibid, p. 15) estimates that the optimal Super Guarantee rate for someone earning \$60,000 a year (just above median earnings) rises from 3.5 per cent assuming a retirement age of 67 to 8.5 per cent assuming retirement at age 62, to hit a 70 per cent replacement rate over their retirement. Whereas the optimal SG rate for someone earning \$120,000 a year (more than twice median earnings) would increase from 7.5 per cent if retiring at age 67 to 13 per cent if retiring at age 62. Both scenarios ignore the prospect that workers receive Newstart, or possibly the Disability Support Pension, in the event of involuntary early retirement.

191. Treasury (2009, p. 111).

People who are forced to retire early, such as carers or those with a disability, may be able to get the Carer Payment or the Disability Support Pension. But as shown in Figure 1.3 on page 15, recent changes to eligibility requirements for the Disability Support Pension mean fewer older Australians access the scheme than previously. And Newstart remains inadequate, having not been increased for the past two decades.

### 3.3.2 Measuring pre-retirement earnings

We calculate replacement rates by comparing average income over retirement against post-tax incomes in the last five years of working life. This replacement rate benchmark is chosen to effectively smooth incomes before and after retirement. Our approach mimics that of many defined benefit pension schemes, where pension entitlements are typically set as a proportion of workers' final earnings.

Calculating replacement rates using the last five years of working life incomes avoids complications that arise from including the costs of children, and government family payments. Most Australians aged 40-55 are still incurring the costs of raising dependent children, whereas in retirement they are not.<sup>192</sup> If the objective is to sustain people's living standards in retirement, the fact that typical retirees do not have dependent children should be taken into account. Our analysis shows that spending by Australian households *falls* by about 15 per cent as they move from ages 45-49 to 60-64 and their children leave home (Figure 3.11 on the following page). And that holds for both wealthier and poorer households (Figure 3.12).

Employment earnings for older Australians today begin to taper off from about the age of 60, reflecting lower retirement ages. Grattan does

---

192. The average number of dependent children in each household falls from 1.5 per household aged 35-44, to 1 per household aged 45-54, to just 0.2 per household aged 55-64. ABS (2019e, table 10.3).

make some allowance for changing work patterns for older workers when modelling retirement incomes for future retirees. We assume that 60-64 year-olds in 30 years will have higher incomes relative to similar-aged workers today, shown by the dotted line in Figure 3.14 on page 48. This reflects the fact that Grattan isn't modelling retirement for Australians today – we're modelling the retirement incomes of people aged 30 today and who won't retire for another 37 years. Rates of workforce participation are much higher today for older workers than they were 30 years ago, especially for women, and we predict they will continue to rise.

The result is that working-age incomes in GRIP peak on an inflation-adjusted basis just before retirement – the precise period we use as the denominator for calculating replacement rates (Figure 3.13 on page 48). But alternative approaches to specifying replacement rates based on the last 10 years of working life, or comparing retirement incomes to inflation-adjusted working-age incomes over a full working life, produce similar replacement rates (Table 4.1 on page 62). Comparing retirement incomes to inflation-adjusted working-age incomes over a full working life – the most reasonable alternative – would actually *increase* the replacement rates for the median earner from 90 per cent to 95 per cent.<sup>193</sup>

### 3.3.3 How long should retirement savings be expected to last?

Grattan assumes that retirees will live until 92. That is based on the prediction, in the 2015 *Intergenerational report*, of average life expectancy for people reaching age 70 in 2055.<sup>194</sup>

Some retirees will live past 92, but the wage-benchmarked Age Pension already provides substantial protection against longevity risk for most Australians, especially later in retirement. By the time a

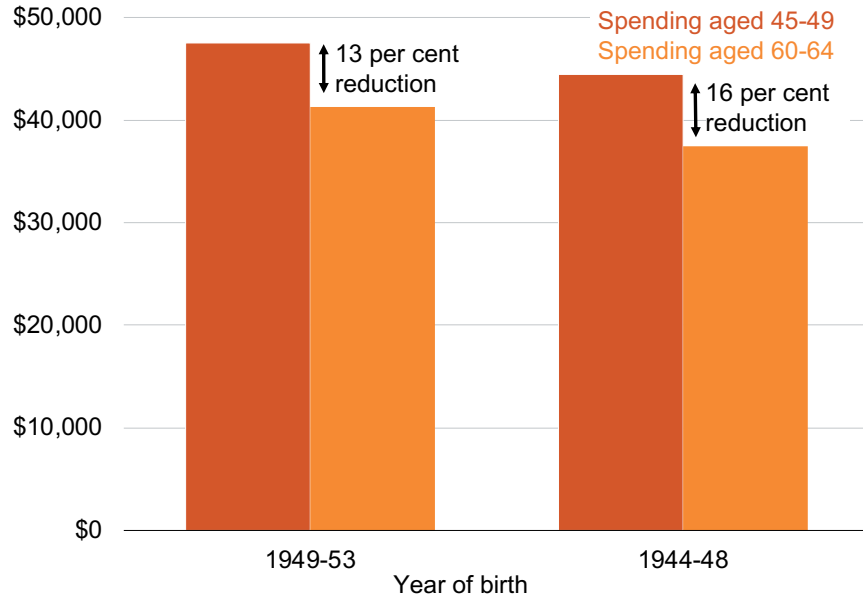
---

193. Coates and Emslie (2019, p. 24).

194. Hockey (2015, table 1.1).

**Figure 3.11: Australian households spend less as they approach retirement because the children move out**

Median household spending per year on goods and services (2015-16\$)

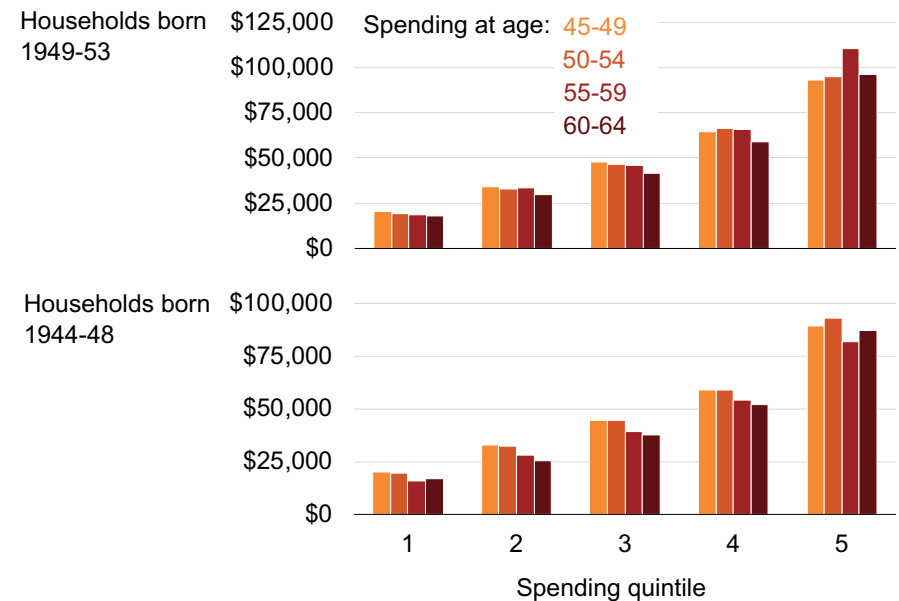


Notes: Inflated to 2015-16 dollars using CPI. To compare couples and singles, spending in couple households is reduced by 50 per cent using a process called equivalisation. No adjustment is made for children – this shows how much people aged 45 to 49 spend on children. Annualised from weekly figures.

Sources: Grattan analysis of ABS (multiple years).

**Figure 3.12: Australian households of all incomes spend less at age 60 than they do in their peak earning years**

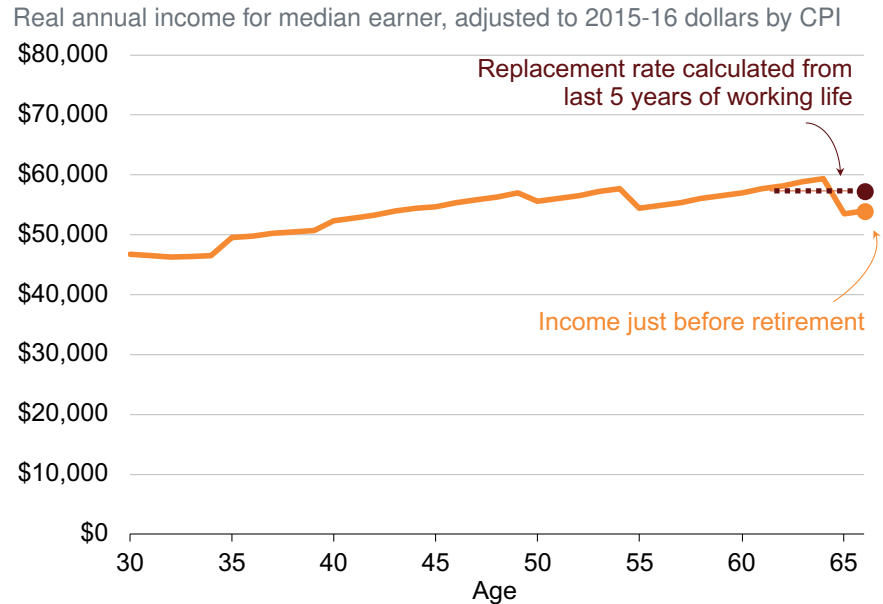
Median household spending per year on goods and services by spending quintile (2015-16\$)



Notes: Inflated to 2015-16 dollars using CPI. To compare couples and singles, spending in couple households is reduced by 50 per cent using a process called equivalisation. No adjustment made for children – this shows how much people aged 45 to 49 spend on children. Annualised from weekly figures.

Source: Grattan analysis of ABS (ibid).

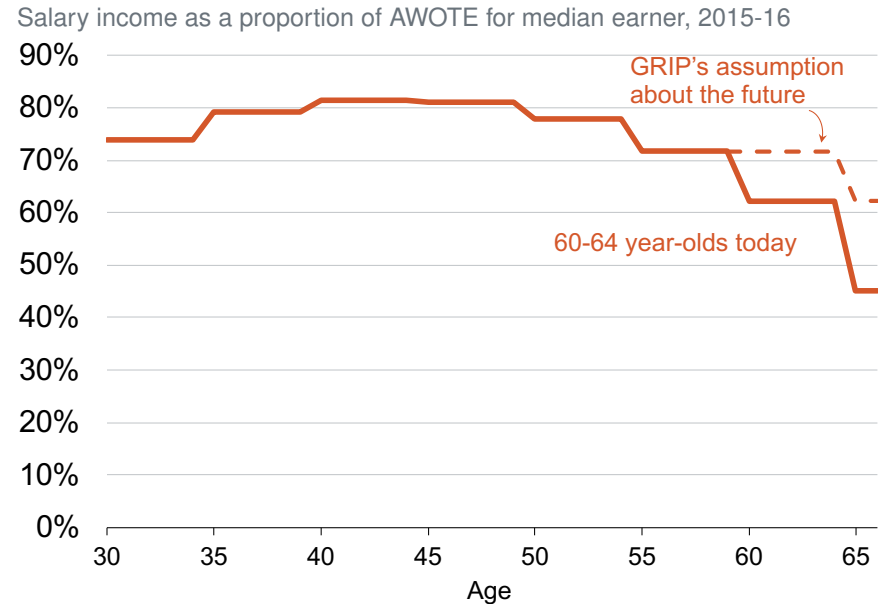
**Figure 3.13: Wages grow as workers age, and so we model that earnings peak just before retirement**



Notes: Models retirement income of a person born in 1985, who works from age 30 to 67, and dies at age 92. Assumes wages growth falls by the amount of any Super Guarantee increase. Employment earnings adjusted to account for movements up and down the earnings distribution, including transitions in and out of part-time work. Assumes that a 60-64 year-old in 30 years will earn a similar income as a proportion of Average Weekly Ordinary Time Earnings (AWOTE) as an income earner five years younger today.

Source: Grattan Retirement Income Projector (GRIP).

**Figure 3.14: 60-year-olds earn less than 50-year-olds today, but we predict future 60-year-olds will narrow the gap**



Notes: Lifetime income adjusted using Grattan's 'pachinko' machine, which reflects the likelihood of moving up and down the income distribution over the course of a person's working life. Because this is calculated as share of AWOTE at the time, it is effectively wage deflated.

Source: Daley et al (2018b, Figure 4.2).



median wage earner aged 30 today reaches 92, the full Age Pension will be worth 73 per cent of their average annual income across their retirement.<sup>195</sup> Since retirees' spending needs also appear to fall by 15-to-20 per cent from the beginning of retirement to age 90, and the Age Pension rises through retirement, the full pension provides quite a safety net against longevity risk for most retirees.

Of course, longevity risk is more of a problem for the wealthiest 20 per cent of retirees. That's why Grattan's modelling assumes retirees aged 92 will still have 10 per cent of their retirement wealth set aside. The OECD allows for 10 per cent of the superannuation balance at retirement to cover the cost of buying an annuity, thereby removing longevity risk for the individual.<sup>196</sup> Those who own a home will also be able to use the Pension Loans Scheme to supplement their spending. And we have ignored the prospect that retirees will receive an inheritance, which is more likely for many wealthier retirees.<sup>197</sup>

As noted in Chapter 1, retirement incomes policies should be set to best suit the many, not the few.

### 3.3.4 Which assets should be counted?

Many traditional approaches to retirement modelling have assumed that retirement incomes will primarily be generated by formal pension savings. For example, when the OECD assessed the adequacy of retirement incomes, it included only income drawn from mandatory pension schemes, and voluntary schemes that cover at least 40

---

195. Coates et al (2019, Figure 3.9).

196. Mercer (2019, p. 7).

197. The probability that someone in the wealthiest 20 per cent receives an inheritance in a given year (2 per cent) is more than double that for someone in the poorest 20 per cent. Someone living until 92 has about a 1-in-5 possibility of receiving an inheritance after their 67<sup>th</sup> birthday. For someone in the wealthiest 20 per cent, this is closer to 1-in-4. Wood et al (2019).

per cent of the working population.<sup>198</sup> Applied to Australia, this approach would ignore voluntary superannuation contributions, as well as substantial non-super savings. In the past, many Treasury assessments of the adequacy of retirement incomes have typically included only superannuation savings,<sup>199</sup> as did a number of industry assessments (Table 4.2 on page 64).

But this approach is outdated. Australians save for retirement using a number of vehicles, including super, housing, and non-super assets that generate income such as investment housing and shares. These non-super savings have persisted even as the superannuation system has matured, and they generate income in retirement. Ignoring these non-super savings paints an unfairly bleak picture of retirement income adequacy, particularly for the wealthiest 20 per cent of retirees.<sup>200</sup>

### 3.3.5 Voluntary super contributions

Voluntary super contributions are a particularly important source of savings for high-income earners. GRIP includes voluntary pre-tax super contributions, but ignores all post-tax super contributions.<sup>201</sup>

---

198. OECD (Table 4.5 2017b, pp. 102, 150). Mandatory schemes with near-universal coverage were also included, provided they cover at least 85 per cent of employees (OECD (ibid, p. 98)).

199. Rothman and Bingham (2004, p. 7); and Henry (2009a).

200. Burnett et al (2014) find that omitting one or more of the 'pillars' of retirement savings leads to significant underestimation of potential living standards during retirement, particularly among those with higher levels of disposable income and net worth. Ignoring non-super savings also leads to misrepresentation of the total risk profile of retirement savings and income.

201. Post-tax super contributions make up about 30 per cent of all super contributions made each year. Such contributions are typically made by a relatively small number of higher-income Australians, typically with large super balances already. Daley et al (2015, Figure 4.1). Some analysts have incorrectly claimed that we include voluntary post-tax super contributions in GRIP. Gallagher (2019).

Nonetheless assumptions about voluntary pre-tax super contributions are difficult to make with the data available to Grattan. Only a minority of people in the ATO's sample of tax returns make voluntary pre-tax super contributions in any year, but many more people probably make a material contribution at some time over their working life. Ideally any model should use tax data from the same individuals over many years to accurately record voluntary contributions. Our model does not have this level of detail and so it assumes that every year people make the average contribution for a person of their age and income level observed in the ATO sample file. In real life people are more likely to make no voluntary contributions in many years, and then contribute much more than the average in one or two years, especially as they approach retirement.

This assumption has featured prominently in the debate about retirement incomes modelling, but it is relatively unimportant.<sup>202</sup> Good modellers get excited about assumptions only if those assumptions significantly change the answers. Even if you assume no one makes voluntary super contributions, Grattan's model of replacement rates for the median worker would only fall from 90 per cent of their pre-retirement earnings to 86 per cent – still a long way above the 70 per cent benchmark. Excluding all voluntary pre-tax super contributions has a larger impact on replacement rates for the top end, but this is precisely the group that is much more likely to make larger voluntary super contributions in real life.<sup>203</sup>

### 3.3.6 Drawdown strategy

Retirement incomes depend a lot on whether retirees draw down on their savings or largely retain their capital throughout retirement.

---

202. Industry Super Australia (2018).

203. Coates and Daley (2018).

Retirees can maximise their total lifetime income by drawing down on their assets faster, and becoming entitled to more Age Pension earlier in their retirement. Alternatively, people might draw down on their assets in line with legislated minimum drawdowns from superannuation.<sup>204</sup> This would result in much lower retirement incomes, but higher bequests. It would also imply much lower replacement rates – the rate for the median earner would be 81 per cent, compared to 90 per cent on GRIP's base case assumptions (Table 4.1 on page 62).<sup>205</sup> On this basis, the median retiree would leave a legacy of \$190,000 in today's dollars, 33 per cent of their savings at retirement, in addition to any home they own.

Retirement incomes policy might be criticised if it assumes that people draw down their savings faster than they really do. But policy should be set so that individuals have enough resources to fund an adequate retirement on the expectation that they do draw down on their wealth. The alternative would effectively set policy, including compelling higher savings, to fund bequests.

GRIP assumes that people withdraw from their superannuation accumulation and pension accounts, as well as from non-super assets, in equal (CPI-adjusted) amounts across the 26 years between retirement and age 92. Under this assumption, the real incomes of low- and middle-income retirees rise as they age, because their Age Pension entitlement increases.

Ideally retirees would be modelled withdrawing more in their earlier years in order to draw a constant real (inflation-adjusted) income over their retirement years.<sup>206</sup> For instance, the Actuaries Institute recently released a simple 'rule of thumb' to guide retirees, which could form

---

204. ATO (2018).

205. For impact across the distribution, see Daley et al (2018b, Figure D5).

206. In practice, generating a constant real retirement income from all sources implies drawing a decreasing income from private sources over time to offset the rising value of Age Pension payments. The value of the pension increases due to

the basis of future modelling of drawdown behaviour.<sup>207</sup> An optimal approach would likely lead to *higher* retirement incomes as retirees draw down their private savings faster in early retirement and therefore receive more Age Pension over the course of their entire retirement. In fact even assuming drawdown at government-mandated minimum drawdown rates only marginally reduces replacement rates for the median earner (Table 4.1 on page 62).

### 3.3.7 Investment returns

Grattan assumes nominal investment returns of 7.5 per cent during working life and 6.5 per cent during retirement (before fees). These assumed returns are consistent with a number of other studies<sup>208</sup> and are substantially lower than the average returns enjoyed by superannuation fund members in recent years.<sup>209</sup>

Policy makers are concerned that future returns on savings may be lower than in the past. A number of studies have pointed to risks of lower returns for future retirement incomes.<sup>210</sup> But lower returns are unlikely to occur without a corresponding decrease in real wages growth (i.e. lower productivity growth), and lower inflation.<sup>211</sup> These combinations affect replacement rates more than returns on their own. Replacement rates in a low-return environment are also cushioned for the median worker by a corresponding increase in the Age Pension (Figure 3.15). Meanwhile declines in long-term, risk-free interest rates in the past decade have substantially boosted returns over the past decade.

wage indexation increasing its real value, and the fact many retirees will become eligible for a larger part-pension as they draw down on their private savings.

207. Ravin et al (2019).

208. For example, Stone et al (2019) assumes returns before fees of 7.5 per cent in the accumulation phase and 6.5 per cent in the drawdown phase.

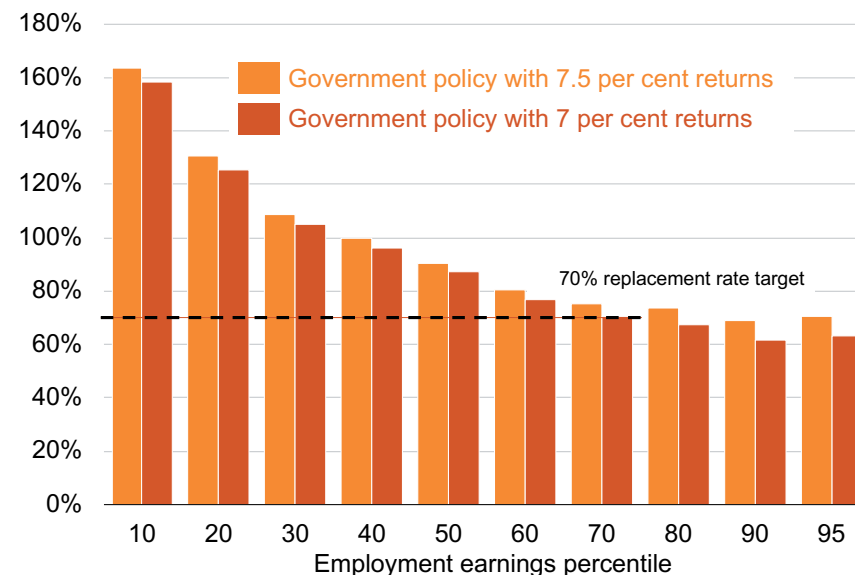
209. ASFA (2018c).

210. See Burnett and Wilkinson (2016).

211. Rachel and T. Smith (2015).

**Figure 3.15: Lower investment returns reduce replacement rates, particularly for higher-income earners**

Annual disposable income in retirement as a share of last five years of working life for a 30-year-old in 2015, deflated by CPI



Notes: Returns are before fees during working life. Returns are one per cent lower during retirement. Results from modelling the retirement income of a person born in 1985, who works from 30 to 67, and dies at age 92. Retirement savings drawn down so that a small bequest is left, in addition to the home. Assumes no reduction in wages growth or inflation in low returns scenario, which would otherwise increase effective replacement rates.

Source: Grattan Retirement Income Projector (GRIP).

### 3.3.8 The wages trade-off

Compulsory superannuation contributions are paid by employers. But just because employers write the cheque does not mean they ultimately bear the cost of compulsory super. The cost can be passed through to consumers in the form of higher prices for goods and services, to workers in the form of lower wages, or borne by shareholders as reduced profits.

The question of who ultimately pays for compulsory superannuation is an empirical one: it can only be resolved with data. A recent Grattan Institute working paper, *No free lunch: higher super means lower wages* examined the super-wages trade-off using a large administrative database of enterprise agreements.<sup>212</sup> It found that, on average, about 80 per cent of the cost of higher super is passed through to workers in the form of lower wages growth over the life of an enterprise agreement, typically 2-to-3 years.<sup>213</sup> The paper finds there are no compelling reasons to expect that the trade-off will be much different for workers on other pay-setting arrangements, and few reasons to expect the trade-off to be different in the future than it was in the past. In the long-run, the degree of pass-through from higher super to lower wages is likely to be even bigger. In practice, full pass-through from super to wages can't be ruled out.<sup>214</sup>

The super-wages trade-off is important for policy makers considering increasing compulsory superannuation. The negative effect on wages is an important part of the costs of higher super, which ought to be weighed alongside super's benefits.

Past Grattan modelling of retirement incomes published in *Money in retirement* assumed that 100 per cent of the cost of higher superannuation came via lower wages.<sup>215</sup> But *No free lunch* showed that varying the assumption about share of higher super that is paid for via lower growth in wages makes little difference to our findings about retirement incomes adequacy for most Australians.<sup>216</sup> In this paper we assume that 80 per cent of the cost of higher compulsory super is ultimately paid for by workers via lower wages.

---

212. Coates et al (2020).

213. The Reserve Bank of Australia also estimates that about 80 per cent of higher super will be paid for through lower wage growth over several years, with the effect greatest in the private sector. Kehoe and Cranston (2020).

214. International studies of similar schemes typically find that all of the cost is borne by workers through lower wage growth in the long term. Coates et al (2020, Figure 2.1).

---

215. Daley et al (2018b).

216. Coates et al (2020, Figure 6.1).

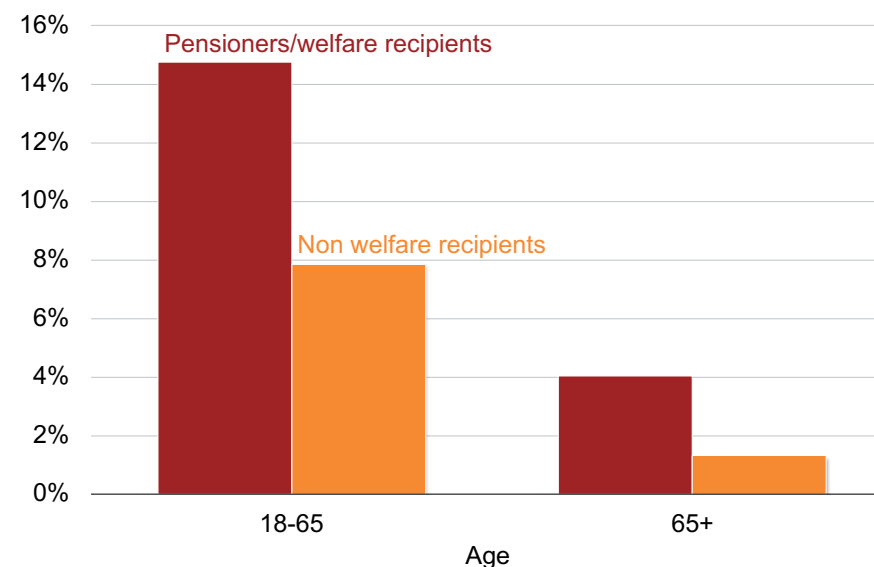
## 4 Retirement incomes are adequate for most working Australians

Chapter 2 showed that most retirees in Australia are likely to avoid poverty in retirement, unless they are renting on a low income. This chapter shows that our retirement incomes system is also achieving its other key adequacy objective: helping smooth lifetime consumption for most Australians.

Most retirees today feel more comfortable financially than younger Australians who are still working. Retirees today are less likely than working-age Australians to suffer financial stress such as being unable to pay a bill on time. Across the income distribution, people typically have enough money to sustain the same, or a higher, living standard in retirement as when working. Most own their own homes. And most retirees are more likely to be able to afford optional extras such as annual holidays. Many retirees are net savers, and current retirees often leave a legacy almost as large as their nest egg on the day they retired.

On reasonable assumptions, the retirees of tomorrow are likely to be even better off, due to a combination of compulsory super contributions, non-super savings, and the Age Pension. The typical home-owning worker can expect to replace about 90 per cent of their pre-retirement earnings, well above the 70 per cent benchmark used by the OECD and others. On our modelling, all but the wealthiest 20 per cent of workers can expect a replacement rate of 70 per cent or more. Many low-income workers can expect a pay rise in retirement, because the Age Pension and the income they get from compulsory retirement savings will be higher than the wage they receive during their working life. Retirement incomes typically remain adequate for most Australians even when they take significant career breaks, such as to care for children, although renters, including many older women, remain at risk of poverty in retirement.

**Figure 4.1: Retirees suffer less financial stress than working-age people**  
Home-owning households facing at least one financial stress, 2015-2016



*Notes: Financial stress is defined as whether, due to a money shortage, a household: 1) skipped meals; 2) did not heat their home; 3) failed to pay gas, electricity, or telephone bills on time; or 4) failed to pay registration insurance on time. 'Pension' includes everyone over 65 who receives social assistance benefits in cash of more than \$100 per week. 'Welfare' includes people who receive more than \$100 per week from a disability support pension, carer payment, unemployment or student allowance, or other government pension.*

*Source: Grattan analysis of ABS (2017a).*

#### 4.1 Today's retirees feel comfortable

Retirees today are more financially comfortable than working-aged Australians. Most retirees have paid off their mortgage, and no longer have the financial stress of bringing up children. They are far less likely to suffer financial stress such as not being able to pay a bill on time (Figure 4.1 on the previous page), and are more likely than working-age households to say they feel financially comfortable (Figure 4.3 on the following page).

Just as retirees are less stressed about essentials, their discretionary expenditure is also less financially constrained than that of working-age people. Retirees are less likely to miss out, due to cost, on things like taking a holiday (Figure 4.2 on the next page). Retirement is a particular relief for low-income earners, whose income typically increases in retirement with access to the Age Pension.

Rather than running out of money each week and dipping excessively into savings, higher-income Australians maintain their nest egg well into retirement. Most retirees never spend a large part of the savings that they have on the day they retire. Many retirees seem reluctant to draw down on their capital, and instead live on the income their savings generate.<sup>217</sup> While precautionary savings may explain part of retirees' savings behaviour (Section 1.6 on page 17), the combination of a lack of spending and high rates of financial satisfaction suggests that retirees' needs are being met.

#### 4.2 Current retirees are typically replacing 70 per cent or more of their pre-retirement income

Most retirees today have successfully smoothed their standard of living into retirement and typically replace 70 per cent of their pre-retirement earnings (see Figure 4.4). The median couple household aged 65-84

---

217. Daley et al (2018b, p. 32).

years earns about 86 per cent of what they earned 20 years ago. Lower-income households typically have more income in retirement than when they worked. And retirees today of all incomes appear to have incomes of at least 70 per cent of their pre-retirement incomes.

The experience of retirees today should be reassuring for current workers. Retirees today did not have the benefit of a lifetime of superannuation, although most benefited from the housing boom, which helped boost their retirement savings. And the Age Pension replaces a large share of their pre-retirement income. If home-owning workers have similar replacement rates, there's little reason to expect they won't enjoy similar levels of financial satisfaction in retirement.

#### 4.3 Most of today's workers will replace 70 per cent of their pre-retirement income

Our updated retirement incomes modelling using our GRIP model shows the median worker aged 30 today can expect a retirement income of 90 per cent of their pre-retirement post-tax income – well above the 70 per cent benchmark used by the OECD and others, and more than enough to maintain pre-retirement living standards.

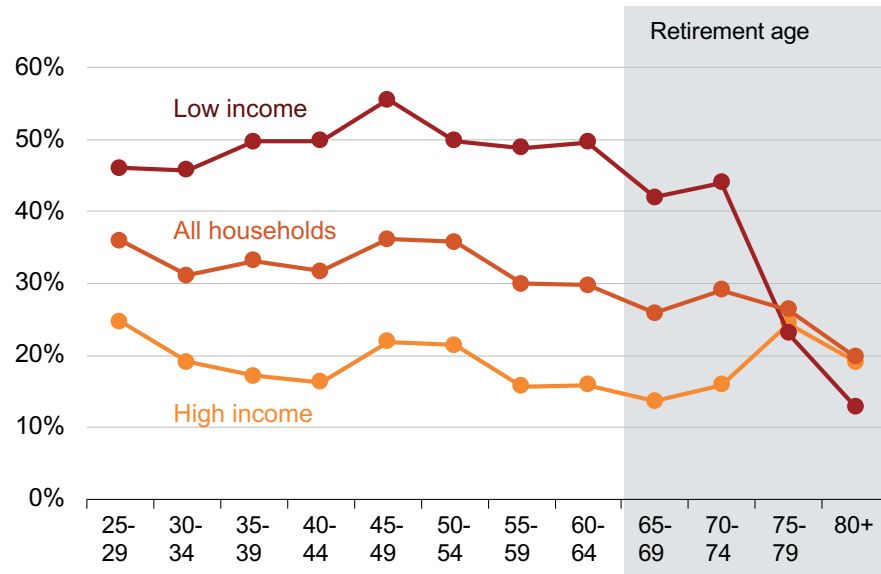
The vast majority of workers aged in their 40s and 50s are also on track for a comfortable retirement (Figure 4.5).<sup>218</sup> In fact workers in their 40s and 50s are typically on track to replace at least 80 per cent of their pre-retirement, post-tax earnings in retirement, well above the 70 per cent benchmark used in our research.

---

218. People who will retire over the next two decades may not save as much out of their pay packets as younger generations, but the Age Pension will replace a larger share of their pre-retirement incomes. And lower compulsory super contributions are offset by historically high returns on assets and significant non-super savings by the wealthy: Daley et al (2018b, chapter 5).

**Figure 4.2: Retirees miss out on fewer experiences because of cost than working-age people**

Share of households that missed out on an experience because of cost in the past 12 months

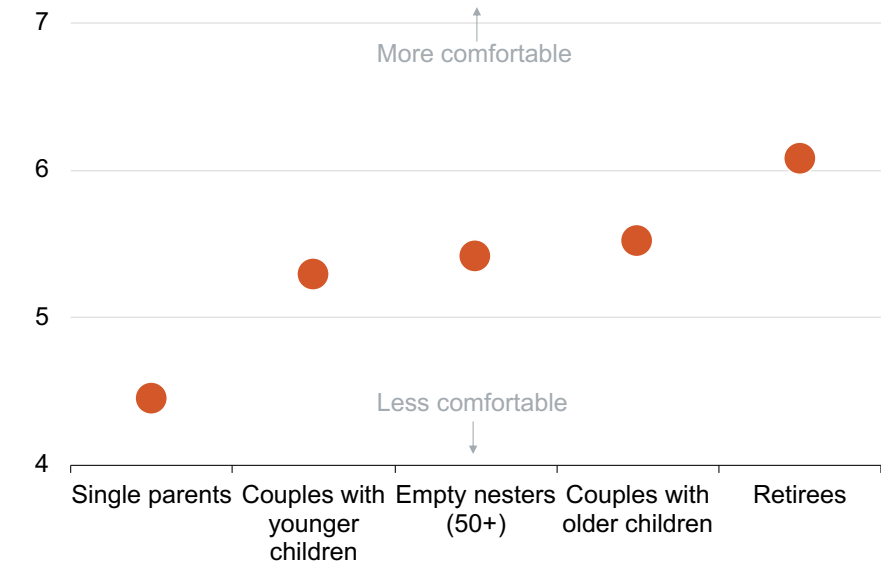


Notes: High (low) income includes all those in the top (bottom) third of incomes for that age cohort. 'Missing out experiences' includes not being able to afford a holiday once a year or not being able to afford a special meal once a week.

Source: Grattan analysis of ABS (2017a).

**Figure 4.3: Retirees today feel more comfortable financially than any other group in society**

Self-assessed financial comfort, scores out of 10

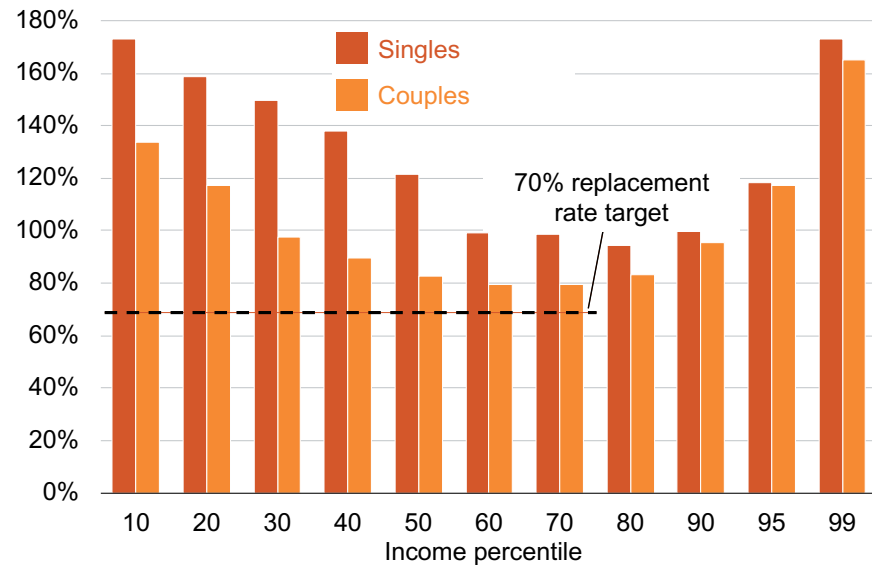


Notes: Median of survey results from 2011 to 2019. Excludes anomalous December 2014 survey. Middle-aged singles and couples without children, and younger singles and couples without children, have been excluded for readability. Middle-aged households with no children are sometimes imagined to be the most financially secure, but even their self-assessed financial comfort is worse than retirees, having averaged just below 5.5 across the survey period.

Source: Daley et al (2018b, Figure 3.1) updated using ME Bank (2020, Figure 15).

**Figure 4.4: Retirees today have higher incomes than when they were of working age**

Annual disposable income for households aged 65-84 in 2015, relative to income for households aged 45-64 in 1995, 2015-16\$

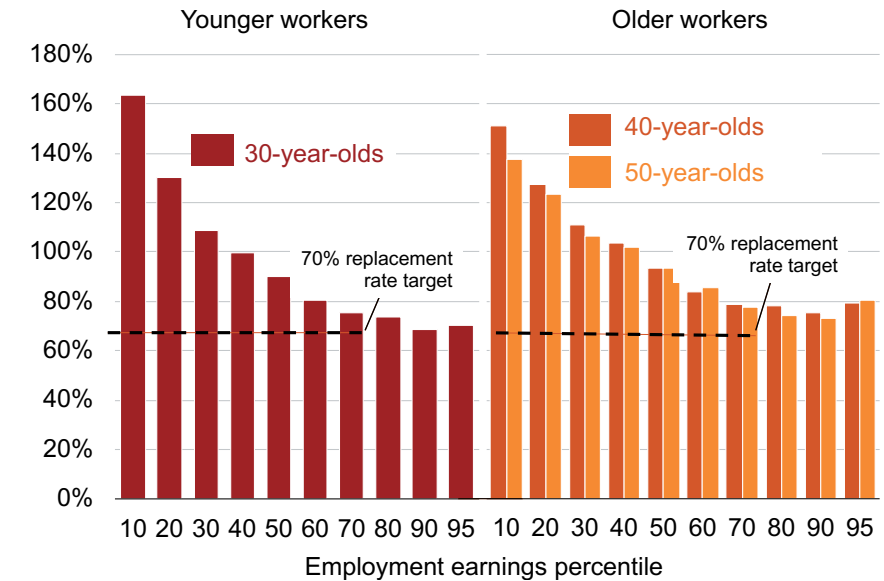


Notes: Based on disposable income from the 1995-96 and 2015-16 iterations of the Survey of Income and Housing. Disposable income includes head of household and their partner, but not children. Incomes in 1995 adjusted to take account of changes in ABS definitions of income between surveys. For more information about how the ABS definition of income has changed, see Wilkins (2014).

Source: Grattan analysis of ABS (various years).

**Figure 4.5: Both older and younger workers can expect to replace at least 70 per cent of their pre-retirement income**

Annual disposable income in retirement as a share of last five years of working life for 30-, 40-, and 50-year-olds in 2015, deflated by CPI



Notes: See Daley et al (2018b, figure 1.2).

Source: Daley et al (ibid, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates and Emslie (2019, pp. 22-23). 40- and 50-year old model not updated to reflect changes in fees described at Section 3.2 on page 31.



### 4.3.1 Our modelling includes women and part-time workers

Contrary to the claims of some commentators,<sup>219</sup> GRIP includes all Australian workers, including women and part-time workers. The initial distribution of earnings used in GRIP is based on Australian Taxation Office data for 2015-16 (Section 3.3 on page 45). This includes everyone who submits a tax return. The median woman earned around \$39,000 in 2016-17, or between the 20<sup>th</sup> and 30<sup>th</sup> percentiles of all workers in GRIP.<sup>220</sup> Women account for 48 per cent of all workers, and 54 per cent of those with wage and salary incomes in the bottom 30 per cent in a given year (Figure 4.6). Most workers on lower incomes work part-time. For example, GRIP predicts that a person who starts at the 10<sup>th</sup> percentile of workers at age 30 will earn about 29 per cent of average earnings over their lifetime, the equivalent of working three days a week at the minimum wage. GRIP also models transitions up and down the earnings distribution due to shifts from full-time to part-time work, among other factors (Section 3.3 on page 45).

### 4.3.2 Most workers who take career breaks can also expect an adequate retirement income

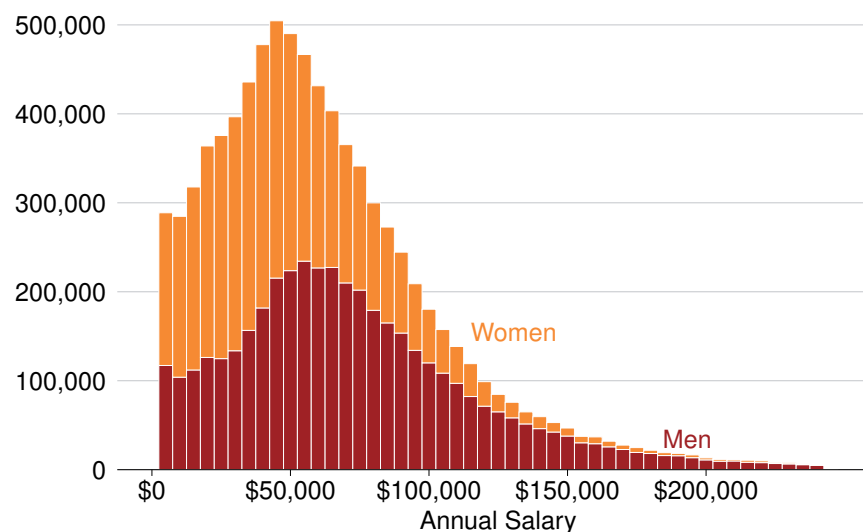
Our baseline projections assume Australians work for 37 years, between the ages of 30 and 67. This allows for a career break of at least five years, given that most Australians start work by age 25 and expect to work for around 37 years (Section 3.3 on page 45). Many Australians, especially women, take large breaks from the workforce, which can have a big impact on their superannuation balances. People might spend a period of their life not paying super because they are a contractor, unemployed, or are taking time away from the workforce to care for children.

219. For example, Industry Super Australia incorrectly claims that Grattan's work ignores women: Myers (2019).

220. Grattan analysis of ATO (2019).

**Figure 4.6: Women are included in our modelling, and tend to earn lower incomes**

Number of taxpayers in salary band, 2015-16



Notes: Distribution captures taxpayers aged 25 to 64. Each histogram column represents a salary band of \$10,000. People with a salary greater than \$250,000 (less than 1 per cent of taxpayers) are excluded from the histogram for readability, but are still included in GRIP modelling.

Source: Grattan analysis of ATO (2016).

Crucially, most Australians will smooth their lifetime consumption even when they take significant career breaks. By only starting work at age 30, GRIP implicitly models that every worker takes a five-year career break between the ages of 25 and retirement. Yet if a median-income earner takes a further five-year career break (10 years in total), and works for 32 rather than 37 years, their replacement rate will only fall from 90 per cent to 88 per cent – still well above the 70 per cent benchmark used by the OECD and Grattan. If they take a 15-year break, their replacement rate only falls to 86 per cent (Figure 4.7).<sup>221</sup>

When careers are interrupted, workers save less super for retirement, but will tend to get a larger Age Pension instead. Workers on higher incomes will be less reliant on the pension in retirement, and are therefore more sensitive to changes in their super balance.<sup>222</sup> A single worker at the 70<sup>th</sup> percentile of earnings who takes a 15-year career break will fall 1 percentage point short of the 70 per cent replacement rate target under current government policy.

### 4.3.3 Most renters can expect to replace their pre-retirement earnings, but many are at risk of poverty

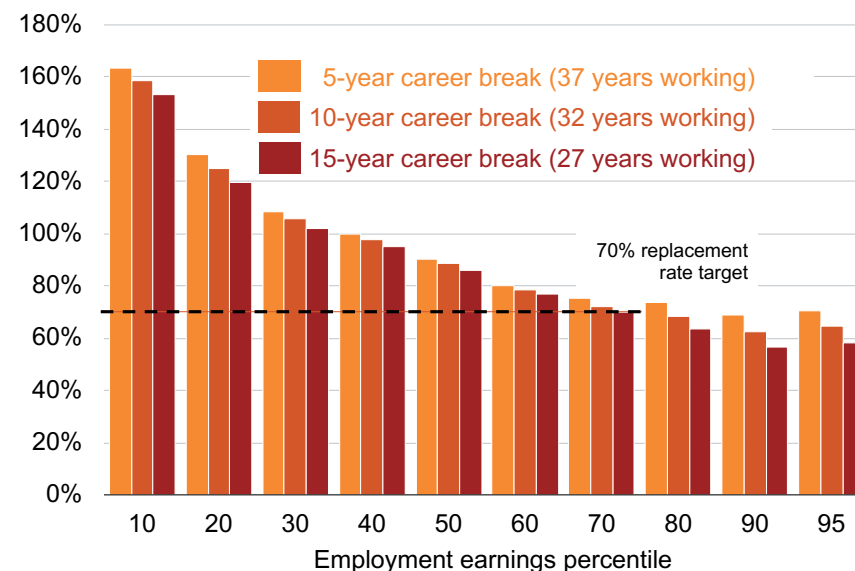
Most renters can expect to replace at least 100 per cent of their pre-retirement income (Figure 4.8 on the next page). The median 30-year-old today who rents will have about the same disposable income before retirement as after under current government policy. And most retired

221. Our baseline model implicitly assumes that workers take time off from the ages of 25 to 29. We measure replacement rates based on the last five years of working life, which means that the replacement rate denominator is unaffected by career breaks earlier in life.

222. These findings are consistent with retirement modelling done for the Henry Tax Review, which found that career breaks did not substantially alter replacement rates, and in some cases increased replacement rates when replacement rates were measured over the full period of someone's working life. Henry (2009a, Chart 4.4).

**Figure 4.7: Career breaks don't change replacement rates much for people in the middle**

Annual disposable income in retirement as a share of last five years of working life for a 25-year-old in 2010, deflated by CPI



Notes: Modelled based on a 25-year-old who does not work for 5, 10, or 15 years and then stays in the workforce until retirement. Based on current retirement income policy settings, including 12 per cent super, and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages.

Source: Daley et al (2018b, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

renters in future are likely to have earned less than median earnings when working.<sup>223</sup>

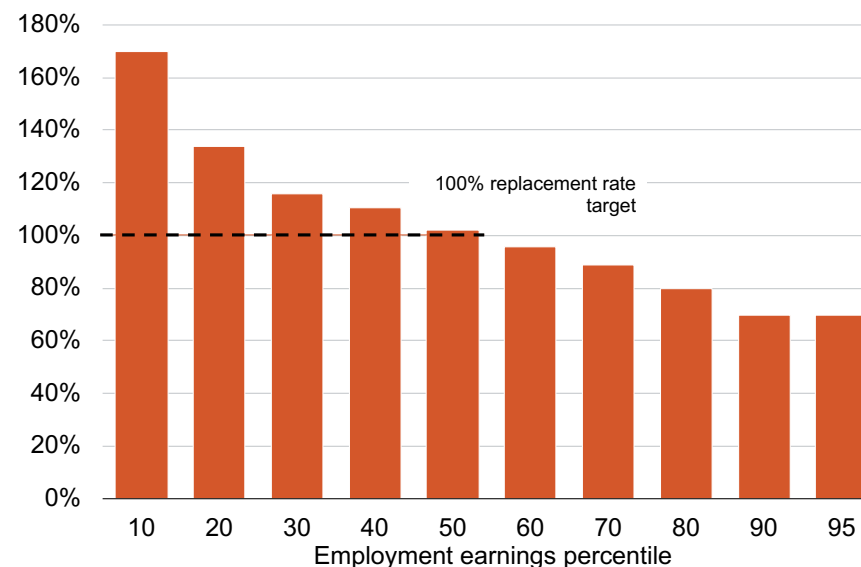
Renters who qualify for the Age Pension can expect to receive Commonwealth Rent Assistance. And renters with a given level of retirement savings will qualify for more Age Pension than homeowners since they can have more assets outside the home before they begin to lose their pension entitlement. Retirees who rent are entitled to have an extra \$210,500 in assets, compared to retirees with a home, before they begin to lose access to the maximum rate Age Pension.<sup>224</sup> Depending on where retirees are positioned on the asset test taper, this can equate to up to an extra \$16,400 each year in pension payments for a single renter, compared to a home-owning pensioner with equivalent non-housing assets.<sup>225</sup>

Many renters are at risk of financial stress and poverty in retirement (Section 2.2 on page 26). Home ownership has fallen fastest for the poorest 40 per cent of Australian households at all ages (Figure 1.6 on page 21). Since renters have lower incomes and have fewer other

223. Around 67 per cent of renting income units aged 35 to 64 years today have below-median employment incomes. Below-average earners are likely to account for a larger share of those still renting at retirement. Grattan analysis of ABS (2019a).
224. Home-owning singles are allowed \$263,250 in assessable assets before their pension is reduced, compared to \$473,750 for a single without a home. Home-owning couples are allowed \$394,500 in wealth before their full pension is reduced, while a couple without a home can have \$605,000 (Services Australia 2020a).
225. Under the current Age Pension assets test, the pension reduces by \$78 for each \$1,000 in assessable assets that retirees have beyond the relevant thresholds. Services Australia (ibid).

**Figure 4.8: Low- and middle-income renters will replace their pre-retirement living standards**

Annual disposable income in retirement for renters as a share of last five years of working life for a 30-year-old in 2015, deflated by CPI



Notes: Based on currently legislated retirement income policy settings, including 12 per cent Super Guarantee (S.G.), and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages. Also assumes renters are eligible for the maximum rate of Commonwealth Rent Assistance, which is benchmarked to inflation only. The bulk of retired renters in future are likely to be among the poorest half of all workers today.

Source: Daley et al (2018b, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

assets than homeowners,<sup>226</sup> they are therefore at greater risk of poverty and financial stress in retirement (Section 2.2 on page 26).

Higher income renters may not replace their pre-retirement living standard (Figure 4.8 on the previous page). But there are relatively few high-income renters today, and unlikely to be substantially more in future. After all, home ownership rates among younger, high-income Australians have fallen only marginally (Figure 1.6 on page 21). And this analysis ignores the prospect that wealthier renters save more – either in super or elsewhere – to compensate for not accumulating wealth by paying off a mortgage by retirement.

#### 4.4 Our findings are robust to different assumptions

As Chapter 3 showed, the assumptions behind GRIP have been considered carefully. Using the most plausible bases for calculation, the GRIP model predicts that most people entering the workforce today aged 30, and working for 37 years, will have incomes in retirement at or above 70 per cent of their pre-retirement incomes. A median-income worker will have a replacement rate of 90 per cent.

But replacement rates are very sensitive to assumptions, which are not always made explicit.

Our modelling results are robust to a range of alternative assumptions, as specified in Table 4.1 on page 62. Replacement rates for the median worker will still be adequate even if:

- retirement earnings are expected to grow with wages;

- replacement rates are measured comparing retirement incomes to the working life incomes in the last 5 years before retirement, or the last 10 years before retirement, or over a full working life;
- investment returns are lower;
- people do not make *any* voluntary super contributions;
- people do not save outside of superannuation;
- drawdown rates are lower (implying greater bequests or greater expected longevity);
- people have substantial broken work histories and accumulate less super by retirement;
- the Superannuation Guarantee remains at 9.5 per cent, instead of rising to 12 per cent as currently legislated.

As shown in Table 4.1 on page 62, the most important assumption is whether retirement incomes are deflated by inflation or by wages. Deflating by inflation is consistent with the objective of lifetime consumption smoothing, because living standards are driven by the level of consumption that people can afford, and inflation reflects changes in the actual cost of what people are able to buy.<sup>227</sup>

We calculate replacement rates by comparing average income over retirement against post-tax incomes in the last five years of working life.<sup>228</sup> But comparing retirement incomes to living standards during the last 10 years of working life produces similar replacement rates for the median earner (90 per cent), as does comparing against incomes across the entire working life (95 per cent).

---

226. Most renting retirees qualify as 'low economic resource' households – income- and asset-poor households that are at risk of high levels of financial hardship. By contrast, only a minority of home-owning retirees qualify as 'low economic resource' households. Coates (2018, p. 8).

227. Rothman and Bingham (2004, p. 6).

228. As noted in Chapter 3, our approach mimics that of many defined benefit pension schemes, where pension entitlements are typically set as a proportion of workers' final earnings.

Another approach adopted by some retirement income modellers is to deflate retirement incomes by inflation during retirement, but by wages during working life, while calculating replacement rates across the whole of retirement (as the numerator) and working life (as the denominator). Deflating working life incomes by wages is inconsistent with the objective of lifetime consumption smoothing. Nonetheless, retirement incomes are still adequate using this approach, with the median earner replacing 80 per cent of their pre-retirement earnings, rather than 90 per cent in our baseline approach (Table 4.1 on the next page).

In fact, even if future retirement incomes are deflated using wage inflation – implying that retirement incomes will keep up with living standards as they rise across the community – replacement rates reach the 70 per cent target for the median worker. And if retirees draw down on their retirement savings more slowly – motivated by the risks of living longer – replacement rates would still exceed our 70 per cent benchmark for the median worker, although they would be lower for the 70th percentile and above.<sup>229</sup> This is a reasonable balance between providing adequate replacement incomes in retirement and subsidising a lot of bequests.

#### 4.5 Our findings are consistent with past work from the Treasury, but contradict flawed industry research

Our research aligns closely with previous Treasury modelling, including for the Henry Tax Review, which also concluded that retirement incomes will be adequate for most Australians.<sup>230</sup> Crucially, Treasury has consistently benchmarked retirement incomes to inflation, rather than to wages.<sup>231</sup>

---

229. Daley et al (2018b, Figure D5).

230. For example see: Morrison (2015b), Rothman (2011), Henry (2009a) and Treasury (2009). More recently see Treasury (2019).

231. Daley et al (2018b, table 4.4).

Recent modelling by actuarial firm Rice Warner also generates similar outcomes to Grattan's retirement incomes modelling.<sup>232</sup> And unlike much other industry research, Rice Warner benchmarks retirement spending needs to inflation, not wages (Table 4.2 on page 64).<sup>233</sup> Similarly, researchers at ANU recently concluded that the retirement incomes system, including compulsory super of 9.5 per cent, typically delivers adequate retirement incomes for many workers assuming CPI deflation of retirement incomes.<sup>234</sup>

Our findings contradict the claims of some in the superannuation industry that Australians are not saving enough for their retirement. Such claims have typically been based on research that overlooks, or is silent about, three important issues.

First, a lot of research assumes that incomes in retirement should keep up with wages growth. Implicitly they assume that a retiree needs an income 28 per cent higher at age 92 than at age 67, even after accounting for inflation (Figure 3.4 on page 37). But our analysis shows that Australians tend to spend less after they retire, even when they have money to spare.<sup>235</sup> Therefore, retirement incomes should be measured after accounting for inflation, rather than wages.<sup>236</sup>

---

232. Rice Warner (2019, graph 6, graph 7).

233. Rice Warner (ibid) continues to deflate working-age income by wages.

234. Khemka (2019). The authors use a number of retirement adequacy benchmarks, including a 70 per cent replacement rate and the ASFA comfortable and modest standards. However the authors find the optimal rate of compulsory super to achieve these benchmarks varies substantially depending on workers' earnings level, the age at which they retire, and a range of other factors.

235. Daley et al (2018b, Figure 3.5, Figure 3.6).

236. Since replacement rates in GRIP are calculated by comparing retirement incomes over the entire retirement to the last five years of working, GRIP implicitly allows for wage deflation of working-age incomes, but CPI deflation of retirement incomes. In contrast, wage indexation remains appropriate for the Age Pension since the pension is designed to ensure older Australians do not fall into poverty in retirement, and poverty is experienced relative to community living standards: Daley et al (ibid, p. 54).

**Table 4.1: Some assumptions matter more than others to calculations of replacement rates**

Replacement rate for median-income worker (lighter colours indicate higher replacement rates)

<b>Period measured</b>	<b>Last 5 years</b>	<b>Last 10 years</b>	<b>Whole working life</b>	<b>Whole working life</b>	<b>Whole working life</b>
Working life					
Retirement	Whole of retirement	Whole of retirement	Whole of retirement	Whole of retirement	Whole of retirement
<b>Deflator used</b>					
Working life	CPI	CPI	CPI	Wages	Wages
Retirement	CPI	CPI	CPI	CPI	Wages
<b>Current policy</b>					
Preferred assumptions	90%	90%	95%	80%	70%
Lower investment returns	87%	87%	92%	78%	67%
Minimum drawdown	81%	81%	85%	72%	62%
Extra 10 years out of workforce	86%	86%	110%	95%	83%
Extra 15 years out of workforce	82%	83%	120%	105%	92%
No voluntary super contributions	86%	86%	93%	79%	68%
No non-super savings	90%	90%	95%	80%	70%
<b>Revised policy</b>					
SG @ 9.5%	89%	89%	94%	79%	69%
Taper rate @ \$2.25	94%	94%	99%	83%	73%
SG & taper changes	92%	92%	97%	81%	71%

Notes: 'Current policy' refers to policy as currently legislated, including: the 12 per cent Superannuation Guarantee from 2025; retirement age at 67; and existing superannuation tax breaks with indexation of relevant caps and thresholds. The interaction between choice of period and choice of deflator is discussed in Footnote 169 on page 39. Career break scenarios based on workers starting work at age 30 and taking 10 or 15 years of career breaks before retiring at age 67. Low investment returns scenario based on returns being 0.5 percentage points lower – in both working life and retirement.

Source: Grattan Retirement Income Projector (GRIP).

Second, some research compares retirement incomes to ASFA's 'comfortable' standard. But that is too high – the standard was set to reflect a lifestyle typical for the top 20 per cent of retirees at the time.<sup>237</sup> Average living standards in Australia before retirement are lower than the ASFA benchmark for living standards in retirement. The average household can only reach ASFA's 'comfortable' benchmark in retirement by living less than 'comfortably' before retirement (Box 2 on page 32).

Third, some research ignores non-super savings, which are material, especially for wealthier households. Not all wealthier retirees have an investment property portfolio, shares, bank deposits, and a business, but most have something beyond their super and their home.<sup>238</sup> Failing to include these non-super savings particularly skews findings for the wealthiest 20 per cent of retirees.

#### 4.6 Our findings are consistent with the lived experience of retirees today

Most importantly, Grattan's retirement modelling accords with the actual experiences of retired Australians today.

Much previous retirement incomes modelling simply assumed retirement incomes would be inadequate, especially by forecasting that retirees' spending needs would rise in line with wages as retirees aged. In contrast, Grattan looked at what retirees spend in retirement, and how retirees' *actual* income and spending compared to their income and spending 20 years ago, before they retired.

As shown in Figure 4.4 on page 56, across the income distribution, retirees today typically have enough money to sustain the same, or a higher, living standard in retirement as when working. Subjectively, most retirees today also feel more comfortable financially than younger Australians who are still working (Figure 4.2 on page 55).<sup>239</sup> Some retirees are suffering financial stress, especially if they rent, but rates of financial stress are much lower for retirees than for people of working age (Figure 4.1 on page 53). Many retirees are net savers, and current retirees often leave a legacy almost as large as their nest egg on the day they retired.<sup>240</sup>

---

237. Ibid (p. 34).

238. Daley and Coates (2018a); and Daley and Coates (2017b).

---

239. Daley et al (2018b, p. 18).

240. Daley et al (ibid, Figure 3.8).

Table 4.2: Much of the Australian literature on retirement incomes adequacy uses wage inflation, and uses the ASFA comfortable standard

Study	Metric	Assets included	Drawdown strategy assumed	Deflator in retirement	Do median-income retirees meet the standard today?	Will median-income workers meet the standard when they retire?
Rothman and Bingham (2004)	Individual replacement rates, five years either side of age 65. No 'adequate' rate defined	Superannuation only	Full drawdown by life expectancy	CPI		
Rothman (2011) and Rothman (2012)	Individual replacement rates, five years either side of age 65. No 'adequate' rate defined	Superannuation, non-super financial assets, and non-home property	Moderate drawdown with some inheritance	CPI and wages		
Henry (2009a)	Individual replacement rates for both working life and final working year	Compulsory and salary sacrifice super contributions	Full drawdown through purchase of annuity	CPI and wages		
Khemka et al (2020)	70% replacement rate; ASFA comfortable standard	Only superannuation	Optimised subject to minimum drawdown rules	CPI		Yes. Only 3.5% required for 70% replacement rate at \$60,000 earnings.
Rice and Bonarius (2020)	ASFA comfortable standard, and 75% of net income replacement rate	No personal wealth other than superannuation	Full drawdown by life expectancy	CPI (wages in working life)		Yes. Both singles and couples hit 75% replacement rate. Majority hit ASFA comfortable standard
Rice Warner (2015)	62.5% of pre-retirement gross earnings	Superannuation only, with small additional estimate of investment property value for high-income earners	Full drawdown by life expectancy, with additional model for 75th and 90th percentile of age expectancy	Wage index	Not reported for median earner	No (median figures only given for population of all ages)
Gallagher (2016), as cited in CSRI (2016)	ASFA comfortable standard, replacement rates, and other measures	Superannuation only	Age-based minimum plus 7%	Wage index	Most scenarios are below ASFA comfortable standard or a 70 per cent replacement rate	Single females achieve standard, but single males and couples do not
Burnett et al (2014)	ASFA comfortable standard	Superannuation, non-super financial assets, and non-home property	Full drawdown by life expectancy	Wage index	No	Couples aged 40-64 today meet standard, but not singles
Actuaries Institute (2015)	ASFA comfortable and modest standards	Superannuation, non-super financial assets, and non-home property	Full drawdown by life expectancy	Wage index	Couples – comfortable Singles – modest	Couples and men – comfortable Women – modest
Industry Super Australia (2015)	ASFA comfortable standard	Superannuation, non-super financial assets, and non-home property	Savings drawn down, leaving 'some bequest'	Not stated – but wages used elsewhere	No	Couples and men but not women

Notes: Grey shade indicates assumptions different from those used in this paper. Dark orange shade indicates that retirees fall short of designated adequacy benchmark. Light orange shade indicates some retirees fall short of designated adequacy benchmark. See Daley et al (2018b, Table 4.4) for further details.



## 5 How to improve Australia's retirement incomes system

The analysis presented in this paper shows that most Australians can look forward to adequate retirement incomes today, tomorrow, and for the foreseeable future. People who are actually retired feel and are reasonably secure financially. The incomes of retirees today and in the future are likely to be substantial relative to their pre-retirement incomes. This is true even if incomes grow more slowly in future, and investment returns are weaker.

Retirement incomes also remain adequate for most Australians even when they take significant career breaks, such as to care for children. When careers are interrupted, workers save less super for retirement, but will tend to get larger part-pensions, offsetting much of any potential fall in retirement income from accumulating less compulsory super. The Age Pension and Rent Assistance, rather than higher compulsory super, remain the best tools to help women at risk of poverty in retirement.

Nevertheless, many people who are still working are worried about their retirement incomes. In part this is because they fail to anticipate that their expectations will change as they age. And in part it is because they are bombarded with messages from parts of the superannuation industry that they will not have enough for retirement, based on a living standard that is higher than most Australians have while working.

Overall, Australia's retirement incomes system is serving us well. It delivers adequate retirement incomes to most citizens at lower budgetary cost than in most other 'rich world' countries. Tight targeting of pension payments via income and assets tests means that Australia spends just 4.2 per cent of GDP on government pension benefits, compared to the OECD average of 8.0 per cent.<sup>241</sup>

---

241. OECD (2017c).

But Australia's retirement incomes system can be improved, and the remainder of this chapter identifies potential reforms to do so. These reforms are discussed in more detail in several previous Grattan Institute reports, especially our 2018 *Money in retirement* report.

### 5.1 Establish a new retirement incomes standard

A priority for the Retirement Income Review should be to establish standards for assessing the adequacy of retirement incomes. Standards matter because boosting retirement incomes always comes at a cost: either workers have lower living standards while working; or governments give up more revenue for super tax breaks; or taxpayers pay more for pensions. And standards would help future governments identify where the retirement incomes system is falling short, and for whom.

Past governments have been reluctant to specify adequacy targets, and so the super industry has filled the void. But the one-size-fits-all ASFA 'comfortable' standard won't do because it implies that most Australians should aim for a higher living standard in retirement than they enjoy while working.

Standards should be set for the Age Pension (plus Rent Assistance for renters) to ensure Australians don't suffer poverty in retirement. While no poverty standard is perfect (Chapter 2), the Age Pension should be assessed on whether it is sufficient to keep older Australians out of poverty based on the OECD's measure of 50 per cent of median income after housing costs.

Standards should also be set for assessing whether the retirement incomes system is helping most Australians enjoy a similar living standard in retirement as they enjoy while working. As a starting point,

the Review should consider the approach adopted by the OECD and used in this paper, and aim for retirement incomes that are 70 per cent of pre-retirement (post-tax) incomes for Australians on median to average earnings who own their own homes. However a lower replacement rate target may also be warranted since housing costs account for a larger share of pre-retirement income (25 per cent) than in the past, and working age spending falls sharply by around 15 per cent from aged 45-50 once the kids leave home. The aim for life-long renters should be to replace between 90 and 100 per cent of their pre-retirement incomes. The Review should set out a preferred approach and assumptions for modelling the future retirement incomes of workers today, as well as sensitivity analysis of how results vary using different assumptions.

In addition, the government should consider establishing a set of retirement income standards for consumers. Such standards could be created by converting a 70 per cent replacement rate (or 100 per cent for renters) to a specific retirement income standard taking into account information on workers' current incomes. Alternatively, a small number of consumer retirement standards could be established for low-, middle-, and high-income earners, reflecting the broad living standards that retirees of different incomes enjoy today.

These new standards should form the basis for government guidance about the adequacy of retirement savings, including on the Australian Securities and Investments Commission (ASIC) *Money Smart* website. References to the Association of Superannuation Funds of Australia (ASFA) comfortable retirement standard should be removed from official government guidance. And ASIC guidance for retirement income calculators should be updated to require retirement incomes to be deflated by inflation only in retirement (rather than wages).<sup>242</sup>

---

242. Australian Securities & Investments Commission (2019). Calculators should retain the option of deflating by wages, or inflation, for working-life incomes.

## 5.2 Boost Rent Assistance by 40 per cent

Australia's retirement incomes system does not always work for low-income people who won't own their home in retirement. Senior Australians who rent in the private market are more likely to suffer financial stress than homeowners, or renters in public housing. And this problem will get worse because younger people on lower incomes are less likely to own their own home than in the past.

Consequently the real policy priority should be to boost Commonwealth Rent Assistance. Rent Assistance materially reduces housing stress among low-income Australians.<sup>243</sup> But the value of Rent Assistance has not kept pace with rent increases. The maximum Rent Assistance payment is indexed in line with CPI, but rents have been growing faster than CPI for a long time.<sup>244</sup>

Our 2018 report, *Money in retirement*, recommended a 40 per cent increase in the maximum rate of Rent Assistance – that is, \$1,435 a year for a single retiree. This would cost about \$300 million a year if provided just to retirees, or \$1.3 billion a year total if extended to working-age Australians who are on income support and who rent.<sup>245</sup>

Commonwealth Rent Assistance would then provide the same level of assistance to low-income earners as it did 15 years ago, taking into account the rising cost of their rent. In future, Rent Assistance should be indexed to changes in rents typically paid by people receiving income support, so that its value is maintained, as recommended by

---

243. In June 2016, 68 per cent of Rent Assistance recipients would have paid more than 30 per cent of their income on rent if Rent Assistance were not provided. With Rent Assistance provided, this proportion was reduced to 41 per cent (Daley et al (2018b, p. 76)).

244. Ibid (p. 76).

245. Costing updated since Daley et al (ibid).

the Henry Tax Review.<sup>246</sup> Increasing Rent Assistance would do more to alleviate poverty in retirement per government dollar spent than the alternatives.

A common concern is that the growing number of renting retirees means that compulsory super needs to rise to ensure most Australians enjoy an adequate retirement income. Yet an increase in Rent Assistance would do far more to boost the retirement incomes of renters, including many high-income renters (Figure 5.1). And a boost to Rent Assistance would help retirees without further impoverishing low-income Australians struggling to pay the rent before they retire.

Some worry that boosting Rent Assistance would lead to higher rents, eroding much of the gains in living standards for low-income retirees.<sup>247</sup> But an increase in Rent Assistance is unlikely to substantially increase rents. Households are unlikely to spend all of the extra income on housing. And only half of low-income renters actually receive Rent Assistance, since eligibility is linked to receiving an income support payment.<sup>248</sup>

Beyond boosting Rent Assistance, there is powerful case for more government support to fund social housing, including for vulnerable older renters at risk of homelessness. But boosting social housing will be expensive: increasing the stock by 100,000 dwellings would require additional ongoing public funding of about \$900 million a year, or upfront capital expenditure of \$10-to-\$15 billion.<sup>249</sup> Therefore providing enough social housing to accommodate all renting pensioners, let alone working-age Australians on low incomes, is likely to prove prohibitive. Any boost to social housing will be expensive, and

246. Henry (2009a, p. 595). While the rental component of the CPI is a readily available and transparent measure, an index of rents paid by Rent Assistance recipients would provide a more accurate assessment of their rental costs.

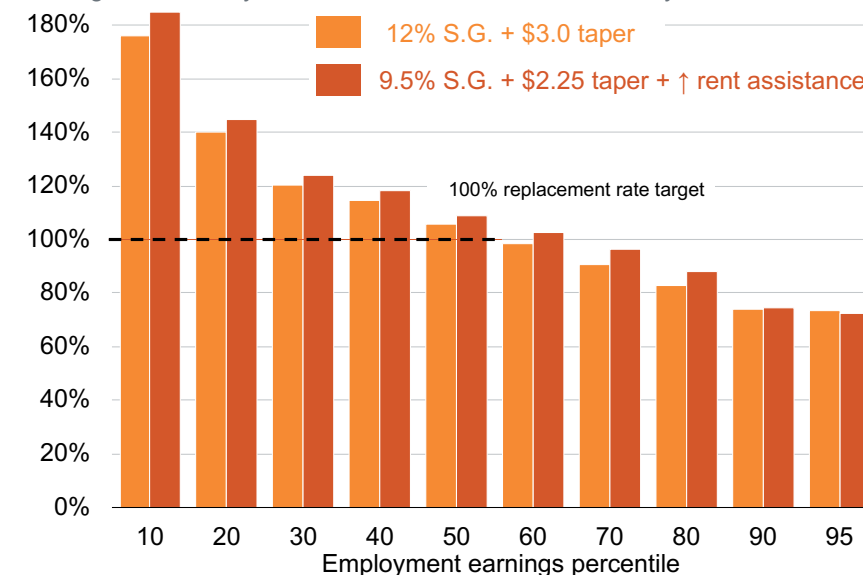
247. Senate Economics References Committee (2015, chapter 22).

248. Daley et al (2018b, p. 77).

249. Daley et al (2019, p. 75).

**Figure 5.1: Increasing Rent Assistance is more effective for low- and middle-income renters than increasing the Super Guarantee**

Annual disposable income in retirement as a share of last five years of working life for a 30-year-old in 2015 who rents, deflated by CPI



Notes: Includes a 40 per cent increase in Rent Assistance. See Daley et al (2018b, Figure 1.2). Based on current retirement income policy settings, including 12 per cent super, and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages. Assumes renters are eligible for the maximum rate of Commonwealth Rent Assistance, which is benchmarked to inflation only in the baseline, and by rents (which grow with wages) in the revised policy scenario.

Source: Daley et al (ibid, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

therefore should be reserved for people at greatest risk of long-term homelessness. Any further support for vulnerable retirees should be focused on direct financial assistance for low-income renters rather than building more social housing.<sup>250</sup>

Our 2018 report, *Housing affordability: re-imagining the Australian Dream*, showed that reforming planning laws to increase housing supply and improve housing affordability more generally would also help low-income earners struggling with high housing costs.<sup>251</sup>

### 5.3 Raise Newstart

Newstart, together with the Disability Support Pension, provides an important safety net for Australians who are unable to work until retirement age. Yet while the Age Pension and Disability Support Pension are indexed to wages, Newstart only increases with inflation.<sup>252</sup> This has 'squeezed' the living standards of people living on Newstart relative to the rest of the population. Households of working age receiving Newstart are under much more financial stress than households receiving other welfare payments.<sup>253</sup>

As many commentators have argued, Newstart payments are much too low.<sup>254</sup> A 'catch up' increase to Newstart of \$75 a week would have a material impact on the incomes of low-income households,<sup>255</sup> and would bring payments closer to community living standards. The payment should then be indexed to wages growth going forward, as

---

250. Daley et al (2019, p. 69).

251. Daley et al (2018a).

252. Wages typically increase faster than prices. So the Age Pension has grown more rapidly than Newstart over the past two decades. Several one-off changes have increased the Age Pension even more (Daley et al (2013a, p. 20)).

253. Daley et al (2018b, p. 27); and Daley et al (2013b, p. 19).

254. ACOSS (2018b); Bagshaw (2018); Australia (2012); BCA (2018); CEDA (2018); Deloitte (2018); Iggulden (2018); and KPMG (2018, p. 14).

255. Deloitte (2018, p. ii).

recommended by the Henry Tax Review.<sup>256</sup> Increasing Newstart would do more to reduce poverty rates per budgetary dollar spent than most other welfare changes.<sup>257</sup> An increase in Newstart would mostly benefit older Australians, since half of Newstart recipients are aged 45 or older.<sup>258</sup> The budgetary costs of a \$75 a week increase in Newstart are substantial, around \$3.3 billion a year on some estimates.<sup>259</sup>

The Government should also review whether current eligibility rules for the Disability Support Pension are appropriate.

### 5.4 Relax the taper rate on the Age Pension assets test

While retirement incomes are adequate for most retirees, *Money in retirement* showed that recent moves to tighten the Age Pension assets test taper have gone too far, excessively penalising people who save more for their retirement.<sup>260</sup>

Before 1 January 2017, retirees with assets above the 'asset free' area lost \$1.50 of pension payments every fortnight for every \$1,000 of assets they owned above the asset threshold, or \$39 a year. The Government then lifted the taper rate on the Age Pension to \$3 of pension lost for every \$1,000 in assets per fortnight, or \$78 a year. This reduced the Age Pension for about 370,000 part pensioners, but a simultaneous increase in the asset free area boosted retirement incomes for about 170,000 part pensioners with fewer assets.<sup>261</sup>

However the changes also resulted in very high effective marginal tax rates on long-term retirement savings. The median-income worker who

---

256. Henry (2009a).

257. Phillips et al (2018).

258. Emslie and Wood (2019).

259. Henriques-Gomes (2018).

260. See Daley et al (2018b).

261. About 92,300 part pensioners no longer qualified for the pension and a further 277,700 had their part-pension reduced. Community Affairs Legislation Committee (2018) and Morrison (2015c).

saves an extra \$1,000 at age 40, and retires at age 67, would increase their retirement income by only \$25 each year, or \$658 over 26 years of retirement.<sup>262</sup> This is a negative real return on money saved for more than 30 years, including compulsory savings under the Superannuation Guarantee.

We recommend that the Age Pension be withdrawn at a rate of \$2.25 per fortnight for each \$1,000 of assets above the asset free area, rather than the current rate of \$3 per fortnight. For middle- and high-income workers, this change would have a bigger impact on retirement incomes per government dollar expended than increasing the Super Guarantee (Figure 5.2). The wages of low-income workers would not be reduced. This change would cost the Budget about \$750 million a year.<sup>263</sup> Relaxing the Age Pension taper rate would also do more than raising compulsory super to help the retirement incomes of middle- and high-income women who take significant career breaks (Figure 5.3 on the next page). And it would also extend the number of higher-income Australians that are insured against longevity and other risks as more older Australians become eligible for a part Age Pension.

Some commentators argue for a more uniform treatment of income and assets in the Age Pension means test.<sup>264</sup> The Henry Tax Review recommended abolishing the separate income and assets tests and replacing them with a single income means test, including deemed income from assets.<sup>265</sup> Within the current two-part means test – the income test and the assets test – some assets are assessed under both tests, while others are assessed only under the assets test. For

262. In 2015-16\$. Assumes an assets test taper of \$3 per \$1,000 in assets, and that the \$1,000 is invested at age 40 in 2025-26: GRIP.

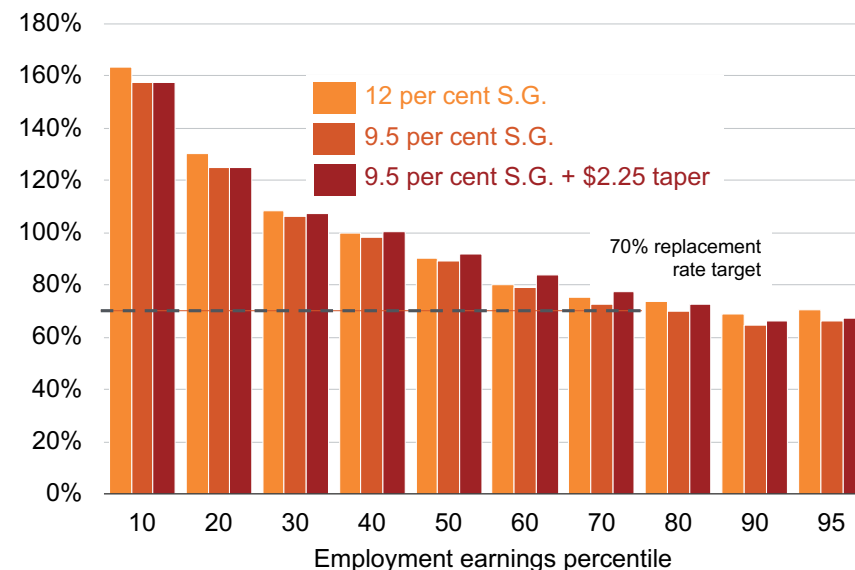
263. Daley et al (2018b, Chapter 8).

264. For example, see: Treasury (2009, p. 533) and Commission of Audit (2014, p. 84).

265. Deeming assumes that financial investments earn a certain rate of income, regardless of their actual earnings. For example, see: Department of Social Services (2020).

**Figure 5.2: Fixing the taper rate does more to help the people in the middle than increasing the Super Guarantee**

Annual disposable income in retirement as a share of the last 5 years of working life for a 30-year-old in 2015, deflated by CPI



Notes: Based on current retirement income policy settings, including 12 per cent super, and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages.

Source: Daley et al (2018b, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

example, the home is exempt from the pension means test, while other assets such as term deposits are treated differently under the income and assets means tests.<sup>266</sup> This results in people receiving different levels of government payments even though they have the same level of wealth. This reduces the fairness of the means testing system, and can also affect where people choose to hold their assets.

There are merits to broader reforms to the pension means test, including creating a single means test. However, such changes would raise substantial design questions, and have significant and complicated distributional consequences that may prove difficult to justify to the general public.

### 5.5 Include more of the family home in the Age Pension means test

Grattan's 2018 report, *Housing affordability: re-imagining the Australian dream*, showed that more of the value of the family home should be included in the Age Pension assets test. This reform would make pension arrangements fairer without compromising the incomes of retirees, contribute between \$1 billion and \$2 billion a year to the Budget,<sup>267</sup> or fund other retirement income reforms set out in this paper, and also improve the allocation of housing assets a little.

Many Age Pension payments are made to households that have substantial property assets. Half of the government's spending on the Age Pension goes to people with more than \$500,000 in assets.<sup>268</sup> Once a person is retired, their house is treated differently to other

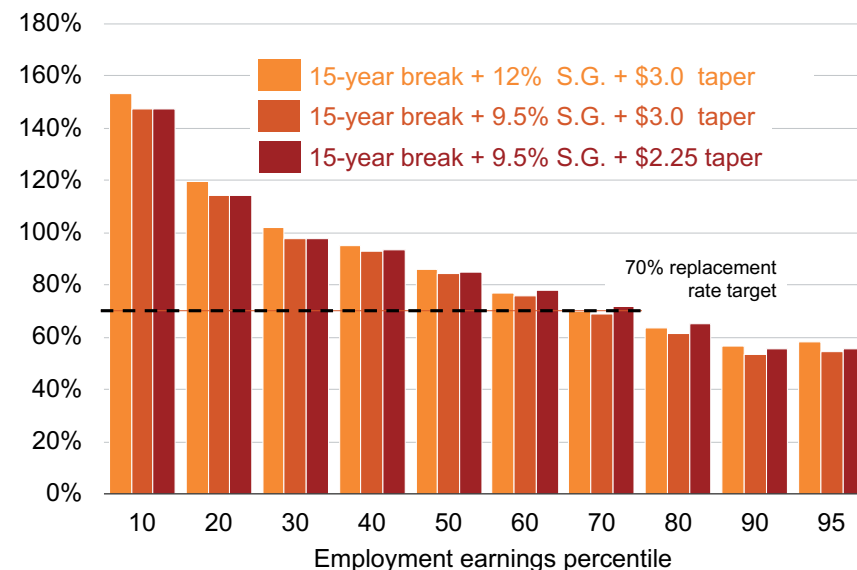
266. Treasury (2009, pp. 538–539).

267. Daley et al (2018a, p. 99).

268. Daley et al (ibid, p. 98). Excludes impact of changes to the Age Pension assets test that took effect from 1 January 2017, reducing the pension entitlements of 326,000 pensioners. However these changes will only reduce overall pension payments to part-rate pensioners by about \$1 billion in 2017-18, which is unlikely to substantially change the distribution of pension payments by net wealth, given

**Figure 5.3: Fixing the taper rate is more effective for people with broken work histories than increasing compulsory super**

Annual disposable income in retirement as a share of the last 5 years of working life for a 30-year-old in 2015, deflated by CPI



Notes: Modelled based on a person who starts work at age 30 and takes a further 15 years of career breaks before retiring. Based on current retirement income policy settings, including 12 per cent super, and assumes 80 per cent of the cost of higher compulsory super contributions comes via lower wages.

Source: Daley et al (2018b, Figure 1.2), updated for latest Grattan retirement incomes projections published in Coates et al (2019, pp. 22–23) and reflecting passage of the Government's 2019 personal income tax cuts.

assets. Under current rules only the first \$210,500 of home equity is counted in the Age Pension assets test; the remainder is ignored.<sup>269</sup> Inverting this so that all of the value of a home is counted above some threshold – such as \$500,000 – would be fairer, and contribute to the Budget.

This reform would have no impact on potential retirement incomes as measured in this report. Instead it would primarily reduce inheritances. But it would also encourage a few more senior Australians to downsize to more appropriate housing, although the effect would be limited given that research shows downsizing is primarily motivated by lifestyle preferences and relationship changes.<sup>270</sup>

Seniors who have little income but live in a high-value property should be allowed to borrow income up to the rate of the Age Pension against the security of their home, via the Pension Loans Scheme. This would give them financial capacity to stay in their home if they chose to. The threshold would ensure that homeowners would still have substantial equity to pass on to their beneficiaries. But it would ask people with high levels of wealth that would otherwise be passed on to heirs to use some of this wealth to support themselves in retirement.

Alternatively a greater portion of the family home could be included in the means tests for residential aged care. Since residential care is typically a person's final place of accommodation, the family home is no longer an accommodation option, nor a vehicle for precautionary

saving. Instead the primary motivation for retaining the home in such situations is for bequests.

Including more of the value of the family home in the aged care means test would improve equity between homeowners and non-homeowners, and help to ensure that care recipients with the financial ability to do so pay for more of their own accommodation and care costs.

### 5.6 Investigate raising the pension and super ages to 70

Previous Grattan Institute reports have shown that increasing retirement ages would produce one of the largest boosts to economic growth<sup>271</sup> and to budget balances<sup>272</sup> in the long term. Increasing the super preservation age to 65 (from 60) could improve the budget bottom line by about \$7 billion (in 2015 prices) in 2055 – mainly due to tax revenue increases from wealthier households – while also boosting old-age workforce participation by 2 per cent.<sup>273</sup> It may then be appropriate to index the Age Pension and superannuation access age to life expectancy.<sup>274</sup>

Older workers in Australia are less likely to work than older workers in many comparable economies.<sup>275</sup> The age at which people can access superannuation or the age pension affects the retirement decisions of at least some workers.<sup>276</sup> In 2014, the Abbott government proposed increasing the pension eligibility age to 70 by 2035.<sup>277</sup> But this change was never legislated, and was abandoned by the Morrison government in September 2018.<sup>278</sup>

---

total pensions spending of \$45 billion in 2017-18 (Morrison (2015a) and Treasury (2017)).

269. Home-owning singles are allowed \$263,250 in assessable assets before their pension is reduced, compared to \$473,750 for a single without a home. Home-owning couples are allowed \$394,500 before their full pension is reduced, while a couple without a home can have \$605,000 (Services Australia 2020a).

270. Daley et al (2018a, p. 38); Productivity Commission (2015c); and Valenzuela (2017).

271. Daley et al (2012).

272. Daley et al (2013b, pp. 29–32).

273. Productivity Commission (2015a, p. 2).

274. Daley et al (2013b, p. 30).

275. Daley et al (2019, p. 28).

276. Daley et al (2013b, p. 30).

277. Parliamentary Library (2015).

278. Yaxley (2018).

Opposition to raising the pension access age focuses on concerns that people on lower incomes are more likely to retire younger, are less likely to be able to work to the age of 70, and have shorter life expectancies.<sup>279</sup> But the needs of this group may be best addressed by allowing earlier access to super for people who have a disability. Assessments of eligibility for the disability pension might also use less stringent tests of whether a person over 60 has such a severe impairment that they are unable to work.

Raising the super preservation age would have little, if any, impact on the workforce participation of individuals who retire involuntarily – almost half of men and more than one-third of women who retire between the ages of 60 and 64.<sup>280</sup>

The Productivity Commission should therefore investigate the economic, social, and budgetary costs and benefits of gradually raising the age of access to the Age Pension and superannuation to 70 years. The inquiry should consider whether there should be a new regime for easier access to the pension and superannuation for people over 60 whose health has been so impaired that it is difficult to work.

### 5.7 Abandon the legislated increases to compulsory super

Given the reality that most Australians will have enough money in retirement, there is no need to boost retirement incomes across the board. Increasing the Super Guarantee as planned would effectively compel most people to save for a higher living standard in retirement than they enjoy in their working lives. It will do little to boost the retirement incomes of many low- and middle-income earners, as shown in Figure 5.4.

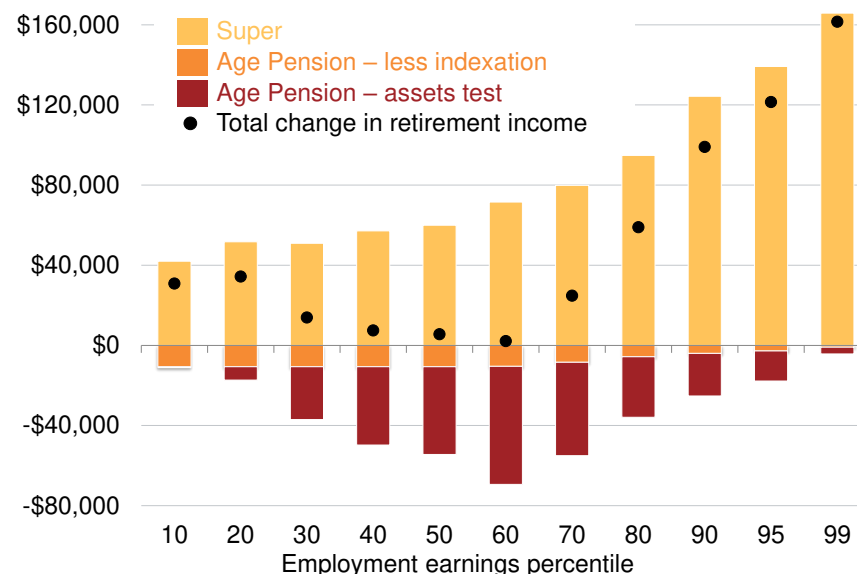
Even if governments wanted to boost retirement incomes, the planned increase in compulsory super contributions to 12 per cent is an

279. See: Whiteford (2014b); Chomik (2014).

280. Productivity Commission (2015a).

**Figure 5.4: Raising the Super Guarantee to 12 per cent won't help many low- and middle-income workers much**

Change in total retirement income if the Super Guarantee increases to 12 per cent compared to staying at 9.5 per cent, 2015-16\$, CPI-deflated



Notes: Assumes 80 per cent of the cost of higher compulsory super contributions is passed through to lower wages, in line with Coates et al (2020). This approach probably underestimates the long-term impact. Assumes 72 per cent of workers in the Male Total Average Weekly Earnings (MTAWE) benchmark are covered by higher compulsory super contributions.

Source: Daley et al (Figure 9.2 2018b), updated to reflect more recent data and methodological improvements to the Grattan Retirement Income Projector (GRIP).



ineffective way to get there. Raising the Super Guarantee to 12 per cent would reduce wages today<sup>281</sup> and do little to boost the retirement incomes of many low- and middle-income workers tomorrow. It would lead to *lower* pensions for both current and future retirees by suppressing the value of the wage-benchmarked Age Pension. Pushing for more retirement savings when they are not needed is simply a recipe for larger bequests, leading to widening wealth inequality over time as those unused savings are passed on to future generations. Scrapping the increase in compulsory super to 12 per cent would also save the Budget \$2 billion a year.

Nor would an increase in the Super Guarantee do much to close the gender gap in retirement incomes. In fact recent Treasury advice suggests that increasing compulsory super would *widen* the gender gap in superannuation savings.<sup>282</sup> Closing the gender gap in lifetime earnings would do the most to improve the retirement savings of women. This would require a range of policy responses that go well beyond the scope of retirement incomes policy, including cultural changes to promote gender wage equality and achieve a better balance in caring responsibilities between men and women, as well as measures to further improve the workforce participation of women.<sup>283</sup>

And nor would higher super overcome some of the key design flaws in Australia's retirement incomes system: Commonwealth Rent Assistance is too low, and the pensions assets test taper is too harsh. Fixing these policies would do more to boost the retirement incomes

---

281. Coates et al (2020) finds that 80 per cent of the cost of higher compulsory super contributions comes at the cost of lower wages for workers. And the long-term trade off is likely to be even higher.

282. A Treasury briefing released under Freedom of Information laws noted that 'While the increase in the rate of SG would increase retirement balances for women, it would likely lead to an even larger increase in male retirement balances due to their higher lifetime earnings.' (Treasury (2019)). See also Kehoe and Cranston (2019).

283. For example see: Daley et al (2012).

of low- and middle-income Australians than further Super Guarantee increases. And it would do so without forcing low- and middle-income Australians to save for a higher standard of living in retirement than they enjoy beforehand.

## 5.8 Reform super tax breaks

Superannuation tax breaks cost a lot – about \$35 billion a year in foregone revenue, or well over 10 per cent of income tax collections – and the cost is growing fast (Section 1.5 on page 15). Half the benefits flow to the wealthiest 20 per cent of households, who already have enough resources to fund their own retirement, and whose savings choices aren't affected much by tax rates.<sup>284</sup>

Three reforms would better align tax breaks with the goals of superannuation, while saving the Budget about \$4 billion to \$5 billion a year.<sup>285</sup>

First, contributions from pre-tax income should be limited to \$11,000 a year. This would improve budget balances by \$1.7 billion a year. There would be little increase in future Age Pension payments, since the reductions in tax breaks would mainly affect people unlikely to receive an Age Pension anyway.

Alternatively, contribution tax breaks could be reformed along the lines proposed by the Henry Tax Review, where superannuation contributions would be taxed at marginal rates of personal income tax, less a 15 per cent or 20 per cent discount. Such an approach could also be combined with a tighter cap on pre-tax super contributions, such as \$15,000 a year.<sup>286</sup> This approach is worth exploring, however

---

284. Daley et al (2015, Figure 2.4).

285. Ibid (p. 2).

286. For example, see: ACOSS (2020, p. 15).

Grattan's 2015 report, *Super tax targeting*, showed that for some employers it could be difficult to administer.<sup>287</sup>

Second, contributions from post-tax income should be limited to \$250,000 over a lifetime, or to \$50,000 a year.<sup>288</sup> It won't save the budget much in the short term, but in the longer term it will plug a large hole in the personal income tax system.

Third, earnings in retirement – currently untaxed for people with superannuation balances below \$1.6 million – should be taxed at 15 per cent, the same as superannuation earnings before retirement. A 15 per cent tax on all super earnings would improve budget balances by about \$2 billion a year today, and much more in future.

The generosity of retirement tax arrangements for some retirees could be wound back without threatening the adequacy of retirement incomes. Tightening super tax breaks would largely affect the top 20 per cent of income earners, who are unlikely to ever receive the Age Pension. Replacement rates for the median worker would be unchanged.<sup>289</sup>

Better targeting super tax breaks to the purposes of superannuation would also reduce the gender gap in superannuation savings. As our

---

287. Daley et al (2015, p. 52). Many employers have traditionally operated one system for regular earnings and pay-as-you-go tax (PAYG) payments, and another system for superannuation payments. The earnings PAYG system does not necessarily have information about the amount of superannuation contributed (which can vary depending on awards, individual employment agreements, and salary sacrifice arrangements). It is unclear whether these issues will be resolved by the transition to single-touch payroll by the ATO.

288. A lifetime cap would be superior to an annual cap in ensuring people with broken work histories are not disadvantaged. But since three quarters of post-tax contributions are made by people aged over 55, there is likely to be little difference in practice between a lifetime cap and an annual cap (Daley et al (ibid, p. 54)).

289. Daley et al (2018b, Figure 10.2).

2015 report *Super tax targeting* shows, super tax breaks provide the greatest boost to high-income workers who don't need them.<sup>290</sup> Most of these high-income workers are men. Better targeting of super tax breaks could free-up revenue to provide more targeted support for retirement incomes for people who need it most, and reduce marginal effective tax rates for low- and middle-income workers to encourage greater female participation in the workforce.

### 5.9 Wind back age-based tax breaks

Grattan's 2016 report, *Age of entitlement*,<sup>291</sup> showed why age-based tax breaks for seniors should be wound back. Two generous age-based tax breaks were introduced in the past 20 years: the Seniors and Pensioners Tax Offset (SAPTO), and a higher Medicare levy income threshold for senior Australians. They are part of a series of policy choices that result in seniors paying less tax than younger workers on the same income.

The tax-free thresholds for seniors and for younger people have diverged over the past 20 years. Seniors do not pay tax until they earn \$32,279 a year, whereas younger households have an effective tax-free threshold of \$20,542. These outcomes are hard to justify. A retired couple pay about \$4,000 a year in tax on annual earnings of \$70,000 from their assets (assuming their assets outside of super are worth \$1.4 million). Any extra income they draw from a super account is tax-free. By contrast, a working couple with both people earning the minimum wage would have the same income of \$70,000 a year but pay tax of about \$7,000 a year. Unlike the retired couple, they probably don't own their own home, and they have little chance of accumulating \$1.4 million in assets, or accruing significant super savings, or owning their home before they retire.<sup>292</sup>

---

290. Daley et al (2015, p. 26).

291. Daley et al (2016b).

292. Daley et al (2016c).

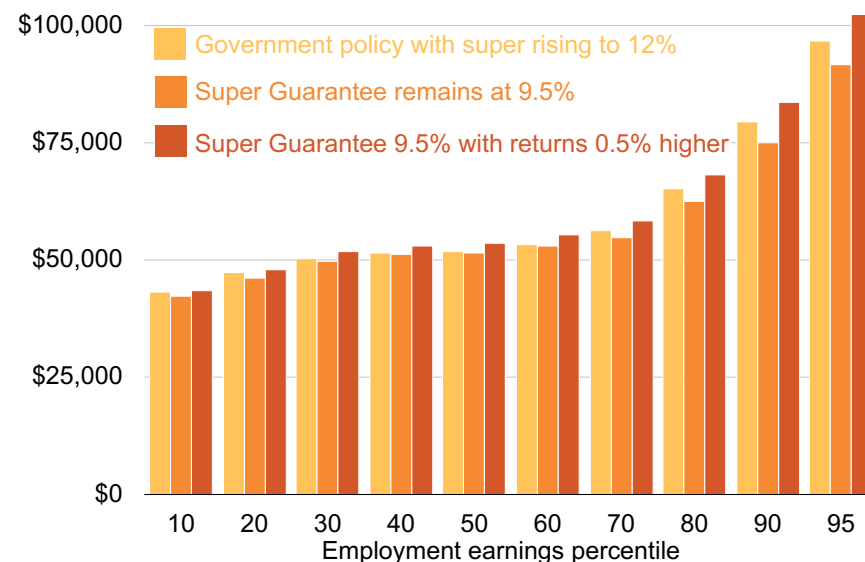
Government should wind back SAPTO so that it is available only to pensioners, and so that those whose income bars them from receiving a full Age Pension pay some income tax. Seniors should also start paying the Medicare levy at the point where they are liable to pay some income tax. They would then pay a similar amount of tax to younger workers with similar incomes. This package would improve budget balances by about \$700 million a year.<sup>293</sup>

### 5.10 Reduce super fees to substantially boost retirement incomes

Reducing average super fees, and increasing investment returns, by channelling people into the better-performing superannuation funds would also boost retirement incomes by more than other policies, including raising the Super Guarantee to 12 per cent. This change would also save the Budget in the long-term via lower pension payments and higher productivity (Figure 5.5).<sup>294</sup>

Australians pay more than \$30 billion a year in super fees – almost 2 per cent of Australia’s annual Gross Domestic Product, and more than they spend each year on energy.<sup>295</sup> Fees in Australia are also much higher than in many other countries.<sup>296</sup> Grattan’s past reports, *Super Sting* and *Super Savings* showed that superannuation funds charge widely varying administration and management fees that range from about 0.5 per cent to 2.0 per cent of assets.<sup>297</sup> The higher-priced

**Figure 5.5: Reducing superannuation fees would boost retirement incomes more than increasing the Super Guarantee to 12 per cent**  
Average retirement income per year by employment earnings percentile, 2015-16\$, CPI deflated



Note: Higher returns are also applied to assets held outside super in retirement, which will only affect the 99<sup>th</sup> percentile.

Source: Grattan Retirement Income Projector (GRIP).

293. Daley et al (2016a, p. 3).

294. For example, Rothman (2012) estimated that if super returns were 1 per cent lower than expected then annual government pension outlays would rise by 0.3 per cent of GDP by 2050. Lifting net returns by the same magnitude (by reducing super fees) could generate similar budgetary savings in the long term.

295. Daley and Coates (2018b).

296. Nolan and Coates (2019b).

297. See: Minifie et al (2015, Figure 9) and Productivity Commission (2018c, Figures 5 and 6).

funds typically produce *worse* returns before fees – and therefore much worse returns after fees.<sup>298</sup>

To fix the mess, the Productivity Commission proposed that Australians be allocated a default super fund only once, when they first started working.<sup>299</sup> An expert panel would select a ‘best in show’ shortlist of default funds, using criteria including investment performance and fees. Unless they chose another fund, new workers would be defaulted into a shortlisted fund and stay there even if they changed jobs.

‘Best in show’ would improve returns as funds competed to make the shortlist and stay there. Market discipline would come from experts with the time, resources, and expertise to decide which funds to shortlist, rather than individuals who don’t. And poor-performing funds would be forced to merge or miss out on the default market entirely.

### 5.11 A range of policy changes could encourage greater draw down of retirement incomes

Retirement income policy is set on the assumption that savings will be consumed. Yet, as noted in Chapter 1, many Australians do not draw down on their retirement savings. As a result, many retirees are consuming much less than is implied by the purported aim of the system to smooth consumption over the lifetime.

To encourage greater draw down, governments might:

- Increase minimum draw down rates from superannuation balances, given that these anchor the expectations of many people;

---

298. Minifie et al (2014, p. 11), Productivity Commission (2018c, Figure 3.24) and Productivity Commission (2018d).

299. Productivity Commission (2018c).

- Continue to shift the default basis for funding aged care so that most people do not have to lodge a substantial ‘bond’ that is typically preserved until death;
- Promote more forcefully that Australia has a genuine safety net for people who live long but run out of money, in the form of the Age Pension and government support for health and aged care.

Governments should also explore Comprehensive Income Products for Retirement (CIPRs), which could help retirees to insure against longevity risk. However policymakers should proceed carefully on CIPRs since such products are not well understood by most Australians, and many Australians are largely insured against longevity risk by the Age Pension.

### 5.12 Act now, but look to the long term

This paper proposes specific reforms that would make Australia’s retirement incomes system simpler and fairer. Our proposals would: target government support better to the system’s purpose, especially in alleviating poverty; better balance the trade-off between consumption during working life and retirement; reduce administrative complexity and cost; and put the system on a more sustainable budgetary footing.

It is often argued that further changes to retirement incomes policies, and superannuation in particular, would shake confidence in the system, undermining retirement outcomes.<sup>300</sup> Some have called for a moratorium on further changes to super, with policy settings reconsidered only every five years in the context of the Intergenerational Report.<sup>301</sup>

Yet recent policy changes to super, such as reining in tax breaks in 2016, have made the system fairer and aligned super tax breaks better

---

300. National Seniors Australia (2020) and ASFA (2020, p. 4).

301. ASFA (2020, p. 25).

with the purpose of superannuation.<sup>302</sup> And few would argue against the more recent reforms to consolidate duplicate accounts and remove unnecessary insurance for younger, low-balance members.

Arguably the bigger threat to confidence is posed by past decisions to expand the generosity of the system without heed to their long-term costs. For example, the 2007 decision to make super withdrawals tax-free has proved both inequitable and unsustainable. As a result, governments have since made incremental policy changes to wind back the generosity of super tax breaks.<sup>303</sup>

The priority, for the Review panel and policy makers, should be to create a policy framework for assessing the long-term policy implications of further changes to retirement incomes policy. And if change is highly desirable in the long term, it is better done sooner than later.<sup>304</sup>

---

302. Daley et al (2016a).

303. See Treasury (2013a, Table 3.1) for a summary of policy changes to super between 2005-06 and 2013-14.

304. Fitzgerald (1993).

## Bibliography

- ABS (multiple years). *Household Expenditure Survey and Survey of Income and Housing, Australia*. Australian Bureau of Statistics.
- \_\_\_\_\_. (2006). *Census of Population and Housing*. Australian Bureau of Statistics.
- \_\_\_\_\_. (2013). *Population Projections, Australia, 2012 (base) to 2101*. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3222.0>.
- \_\_\_\_\_. (2016). *Census of Population and Housing*. Australian Bureau of Statistics.
- \_\_\_\_\_. (2017a). *Microdata: Household Expenditure, Income and Housing, 2015-16*.
- \_\_\_\_\_. (2017b). *Retirement and Retirement Intentions, Australia, July 2016 to June 2017*. Australian Bureau of Statistics. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6238.0July%202016%20to%20June%202017?OpenDocument>.
- \_\_\_\_\_. (2018). *3310.0 - Marriages and Divorces, Australia, 2017*. Australian Bureau of Statistics. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3310.02017?OpenDocument>.
- \_\_\_\_\_. (2019a). *Microdata: Survey of Income and Housing, 2017-18*.
- \_\_\_\_\_. (2019b). *Life Tables, States, Territories and Australia, 2016-2018*.
- \_\_\_\_\_. (2019c). *Average Weekly Earnings, Australia, May 2019*. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/second+level+view?ReadForm&prodno=6302.0&viewtitle=Average%5C%20Weekly%5C%20Earnings,%5C%20Australia~May%5C%202019~Latest~15/08/2019&&tabname=Past%5C%20Future%5C%20Issues&prodno=6302.0&issue=May%5C%202019&num=&view=&>.
- \_\_\_\_\_. (2019d). *Household Occupancy and Costs, Australia*. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4130.02017-18?OpenDocument>.
- \_\_\_\_\_. (2019e). *6523.0 - Household Income and Wealth, Australia, 2017-18*. Australian Bureau of Statistics. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6523.0Main+Features12017-18?OpenDocument>.
- \_\_\_\_\_. (2020a). *Consumer Price Index, Australia, Dec 2019*. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0>.
- \_\_\_\_\_. (2020b). *Selected Living Cost Indexes, Australia, Dec 2019*. <https://www.abs.gov.au/ausstats/abs@.nsf/mf/6467.0>.
- ACOSS (2016). *Poverty in Australia 2016*. <https://www.acoss.org.au/wp-content/uploads/2016/10/Poverty-in-Australia-2016.pdf>.
- \_\_\_\_\_. (2018a). *Poverty in Australia 2018*. [https://www.acoss.org.au/wp-content/uploads/2018/10/ACOSS\\_Poverty-in-Australia-Report\\_Web-Final.pdf](https://www.acoss.org.au/wp-content/uploads/2018/10/ACOSS_Poverty-in-Australia-Report_Web-Final.pdf).
- \_\_\_\_\_. (2018b). *Could you live on \$39 per day?* Australian Council of Social Service. <https://www.acoss.org.au/raisetherate/>.
- \_\_\_\_\_. (2020). *Retirement Income Review Submission — February 2020*. <https://www.acoss.org.au/wp-content/uploads/2020/02/200202-Retirement-Incomes-Review-ACOSS-submission.pdf>.
- Actuaries Institute (2015). *For richer, For Poorer, Retirement Incomes*. Sydney: Institute of Actuaries of Australia, <https://www.actuaries.asn.au/Library/Opinion/2015/ForRicherForPoorerRetirementIncomes2WEB.pdf>.
- Aged Care Financing Authority (2019). *Seventh report on the Funding and Financing of the Aged Care Industry*. Australian Government. <https://www.health.gov.au/sites/default/files/documents/2019/11/seventh-report-on-the-funding-and-financing-of-the-aged-care-industry-july-2019.pdf>.
- Alessie et al (2013). Alessie, R., Angelini, V. and Santen, P. van. "Pension wealth and household savings in Europe: Evidence from SHARELIFE". *European Economic Review* 63, pp. 308–328.

- Alonso-Garcia et al (2017a). Alonso-Garcia, J., Bateman, H., Bonekamp, J., Soest, A. van and Stevens, R. *Saving preferences in retirement: the impact of pension policy design and health status*. [http://www.icpmnetwork.com/wp-content/uploads/2017/10/Saving-preferences-in-retirement%5C\\_Aug-2017%5C\\_AlonsoGarcia%5C\\_Bateman-et-al.pdf](http://www.icpmnetwork.com/wp-content/uploads/2017/10/Saving-preferences-in-retirement%5C_Aug-2017%5C_AlonsoGarcia%5C_Bateman-et-al.pdf).
- Alonso-Garcia et al (2017b). Alonso-Garcia, J., Bateman, H., Bonekamp, J. and Stevens, R. *Retirement drawdown defaults: the role of implied endorsement*. [https://cepar.edu.au/sites/default/files/2017%7B%5C\\_%7DWP20%7B%5C\\_%7DRetirement%7B%5C\\_%7Ddrawdown%7B%5C\\_%7Ddefaults%7B%5C\\_%7Dthe%7B%5C\\_%7Drole%7B%5C\\_%7Dof%7B%5C\\_%7Dimplied%7B%5C\\_%7Dendorsement.pdf](https://cepar.edu.au/sites/default/files/2017%7B%5C_%7DWP20%7B%5C_%7DRetirement%7B%5C_%7Ddrawdown%7B%5C_%7Ddefaults%7B%5C_%7Dthe%7B%5C_%7Drole%7B%5C_%7Dof%7B%5C_%7Dimplied%7B%5C_%7Dendorsement.pdf).
- Antolin, P. (2009). *Private Pensions and the Financial Crisis: How to Ensure Adequate Retirement Income from DC Pension Plans*. OECD. <https://www.oecd.org/daf/fin/44628862.pdf>.
- ASFA (2018a). *ASFA Retirement Standard*. <https://www.superannuation.asn.au/ArticleDocuments/269/ASFA-RetirementStandard-Summary-2018.pdf.aspx?Embed=Y>.
- (2018b). “2018 ASFA Retirement Standard Budgets Review”. *Updating and extending indicative budget standards for older Australians*. <https://www.superannuation.asn.au/ArticleDocuments/269/2018-ASFA-Retirement-Standard-Budgets-Review.pdf.aspx?Embed=Y> (visited on 01/06/2018).
- (2018c). *Another good year for Australia’s super savers*. <https://www.superannuation.asn.au/media/media-releases/2018/media-release-30-august-2018>.
- (2020). *Submission to the Retirement Income Review Secretariat — Consultation Paper*. [https://www.superannuation.asn.au/ArticleDocuments/1452/202002\\_Retirement\\_Income\\_Review.pdf.aspx?Embed=Y](https://www.superannuation.asn.au/ArticleDocuments/1452/202002_Retirement_Income_Review.pdf.aspx?Embed=Y) (visited on 05/02/2020).
- Asher et al (2017). Asher, A., Meyricke, R., Thorp, S. and Wu, S. “Age pensioner decumulation: Responses to incentives, uncertainty and family need”. *Australian Journal of Management* 42.4, pp. 583–607.
- ATO (2016). *The 2015–16 individuals’ sample file*. Ed. by A. G. Australian Taxation Office.
- (2018). *Minimum annual payments for super income streams*. <https://www.ato.gov.au/Rates/Key-superannuation-rates-and-thresholds/?page=10>.
- (2019). *The 2016–17 individuals’ sample file*. Ed. by A. G. Australian Taxation Office.
- Auster, A. and Maddock, E. (2016). *Expenditure Patterns in Retirement*. [http://www.aist.asn.au/media/16660/AIST%7B%5C\\_%7DExpendPatternsRetirement%7B%5C\\_%7DAug16%20WEB.pdf](http://www.aist.asn.au/media/16660/AIST%7B%5C_%7DExpendPatternsRetirement%7B%5C_%7DAug16%20WEB.pdf).
- Australia, B. C. of (2012). *Submission to the Senate Inquiry into the Adequacy of the Allowance Payment System for Jobseekers and Others*. Business Council of Australia. <http://legacy.bca.com.au/publications/submission-to-the-senate-inquiry-into-the-adequacy-of-the-allowance-payment-system-for-jobseekers-and-others>.
- Australian Government (2019). *Retirement Income Review - Consultation Paper*. <https://treasury.gov.au/sites/default/files/2019-11/c2019-36292-v2.pdf>.
- Australian Securities & Investments Commission (2019). *19-129MR ASIC amends relief conditions for superannuation and retirement calculators*. <https://asic.gov.au/about-asic/news-centre/find-a-media-release/2019-releases/19-129mr-asic-amends-relief-conditions-for-superannuation-and-retirement-calculators/>.
- Bagshaw, E. (2018). ‘Freeze has gone on too long’: John Howard calls for dole increase. <https://www.smh.com.au/politics/federal/freeze-has-gone-on-too-long-john-howard-calls-for-a-dole-increase-20180509-p4ze83.html>.

- Banks et al (1998). Banks, J., Blundell, R. and Tanner, S. "Is there a retirement-savings puzzle?" *American Economic Review* 88.4, pp. 769–788. <https://www.jstor.org/stable/117005>.
- Banks, J. and Diamond, P. (2010). "The Base for Direct Taxation". *Tax by design*, pp. 548–674.
- BCA (2018). *Australia at work: managing adjustment and change*. Business Council of Australia. [https://www.bca.com.au/australia\\_at\\_work\\_managing\\_adjustment\\_and\\_change](https://www.bca.com.au/australia_at_work_managing_adjustment_and_change).
- Blanchett, D. (2014). "Exploring the Retirement Consumption Puzzle". *Journal of Financial Planning*.
- Burnett et al (2014). Burnett, J., Davis, K., Murawski, C., Wilkins, R. and Wilkinson, N. *Measuring adequacy of retirement savings*. Melbourne. [https://www.melbourneinstitute.com/downloads/working%7B%5C\\_%7Dpaper%7B%5C\\_%7Dseries/wp2014n05.pdf](https://www.melbourneinstitute.com/downloads/working%7B%5C_%7Dpaper%7B%5C_%7Dseries/wp2014n05.pdf).
- Burnett, J. and Wilkinson, N. (2016). *Retirement income adequacy - are we still making progress?* Melbourne. <https://www.towerswatson.com/DownloadMedia.aspx?media=%7B%5C%7D7B63745DB9-A879-4FC1-8386-76B04B48CBDA%7B%5C%7D7D>.
- Carling, R. (2020). *Submission to the Retirement Income Review Consultation Paper*. Centre for Independent Studies. <https://treasury.gov.au/sites/default/files/2020-02/cis300120.pdf> (visited on 14/02/2020).
- CEDA (2018). *We need to stop punishing the unemployed*. Centre for Economic Development. <https://ceda.com.au/Digital-hub/Blogs/CEDA-Blog/September-2018/We-need-to-stop-punishing-the-unemployed>.
- Chivers, C. and Coates, B. (2019). "Who is homeless in Australia?" *Grattan Blog*. <https://blog.grattan.edu.au/2019/06/who-is-homeless-in-australia/>.
- Chomik, R. (2014). *The pension age is rising to 70: a case of one size fits some*. <https://theconversation.com/the-pension-age-is-rising-to-70-a-case-of-one-size-fits-some-25537>.
- Chomik, R. and Piggott, J. (2016). *Retirement Income Adequacy: Concepts and Measurement*. [https://www.cepar.edu.au/sites/default/files/Retirement%7B%5C\\_%7DIncome%7B%5C\\_%7DAdequacy.pdf](https://www.cepar.edu.au/sites/default/files/Retirement%7B%5C_%7DIncome%7B%5C_%7DAdequacy.pdf).
- Chomik et al (2018). Chomik, R., Graham, S., Bateman, H., Piggott, J. and Yan, S. *Retirement income in Australia: Part II – Public support*. CEPAR. <http://cepar.edu.au/resources-videos/research-briefs/retirement-income-australia-part-2>.
- Chomik, R. and Yan, S. (2019). *Housing in an ageing Australia: Nest and nest egg?* CEPAR. <http://cepar.edu.au/resources-videos/research-briefs/housing-ageing-australia-nest-and-nest-egg%7D>.
- Clare, R. (2008). *The Age Pension, superannuation and Australian retirement incomes*. <https://www.superannuation.asn.au/ArticleDocuments/359/rc0901-age-pension.pdf.aspx?Embed=Y>.
- Coates, B. (2018). *What's the best way to close the gender gap in retirement incomes?* Grattan Institute. <https://grattan.edu.au/news/whats-the-best-way-to-close-the-gender-gap-in-retirement-incomes/>.
- Coates, B. (2019a). "Myth busted. Boosting super would cost the budget more than it saved on age pensions". *The Conversation*. 20 June 2019. <https://theconversation.com/myth-busted-boosting-super-would-cost-the-budget-more-than-it-saved-on-age-pensions-119002>.
- Coates, B. (2019b). *Housing in retirement: the emerging challenge to Australians' retirement incomes*. Grattan Institute. <https://grattan.edu.au/presentations/housing-in-retirement-the-emerging-challenge-to-australians-retirement-incomes/>.
- Coates, B. and Daley, J. (2018). "The (Reassuring) Truth about Retirement Incomes". *Inside Story*. <https://insidestory.org.au/the-reassuring-truth-about-retirement-incomes/> (visited on 12/01/2020).
- Coates, B. and Emslie, O. (2018). "Super. If Labor really wanted to help women in retirement, it would do something else". *The Conversation*. <https://theconversation.com/super-if-labor-really-wanted-to-help-women-in-retirement-it-would-do-something-else-103603>.



- Coates, B. and Emslie, O. (2019). *Our latest retirement income projections show most Australians will still have enough*. Grattan Institute. <https://grattan.edu.au/news/our-latest-retirement-income-projections-show-most-australians-will-still-have-enough/>.
- Coates, B. and Chen, T. (2019). "Why Australia's old-age poverty rates are far lower than you might think". *Grattan Blog*. <https://blog.grattan.edu.au/2019/04/why-australias-old-age-poverty-rates-are-far-lower-than-you-might-think/>.
- Coates, B. and Cowgill, M. (2019). "How much does the typical Australian earn? The answer might surprise you". *Grattan Blog*. <https://blog.grattan.edu.au/2019/04/how-much-does-the-typical-australian-earn-the-answer-might-surprise-you/>.
- Coates et al (2019). Coates, B., Emslie, O. and Nolan, J. *Off Target: Why Mercer's Critique of Our Retirement Modelling Misses the Mark*. Grattan Institute. <https://grattan.edu.au/submissions/off-target-why-mercers-critique-of-our-retirement-modelling-misses-the-mark/> (visited on 12/01/2020).
- Coates et al (2020). Coates, B., Mackey, W. and Cowgill, M. *No free lunch: higher superannuation means lower wages*. Grattan Institute. <https://grattan.edu.au/report/no-free-lunch/> (visited on 03/02/2020).
- Commission of Audit (2014). *Towards responsible government: The report of the National Commission of Audit: phase one*. National Commission of Audit.
- Community Affairs Legislation Committee (2018). *Official Committee Hansard*. The Senate. [https://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/a5d869b6-8275-46ad-837b-54c362066f4a/toc\\_pdf/Community%20Affairs%20Legislation%20Committee\\_2018\\_03\\_01\\_5948\\_Official.pdf](https://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/a5d869b6-8275-46ad-837b-54c362066f4a/toc_pdf/Community%20Affairs%20Legislation%20Committee_2018_03_01_5948_Official.pdf).
- Connolly, E. (2007). *The Effect of the Australian Superannuation Guarantee on Household Savings Behaviour*. <http://www.rba.gov.au/publications/rdp/2007/2007-08.html>.
- Cooper, J. and Minney, A. (2018). *Household spending patterns in retirement*. Challenger. [https://www.finsia.com/docs/default-source/jassa-current-issue/ajaf-2018-issue-1/ajaf-2018-issue-1\\_article-3.pdf?sfvrsn=367b9e93\\_2](https://www.finsia.com/docs/default-source/jassa-current-issue/ajaf-2018-issue-1/ajaf-2018-issue-1_article-3.pdf?sfvrsn=367b9e93_2).
- CSRI (2016). *Pursuing Adequate Retirement Incomes for All: Policy Recommendations*. <https://cfsri.files.wordpress.com/2015/09/csri-adequacy-position-paper-final-20161006.pdf>.
- Daley et al (2012). Daley, J., McGannon, C. and Ginnivan, L. *Game-changers: economic reform priorities for Australia*. Grattan Institute. <https://grattan.edu.au/report/game-changers-economic-reform-priorities-for-australia/>.
- Daley et al (2013a). Daley, J., McGannon, C. and Savage, J. *Budget pressures on Australian governments*. Grattan Institute. [https://grattan.edu.au/wp-content/uploads/2014/04/187\\_budget\\_pressures\\_report.pdf](https://grattan.edu.au/wp-content/uploads/2014/04/187_budget_pressures_report.pdf).
- Daley et al (2013b). Daley, J., McGannon, C., Savage, J. and Hunter, A. *Balancing budgets: tough choices we need*. Grattan Institute. [http://grattan.edu.au/static/files/assets/ceacf10a/801%7B%5C\\_%7DBalancing%7B%5C\\_%7DBudgets.pdf](http://grattan.edu.au/static/files/assets/ceacf10a/801%7B%5C_%7DBalancing%7B%5C_%7DBudgets.pdf).
- Daley et al (2014). Daley, J., Wood, D., Weidmann, B. and Harrison, C. *The wealth of generations*. Grattan Institute. <http://grattan.edu.au/report/the-wealth-of-generations/>.
- Daley et al (2015). Daley, J., Coates, B., Wood, D. and Parsonage, H. *Super tax targeting*. Grattan Institute. <http://grattan.edu.au/wp-content/uploads/2015/11/832-Super-tax-targeting.pdf>.
- Daley, J. and Coates, B. (2016). *Submission to Senate Standing Economics Committee Inquiry into the Superannuation (Objective) Bill 2016*. <https://grattan.edu.au/wp-content/uploads/2017/01/Submission-to-inquiry-into-Superannuation-Objective-23-December-2016-SUBMITTED.pdf>.

- Daley et al (2016a). Daley, J., Coates, B., Young, W. and Parsonage, H. "A better super system: Assessing the 2016 tax reforms". <http://grattan.edu.au/wp-content/uploads/2016/09/876-A-better-super-system.pdf>.
- Daley et al (2016b) \_\_\_\_\_. *Age of Entitlement: age-based tax breaks*. Grattan Institute. <https://grattan.edu.au/report/age-of-entitlement/>.
- Daley et al (2016c). Daley, J., Wood, D. and Parsonage, H. *Hot property: negative gearing and capital gains tax*. <https://grattan.edu.au/report/hot-property/>.
- Daley, J. and Coates, B. (2017a). "Why older Australians don't downsize and the limits to what the government can do about it". *The Conversation*. <https://theconversation.com/why-older-australians-dont-downsize-and-the-limits-to-what-the-government-can-do-about-it-76931>.
- \_\_\_\_\_. (2017b). *Supplementary Submission to Senate Standing Economics Committee Inquiry into the Superannuation (Objective) Bill 2016*. Grattan Institute. <https://grattan.edu.au/wp-content/uploads/2017/02/Supplementary-Submission-to-inquiry-into-Superannuation-Objective-13-February-2017-FINAL.pdf>.
- \_\_\_\_\_. (2018a). *Submission to Senate Standing Economics Committee Inquiry into the Superannuation (Objective) Bill 2016*. Grattan Institute. <https://grattan.edu.au/wp-content/uploads/2018/07/Grattan-submission-to-Senate-economics-protecting-your-super-FINAL1.pdf>.
- Daley et al (2018a). Daley, J., Coates, B. and Wiltshire, T. *Housing affordability: re-imagining the Australian dream*. Grattan Institute. <https://grattan.edu.au/report/housing-affordability-re-imagining-the-australian-dream/>.
- Daley et al (2018b). Daley, J., Coates, B., Wiltshire, T., Emslie, O., Nolan, J. and Chen, T. *Money in retirement: more than enough*. Grattan Institute. <https://grattan.edu.au/report/money-in-retirement/>.
- Daley, J. and Coates, B. (2018b). "We need to switch off these superannuation rorts". *The Australian*. <https://grattan.edu.au/news/we-need-to-switch-off-these-superannuation-rorts/>.
- Daley et al (2019). Daley, J., Duckett, S., Goss, P., Minifie, J., Norton, A., Terrill, M., Wood, T. and Coates, B. *Commonwealth Orange Book 2019: Policy priorities for the federal government*. Grattan Institute. <https://grattan.edu.au/report/commonwealth-orange-book-2019/>.
- Daniels, D. (2011). *Social security payments for the aged, people with disabilities and carers 1901 to 2010*. Australian Parliamentary Library. [https://www.aph.gov.au/About%7B%5C\\_%7DParliament/Parliamentary%7B%5C\\_%7DDepartments/Parliamentary%7B%5C\\_%7DLibrary/pubs/BN/1011/SSPayments1](https://www.aph.gov.au/About%7B%5C_%7DParliament/Parliamentary%7B%5C_%7DDepartments/Parliamentary%7B%5C_%7DLibrary/pubs/BN/1011/SSPayments1).
- Dawson, E. (2020). "What exactly is a comfortable lifestyle in retirement?" *Sydney Morning Herald*. <https://www.smh.com.au/national/what-exactly-is-a-comfortable-lifestyle-in-retirement-20200218-p541wk.html>.
- Deloitte (2018). *Analysis of the impact of raising benefit rates*. Deloitte Access Economics, commissioned on behalf of ACOSS. <https://www.acoss.org.au/wp-content/uploads/2018/09/DAE-Analysis-of-the-impact-of-raising-benefit-rates-FINAL-4-September-...-1.pdf>.
- Department of Human Services (2016). *Assets test limits for part pensions*. <https://www.humanservices.gov.au/customer/enablers/assets>.
- \_\_\_\_\_. (2019). "Age Pension - Who Can Get It". <https://www.humanservices.gov.au/individuals/services/centrelink/age-pension/who-can-get-it> (visited on 12/01/2020).
- Department of Social Services (2020). *Overview of deeming*. <https://guides.dss.gov.au/guide-social-security-law/4/4/1/10>.
- Department of Work and Pensions (2006). *Security in retirement: towards a new pensions system*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/272299/6841.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/272299/6841.pdf).
- Drew, M. and Stanford, J. (2003). *A Review Of Australia's Compulsory Superannuation Scheme After A Decade*. Discussion papers (University of Queensland. School of Economics). <http://www.uq.edu.au/economics/abstract/322.pdf>.

- DSS (2019). *DSS Demographics, December 2018*. <https://data.gov.au/dataset/ds-dga-cff2ae8a-55e4-47db-a66d-e177fe0ac6a0/distribution/dist-dga-3c69d15e-5ac1-48d9-9ae4-56957c63485a/details?q=dss%20demographic>.
- Emslie, O. and Wood, D. (2019). “5 charts on what a Newstart recipient really looks like”. *The Conversation*. October 30. <https://theconversation.com/5-charts-on-what-a-newstart-recipient-really-looks-like-125937>.
- Eslake, S. (2017). *No place like home: the impact of declining home ownership on retirement*. Prepared for the Australian Institute of Superannuation Trustees. [https://www.aist.asn.au/getattachment/Media-and-News/News/2017/No-place-like-home-the-impact-of-declining-home-ow/AIST\\_Housing-affordability-and-retirement-incomes\\_FINAL-21032017.pdf](https://www.aist.asn.au/getattachment/Media-and-News/News/2017/No-place-like-home-the-impact-of-declining-home-ow/AIST_Housing-affordability-and-retirement-incomes_FINAL-21032017.pdf).
- Financial System Inquiry (2015). *Financial System Inquiry, Final Report*. [http://fsi.gov.au/files/2014/12/FSI%7B%5C\\_%7DFinal%7B%5C\\_%7DReport%7B%5C\\_%7DConsolidated20141210.pdf](http://fsi.gov.au/files/2014/12/FSI%7B%5C_%7DFinal%7B%5C_%7DReport%7B%5C_%7DConsolidated20141210.pdf).
- Fitzgerald, V. (1993). “National saving – A report to the Treasurer”.
- Gallagher, P. (2011). *Treasury approaches to measuring retirement income adequacy*. <https://actuaries.asn.au/Library/Phil%20Gallagher.pdf>.
- (2019). “Australian Retirement Income Adequacy – A Distributional Approach to Cameo Modelling”. 27th Colloquium on Pensions and Retirement Research. Sydney, NSW. <https://treasury.gov.au/sites/default/files/2020-02/industry-superaustralia.pdf>.
- Gebler, J. (2018). *Analysis: Retirees’ spending falls faster than expected into old age*. Milliman. <https://au.milliman.com/insight/analysis-retirees-spending-falls-faster-than-expected-into-old-age>.
- Gruen, D. and Soding, L. (2011). “Compulsory Superannuation and National Saving”. *Economic Roundup Issue 3, 2011*. <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2011/Economic-Roundup-Issue-3/Report/Compulsory-superannuation-and-national-saving>.
- Harmer, J. (2009). *Pension Review Report*. [https://www.dss.gov.au/sites/default/files/documents/05%7B%5C\\_%7D2012/pensionreviewreport.pdf](https://www.dss.gov.au/sites/default/files/documents/05%7B%5C_%7D2012/pensionreviewreport.pdf).
- Henriques-Gomes, L. (2018). “Push to raise Newstart allowance by \$75 a week”. *The Guardian*. 17 September 2018. <https://www.theguardian.com/australia-news/2018/sep/17/push-to-raise-newstart-allowance-by-75-a-week>.
- Henry, K. (2009a). *Australia’s future tax system - The retirement income system: Report on strategic issues*.
- (2009b). *Australia’s future tax system - Retirement Income Consultation Paper*. [http://taxreview.treasury.gov.au/content/ConsultationPaper.aspx?doc=html/publications/Papers/Retirement\\_Income\\_Consultation\\_Paper/index.htm](http://taxreview.treasury.gov.au/content/ConsultationPaper.aspx?doc=html/publications/Papers/Retirement_Income_Consultation_Paper/index.htm).
- HILDA (2016). *Survey of Household Income and Labour Dynamics Australia*. [https://melbourneinstitute.unimelb.edu.au/%7B%5C\\_%7D%7B%5C\\_%7Ddata/assets/pdf%7B%5C\\_%7Dfile/0007/2155507/hilda-statreport-2016.pdf](https://melbourneinstitute.unimelb.edu.au/%7B%5C_%7D%7B%5C_%7Ddata/assets/pdf%7B%5C_%7Dfile/0007/2155507/hilda-statreport-2016.pdf).
- (2019). *Survey of Household Income and Labour Dynamics Australia*. <https://www.melbourneinstitute.com/hilda/>.
- Hobman, E. and Reeson, A. (2018). “Superannuation Drawdown: Motivations and Behaviour”. *forthcoming*.
- Hockey, J. (2015). *2015 Intergenerational Report*. <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2015/2015-Intergenerational-Report>.
- HSBC (2017). *The Future of Retirement*. <https://www.hsbc.com/-/media/hsbc-com/newsroomassets/2017/pdfs/170426-the-future-of-retirement-shifting-sands.pdf>.
- Hurd, M. and Rohwedder, S. (2003). *The retirement-consumption puzzle: Anticipated and actual declines in spending at retirement*. NBER Working Paper No.9586. <http://www.nber.org/papers/w9586>.
- Hurd et al (2012). Hurd, M., Michaud, P.-C. and Rohwedder, S. “The displacement effect of public pensions on the accumulation of financial assets”. *Fiscal studies* 33.1, pp. 107–128.

- Iggulden, T. (2018). “Budget repair less urgent than raising dole payments, leading economist Chris Richardson says”. *ABC News*. <http://www.abc.net.au/news/2018-05-02/budget-repair-less-urgent-than-raising-dole-economist-says/9717140>.
- Industrial Relations Victoria (2020). *Victorian Government Submission to the Commonwealth Government’s Review of the Retirement Income System*. <https://treasury.gov.au/sites/default/files/2020-02/industrialrelationsvictoria100220.pdf>.
- Industry Super Australia (2015). *Nearly half of Australians will not have a comfortable retirement*. <http://www.industrysuperaustralia.com/publications/reports/nearly-half-of-australians-will-not-have-a-comfortable-retirement/>.
- \_\_\_\_\_ (2018). “Grattan Wrong on Super Guarantee, Right on Age Pension”. *Industry Super*. <https://www.industrysuper.com/media/grattan-wrong-on-super-guarantee-right-on-age-pension/> (visited on 12/01/2020).
- Ingles, D. and Stewart, M. (2015). *Superannuation tax concessions and the age pension: a principled approach to savings taxation*. [https://taxpolicy.crawford.anu.edu.au/files/uploads/taxstudies%7B%5C\\_%7Dcrawford%7B%5C\\_%7Danu%7B%5C\\_%7Dedu%7B%5C\\_%7Dau/2015-12/m%7B%5C\\_%7Dstewart%7B%5C\\_%7Dd%7B%5C\\_%7Dingles%7B%5C\\_%7Dretirement%7B%5C\\_%7Dincome%7B%5C\\_%7Dfinal.pdf](https://taxpolicy.crawford.anu.edu.au/files/uploads/taxstudies%7B%5C_%7Dcrawford%7B%5C_%7Danu%7B%5C_%7Dedu%7B%5C_%7Dau/2015-12/m%7B%5C_%7Dstewart%7B%5C_%7Dd%7B%5C_%7Dingles%7B%5C_%7Dretirement%7B%5C_%7Dincome%7B%5C_%7Dfinal.pdf).
- Keating, M. and Podger, A. (2020). *Submission to the Retirement Income Review*. Committee for Sustainable Retirement Incomes. <https://treasury.gov.au/sites/default/files/2020-01/csri150120.pdf> (visited on 14/02/2020).
- Kehoe, J. and Cranston, M. (2019). “Higher super won’t help women much: Treasury”. *Australian Financial Review*. 20 September 2019. <https://www.afr.com/policy/tax-and-super/higher-super-won-t-help-women-much-treasury-20190920-p52tfx>.
- \_\_\_\_\_ (2020). “What Philip Lowe told the House Committee”. *Australian Financial Review*. 7 February 2020. <https://www.afr.com/politics/federal/rba-governor-fronts-mps-20200207-p53yl2>.
- Khemka, G. (2019). “Myth busted. Boosting super would cost the budget more than it saved on age pensions”. *The Conversation*. 20 June 2019. <https://theconversation.com/myth-busted-boosting-super-would-cost-the-budget-more-than-it-saved-on-age-pensions-119002>.
- Khemka et al (2020). Khemka, G., Tang, Y. and Warren, G. *The ‘Right’ Level for the Superannuation Guarantee: A Straightforward Issue by No Means*. ANU College of Business and Economics.
- Khemka, G. and Warren, G. (2020). *Submission to the Retirement Income Review*. Australian National University. <https://treasury.gov.au/sites/default/files/2020-01/warrenkhemka140120.pdf> (visited on 05/02/2020).
- KPMG (2018). *Federal Budget 2016*. KPMG. <https://assets.kpmg/content/dam/kpmg/pdf/2016/05/federal-budget-2016-review.pdf>.
- \_\_\_\_\_ (2020). *Retirement Incomes Review Consultation Process: Submission*. <https://treasury.gov.au/sites/default/files/2020-02/kpmg030220.pdf>.
- Love et al (2009). Love, D. A., Palumbo, M. G. and Smith, P. A. “The trajectory of wealth in retirement”. *Journal of Public Economics* 93.1-2, pp. 191–208.
- Mather, J. (2019). “The ‘average’ retiree is now self-funded”. *Australian Financial Review*. 26 June 2019. <https://www.afr.com/policy/tax-and-super/the-average-retiree-is-now-self-funded-20190625-p52121>.
- McDonald, P. (2019). *Home Ownership Futures: An Alternative Approach To Measurement*. CEPAR.
- ME Bank (2020). *Household financial comfort report - Seventeenth Edition*. ME Bank.

- Melbourne Institute (2019). "Poverty Lines: Australia - June Quarter 2019". [https://melbourneinstitute.unimelb.edu.au/\\_\\_data/assets/pdf\\_file/0007/3207823/Poverty-Lines-Australia-June-2019-Final.pdf](https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0007/3207823/Poverty-Lines-Australia-June-2019-Final.pdf).
- Mercer (2018). *Melbourne Mercer Global Pension Index 2018*. [https://www.mercer.com.au/content/dam/mercer/attachments/asia-pacific/australia/mmgpi-2017/au-2017-mmgpi-report.pdf?utm%7B%5C\\_%7Dmedium=referral%7B%5C&%7Dutm%7B%5C\\_%7Dsour ce=web%7B%5C&%7Dutm%7B%5C\\_%7Dcampaign=mmgpi](https://www.mercer.com.au/content/dam/mercer/attachments/asia-pacific/australia/mmgpi-2017/au-2017-mmgpi-report.pdf?utm%7B%5C_%7Dmedium=referral%7B%5C&%7Dutm%7B%5C_%7Dsour ce=web%7B%5C&%7Dutm%7B%5C_%7Dcampaign=mmgpi).
- \_\_\_\_\_ (2019). "A review of Grattan's work on super". <https://www.mercer.com.au/content/dam/mercer/attachments/asia-pacific/australia/our-thinking/A-review-of-Grattans-work-on-super.pdf>.
- Millane, E. (2020). *The Ghost of National Superannuation*.
- Minifie et al (2014). Minifie, J., Savage, J. and Cameron, T. *Super sting: how to stop Australians paying too much for superannuation*. Grattan Institute. <https://grattan.edu.au/report/super-sting-how-to-stop-australians-paying-too-much-for-superannuation/>.
- Minifie et al (2015) \_\_\_\_\_. *Super savings*. Grattan Institute. <http://grattan.edu.au/wp-content/uploads/2015/04/821-super-savings2.pdf>.
- Mirrlees et al (2011). Mirrlees, J., Adam Stuart Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G. and Poterba, J. *Tax by design*. <http://www.ifs.org.uk/mirrleesreview/design/taxbydesign.pdf>.
- Morrison, S. (2015a). *Fairer access to a more sustainable pension*. <https://formerministers.dss.gov.au/15866/fairer-access-to-a-more-sustainable-pension/>.
- \_\_\_\_\_ (2015b). *Address to the Association of Superannuation Funds Of Australia (ASFA) Conference, Brisbane*. Brisbane. <http://sjm.ministers.treasury.gov.au/speech/006-2015/>.
- \_\_\_\_\_ (2015c). *The Best Form of Welfare*. Canberra. <http://www.formerministers.dss.gov.au/15959/address-to-the-national-press-club-the-best-form-of-welfare/>.
- Myers, R. (2019). "Controversial super report finds big contributions hurt wages". *The New Daily*. <https://thenewdaily.com.au/finance/superannuation/2020/02/02/controversial-super-report-grattan/> (visited on 02/02/2020).
- Nakajima, M. and Telyukova, I. (2013). *Housing in retirement across countries*. Boston College Centre for Retirement Research. <https://crr.bc.edu/working-papers/housing-in-retirement-across-countries/>.
- National Seniors Australia (2020). *Submission to the Retirement Income Review*. <https://treasury.gov.au/sites/default/files/2020-02/nationalseniorsassociation030220.pdf> (visited on 15/02/2020).
- Nolan, J. and Coates, B. (2019a). "Using the right survey to measure retiree spending". *Grattan Blog*. <https://blog.grattan.edu.au/2019/05/using-the-right-survey-to-measure-retiree-spending/>.
- \_\_\_\_\_ (2019b). "The curious case of the missing superannuation fees". *Grattan Blog*. <https://blog.grattan.edu.au/2019/12/the-curious-case-of-the-missing-superannuation-fees/>.
- OECD (2012). *OECD Pensions Outlook 2012*. Paris. [https://www.oecd-ilibrary.org/finance-and-investment/oecd-pensions-outlook-2012%7B%5C\\_%7D9789264169401-en](https://www.oecd-ilibrary.org/finance-and-investment/oecd-pensions-outlook-2012%7B%5C_%7D9789264169401-en).
- \_\_\_\_\_ (2017a). *OECD Pensions at a Glance 2017: how does Australia compare?* <https://www.oecd.org/australia/PAG2017-AUS.pdf>.
- \_\_\_\_\_ (2017b). *OECD Pensions at a Glance 2017*. Paris. [http://dx.doi.org/10.1787/pension%7B%5C\\_%7Dglance-2017-en](http://dx.doi.org/10.1787/pension%7B%5C_%7Dglance-2017-en).
- \_\_\_\_\_ (2017c). *Pension spending (indicator)*. Paris. doi:%2010.1787/a041f4ef-en.
- \_\_\_\_\_ (2019). *OECD Pensions at a Glance 2019*. [https://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-2019\\_b6d3dcfc-en](https://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-2019_b6d3dcfc-en).

- Parliamentary Budget Office (2018). *Disability Support Pension – Historical and Projected Trends*. Parliamentary Budget Office.  
[https://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Budget\\_Office/Publications/Research\\_reports/Disability\\_support\\_pension\\_Historical\\_and\\_projected\\_trends](https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Publications/Research_reports/Disability_support_pension_Historical_and_projected_trends) (visited on 09/02/2020).
- Parliamentary Library (2015). *Social Services Legislation Amendment (Fair and Sustainable Pensions) Bill 2015*.  
[https://www.aph.gov.au/Parliamentary%7B%5C\\_%7DBusiness/Bills%7B%5C\\_%7DLegislation/bd/bd1415a/15bd129](https://www.aph.gov.au/Parliamentary%7B%5C_%7DBusiness/Bills%7B%5C_%7DLegislation/bd/bd1415a/15bd129).
- Phillips et al (2018). Phillips, B., Webster, R. and Gray, M. *Optimal policy modelling: a microsimulation methodology for setting the Australian tax and transfer system*. ANU Centre for Social Research and Methods.  
[https://csrcm.cass.anu.edu.au/sites/default/files/docs/2018/12/Optimal-policy-modelling-setting-Australian-tax-and-transfer-system-10-2018-CSRm-working-paper\\_0.pdf](https://csrcm.cass.anu.edu.au/sites/default/files/docs/2018/12/Optimal-policy-modelling-setting-Australian-tax-and-transfer-system-10-2018-CSRm-working-paper_0.pdf).
- Productivity Commission (2015a). *Superannuation Policy for Post-Retirement*.  
<http://www.pc.gov.au/research/completed/superannuation-post-retirement>.
- \_\_\_\_\_ (2015b). *Tax and Transfer Incidence in Australia*.  
<https://www.pc.gov.au/research/completed/tax-and-transfer-incidence/tax-and-transfer-incidence.pdf>.
- \_\_\_\_\_ (2015c). *Housing Decisions of Older Australians*.  
<http://www.pc.gov.au/research/completed/housing-decisions-older-australians/housing-decisions-older-australians.pdf>.
- \_\_\_\_\_ (2018a). *Report on Government Services 2018, Chapter 18: Housing*.  
<https://www.pc.gov.au/research/ongoing/report-on-government-services/2018/housing-and-homelessness/housing/rogs-2018-partg-chapter18.pdf>.
- \_\_\_\_\_ (2018b). *Introducing Competition and Informed User Choice into Human Services: Reforms to Human Services - Social Housing in Australia*. <https://www.pc.gov.au/inquiries/completed/human-services/reforms/report/02-human-services-reforms-housing.pdf>.
- \_\_\_\_\_ (2018c). *Superannuation: assessing efficiency and competitiveness*.  
<https://www.pc.gov.au/inquiries/current/superannuation/assessment/draft>.
- \_\_\_\_\_ (2018d). *Superannuation: assessing efficiency and competitiveness. Supplementary Paper – Investment performance: Supplementary analysis*.  
[https://www.pc.gov.au/\\_\\_data/assets/pdf\\_file/0020/232526/superannuation-assessment-investment-performance-supplement.pdf](https://www.pc.gov.au/__data/assets/pdf_file/0020/232526/superannuation-assessment-investment-performance-supplement.pdf).
- \_\_\_\_\_ (2019). *Vulnerable Private Renters: Evidence and Options*.  
<https://www.pc.gov.au/research/completed/renters/private-renters.pdf>.
- Rachel, L. and Smith, T. (2015). *Secular drivers of the global real interest rate*. London. <http://www.bankofengland.co.uk/research/Documents/workingpapers/2015/swp571.pdf>.
- Ravin et al (2019). Ravin, J. D., Liu, E., van Rooyen, R., Scully, P. and Wu, S. “Spend Your Decennial Age: A Rule of Thumb for Retirement”. *Actuaries Summit 2019*, p. 66.
- Rice Warner (2015). *Retirement Savings Gap as at 30 June 2014*.  
<http://ricewarner.com/wp-content/uploads/2015/12/Retirement-Savings-Gap-as-at-30-June-2014.pdf>.
- \_\_\_\_\_ (2019). *What is the right level of superannuation guarantee?* Sydney.  
<https://www.ricewarner.com/wp-content/uploads/2019/06/Rpt-What-is-the-right-level-of-SG-Actuaries-Institute-June-2019.pdf>.
- Rice, M. and Bonarius, N. (2020). *What is the right level of superannuation guarantee?* Rice Warner.
- Rothman, G. (2007). *The Adequacy Of Australian Retirement Incomes - New Estimates Incorporation The Better Super Reforms*. [http://www.docs.fce.unsw.edu.au/fce/Research/ROTHMAN\\_George.pdf](http://www.docs.fce.unsw.edu.au/fce/Research/ROTHMAN_George.pdf).

- Rothman, G. (2011). *Projecting the Adequacy of Australian Retirement Incomes: for whole of population, income and gender groups*. <https://www.business.unsw.edu.au/research-site/cps-site/Documents/G.%20Rothman%20-%20Projecting%20the%20Adequacy%20of%20Australian%20Retirement%20Incomes.pdf>.
- \_\_\_\_\_ (2012). *Modelling the sustainability of Australia's retirement income system*.
- Rothman, G. and Bingham, C. (2004). *Retirement income adequacy revisited*.
- Saunders et al (1998). Saunders, P., Chalmers, J., McHugh, M., Murray, C., Bittman, M. and Bradbury, B. *Development of Indicative Budget Standards For Australia*. [https://www.dss.gov.au/sites/default/files/documents/06%7B%5C\\_%7D2012/policyresearchpaperno74.pdf](https://www.dss.gov.au/sites/default/files/documents/06%7B%5C_%7D2012/policyresearchpaperno74.pdf).
- Saunders, P. and Wong, M. (2011). "Pension adequacy and the pension review". *Economic and Labour Relations Review* 22.3, pp. 7–26.
- Saunders, P. and Bedford, M. (2017). *New Minimum Income for Healthy Living Budget Standards for Low-Paid and Unemployed Australians*. UNSW Social Policy Research Centre. <http://unsworks.unsw.edu.au/fapi/datastream/unsworks:46140/bin5d1d5682-c6de-4e33-9629-f1fcad47e78c?view=true&xy=01>.
- Select Committee on Superannuation (2002). *Official Committee Hansard*. The Senate. [https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;orderBy=\\_fragment\\_number;query=\(\(Dataset:commsen\)%20SearchCategory\\_Phrase:%22committees%22\)%20CommitteeName\\_Phrase:%22select%20committee%20on%20superannuation%22%20Questioner\\_Phrase:%22senator%20cherry%22;rec=0](https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;orderBy=_fragment_number;query=((Dataset:commsen)%20SearchCategory_Phrase:%22committees%22)%20CommitteeName_Phrase:%22select%20committee%20on%20superannuation%22%20Questioner_Phrase:%22senator%20cherry%22;rec=0).
- Senate Economics References Committee (2015). *Out of reach? The Australian housing affordability challenge*. [http://www.aph.gov.au/Parliamentary%7B%5C\\_%7DBusiness/Committees/Senate/Economics/Affordable%7B%5C\\_%7Dhousing%7B%5C\\_%7D2013/Report](http://www.aph.gov.au/Parliamentary%7B%5C_%7DBusiness/Committees/Senate/Economics/Affordable%7B%5C_%7Dhousing%7B%5C_%7D2013/Report).
- Services Australia (2020a). *Age Pension*. Australian Government. <https://www.servicesaustralia.gov.au/individuals/services/centrelink/age-pension>.
- \_\_\_\_\_ (2020b). *Rent Assistance*. Australian Government. <https://www.servicesaustralia.gov.au/individuals/services/centrelink/rent-assistance>.
- SGS Economics & Planning et al (2019). SGS Economics & Planning, National Shelter, Community Sector Banking and Brotherhood of St Laurence. *Rental Affordability Index, November 2019 Release*. [http://shelter.org.au/site/wp-content/uploads/SGS-Economics-and-Planning\\_RAI-November-2019.pdf](http://shelter.org.au/site/wp-content/uploads/SGS-Economics-and-Planning_RAI-November-2019.pdf).
- Shorten, B. (2011). *Superannuation Guarantee (Administration) Amendment Bill 2011, Second Reading*. Canberra. [http://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/3641b583-a42e-4045-9472-07db51574a42/0017/hansard%7B%5C\\_%7Dfrag.pdf;fileType=application%7B%5C\\_%7D2Fpdf](http://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/3641b583-a42e-4045-9472-07db51574a42/0017/hansard%7B%5C_%7Dfrag.pdf;fileType=application%7B%5C_%7D2Fpdf).
- Smith, W. and Hetherington, D. (2016). *The adequacy of the age pension in Australia*. [https://percapita.org.au/wp-content/uploads/2018/05/Pension-Adequacy%7B%5C\\_%7DFinal.pdf](https://percapita.org.au/wp-content/uploads/2018/05/Pension-Adequacy%7B%5C_%7DFinal.pdf).
- Spicer et al (2015). Spicer, A., Stavrunova, O. and Thorp, S. *How Portfolios Evolve After Retirement: Evidence from Australia*. [https://cama.crawford.anu.edu.au/sites/default/files/publication/cama%7B%5C\\_%7Dcrawford%7B%5C\\_%7Ddanu%7B%5C\\_%7Ddedu%7B%5C\\_%7Dau/2015-11/39%7B%5C\\_%7D2015%7B%5C\\_%7Dspicer%7B%5C\\_%7Dstavrunova%7B%5C\\_%7Dthorp.pdf](https://cama.crawford.anu.edu.au/sites/default/files/publication/cama%7B%5C_%7Dcrawford%7B%5C_%7Ddanu%7B%5C_%7Ddedu%7B%5C_%7Dau/2015-11/39%7B%5C_%7D2015%7B%5C_%7Dspicer%7B%5C_%7Dstavrunova%7B%5C_%7Dthorp.pdf).
- Stone et al (2019). Stone, J., Bott, M., Trinh, K., Lavers, E. and Kowcza, J. *The superannuation system in aggregate*. <https://research.treasury.gov.au/sites/research.treasury.gov.au/files/2019-11/The-superannuation-system-in-aggregate.pdf>.
- Super Consumers Australia (2020). *Super Consumers Australia submission in response to the Retirement Income Review*. Super Consumers Australia. <https://treasury.gov.au/sites/default/files/2020-02/superconsumersaustralia030220.pdf>.

- Treasury (2009). *Australia's future tax system, Report to the Treasurer, Part One Detailed analysis*.  
[http://taxreview.treasury.gov.au/content/downloads/final%7B%5C\\_%7Dreport%7B%5C\\_%7Dpart%7B%5C\\_%7D2/AFTS%7B%5C\\_%7DFinal%7B%5C\\_%7DReport%7B%5C\\_%7DPart%7B%5C\\_%7D2%7B%5C\\_%7DVol%7B%5C\\_%7D1%7B%5C\\_%7DConsolidated.pdf](http://taxreview.treasury.gov.au/content/downloads/final%7B%5C_%7Dreport%7B%5C_%7Dpart%7B%5C_%7D2/AFTS%7B%5C_%7DFinal%7B%5C_%7DReport%7B%5C_%7DPart%7B%5C_%7D2%7B%5C_%7DVol%7B%5C_%7D1%7B%5C_%7DConsolidated.pdf).
- \_\_\_\_\_ (2010). *Commonwealth Budget 2010-11, Budget Paper No.2*. Canberra. [http://budget.gov.au/2010-11/content/bp2/download/bp2%7B%5C\\_%7Dv2.pdf](http://budget.gov.au/2010-11/content/bp2/download/bp2%7B%5C_%7Dv2.pdf).
- \_\_\_\_\_ (2013a). *A Super Charter: Fewer Changes, Better Outcomes*. [http://www.treasury.gov.au/Policy-Topics/SuperannuationAndRetirement/supercharter/%7B~%7D/media/Treasury/Policy%20Topics/Superannuation/supercharter/Downloads/PDF/super%7B%5C\\_%7Dcharter%7B%5C\\_%7Dreport.ashx](http://www.treasury.gov.au/Policy-Topics/SuperannuationAndRetirement/supercharter/%7B~%7D/media/Treasury/Policy%20Topics/Superannuation/supercharter/Downloads/PDF/super%7B%5C_%7Dcharter%7B%5C_%7Dreport.ashx).
- \_\_\_\_\_ (2013b). *Tax expenditures statement 2013*. <http://treasury.gov.au/~media/Treasury/Publications%20and%20Media/Publications/2014/TE%202013/Documents/PDF/TE13-Consolidated.ashx>.
- \_\_\_\_\_ (2014). *Budget 2014-15: Budget Paper No. 2*. [https://www.budget.gov.au/2014-15/content/bp2/download/BP2%7B%5C\\_%7Dconsolidated.pdf](https://www.budget.gov.au/2014-15/content/bp2/download/BP2%7B%5C_%7Dconsolidated.pdf).
- \_\_\_\_\_ (2017). *Budget 2017-18: Budget Paper 1*. Treasury. [http://www.budget.gov.au/2017-18/content/bp1/download/bp1\\_bs6.pdf](http://www.budget.gov.au/2017-18/content/bp1/download/bp1_bs6.pdf).
- \_\_\_\_\_ (2018a). "Tax Expenditures Statement 2017". <https://treasury.gov.au/publication/2017-tax-expenditures-statement/>.
- \_\_\_\_\_ (2018b). *Budget 2018-19: Budget Paper 2*. [https://www.budget.gov.au/2018-19/content/bp2/download/bp2%7B%5C\\_%7Dcombined.pdf](https://www.budget.gov.au/2018-19/content/bp2/download/bp2%7B%5C_%7Dcombined.pdf).
- \_\_\_\_\_ (2019). *Freedom of Information Request: Grattan Institute Report*. <https://treasury.gov.au/foi/2534>.
- \_\_\_\_\_ (2020). *TAX BENCHMARKS AND VARIATIONS STATEMENT 2019*. [https://treasury.gov.au/sites/default/files/2020-01/complete\\_tbvs\\_web.pdf](https://treasury.gov.au/sites/default/files/2020-01/complete_tbvs_web.pdf).
- Tune, D. (2017). *Legislated Review of Aged Care 2017*. [https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/08\\_2017/legislated\\_review\\_of\\_aged\\_care\\_2017.pdf](https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/08_2017/legislated_review_of_aged_care_2017.pdf).
- Valenzuela, R. (2017). "It's about time, not money: the real reason retirees keep their big homes". *The Age*. <http://www.theage.com.au/money/its-about-time-not-money-the-real-reason-retirees-keep-their-big-homes-20170825-gy4kbp.html>.
- Van Ooijen et al (2015). Van Ooijen, R., Alessie, R. and Kalwij, A. "Saving behavior and portfolio choice after retirement". *De Economist* 163.3, pp. 353–404.
- Whiteford, P. (2014a). "Measuring and Promoting Wellbeing : How Important is Economic Growth?" *Dimensions of Tax Design*, pp. 477–516.
- \_\_\_\_\_ (2014b). "Work till you drop?" *Inside Story*. <https://insidestory.org.au/work-till-you-drop/>.
- Wilkins, R. (2014). "Evaluating the Evidence on Income Inequality in Australia in the 2000s". *Economic Record* 90.288, pp. 63–89.
- Women in Super (2020). *Achieving a fairer retirement outcome for all Australians, including women, Submission to the Retirement Income Review*. <https://treasury.gov.au/sites/default/files/2020-02/wis030220.pdf>.
- Wood et al (2019). Wood, D., Griffiths, K. and Emslie, O. *Generation Gap: Ensuring a Fair Go for Younger Australians*. 2019-07. Grattan Institute. <https://grattan.edu.au/report/generation-gap/> (visited on 12/01/2020).
- World Bank (1994). *Averting the Old Age Crisis*.
- Yaxley, L. (2018). "Scott Morrison scraps Government plans to raise pension age to 70". *ABC News*. <http://www.abc.net.au/news/2018-09-05/scott-morrison-scraps-plans-to-raise-pension-age-to-70/10202678>.



This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the author and should not be attributed to either DSS or the Melbourne Institute.