

## The savings behaviour of older households

This briefing note draws from Grattan Institute’s recent report:

*Daley, J., Coates, B., Wiltshire, T., Emslie, O., Nolan, J. and Chen, T. (2018). Money in retirement: More than enough. Grattan Institute.*

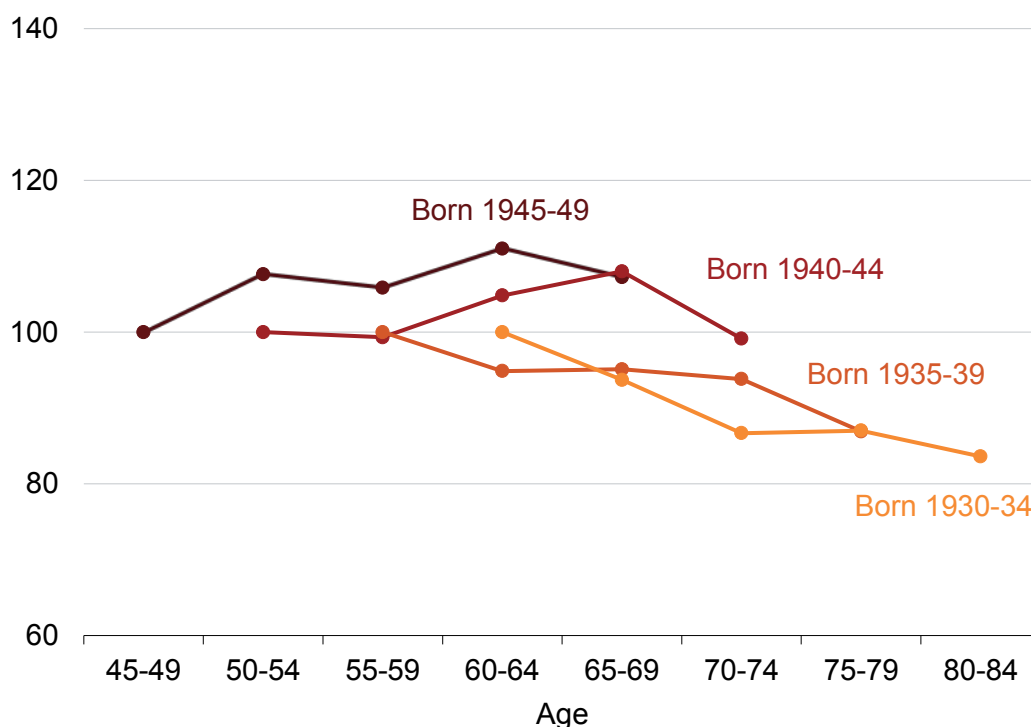
### Retirees spend less as they age

Australians tend to spend less after they retire. Even the wealthy eat out less, drink less alcohol and replace clothing and furniture less often. Spending tends to slow at around the age of 70, and decreases rapidly after 80.

Successive waves of the Household Expenditure Survey conducted by the Australian Bureau of Statistics show that for a given cohort, spending falls once households are aged over 70 (see Figure 1). And this quasi-longitudinal analysis may understate the fall in household expenditure because of survivorship bias.<sup>1</sup>

**Figure 1: Retirees spend less as they age**

*Equivalent household spending by age cohort, relative to 1993, \$2015-16, per cent*



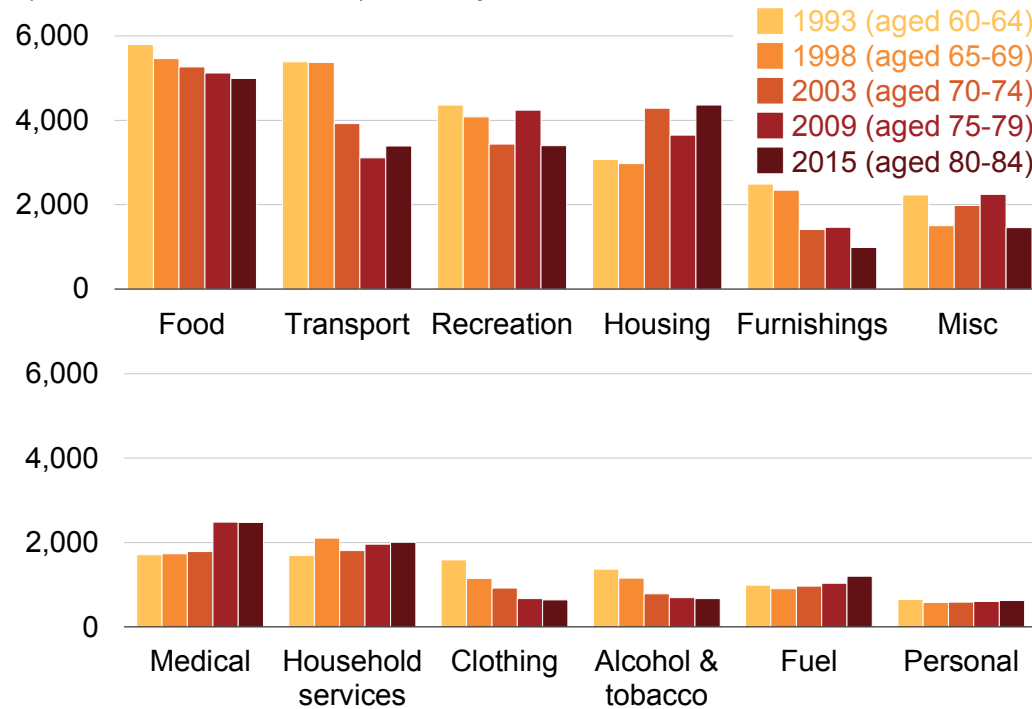
*Notes: Spending from the 1993-94, 1998-99, 2003-04, 2009-10 and 2015-16 iterations of the Household Expenditure Survey. Each line represents a single cohort across time as they age. While the age cohorts are 5 years apart, there was a gap of 6 years between the past three HES surveys. Spending is deflated by CPI. This analysis of the spending patterns of age cohorts over time is consistent with analysis that compares spending of households of different ages today. Sources: Daley et al. (2018).*

<sup>1</sup> Older households are by definition those that have survived, and those on higher incomes tend to live longer. For example, Clarke and Leigh (2011) find that at age 60 the difference in life expectancy between the wealthiest and poorest 20 per cent of income-earners was 5 years for men and 5.4 years for women. See also: Whiteford (2014) and Chomik (2018).

This fall in overall spending is mainly a result of lower spending on transport, recreation, food and furnishings (Figure 2). Retirees who own a home tend to have paid off their mortgage by retirement (Figure 3),<sup>2</sup> and no longer need to spend money on children or on work-related expenses.<sup>3</sup> Pensioners also spend less due to discounts on council rates, motor vehicle registration, electricity and gas bills, public transport fares, and pharmaceuticals. Public transport concessions apply to all retirees – not just those on the pension. Retirees’ spending also tends to be lower because they have more time, and so cook at home more and eat out less.<sup>4</sup>

**Figure 2: Retiree spending on food, transport, and recreation declines**

*Equivalised household annual expenditures for cohort born in 1930-34, \$2015-16*



*Notes: See Daley et al. (2018). Because coding of expenses changes from year to year, 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.*

*Source: Daley et. Al. (2018).*

Falls in out-of-pocket spending during retirement appear to reflect declining health. Retirees’ spending is highest in early retirement when they are healthiest, and seek to enjoy a range of activities including international travel.<sup>5</sup> But as health declines they spend less on recreation and travel.

While retirees do spend more on healthcare as they age, this is small relative to the falls in other categories, and is likely to reflect higher prices for the type of health costs paid directly by

<sup>2</sup> Average mortgage repayments also fall sharply for homeowners as they enter retirement, according to Grattan analysis of ABS (2017). There is however an increase in housing costs for those in late retirement, see Figure 2, which may be in part because council rates have increased faster than inflation over the past 20 years.

<sup>3</sup> Similarly, Chomik and Piggott (2016) find large reductions on spending on work-related clothing, motor vehicle and transport costs.

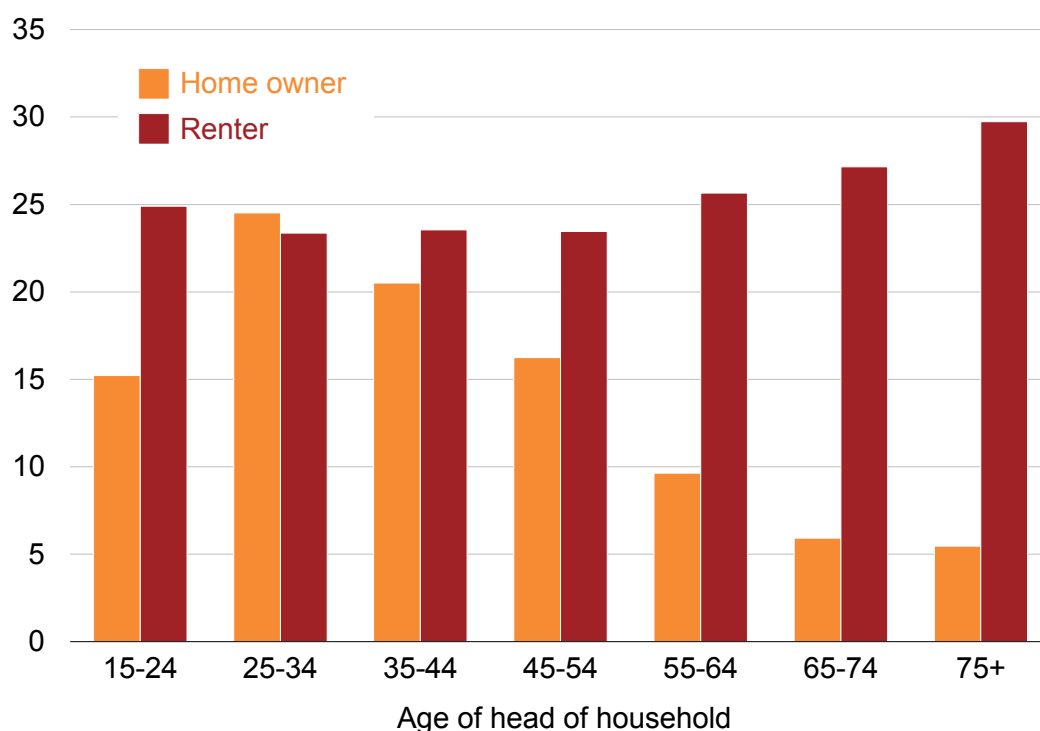
<sup>4</sup> Chomik and Piggott (2016) also find large reductions on spending on pre-packaged meals and meals out. Analysing U.S. food diaries, Aguiar and Hurst (2005) noted that although food expenditures decline 17 per cent at retirement, the quantity and quality of food consumed does not change.

<sup>5</sup> Many models of retirement income look at retirement in three stages: active retirement, passive retirement, and frail living. See: Cooper and Minney (2018).

individuals, such as private health insurance.<sup>6</sup> Governments foot the bill for most of the cost of health and aged care for older Australians.<sup>7</sup> More government spending on retirees means that while they might spend less of their own money overall, total consumption increases. The average 80 to 84 year old receives double the spending on services per year of a 50 to 54 year old. For a 90-94 year old government spending triples.<sup>8</sup> The result is that while out of pocket spending for retirees falls, total consumption does not.<sup>9</sup>

**Figure 3: Homeowners' housing costs decline sharply as they approach retirement**

*Housing costs as a percentage of household disposable income by age and tenure type, 2015-16*



*Notes: Housing costs include mortgage interest and principal repayments and general rates for homeowners, and rental payments for renters. Does not include imputed rent.*

*Sources: Daley et al. (2018)*

Analysis of bank accounts shows that older households today spend much less than younger households. Richer households spend a lot less as they age; poorer households spend a little less as they age (Figure 4). Even a retiree aged 85-plus among the top quarter of retirees by wealth is still spending at or below the Aged Pension.<sup>10</sup>

International studies make similar findings.<sup>11</sup> Reports using the British Family Expenditure Survey<sup>12</sup> and The American Income Dynamics and the Consumer Expenditure Survey both found

<sup>6</sup> Private health insurance premiums have risen by an average of 5.35 per cent a year since 2000, much faster than inflation overall. Silvester et al. (2018).

<sup>7</sup> Average government spending on healthcare for households aged 65 and over was \$16,682 in 2009-10. Over the past 20 years, government health spending per person increased in real terms by about 3.7 per cent a year. Cumulatively,

government health spending per person of a given age doubled, and increased the most for over-70s. See Daley et al. (2014, Figure 3.4.).

<sup>8</sup> Productivity Commission (2015, p. 3).

<sup>9</sup> Chomik et al. (2018, p. 30).

<sup>10</sup> Gebler (2018)

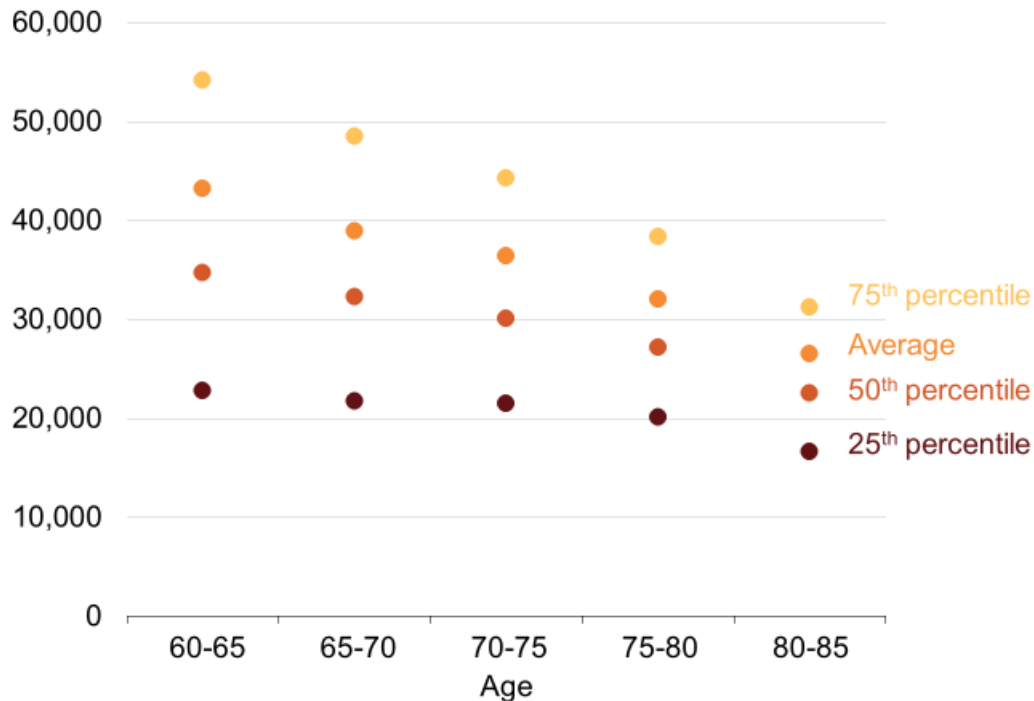
<sup>11</sup> For example, Fisher et al. (2008) find that consumption expenditures decrease by about 2.5 per cent when individuals retire; expenditures continue to decline at about 1 per cent per year after that.

<sup>12</sup> Banks et al. (1998)

spending decreases into retirement.<sup>13</sup> Another prominent U.S. study found that real spending falls by around 1 per cent each year in retirement.<sup>14</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>15</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>16</sup>

**Figure 4: Bank transaction records show that spending decreases with age**  
*Annual spending by wealth band and age bracket, couples, 2017*



*Notes: The Milliman Retirement Expectations and Spending Profiles (ESP) analysis is based on the actual spending of more than 300,000 Australian retirees, drawn from bank account and credit card data. The 'Average' series represents average spending across all wealth bands, for each age bracket.*

*Source: Gebler (2018).*

Why do people spend less in retirement than when they were working, but still feel more financially comfortable – sometimes labelled the 'retirement satisfaction puzzle'?<sup>17</sup>

It seems that expectations of income required in retirement decrease as households get closer to retirement.<sup>18</sup> Compared to the non-retired 45-49 age group, the non-retired age groups 60-64 and 65+ respectively expect to require \$11,800 and \$5,307 less a year in retirement.

It is possible that people adapt to lower living standards, or are influenced by the expectations of their peers. Or it may be that expenditure needs in retirement are lower than commonly assumed.

<sup>13</sup> Hurd and Rohwedder (2003).

<sup>14</sup> Blanchett (2014). Even among older retirees (aged 80+) there is no increase in spending: it just stops falling. Given that a larger share of health costs in old age are funded by government, total spending at older ages is likely to be lower in Australia. See also: Cooper and Minney (2018).

<sup>15</sup> Auster and Maddock (2016).

<sup>16</sup> See Daley et al. (2018, Appendix B).

<sup>17</sup> Bradbury and Mendiola (2012).

<sup>18</sup> Wilkins (2017).

Research on the psychology of ageing suggests people change their outlook as they age. Younger people tend to focus on achieving new exciting goals, but as they age they focus less on self-advancement and more on preserving the important things they already have.<sup>19</sup> Many younger people do not foresee this changing perspective. This suggests their expectations may be an unreliable guide to how much income they will need in retirement.<sup>20</sup>

### **Most Australians save in retirement**

Falling spending through retirement might reflect households running out of savings. But rather than running out of money each week and eating into savings, most Australians maintain their nest egg well into retirement.

#### ***The extent of 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 drawdown 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 the day they retire. Many retirees seem reluctant to draw down on their capital, and instead live on the income their savings generate.

Our analysis of the Survey of Income and Housing produced by the ABS shows that retirees typically maintain their non-housing wealth through their retirement (Figure 4). Wealth appears to have dipped only because the Global Financial Crisis reduced capital values, rather than because retirees drew down on their savings. This is true for both high- and low-wealth households: the bottom third by wealth of the cohort born in 1930-34 (aged 70-74 in 2005) increased their non-housing wealth from \$68,000 in 2005 to \$122,000 in 2015.<sup>21</sup>

These findings are consistent with a range of other studies all showing that most 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>22</sup> A recent study found that at death the median pensioner still had 90 per cent of their wealth as first observed.<sup>23</sup> 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. Another study found that many Australian retired households – pensioners or otherwise – do not spend down much of their financial wealth as they age.<sup>24</sup> And the Productivity Commission found that people aged 75-79 had a higher net worth on average than people aged 50-54.<sup>25</sup>

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<sup>19</sup> Robinson (2012); and Ebner et al. (2006).

<sup>20</sup> ASFA (2018b) justifies its retirement standards on the basis that they fit the income people expect to need in retirement

<sup>21</sup> Grattan analysis of ABS (2017). This may overstate the increase in wealth because of survivorship bias: mortality is probably higher among those with lower wealth. See Clarke and Leigh (2011), Whiteford (2014) and Chomik (2018)

<sup>22</sup> Morrison (2015). Around 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.

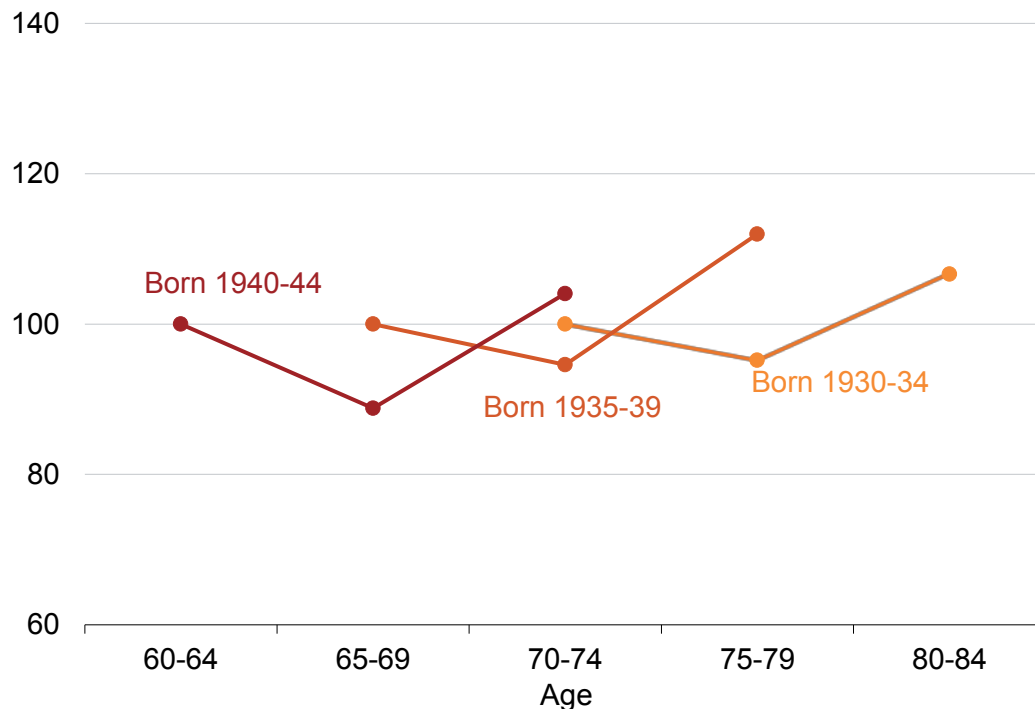
<sup>23</sup> Asher et al. (2017) find that age pensioners preserve financial and residential wealth and leave substantial bequests.

<sup>24</sup> Spicer et al. (2015).

<sup>25</sup> Productivity Commission (2015).

**Figure 5: Retirees generally don't spend their nest egg in retirement**

*Household net financial wealth by age cohort, excluding the family home, contents and vehicles, relative to 2005, \$2015-16, per cent*



*Notes: Based on net financial wealth from the 2005-06, 2009-10 and 2015-16 iterations of the Survey of Income and Housing. Net financial wealth is total net wealth excluding the value of the principal place of residence (and related mortgage liabilities), personal effects and motor vehicles. Deflated by CPI.*

*Sources: ABS (various years); Grattan analysis.*

### **Motivations for net saving in retirement**

It's difficult to disentangle the many reasons why retirees don't spend down their savings. Some retirees might be concerned about longevity risk – the risk that they outlive their savings – especially if they live well beyond average life expectancy.

But the effect of longevity risk on retirees' savings behaviour is often overstated.<sup>26</sup> One survey of those 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>27</sup> The Age Pension provides close to full insurance against longevity risk for low-income retirees, and partial 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>28</sup> And demand for financial products that insure against longevity risk – such as annuities – remains very low in Australia.<sup>29</sup>

<sup>26</sup> For example, Alonso-Garcia et al. (2017a) find that actual exposure to longevity risks does not affect motives to spend and save in retirement.

<sup>27</sup> 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).

<sup>28</sup> Grattan analysis. See Daley et al. (2018).

<sup>29</sup> 107. Productivity Commission (2015, 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.

Other motives, such as concern about potential future health and aged care costs, appear to be important drivers of precautionary saving by retirees.<sup>30</sup> In the US and UK, where many must fund their own aged care, retirees do not draw down much on their wealth.<sup>31</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>32</sup>

Australia's aged care system arguably exacerbates these issues since accommodation costs in residential aged care are historically funded by aged care bonds.<sup>33</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 residential accommodation costs paid by bonds.<sup>34</sup> This may reduce retirees' motives to save in retirement in future.

In addition, Australia's legislated minimum drawdown rates from superannuation in retirement may 'anchor' retirees' expectations about how much they should spend.<sup>35</sup> At these minimum rates, most retirees would leave very large legacies: the median worker would leave a bequest of \$190,000, in addition to the value of any home owned.<sup>36</sup>

#### ***Policy implications of net saving in retirement***

Thus most retirees do not in fact draw down much on their savings, even though retirement income policy is set on the assumption that savings will be consumed.<sup>37</sup> 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.

Our analysis of retiree behaviour indicates some potential directions for investigation to align retiree behaviour more closely with the way that the system is intended to work. Any policy intervention would need to be mindful that the failure to draw down is as much a consequence of sub-conscious behaviour as rational decision-making. Accordingly governments might:

- Increase minimum drawdown rates given that these anchor the expectations of many people;
- 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;

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<sup>30</sup> Alonso-Garcia et al. (2017b).

<sup>31</sup> 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)).

<sup>32</sup> Nakajima and Telyukova (ibid.). More recent research on drawdown behaviour in the Netherlands finds slow drawdown of wealth during retirement. Alonso-Garcia et al. (2017b).

<sup>33</sup> 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)).

<sup>34</sup> Ibid.

<sup>35</sup> 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. (2017a) 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

<sup>36</sup> See Daley et al. (2018, Section 4.5.6).

<sup>37</sup> See Daley et al. (2018, Section 2.2).

- Limit additional tax or welfare benefits to Comprehensive Income Products in Retirement ('CIPRs'), because such products appear not to respond to a major concern of retirees – the need to be able to pay a large and unexpected lump sum;
- Message more clearly and forcefully that there is a genuine safety net for those who live long but run out of money, in the form of government support for health, aged care, and the Age Pension.



## References

- ABS (2017) Microdata: Household Expenditure, Income and Housing, 2015-16.
- Aguiar, M. and Hurst, E. (2005). "Consumption vs. Expenditure". *Journal of Political Economy* 113.5, pp. 919–948. <http://www.nber.org/papers/w18693>.
- Alonso-Garcia et al. (2017a). 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).
- Alonso-Garcia et al. (2017b). 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/Savingpreferences-in-retirement%5C\\_Aug-2017%5C\\_AlonsoGarcia%5C\\_Bateman-et-al.pdf](http://www.icpmnetwork.com/wp-content/uploads/2017/10/Savingpreferences-in-retirement%5C_Aug-2017%5C_AlonsoGarcia%5C_Bateman-et-al.pdf).
- ASFA (2018b). 2018 ASFA Retirement Standard Budgets Review. <https://www.superannuation.asn.au/ArticleDocuments/269/2018-ASFA-Retirement-Standard-Budgets-Review.pdf.aspx?Embed=Y>.
- 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.
- 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).
- 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>.
- Blanchett, D. (2014). "Exploring the Retirement Consumption Puzzle". *Journal of Financial Planning*.
- Bradbury, B. and Mendiola, S. (2012). Living standards after retirement: perceptions and expenditure patterns. [https://www.melbourneinstitute.com/downloads/hilda/Bibliography/Other%7B%5C\\_%7DPublications%2012/Bradbury%7B%5C\\_%7Deta%7B%5C\\_%7DExpenditureCostsFinalReport.pdf](https://www.melbourneinstitute.com/downloads/hilda/Bibliography/Other%7B%5C_%7DPublications%2012/Bradbury%7B%5C_%7Deta%7B%5C_%7DExpenditureCostsFinalReport.pdf).
- Chomik, R. (2018). Retiring at 70 was an idea well ahead of its time. *The Conversation*. <https://theconversation.com/retiring-at-70-was-an-idea-well-ahead-of-its-time-102704>.
- 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.
- Clarke, P. and Leigh, A. (2011). "Death, dollars and degrees: socio-economic status and longevity in Australia". *Economic Papers* 30.3, pp. 348–355. <http://andrewleigh.org/pdf/DeathDollarsDegrees.pdf>.
- Cooper, J. and Minney, A. (2018). Household spending patterns in retirement.
- Daley et al. (2014). Daley, J., Wood, D., Weidmann, B. and Harrison, C. The wealth of generations. <http://grattan.edu.au/report/the-wealth-of-generations/>.
- Daley, J., Coates, B., Wiltshire, T., Emslie, O., Nolan, J. (2018). Money in retirement: More than enough. Grattan Institute. <https://grattan.edu.au/report/money-in-retirement/>

- Ebner et al. (2006). Ebner, N. C., Freund, A. M. and Baltes, P. B. "Developmental changes in personal goal orientation from young to late adulthood: from striving for gains to maintenance and prevention of losses". *Psychology and aging* 21.4, p. 664.
- Fisher et al. (2008). Fisher, J., Johnson, D. S., Marchand, J., Smeeding, T. M. and Torrey, B. B. "The Retirement Consumption Conundrum: Evidence from a Consumption Survey". *Economics Letters* 99.3, pp. 482–485.
- Gebler, J. (2018). Analysis: Retirees' spending falls faster than expected into old age. Milliman.
- Hobman, E. and Reeson, A. (2018). "Superannuation Drawdown: Motivations and Behaviour". *forthcoming*.
- Hurd, M. and Rohwedder, S. (2003). The retirement-consumption puzzle: Anticipated and actual declines in spending at retirement. <http://www.nber.org/papers/w9586>.
- Lowe, P. (2018). Remarks to the A50 Dinner. <https://www.rba.gov.au/speeches/2018/sp-gov-2018-02-08.html>.
- Morrison, S. (2015). Fairer access to a more sustainable pension. <https://formerministers.dss.gov.au/15866/fairer-access-to-a-more-sustainable-pension/>.
- Nakajima, M. and Telyukova, I. (2013). "Housing in retirement across countries".
- Productivity Commission. (2015). Superannuation Policy for Post-Retirement. <http://www.pc.gov.au/research/completed/superannuation-postretirement>.
- Robinson, O. (2012). "Values and adult age: findings from two cohorts of the European Social Survey".
- Silvester et al. (2018). Silvester, B., Jeyaratnam, E. and Jackson-Webb, F. Private health insurance premium increases explained in 14 charts. <https://theconversation.com/private-health-insurance-premium-increases-explained-in-14-charts-92825>.
- 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\\_%7Dedu%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_%7Dedu%7B%5C_%7Dau/2015-11/39%7B%5C_%7D2015%7B%5C_%7Dspicer%7B%5C_%7Dstavrunova%7B%5C_%7Dthorp.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).
- 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. (2014). Work till you drop? Inside Story. <https://insidestory.org.au/work-till-you-drop/>.
- Wilkins, R. (2017). The Household, Income and Labour Dynamics in Australia Survey: Selected findings from waves 1 to 15. The 12th Annual Statistical Report of the HILDA Survey. [http://melbourneinstitute.unimelb.edu.au/%7B%5C\\_%7D%7B%5C\\_%7Ddata/assets/pdf%7B%5C\\_%7Dfile/0010/2437426/HILDA-SR-medres.pdf](http://melbourneinstitute.unimelb.edu.au/%7B%5C_%7D%7B%5C_%7Ddata/assets/pdf%7B%5C_%7Dfile/0010/2437426/HILDA-SR-medres.pdf).