

Australia's National Saving Updated: 2020 and Beyond

2020

Final Report to
Financial Services Council (FSC) and MLC



Advisory Street

Our strategic advice puts you streets ahead of the rest

Acknowledgements

The authors wish to thank the Financial Services Council (FSC) and MLC for funding the research for this report, as part of their advocacy for the Government's *Retirement Income Review*.

The project to produce this report was led by Taleen Shamlian, with specialist expertise by Dr Vince FitzGerald AO. Other members of the team included Anne Irvine and administrative assistance by Zina Wilshire.

We are very grateful to Vince's seminal work and thought leadership on superannuation issues, and his support, wisdom, generosity and expertise in preparing this report.



Advisory Street

Suite 4, Level 6,
10 Spring Street
Sydney NSW 2000
W: <https://www.advisorstreet.com/>
E: admin@advisorstreet.com
T: @advisorst

Suggested citation for this report:

Advisory Street 2020, *Australia's National Saving Update: Beyond 2020*, Report to FSC and MLC, Sydney.

Disclaimer:

While Advisory Street endeavours to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any claim by any party acting on such information.

Table of contents

| | |
|--|----|
| Acknowledgements..... | 2 |
| Table of contents | 3 |
| Executive summary | 4 |
| Chapter 1: Savings – some facts..... | 7 |
| 1.1 Saving in Australia: the ‘big picture’ | 7 |
| 1.2 Distribution of saving and wealth | 9 |
| 1.3 Superannuation balances | 12 |
| Chapter 2: Are household savings adequate for retirement? | 16 |
| 2.1 Overview..... | 16 |
| 2.2 Measures of adequacy | 17 |
| 2.3 Australia’s retirement savings gap..... | 18 |
| 2.4 Longevity and delaying retirement..... | 21 |
| 2.5 International comparisons..... | 24 |
| Chapter 3: Are retirement income savings equitable?..... | 26 |
| 3.1 Women | 26 |
| 3.2 Changing nature of work..... | 29 |
| Chapter 4: Implications for public sector finances | 31 |
| 4.1 Australia’s budget finances..... | 31 |
| 4.2 Comparison with OECD countries | 33 |
| Chapter 5: Looking forward – where to from here? | 36 |
| 5.1 Possible policy options | 36 |
| Appendix A: References | 38 |

Executive summary

This Report updates our 2007 analysis to the Financial Services Council (FSC)¹ by examining the current state of household saving and its consequences for our retirement incomes, and focuses on the following questions:

- Has household saving changed since 2007– and what are the drivers?
- Are savings levels adequate to fund both the current and future generations’ retirement? Are Australians, and particularly the baby boomers, adequately providing for retirement?
- Has the retirement ‘savings gap’ increased or decreased and what are the drivers?
- Do certain cohorts face bigger challenges than others in preparing for and funding retirement?
- What are the future intergenerational equity issues and expected fiscal burden?
- What are the policy initiatives that can better prepare Australians for these trends?

At the time of the 2007 Report, household saving rates had collapsed and remained negative for much of the decade, associated with high household debt levels with Australians investing heavily in their homes.

The period from mid 2007 to early 2009, however, marked a key turning point in the domestic and global economies with the onset of the Global Financial Crisis. Household saving rates rose sharply, largely due to ‘precautionary motives’ or ‘preparing for a rainy day’ as Australian households rebuilt wealth following volatility in equity and bond markets, and less security in the job market.

While household saving rates have declined since 2011 yet remain in positive territory, the question still remains whether they are adequate to fund both the current and future generations’ retirement.

The short answer is that they are unlikely to be adequate. The retirement savings gap (RSG) is one indicator of the shortfall between the retirement income of working Australians and the income they need for an adequate (reasonable) retirement given their life expectancy. This Gap is estimated to be around \$2 trillion in June 2014. This is despite an increase in the compulsory

¹ “Australia’s National Saving Revisited: Where do we stand now?”, Report to the Investment & Financial Services Association (2007) written at The Allen Consulting Group. A copy of the report can be found on the Melbourne Institute’s website <https://melbourneinstitute.unimelb.edu.au/>

superannuation guarantee from 9.0 per cent to 9.5 per cent in 2013 and the legislated increase to 12 per cent in 2025.

Moreover, the retirement savings gap is larger for certain cohorts of workers — in particular for women, low income earners and those that are facing changes in the nature of work (such as the self-employed and those in the ‘gig economy’).

Questions about the adequacy of retirement incomes and other expenses related to ageing (notably the cost of the Age Pension, health and aged care) invariably involve public financing. Analysis by the Parliamentary Budget Office shows that, in the absence of policy adjustments, the ageing of the population will add 0.3 percentage points to the annual real growth in Government spending and reduce annual real growth in revenue by 0.4 percentage points. In real terms, this is equivalent to an annual cost to the budget of around \$36 billion by 2028-29.

Minimising this fiscal burden is important to ensure that future generations can enjoy similar (if not improved) living standards relative to the generation current moving into retirement, and that high tax rates do not unfairly restrain economic growth.

We consider that maintaining the timetable to increase the Superannuation Guarantee to be 12 per cent by 2025 is an integral pillar of Australia’s retirement income system. The vast majority of Australians strongly support the current level of compulsory superannuation, as well as the legislated increase to 12 per cent.² Changes to the system (which have been frequent) also cause confusion among contributors — undermining confidence and trust — as well as directly discouraging increased contributions and placing increased emphasis on the Age Pension.

The present Government and its predecessor have implemented, and continue to implement major reforms to the superannuation system, particularly following the Productivity Commission’s review into the efficiency of the superannuation system and the Royal Commission — reforms which have made a very significant difference and will continue to do so.

But more may need to be considered — for example, increasing the preservation age and encouraging people to delay retirement, abolishing the \$450 monthly threshold and a range of other possible initiatives — so as to lift the adequacy of retirement

² ASFA surveyed Australian households in relation to their support for the current level of compulsory superannuation. The survey showed that the great majority of Australians over 90 per cent either ‘strongly support’ or ‘support’ compulsory superannuation (at a rate of 9.5 per cent of wages) and a very small proportion, or less than 2.5 per cent of Australians, ‘oppose’ or ‘strongly oppose’ compulsory superannuation at this level. Australians were also asked about whether they supported an increase in compulsory contributions to 12 per cent of wages. Again, ASFA’s survey showed that the overwhelming majority of respondents, around 80 per cent of respondents, ‘supported’ or ‘strongly supported’ the legislated scheduled increase. Less than 10 per cent of Australians (or 7.8 per cent) ‘oppose’ or ‘strongly oppose’ increasing compulsory superannuation to the new level of 12 per cent.

income provision for all Australians, and to ease the burden on future public budgets and future generations of taxpayers.

Chapter 1: Savings – some facts

Key points

This chapter examines the current state of household saving and whether Australians are providing adequately for retirement.

In contrast to the experience in the late 1980s through to around 2007 when household saving fell sharply reaching a low point of negative 1 per cent in 2003, household saving has increased particularly at the onset of the Global Financial Crisis (GFC).

Our wealth position has improved, much of it related to our increased propensity to 'save for a rainy day' since the GFC. While equity in housing is still the most dominant form of wealth accumulation, superannuation balances have increased significantly and form the second largest component of our wealth.

Women currently have around 70 per cent of the superannuation balances compared to men. This ratio has improved over time.

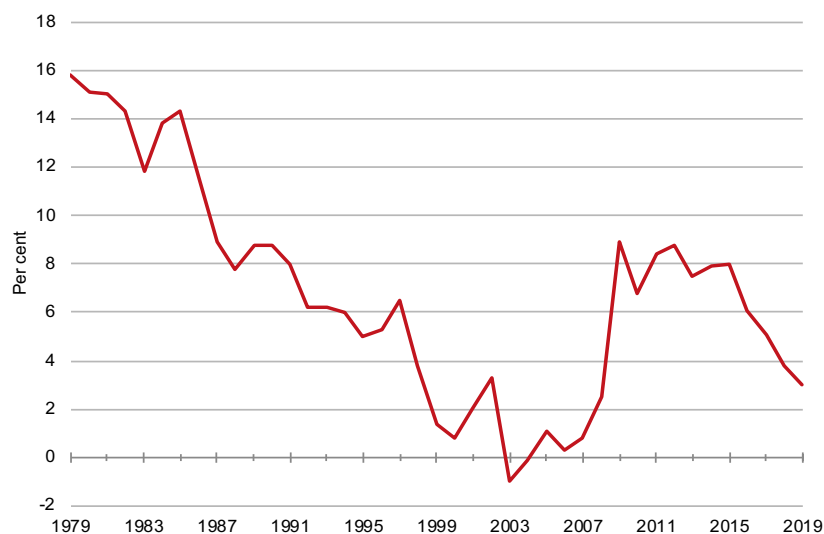
1.1 Saving in Australia: the 'big picture'

From the mid 1980s, the household saving ratio in Australia declined steadily and collapsed coming into the 2000s decade (see Figure 1.1).³ At the time of the 2007 Report, the household saving ratio was negative, with households spending more on goods and services than they could afford based on their measured income (ACG 2007).

A number of factors contributed to this trend, including the low interest rate and low inflation environment which increased the availability of credit, a sustained period of economic growth, Australians experiencing steady employment and lower unemployment, and rising asset prices. All of these factors had varying degrees of importance to the overall saving ratio being negative in 2007.

³ In broad terms, household saving is the residual of household disposable income after spending on goods and services. For a further explanation of the savings measure, including adjustments to the conventional saving measure, please refer to the 2007 Report Chapter 2.

Figure 1.1: Household saving ratio, per cent of GDP



Source: ABS 2019, 5204.0 Australian System of National Accounts, 2018-19, Table 1.

With the onset of the Global Financial Crisis (GFC) in 2008, the household saving ratio increased sharply, rising to as high as 8.9 per cent of GDP by the end of June 2009. The household saving ratio has declined since 2011 from these high rates, yet has stayed in positive territory since then — it is currently around 3.0 per cent of GDP.

There are several explanations for this sharp increase, one of which is the ‘precautionary motive’ where households ‘save for a rainy day’ or pay down debt when facing unforeseen economic or financial circumstances.

During the period of mid 2007 to early 2009, the global economy experienced its sharpest slowdown since the Great Depression with millions of people losing their jobs, their homes and large amounts of their wealth (RBA 2019). The global economy saw a significant slowdown in growth, house prices in the US fell sharply, and some financial firms failed or nearly failed, triggering a panic in financial markets globally as investors began pulling money out of banks and investment funds around the world. Businesses were much less willing to invest and households less willing to spend as confidence collapsed.

Australia’s experience of the GFC was not as acute as that of other countries — unemployment rose slightly, economic growth slowed slightly and the financial system remained stable with no banks collapsing. Nevertheless, as a small open economy, Australia was not immune to some of these global shocks.

Australian households, particularly for those who appear to have less secure income or more vulnerable to an asset price shock, responded to the events overseas by increasing their saving during this period. Wealthier households increased their savings

significantly, suggesting an effort to rebuild wealth following the GFC.

The Reserve Bank of Australia’s (RBA) assessment of the GFC period (2003-04 to 2009-10) showed that the precautionary motive was the single biggest contributor to the household saving rate increasing (Price and Finlay, 2016). Households with high debt levels also saw a rise in saving as they returned to more prudent attitudes to debt, with the excess levels of debt running its course.⁴

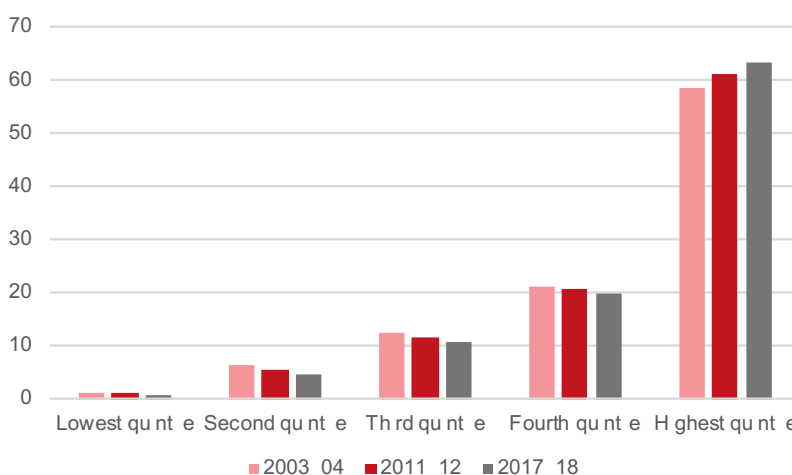
1.2 Distribution of saving and wealth

The discussion above considered household saving ratio in aggregate. This section examines how saving – measured as changes in net worth – is distributed by income and wealth across Australian households.⁵

Saving by net wealth

Figure 1.2 shows that wealth is distributed very unevenly across households.

Figure 1.2 Equivalised household net worth, by quintile



Source: ABS 6523.0 *Household Income and Wealth Australia: Summary of Results*, 2017-18, Table 2. Notes: Equivalised disposable household income is disposable household income adjusted using an equivalence scale. For a one person household, this is equal to disposable household income. For a household comprising more than one person, this is an indicator of the disposable household income that would need to be

⁴ The saving behaviour associated with age or the ‘life cycle hypothesis’ was not found to be change saving rates significantly between 2003-04 to 2009-10. Ibid.

⁵ We have selected the Australian Bureau of Statistics’ measure of household wealth on this occasion as it provides a more comprehensive assessment of the household balance sheet, given HILDA’s reliance on survey instruments may mean that its difficult to survey high net worth households. See Ryan and Stone (2016) for a comparison between the ABS and HILDA wealth measures.

received by a one person household to enjoy the same level of economic wellbeing as the household in question.

A very small proportion of households have high net worth and a large proportion have relatively low net worth.

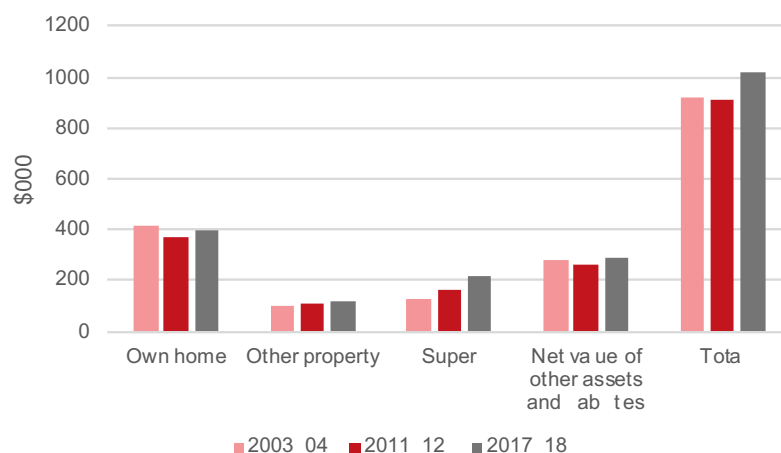
- The lowest quintile (bottom 20 per cent of net wealth) collectively held less than 1 per cent. This was equivalent to an average of \$24,600 in 2017-18 (ABS 2019, Table 2.1).
- The highest quintile, or the wealthiest 20 per cent accounted for 63 per cent of total net worth, or an average net worth of \$1.8 million (equivalised).
- The wealthiest households have around 5.7 times more wealth compared with the middle (or third quintile).
- The distribution of wealth has deteriorated slightly between 2003-04 and 2017-18 (as measured by the Gini coefficient).⁶

Much of this increase in household net worth over the 2003-04 to 2017-18 period came from growth in the value of non-housing assets, predominately by superannuation (Figure 1.4). Equity in housing continues to comprise the largest component of the household balance sheet (around 39 per cent in 2017-18) and has seen its real value bounce around due to volatility in house prices.

Superannuation assets, on the other hand, have increased as a proportion of household assets rising from 14 per cent of total net worth in 2003-04 to 21 per cent of total net worth in 2017-18. Real growth in superannuation assets between 2003-04 to 2011-12 was due to positive valuation effects and the recovery in global equity markets and the Australian dollar exchange depreciation, which raised the value of investments in overseas assets held by superannuation funds (Ryan and Stone, p. 7).

⁶ There are many summary indicators that can be used to help understand the distribution of income and wealth across the population. The ABS uses the Gini coefficient as an internationally comparable indicator. The Gini coefficient lies between 0 and 1. If everyone in the population had the same income or wealth, the Gini coefficient would be zero. Gini coefficient values that are closer to 1 represent greater inequality. Compared to other summary indicators, the Gini coefficient is not overly sensitive to low or negative incomes. The Gini coefficient was 0.565 in 2003-04 and 0.619 in 2017-18 (ABS 2019a).

Figure 1.3: Household assets and liabilities (2017-18 dollars)



Source: ABS 2019a *Household Income and Wealth Australia: Summary of Results, 2017-18*, Catalogue No. 6523.0, Canberra, Table 2, and CPI deflator, Advisory Street calculations.

Saving across the life cycle

Turning now to the saving distribution across the age spectrum, the data shows that Australian's saving behaviour is generally consistent with the 'life cycle hypothesis' – where individuals prefer to smooth consumption over their lifetime and where typically:

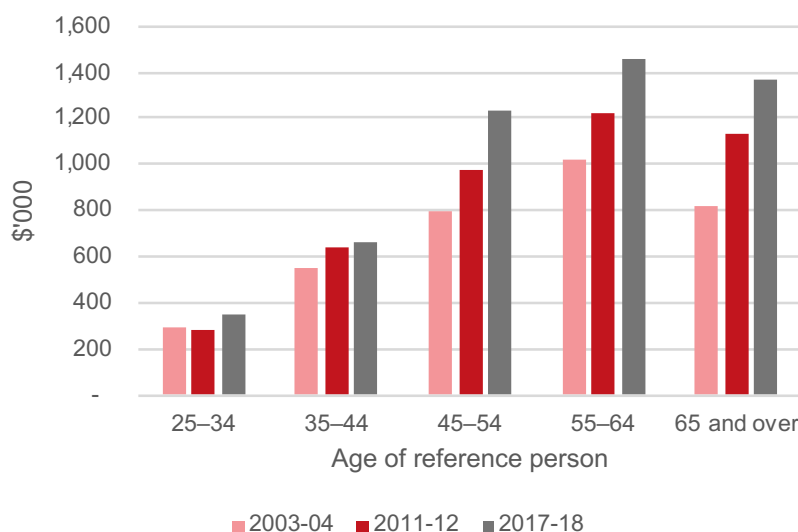
- Saving rates are low early in life when income is low;
- Saving rates increase when individuals move through their earning years; and
- Saving rates decline as households draw down their assets in retirement.

According to this life cycle hypothesis, a person's net worth will grow over their working lives.

This outcome is analysed in Figure 1.5, which shows the net worth of households by different age groups.

- Net wealth increases as individuals age with pre-retirees and baby boomers (those aged over 65 years) having an average net wealth around \$1.4 million in 2017-18.
- Generation X (aged 35 to 45 years) had around half the net worth (or \$663,000) of baby boomers.
- Not surprisingly, younger individuals had low net wealth at about one-third of the value of all households.
- The net wealth of all age brackets have increased over time between 2003-04 and 2017-18.

Figure 1.4: Average net worth by age of household reference person, (2017-18 dollars)



Source: ABS 2019, *Household Income and Income Distribution Australia* Detailed tables, Cat. No. 6523.0, and CPI deflator, Advisory Street calculations. Notes: Figures for 15-24 year olds have been excluded as the ABS advises that the estimates have a large relative standard error (of 25% to 50%) and should be used with caution.

Consistent with the distribution of overall net worth, baby boomers have the greatest amount saved in the value of their home and superannuation.

- In 2017-18, the average baby boomer household owned more than \$600,000 of their home (44 per cent of total net assets) and had over \$252,000 (18 per cent) invested in superannuation (ABS 6523.0 Table 10.2).
- Generation X cohort (35-44 years), had an average of \$246,600 saved in their own home (37 per cent of total net assets), and \$137,700 in superannuation (20.7 per cent of total net assets).
- The household dwelling is the dominant form of saving for all age groups.

1.3 Superannuation balances

This section does a ‘deep dive’ into Australia’s superannuation balances. A brief summary of the Superannuation Guarantee is found in Box 1.1.

Box 1.1 Summary of the Superannuation Guarantee

The Government first introduced Australia's mandatory superannuation system in 1992 to help Australians support their retirement with superannuation contributions over their working life. The Superannuation Guarantee rate (mandatory superannuation contribution rate) has increased from the initial 3 per cent of employees' wage to 9.5 per cent today. It is legislated to increase to 12 per cent between 2021 and 2025.

The system is 'maturing' over time as Australians spend more of their working life with mandatory superannuation (and with higher Superannuation Guarantee rates).

Source: Advisory Street.

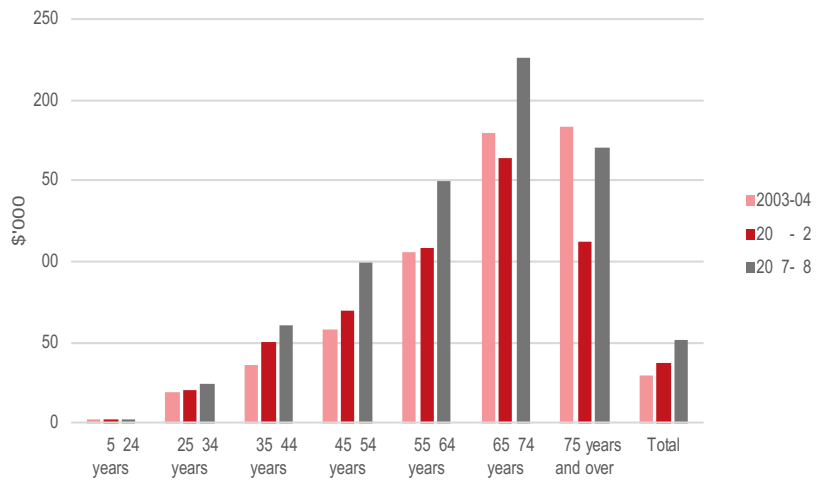
The total value of assets in Australia's superannuation system is \$2.9 trillion in September 2019 (APRA 2019), equivalent to nearly 150 per cent of GDP.

During the GFC, Australia's superannuation system played an important role in providing long-term funding for economic activity in Australia — both directly and indirectly through funding financial institutions — and contributing to the stability of the financial system and the economy (Australian Government Treasury 2014, p. 89).

In terms of superannuation balances, the median superannuation balance was \$52,000 in 2017-18.⁷ Figure 1.6 shows that the real median superannuation balance has grown from \$29,7000 in 2003-04 to \$38,000 in 2011-12 to \$52,000 in 2017-18, with the biggest increase in balances being for baby boomers and households close to retirement age.

⁷ The average balance by Australian households is \$144,900 in 2017-18. As there are many people with more than one superannuation account given multiple career jobs, the median balance, which is unaffected by high or low balances, is a better measure (FSC 2019, p. 24).

Figure 1.5: Median superannuation balances by age (2017-18 dollars)

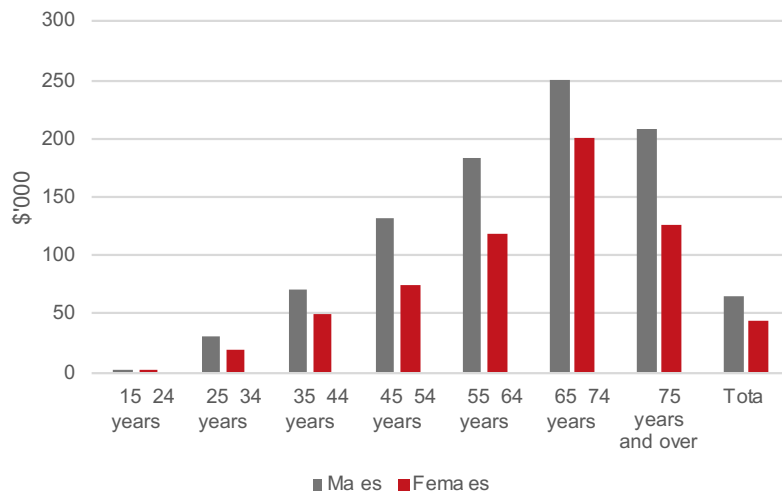


Source: ABS 6523.0, Household Income and Wealth, Australia: Summary of Results, 2017-18, Table 12, and CPI deflator, Advisory Street calculations.

Women

Turning now to the superannuation balances between the genders, women currently retire with around 70 per cent of the superannuation balances than that of their male counterparts. The gap varies between age cohorts with the highest superannuation balance gap among women aged 45-54 years - see Figure 1.7.

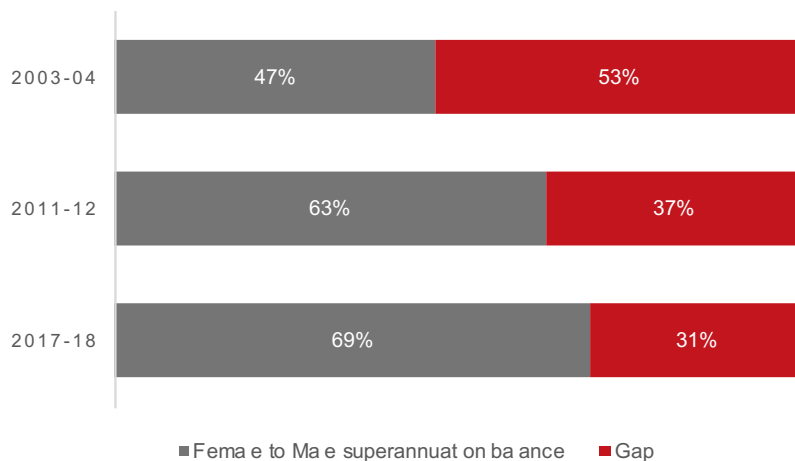
Figure 1.6: Median superannuation account balances by gender, 2017-18 dollars.



Source: ABS 6523.0, Household Income and Wealth, Australia: Summary of Results, 2017-18, Table 12.

The overall gender gap in superannuation balances has improved since 2003-04 when female superannuation balances represented nearly 47 per cent of their male counterparts – see Figure 1.8.

Figure 1.7: Ratio of Female to Male superannuation balance



Source: ABS 6523.0, Household Income and Wealth, Australia: Summary of Results, 2017-18, Table 12 and Advisory Street calculations.

Chapter 2: Are household savings adequate for retirement?

Key points

Whilst Australia has one of the largest superannuation systems, and household saving rate has been in positive territory in recent years, the question remains whether it is adequate to fund the current and future retirement of Australians.

It is difficult to define how much retirement income is adequate as there is no consensus view and depends on a range of factors including gender, marital status, longevity, health and aged care costs, and accommodation costs (especially for non-home owners).

Nevertheless, using a 62.5 per cent of pre-retirement earnings (in real terms) as the replacement rate, the 'retirement savings gap' is estimated to be around \$2 trillion (in 2015 dollar terms).

The gap appears to have increased in recent years, with the biggest factor between the 2013 and 2014 years being the effect of further delaying the superannuation guarantee.

Comparisons with other OECD countries shows that Australia lags on adequacy of retirement incomes as the average replacement rates in Australia are lower than the OECD average, although well targeted for low income earners.

2.1 Overview

Whilst Australia has one of the largest superannuation systems, and household saving rates have increased in recent years, the question remains whether it is adequate to appropriately fund current and future retirement of Australians.

Whether the level of retirement income is adequate varies greatly based on different circumstances, and it is difficult to determine how much an individual actually 'needs' to live on. Despite this, it is useful to consider various measures of adequacy as well as comparisons with other advanced economies in order to obtain a view on whether retirement incomes are adequate in Australia.

It is difficult to define how much retirement income is adequate as there is no consensus view. We provide an overview of some of the various definitions of what is considered an 'adequate' retirement income and use a replacement rate to make an

assessment of whether current retirement incomes are adequate in Australia.

There is much complexity in assessing adequacy based on the many factors of gender, marital status, longevity, health and aged care costs, and accommodation costs (for non-home owners).

The level of retirement income in Australia is not considered adequate based on various measures as well as comparisons with other advanced economies.

2.2 Measures of adequacy

There are two key methods of measuring adequacy of retirement incomes:

- replacement rate — retirement income expressed as a percentage of pre-retirement income; and
- budgetary standard — measuring retirement income against what it costs to live.

There are many different views on how best to calculate each of these measures.

In a study commissioned by Financial Services Council (FSC), Rice Warner (2015) argue that the replacement rate is more appropriate to determine adequacy as it is focused on maintenance of a standard of living.

A review of industry research indicates that the replacement rate is more often used in analysis of the adequacy of retirement income systems. The OECD uses replacement rates in its analysis of retirement incomes across developed nations (OECD 2019). It reports on replacement rates for females, those on low income and takes into consideration the impact of career breaks (due to childcare and unemployment). This is discussed further in Chapter 3.

As previously mentioned, there is no consensus view on what a replacement rate should be as it differs due to individual circumstances and other factors. Discussions of the replacement rate cover a fairly broad range from 60 to 75 per cent. There is also criticism that a benchmark rate should take into account the circumstances of different cohorts and that there should be a different replacement rate for those on lower incomes for example.

Rice Warner (2015, p.11) define retirement income adequacy as “the savings required at retirement to provide 62.5% of pre-retirement earnings (in real terms) for each year until life expectancy”. Their analysis of retirement savings gap (see below) leaves out the cohort that earns twice average earnings as it is expected they would have adequate provision in retirement. The 62.5 per cent figure is within the range of 60-65 per cent as defined by the Senate Select Committee on Superannuation and Financial Services (2002) that concluded this range would be an adequate retirement income.

2.3 Australia's retirement savings gap

Using a replacement rate of 62.5 per cent of pre-retirement earnings (in real terms), we can then estimate the Retirement Savings Gap (RSG).

The retirement savings gap refers to the shortfall between the retirement income of working Australians and the income they need for an adequate retirement for their life expectancy.

Rice Warner's report for FSC on Retirement Savings Gap provides a snapshot in 2014 of Australia's retirement income adequacy.

It estimates a deficit of \$2.052 trillion at 30 June 2014 — this is the amount that is required to make all Australians (except low income earners) self-sufficient in retirement (Rice 2015, p. 4).

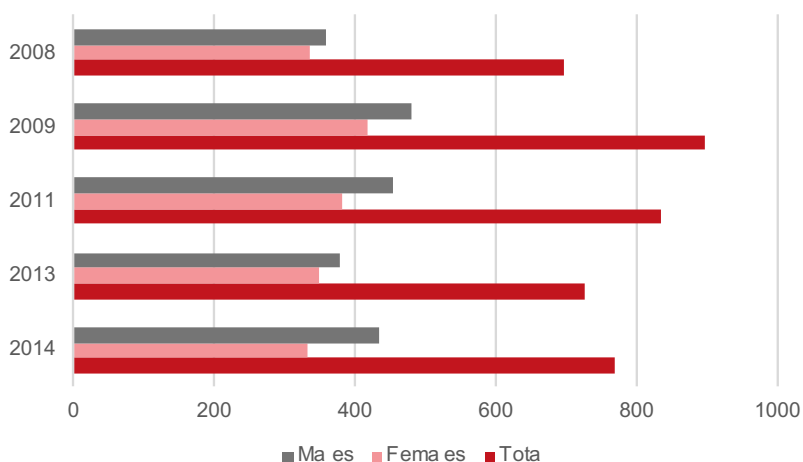
If the Age Pension is taken into account, the Retirement Savings Gap falls to \$768 billion (as at June 2014).

These estimates are based on the assumption that the Superannuation Guarantee remains at 9.5 per cent, after which it increases to 12 per cent by 2025.

The figures above are lump sums for all Australian households, however, as Rice notes, "it is important to note that this amount is not a lump sum that is required immediately, but an amount that would need to be funded over the expected term to retirement of the current workforce" (Rice 2015, p. 16).

The Retirement Savings Gap appears to have increased over time (see Figure 2.1), reflecting a "complex relationship" between: changes in the underlying population mortality; increases in earnings; changes in the population income distribution; changes in the underlying population demographics; changes in the estimate of the pre-retirement savings; and changes in assumptions in the model to reflect changes to the underlying economic variables (Rice Warner 2015, p. 5). The largest component of the change in RSG between 2013 and 2014 was the four year delay on the superannuation guarantee (adding \$118 billion to the RSG), followed by an increase in average earnings (Rice Warner 2015, p. 6).

Figure 2.1: Retirement Savings Gap after the Age Pension (2013-14 dollars)



Source: R ace Warner 2015, p. 11.

Note: A direct comparison between the 2007 Report and the most recent Retirement Savings Gap estimate cannot be made given the change in the methodology. In recent years, R ace Warner used the measure of 62.5 per cent of pre retirement earnings (in real terms) for each year until life expectancy from an account based pension, whereas previous analysis measured adequacy against 62.5 per cent of gross earnings, commencing from age 65. R ace Warner notes that the figures after Age Pension are the appropriate figures for the RSG.

If we look at the retirement savings gap per Australian, it is estimated to be:

- \$187,200 excluding the age pension; or
- \$70,100 if the age pension is taken into account.

The retirement savings gap is estimated to be equivalent to 1.3 times GDP.

Men have a higher RSG after the Age Pension. This can be explained by the fact that men tend to receive lower Age Pension benefits as they generally have greater superannuation savings at retirement. Further, fewer males survive to advanced ages (where most retirees receive a full Age Pension). In contrast, women tend to have a lower RSG as a result of the Age Pension forming a higher proportion of their retirement income (females tend to have lower pre-retirement incomes and therefore lower required adequate retirement incomes on our measure).

Table 2.1 Retirement Savings Gap (\$billion, as at June 2014).

| | Males | Females | Total |
|---------------------------|-------|---------|-------|
| Before Age Pension | 1,005 | 1,047 | 2,052 |
| After Age Pension | 435 | 333 | 768 |

Source: R ce Warner 2015, p. 11.

Maintaining the legislated increase in the superannuation guarantee from 9.5 per cent to 12 per cent by 2025 will assist with narrowing the Retirement Savings Gap. This is discussed further in Chapter 3.

Alternatively, Australians may need to retire at a later age, particularly as Australians are living longer than in the past. Section 2.3 assesses the Longevity Savings Gap (LSG) impact from those who may live longer than their expected age, as well as the possibility of delaying the retirement age.

The argument that retirement incomes are adequate

Some commentators, such as the Grattan Institute (2018), has disagreed with the view that Australia's retirement incomes are adequate, and argue that across income levels, Australians will have enough retirement income to sustain the same, or higher, living standard in retirement. Their modelling shows that average Australians would expect retirement income of at least 91 per cent of pre-retirement income, a level well above OECD averages and other industry benchmarks. They hold the view that the planned 12 per cent superannuation contribution is not appropriate, even if the government did want to boost retirement income.

Mercer (2019) critiqued this analysis saying its research assumptions were not realistic for average Australians. Some of these assumptions included that: Australians are single when they retire, that everyone would work until pension eligibility age of 67, no allowance for those who live past the age of 92, and desired lifestyle and income assumptions. The Grattan report assumed medium income Australians would have a net replacement rate of 89 per cent of their income before retirement whereas Mercer research (2019) shows it would be lower at 68 per cent. The conclusions were also based on a single cameo rather than a broad range of cameos which would provide a better understanding of the various factors affecting different cohorts.⁸

⁸ Industry Super Australia (Gagher P and Bastian B, 2019) has a so released its modelling to show that Grattan Institute's estimates of retirement income under a 12 per cent superannuation contribution is misleading and that its assumptions were flawed.

2.4 Longevity and delaying retirement

Longevity

One factor, which needs to be considered and which implies a higher degree of adequacy of retirement provision than otherwise, is increasing longevity. Similar to citizens of other advanced countries, Australians are living longer than in the past, and this is expected to continue in the future. Since the first Intergenerational Report in 2002, the proportion of people aged over 65 has gone from 13 per cent (or 2.5 million) to 16 per cent (or 4 million) today (Frydenberg 2019, p. 94). Australia's life expectancy is the sixth highest in the world, and we are seeing an increase of almost one year every four years (Ibid).

Given these trends, it is important to measure the retirement income adequacy should people live longer than expected. This can be measured by the Longevity Savings Gap (LSG) — which is defined as the shortfall between retirement income for those that live longer than average life expectancy. Rice Warner (2015) analysed this under three scenarios:

- target income required until life expectancy, the age at which 50 per cent of retirees will survive,
- target income required to the age where 25 per cent of retirees will survive (75th survival percentile),
- target income required to the age at which 10 per cent of retirees will survive (90th survival percentile).

Under each of these scenarios, the retirement and longevity savings gap is illustrated in the table below.

The modelling showed an average income earner would have higher net incomes than estimated by the Grattan Institute. Also, the Grattan report only provided analysis on a single person and no other combinations, such as a couple. We note that Treasury's Model of Australian Retirement Incomes and Assets (MARIA) allows for many combinations and factors to be taken into account, and some are calling for it to be publicly released as a valuable input into superannuation adequacy discussions.

Table 2.2 Retirement and Longevity Savings Gaps

| As at June 2014 | Amount excluding Age Pension (\$b) | Difference from RSG (\$b) | Percentage (%) difference |
|-----------------------------------|------------------------------------|---------------------------|---------------------------|
| 50 th Percentile (RSG) | 2,052 | n/a | n/a |
| 75 th Percentile (LSG) | 2,920 | 875 | 43% |
| 90 th Percentile (LSG) | 4,005 | 1,960 | 96% |

Source: R ce Warner 2015, p. 4.

The analysis shows that it is expensive for those who live beyond their life expectancy; and inefficient for those that die before their life expectancy and leaving large balances behind.

On a per person level, the retirement savings gap increases to \$266,400 at the 75th survival percentile and \$365,400 at the 90th survival percentile.

Delaying the retirement age

One approach to prevent a shortfall in retirement savings is delaying the retirement age of workers.

In the assessment above, it is assumed that all members of the population retire at the future pension eligibility age of 67. However, in reality the median age of retirees leaving the workforce is around age 61. If this current trend continues, the RSG is much higher (see Table 2.3).

Table 2.3 Total Retirement Savings Gap including the Age Pension — delaying pension age (\$bn)

| As at 30 June 2014 | Males | Females | Total |
|--------------------|-------|---------|-------|
| Retire at age 60 | 998 | 700 | 1,698 |
| Retire at age 61 | 920 | 648 | 1,568 |
| Retire at age 62 | 834 | 590 | 1,424 |
| Retire at age 63 | 746 | 533 | 1,279 |
| Retire at age 64 | 669 | 478 | 1,147 |
| Retire at age 65 | 594 | 429 | 1,023 |
| Retire at age 66 | 513 | 383 | 897 |
| Retire at age 67 | 435 | 333 | 768 |
| Retire at age 68 | 377 | 289 | 666 |
| Retire at age 69 | 307 | 250 | 557 |
| Retire at age 70 | 242 | 209 | 451 |

Source: Rice Warner 2015, p. 22.

Early retirement age is attributed to a higher Retirement Savings Gap (when including the Age Pension) due to:

- the inability to access the Age Pension for six years of retirement, before reaching the Age Pension age;
- lower savings at retirement due to less time in the workforce;
- higher required savings due to a longer time spent in retirement; and
- a larger proportion of people living at age 61 compared to age 67 (Rice Warner 2015, p. 22).

Government policies to increase the preservation age and Age Pension will go some way to incentivise people to delay retirement, and thus reduce the RSG.

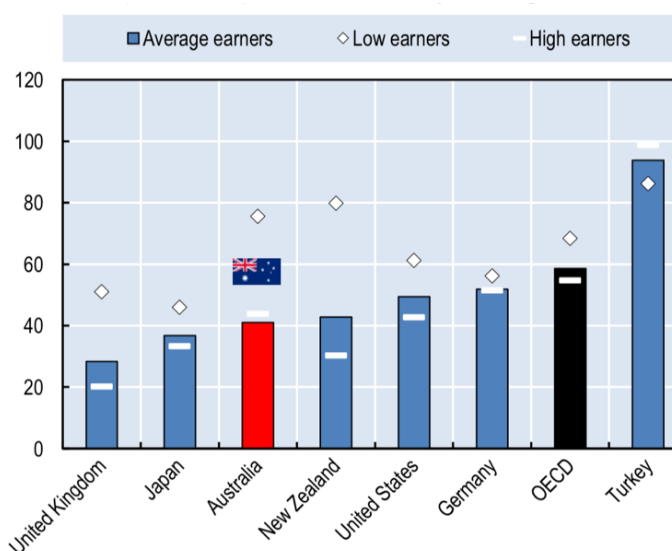
2.5 International comparisons

Research shows that Australia falls behind in international comparisons of adequacy of retirement incomes. Retirement income levels are lower than many other advanced economies.

OECD research shows Australia lags on adequacy of retirement incomes, based on replacement rates. The average replacement rates in Australia are lower than the OECD average, however replacement rates for low income earners are higher (due to impact of the age pension). Findings, as seen in Figure 2.2, include:

- The future net replacement rate for full career male average wage earner is 41 per cent, compared to OECD average of 59 per cent.
- The replacement rate for low income earners is 76 per cent compared to OECD average of 68 per cent (noting Australia's age pension provides a safety net for lower income earners).

Figure 2.2 Net pension replacement rates by earnings level



Source: OECD 2019

The 2019 Melbourne Mercer *Global Pension Index* is another benchmark for assessing retirement income systems globally. Box 2.1 summarises this Index.

Box 2.1 Summary of Melbourne Mercer Global Pension Index

The Melbourne Mercer *Global Pension Index* is a study of 37 retirement income systems, representing more than 63 per cent of the world's population uses three sub-indices – adequacy, sustainability and integrity – to measure each retirement income system against more than 40 indicators.

The weightings used are 40 per cent for the adequacy sub-index, 35 per cent for the sustainability sub-index and 25 per cent for the integrity sub-index which have remained unchanged since the first Index in 2009.

The different weightings are used to reflect the primary importance of the *adequacy* sub-index which represents the benefits that are currently being provided together with some important system design features.

The *sustainability* sub-index has a focus on the future and measures various indicators which will influence the likelihood that the current system will be able to provide benefits into the future.

The *integrity* sub-index includes several items that influence the overall governance and operations of the system which affects the level of confidence that the citizens of each country have in their system.

Source: Mercer 2019b, p. 5.

Australia's overall ranking was a B+, demonstrating a system that has a sound structure, with many good features, but has some areas for improvement that differentiates it from an A-grade system (Mercer 2019, p. 6). Australia is third in ranking behind the Netherlands and Denmark who received an A.

In terms of the adequacy index, Australia rates 11th amongst the 35 countries, with a score of 70.3, putting Australia behind Denmark, Finland, France, Ireland, Brazil, Norway, Singapore, Spain, New Zealand, and Germany, and represents a fall in placing from previous years (although an improvement in individual index score).⁹ Some of the areas of improvement suggested by Mercer are integrated into our policy recommendations in Chapter 5.

⁹ Australia ranks third on the Sustainability Index and fourth on the Integrity Index (Mercer 2019b, p.7).

Chapter 3: Are retirement income savings equitable?

Key points

Women and self-employed are two groups that do not see equity in terms of retirement income savings.

For women, retirement incomes continue to lag their male counterparts, due to the existing gender wage gap, as well as career breaks often due to childcare commitments.

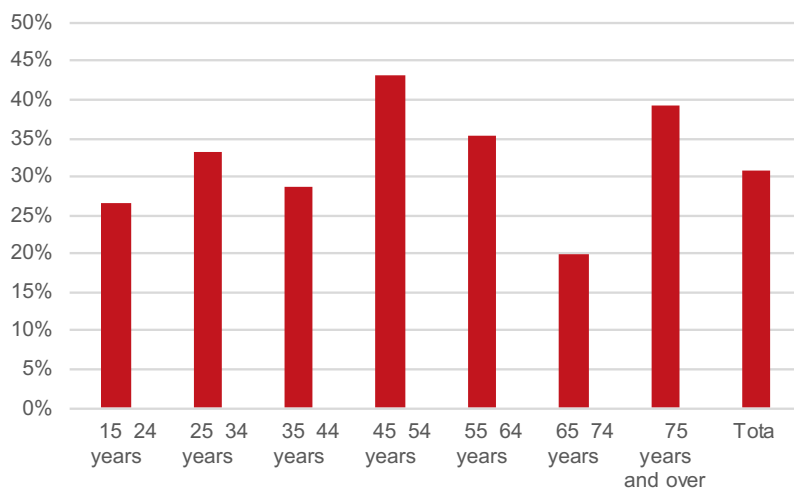
Due to the changing nature of work, there are more self-employed who do not tend to have the same level of superannuation contribution as employee.

In assessing equity in retirement incomes, the focus is on the various groups that tend to fall behind in retirement income levels, such as women who often take time out of the workforce, or self-employed who tend to have lower superannuation contributions or those who experience unemployment due to various factors.

In this chapter we focus on whether retirement income savings are equitable in terms of women and self-employed (or those referred to as working in the new gig economy).

3.1 Women

Chapter 1 showed that women currently have a smaller pool of superannuation balances compared to men — currently around 70 per cent, such that the gap is 31 per cent (see Figure 1.8). The superannuation gap is most prominent for women aged 45-54 years when superannuation balances for women are 57 per cent of the median male superannuation balance in the same age group, when the gap is assessed at 43 per cent.

Figure 5.1 Gender gap to median superannuation balances by age

Source: ABS 2019a *Household Income and Wealth 2017-18* Canberra, Table 12.3

While the gap has narrowed over time (as seen in Figure 1.8), there continues to be several factors that lead to lower superannuation balances for women. The Workplace Gender Equality Agency (WGEA), Australian Institute of Superannuation Trustees (AIST), Women in Superannuation (WIS), amongst others, identify the following factors:

- **the labour force participation rate** for women aged between 20-74 years was 66% for women compared with a higher participation rate of 78% for men.
- women are more likely to have **interrupted work patterns** – for example, taking unpaid leave around childbirth and in the months following, or caring for an elderly parent, although more and more organisations are offering paid primary carers' leave and have a gender equality policy and/or strategy in place.
- gender **wage gap** of 23.1% full-time total remuneration gender pay gap, with men earning on average \$26,853 a year more than women. Factors include women working part-time, women being more likely to be employed in lower wage industries (for example, hospitality, aged care and child care) and few women at manager-level and C-suite executive positions (AIST, WIS and WGEA 2016).

Chapter 2 shows that women have a larger Retirement Savings Gap before the Age Pension is taken into account. This reflects the combination of lower superannuation savings at retirement and their longer expectation of life (and thus the longer period over which to provide an adequate income) relative to males.

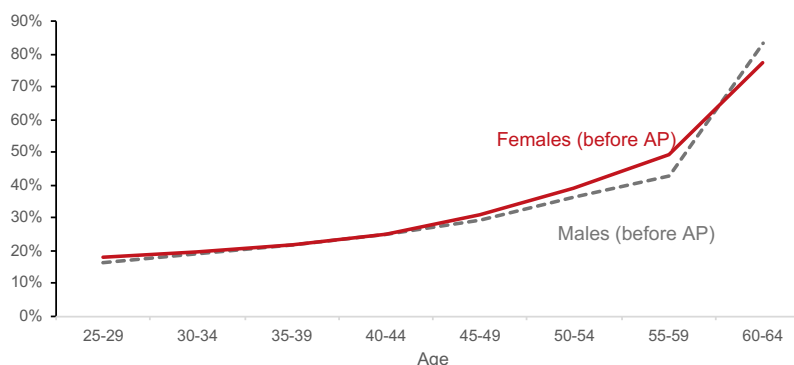
In response to the inadequacy of superannuation savings, one measure is to increase one's additional contribution to offset the Retirement Savings Gap over the future of the lifetime. This is

shown below as a contribution in addition to the Superannuation Guarantee rate in Figure 3.2

Not surprisingly, the rates increase with age as older generations have spent less time accumulating through the superannuation system and have a shorter time horizon to amortise (or narrow) the RSG.

The rates for women are considerably higher due to: the pool of current savings being less than males due to career breaks; the lower average income for females relative to males such that there is less accumulated future contributions; and a larger pool of assets required at retirement to fund income payments given the longer life expectancy of women, despite women possibly requiring lower post-retirement expenses when assuming a 62.5 per cent adequacy level given females have lower salaries on average (Rice Warner 2015, p. 19).

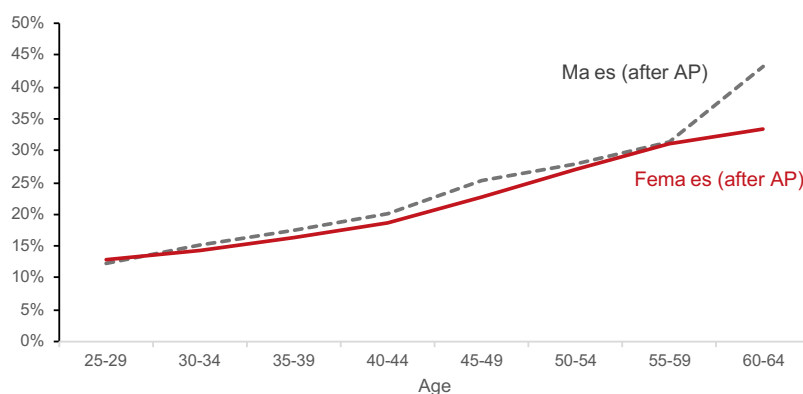
Figure 3.2: Required Additional Contribution (before the Age Pension)



Source: Rice Warner 2015, p.19.

If the Age Pension is taken into account (Figure 3.3), the required contribution is lower compared with men.

Figure 3.3: Required contribution rates by cohort (including the Age Pension)



Source: R ce Warner 2015, p.18.

Indeed, OECD results show that a five-year career break (for childcare or unemployment reasons) lowers the future replacement rates by 12 per cent, which is higher than OECD average of 4 per cent for childcare and 6 per cent for unemployment. Longer career breaks have less impact on entitlements (OECD 2019).

3.2 Changing nature of work

Since 2007, a new generation of work has been introduced by technology, often described as the ‘gig economy’ where digital platforms act as intermediaries using algorithmic management to connect workers with end-users (enterprises or consumers) seeking specific services (QUT 2018).’ Such work can be seen in a variety of industries including food delivery, graphic design, outsourcing of every day tasks, and so forth.

Gig workers are often not classed as employees, but as independent contractors, and are ineligible for compulsory employer-funded superannuation that takes effect when any employee earns more than \$450 a month.

A recent survey estimates that the gig economy comprises 7.1 per cent of the labour force, and that 13.1 per cent of survey respondents have, at some time, undertaken digital platform work (McDonald 2019). Younger people (aged 18-34) and males are more likely to be working through digital platforms than other demographic groups; females are only half as likely as males to work on digital platforms (Ibid).

These trends have also been demonstrated with superannuation account balances where the proportion of young men who have an account has fallen in recent years from 54.5 per cent in 2011-12 to 49.6 per cent in 2017-18 (ABS 2019a).

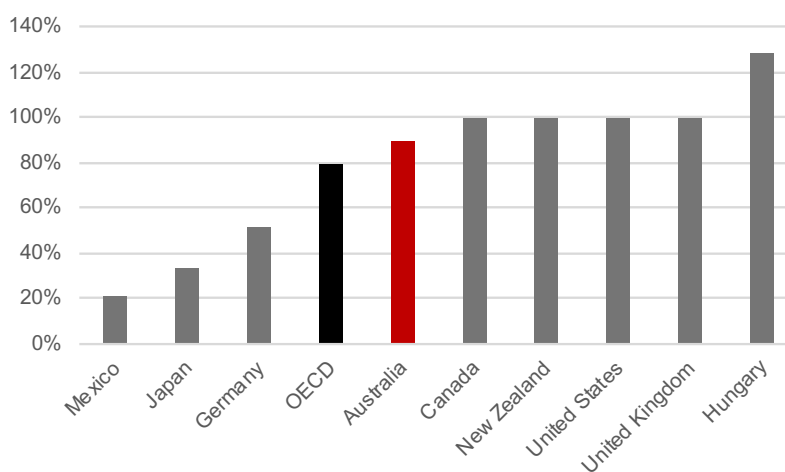
This bucks the trend in where the proportion of superannuation account balances for all age and gender cohorts have increased.

The self-employed labour force can also be vulnerable in their ability to accrue superannuation as they are not necessarily covered by the Superannuation Guarantee and would tend to typically invest much of their equity in their businesses and may rely on sale of their business to fund their retirement life.

It is not surprising then that without compulsion, the participation rate in the superannuation scheme is much less than someone at full-time employment, estimated by the OECD to be around 27 per cent contributing to superannuation schemes in 2016-17 (OECD 2019, p.1).

As a result, the self-employed are much more reliant on the Age Pension, and any reliance on voluntary savings would see a replacement rate much lower compared with employees. It is estimated that self-employed will have a pension equivalent of 90 per cent of ‘full career employees’, despite not making any contributions. The OECD states that this “places an unnecessary extra burden on public finances” (OECD 2019).

Figure 3.4 Theoretical pensions of a self-employed worker relative to an employee both with income at average net wage



Source: OECD 2019, p. 1.

Chapter 4: Implications for public sector finances

Key points

Longevity and years in retirement are projected to increase, and given that there is an under-provision for retirement, many people will be reliant on a full or part Age Pension over the next forty years.

The Parliamentary Budget Office (PBO) forecasts an increase in annual real growth in spending and a decrease in annual real growth revenue, associated with ageing.

While some commentators suggest that Australia's retirement system is not fiscally sustainable, the OECD comparison across 36 member countries suggests otherwise.

It indicates that the average cost of Australia's cost of the Age Pension is relatively small as a proportion of GDP, despite projections of the ageing of the population.

4.1 Australia's budget finances

As discussed in Chapter 2, Australia's population is ageing with our median age now 37 years, an increase of two years since the first Intergenerational Report (Frydenberg 2019, p. 94).

Questions about ageing of the population and the adequacy of retirement incomes and other expenses related to ageing (notably health and aged care) invariably involve public finances.

In order to review the fiscal implications of ageing, long-term projections were produced for Australia and published by the Parliamentary Budget Office in 2019 (PBO 2019).¹⁰

The PBO forecasts that the ageing population is projected to subtract 0.4 percentage points from the annual real growth in revenue and add 0.3 percentage points to the annual real growth in spending (PBO 2019, p. iv). In real terms, this is equivalent to an annual cost to the budget of around \$36 billion by 2028-29 (Ibid).

The PBO notes that the impact of ageing on expenditure stems from three key areas – the Age Pension as the number of baby boomers reliant on the Age Pension increases; aged care costs associated with more older Australians move into residential care

¹⁰ The PBO notes that its approach is “broadly comparable” to the Intergenerational Reports (IGR) that look at the impact of ageing on the budget, although the PBO focuses more on the medium term (rather than long term), and provides “more detailed analysis” of the revenue impact of an ageing population (PBO 2019, p. 1 and 7).

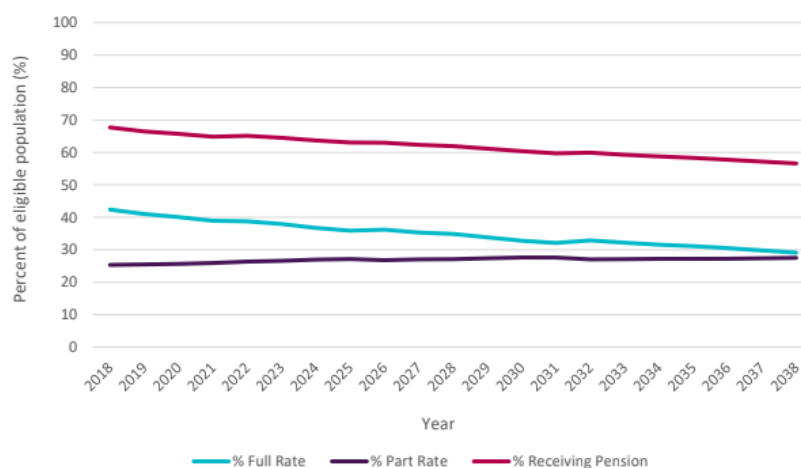
places or are more reliant on home care; and health care costs rising as elderly persons are more reliant on Medicare, pharmaceutical benefits and hospitals. On the revenue side, the PBO notes that ageing will slow labour force growth, reduce national income and therefore tax revenue (PBO 2019, p. 5).

The discussion above highlights that without any further policy or expenditure changes, there will be an unfair burden on future generations to support a larger aged population. Minimising this fiscal burden is important to ensure that future generations enjoy similar (if not improved) living standards relative to the generation current moving into retirement, and that high tax rates are not unfairly restraining economic growth.

A key question is to consider what policy options are available to government to ensure that the fiscal burden is reduced for the next generation?

Superannuation is important in reducing the future cost of the Age Pension. Forecasts by Rice Warner (2019, p. 12) show that once the superannuation system matures in the late 2030s, fewer people will receive a full Age Pension. It is estimated that by 2038, the proportion of retirees who will receive the full pension will fall from over 40 per cent to just under 30 per cent, while there will be a slightly higher proportion of people moving from full to part pension as they age and become more self-sufficient.

Figure 5.1 Projected proportion of the eligible population receiving the Age Pension



Source: Rice Warner 2019, p. 13.

Some commentators argue that an increase to the superannuation guarantee to 12 per cent will have a larger impact on budget finances as they expect that the superannuation tax concessions to be greater than the benefit of reduced Age Pension expenditure. However, it is important to note several factors:

- Most developed countries accept that saving for retirement income should receive preferential tax treatment relative to other savings. This is typically undertaken by applying expenditure tax treatment. Under this treatment no tax is applied to contributions, or investment income, but full marginal taxation is applied to benefits when withdrawn — a so-called EET approach (OECD 2018). The Australian tax system is different – taxing superannuation on a tE basis – under which contributions and earnings are taxed but at concessional rates for most people, while benefits are generally not taxed. Overall, Australia’s tax system applying to retirement savings is not overly generous when compared with similar developed countries (OECD 2018).
- Without tax concessions, few Australians would contribute to superannuation beyond the mandatory component. Estimates suggest that compulsory superannuation contributions have offset reductions in other forms of saving with the offset accounting for possibly as high as 30-50 per cent (ACG 2007, p. 55 and Gruen and Sodling 2011). This may have the impact of reducing the total stock of superannuation contributions (valued at \$2.9 trillion in 2019) and, in turn, reducing superannuation-generated economic activity, and increasing the budget spending on the Age Pension.
- Comparisons over time – it is important to ensure that costs and benefits of the superannuation guarantee are not mismatched according to the time horizon in which they accrue. Tax expenditures are largely incurred during the accumulation phase when contributions are taxed concessionally. Savings to the budget are not realised until the member reaches Age Pension eligibility age (Rice Warner 2019, p. 13).

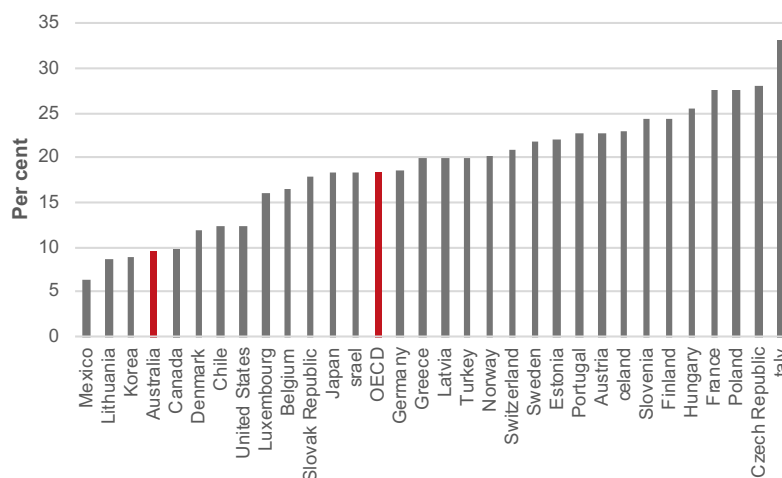
It is important that these issues are considered in the Government’s *Retirement Income Review* and the forthcoming fifth *Intergeneration Report* to ensure an accurate assessment of the superannuation system on projected fiscal circumstances.

4.2 Comparison with OECD countries

This section compares Australia’s retirement income system with other OECD countries and provides insights into why Australia’s system is the aspiration of many.

In comparison to the OECD, Australia’s compulsory superannuation rate is less than the mandatory pension contribution rates seen in other advanced economies. Figure 5.2 shows that Australia’s levels are towards the lower end of the OECD rankings, with the average effective mandatory contribution rate of an average earner being 18.4 per cent in 2018.

Figure 5.3 Mandatory pension contribution rates for an average worker (per cent of gross earnings), 2018



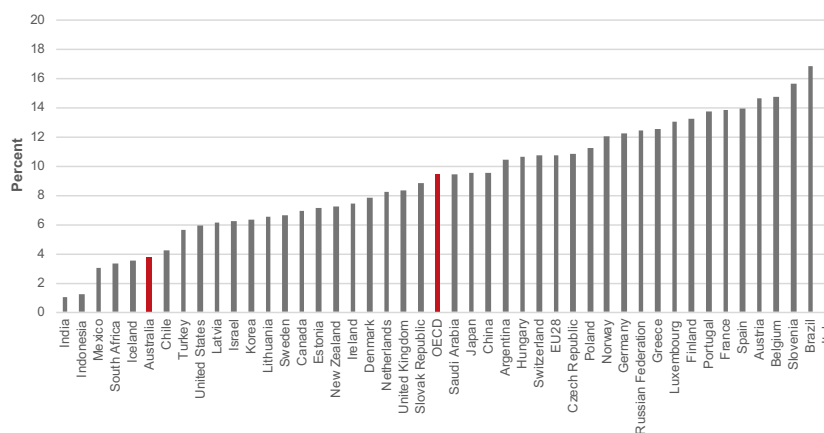
Source: OECD (2019), “Mandatory pensions contributions”, in Pensions at a Glance 2019: OECD and G20 Indicators, OECD Publishing, Paris.

Australia’s ageing of the population is slower than the OECD average.

- The OECD measure for this ratio (Old-Age to Working-Age ratio) is projected to climb from 31 old-age persons per 100 working-age persons in 2020 to 53 older persons per one hundred working-age persons by 2050, representing a 71 per cent increase).
- Australia’s ratio will increase at a slower rate from 27.7 old-age persons per 100 working-age persons in 2020 to 41.6 old-age persons per 100 working-age persons in 2050, representing a 50 per cent increase (OECD 2019e).

Australia also has one of the lowest levels of spending on pensions compared with other advanced countries. The OECD forecasts Australia to spend 3.7 per cent of GDP on Age Pensions in 2050; this compares to an average of 9.4 per cent of GDP by other OECD countries. That is, public expenditure on pensions is projected to remain well below half of the OECD average.

Figure 5.2: Projections of public expenditure on pensions in 2050, Per cent of GDP



Source: OECD 2019), “Long term projections of public pension expenditure”, in Pensions at a Glance 2019: OECD and G20 Indicators, OECD Publishing, Paris.

Given the smaller involvement of the budget in funding pensions and the slower ageing process, the OECD concludes that for Australia “there is less of an issue of public finance pressure than in many other OECD countries”, and that “the superannuation system being defined contribution is not subject to financial sustainability issues” given that fewer individuals will be reliant on the Age Pension (OECD 2019e).

Chapter 5: Looking forward – where to from here?

Key points

The analysis in the previous chapters showed that there continues to be an under-provision for retirement.

This Retirement Savings Gap is particularly acute for those nearing retirement as they (or their employers) have not contributed to the superannuation guarantee system for their full working career, as well as women and those facing changes to the nature of work.

This chapter summarises some key policy issues that merit consideration.

5.1 Possible policy options

Given the findings in the earlier chapters, it is clear that superannuation should remain an integral pillar of Australia's retirement income system. Recent commentary, such as delaying the legislated increase in the superannuation guarantee, may work to weaken this pillar.

Changes to the system (which have been frequent) also cause confusion among contributors — undermining confidence and trust — as well as directly discouraging increased contributions and placing increased emphasis on the Age Pension.

The vast majority of Australians strongly support the current level of compulsory superannuation, as well as the legislated increase to 12 per cent.¹¹

Thus, while changes may reduce burdens on Government budgets in the near term, they may increase burdens on future Government budgets, which will in turn result in higher tax burdens on the next generation.

Thus, in the interest of intergenerational equity, it is important to keep the incentives to contribute to superannuation strong.

¹¹ ASFA surveyed Australian households in relation to their support for the current level of compulsory superannuation. The survey showed that the great majority of Australians over 90 per cent either 'strongly support' or 'support' compulsory superannuation (at a rate of 9.5 per cent of wages) and a very small proportion, or less than 2.5 per cent of Australians, 'oppose' or 'strongly oppose' compulsory superannuation at this level. Australians were also asked about whether they supported an increase in compulsory contributions to 12 per cent of wages. Again, ASFA's survey showed that the overwhelming majority of respondents, around 80 per cent of respondents, 'supported' or 'strongly supported' the legislated scheduled increase. Less than 10 per cent of Australians (or 7.8 per cent) 'oppose' or 'strongly oppose' increasing compulsory superannuation to the new level of 12 per cent.

Superannuation is also the key to ensuring that today’s working Australians can look forward to high standards of living in their retirement.

There are a number of other policy initiatives that may need to be considered to lift the adequacy of retirement income provision for all Australians. These include, but are not limited to:

- The reforms to superannuation balances associated with consolidating multiple or ‘zombie’ accounts, estimated to be 10 million accounts by the Productivity Commission, will go a long way to ensuring the people’s superannuation balances are not eroded (PC 2018).
- Removing the \$450 minimum monthly earnings threshold for superannuation guarantee payments will make a difference to the retirement savings for many Australians, particularly for women, those at the start of their careers, low income individuals and those working in the gig economy.
- Continuing to support and increase awareness around financial literacy so that Australians from all backgrounds, particularly women and younger workers, have access to responsible money management.¹²
- Payment of superannuation on parental leave payments would address the issue of interrupted working patterns due to caring responsibilities and recognises that income replacement should incorporate superannuation. Some employers have introduced superannuation payments for parental leave — ideally, this should be encouraged for all employers and include parental leave payments by government.
- Increasing the superannuation access age (or preservation age) from 60 to 65 years so as to better match increasing life expectancy, but to also ensure that reforming early access arrangements for superannuation for those unable to work to a higher preservation age.
- Delaying the retirement age from (median) 61 years to longer time spent in work force, either in a full-time or part-time capacity.

¹² A good list of financial literacy initiatives for retirement is contained in OECD (2016). One example is the NSW Government’s Council for Women’s Economic Opportunity (CWEO) launched in February 2020 a central source website titled “Everything for Women – Financial Information Too”.

Appendix A: References

Allen Consulting Group 2009, "Better Living Standards and a stronger economy: the role of superannuation in Australia", Report to the Association of Superannuation Funds of Australia (ASFA). Found at <https://www.superannuation.asn.au/ArticleDocuments/359/Allen-ASFA-Sep09-summary.pdf.aspx?Embed=Y>

Allen Consulting Group 2007, "Australia's National Saving Revisited: Where do we stand now?", Report to the Investment & Financial Services Association (IFSA), found at <https://melbourneinstitute.unimelb.edu.au/>

ABS (Australian Bureau of Statistics) 2019, *Australian System of National Accounts, 2018-19*, cat. no. 5204.0, Canberra.

ABS 2019a, *Household Income and Wealth, Australia: Summary of Results, 2017-18*, cat. no. 6523.0, Canberra.

ABS 2019b, *Household Income and Income Distribution, Australia*, cat. no. 6523.0, Canberra.

AIST (Australian Institute of Superannuation Trustees), WIS (Women in Superannuation) 2016, *Women's Super Summit 2016*, Report found at 'Workplace Gender Equality Agency' (WGEA) website, <https://wgea.gov.au/sites/default/files/documents/aist-wis-women-super-summit.pdf>, Accessed 13 January 2020.

APRA (Australian Prudential Regulation Authority) *Quarterly Superannuation Performance Statistics*, September 2019 (released 26 November 2019).

ASFA 2019, *ASFA Retirement Standard: Detailed Budget Breakdowns*, 'ASFA Research and Resource Centre: The Association of Superannuation Funds of Australia', September Quarter 2019, Sydney.

ASFA, Clare R 2019a, *Community Support for Compulsory Superannuation: Recent survey results of community attitudes to compulsory superannuation and living standards in retirement*, 'ASFA Research and Resource Centre: The Association of Superannuation Funds of Australia', May 2019

Australian Government Treasury 2014, *Financial System Inquiry: Final Report*, (Murray Inquiry) Canberra.

Daley J, Coates B, Wiltshire T, Emslie O, Nolan J, and Chen T, 2018, *Money in retirement: more than enough*, Grattan Institute Report No. 2018-17, November 2018, <https://grattan.edu.au/wp-content/uploads/2018/11/912-Money-in-retirement.pdf>

FSC (Financial Services Council) 2019, *State of the Industry Report*, Sydney.

FitzGerald VW 1993, *National Saving: A Report to the Treasurer*, Australian Government Publishing Service, Canberra.

Frydenberg, J Treasurer of Australia 2019, *Preparing for an ageing population*, Speech to the Committee of Economic Development (CEDA) on 19 November 2019, found at www.ceda.com.au.

Gallagher P, Bastian B 2019, *ISA Briefing Note: Errors in Grattan Cameos on the Impact of a Rise in the SG on Living Standards*, 4 October 2019.

Gruen, D. and Sodling, L. 2011, *Compulsory Superannuation and National Saving*, Address by the first author to the Melbourne Institute/The Australian 2011 Economic and Social Outlook Conference, Australian Treasury, 1 July 2011.

Parliamentary Budget Office (PBO), 2019, *Australia's ageing population: Understanding the fiscal impacts over the next decade*, https://www.aph.gov.au/about_parliament/parliamentary_departments/parliamentary_budget_office.

Price F and Finlay R, 2014, *The Rise in Household Saving*, Reserve Bank of Australia, Bulletin, June Quarter 2014.

Productivity Commission 2018, *Superannuation: Assessing Efficiency and Competitiveness*, Report no. 91, Canberra.

McDonald P, Williams Dr. P, Stewart A, Oliver Dr. D and Mayes R, 2019, *Digital Platform Work in Australia Preliminary findings from a national survey 18 June 2019*, Preliminary report commissioned by the Victorian Department of Premier and Cabinet, available at <https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.vic-engage.files/6915/6081/7253/Digital Platform Work in Australia - Preliminary Findings 18 June 2019.pdf>

Mercer 2019, *A review of Grattan's work on super, Verdict: Very Misleading*, July 2019, <https://www.mercer.com.au/content/dam/mercer/attachments/asia-pacific/australia/our-thinking/A-review-of-Grattans-work-on-super.pdf>,

Mercer 2019b, *Melbourne Mercer Global Pension Index 2019*, Monash Centre for Financial Studies, Melbourne.

NSW Government's Council for Women's Economic Opportunity (CWEO) 2019, <https://www.women.nsw.gov.au/>

OECD 2019 *Pensions at a Glance 2019, How does Australia compare?*, 'Key findings', November 2019, <http://www.oecd.org/australia/PAG2019-AUS.pdf>

OECD 2019a *Pensions at a glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/b6d3dcfc-en>.

OECD 2019b, "Projections of public expenditure on pensions, 2015-60, % of GDP", in *Finances of retirement-income systems*, OECD Publishing, Paris, <https://doi.org/10.1787/84260029-en>.

OECD 2019c, "Mandatory pension contributions", in *Pensions at a Glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris.

OECD 2019d, "Long-term projections of public pension expenditure", in *Pensions at a Glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris.

OECD 2019e, "Demographic Old-Age to Working-Age Ratio", in *Pensions at a Glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris.

OECD 2018, "Project on Financial Incentives and Retirement Savings, Policy Brief No. 1", OECD Publishing, Paris.

OECD 2016, "The role of financial education in supporting decision-making for retirement", Chapter 5, OECD Publishing, Paris.

Price, F and Finlay, R. 2014, "The Rise in Household Saving", Reserve Bank of Australia, Bulletin, June Quarter 2014.

QUT Business School Work, Industry Futures Research Program 2018, *Hope is not a strategy – our shared responsibility for the future of work and workers*, Report submission referred in 'Australian Senate Select Committee on the Future of Work and Workers' on 19 September 2018, Commonwealth of Australia 2018, Canberra, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Future_of_Work_and_Workers/FutureofWork/Report, Accessed 13 January 2019.

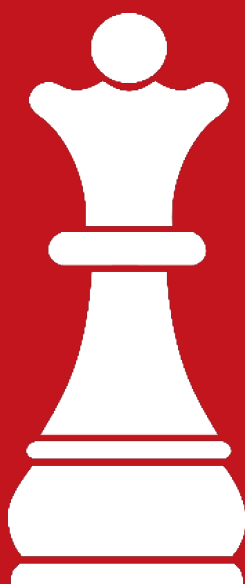
RBA (Reserve Bank of Australia) 2020, *The Global Financial Crisis: Explainer*, <https://www.rba.gov.au/education/resources/explainers/pdf/the-global-financial-crisis.pdf?v=2020-01-21-10-59-18>, accessed 20 January 2020.

Rice Warner 2015, *Retirement Savings Gap as at 30 June 2014*, Report prepared for FSC, <https://ricewarner.com/wp-content/uploads/2015/12/Retirement-Savings-Gap-as-at-30-June-2014.pdf>, accessed 21 January 2020.

Rice M and Bonarius N 2019, *What is the right level of superannuation guarantee?* Presentation to the Actuaries Institute, 3-4 June 2019.

Ryan P and Stone T 2016, *Household Wealth in Australia: Evidence from the 2014 HILDA Survey*, RBA Bulletin, June Quarter 2016 p.7.

[Page intentionally left blank]



Advisory Street

Our strategic advice puts you streets ahead of the rest

Contact

Suite 4, Level 6,
10 Spring Street
Sydney NSW 2000

E: admin@advisorstreet.com

W: www.advisorstreet.com



advisorst



Advisory Street