

THE VULNERABILITY OF OLDER AUSTRALIANS IN BANKRUPTCY: INSIGHTS FROM AN EMPIRICAL STUDY

ABSTRACT

This article presents the results of the first empirical study focused on older Australians in bankruptcy. Our study — based on the examination of a large and unique dataset obtained by the authors from the bankruptcy regulator, the Australian Financial Security Authority, offers valuable insight into the severe financial challenges faced by many older Australians. Our analysis provides insights into the most significant causes of bankruptcy for older Australians as well as some possible explanations for their financial vulnerability. Our findings include that older Australians comprise an increasing proportion of those in bankruptcy and are far more likely to cite excessive credit as the cause of their bankruptcy compared to younger and middle-aged bankrupts. We also find that the key salient features of older Australians in bankruptcy are their very high credit-card debts, particularly in light of their low incomes and modest levels of assets. While older Australians tend to own real estate (such as their own home) and can be described as being ‘asset-rich’, we observe that only a very small proportion of older Australians in bankruptcy own real estate.

I INTRODUCTION

Australia’s population is ageing — in 2016, there were around 3.7 million Australians aged 65 and over — and the number of older Australians¹ is expected to increase considerably in the coming decades due to longer life

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¹ Generally, in this article we define older Australians as being aged 65 years and older.

expectancy.² In today's society, Australians are increasingly needing to access credit to obtain basic necessities, such as housing and healthcare.³ This is occurring within the context of governments having a reduced role in the direct provision of social welfare.⁴ For older Australians on low incomes and with modest assets, this has meant a greater reliance on credit, particularly high-risk credit, and is reflected by increasing levels of over-indebtedness and bankruptcy.

This article contributes to the developing body of Australian empirical bankruptcy research by providing results of an empirical study focused on older bankrupts in Australia. We focus our analysis on the most prominent causes of bankruptcy involving older Australians, and the salient financial characteristics which distinguish older Australians in bankruptcy from other bankrupts and older Australians more broadly. There has been considerable empirical research on the subject of older Americans in bankruptcy in the United States.⁵ However, the application of this research to Australia is limited due to differences in the legal, economic and social ramifications of bankruptcy.⁶

Our empirical study is based on the examination of a large and unique dataset obtained by the authors from the regulator, the Australian Financial Security Authority ('AFSA'). In line with its privacy policies and its commitment to facilitating

² According to the Australian Bureau of Statistics ('ABS'), older Australians comprise 15.8 per cent of the population (3.7 million): ABS, *2016 Census QuickStats* (17 August 2018) <http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/036>. The number of older Australians is expected to increase to 22 per cent of the population (8.7 million) by 2056: Australian Institute of Health and Welfare ('AIHW'), *Older People* (16 January 2018) <<https://www.aihw.gov.au/reports-statistics/population-groups/older-people/overview>>.

³ Indeed, Australia was described as a credit society as early as the 1980s: see, eg. Paul Ali, Evgenia Bourova and Ian Ramsay, 'The Statutory Right to Seek a Credit Contract Variation on the Grounds of Hardship: A History and Analysis' (2016) 44 *Federal Law Review* 77, 101; Therese Wilson, 'Banks Behaving Badly' (2004) 29 *Alternative Law Journal* 294, 294.

⁴ See, eg. Greg Marston and Lynda Shevellar, 'In the Shadow of the Welfare State: The Role of Payday Lending in Poverty Survival in Australia' (2014) 43 *Journal of Social Policy* 155, 155, 161.

⁵ See, eg. Deborah Thorne, 'The (Interconnected) Reasons Elder Americans File Consumer Bankruptcy' (2010) 22 *Journal of Aging & Social Policy* 188; Deborah Thorne, Elizabeth Warren and Teresa A Sullivan, 'The Increasing Vulnerability of Older Americans: Evidence from the Bankruptcy Court' (2009) 3 *Harvard Law & Policy Review* 87; John A E Pottow, 'The Rise in Elder Bankruptcy Filings and the Failure of US Bankruptcy Law' (2011) 19 *Elder Law Journal* 119; Theresa J Pulley Radwan and Rebecca C Morgan, 'Today's Elderly in Bankruptcy and Predictions for the Elderly of Tomorrow' (2010) 6 *National Academy of Elder Law Attorneys Journal* 1.

⁶ Nathalie Martin, 'Common-Law Bankruptcy Systems: Similarities and Differences' (2003) 11 *American Bankruptcy Institute Law Review* 367, 403–10.

bankruptcy research, AFSA has provided a dataset of nearly 29 000 de-identified records of individual bankruptcies initiated between 2007 and 2016.

Our examination of older people in bankruptcy, and the reasons why they face bankruptcy, provides an empirical account of a subset of the bankruptcy population that has yet to be examined in Australia. We analyse the data to form a clearer understanding of the salient features of bankruptcies involving older Australians that occurred during the period identified.⁷ We find that in some respects, older Australians in bankruptcy share characteristics with bankrupts of other age groups. For example, a typical older bankrupt has never been bankrupt before, and seeks bankruptcy via a debtor's petition (ie voluntarily) for non-business-related reasons.

However, older Australians in bankruptcy also differ in several key aspects from other bankrupts, and from other older Australians. We focus on these aspects in our article. We find that older Australians in bankruptcy are far more likely to cite excessive credit as the cause of their bankruptcy compared to younger and middle-aged bankrupts. Further, older bankrupts have very high credit-card debts, both in absolute terms, and relative to their modest incomes and assets, raising questions of how and for what reasons older people with limited assets — many of whom are pensioners — accumulate such large debts. We also observe that only a very small proportion of older Australians in bankruptcy own real estate, such as their own home. These findings are particularly surprising given the broad view that older people are both 'asset-rich', and tend to be conservative borrowers.

Our empirical findings can play an important role in informing bankruptcy policy and law reform by helping to develop a profile of older Australians in bankruptcy. Our findings also provide insight into the severe financial challenges faced by many older Australians.

The analysis is structured in five parts. Part II provides an overview of the bankruptcy law in Australia. Part III sets out the methodology and the results of our empirical study of older Australians in bankruptcy. Part IV discusses the implications of our findings. Part V concludes.

II AUSTRALIAN BANKRUPTCY LAW

Bankruptcy is a legal process enabling people with unmanageable debt to obtain a release from their financial obligations. The current bankruptcy law in Australia is set out in the *Bankruptcy Act 1966* (Cth) ('*Bankruptcy Act*').

While the earliest English bankruptcy laws were enacted in the 16th century and were essentially punitive in nature, the sanctions imposed on bankrupts have become

⁷ The data spans the period from 1 July 2007 to 20 June 2016. On 1 July 2007, AFSA adopted its current data management and reporting system.

considerably less severe over time.⁸ Bankruptcy has been part of Australian law since the early 19th century.⁹ Current Australian bankruptcy law, as set out in the *Bankruptcy Act*, has evolved to focus on the pragmatic goal of equitable asset distribution, rather than the punishment of debtors.¹⁰

Under Australian bankruptcy law, bankruptcy can be sought voluntarily by the debtor via the presentation of a ‘debtor’s petition’.¹¹ A debtor’s petition is often sought as a last resort by debtors seeking a fresh start after experiencing the most severe financial crises. Alternatively, the bankruptcy of a debtor can also be sought against the debtor’s wishes, where the court issues a sequestration order following the lodgement of a petition by a creditor.¹² The consequences of an involuntary bankruptcy are likely to be more serious for the debtor.

When a debtor becomes bankrupt, they are provided with protections from unsecured creditors.¹³ However, the bankrupt’s assets, subject to certain exemptions,¹⁴ are transferred to the trustee in bankruptcy who is able to sell them and use the proceeds to repay creditors.¹⁵ For a certain period (usually three years, but up to eight years on application by the trustee in certain circumstances), these individuals face certain legal restrictions.¹⁶ For example, an undischarged bankrupt

- is required to give their passport to the trustee;¹⁷

⁸ Paul Ali, Lucinda O’Brien and Ian Ramsay, ‘Short of a Few Quid: Bankruptcy Stigma in Contemporary Australia’ (2015) 38 *University of New South Wales Law Journal* 1575.

⁹ J L B Allsop and L Dargan, ‘The History of Bankruptcy and Insolvency Law in England and Australia’ in Justin T Gleeson, J A Watson and Elizabeth Peden (eds), *Historical Foundations of Australian Law* (Federation Press, 2013) vol 2, 415–61. For more detail on Australian personal insolvency law, including bankruptcy, see also Ian Ramsay and Cameron Sim, ‘Trends in Personal Insolvency in Australia’ (Research Report, Centre for Corporate Law and Securities Regulation, The University of Melbourne, 2009) 29–39 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1367445>.

¹⁰ Law Reform Commission, *General Insolvency Inquiry*, Report No 45 (1988) vol 1, 15–17. As observed by Ali, O’Brien and Ramsay, two other objectives of the current bankruptcy laws are to provide debtor rehabilitation (ie ‘a fresh start’) and to discourage fraudulent behavior by dishonest or rogue debtors: see Paul Ali, Lucinda O’Brien and Ian Ramsay, ‘Short of a Few Quid: Bankruptcy Stigma in Contemporary Australia’ (2015) 38 *University of New South Wales Law Journal* 1575, 1594, 1596–9.

¹¹ *Bankruptcy Act* s 55.

¹² *Ibid* s 43(1).

¹³ Secured creditors’ rights to realise or otherwise deal with their security are not affected by bankruptcy: *ibid* s 58(5).

¹⁴ Debtors are entitled to retain certain types of assets, including ordinary household goods, items of sentimental value, and tools of trade: see, eg, *ibid* s 116(2).

¹⁵ *Ibid* s 129.

¹⁶ *Ibid* ss 149, 149A(2)(a)(i).

¹⁷ *Ibid* s 77(1)(a)(ii).

- cannot leave Australia without the written consent of the trustee (a failure to do this is punishable by imprisonment);¹⁸
- is restricted from continuing or commencing legal proceedings, with certain exceptions;¹⁹
- is excluded from certain occupations (such as managing corporations);²⁰ and
- is disqualified from standing for, or holding, a federal or state parliamentary seat.²¹

During this period, bankrupts are required to make contributions towards their debts, if their incomes exceed a certain threshold.²² At the end of this period, bankrupts are freed from their legal restrictions and their remaining debts are discharged.²³ The bankrupt's details are permanently listed on the National Personal Insolvency Index ('NPII'), a searchable public register listing insolvency proceedings in Australia.²⁴ A record of the bankruptcy is also retained by credit reporting agencies for up to seven years.²⁵

In 2016, the Federal Government announced its intention to reduce the period of bankruptcy from three years to one year.²⁶ However, it is yet to introduce legislation implementing such a change. If implemented, these changes would further emphasise the pragmatic, rather than punitive, function of Australian bankruptcy law.

¹⁸ Ibid s 272(1)(c).

¹⁹ Ibid s 60.

²⁰ *Corporations Act 2001* (Cth) s 206B(3). For other employment restrictions that apply to undischarged bankrupts, see AFSA, *How Does Bankruptcy Affect My Income and Employment?* (August 2018) <<https://www.afsa.gov.au/insolvency/i-cant-pay-my-debts/employment-restrictions>>.

²¹ Senate and Federal House of Representatives: see *Australian Constitution* s 44(iii). Similar provisions are in place in the states and territories: see *Constitution Act 1902* (NSW) ss 13A(1)(e); *Parliament of Queensland Act 2001* (Qld) s 64(2)(f); *Constitution Act 1934* (SA) ss 17(1)(d), 31(1)(e); *Constitution Act 1934* (Tas) ss 34(d); *Constitution Act 1975* (Vic) ss 44(2)(c), 55(c); *Constitution Acts Amendment Act 1899* (WA) ss 32(1)(2), 38(d).

²² *Bankruptcy Act* pt VI Division 4B.

²³ Certain unsecured debts, such as child support and maintenance, HECS and HELP debts, court-imposed penalties and fines, are not extinguished when the debtor is released from bankruptcy: *Bankruptcy Act 1966* (Cth) s 153(2).

²⁴ Following discharge, the NPII is updated to reflect the status of the person as a discharged bankrupt. The *Bankruptcy Regulations 1996* (Cth) pt 13 provides detail on what is to be entered on the index.

²⁵ *Privacy Act 1988* (Cth) s 20X(1).

²⁶ Australian Government, 'Improving Bankruptcy and Insolvency Laws' (Proposals Paper, Treasury, April 2016) 5.

An important aspect of personal insolvency law in Australia is the existence of debt agreements as an alternative to bankruptcy.²⁷ As discussed in the next part of the article, the popularity of debt agreements has increased rapidly since their introduction in 1996. Eligible insolvent debtors may propose to enter a debt agreement and then creditors vote on the offer. While not all consequences and restrictions that apply to bankruptcy apply to debt agreements, the proposal of a debt agreement is in itself an act of bankruptcy, which may be used by a creditor to apply for a sequestration order before creditors have the opportunity to vote on the agreement. It has been suggested that one of the reasons for the growth in the number of debt agreements in Australia is that these agreements do not carry the same stigma that comes with bankruptcy.²⁸

III EMPIRICAL STUDY

A Methodology

AFSA provided the authors with 28 683 records entered between 1 July 2007 and 20 June 2016. The sample represents 10 per cent of all bankruptcies filed during this period, and has been selected randomly, to ensure it is broadly representative of the bankrupt population.

The dataset includes a number of characteristics for each bankrupt individual, including their gender, age, occupation, income, source of income, and whether the bankruptcy is business-related. The dataset also includes the cause of bankruptcy, either as nominated by each individual when completing his or her Statement of Affairs ('SOA') form at the commencement of bankruptcy, or, in the case of an involuntary bankruptcy, based on information supplied by creditors. Also included are details of each individual's unsecured assets and liabilities at the time of bankruptcy.

While this dataset is extremely rich, it has several limitations. In the first instance, the data is provided by bankrupts themselves, at the commencement of their bankruptcies. The period leading up to bankruptcy is frequently marked by intense stress and a sense that one's financial problems have become overwhelming and unmanageable.²⁹

²⁷ For a discussion of debt agreements, see generally Vivien Chen, Lucinda O'Brien and Ian Ramsay (2018) 44(1) 'An Evaluation of Debt Agreements in Australia' *Monash University Law Review* 151 <https://www.monash.edu/__data/assets/pdf_file/.../Chen,-OBrien-and-Ramsay.pdf>. Another alternative to bankruptcy in Australia is entry into a Part X agreement, however the prevalence of these agreements has declined significantly over time: see AFSA, below n 34.

²⁸ Ian Ramsay and Cameron Sim, 'Personal Insolvency Trends in Australia 1990–2008' (2009) 17 *Insolvency Law Journal* 69, 101.

²⁹ Teresa A Sullivan, Elizabeth Warren and Jay Lawrence Westbrook, *As We Forgive Our Debtors: Bankruptcy and Consumer Credit in America* (Oxford University Press, 1989) 244. See also Deborah Thorne, 'Women's Work, Women's Worry? Debt Management in Financially Distressed Families' in Katherine Porter (ed), *Broke: How Debt Bankrupts the Middle Class* (Stanford University Press, 2012) 136, 141.

For this reason, it is likely that some of the data reported by debtors at the commencement of bankruptcy is inaccurate or incomplete.

The format of the dataset also imposes some limitations. Key financial data — income, assets and liabilities — is recorded in bands, such as ‘\$0.01–\$4999.99’, rather than in precise figures. Banded data tends to obscure true distributions and thus reduce the accuracy of statistical calculations such as means and medians. Moreover, the dataset does not include secured liabilities, such as mortgages, as AFSA is unable to guarantee the reliability of such data.³⁰ Nonetheless, even considering these limitations, the dataset provides valuable insights into the circumstances of Australian debtors at the time of their bankruptcies.

An important question to consider at the outset is what age groups should be included within the definition of ‘older Australians’. The AFSA dataset is grouped into age bands, which include the following older groups: 55–59 years, 60–64 years, 65–69 years and over 70 years. Generally, in this article we define older Australians as being aged 65 years and older, 65 being the original qualifying age for the age pension in Australia.³¹ However we also make observations in relation to both the ‘younger’ and ‘older’ cohorts of older Australians (those aged between 65 and 69, and those aged 70 and over), to provide a more nuanced picture of older Australians in bankruptcy at different points in their lifetime. For example, we observe differences between bankrupts around the time of eligibility for the age pension, and those who likely have been eligible for the age pension for some years.³²

It was noted that 87.4 per cent of coupled respondents to the Consumer Bankruptcy Project (‘CBP’) survey reported being ‘very stressed’ over their finances immediately before bankruptcy, while another 10.2 per cent were ‘somewhat stressed’.

³⁰ AFSA advised that many debtors are unaware of the extent of their mortgages, or the market value of their homes, at the time of their bankruptcies. While AFSA does not report on secured liabilities, it does include one category of unsecured liability which it calls ‘house mortgage’. This category refers to debts where the amount owing exceeds the value of the security (ie only the amounts ‘owing above the estimated value of the security’ are included in the dataset): see, eg, Insolvency and Trustee Service Australia (‘ITSA’), ‘Profiles of Debtors 2011’ (Report, 2011) 19 <<https://www.afsa.gov.au/statistics/profiles-debtors>> (‘*Profiles of Debtors 2011 Report*’).

³¹ For many statistical purposes, the older cohort is taken to be comprised of those aged 65 and above: see, eg, AIHW, ‘Australia’s Health 2016’ (Report, 2016) 349 <<https://www.aihw.gov.au/reports/australias-health/australias-health-2016/contents/summary>>.

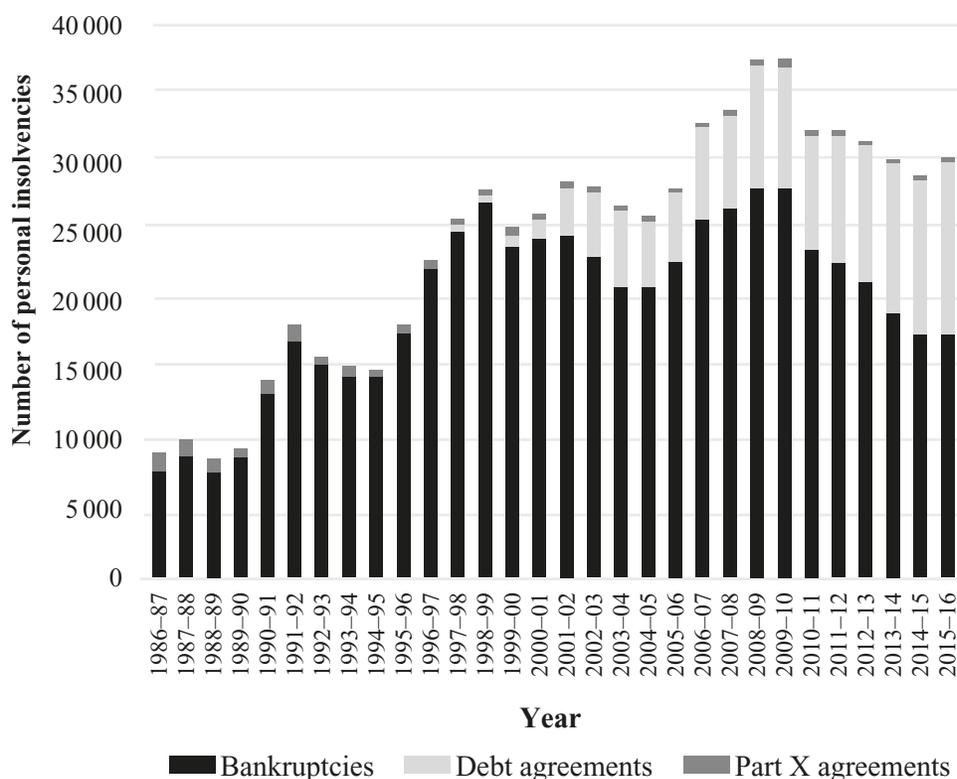
³² During the period of the study the qualifying age for the age pension was 65 years. However, the qualifying age will gradually increase to 67 years by June 2023. The Federal Government has also announced a policy to continue increasing the qualifying age until it is 70 years by 1 July 2035, although these subsequent increases are yet to be legislated: Department of Human Services, *Increase the Age Pension Qualifying Age to 70 Years — Budget 2014–15* (5 July 2018) <<https://www.humanservices.gov.au/organisations/about-us/budget/budget-2014-15/budget-measures/older-australians/increase-age-pension-qualifying-age-70-years>>.

B *An Overview of Bankruptcy and Personal Insolvency in Australia*

In order to provide context for our study of older Australians in bankruptcy, we first provide a brief overview of the prevalence of bankruptcy and personal insolvency in Australia, and how this has changed over time.

In 2015–16, 17 202 people declared bankruptcy in Australia, while the total number of personal insolvencies was 29 527. As illustrated in Figure 1, personal insolvencies (comprised of bankruptcies, debt agreements and a much smaller number of Part X agreements) had become more frequent between 1986–87 and 2009–10. The change in the total number of insolvencies over that period constitutes a fourfold increase, but since 2009–10 the number of personal insolvencies has been declining.

Figure 1: Changes in the number of personal insolvencies in Australia since 1986–87



Source: AFSA.³³

Based on current filing rates, around 2.6 per cent of Australians could expect to become bankrupt during their working lifetime. Although bankruptcy and personal insolvency still affect a small proportion of the population, the incidence of

³³ AFSA, *Time Series* <<https://www.afsa.gov.au/statistics/time-series>>.

bankruptcy and personal insolvency has increased since the 1980s. Between 1986 and 2016, the incidence of bankruptcy (in any given year) increased from around 0.05 per cent to 0.07 percent, while the increase in personal insolvency has been more significant (from 0.05 per cent to 0.12 per cent, annually).³⁴

As shown in Figure 1, the number of bankruptcies has declined in almost every year since 2009–10. Over this period, there has been a corresponding increase in the number of debt agreements. Indeed, the number of debt agreements had increased significantly from less than 400 in 1997–98 to over 12 000 in 2015–16. While in 1997 around 96.6 per cent of insolvent debtors applied for bankruptcy, in 2015–16 the proportion of insolvent debtors opting for bankruptcy was around 58.3 per cent.

C Trends in Bankruptcies Involving Older Australians

The trends in the number of personal insolvencies and bankruptcies discussed in the previous section have not affected all age cohorts uniformly. In this section, we describe the key characteristics and trends in the age demographics of the bankruptcy population in Australia.

1 Changing Age Profiles of Bankrupts

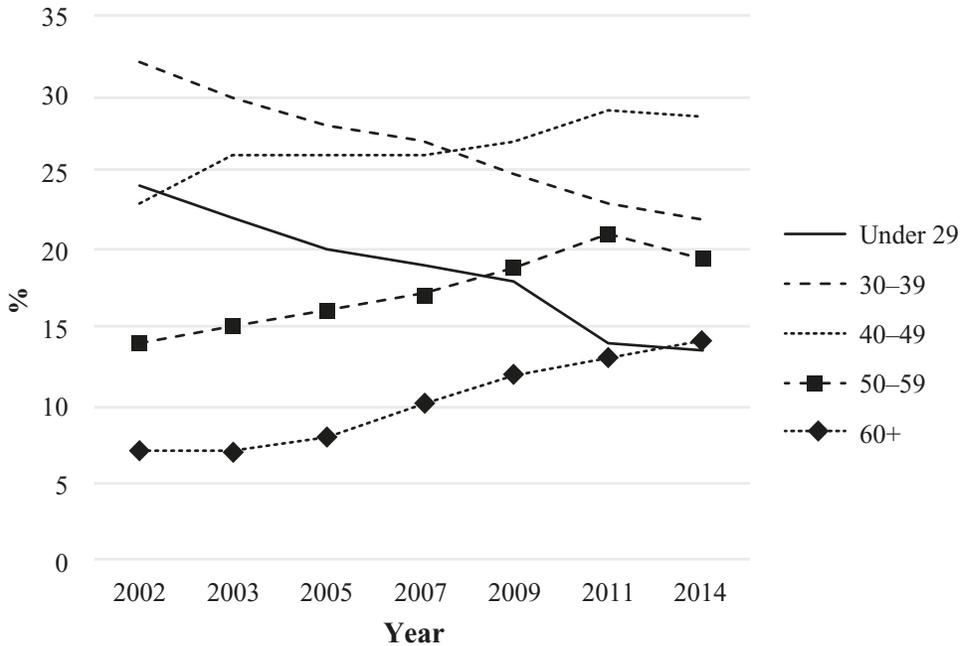
The age profile of bankrupts has been changing in Australia in recent years. As we have seen, the total number of bankruptcies has declined between 2008 and 2014. Some of the largest declines involved the younger cohorts, which has the result of raising the average age of the bankruptcy population.

The 2008 report on personal insolvency trends by Ramsay and Sim observed steady increases in the age of bankrupts in Australia since 1997.³⁵ As shown in Figure 2, the proportion of older bankrupts has continued to increase since 2008, albeit at a slower rate. The bankruptcy population has been ageing, with the proportion of bankrupts in the three oldest age cohorts (40–49 years, 50–59 years, and 60 years and older) increasing over the period. Further, the proportion of bankrupts aged 60 and over has doubled from around 7 per cent to around 14 per cent of all bankrupts between 2002 and 2014.

³⁴ Incidence calculated using ABS population statistics and forecasts for those aged 18 and older: see ABS, *Population Projections, Australia, 2012 (base) to 2101* (ABS Catalogue No 3222.0, 2013); ABS, *Australian Demographic Statistics* (ABS Catalogue No 3101.0, 2018) table 59; ABS, *Australian Historical Population Statistics 2014* (ABS Catalogue No 3105.0.65.001, 2014) table 19.

³⁵ Ramsay and Sim found that the proportion of bankrupts aged 54 or older had increased from 10 per cent of all bankrupts in 1997 to 22 per cent in 2008: Ramsay and Sim, 'Trends in Personal Insolvency in Australia', above n 9, 76–7.

Figure 2: Bankruptcy population broken down by age cohorts



Source: Data primarily derived from ITSA Profiles of Debtors 2002 and 2011 Reports.³⁶ The 2014 data is sourced from the AFSA dataset ‘Bankrupts Ages’.³⁷

One reason for the increase in the proportion of older bankrupts is the ageing of the overall population in Australia (the proportion of the older Australians has increased from 11.9 per cent to 15 per cent in the two decades preceding 2015).³⁸ However, a more significant reason is the rising popularity of debt agreements as an alternative to bankruptcy, among all age cohorts. They have been particularly popular with younger and middle-aged people. For example, an analysis of AFSA statistics reveals that in 2014, nearly two thirds of people aged 24 years or under who became insolvent entered into debt agreements. In contrast, the increase in the proportion of debt agreements entered into by older Australians remained at less than 20 per cent in 2014. This is illustrated by Table 1.

³⁶ ITSA, ‘Profiles of Debtors 2002’ (Report, 2002) <<https://www.afsa.gov.au/statistics/profiles-debtors>>; ITSA, ‘Profiles of Debtors 2011’ above n 30.

³⁷ AFSA, *Ages of Insolvent Debtors* (2018) <<https://www.afsa.gov.au/statistics/ages-insolvent-debtors>>.

³⁸ ABS, *Australian Demographic Statistics, June 2015 — Feature Article: Population by Age and Sex, Australia, States and Territories* (ABS Catalogue No 3101.0, 23 March 2016) <<http://www.abs.gov.au/ausstats/abs@.nsf/featurearticlesbyCatalogue/7A40A407211F35F4CA257A2200120EAA?OpenDocument>>.

Table 1: Number of debt agreements as a proportion of all personal insolvencies for each age cohort (%)

Age Cohort	2008 (%)	2014 (%)	2008–2014 Increase (percentage points)
17–24	37.1	61.7	24.6
25–29	38.5	58.4	19.8
30–34	28.7	48.3	19.6
35–39	22.3	39.9	17.6
40–44	18.7	34.2	15.5
45–49	17.4	32.1	14.7
50–54	15.4	29.8	14.4
55–59	11.3	24.6	13.2
60–64	6.0	19.6	13.6
65–69	4.5	14.1	9.6
70 or more	5.5	18.9	13.4
Total	22.0	38.2	16.2

Source: derived from AFSA datasets.³⁹

2 *Incidence of Bankruptcy Categorised by Age and Gender*

This section presents the differences in the incidence of bankruptcy among the age cohorts. The incidence of bankruptcy is calculated by dividing the total number of bankrupts in each age category by the total number of Australians within that age category. We present this data for both males and females.

Figures for the incidence of bankruptcy per 100 000 individuals are set out in Table 2 and Figure 3 for the major age groups for both males and females. While we have seen that the bankruptcy population is ageing, older Australians remain less likely to face bankruptcy compared to other age groups. The incidence of bankruptcy among older Australians is considerably lower than for those under 65 years of age. As shown in Table 2, the incidence of bankruptcy among males aged 65 years and older is just 77.3 per 100 000, as compared to 174.5 per 100 000 for males aged under 65 years. The difference in incidence between older and younger females is also stark: the incidence of bankruptcy among females aged 65 years and older is 46.2 per 100 000, as compared to 127.4 per 100 000 for females aged under 65 years. This means that older Australians are less than half as likely to become bankrupt than the remainder of the population.

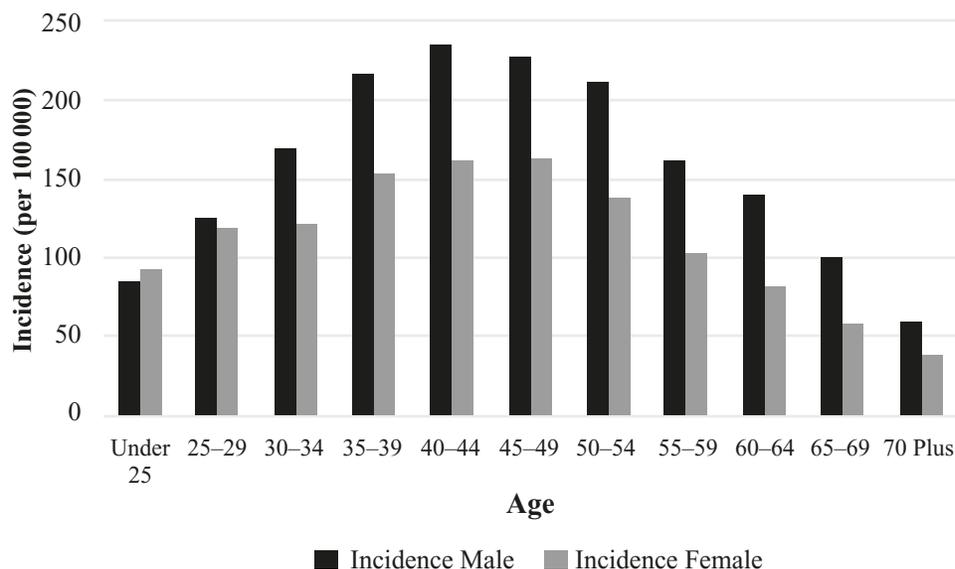
³⁹ AFSA, above n 37.

Table 2: Incidence of bankruptcy per 100 000 people aged 18 years and over during the period of the study

	Males	Females
Incidence of bankruptcy (all ages)	160.6	115.3
Age under 65 years	174.5	127.4
Age 65 years and over	77.3	46.2

Sources: AFSA and ABS.⁴⁰

Figure 3: Incidence of bankruptcy – male and female comparison, per 100 000 people aged 18 years and over during the period of the study



Source: AFSA and ABS.⁴¹

Figure 3 illustrates how the incidence, or the likelihood of bankruptcy, changes over a person’s lifetime. Overall, the trend for both males and females shows an increase in the risk of bankruptcy between the 20s and 40s, after which it declines again. The Figure shows that the incidence of bankruptcy is higher for males in each age cohort except for those aged under 25 years. However, the difference in bankruptcy incidence between the genders is relatively small for those aged under 30 years. The difference in bankruptcy incidence between the genders is most pronounced for those aged 60 years and over. The incidence of bankruptcy among males is nearly twice as high as among females for those aged 60–64 years and 65–69 years. As noted in the next section, a significant reason for these differences — particularly among

⁴⁰ ABS, *Australian Demographic Statistics, June 2017* (ABS Catalogue No 3101.0, 21 March 2018) <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun%202017?OpenDocument>.

⁴¹ Ibid.

older people — is the small number of business-related bankruptcies involving older females.

D *Causes of Bankruptcy Involving Older Australians*

A key objective of our study of older Australians in bankruptcy is to identify the reasons why older people file for bankruptcy. Bankruptcies are categorised by AFSA as either business-related or personal.⁴² A business-related bankruptcy is defined by AFSA as being one in which a person's bankruptcy is 'directly related to his or her proprietary interest in a business'.⁴³ This group is likely comprised of bankrupt sole traders, members of business partnerships, and shareholders who have provided a personal guarantee to a company's creditors.

The primary causes of bankruptcy, as identified by the debtor, differ depending on whether the bankruptcy is business-related or personal. We focus the remainder of our article on personal bankruptcies involving older Australians. We have taken this approach because of the relatively small sample size of older business-related bankrupts, and particularly older female bankrupts. For example, the total number of female business-related bankrupts above the age of 70 years in the dataset is 14 (and there are only 56 female business-related bankrupts aged 65–69 years). It is possible that undertaking finer analysis of older business-related bankrupts may thus yield unreliable conclusions.⁴⁴

Table 3 provides the percentages of personal bankruptcies categorised by the primary cause of bankruptcy. We can see that the primary causes of bankruptcy differ between the age cohorts.

⁴² For ease of reference we also use this term to refer to non-business-related bankruptcies.

⁴³ This categorisation is sourced from the responses by the bankrupt in their SOA form, which is submitted to AFSA. AFSA also notes that it 'does not provide guidance, including the definition of business,' which means that this data may be 'affected by differences in debtors' interpretations of what constitutes a business': ITSA, above n 30, 15. More than three quarters (79 per cent) of the bankruptcies in the dataset are classified as personal bankruptcies. The proportion of business-related bankruptcies differed between age groups. The youngest and oldest cohorts are least likely to become bankrupt for business-related reasons.

⁴⁴ A number of logistic regressions including specific (dummy) age variables as well as other demographic and financial characteristics were carried out to determine which age variables were statistically significant in relation to causes of bankruptcy. We find few statistically significant variables for business-related bankruptcies. There are no statistically significant variables involving the older Australian cohort. This implies that age may not be an important determinant of business-related bankruptcy, but rather that the characteristics correlated with age (such as financial circumstances) may be more influential.

Table 3: Primary causes of personal bankruptcy for different age groups (%)

Primary Cause of Bankruptcy: Personal Bankruptcy	Under 25 years	25–34 years	35–44 years	45–54 years	55–64 years	65 years and older
Adverse legal action	3.1	3.3	3.3	4.2	4.9	3.7
Domestic discord	10.2	15.7	17.9	11.8	5.6	3.0
Excessive credit	22.9	25.3	22.4	21.7	23.1	36.5
Gambling, speculation, and extravagance in living	2.8	4.0	3.3	3.8	4.0	3.9
Ill health	4.6	6.6	9.0	12.8	16.8	16.5
Liabilities due to guarantees	0.6	1.2	2.5	3.1	2.9	2.3
Other causes	2.4	5.6	9.4	10.2	11.1	11.6
Unemployment	53.3	38.3	32.2	32.4	31.7	22.4

Source: AFSA and ABS.⁴⁵

The most significant primary causes of bankruptcy associated with older age are ‘excessive credit’, ‘ill health’ and ‘unemployment’. These primary causes, discussed in more detail below, comprise more than three quarters of all personal bankruptcies involving older Australians. The four remaining specific causes of bankruptcy, which are ‘adverse legal action’, ‘domestic discord’, ‘gambling, speculation and extravagance in living’, and ‘liabilities due to guarantees’ each comprise between two and four per cent of personal bankruptcies involving older Australians.⁴⁶ It is worth noting that, of these other causes, domestic discord is much more prevalent among younger and middle-aged bankrupts. It is cited by only 3 per cent of older Australians as the primary reason for their bankruptcy, compared to, for example, the cohort aged 35–44 years (17.9 per cent).

It is possible that the likelihood of bankruptcy among older Australians can be explained by factors that are normally characteristic of the aged, rather than age per se. Key characteristics of older Australians include that they are more likely to be asset-rich, income-poor, more dependent upon government welfare transfers, and far less likely to be supporting young children.

To account for these factors, we conducted a series of logistic regressions for the primary causes of bankruptcy to identify the salient characteristics which are directly associated with (and therefore potentially causally related to) bankruptcy and isolate the age characteristic itself.⁴⁷ This analysis is important because it could be the case

⁴⁵ ABS, above n 40.

⁴⁶ The catch-all category of ‘other causes’ is reported as the primary cause of 11.6 per cent of personal bankruptcies involving older Australians.

⁴⁷ In the logistic regressions that follow, we test whether age — in particular older age — is a risk factor for three key causes of bankruptcy: excessive credit issues, ill-health, and unemployment. Age, however, is clearly correlated with a number of other characteristics such as income level (older age bankrupts will have a lower

that advancing age has no impact upon bankruptcy at all. For example, it could be true that older Australians tend to become bankrupt simply because their income levels are lower than other age cohorts. However, in the case of the three major causes of bankruptcy affecting older Australians, we find that being older is itself a factor in the bankruptcy, independent of factors normally characteristic of older age, such as low income.⁴⁸

1 *Excessive Credit*

Our findings show that credit problems are by far the single highest cause of bankruptcy among older Australians. ‘Excessive credit’ is cited as the primary cause of personal bankruptcy by a significant proportion of younger and middle-aged Australians. However, the proportion of older Australians citing ‘excessive credit’ as the primary cause of bankruptcy is considerably higher than for each of the other age cohorts (36.5 per cent of older Australians cite excessive credit as the primary cause of bankruptcy, compared to 21.7–25.3 per cent among the other cohorts).⁴⁹

2 *Ill Health*

Another key aspect which differentiates the older cohort from the younger cohorts is the proportion of bankrupts citing ‘ill health’ as a primary cause of bankruptcy. The proportion of younger debtors citing ill health as the primary cause is significantly lower. This trend is positively correlated with age. However, the increase in the proportion of debtors citing ill health as the key reason for their bankruptcy occurs earlier in the debtor’s lifecycle than ‘excessive credit’. Indeed, the percentage

income, particularly if they have retired or transitioned to part-time work), sources of income (older age bankrupts are more likely to be receiving government benefits as the primary source of income), and asset levels (older age bankrupts would be expected to be more asset-rich than younger bankrupts). Other factors might also confound an otherwise straightforward analysis (see Appendix A). Logistic regression allows us to test hypotheses about the impact of older age by factoring out the unique impact of these confounding characteristics. Typically, regression analysis measures the impact of a characteristic of interest (such as particular age groups) by comparing them to a base (or control) group. In this case, the control group is comprised of bankrupts aged between 30 and 54 years. We therefore measure whether a suite of individual groups (characterised by both age ranges and gender) impact bankruptcy causes independently. This is done by creating ‘dummy variables’ for the following groups: both male and female respondents aged under 30 years; 55–60 years; 60–65 years; 65–70 years; and 70 years and over.

⁴⁸ See below nn 49–52.

⁴⁹ The impact of ‘excessive credit’ as a cause of bankruptcy in the older age group was confirmed in the logistic regression. Some characteristics, such as receiving government benefits as a primary income source and high overall income levels, increase the likelihood of bankruptcy caused by excessive credit. Other characteristics, such as having substantial asset levels, reduce this likelihood. After factoring out these characteristics, the logistic regression identifies older age (more specifically, males aged 60 years and over and females aged 55 years and over) as a significant risk factor for those who cited excessive credit as the cause of bankruptcy.

of individuals citing ill health as the predominant reason for their bankruptcy is similar between bankrupts aged 55–64 years and 64 years and over (16.8 per cent and 16.5 per cent respectively).⁵⁰

3 Unemployment

Unemployment as a cause of bankruptcy is inversely related to age. It is the key cause of bankruptcy for the youngest cohort (those younger than 25 years), more than half of whom cite unemployment as the primary cause of bankruptcy. Among other age cohorts this proportion declines to around one third of bankruptcies, although it is still the most significant factor for all age groups except the oldest cohort.

The proportion of older Australians citing unemployment as the primary reason for their bankruptcy (22.4 per cent) is lower than the other age groups. However, this figure — comprising the second highest cause of bankruptcy among older Australians — remains highly significant. A finer analysis of the older age bankruptcy cohort shows that around 31 per cent of males aged 65–69 years cite unemployment as the key reason for their bankruptcy. This proportion is significantly lower for females aged 65–69 years (22.1 per cent), which may reflect the fact that females tend to retire around nine years earlier than males.⁵¹ There is no substantial difference in the proportion of males and females aged 70 years and over citing unemployment as the key reason for their bankruptcy (16.7 and 16.8 per cent respectively), presumably as by this age most people would have retired regardless of gender.⁵²

⁵⁰ The impact of ill health as a cause of bankruptcy in the older age group was confirmed in the logistic regression. Some characteristics, such as earning a wage or funding one's primary income through self-employment, decrease the likelihood of bankruptcy caused by ill health. Other characteristics, such as high incomes, higher unsecured liabilities and more substantial asset holdings, reduce this likelihood. After accounting for these characteristics, the logistic regression identifies the demographic of older age brackets as significant: this is especially noticeable in relation to males aged 60–64 years, and females aged 55–65 years.

⁵¹ The average age of retirement for people aged 45 years and over was 53.8 years in 2012–13 (50.0 years for females and 58.5 years for males): ABS, *Retirement and Retirement Intentions, Australia, July 2012 to June 2013* (ABS Catalogue No 6238.0, 2013) ('Retirement Intentions').

⁵² The impact of unemployment as a cause of bankruptcy — inversely related to age — was confirmed in the logistic regression. Some characteristics, such as receiving government benefits as a primary income source, increase the probability of bankruptcy due to unemployment. Others, such as higher income levels and higher unsecured liability levels (generally correlated with high assets), reduce this probability. Further, bankrupts from certain occupational groups (eg machinery operators, community and personal workers, labourers and technicians) were more likely than others to cite unemployment as the cause of bankruptcy. After accounting for these characteristics, the logistic regression still substantiated the inverse relationship between age and unemployment as a reason for bankruptcy. Those in the older age demographic are far less likely to cite unemployment being primarily responsible for their bankruptcy (more specifically, males aged 60 years and over; and females aged 55 years and over).

E *Financial Circumstances of Older Bankrupts*

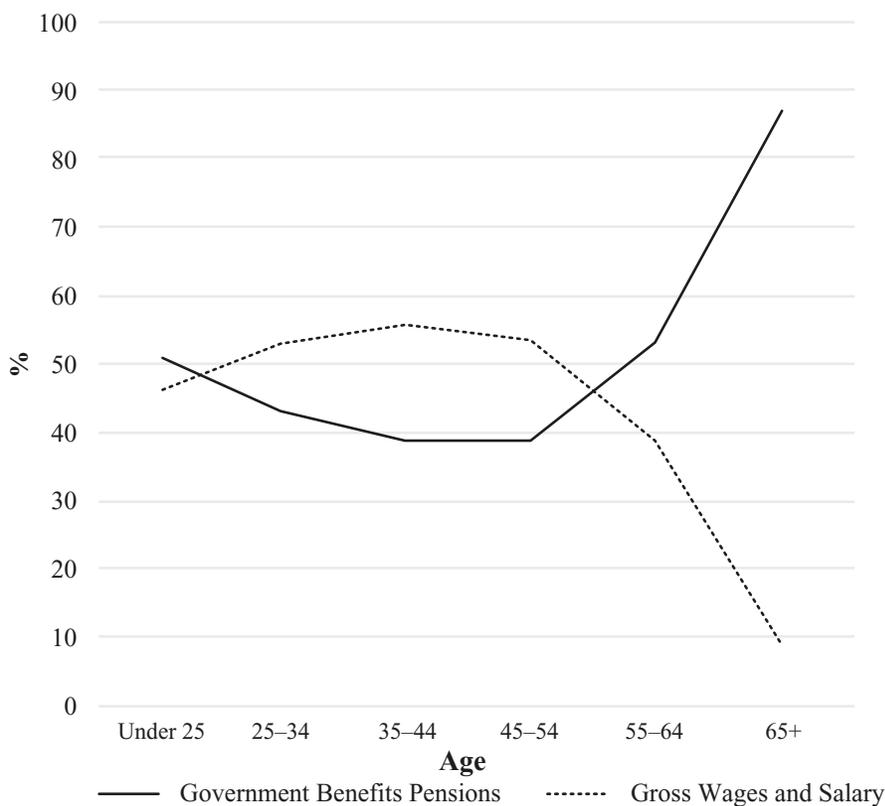
In this section, we examine the financial circumstances — incomes, assets, unsecured liabilities, and net worth — of older bankrupts, and compare these with younger cohorts of bankrupts and other older Australians.

1 *Incomes*

(a) *Primary Income Source*

As shown in Figure 4, the primary income sources for nearly all bankrupts of all ages are ‘wages and salaries’, and ‘government benefits and pensions’. Other primary income sources — such as business earnings and superannuation — are less common.

Figure 4: Primary income sources for different age groups (percentage of personal bankrupts citing income source as primary)



Source: AFSA and ABS.⁵³

⁵³ ABS, *Australian Demographic Statistics, June 2017* (ABS Catalogue No 3101.0, 21 March 2018) <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun%202017?OpenDocument>.

The primary income source of bankrupts varies depending on the bankrupts' age profiles. However, the biggest changes in bankrupts' primary income sources occur between the cohort aged 45–54 years and 65 years and older. More than half of the cohort aged 45–54 years receives most of their income from wages and salaries, while “government benefits and pensions” is the primary income source of around a third of bankrupts from that age group. However, for the cohort aged 55–64 years these proportions are reversed, with more than half of bankrupts citing ‘government benefits and pensions’ as their primary income source. A large proportion of bankrupts in the 55–64 years age bracket are either unemployed or on other forms of government benefits or pensions. The proportion of bankrupts aged 65 years and over that cite government benefits and pensions as their primary income source is even higher, at 87.1 per cent, with less than 9 per cent obtaining their primary income from wages and salaries.

The low proportion of bankrupts citing wages and salaries as the primary income source is broadly in line with other older Australians — only around 12.0 per cent of older Australian households list wages and salaries as their primary income source.⁵⁴ However, there is a substantial difference between the proportion of older bankrupts citing government benefits or pensions as the primary income source and the broader population of older Australians (around 61.8 per cent of older Australians cite this as their primary income source, compared to 87.1 per cent of older bankrupts). The difference is due to the reliance on other sources of income (such as superannuation), which are cited as the primary income sources of around 24.8 per cent of older Australians. Superannuation is the primary source of income of only around one per cent of bankrupts, and less than one per cent described their primary income source as ‘other’.

(b) Gross Income

Overall, bankrupts' incomes (at both the individual and household level), which are provided in Table 4, are lower than average incomes in Australia. Analysis of bankrupts' incomes also shows a relationship between bankrupts' ages and incomes — incomes for both male and female bankrupts start declining from around the age of 40–49 years. Older bankrupts' incomes are thus relatively low compared to other age cohorts of bankrupts — for example, they are only around half that of bankrupts in their 40s.⁵⁵

⁵⁴ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16* (ABS Catalogue No 6523.0, 2017) Age of Reference Person — table 12.3 <<http://abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6523.02015-16?OpenDocument>>.

⁵⁵ Bankrupts aged 45–49 years have mean gross income of \$38 420.50 and median income of \$32 500.

Table 4: Personal bankrupts' gross incomes during the period of the study

(\$)	Mean personal gross income	Median personal gross income	Mean household gross income	Median household gross income
Males age 65 years and older	23 041	17 500	44 401	35 000
Females age 65 years and older	19 676	17 500	36 009	30 000
Bankrupts age 65 years and older	21 657	17 500	41 942	35 000
All personal bankrupts	34 510	27 500	72 245	65 000
All Australians (aged 15 years and older)	60 000 ⁽¹⁾	34 400 ⁽²⁾	110 000 in 2015–16 (85 750 in 2007–08)	84 000 in 2015–16 (66 820 in 2007–08)

Notes: (1) As the ABS generally publishes gross incomes for households, this figure is approximated from 2015–16 weekly cash earnings.⁵⁶

(2) This figure is approximated using ABS median weekly incomes.⁵⁷

Source: ABS and AFSA.⁵⁸

As shown in Table 4, older bankrupts' gross household incomes are considerably lower than the mean and median gross household incomes of bankrupts of all ages. However, gross household income is an imperfect indicator of economic wellbeing, because it does not reflect the size of the household. Unlike the younger cohorts, older Australians usually reside in a single-person household or as part of a couple with no dependent children. This factor makes it difficult to compare an older person's individual or household income with other age cohorts.⁵⁹

⁵⁶ ABS, *Average Weekly Earnings, Australia* (ABS Catalogue No 6302.0, 2016).

⁵⁷ ABS, *2016 Census QuickStats* (17 August 2018) <http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/036>.

⁵⁸ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.1; ABS, *2016 Census QuickStats* (17 August 2018) <http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/036>.

⁵⁹ Around 41 per cent of older Australians are living in a 'lone person' household, which is higher than any other age category. Around 83 per cent of older Australians are living in either a 'lone person' household, or as part of a couple with no dependent children. The ABS also publishes an 'equivalised disposable household income' measure which accounts for the size of the household. The difference between equivalised disposable incomes of older Australians and the broader population is significantly smaller than the difference between the respective gross incomes: see ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.3, 12.4.

As such, we also compare gross personal incomes of older bankrupts with the other cohorts. Again, these are much lower for older bankrupts than other age cohorts.⁶⁰ For example, the median gross personal income of older Australian bankrupts is only \$17 500, compared to the median income of all bankrupts, \$27 500. We also find that only 5.8 per cent of bankrupts aged 65–69 and 3.2 per cent of those aged 70 years and over have a gross personal income over \$50 000.

We find that the relatively low household incomes of older bankrupts are broadly consistent with household incomes of other older Australians.⁶¹ Older Australians make up around 14 per cent of the population but comprise nearly one third (1.2 million) of people living in low income households.⁶²

Similarly to older bankrupts' household incomes, older Australians' personal incomes are low. In 2011, more than half of all older Australians had personal annual incomes between \$10 400 and \$20 800.⁶³ This equates to \$200–\$400 per week, substantially less than Australians' median weekly personal incomes of \$577 at the time.⁶⁴ It is also significantly lower than the current minimum wage, \$589.30 per week, for a person working full-time.⁶⁵

⁶⁰ Unsurprisingly, there is a clear relationship between government benefits and pensions as a primary income source, and a lower income.

⁶¹ We compared the household gross incomes of older bankrupts with those of other older Australians. We find that this difference is relatively small (median gross household income: \$35 000 among older bankrupts, compared with \$39 416 among other older Australians; mean: \$41 942 among older bankrupts' households, compared with \$47 060 among other older Australians' households). This difference likely reflects inflation, which results in increases to the age pension rates. The effect of inflation on pensions is significant — over the period of the study, the age pension rate increased from around \$13 000 to over \$20 000. As AFSA does not adjust income or debt levels to derive real measures, we arrive at relatively lower incomes over the period of the study compared with 2015–16 ABS statistics, which were used for the above comparison. See ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.1.

⁶² ABS, *Household Income and Wealth, Australia, 2013–14 — Feature Article: Wealth of Low Income Households* (ABS Catalogue 6523.0, 2016). See also Australian Council of Social Service ('ACOSS'), 'Inequality in Australia' (Report, 2015) 43: this report found that 45 per cent of older Australians are in households in the bottom 20 per cent of the income distribution.

⁶³ ARC Centre of Excellence in Population Ageing Research ('CEPAR'), 'Older Australian Fact Sheet' (Fact Sheet, September 2014) 3 <http://cepar.edu.au/sites/default/files/A_Statistical_Portrait_of_the_Older_Australian.pdf>.

⁶⁴ ABS, *2011 Census QuickStats* (28 March 2013) <www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/0>.

⁶⁵ Fair Work Australia, 'Annual Wage Review 2010–11' (PR 062011, 20 June 2011) 2 <<https://www.fwc.gov.au/documents/sites/wagereview2011/downloads/pr062011.pdf>>.

2 *Assets*

Our analysis identifies significant differences between the types and values of assets held by older Australians and those in bankruptcy. The first difference relates to real estate ownership. The proportion of older bankrupts owning real estate is very low, being less than 10 per cent. The data shows that the rates of home ownership among bankrupts are highest for those bankrupts in their 30s and 40s — albeit the proportion is still quite low (less than 15 per cent).

This suggests that personal bankruptcy tends to involve renters, who actually comprise less than a third of Australians, and an even smaller proportion of older Australians.⁶⁶ In Australia, home ownership rates among households of older people have been consistently high. In 2010, over 80 per cent of older Australian households owned their own home (either outright, or with a mortgage).⁶⁷

We also find that the vast majority of older bankrupts (and bankrupts of other ages) do not have significant levels of assets. Indeed, a high proportion of bankrupts of all ages report '\$0' realisable assets. However, older bankrupts tend to have even lower levels of assets than younger cohorts.⁶⁸ As shown in Table 5, the median value of all assets held by older bankrupts is only \$2500. The level of assets held by older bankrupts decreases with age — for example, high proportions of bankrupts from the oldest age cohort (those aged 70 and over) report '\$0' for the value of the following asset categories:

- jewellery: 98.2 per cent of bankrupts report '\$0';
- tax refund: 96.1 per cent;
- other items of value: 87.9 per cent;
- shares: 96.5 per cent;
- tools of trade: 94.2 per cent; and
- superannuation and life insurance policies: 90.0 per cent.

⁶⁶ ABS, *Housing Occupancy and Costs, 2015–16* (ABS Catalogue No 4130.0, 2017) table 1.3; Judith Yates, Rachel Ong and Bruce Bradbury, 'Housing as the Fourth Pillar of Australia's Retirement Income System' (Discussion Paper for the Committee for Sustainable Retirement Incomes Roundtable, 5 August 2016) 2 <<https://cfsri.files.wordpress.com/2015/09/yates-ong-bradbury-csri-work-stream-1-discussion-paper-5-aug.pdf>>.

⁶⁷ Yates, Ong and Bradbury, above n 66.

⁶⁸ While mean assets are slightly higher for older bankrupts than for bankrupts under the age of 65 years, means are more likely to be influenced by extreme cases. Median assets of older bankrupts are considerably lower than younger bankrupts.

Table 5 Bankrupts' assets: selected characteristics

	Personal bankruptcies (age under 65 years)	Personal bankruptcies (age over 65 years)
Total assets (mean)	\$154 176	\$162 336
Total assets (median)	\$17 500	\$2500
Total assets grouped (%)		
Proportion of bankrupts with assets valued under \$20 000	54.5	77.4
\$20 000 to \$49 999	15.1	4.5
\$50 000+	30.5	18.1

Source: AFSA and ABS.⁶⁹

This general lack of assets clearly distinguishes older bankrupts from the broader population of older Australians. Older bankrupts also have very low levels of liquid assets, such as cash, shares or funds in bank accounts. Only a very small proportion of older bankrupts own shares, while only around two per cent of older bankrupts have over \$5000 in their bank accounts, or in cash.

Other older Australians are generally 'asset-rich'. A significant proportion of older Australians' assets is comprised of real estate assets. In 2015–16, households with a reference person aged 65–74 years on average held \$1.4 million in assets, which includes around \$555 000 in financial assets (such as bank accounts, shares, trusts and superannuation) while the remainder is comprised primarily of real estate assets. Households with a reference person aged 75 years and older on average held \$1.08 million in assets, which includes \$285 000 in financial assets.⁷⁰ As discussed below, many older Australians own real estate unencumbered (or have only small mortgages remaining), which means that they also have high levels of wealth ('net worth').

3 *Indebtedness*

In respect of liabilities, only unsecured debts (debts that are not secured by a mortgage or security interest over property) are included in the dataset. However, this omission only has the effect of understating the level of indebtedness of bankrupts. Further, as we have shown above, it appears that very few older bankrupts actually own real estate, so the existence of home loans is unlikely to materially impact our observations relating to bankrupts' typical financial circumstances.⁷¹

⁶⁹ ABS, above n 40.

⁷⁰ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.2.

⁷¹ Less than one per cent of all older bankrupts report the unsecured liability 'house mortgage'. This comprises 1 in 10 older bankrupts who have real estate. For discussion of AFSA's treatment of mortgages and secured liabilities, see ITSA, above n 30 and accompanying text.

The main area of debt which affects all bankrupts, including older cohorts, is credit-card liabilities. The size of bankrupts' credit-card debt generally increases with age, and plateaus for the 60s age cohort. As shown in Table 6, older bankrupts have higher credit-card debts compared to those younger than 65 years. While the magnitude of the credit-card debt is slightly lower for older bankrupts compared to those in their 50s, it is still considerably higher than the average for all age cohorts. It is also notable that older bankrupts are more likely to have credit-card debt compared to other cohorts (over 80 per cent of older bankrupts have credit-card debt), and that many of these debts are large (over 40 per cent of older bankrupts have credit-card debt of over \$20 000).

Table 6: Bankrupts' liabilities: selected characteristics

	Aged under 65 years	Aged over 65 years
Mean of credit-card debt (\$)	18 764	28 021
Mean of credit-card debt (excluding those bankrupts with '0' debt) (\$)	26 155	33 439
Median of credit-card debt (\$)	7 500	17 500
Median of credit-card debt (excluding those bankrupts with '0' debt) (\$)	17 500	22 500
Mean unsecured liabilities (\$)	144 350	197 663
Median unsecured liabilities (\$)	37 500	27 500
Proportion of those with unsecured liabilities \$50 000 and over (%)	38.5	32.0
Average proportion of credit-card debt as % of total unsecured liabilities (%)	34.0	64.0

Source: AFSA and ABS.⁷²

The overall magnitude of unsecured liabilities held by bankrupts follows a similar trajectory to credit card debt — bankrupts' levels of debt increase with age, plateau when individuals are aged 40–65 years, and decline after the age of 65 years. The average size of credit card debt as a percentage of their total liabilities also increases with age, even among older bankrupts. For example, on average, credit card debt comprises 55.0 per cent of total liabilities for bankrupts aged 60–64 years, 60.2 per cent for those aged 65–69, and 68.3 per cent for those aged 70 years and over.

A substantial proportion of older bankrupts (35.6 per cent) also report having debt categorised by AFSA as 'other'. The proportion of older bankrupts who report having 'other' debts is significantly lower than other age cohorts (53.7 per cent of other bankrupts report having 'other' debt). The remaining types of unsecured debt — such as overdrafts, rates, store card debts,⁷³ legal liabilities, medical debts,

⁷² ABS, above n 40.

⁷³ The prevalence of store card debts is higher among older bankrupts than among other cohorts, however, this may simply reflect that older people are more likely to use store cards for shopping compared to younger bankrupts. The percentage of older

and personal loans — are held by smaller proportions of older bankrupts, and they comprise a much smaller component of their unsecured liabilities. The magnitude of these liabilities either declines with age (for example, overdrafts, utility liabilities, rates liabilities, and taxation liabilities) or is generally very low for all personal bankruptcies (for example, trade liabilities and legal liabilities).

The high levels of credit card debts among older bankrupts vastly differ from the general older population in Australia. Older bankrupts have mean credit card debt of \$28 021. However, mean credit card liabilities for older households are around \$1200,⁷⁴ which comprises less than 5 per cent of the mean credit card debt of an older bankrupt. Excluding home loans and loans on other real estate, mean liabilities for older Australians are also very low (around \$5200) compared to older bankrupts.⁷⁵

4 *Net Worth*

Net worth, which is a measure of wealth, is defined as the excess of assets over liabilities. Wealth tends to be accumulated during people's working lives and tends to be reduced during retirement to support consumption. As such, older Australians are generally income-poor but have a high level of net worth, due to their relatively higher levels of assets and lower levels of liabilities. In 2015–16, households with a reference person aged 65–74 years had median net worth of \$802 800, while households aged 75 years and over had net worth of \$642 500 (compared to a median Australian household net worth of \$527 000).⁷⁶

In contrast, the net worth of bankrupts is very low. Indeed, even without factoring in secured liabilities, most bankrupts have an excess of liabilities over assets. The proportion of older bankrupts with liabilities in excess of assets is particularly high — 83.3 per cent, compared to 68.2 per cent of those aged under 65 years. The proportion of bankrupts whose unsecured liabilities exceed assets is illustrated in Figure 5. The percentage of bankrupts that have liabilities exceeding assets decreases with age until individuals enter their 40s and early 50s, after which the proportion of bankrupts with excess liabilities increases again.

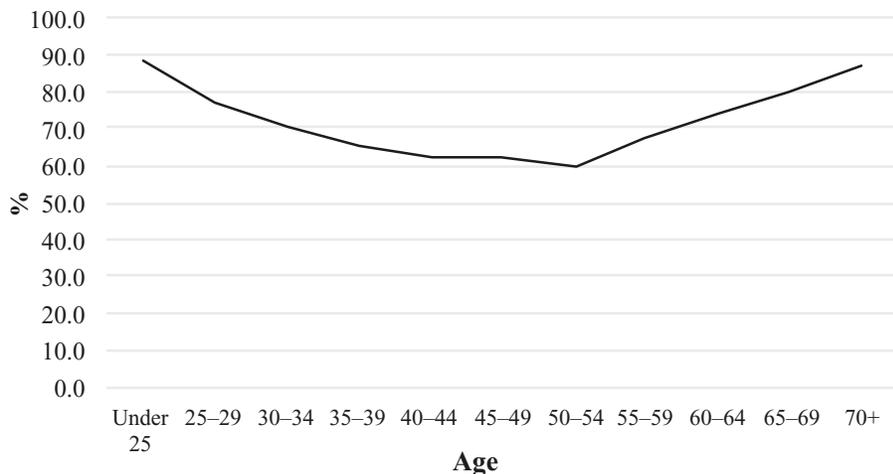
bankrupts with sizeable store card liabilities (2.0 per cent of bankrupts aged 65 years and over report store card liabilities of over \$5000) is far lower than the percentage of older bankrupts with large credit-card liabilities.

⁷⁴ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.2. This amount comprises less than half of the amount owing on credit-cards across all Australian households (\$2600).

⁷⁵ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.2. This amount comprises less than one third of all households' mean liabilities excluding home loans and loans on other real estate (\$18 200). It comprises around 2.6 per cent of mean, or 18.9 per cent of median, unsecured liabilities held by older bankrupts. Note that these two estimates (\$5200 and \$18 200) have a relative standard error of 25 per cent to 50 per cent.

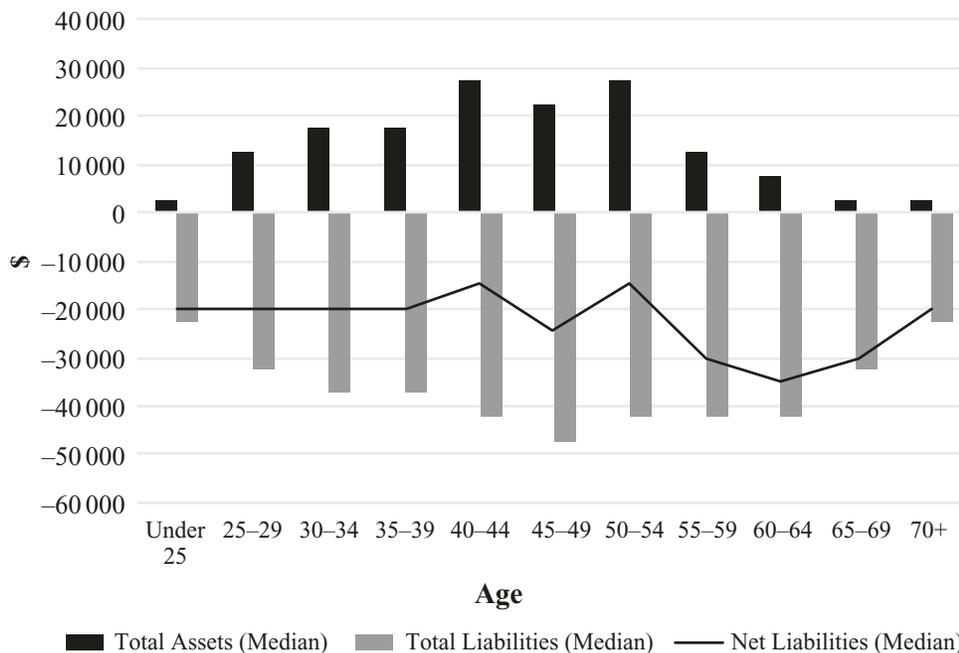
⁷⁶ ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.2. Mean net worth for the respective household cohorts was significantly higher: \$1.33 million and \$1.04 million.

Figure 5: Percentage of bankrupts whose liabilities exceed assets, categorised by age



Source: AFSA and ABS.⁷⁷

Figure 6: Bankrupts' median assets, liabilities and net liabilities, categorised by age



Source: AFSA and ABS.⁷⁸

⁷⁷ ABS, above n 40.

⁷⁸ Ibid.

A broadly similar pattern emerges in relation to the level of wealth of the older bankrupts compared to the younger cohorts. Indeed, Figures 5 and 6 show that the wealth of the oldest two cohorts largely mirrors the youngest two cohorts. These cohorts are most likely to have liabilities in excess of assets — for example, only one in eight bankrupts from the oldest and youngest cohorts has higher assets than liabilities. They also tend to have the lowest levels of assets (median level of assets is only \$2500). The consequences of financial trouble for the youngest and oldest cohorts will of course differ, as older people have fewer years left during which they can recover from bankruptcy, particularly given their reliance on government pensions and benefits.

IV ANALYSIS

In this part of the article we discuss the implications of our empirical results for our understanding of older Australians in bankruptcy.

A Causes of Bankruptcy Among Older Australians

We have seen that the three most common causes of bankruptcy among older Australians are excessive credit, ill health and unemployment. It is likely that, while debtors are required to select a ‘primary’ cause for their bankruptcies, many personal bankruptcies result from multiple interrelated causes, rather than a single cause.⁷⁹ For example, it is possible that when a debtor selects ‘ill health’ as the primary cause, other factors such as unemployment and excessive credit may have contributed to the bankruptcy (and vice versa).

1 Excessive Credit

That more than a third of bankruptcies involving older Australians are caused by excessive credit is perhaps surprising as it is accepted that in general, older people do not suffer from credit problems to the same extent as younger people. This may still be the case, but recent research has shown that credit problems are increasingly affecting some older people, and particularly those on low incomes.⁸⁰

⁷⁹ Indeed, research undertaken in the US found that in most cases bankruptcies involving elderly Americans involved multiple crises. Thorne’s study found that multiple crises were responsible for 71 per cent of bankruptcies involving elderly Americans. Thorne notes that ‘[t]aken together, the qualitative and quantitative data make a strong case for the interconnectedness of the reasons for elder bankruptcy. No single event is to blame. Instead, there is a chorus of reasons, but the end result is still the same’: Thorne, ‘Interconnected Reasons’, above n 5, 200–1.

⁸⁰ Frances Gibson, ‘Financial and Consumer Credit Issues for Older Consumers in Central Victoria’ (Report, Loddon Campaspe Community Legal Centre, April 2008) 6–7, 26–8 <<http://lcclc.org.au/wp-content/uploads/2012/02/Changing-Times-Report1.pdf>>.

Our findings raise questions about lending practices to vulnerable groups such as pensioners, who have low incomes and many of whom have no liquid assets, and those on the cusp of retirement who are likely to experience a decline in income. It has been observed that vulnerable older people are increasingly ‘using credit to make essential purchases that they cannot otherwise afford’.⁸¹ People with lower levels of financial literacy are more likely to also have lower income and wealth, which has implications for retirement planning and income management post-retirement.⁸² Studies have also shown that older people have lower levels of financial literacy and may be less likely to understand credit than the younger cohorts.⁸³ The combination of low incomes, limited assets and older age may make some people particularly vulnerable. As older people on low incomes may find it difficult to obtain small loans, they may fall prey to predatory lenders, such as those that charge excessively high interest rates.⁸⁴

‘Excessive credit’ is a very broad category that involves an element of subjectivity. In other words, what constitutes ‘excessive’ credit is subjective to the debtor and requires a degree of hindsight and attribution of responsibility.⁸⁵ Given the likelihood that most bankruptcies are caused by multiple interrelated causes, it is likely that excessive, or dangerous, credit is a more significant cause of bankruptcy than what our results indicate. For example, offering high credit card limits to financially vulnerable people, such as pensioners with no assets, or lending large amounts to people nearing retirement, likely contributes to their financial demise even if some other event (such as illness or unemployment) subsequently made repayment of the debts untenable.

⁸¹ Ibid 26–7.

⁸² ANZ, ‘ANZ Survey of Adult Financial Literacy in Australia’ (Report, October 2008) 4–5 <<https://www.anz.com/resources/5/4/54a7b400413360d8b5d8bda2fd298cdf/Survey-Adult-Financial-Literacy-2008.pdf?MOD=AJPERES>>; Hazel Bateman et al, ‘Financial Competence and Expectations Formation: Evidence from Australia’ (2012) 88 *Economic Record* 39, 40.

⁸³ The ANZ financial literacy survey found that participants aged 70 and over had the lowest levels of financial literacy of all age groups: ANZ, above n 82, 4. See also Council of the Ageing (Victoria), ‘Report to Consumer Credit Fund for Credit Preferences and Credit Traps for Older People’ (Report, September 2007) <<https://www.consumer.vic.gov.au/resources-and-tools/research-studies>>. For discussion of consumer credit issues among older people see generally Frances Gibson and Francine Rochford, ‘Emerging Consumer Credit Issues for Older Australians’ (2008) 12 *University of Western Sydney Law Review* 73; Radwan and Morgan, above n 5, 12.

⁸⁴ Gibson, above n 80, 30.

⁸⁵ The findings of another recent Australian study, which included surveys of current and former bankrupts, illustrates this attribution of responsibility. The study found that respondents attributing their problems at least in part to excessive use of credit ‘were much more likely to attribute their bankruptcies to their own financial mismanagement, rather than misfortunes such as physical or mental health problems’: Paul Ali, Lucinda O’Brien and Ian Ramsay, ‘Bankruptcy and Debtor Rehabilitation: An Australian Empirical Study’ (2017) 40 *Melbourne University Law Review* 688, 717.

2 *Ill Health*

The fact that older people are more likely to cite ill health as a reason for their bankruptcy is not surprising as the risks of health problems increase with age. Indeed, most older Australians (87 per cent) suffer from at least one chronic disease, while 60 per cent suffer from more than one.⁸⁶ Furthermore, many people who enter retirement in good health are likely to face significant health-related costs later in their life.⁸⁷

In some respects, the relatively low proportion⁸⁸ of older bankrupts citing ill health as the primary reason for their bankruptcy — compared to unemployment

⁸⁶ AIHW, 'Australia's Health 2016', above n 31, 73, 76.

⁸⁷ Indeed, a US study found that retirees who are healthy will face higher lifetime health care costs than those with chronic diseases — because the former will likely live longer which will increase their overall health-related costs and increase the probability that they will require a longer period of home care: Wei Sun, Anthony Webb and Natalia Zhivan, 'Does Staying Healthy Reduce Your Lifetime Health Care Costs?' (Brief No 10–8, Centre for Retirement Research, Boston College, May 2010) 1–3 <http://crr.bc.edu/wp-content/uploads/2010/05/IB_10-8.pdf>.

⁸⁸ As a point of comparison, in the US, a study undertaken as part of the CBP found that 'illness and injury' (65 per cent) was cited by older American bankrupts almost as often as 'credit-card interest and fees' (67 per cent) as a cause of bankruptcy: Thorne, 'Interconnected Reasons', above n 5, 194. The US studies allowed respondents to select more than one cause of bankruptcy, rather than just the *primary* cause. There have been other studies showing that medical reasons contributed to most bankruptcies in the US: see, eg, David U Himmelstein et al, 'Medical Bankruptcy in the United States, 2007: Results of a National Study' (2009) 122 *American Journal of Medicine* 741, 743.

The difference between medical bankruptcy levels in Australia and the US may reflect specific characteristics that relate to the US. Americans pay significant healthcare costs. Indeed, it was found that in 2010 older Americans on average spent \$US18 424 on personal health care: see David Lassman et al, 'US Health Spending Trends by Age and Gender: Selected Years 2002–10' (2014) 33 *Health Affairs* 815, 815. A major study found that the US has a health system which is the most expensive system in the world but which also underperforms all countries in the Organisation for Economic Cooperation and Development ('OECD'), particularly in the key indicators of affordability and equity. It is particularly relevant in relation to medical bankruptcy that the US health system was ranked last in terms of access, equity and health care outcomes. In the US, 20 per cent of respondents to the study reported having serious problems paying, or were unable to pay, medical bills — compared to 5 per cent in Australia. A third of US respondents to the study reported cost-related access problems relating to medical care in 2016–17, compared to 14 per cent of those in Australia. The difference between individuals on high and low incomes reporting serious problems paying or being unable to pay medical bills was 18 per cent in the US, compared to only 6 per cent in Australia: see Eric Schneider et al, 'Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities

(22.4 per cent) and excessive credit (36.5 per cent) — may be a reflection on Australia's universal health system, which is of high quality by international standards.⁸⁹

In Australia, a significant proportion of older people's healthcare costs are borne by governments, which helps keep their out-of-pocket healthcare costs manageable.⁹⁰ Recent modelling suggests that much of the increase in Australian healthcare spending by governments relates to providing new, improved and more frequent health services rather than spending causally related to the ageing population or population growth.⁹¹

While the universal health system in Australia can reduce the financial hardship, and thus potentially prevent bankruptcy of vulnerable people, the costs of out-of-pocket healthcare may be a cause of bankruptcy for some older Australians. Even government concessions such as healthcare cards do not entirely protect older people from financial hardship as a result of out-of-pocket healthcare costs — such as those involved in long-term treatment and care, and supportive care in the community.⁹²

for Better US Health Care' (Report, The Commonwealth Fund, July 2017) 4–7, 21, 23 <<http://www.commonwealthfund.org/publications/fund-reports/2017/jul/mirror-mirror-international-comparisons-2017>>.

⁸⁹ According to the survey of health care systems by The Commonwealth Fund which included 10 other countries, Australia was ranked second in 2017 behind the United Kingdom (Australia was ranked fourth in terms of access, seventh in terms of equity, and first in terms of health care outcomes): Schneider et al, above n 88, 5. See also Emil Jeyaratnam and Fron Jackson-Webb, 'Infographic: Comparing International Health Systems' *The Conversation*, September 1 2014 <<https://theconversation.com/infographic-comparing-international-health-systems-30784>>.

⁹⁰ Alan Tapper and John Phillimore, 'Trends in Australian Government Health Expenditure by Age: A Fiscal Incidence Analysis' (2014) 38 *Australian Health Review* 523, 527. This study found that growth in government health expenditure per household has been more than three times as rapid for those aged 65 years and older than for those aged 15–44 years. See also John Daley and Danielle Wood, 'The Wealth of Generations' (Report No 2013–14, Grattan Institute, December 2014) 25 <<https://grattan.edu.au/wp-content/uploads/2014/12/820-wealth-of-generations.pdf>>.

⁹¹ See generally John Daley and Cassie McGannon, 'Budget Pressures on Australian Governments 2014' (Report No 2014–7, Grattan Institute, May 2014) 20 <<https://grattan.edu.au/wp-content/uploads/2014/05/812-budget-presures.pdf>>; Tapper and Phillimore, above n 90.

⁹² Beverley M Essue and Stephen Jan, 'The Household Economic Burden of Chronic Illness: An Under-Recognised Problem in Australia' (2013) 12 *Consumers Health Forum: Health Voices* 11, 11–12 <https://chf.org.au/sites/default/files/healthvoices_april_web.pdf>; Ian McRae et al, 'The Health of Senior Australians and the Out-of-Pocket Healthcare Costs They Face' (Report, Australian Government, Department of Health and Ageing, National Seniors Productive Ageing Centre, 2012) 12–13. Further, Walker found that a high proportion of the 'younger old' (who were aged between 65 years and 74 years) were vulnerable to increases in co-payments: Agnes Walker, 'Distributional Impact of Higher Patient Contributions to Australia's Pharmaceutical Benefits Scheme' (Discussion Paper No 45, National Centre for Social and Economic Modelling, September 1999) 19.

Out-of-pocket costs and co-payments are significant when considered relative to older Australians' total expenditure, and their relatively lower incomes.⁹³ Out-of-pocket costs particularly affect older Australians with multiple chronic conditions, because these people have a tendency to have lower incomes (and higher health costs due to multiple chronic conditions).⁹⁴ A recent study found that older Australians who are unable to afford these expenses are likely to have to draw on savings, sell assets or take out credit.⁹⁵ As such, there will be many older Australians who will face financial hardship due to healthcare costs, which may in turn lead to other crises and possibly even bankruptcy.⁹⁶

In Australia, research has shown that ill health is a significant factor that leads to people having shorter working lives.⁹⁷ This means that for many older people, ill

⁹³ Farhat Yusuf and Stephen R Leeder, 'Can't Escape It: The Out-of-Pocket Cost of Health Care in Australia' (2013) 199 *Medical Journal of Australia* 475, 477. The study found that while the costs borne by older Australians were only slightly higher than for younger people, these costs comprised a higher proportion of older people's total expenditure. It has been observed that an increase in pharmaceutical costs results in a more significant impact — as measured by a decrease in dispensing of government-subsidised medicines — on social beneficiaries (generally comprised of low income earners and the elderly): see Anna Hynd et al, 'The Impact of Co-Payment Increases on Dispensings of Government-Subsidised Medicines in Australia', (2008) 17 *Pharmacoepidemiology and Drug Safety* 1091, 1097–8. See also Yun-Hee Jeon et al, 'Economic Hardship Associated with Managing Chronic Illness: A Qualitative Inquiry' (2009) 9 *BMC Health Services Research* 182, 187–90.

⁹⁴ Anthony Carpenter et al, 'Affordability of Out-of-Pocket Health Care Expenses Among Older Australians' (2015) 119 *Health Policy* 907; Jeon et al, above n 93; McRae et al, above n 92, 8; M Mofizul Islam et al, 'Out-of-Pocket Expenditure by Australian Seniors with Chronic Disease: The Effect of Specific Diseases and Morbidity Clusters' (2014) *BMC Public Health* 1008; Ian McRae et al, 'Multimorbidity is Associated with Higher Out-of-Pocket Spending: A Study of Older Australians with Multiple Chronic Conditions' (2013) 19 *Australian Journal of Primary Health* 144.

⁹⁵ Carpenter et al, above n 94, 910–11.

⁹⁶ Essue and Jan, above n 92.

⁹⁷ Agnes Walker, 'The Impact of Health on the Ability of Older Australians to Stay in the Workforce — With Possible Contributions to Economic Sustainability' (Paper Presented at the Conference: A Future that Works – Economics, Employment and the Environment, Newcastle, December 2004) <<http://natsem.canberra.edu.au/publications/?publication=impact-of-health-on-the-ability-of-older-australians-to-stay-in-the-workforce-with-possible-contributions-to-economic-sustainability>>; Laurann Yen et al, 'The Impact of Chronic Illness on Workforce Participation and the Need for Assistance with Household Tasks and Personal Care by Older Australians' (2011) 19 *Health and Social Care in the Community* 485. ABS statistics also show that 'own sickness, injury or disability' is the second highest reason for retirement from the workforce (19 per cent of men and 14 per cent of women). The most common reason for retirement is 'reached retirement age/eligible for superannuation/pension' (ie voluntary retirement): see ABS, *Retirement and Retirement Intentions, Australia, July 2014 to June 2015* (ABS Catalogue No 6238.0, 2016).

health and unemployment are inextricably linked and can together result in financial hardship and, potentially, bankruptcy.⁹⁸ We examine unemployment as the third major cause of bankruptcy among older Australians in the following section.

3 *Unemployment*

The high proportion of older bankrupts citing unemployment as the primary cause of bankruptcy is perhaps surprising, especially when one considers that the clear majority of older Australians are already retired from the workforce, and that unemployment among older Australians is low.⁹⁹ Among older Australians, only around 13 per cent (17 per cent of males, and 9 per cent of females) are considered by the ABS to be participating in the workforce.¹⁰⁰ A decade ago the proportion of older Australians in the workforce was even lower (8 per cent), which suggests that Australians are increasingly retiring later.¹⁰¹

One possible explanation for the high proportion of older bankrupts citing unemployment as the primary cause of bankruptcy relates to the ABS definition of unemployment. The ABS definition requires the person to be actively seeking work and to be currently available for work.¹⁰² Thus, the ABS unemployment rate for older Australians is very low, because many older Australians are not classified as being in the workforce.¹⁰³ The ABS definition of unemployment would exclude a significant proportion of older people, such as those who are retrenched or dismissed, or those

⁹⁸ A US study carried out as part of the CBP found that ‘the loss of income and employment [because of sickness or injury] is even more devastating financially than the direct cost of medical care’: Teresa A Sullivan, Elizabeth Warren and Jay Lawrence Westbrook, *The Fragile Middle Class: Americans in Debt* (Yale University Press, 2000) 142.

⁹⁹ The ABS publishes quarterly unemployment rates for those aged 65 years and over. These have ranged between 0.2 per cent and 2.8 per cent over the last 10 years: see ABS, *Labour Force, Australia, Detailed — Electronic Delivery July 2018* (ABS Catalogue No 6291.0.55.001, 2018). However, the ABS notes that many of the lower quarterly estimates are ‘subject to sampling variability too high for practical purposes’.

¹⁰⁰ AIHW, *Older Australia at a Glance* (21 April 2017), <<https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/demographics-of-older-australians/australia-s-changing-age-and-gender-profile>>; ABS, *Labour Force, Australia, Detailed — Electronic Delivery, Nov 2018* (ABS Catalogue No 6291.0.55.001, 2018) *Labour Force, Australia, Detailed - Electronic Delivery, Nov 2018*, Table 1.

¹⁰¹ *Ibid.*

¹⁰² ABS, *Labour Statistics: Concepts, Sources and Methods* (ABS Catalogue No 6102.0.55.001, 2007).

¹⁰³ It has been suggested that this form of involuntary withdrawal from the workforce amounts to ‘hidden unemployment’: Vincent Dubé, ‘Sidelined in the Labour Market’ (2004) 5 *Perspectives on Labour and Income* 5, 9 <<http://www.statcan.gc.ca/pub/75-001-x/75-001-x2004104-eng.pdf>>. See also Scott Baum and William Mitchell, ‘Labour Underutilisation and Gender; Unemployment Versus Hidden-Unemployment’ (2010) 29 *Population Research and Policy Review* 233, 236.

who face an early exit from the workforce due to factors such as ill health and discrimination.¹⁰⁴ AFSA, however, does not provide a definition of unemployment,¹⁰⁵ which means that many older bankrupts who consider themselves unemployed may cite this as the primary cause of their bankruptcy, even if they do not meet the more narrow, technical ABS classification.

Another possible explanation relates to the fact that older Australians are increasingly delaying their retirement, largely due to concerns about financial security.¹⁰⁶ A lack of financial security for older Australians may of course make them more vulnerable to bankruptcy, particularly in the event of job loss, which may affect older people due to reasons such as ill health, retrenchment or redundancy. Job loss can be an unexpected event, and indeed many Australians who find themselves forced into early retirement due to job loss would not expect this to occur.¹⁰⁷ With this in mind, our findings may reflect that those older Australians who *are* unemployed or forced into early retirement due to job loss are more likely to become bankrupt compared to those older Australians who have already retired voluntarily and those who remain employed in positions with high levels of job security. Perhaps this reflects that some of these older people are already highly vulnerable prior to losing their job, or that the unexpected crisis of unemployment prompted the bankruptcy. It is also possible that the relatively long periods of time that older people remain unemployed further increases their risk of bankruptcy. The AFSA data shows that many bankrupts have been out of work for a very short period of time prior to their bankruptcy (consistent with bankruptcy being caused by a crisis, or series of crises), but that around one third of all unemployed bankrupts have been out of work for an extended period of at least two years.¹⁰⁸ Long-term unemployment is frequent among older Australians actively looking for work,¹⁰⁹ and indeed it has been suggested that official long-term unemployment figures underestimate the true extent of the problem because, as noted above, many older may stop looking for work due to reasons such as age

¹⁰⁴ See generally E Y Sweeney, 'Willing to Work: Qualitative Study of Employment Discrimination against Older Australians' (Report, Australian Human Rights Commission, 6 April 2016) <<https://www.humanrights.gov.au/our-work/age-discrimination/publications/qualitative-study-employment-discrimination-against-older>>.

¹⁰⁵ ITSA, above n 30, 17.

¹⁰⁶ ABS statistics show that the most significant factor influencing Australians' decisions on when to retire is financial security (35 per cent of females and 40 per cent of males), followed by health and physical abilities (around 23 per cent): see ABS, *Retirement and Retirement Intentions*, above n 97.

¹⁰⁷ An ABS survey covering the 20 year period to 2007 found that less than one per cent of workers intending to retire expected being retrenched or made redundant to be the main factor influencing their retirement decision. However, a far greater proportion of people, eight per cent, said that this was in fact the main reason they had retired: see ABS, *Australian Social Trends* (ABS Catalogue No 4102.0, 2009) 27.

¹⁰⁸ ITSA, above n 30, 18.

¹⁰⁹ It has been found that 'the likelihood of a long search for employment increases significantly with age': Damian Oliver and Serena Yu, 'The Australian Labour Market in 2016' (2017) 59 *Journal of Industrial Relations* 254, 257.

discrimination, or ill health and disability and this is not captured by official unemployment statistics.¹¹⁰

B *Financial Circumstances of Older Australians in Bankruptcy*

1 *Incomes*

As discussed, our logistic regressions suggest that age, government pensions as a primary income source, and gross incomes are important factors in explaining bankruptcy caused by excessive credit and unemployment. The first two of these factors are also important in explaining bankruptcy caused by ill health.¹¹¹

While older bankrupts have incomes that are much lower than the broader Australian population, they are largely consistent with incomes of other older Australians. This is principally due to their primary source of income being the age pension. As discussed below, the rate of income poverty among older people in Australia is one of the highest in the OECD.¹¹²

2 *Assets*

Generally, older Australians tend to be asset-rich but income-poor due to having accumulated assets over their working life and subsequently relying on the age pension for income.¹¹³ However, we have seen that most older bankrupts have very low levels of realisable assets, or none at all.

We also know that one third of older low-income households have few liquid assets.¹¹⁴ Research demonstrates that a significant proportion of older Australians, including those on low incomes, are experiencing financial stress, resulting in them being unable to pay their utility bills on time.¹¹⁵ One would expect that this vulnerable group of Australians — with low incomes and few liquid assets — would be at higher risk of bankruptcy compared to other older Australians.

Assets that are required to be reported to AFSA are divisible/realisable assets at the time of the bankruptcy. Since this data is collected at the commencement of the

¹¹⁰ Baum and Mitchell, above n 104, 238, Dubé, above n 103.

¹¹¹ See above Part III (D) of this article.

¹¹² Below n 145 and accompanying text.

¹¹³ Daley and Wood, above n 90; AIHW, 'Older Australia at a Glance' (Report, Australian Government, Department of Health and Ageing, November 2007) 43–4, <<https://www.aihw.gov.au/reports/aged-care/older-australia-fourth-edition/formats>>. See also above n 73 and accompanying text.

¹¹⁴ ABS, 'Many Older Australian Households Asset-Rich, Income-Poor' (Media Release, ABS Catalogue No 6523.0, 30 March 2016).

¹¹⁵ Simon Kelly, 'A Squeeze on Spending? An Update on Household Living Costs' (Report, Australian Government, Department of Health and Ageing, National Seniors Productive Ageing Centre, October 2013) 22–5.

bankruptcies, it is likely to show the person's financial affairs in their worst state because assets may have been owned and sold prior to filing. Some bankrupts may have already sold assets to pay debts, or had secured property repossessed, prior to filing for bankruptcy. This may partially explain the high proportion of bankrupts that report '\$0' realisable assets. Thus, while these figures are a good indicator of the state of the bankrupt population's financial affairs at the time of bankruptcy, they may not be as reliable an indicator of the person's state of affairs in the years *prior* to their most severe financial distress. A lack of assets held by bankrupts, and older bankrupts in particular, may also at first glance indicate that assets have had to be disposed of as an attempt to prevent the assets from becoming divisible among creditors. However, the latter is in breach of the *Bankruptcy Act* and there are serious consequences for the debtor. For this reason, AFSA also requires bankrupts to detail sales, transfers or gifts of assets in the five years prior to the bankruptcy.¹¹⁶ Less than 10 per cent of bankrupts aged 70 years and over, and less than 15 per cent of bankrupts aged 65–69 years note that they sold, transferred or gifted assets during the five years prior to bankruptcy. From this, we can infer that the vast majority of older bankrupts had already held very low levels of assets in the years preceding the crisis (or crises) which eventually led to their bankruptcy.

3 *Superannuation*

Our findings suggest that older Australians in bankruptcy are far less likely to be in a position to draw on superannuation assets (and other alternative income sources, such as incomes from investments), compared to older Australians from middle and higher income households. For example, 9 out of 10 bankrupts aged 70 years and over report having no superannuation assets to draw on. The low incomes and lack of realisable assets likely necessitates the borrowing which culminates in bankruptcy. This may indicate that bankruptcy is more likely to affect those older Australians with low incomes, as they are less likely to be able to draw on superannuation balances (recall that older bankrupts are reliant on government benefits and pensions).¹¹⁷ These findings illustrate that middle and higher income older households with superannuation assets, are less vulnerable and thus less likely to face bankruptcy.

Insufficient understanding of superannuation due to the complexity of the system may contribute to a lack of retirement income adequacy for many older Australians,

¹¹⁶ *Bankruptcy Act* s 121. Additionally, under s 120 of the *Bankruptcy Act*, transactions for less than the market value of the property are voidable if they occurred within five years before the commencement of the bankruptcy (with certain exceptions).

¹¹⁷ ABS data shows that high and middle-income retiree households are highly likely to derive their income from 'other income', including superannuation. Seventy-six per cent of higher income and 53 per cent of middle income households drew their income primarily from 'other income', while 92 per cent of lowest income households drew their incomes from government pensions and allowances: see ABS, *Household Income and Wealth, Australia, 2015–16 — Characteristics of Low, Middle and High Income Households* (ABS Catalogue No 6523.0, 2017).

culminating in bankruptcy.¹¹⁸ While this may be an area to consider reform, it is a key feature of the superannuation system that the level of compulsory employer contribution is determined by the employee's income — which effectively means that superannuation balances on retirement correlate with pre-retirement wealth.¹¹⁹ Thus, people who have been working part-time or receive low incomes during their working life (or have been forced into early retirement or experience lengthy work interruptions) will tend to have limited assets and low superannuation balances upon retirement, which will necessitate reliance on government pensions. This issue particularly affects women, who tend to retire with far lower superannuation balances as a result.¹²⁰

While superannuation is a key pillar of Australia's retirement system, people on low incomes will only receive limited (if any) benefits of superannuation reforms.¹²¹ Possible reforms that would reduce poverty for older Australians include targeted changes to government benefits, such as the increase to the Commonwealth Rent Assistance supplement discussed in the next section.

4 *Bankrupts' Home Ownership*

We also observe that only a very small proportion of older Australians in bankruptcy own real estate, such as their own home. This finding is significant because home ownership is often considered to be a fourth pillar of Australia's retirement income system (in addition to the three traditional pillars being the age pension, superannuation, and voluntary savings).¹²² Our findings offer further evidence that home

¹¹⁸ Australia's superannuation system is particularly complex, and research has found that low incomes, wealth and older age are associated with lower levels of financial literacy. Bateman et al suggest that '[a]s even choices as fundamental as contribution rates require the navigation of complex tax provisions, and fund and investment choices require some understanding of risk, return and diversification, it is likely that the financial capability of Australian retirement savers plays a key role in enabling retirement income adequacy': Bateman et al, above n 82, 42.

¹¹⁹ Indeed, it has been observed that occupational pensions (such as superannuation) can actually *increase* inequality among pensioners. They do this because they 'amplify and extend labour market inequalities': Kendra Strauss, 'Accessing Pension Resources: The Right to Equality Inside and Out of the Labour Market' (2014) 10 *International Journal of Law in Context* 522, 522.

¹²⁰ Brendan Coates, 'What's the Best Way to Close the Gender Gap in Retirement Incomes?' (Working Paper No 2018-01, Grattan Institute, February 2018) 4 <<https://grattan.edu.au/wp-content/uploads/2018/02/899-Best-way-to-close-gender-gap-retirement-incomes.pdf>>.

¹²¹ *Ibid* 25.

¹²² Yates, Ong and Bradbury, above n 66, 1; Saul Eslake, 'No Place like Home, The Impact of Declining Home Ownership on Retirement' (Report, Australian Institute of Superannuation Trustees, March 2017) 15 <<http://www.aist.asn.au/policy-research-archive/research-papers/2017-research/no-place-like-home-the-impact-of-declining-home-ownership-in-retirement.aspx>>.

ownership provides protection against financial hardship and poverty,¹²³ allowing many Australians to manage serious financial crises which could have otherwise led to bankruptcy. The low rates of home ownership among bankrupts may reflect the fact that home owners are less financially vulnerable than renters. They are less vulnerable *by virtue of* their home ownership (their home being a valuable asset during a period of rising property values, which can be either sold or the equity used to obtain loans). Equally importantly, people who are more financially vulnerable are simply less likely to own real estate in the first place. That is, they are less likely to attempt to take on a mortgage, and even if they did, they are unlikely to be able to afford a deposit or be offered finance. The low rate of home ownership among bankrupts (and older bankrupts in particular) may also reflect a reluctance by some homeowners to file for bankruptcy due to the risk of having their home sold by the trustee.

Our findings also provide further evidence of the vulnerability of those older Australians who are renting. Home ownership (or rather lack thereof) is the most significant factor contributing to financial hardship among pensioners,¹²⁴ and it has been found that the cost of accommodation may be the key reason that determines whether an older person lives in poverty.¹²⁵ Since most older Australians (around 75 per cent) own their own home outright — compared to around 21 per cent of those younger than 65 years — they also typically have lower housing costs.¹²⁶ However, older Australians in private rental accommodation face a more severe housing cost burden than any other age cohort.¹²⁷ Those particularly vulnerable are older Australians who are renting in a metropolitan area and living by themselves.¹²⁸ This situation may deteriorate further due to a predicted shortage of affordable private rental and social housing,¹²⁹ which may further increase bankruptcy rates among older Australians.

Given that our results suggest that many older Australians in bankruptcy reside in private rental accommodation, an increase in the Commonwealth Rent Assistance supplement could reduce the risk of bankruptcy among this group. It has been found that this supplement (currently capped at \$67 per week for people with no dependent children, and currently indexed to the Consumer Price Index) covers only a small

¹²³ ACOSS and Social Policy Research Centre ('SPRC'), 'Poverty in Australia' (Report, 2016) 30–1.

¹²⁴ Warwick Smith and David Hetherington, 'The Adequacy of the Age Pension in Australia', (Report, Per Capita Australia, September 2016) 5.

¹²⁵ Alan Morris, 'Contentment and Suffering: The Impact of Australia's Housing Policy and Tenure on Older Australians' (2009) 44 *Australian Journal of Social Issues* 363, 366.

¹²⁶ CEPAR, above n 63; Yates, Ong and Bradbury, above n 66, 2.

¹²⁷ Yates, Ong and Bradbury, above n 66, 3; Eslake, above n 122, 16.

¹²⁸ Morris, above n 125, 373.

¹²⁹ Yates, Ong and Bradbury, above n 66, 12.

proportion of housing costs for older private renters.¹³⁰ Coates, in making the case for an increase in this supplement as a measure to help alleviate poverty of older Australians and reduce the gender gap in retirement incomes, suggests that it would be more effective than a number of recently proposed changes to superannuation.¹³¹

5 *Indebtedness*

We have seen that like many older Australians, older bankrupts have low incomes. However, many older Australians tend to have no debt, and those that do are extremely unlikely to be over-indebted.¹³² Older Australians tend to be more conservative borrowers, and even those on low incomes may be more likely to cut back on basics such as food and medicines rather than take out credit they would be unable to repay.¹³³

In contrast to other older Australians, who generally have relatively high levels of wealth and few debts, older bankrupts' financial situations are characterised by high levels of indebtedness combined with very low assets. As the AFSA data on liabilities is limited to unsecured liabilities, some older bankrupts' financial circumstances are likely to be even more precarious than our findings indicate.¹³⁴

Older bankrupts' high levels of indebtedness are mostly due to their credit card liabilities, which are significant both in absolute terms, and relative to their incomes

¹³⁰ ACOSS, Submission to Treasury, Parliament of Australia, *Retirement Income Review*, 2015 <<http://bettertax.gov.au/files/2015/08/Australian-Council-of-Social-Service-Submission-4.pdf>>.

¹³¹ Coates, above n 120.

¹³² Over-indebtedness is defined by the ABS as occurring when a household's debt is three or more times the household's annual income, or when debt is equal to three-quarters or more of the value of the household's assets. In 2015–16 older households were significantly less likely to be over-indebted compared to other age cohorts (only around 5 per cent of these households were over-indebted): see ABS, *Household Income and Wealth, Australia, 2015–16 — Feature Article: Household Debt and Over-Indebtedness in Australia* (ABS Catalogue No 6523.0, 2017).

¹³³ *Ibid*; ABS, *Household Income and Wealth, Australia: Summary of Results, 2015–16*, above n 54, Age of Reference Person — table 12.2. See also Hynd et al, above n 93; Anna Kemp et al, 'Determinants of Self-Reported Medicine Underuse Due to Cost: A Comparison of Seven Countries' (2010) 15 *Journal of Health Services Research & Policy* 106, 106–7.

¹³⁴ While older people are less likely to have a mortgage than other demographics, there are many reasons why some people retire while still carrying a mortgage. For example, they may have purchased property later in life, or taken out a reverse mortgage to help pay for expenses. For discussion and other examples, see Radwan and Morgan, above n 5, 9.

and assets. Again, this finding is somewhat surprising given that it has been observed that older people tend to rely less on credit-cards compared to other age cohorts.¹³⁵

Our results raise the question of how pensioners with limited assets are accumulating such high credit card debts, which may warrant further investigation. Evidence is emerging that credit card debts — and inappropriate credit limits — are increasingly becoming the major cause of personal bankruptcy, including for pensioners and others on government benefits.¹³⁶ Further, interest rates on credit cards are regressive in the sense that they have a more profound impact on poorer and vulnerable people, as these demographics are more likely to incur high interest rates and additional fees and charges on their balances.¹³⁷ Further, as their levels of debt (and fees) comprise a large proportion of their income, they are more likely to have a severe impact.¹³⁸

Recent empirical research has found that bankruptcy in Australia is increasingly becoming a middle-class phenomenon, displacing traditional assumptions that bankruptcy is either the domain of the chronically poor or the profligate rich who are seeking to avoid meeting their financial obligations.¹³⁹ While our results indicate that older bankrupts tend to have low incomes and assets, some of the bankruptcies may have been the result of severe credit problems for older Australians who are not poor. These bankruptcies may again be in large part due to certain lending practices by financial institutions. For example, it has been observed that some financial institutions do not consider a person's age when lending and do not design a repayment

¹³⁵ Anil Mathur and George P Moschis, 'Use of Credit-Cards by Older Americans' (1994) 8 *Journal of Services Marketing* 27, 35. The results of this US study suggest that the relatively low use of credit-cards by older people is not due to age *per se* but rather due to other circumstances associated with age (such as income and employment or retirement status).

¹³⁶ Michael Janda, *Credit-Card Bankruptcies Could be the Next Banking Scandal* (29 September 2016) ABC News <<http://www.abc.net.au/news/2016-09-29/credit-cards-could-be-next-banking-scandal/7886276>>.

¹³⁷ See The Department of the Treasury, Submission No 17 to the Senate Economics References Committee, *Inquiry into Matters Relating to Credit-card Interest Rates*, 11 August 2015, 2; Scott Schuh, Oz Shy and Joanna Stavins, 'Who Gains and Who Loses from Credit-Card Payments? Theory and Calibrations' (Public Policy Discussion Paper No 10–03, Federal Reserve Bank of Boston, August 2010) <<http://www.bos.frb.org/economic/ppdp/2010/ppdp1003.pdf>>.

¹³⁸ *Ibid.*

¹³⁹ Ian Ramsay and Cameron Sim, 'Personal Insolvency in Australia: An Increasingly Middle Class Phenomenon' (2010) 38 *Federal Law Review* 283; Gregory Mowle, 'What is the Link Between Financial Literacy and Bankruptcy?' (2017) 24(2) *Credit Management in Australia* 1, 22, 24 <http://aicm.com.au/files/7814/9499/1674/AICM_May_2017_Hi-res_v2.compressed.compressed.pdf>. This follows similar findings in the US — see for example, Sullivan, Warren and Westbrook, above n 98, 6; Elizabeth Warren and Deborah Thorne, 'A Vulnerable Middle Class' in Katherine Porter (ed), *Broke: How Debt Bankrupts the Middle Class* (Stanford University Press, 2012) 25, 27–8.

strategy which considers that when most people retire, their income decreases.¹⁴⁰ This would commonly occur because the age pension is significantly lower than people's previous wages or salary. Store cards, which are popular with older people, may also be contributing to older people's credit problems. These cards often involve much higher interest rates than credit cards, and particularly when combined with interest-free deals can encourage people to make additional purchases on credit which they may be unable to afford.¹⁴¹

C *Why are Older Australians Less Likely to File for Bankruptcy?*

The age profile of people going bankrupt in Australia is changing and the bankruptcy population is getting older. However, as we have shown, this change can largely be explained by the fact that younger and middle-aged insolvent debtors are increasingly turning to debt agreements instead of bankruptcy. A secondary factor explaining the increase in the proportion of older bankrupts in Australia is the ageing of the overall population in Australia.

Our results illustrate that bankruptcy is increasingly affecting people of all ages, including the elderly. However, older Australians remain less than half as likely to become bankrupt than the remainder of the population. We have also seen that those older Australians who *do* become bankrupt are more likely than any other age cohort of bankrupts to be on low incomes and highly reliant on government benefits or pensions.

The relative lack of indebtedness of older Australians is likely to be the most significant reason for their lower likelihood of facing bankruptcy compared to other age groups.¹⁴² However, there are other possible explanations for why older Australians are less likely to become bankrupt. Recent Australian research suggests that a persistent correlation between bankruptcy and entrenched poverty remains,¹⁴³ and older Australians are more likely than any other age group (other than children) to experience poverty.¹⁴⁴ Indeed, income poverty among older people is more common in Australia than in each of the other countries in the OECD, except Korea and Latvia.¹⁴⁵

¹⁴⁰ Gibson, above n 80, 28, 31.

¹⁴¹ ASIC, *Factsheet: Interest-Free Deals* (August 2011) <<https://www.moneysmart.gov.au/tools-and-resources/publications/factsheet-interest-free-deals>>; ASIC, *Factsheet: Credit-Cards and Store Cards* (August 2011) <<https://www.moneysmart.gov.au/tools-and-resources/publications/factsheet-credit-cards-and-store-cards>>.

¹⁴² Above nn 74–5 and accompanying text.

¹⁴³ Paul Ali, Lucinda O'Brien and Ian Ramsay, 'Bankruptcy, Social Security and Long Term Poverty: Results from a Survey of Financial Counsellors and Consumer Solicitors' (2016) 44 *Australian Business Law Review* 144, 150.

¹⁴⁴ ACOSS and SPRC, above n 123, 21, 33.

¹⁴⁵ OECD, 'Pensions at a Glance' (Report, 2017) 135 <<http://www.oecd.org/pensions/oecd-pensions-at-a-glance-19991363.htm>>. However, there are limitations in such measures which only consider income, as opposed to wealth (such as superannuation

This suggests that there are many low-income older Australians in severe financial stress who do not file for bankruptcy due to its negative consequences. Indeed, it is possible that the consequences of bankruptcy are particularly serious for older Australians. Older people may feel particularly vulnerable in filing for bankruptcy, because their earning capacities are limited, as most derive their incomes from government benefits and pensions. Further, many older people will feel that bankruptcy will not provide a fresh start for them, as they typically have fewer years left to recover from any credit troubles compared to younger people. Indeed, studies have shown that one of the key factors allowing a person to succeed financially after bankruptcy, is the ability to secure future employment at a sufficient salary — which of course would not be feasible, or desirable, for many older people in bankruptcy.¹⁴⁶ For those older Australians who are employed prior to their bankruptcy, the effects of bankruptcy can be a barrier to future employment and even result in involuntary retirement.¹⁴⁷ For example, these people may have been deregistered from professional or trades associations as a result of their bankruptcy, or may have had restrictive conditions placed on their ability to continue working.¹⁴⁸ It is likely that many older people will not re-register even after being discharged from their bankruptcy. There may also be other obstacles to the financial recovery of older bankrupts — such as individuals and creditors who exacerbate older bankrupts' financial troubles through predatory actions.¹⁴⁹

savings and home ownership). The report by ACOSS and SPRC which found that older Australians are more likely to experience poverty than the rest of the population, other than children, also takes into account housing costs: ACOSS and SPRC, above n 123.

¹⁴⁶ Sullivan, Warren and Westbrook, *The Fragile Middle Class*, above n 98, 105–6; Katherine Porter and Deborah Thorne, 'The Failure of Bankruptcy's Fresh Start' (2006) 92 *Cornell Law Review* 67, 110–11; Robyn L Meadows, 'Bankruptcy Reform and the Elderly: the Effect of Means-Testing on Older Debtors' (2000) 36 *Idaho Law Review* 227, 237.

¹⁴⁷ It has been found that bankruptcy is a factor that can push males aged 45 years and over into early retirement. The relationship between major financial difficulties, such as bankruptcy, and retirement was not statistically significant for females. See Roger Wilkins, 'The Household, Income and Labour Dynamics in Australia (HILDA) Survey: Selected Findings from Waves 1 to 15' (Report, Melbourne Institute, The University of Melbourne, 2017) 70. See generally Nicola Howell and Rosalind Mason, 'Reinforcing Stigma or Delivering a Fresh Start: Bankruptcy and Future Engagement in the Workforce' (2015) 38 *University of New South Wales Law Journal* 1529.

¹⁴⁸ For a (non-exhaustive) list of associations and licensing authorities that impose restrictions or conditions on undischarged bankrupts, see AFSA, *Employment Restrictions* (2016) <<https://www.afsa.gov.au/insolvency/i-cant-pay-my-debts/employment-restrictions>>.

¹⁴⁹ Hanna notes that these individuals, or 'vultures', 'come in many shapes and sizes — as telemarketers, credit-card company solicitors, mortgage company loan officers, and even family members': Meelad Hanna, 'For the Bankrupt Elder, There is No "Fresh Start": Resisting the Vulture Effect' (2015) 14 *Seattle Journal of Social Justice* 781, 782.

It is also possible that older Australians are more reluctant than other age groups to file for bankruptcy, for reasons such as the stigma associated with bankruptcy¹⁵⁰ and the fear of long-term consequences — such as having their home sold by the trustee. Older bankrupts may also resist filing for bankruptcy due to the potential for future difficulties with obtaining insurance and entering essential contracts (such as telecommunications and rental contracts).¹⁵¹ Moreover, bankruptcy would likely further impact older Australians' ability to obtain credit, which they may need to make essential purchases that they cannot otherwise afford, such as medicines. They may therefore be more likely to forego essential purchases instead of filing for bankruptcy.¹⁵²

V CONCLUSION

While older Australians remain less likely to face bankruptcy compared to other age groups, they comprise an increasing proportion of Australians in bankruptcy. We expect that the ageing population, the forecasted increases in the numbers of older Australians renting or with mortgages, and the increasing popularity of debt agreements as an alternative to bankruptcy among younger Australians, means that this trend will likely continue.

In this article, we examined a large representative sample of bankruptcy data provided by AFSA to examine the key causes of bankruptcy of older Australians, and some potential reasons for the vulnerability of this demographic. The reasons for older Australians filing for bankruptcy may be complex and in many cases intertwined — for example, older people are more likely to have lower incomes due to their reliance on government pensions, are more likely to suffer from health problems, and those that hope to remain in the workforce are more likely to face obstacles, such as age discrimination, leading to difficulties finding and maintaining employment. Our analysis provides important insights into the causes of bankruptcy among older Australians and some possible explanations for their financial vulnerability, enhancing our understanding of how personal bankruptcy laws operate in practice.

Our results illustrate the contrasting financial fortunes of older Australians. While many older Australians are 'asset-rich' and carry little or no debt, this is by no means universal. Many older Australians have little or no liquid assets, and older people represent the age cohort most likely to experience poverty, other than children.

Our findings also provide an important insight into the financial challenges faced by many older Australians. The most significant causes of personal bankruptcy

¹⁵⁰ See, eg, Ali, O'Brien and Ramsay, 'Bankruptcy, Social Security and Long Term Poverty', above n 143, 147.

¹⁵¹ Financial Rights Legal Centre and Lismore and District Financial Counselling, 'Bankruptcy Toolkit' (Report, 2014) 101–2 <<http://financialrights.org.au/wp-content/uploads/2015/02/bktk2014.pdf>>.

¹⁵² Hynd et al, above n 93; Kemp et al, above n 133.

involving older Australians are excessive credit, unemployment, and ill health. It is likely that — like other Australians their age — many Australians in bankruptcy had been forced into involuntary retirement due to difficulties in finding and maintaining employment, and health problems. Again, like many others their age, older Australians in bankruptcy had low incomes because they were reliant on the age pension. However, in contrast to other older Australians, who generally have relatively high levels of wealth — such as real estate and financial assets — accumulated during their working years, older bankrupts had carried high levels of debt. Only a very small proportion of older bankrupts owned their own home. Indeed, a high proportion of bankrupts of all ages reported no realisable assets at all. These vulnerable individuals were unlikely to be able to repay their debts due to the combination of their low incomes and lack of assets, leading to bankruptcy.

Considering older bankrupts' severe financial crises, it appears unsurprising that the highest proportion of older Australians cite excessive credit as the primary reason for their bankruptcy. On the other hand, that more than a third of bankruptcies involving older Australians are caused by excessive credit is notable in the context of the widely-held belief that older people do not suffer from credit problems to the same extent as younger people, a belief that may be becoming increasingly misplaced.

Our findings provide an insight into the characteristics of only those older Australians who have been driven by severe financial crises to file for bankruptcy. Older Australians in bankruptcy represent only a small proportion of older people facing financial difficulties and struggling under a serious debt burden in a society where many people must access credit even to obtain basic necessities. Many would be reluctant to file for bankruptcy due to its disadvantages, such as the risk of having their home sold by the trustee, or the prospects of being unable to obtain further credit for essential purchases. Others will simply cut back on basics such as medicines rather than taking out credit in the first place. Thus, bankruptcy filings allow us to see only 'the tip of the iceberg' of the financial difficulties faced by older people.

APPENDIX A: LOGISTIC REGRESSION EXPLANATION

A logistic regression is used when the variable being modelled or 'predicted' (called the 'dependent variable') — on the basis of one or more 'predictor' or 'explanatory' variables — takes the form of either a 'one' or 'zero'. In the first logistic regression below, we model the probability that a bankrupt will *nominate excessive credit as the primary cause of their bankruptcy*. So, the dependent variable takes the value of one if they did, and zero if they did not cite excessive credit. The second logistic regression models the probability that *ill-health was the primary cause of bankruptcy*; the third regression, *whether unemployment as the primary cause of bankruptcy* is cited.

While such modelling to *determine explanations* is the norm in logistic regression, our concern is more narrow. Our interest is to determine if *age* — and particularly older age — has an effect on the probability of selecting a particular cause of bankruptcy. Since age is correlated, to some extent, with a variety of other characteristics (for example, older people tend to be income poor and asset-rich), the risk

is that an ‘older age bracket’ variable will be shown to be a significant influence, when in fact the actual reason is, for example, lower income, or higher assets. In other words, income, asset level, sources of income, whether there is a spouse with an income source, and so on, might *confound* the unique contribution of age. Our purpose in the three regressions below is to include these possible confounding variables — together with the age bracket variables — so we can determine the unique effect (if any) of age alone. We also include a suite of non-confounding variables to determine if age still has a noticeable effect once these other effects are accounted for, or ‘factored out’.

As in ‘ordinary least squares’ (OLS) linear (or multiple) regression, each explanatory variable is tested to see if it has a ‘slope’. If a series trends upwards (eg the likelihood of a bankrupt citing excessive credit rises *with* increasing age) or downwards, then there is evidence for a linear relationship between the two. Since we are working with *samples* to try and predict *populations*, there will be a margin of error involved in the slope. So, we normally test (statistically) the probability that the slope will be different from that postulated in the ‘null hypothesis’: the null hypothesis simply postulates there will be *no slope at all* (and therefore *no relationship* between the dependent variable and the explanatory variable).

In logistic regression, the determination and testing of this ‘slope’ is complicated by the fact that the relationship between the two variables is not linear. By taking the logarithm of the odds of the dependent variable, an appropriate form can be derived whereby the relationship can be tested statistically. The ‘p-value’ which is normally derived for each explanatory variable presents the probability that the slope is zero. As a rule of thumb, if there is equal to or less than a 1 in 20 chance of the slope being zero (that is, a p-value of equal to, or less than, 0.05) we judge that there is a ‘statistically significant’ probability that a relationship exists. That is, the slope is highly unlikely to be zero. In other words: the explanatory variable *does affect* the dependent variable.

Logistic regression packages (such as SPSS — used for the analysis in this paper) also provide broad tests to see if the derived or ‘likelihood’ model fits the raw observations. One test is the *Model Chi-square test* which is equivalent to the ‘F-test model’ used in OLS multiple regression. It tests whether all of the coefficients are equal to zero, and therefore a good model is one where this (null) hypothesis is rejected (that is, returns a p-value equal to, or less than, 0.05). It effectively tests the extent to which any of the explanatory variables predict the dependent variable.

Another test used for the logistic regression model, however, is the extent to which the derived model ‘fits’ the raw data. The raw observations are first used to derive a *likelihood model* — an equation which likely fits the data. It tests the proposition that the sample (the observations in the data) could reasonably be drawn from a hypothesized population that is modelled ‘perfectly’ by the logistic regression likelihood model. If it fitted perfectly, the likelihood of such a perfect fit would be 1 — at worst, signifying no reasonable fit, the likelihood would be zero. The relationship between the observed values and the ‘best-fit’ likelihood model follows a chi-square distribution. The null hypothesis in this case is that the probability of the data fitting such

a perfect model is 1. In this case, we would wish to *fail to reject* the null hypothesis (that is, the p-value should be greater than 0.05). If the null hypothesis were to be rejected, we would conclude that the likelihood model does not at all explain the data. This test is the -2 LL (Log Likelihood) model indicated in the output below.

Finally, it is possible to ask if each of the individual data in the dependent variable is ‘guessed’ correctly by the model. A classification table is usually produced by logistic regression software that gives the percentage of the ‘1’ that are correctly estimated (the 1 in this case being, for example, bankrupts who cited excessive credit as the primary cause of their bankruptcy); and the percentage of ‘0’ that were correctly estimated (that is, those who did not cite excessive credit). These percentages are given below, together with the overall percentage of correctly estimated cases.

I LOGISTIC REGRESSION DEPENDENT VARIABLE: THE IMPACT OF EXCESSIVE CREDIT AS THE PRIMARY CAUSE OF BANKRUPTCY

Total number of cases: 22 517 (Unweighted)

-2 Log Likelihood	23 297.468
Goodness of Fit	22 322.181

	Chi-Square	df	Significance
Model Chi-Square	1478.104	25	.0000
Improvement	1478.104	25	.0000

Classification Table for C.CREDIT

		Predicted		Per Cent Correct
		.00	1.00	
		0	1	
Observed				
.00	0	17 007	124	99.28%
1.00	1	5296	90	1.67%
			Overall	75.93%

II LOGISTIC REGRESSION DEPENDENT VARIABLE: THE IMPACT OF ILL-HEALTH AS THE PRIMARY CAUSE OF BANKRUPTCY

Number of selected cases: 22 517

-2 Log Likelihood	14 296.020
Goodness of Fit	22 801.395

	Chi-Square	df	Significance
Model Chi-Square	1018.803	25	.0000
Improvement	1018.803	25	.0000

Classification Table for C.HEALTH

		Predicted		
		.00	1.00	Per Cent Correct
		0	1	
Observed				
.00	0	20 109	0	100.00%
1.00	1	2408	0	.00%
			Overall	89.31%

III LOGISTIC REGRESSION DEPENDENT VARIABLE: THE IMPACT OF UNEMPLOYMENT AS THE PRIMARY CAUSE OF BANKRUPTCY

Number of selected cases: 22 517

-2 Log Likelihood	26 333.977
Goodness of Fit	22 680.177

	Chi-Square	df	Significance
Model Chi-Square	2636.971	25	.0000
Improvement	2636.971	25	.0000

Classification Table for C.UNEMP

		Predicted		
		.00	1.00	Per Cent Correct
		0	1	
Observed				
.00	0	12 813	1970	86.67%
1.00	1	4892	2842	36.75%
			Overall	69.53%

