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While the majority of those who declare bankruptcy do so voluntarily, a significant proportion are forced into bankruptcy as a result of legal action. This paper interrogates data obtained from the Australian Financial Security Authority to explore the attributes of debtors who go bankrupt involuntarily. Based on this analysis, the authors hypothesise that people who go bankrupt involuntarily are those who have more to lose by going bankrupt – such as a family home, a business venture or a managerial or professional occupation – meaning that they are more likely to resist bankruptcy until they are forced into it by their creditors.

Key words: attributes, bankruptcy, business, debtors, involuntary

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More to Lose: The Attributes of Involuntary Bankruptcy

Abstract

While the majority of those who declare bankruptcy do so voluntarily, a significant proportion are forced into bankruptcy as a result of legal action. This paper interrogates data obtained from the Australian Financial Security Authority to explore the attributes of debtors who go bankrupt involuntarily. Based on this analysis, the authors hypothesise that people who go bankrupt involuntarily are those who have more to lose by going bankrupt – such as a family home, a business venture or a managerial or professional occupation – meaning that they are more likely to resist bankruptcy until they are forced into it by their creditors.

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1 Introduction

In the last year, 16,811 Australians went bankrupt (Australian Financial Security Authority (AFSA), 2016c).[1] The great majority of these bankruptcies were voluntary. While it can be assumed that most debtors are reluctant to declare bankruptcy, they generally elect to initiate the process, rather than wait to be forced into bankruptcy by their creditors. However, some debtors are made bankrupt involuntarily by means of a 'creditor's petition'.[2] The creditor's petition is an enduring feature of the

[1] This is the total number of bankruptcies initiated in the financial year ending on 30 June 2018.

[2] In the financial year ending on 30 June 2015 (the most recent year for which data is available), there were 1,708 involuntary bankruptcies, representing 10 per cent of all bankruptcies. In the year ending 30 June 2014, there were 2,058, representing 11 per cent of all bankruptcies. In the year ending 30 June 2013, there were 1,863, representing nine per cent of all bankruptcies (AFSA, 2016a).

bankruptcy system Australia inherited from the United Kingdom.[3] The Bankruptcy Act 1966 (Cth) ('Bankruptcy Act') provides that when creditors are unable to recover debts of $5,000 or more, they can apply to have the debtor made bankrupt.[4] In response to a creditor's petition, a debtor may appear before the court to explain why he or she should not be made bankrupt. In practice, however, most involuntary bankruptcies are uncontested (Ali et al, 2015a, p. 168). Around 10 per cent of bankruptcies are initiated by creditors each year (AFSA, 2016b). Yet despite the persistent presence of involuntary bankruptcy in the Australian system, there has been no academic study of this phenomenon to date. Moreover, despite the wealth of data published by the regulator, the Australian Financial Security Authority (AFSA), there is no publicly available data regarding the specific characteristics of debtors who become bankrupt involuntarily.

This paper offers a detailed insight into the attributes of debtors who go bankrupt involuntarily. It draws on a unique data file of 28,675 individual bankruptcies, provided by AFSA in accordance with its commitment to supporting scholarly study of the bankruptcy system. The paper employs statistical analysis to explore the demographic and financial characteristics of the debtors in the sample, focusing on the 1,969 whose bankruptcies were involuntary. It discusses the distinguishing features of the debtors in this group, with regard to age, gender, geographic location, occupation, stated causes of bankruptcy and type of bankruptcy (business or non-business), prior history of bankruptcy and financial characteristics such as debt and asset levels. Based on this analysis, the paper identifies the demographic and financial attributes that appear to make debtors more vulnerable to involuntary bankruptcy. It finds that those who go bankrupt involuntarily are more likely to have higher incomes, higher debt levels and more assets, and are much more likely than other debtors to be engaged in business activities. The paper speculates that these debtors are more likely to resist bankruptcy – and therefore are more likely to go bankrupt involuntarily – because they have a greater incentive to avoid bankruptcy, and the financial and reputational costs associated with it. The paper considers the implications of this finding, in the context of the Australian Government's current law reform agenda, which seeks to reduce the 'stigma' of bankruptcy among businesspeople (Treasury, 2016, p. 5).

[3] Until the nineteenth century, creditors' petitions were the only means of initiating bankruptcy under English law. It was not until 1825 that English debtors were permitted to declare bankruptcy voluntarily (Allsop & Dargan, 2013, p. 439). The bankruptcy laws of colonial Australia derived from these English laws but quickly developed a number of distinctive features (Allsop & Dargan, 2013, pp. 448-60). Kercher (1990, pp. 43, 48) notes that, compared with English bankruptcy laws, the colonial laws were 'much less favourable to creditors', affording them far less 'control' over the process of debt recovery. According to John Gava (1989, pp. 214-215), between 1842 and 1849, there were 1,880 insolvencies in the colony. Of these, 1,830 (97 per cent) were voluntary.

[4] Bankruptcy Act ss 40-54. This threshold increased from $2,000 to $5,000 in 2010 with the passage of the Bankruptcy Legislation Amendment Act 2010 (Cth).

2 Background

In Australia, approximately 90 per cent of bankruptcies are initiated by debtors themselves, by means of a 'debtor's petition'. By lodging a debtor's petition with the regulator, AFSA, a debtor can initiate his or her own bankruptcy without seeking the consent of creditors or the approval of a court (Murray and Harris, 2018, p. 57; Bankruptcy Act s 55). Involuntary bankruptcies are much rarer, making up roughly 10 per cent of bankruptcies per year (AFSA, 2016b). When creditors are unable to recover a debt of $5,000 or more, they are entitled to apply to a court to have the debtor declared bankrupt. In these circumstances, a court may issue a 'sequestration order', which formally commences the debtor's bankruptcy (Bankruptcy Act ss 43, 44). Before such an order can be made, the court must be satisfied that the debtor has committed an 'act of bankruptcy', such as failing to pay a debt or travelling with the intention of evading creditors (Bankruptcy Act s 40). To determine whether or not such an act has occurred, the court must hold a hearing, at which the debtor is entitled to appear to explain why he or she should not be made bankrupt (Murray and Harris, 2018, p. 57; Bankruptcy Act sub-s 52(1)). In practice, however, debtors rarely attend these hearings and most are made bankrupt in their absence (Ali et al, 2015a, p. 168). AFSA publishes no data regarding involuntary bankruptcies, other than the number commenced in each financial year and the proportion of all bankruptcies that are involuntary. While it publishes data regarding the attributes of debtors, including their gender, age, occupation and stated cause of bankruptcy (AFSA, 2016d), it does not produce any such data relating specifically to debtors in involuntary bankruptcy.

Recent policy debates have focussed on bankruptcy's role in promoting 'entrepreneurial' activity (Treasury, 2016, p. 5). In a 2016 'proposals paper', entitled 'Improving Bankruptcy and Insolvency Laws', the Government observed that 'entrepreneurship is central to economic growth, job creation and future prosperity' (2016, p. 3). It proposed to reduce the default period of bankruptcy from three years to one, in order to 'encourage entrepreneurial endeavour and reduce associated stigma [by] acknowledg[ing] that bankruptcy can be a result of necessary risk-taking or misfortune rather than misdeed…' (2016, p. 5). The Government suggested that various restrictions attaching to bankruptcy should also be limited to one year (2016, p. 5). These include the prohibition on serving as a company director whilst an undischarged bankrupt: (Corporations Act 2001 (Cth) ss 206A-206B; Howell & Mason, 2015, p. 1,541). The proposal attracted criticism from some commentators, who pointed out that business bankruptcies currently make up less than a quarter of all bankruptcies (Dickfos and Brown, 2016). Citing these figures, critics argued that reducing the period of bankruptcy would primarily benefit non-business debtors, while doing little to promote entrepreneurship (Dickfos and Brown, 2016). Despite these objections, in 2017, the Government introduced the Bankruptcy Amendment (Enterprise Incentives) Bill 2017 (Cth) ('Bankruptcy Bill'), reducing the period of bankruptcy from three years to one for all debtors. The Bill was endorsed by a Senate committee in

early 2018 (Senate Legal and Constitutional Affairs Legislation Committee, 2018), but by late 2018 it had not yet passed into law. The authors evaluate these proposed reforms, in the context of the research findings, in Section Eight, below.

3 Data and methodology

The sample upon which this paper is based has been drawn from AFSA's database. The 28,675 records are a random sample, constituting approximately 10 per cent of all bankruptcies filed between 1 July 2007 and 20 June 2016.[5] Seventy-nine per cent (or 22,517) relate to non-business or 'personal' bankruptcies. The remaining 21 per cent (6,158) relate to business bankruptcies. The data is drawn from the Statement of Affairs, a questionnaire which must be lodged by all debtors at the commencement of bankruptcy. The Statement of Affairs provides AFSA with detailed information about each debtor's assets, debts and income. In cases of involuntary bankruptcy, this information is initially derived from creditors, rather than the Statement of Affairs. It is updated when the debtor subsequently lodges his or her Statement of Affairs. Drawing on this information, the dataset supplied to the authors by AFSA records each debtor's gender, age, occupation, and family situation, including whether or not the debtor is supporting dependants. It notes the debtor's income, the source of that income, and whether or not the debtor has access to a spouse's income. It records the debtors's unsecured assets and debts, dividing these into categories (such as 'credit card', 'personal loan' or 'trade' debts). The dataset identifies each debtor's state of residence and whether or not he or she lives in a 'major city', 'inner regional', 'outer regional', 'remote' or 'very remote' area, as defined by the Australian Bureau of Statistics. It also notes the cause of bankruptcy, as identified by the debtor, and whether or not the debtor had ever been bankrupt before.

Despite its comprehensiveness, this data set is subject to certain limitations. Since the data was obtained from debtors themselves, in most case, it is likely that some is inaccurate or incomplete. The data set does not include secured assets or debts, such as homes and home mortgages, since AFSA advises that debtors' self-reporting is often unreliable in this respect. The format of the data set also imposes some limitations on the analysis of debtors' assets and debts. This data was recorded in bands (for example '$0.01−$4,999.99'), which reduces the accuracy of statistical calculations such as means and medians. The categories of 'personal' and 'business' bankruptcy introduce a further element of ambiguity. These categories are based upon the causes of bankruptcy identified by debtors in the Statement of Affairs.[6] When completing this document, debtors are asked to choose from a list

[5] 1 July 2007 was the date on which AFSA adopted its current data management and reporting system. The data file was produced on 20 June 2016 and includes all records entered up until that date.

[6] In the Statement of Affairs, each debtor is asked to specify the 'main cause' of his or her bankruptcy, choosing from a list of ten 'business related' and seven 'non business related' causes. The 'non business' causes are: 'Unemployment or loss of income', 'adverse legal action', 'liabilities due to guarantees', 'gambling, speculation & extravagance in living', 'ill

of 'business related' or 'non-business related' causes. Yet as AFSA (2012, p. 15) notes, it 'does not provide guidance' to debtors as to the meaning of 'business' or 'business related bankruptcy'. As such, AFSA notes that its data 'may be affected by differences in debtors' interpretations of what constitutes a business.'

A further limitation relates specifically to the proportion of involuntary bankruptcies in the sample and the composition of this group. As noted above, debtors who are bankrupted by means of a creditor's petition are required to lodge a Statement of Affairs. In some cases, however, debtors fail to lodge this document, while in other cases they only do so after a significant delay. As noted above, involuntary bankruptcies account for approximately ten per cent of bankruptcies each year. Yet since 2007, cases in which the debtor has gone bankrupt involuntarily and lodged a Statement of Affairs have accounted for only 8.5 per cent of total bankruptcies.[7] Debtors who had not lodged a Statement of Affairs by 20 June 2016 were excluded from the sample, as their records contained only minimal data supplied to AFSA by a creditor (or creditors). As a consequence of this exclusion, and the random sampling employed, involuntary bankruptcies make up only 6.8 per cent of the sample. It is possible that this process of exclusion has slightly distorted the demographic profile of involuntary debtors in the sample. Certain groups of debtors (for example, recent migrants or those in rural or remote areas) may be less likely than others to lodge a Statement of Affairs, due to language barriers, lack of access to support services or other factors. To this extent, the current sample cannot be regarded as strictly representative of the overall population of debtors who go bankrupt involuntarily.

Even with these limitations, the data supplied by AFSA offers an unprecedented insight into the characteristics of debtors who experience involuntary bankruptcy in Australia. A number of statistical tests have been employed to determine which demographic characteristics affect rates of involuntary bankruptcy, and thus to identify groups that appear to be at greater risk of experiencing an involuntary bankruptcy. Employing logistic regression techniques, the dependent variable 'involuntary bankruptcy' was regressed on a wide selection of demographic characteristics and financial indicators. This regression was first run on the entire AFSA sample. Subsequently, regressions were run on two separate groups: personal debtors and business debtors. Since these

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health or absence of health insurance', 'domestic discord or relationship breakdowns' and 'excessive use of credit facilities including losses on repossessions, high interest payments and pressure selling'. The 'business related' causes are: 'Economic conditions affecting industry, including competition, credit restrictions, fall in prices or increases in costs'; 'Lack of business ability including underquoting or failure to assess potential of business'; 'Excessive interest payments on loan monies and capital losses on repayments'; 'Excessive drawings including failure to provide for taxation'; 'Inability to collect debts due to disputes, faulty work or bad debts'; 'Failure to keep proper books of account and costing records'; 'Lack of sufficient initial working capital'; 'Gambling or speculation'; and 'Seasonal conditions including floods and drought'. Debtors are also invited to state '[an]other reason not listed' (AFSA, 2016e, p. 9).

[7] AFSA advises that since 2007-2008, the proportion of debtors going bankrupt involuntarily was lowest in 2008-09 (when it was 7.0%) and highest in 2013-14 (when it was 10.1%) (Paul, R., 2018, email to [*omitted to preserve authors'* anonymity], 5 June).

groups exhibit quite distinct demographic and financial characteristics, analysing each group separately yields more accurate results.

4 Demographic characteristics

This section outlines the chief demographic characteristics of debtors who go bankrupt involuntarily.

a Type and cause of bankruptcy

Involuntary bankruptcy was far more common among business debtors than it was among personal debtors, as shown in Table 1. While business debtors made up only 21 per cent of all debtors in the sample, they accounted for 45 per cent of the involuntary bankruptcies in the sample.[8]

[Table 1]

Involuntary bankruptcy accounted for 1,074 (five per cent) of personal bankruptcies, but 895 (15 per cent) of business bankruptcies.

The Statement of Affairs offers debtors two separate lists of causes, one unique to personal bankruptcy and the other unique to business bankruptcy. Among personal debtors, unemployment featured prominently as a cause of both voluntary and involuntary bankruptcy, as shown in Table 2. Apart from this, debtors who went bankrupt voluntarily were more likely to cite 'excessive use of credit', 'domestic discord' or 'ill health'. Those who went bankrupt involuntarily were more likely to cite 'adverse legal action' or 'other reasons'. By contrast, business debtors tended to report similar causes, whether their bankruptcies were voluntary or involuntary. As shown in Table 3, the most common causes cited by business debtors were 'economic conditions' and 'other business reason[s]'.

[Tables 2 and 3]

b Gender and age

As shown in Tables 4 and 5, rates of involuntary bankruptcy were higher among men than women, in both personal and business bankruptcy. This gender imbalance was particularly striking in personal bankruptcy, with men making up 54 per cent of debtors but 72 per cent of involuntary debtors.

[Tables 4 and 5]

[8] When reporting the results of their statistical analysis, the authors have rounded all figures to the nearest whole number, except in Table 12, where results are reported to three decimal places.

Older debtors were more likely to go bankrupt involuntarily than younger debtors. As set out in Table 6, only one per cent of all debtors aged under 25, in personal bankruptcy, were made bankrupt involuntarily. By contrast, seven per cent of personal debtors aged 45 to 54 went bankrupt involuntarily. In business bankruptcy, 17 per cent of debtors in this age group went bankrupt involuntarily.

[Table 6]

c Occupation

Table 7 shows the rate of involuntary bankruptcy in various occupations. The occupational categories have been split into 'male' and 'female' groups.[9] Rates of involuntary bankruptcy were comparatively high among male managers, professionals and sales workers, in both personal and business-related bankruptcy. Of all male professionals in the personal bankruptcy sample, 10 per cent went bankrupt involuntarily. In the business category, almost 20 per cent of male managers went bankrupt involuntarily.

[Table 7]

d Family situation

Debtors who went bankrupt involuntarily were more likely to have spouses and dependants than those who went bankrupt on their own initiative. This was the case in both personal and business bankruptcy, as set out in Tables 8 and 9 respectively.

[Tables 8 and 9]

e Previous bankruptcy

Among debtors in personal bankruptcy, first bankruptcies were much more likely to be involuntary than second or subsequent bankruptcies. As shown in Table 10, five per cent of first-time personal bankruptcies were involuntary, while only three per cent of second or subsequent bankruptcies were involuntary. This effect was much less pronounced among business bankruptcies.

[Table 10]

[9] There was considerable variation in the gender composition of the various occupational categories. For example, among personal debtors in the sample, men made up 85 per cent of technicians but only 25 per cent of those in clerical occupations. Given the high concentration of male debtors in involuntary bankruptcy, a high or low rate of bankruptcy in any particular occupational group will be partly determined by the gender composition of that group. If the groups were not separated into 'male' and 'female' groups, male-dominated occupations would show a disproportionately high rate of involuntary bankruptcy.

5 Financial characteristics

This section outlines the distinguishing financial characteristics of debtors who go bankrupt involuntarily.

a Income and income source

Debtors who went bankrupt involuntarily were likely to have higher individual and household incomes than those who went bankrupt voluntarily. In personal bankruptcy, debtors who went bankrupt of their own volition reported average annual incomes of $34,052 (median: $27,500). Those who went bankrupt involuntarily had average incomes of $43,664 (median: $37,500). This disparity was also observable among business debtors. In business bankruptcy, debtors who went bankrupt voluntarily earned incomes of $41,028, on average (median: $37,500). Those who went bankrupt involuntarily earned incomes of $45,886 (median: $42,500). The average household incomes (including spousal incomes)[10] of debtors in personal bankruptcy were $44,619 for those who went bankrupt voluntarily (median: $37,500), and $57,612 (median: $47,500) for those who went bankrupt involuntarily. In business bankruptcy, these figures were $58,565 (median: $52,500) and $63,354 (median: $52,500) respectively.

Debtors who were self-employed or reliant upon business earnings were far more likely to go bankrupt involuntarily than those who relied on wages, government benefits or pensions. This was true for both personal and business debtors, as shown in Table 11. Among personal debtors in the sample, 19 per cent of those who listed business earnings as their primary income source went bankrupt involuntarily. By contrast, only three per cent of personal debtors who cited government benefits as their primary income source went bankrupt involuntarily.

[Table 11]

b Assets

In both personal and business bankruptcy, debtors who went bankrupt involuntarily reported higher assets than those who went bankrupt by choice. This was particularly striking among personal debtors. Personal debtors who elected to go bankrupt reported average assets of $136,453 (median:

[10] Some adjustment was required in relation to the data concerning spousal income, which the authors used to calculate debtors' total household income. When reporting their spouses' incomes in the Statement of Affairs, debtors are invited to provide either a fortnightly or an annual figure. As noted above, AFSA's spreadsheet recorded this data in bands, rather than in precise figures. This meant that the data was imprecise with respect to spousal incomes reported as fortnightly amounts. For example, 116 people reported fortnightly spousal income in the '$1-$4,999' range. This translated to a potential annual income as low as $26 or as high as $129,974. To arrive at more precise estimates of total household incomes, spousal incomes reported over periods of less than a year were stripped from the data set and replaced with imputed annual incomes. These imputed annual incomes were based upon the average spousal incomes of those individuals who reported their spouses' income in annual figures. These imputed incomes were adjusted for gender. Men were imputed with the average female spousal income, while women were imputed with the average male spousal income. Records adjusted in this way accounted for 12.2 per cent of the total data set.

$12,500). By contrast, those who went bankrupt involuntarily reported average assets of $519,458 (median: $67,500). Among business debtors, those who chose to go bankrupt reported average assets of $364,992 (median: $57,500), while those who did not reported average assets of $488,648 (median: $77,500). This disparity might in part be linked to higher rates of home ownership among debtors who went bankrupt involuntarily. In personal bankruptcy, those who went bankrupt involuntarily were far more likely to own real estate assets than those who chose to go bankrupt. Fifty-eight per cent reported real estate assets, while among those who chose to go bankrupt, the home ownership rate was 23 per cent. This difference was less striking among business debtors, but still present. Among business debtors, 53 per cent of those who went bankrupt involuntarily owned real estate, while 44 per cent of those who went bankrupt voluntarily owned real estate.

c Debts

Similarly, involuntary debtors in personal and business bankruptcy reported higher debt levels than those who went bankrupt voluntarily. Again, this was particularly striking among personal debtors. Personal debtors who chose to go bankrupt reported average debts of $115,704 (median: $37,500), while those who went bankrupt involuntarily reported average debts of $791,038 (median: $92,500). Among business debtors, those who went bankrupt voluntarily reported average debts of $437,832 (median: $102,500). Those who went bankrupt involuntarily reported average debts of $524,254 (median: $152,500).

6 The most influential attributes

While many attributes correlate with an increased rate of involuntary bankruptcy, some are particularly influential. This is illustrated in Table 12. In Table 12, the first column lists an explanatory variable. Each variable is an attribute of debtors in the sample (for example, age, primary income source, occupation or cause of bankruptcy).[11] The rightmost column, headed 'RABS', shows the absolute value of the R variable (an estimate of the partial correlation between dependent and explanatory variables).[12] The R variable is bounded between zero and unity. As R increases in value, so does the likelihood of involuntary bankruptcy (Norusis, 1990, p. 48). As such, a 'RABS' value closer to one indicates a higher likelihood that the attribute in question has an influence on rates of involuntary bankruptcy. The table lists the variables from the highest to the lowest 'RABS' value, meaning that it begins with the explanatory variable that has the greatest influence on rates of

[11] All of the explanatory variables with the exception of age and financial year are dummies (taking a value of either unity or zero), and the presence of each is base-lined with the variables that are omitted. So, for example, the 'female' characteristic is present, while the 'male' characteristic (its base-line) is omitted. The presence of a selection of occupation groups (such as professionals and those in managerial occupations) is base-lined with those occupational groups omitted (in this case machinery operators, community and service workers, labourers, and other occupational groups).
[12] RABS functions as a rough equivalent to the standardised beta in a normal Ordinary Least Squares regression.

involuntary bankruptcy.[13] The first column reports the regression coefficient ('Coef'). The sign of the coefficient – positive or negative – indicates whether the variable increases or decreases the likelihood of involuntary bankruptcy among debtors who exhibit the attribute in question. The significance level for each variable is reported in the second column ('Sig'). Statistical significance indicates that the characteristic is likely to affect the rate of involuntary bankruptcy independently of all other explanatory variables.

[Table 12]

As shown in Table 12, the single most important variable that determines whether or not a bankruptcy is voluntary is whether or not the debtor is a home owner. The second most important, or influential, variable, is whether or not the bankruptcy is business-related.[14] The next most important determinants are age at insolvency and gender, followed by the source of a debtor's income. Business earnings or earnings from self-employment increase the likelihood of involuntary bankruptcy, while reliance on a government benefit or pension decreases it, as indicated by the negative co-efficient next to the 'government benefits' variable. Also influential are whether or not the debtor has dependants and whether or not he or she has a history of bankruptcy. Having dependants makes it more likely that a debtor will go bankrupt involuntarily, while a prior history of bankruptcy makes it more likely that the bankruptcy will be voluntary (as reflected in the negative coefficient next to this variable). High unsecured debts and high assets also increase the likelihood of a bankruptcy being involuntary. Occupation is moderately influential, with a professional or managerial occupation making it more likely that a debtor will go bankrupt involuntarily.

7 Incentives to resist bankruptcy

Debtors who go bankrupt involuntarily share several distinctive financial and demographic attributes. They tend to have higher incomes, higher debt levels and more assets, including more real estate assets. They tend to be older, male, have spouses and dependants. They tend to work in professional and managerial occupations. They are much more likely than other debtors to be engaged

[13] In other words, the top row represents the variable that expresses the highest chance of shifting the dependent variable from zero (or 'non-sequestration order') to unity ('sequestration order'), followed, in order, by those variables reporting a successively smaller impact.

[14] The cause of bankruptcy identified by a debtor in his or her Statement of Affairs also has a powerful influence on whether or not the debtor's bankruptcy is likely to be involuntary. This is particularly true if the debtor nominates 'excessive use of credit' or 'unemployment' as the cause of his or her bankruptcy. When the causes of bankruptcy are included in the table, as separate variables, 'excessive use of credit' or 'unemployment' are the two most influential variables overall. The RABS value of 'excessive use of credit' is 0.112 (coefficient: -2.343). The RABS value of 'unemployment' is 0.082 (coefficient: -1.475). In interpreting these results, it is important to recall that the Statement of Affairs offers debtors two separate lists of causes, one unique to personal bankruptcy and the other unique to business bankruptcy. For this reason, the high RABS values of individual causes of bankruptcy, as separate variables, diminishes the relative influence of the stand-alone variable, 'business-related bankruptcy'.

in business activities and to attribute their financial problems to business factors (as evidenced by the cause of bankruptcy nominated on their Statement of Affairs forms).

It is possible that debtors with these attributes are more likely to go bankrupt involuntarily because, compared with other debtors, they have stronger incentives to remain outside bankruptcy, meaning that they are less likely to go bankrupt voluntarily. These debtors are in one sense more likely to benefit from bankruptcy, in so far as they have more significant debts to discharge. In other ways, however, they stand to lose considerably more by going bankrupt. Those who are managers or professionals are more likely than other debtors to be affected by legal restrictions on their capacity to work in their usual occupation, as a consequence of bankruptcy.[15] Owners of significant assets – particularly real estate assets – also stand to lose more in bankruptcy than other debtors, since most of these assets will become part of the bankrupt estate, to be distributed to creditors.[16] For debtors with spouses and children, in particular, the loss of a house in this way is likely to cause significant upheaval and emotional distress, meaning that debtors who own a family home may be more likely than others to resist bankruptcy.

It is likely that many business debtors also have significant incentives to avoid bankruptcy. Many will have mortgaged their family homes or other significant personal assets as security for business debts. Moreover, their businesses will in many cases be the product of considerable planning and personal exertion. In some cases, particularly for middle-aged debtors, these businesses will represent the culmination of long careers and many years' experience. For these debtors, bankruptcy might represent not only the loss of financial assets, but also a loss of a more personal kind. It may entail damage to one's professional reputation (Ali et al, 2015b; Ali et al, 2017), customer goodwill or valued business relationships, including, in some cases, relationships with other small businesses that might be adversely affected by the bankruptcy. For debtors in these circumstances, there are particularly strong and complex incentives to avoid bankruptcy, in the hope of repaying debt out of future earnings. It is therefore unsurprising that these debtors are more likely to find themselves entering bankruptcy involuntarily.

8 Policy implications

These findings have important implications for the Government's proposed reforms to the Bankruptcy Act. As discussed above, the Government has instigated these reforms in order to reduce the 'stigma' associated with bankruptcy (Treasury, 2016, p. 5). According to the Government, this stigma currently 'discourage[s] innovation and business start-ups' by penalising 'necessary risk-

[15] For a comprehensive discussion of these restrictions, see Howell and Mason (2015).
[16] Bankruptcy Act s 116. Debtors are permitted to retain certain types of property, including essential household items, items of sentimental value and tools of trade. See Bankruptcy Act sub-s 116(2).

taking' (2016, p. 5) among entrepreneurs. The Government has introduced amendments to the Bankruptcy Act, which reduce the period of bankruptcy from three years to one (Bankruptcy Bill, item 19). It maintains that these reforms will 'foster entrepreneurial activity by reducing the negative effects that harsh bankruptcy laws may have on prospective entrepreneurs' (McGrath, 2017, p. 8029). Yet the results of this study suggest that business debtors are more reluctant than personal debtors to declare bankruptcy voluntarily. It is possible that this is because businesspeople perceive themselves as having more to lose by declaring bankruptcy – not only with respect to tangible assets, but with respect to intangible factors such as professional reputation, customer goodwill and business relationships.

It is unclear how effective the reforms will be in changing attitudes to bankruptcy among entrepreneurs. The Bill does not protect debtors from losing their homes, or other tangible assets, at the commencement of bankruptcy. It does not reduce the impact of bankruptcy on debtors' future earnings. Instead, it specifically provides that debtors will still be required to make contributions from their earnings for a minimum of three years after bankruptcy (Parliament, 2016-2017, pp. 7-8; Bankruptcy Bill, item 5). Moreover, despite the Government's stated intention that the Bill will 'reduce the stigma associated with business failure' (Treasury, 2016, p. 3), it is not clear how, or to what extent, the Bill will lessen the impact of bankruptcy upon intangible assets such as reputation and customer relationships. In so far as it reduces the duration of certain restrictions associated with bankruptcy (such as the restriction on acting as a company director) to one year, the Bill does mitigate the negative impact of bankruptcy for people engaging in these specific activities. However, drawing solely upon the data discussed in this paper, it is impossible to know how much this aspect of bankruptcy influences businesspeople, when they are contemplating a new business venture. In this context, it is unclear to what extent the Bankruptcy Bill will achieve its goal of 'encourag[ing] Australians to embrace risk' by becoming more entrepreneurial (Treasury, 2016, p. 3).

9 Conclusion

This paper is the first empirical study to explore the specific attributes of debtors who go bankrupt involuntarily. It draws upon a unique data set, supplied by AFSA, to identify the demographic and financial attributes that distinguish debtors who go bankrupt involuntarily. It finds that in comparison with those who initiate their own bankruptcies, involuntary bankrupts are more likely to be middle-aged or older, male, with spouses and dependants. They are more likely to work in managerial or professional occupations. They are more likely to have higher debts, higher incomes and more substantial assets, including real estate assets. They are also much more likely to be operating businesses and to rely on business earnings as their main source of income. The paper speculates that these debtors have more to lose by entering bankruptcy, both in a financial sense and in

a social or emotional sense. For this reason, they are less likely to initiate their own bankruptcies and more likely to be forced into bankruptcy by their creditors. On this basis, the paper concludes that the Government's current reform agenda may have limited success in reducing the 'stigma' of bankruptcy among business debtors. While reducing the period of bankruptcy from three years to one may reduce the 'negative effects' of bankruptcy (McGrath, 2017, p. 8029), in some respects, it is unclear to what extent these reforms will reduce the perceived financial and emotional costs of bankruptcy, among current and prospective entrepreneurs.

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Tables

Table 1: Number of voluntary and involuntary bankruptcies in the personal and business debtor groups (per cent of total)

	Voluntary (%)	**Involuntary (%)**	**All (%)**
Personal Bankruptcies	21,443 (80)	1,074 (55)	22,517 (79)
Business Bankruptcies	5,263 (20)	895 (45)	6,158 (21)
Total	26,706 (100)	1,969 (100)	28,675 (100)

Table 2 Leading causes of bankruptcy identified by personal debtors in voluntary and involuntary bankruptcy

Causes	**Voluntary bankruptcy (% of debtors)**		**Causes**	**Involuntary bankruptcy (% of debtors)**
Unemployment	35		Other causes	33
Excessive credit	25		Unemployment	18
Domestic discord	13		Adverse legal action	16
Ill health	11		Domestic discord	8

Table 3 Leading causes of bankruptcy identified by business debtors in voluntary and involuntary bankruptcy

Causes	Voluntary bankruptcy (% of debtors)		Causes	Involuntary bankruptcy (% of debtors)
Economic conditions	39		Economic conditions	31
Other business reason	27		Other business reason	28
Personal reasons[†]	7		Excessive drawings	8
Lack of business ability	6		Lack of business ability	6

Table 4: Gender of debtors in voluntary and involuntary personal bankruptcy (per cent of total)[‡]

	All (%)	Voluntary (%)	Involuntary (%)
Males	54	53	72
Females	46	47	28

[†] This category is defined in the AFSA data set as 'Personal reasons, including ill health of self or dependents, domestic discord & other personal reasons'. AFSA advises that debtors are included in this category if they provide ambiguous data in the Statement of Affairs. Some debtors, for example, select a non-business cause of bankruptcy but include other information (such as details of trade debts) suggesting that they have been engaged in business activity.

[‡] A small number of debtors in voluntary bankruptcy did not disclose a gender, meaning that the sub-groups of male and female debtors in each category do not add up to the total number of debtors in all cases.

Table 5: Gender of debtors in voluntary and involuntary business bankruptcy (per cent of total)[§]

	All (%)	Voluntary (%)	Involuntary (%)
Males	71	70	77
Females	29	30	23

Table 6 Rates of involuntary bankruptcy ('IB') in the debtor population by age group and type

	Personal (% IB)	Business (% IB)
Age Under 25	1	6
Age 25-34	3	12
Age 35-44	5	13
Age 45-54	7	17
Age 55-64	6	14
Age 65 Plus	5	17

Table 7 Rates of involuntary bankruptcy by occupation, gender and type

	Personal (% IB)		Business (% IB)	
	Males	Females	Males	Females
Managers	9	5	17	8
Professionals	10	4	19	11
Technicians and trades workers	7	5	16	10
Community and personal service	4	2	14	11
Clerical and administrative	6	3	14	11
Sales workers	8	3	18	9
Machinery operators and drivers[¶]	4	4	9	13
Labourers	4	2	14	20

Table 8: Family situations of debtors in voluntary and involuntary personal bankruptcy (per cent of total)

	Voluntary (%)	Involuntary (%)

[§] See preceding note.
[¶] The sample size for female machinery operators and drivers in the business-related category was small (n=38).

Spouse	40	56
Dependants	38	44

Table 9: Family situations of debtors in voluntary and involuntary business bankruptcy (per cent of total)

	Voluntary (%)	**Involuntary (%)**
Spouse	61	66
Dependants	44	50

Table 10 Rates of involuntary bankruptcy by previous bankruptcy rate and type

	Personal (% IB)	**Business (% IB)**
First bankruptcy	5	15
Second or subsequent bankruptcy	3	13

Table 11 Rates of involuntary bankruptcy by debtors' primary income source and type

Primary Income Source	**Personal (% IB)**	**Business (% IB)**
Business Earnings	19	22
Self-employment	18	19
Wages	5	14
Government Benefits or Pensions	3	11

Table 12 The influence of debtor attributes on rates of involuntary bankruptcy

	Coef	**Sig**	**RABS**
Home owner	0.921	0.000	0.133
Business related bankruptcy	0.641	0.000	0.098
Age at insolvency	0.021	0.000	0.075
Males	0.532	0.000	0.073
Primary income source: self employment	0.628	0.000	0.073
Primary income source: business earnings	0.787	0.000	0.051
Primary income source: government benefits pensions	-0.354	0.000	0.041
Has dependants: family situation	0.276	0.000	0.039
Previously bankrupt	-0.366	0.000	0.037
High unsecured debts	0.241	0.000	0.032
High assets	-0.240	0.000	0.031
Occupation group: Professional	0.171	0.031	0.014
Occupation: Manager	0.128	0.098	0.007

Note: Logistic regression based on n=28,683; Model Chi-Square 1581.3 with degrees of freedom=18 significant at 0.000; Classification table predicts 93.1 per cent correct. Altogether 18 explanatory variables in model (only those significant shown in table). 'RABS' is the absolute value of the R statistic.