Financial fragility, financial literacy and the early withdrawal of retirement savings during COVID-19

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Abstract

Using micro-data from the 2020 *Household, Income and Labour Dynamics in Australia (HILDA) Survey* for a large nationally representative sample of adults aged 18-64, this paper examines the factors associated with the early withdrawal of retirement savings as a result of the coronavirus. Logistic regressions show that early withdrawal behaviour was in response to financial needs with the likelihood of making a withdrawal higher amongst the young, those classified as financially fragile, precariously employed, the unemployed, lone parents with dependent children, persons experiencing poor health and those with poor financial literacy. The results raise questions about the design of early release schemes and the objectives of the Australian retirement income system, including equity outcomes in retirement. Policy suggestions are discussed, including a call for suitable data for monitoring purposes. The latter is important if the long-term equity effects of COVID-19 related to early withdrawals are to be properly understood.

JEL Codes: G51, G53, H55, J16, J32
Keywords: pension savings, superannuation, financial literacy, financial fragility, COVID-19

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Introduction

In 1992, and in response to budgetary pressures associated with an aging population, Australia adopted a system of compulsory retirement savings in the form of mandated employer contributions into privately-managed defined contribution (DC) funds. Thirty years later coverage under the Australian system is high; around 90 per cent of adults aged 18-64 have some pension (superannuation) savings (Preston and Wright, 2022).[1] At March 2022, the total value of pension funds in Australia was around $3.4 trillion (ASFA, 2022), making it one of the largest pension fund markets in the world (Tang, 2021).

At the time of its establishment the vision for the Australian retirement income system was one of stable savings and preservation of contributions until retirement (Keating, 1991). Early withdrawal of retirement savings is provided for under certain conditions such as financial hardship, compassionate grounds and terminal illness. In 2020 these arrangements were significantly relaxed under the COVID-19 early release scheme (ERS). Via the latter, individuals, on meeting certain conditions, could withdraw up to A$10,000 before June 30, 2020 (i.e., within the 2019/20 financial year) and a further A$10,000 in the 2020/21 financial year. By the close of the scheme 3.5 million initial applications and 1.4 million repeat applications had been made (APRA, 2021).

The policy change was not without critique. Amongst other things, commentators noted that: some pension funds would be more exposed than others due to their nature and membership composition (e.g., Hostplus is a pension fund for employees in hospitality, tourism and recreation industry – an industry that was particularly hard-hit during COVID-19); that some individuals might face undue pressure to make an early withdrawal (renters, for example, may have been subject to pressure to withdraw within the context of legislative protections against evictions where rents could not be paid); and that the policy had the potential to 'exacerbate structural issues' within the retirement income system (CEDA, 2020; McKeown, 2020). Of particular concern was the question of gender equality and the likelihood that the ERS could exacerbate prevailing gender gaps in retirement savings (Birch and Preston, 2021a). During the early stages of the pandemic women were disproportionately affected in terms of jobs layoffs and cuts to hours worked (McKeown, 2020; Birch and Preston, 2021b).[2]

Globally, Australia was not alone in permitting early access to retirement savings during COVID-19. Kay and Borzotzky (2022) describe the case of Chile and the pressure within that country to permit access to pension funds during this time. The general consensus is that early access arrangements can be welfare enhancing by permitting consumption smoothing (Agarwal, Pan and Qian, 2020; Bateman *et al.*, 2022; Butrica,

1 In Australia the term superannuation savings is synonymous with the term pension.

2 Birch and Preston (2021b, Figure 1) show a 13 percentage point decline in the monthly hours worked by females between March 2020 and April 2020. Amongst men the corresponding fall was 7 percentage points.

Zedlewski and Issa, 2010; Wang-Ly and Newell, 2022). The danger, of course, is that early release schemes put at risk the financial well-being of some individuals in retirement. Additionally, the frequent relaxation of the rules governing early access to retirement savings also risks the integrity of the pension system and the principle of preservation. It also sends particular signals or messages that may undermine retirement planning and savings behaviour (Bateman *et al*., 2022). Concerningly, there appears to be no shortage of ideas for the use of retirement savings under early release provisions. Examples include permitting graduates to draw on their retirement savings to pay off government student loans (Iggulden, 2016) and a 'Super Home Buyer Scheme' whereby buyers could invest up to 40 per cent of their retirement savings in an existing or new property (Wu, 2022). The 'marketing message' given by these proposals is that "It's your money" (Murphy, 2022) and, as noted, that it does not need to be preserved. Recent evidence suggests that Australians are increasingly engaging in early withdrawal behaviour to pay for medical treatment such as dental work and IVF (Dalzell, 2022).

Since the 2007/8 global financial crisis (GFC) (also referred to as the 'Great Recession) there has been growing debate about the merits of early withdrawal pension arrangements and growing interest in understanding who makes such withdrawals, how withdrawn funds are used and how early withdrawal schemes might best be designed (Agarwal, Pan and Qian, 2020; Argento, Bryant and Sabelhaus, 2015; Beshears *et al*., 2015; Butrica, Zedlewski and Issa, 2010; Lee and Hanna, 2020). COVID-19 has fuelled interest in these debates, with recent Australian contributions including that of Warren (2021), Bateman *et al*. (2022) and Wang-Ly and Newell (2022).

In this paper data from the Household, Income and Labour Dynamics in Australia (HILDA) survey are used to also contribute to debate and inform policy development. HILDA is a large, rich, nationally representative, database. The paper extends Australian-based research by Warren (2021), Bateman *et al*. (2022) and Wang-Ly and Newell (2022). Bateman *et al*. (2022) employ administrative and online survey data in their analysis; their administrative data are from a large industry fund that predominantly covers men. Warren's analysis is based on a survey of Australian families while Wang-Ly and Newell tracked transactions in a large dataset provided by the Commonwealth Bank of Australia.

The specific focus in this paper is a study of the factors associated with early access under the COVID-19 ERS. In 2020 HILDA participants were asked, amongst other things, about their employment situation at March 2020 and after, their financial well-being, their financial literacy, whether they withdrew any of their retirement savings on account of the coronavirus and, if so, how much they withdrew. Such rich information enables a detailed analysis of the factors associated with making an early withdrawal of retirement savings during COVID-19, including the role played by financial literacy. A disaggregated analysis by gender highlights areas where the correlates differ. The analysis herein should be of interest to policy makers concerned with the design of early withdrawal provisions in pension systems, those concerned with income security and equality in old age and those concerned with the welfare of financially vulnerable individuals.

The remainder of the paper is organised as follows. Section 2 details the institutional context and offers some descriptive statistics on early withdrawals based on HILDA. Section 3 describes the research approach, data and sample. Section 4 presents the results and Section 5 concludes the paper.

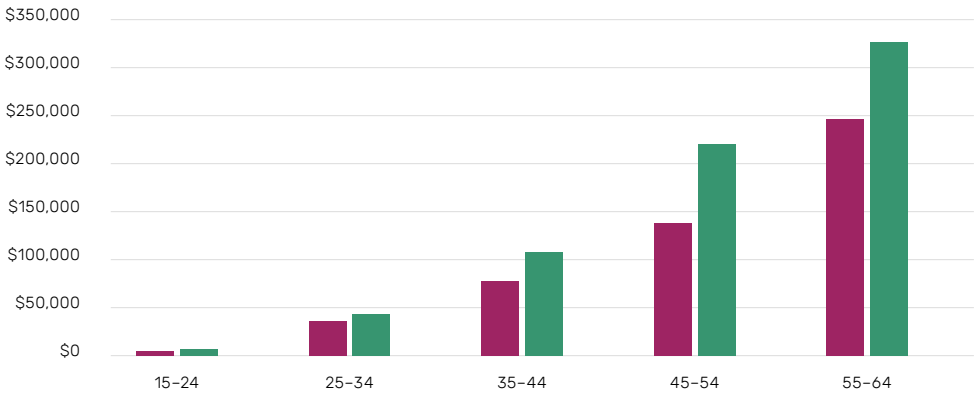
Background

Characteristics of Australia's retirement system

Australia's retirement income system is comprised of three pillars. The first is a means-tested universal Age Pension. This is a safety-net arrangement with the Age Pension rate set close to the poverty line (Birch and Preston, 2021a). The second is the savings accumulated under the mandated component of the retirement savings system (i.e., compulsory employer pension contributions, most of which are made into DC schemes). The third is comprised of voluntary contributions into pension funds or private savings made elsewhere. For most individuals the preservation age for savings under Pillars 2 and 3 is around 60 years of age. This contrasts with the Age Pension where the eligibility age is around 66-67 years. While coverage of Pillar 2 is high, retirement income savings in Pillars 2 and 3 are relatively low. For example, the median balance amongst men and women aged 45-54 years in 2019 was around A$150,000 for men and A$87,000 for women (ABS, 2022). Most retirees (around 70 per cent) currently receive the Age Pension (either in part or full) (Oguzoglu, Polidano and Vu, 2020) and it is likely that this will remain the case for many years to come. Generous tax concessions and government co-contributions have been used to incentivise voluntary savings into retirement funds. Indeed estimates suggest that by 2050 the cost of tax concessions as a share of GDP will exceed that of Age Pension expenditure (Treasury, 2020b, p.20). The system is described in more detail in Kingston and Thorp (2019) and Preston and Wright (2022).

The adoption of a mandated component has, as noted, significantly enhanced coverage of pension arrangements in Australia. Structural issues, nevertheless, plague the system. The occupational-based nature of the system, for example, disadvantages women who, on average work fewer hours in paid employment over their life-time and receive, on average, lower wages (Feng *et al*, 2019; Preston and Wright, 2022). Figure 1 shows the average (mean) balances of men and women in Australia by age. Focusing again on those aged 45-54 (a group that has mostly been covered by the mandatory component (Pillar 2) throughout their working life) the estimates show a gender gap in mean balances of 61 per cent (meaning that the average balances of females would need to increase by 61 per cent to equal that of males). At the median the corresponding gender gap is equal to 72 per cent.

Figure 1: Average (mean) pension (superannuation) savings of Australians aged 15-64 with positive balances, 2019-20.



Source: Australian Bureau of Statistics (ABS) (2022), Table 12.3.

COVID-19 Early Release Scheme

In March 2020, just a few weeks after the World Health Organisation (WHO) declared the COVID-19 pandemic, Australia's Federal government announced a billion-dollar wage subsidy (JobKeeper) program and an increase in government income support payments for recipients of unemployment payments and other income support payments. Notably the 'JobKeeper' wage subsidy was not available for short-term casuals, employees in government agencies and employees in public universities.[3] Around the same time the government also announced a relaxation of arrangements governing early access to privately accumulated pension savings (i.e., contributions under Pillars 2 and 3 of the system). Up to A$10,000 could be withdrawn in financial year 2019/20 and a further A$10,000 in 2020/21 financial year. Unlike other early access arrangements such as the 'First Home Super Saver' (FHSS) scheme whereby first home buyers may withdraw up to A$15,000 per year (total A$30,000) of their voluntary contributions (Pillar 3) to help with the purchase of their first home, the early access arrangements under the COVID-19 ERS did permit a withdrawal of contributions made by employers. To be eligible to make a withdrawal individuals needed to satisfy one or more of the following requirements:

(a) Be unemployed
(b) Be eligible to receive a JobSeeker payment (e.g., youth allowance, parenting payment or special benefit)

3 Table A1 of Birch and Preston (2021b) provides a summary of the JobSeeker (support for those not in employment) and JobKeeper provisions.

(c) On or after 1 January 2020 had been made redundant, had their working hours reduced by 20 per cent or more or were a sole trader and their business was suspended or there was a reduction to their turnover of 20 per cent or more (Treasury, 2020a).

Applications were made online and required minimal supporting documentation (Bateman *et al*., 2022; Wang-Ly and Newell, 2022). Evidence suggests that most decisions were made in less than a week and without consideration of the long-term impact on incomes in retirement (Bateman *et al*., 2022). Additionally, the $10,000 limit appears to have served as a guide or anchor as to an appropriate withdrawal amount; if the limit had been higher it is likely more would have been withdrawn (*ibid*.).

In the 2020 HILDA survey (which went to the field around July of that year) the responding person questionnaire was re-engineered to ask questions related to COVID-19 and paid work. Specifically respondents were asked *"Now think back to the start of March of this year, before the introductions of restrictions by governments to limit the spread of the coronavirus. Can I just check: where you in paid employment then?"*. Those answering 'yes' were then asked a series of questions about their work including: *"As a result of the coronavirus, did you take a cut in your rate of pay? Were you temporarily stood down without pay or required to take unpaid leave? Was your employment terminated or were you made redundant? Did the income you normally receive from paid employment increase or decrease because of the coronavirus?"* Table 1 shows that, of those employed at March 2020, 7 per cent of men and 6 per cent of women experienced a pay cut and that 25 per cent reported a cut in hours. A sizeable share of both groups (7 per cent amongst men and 10 per cent amongst women) were temporarily stood down without pay or required to take unpaid leave.

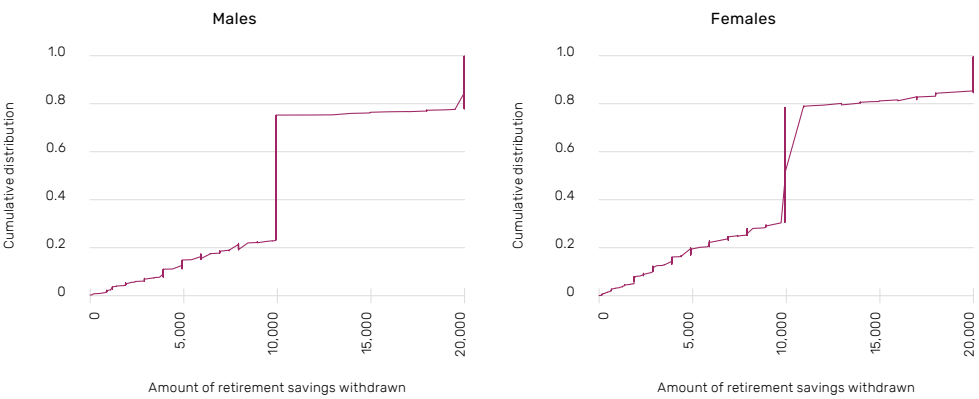
Table 1: Share of persons who were employed at March 2020 and who, as a result of the coronavirus, experienced a cut in pay or hours or were temporarily stood down or made redundant

	As a result of the coronavirus you/your:	Male	Female
(1)	Rate of pay was cut	7%	6%
(2)	Hours were cut	25%	25%
(3)	Were temporarily stood down without pay or required to take unpaid leave	8%	10%
(4)	Employment was terminated or you were made redundant	5%	4%

Notes:
1. Sample: aged 18-64.
2. N=4,217 (males); N=4,532 (females) for rows (1), (3) and (4); N=4,984 (males) and N=4,975 (females) for row (2).
3. Estimates weighted to reflect population totals.
4. Source: HILDA, wave 20.

HILDA respondents were also asked *"Did you withdraw money from any of your superannuation [pension] funds because of the coronavirus crisis?"* and, if yes, *"What was the amount withdrawn?"*. Weighted estimates for a sample of persons aged 18-64 finds that 13 per cent of men and 9.5 per cent of women reported withdrawing retirement savings because of coronavirus. The mean amount withdrawn was $11,135 amongst men and $10,143 amongst women. Figure 2 shows the cumulative distribution functions for men and women separately. There is a clear clustering of withdrawals at the A$10,000 amount (the maximum possible in each financial year). The estimates in Figure 2 support the conclusion of Bateman *et al*. (2022) that the A$10,000 limit served as an anchor point for individuals choosing how much to withdraw. Amongst men the share withdrawing less than this amount was around 20 per cent and for women it was around 30 per cent. Gender differences in withdrawal patterns may relate to gender differences in balances to begin with.

Figure 2: Distribution of Retirement Savings Withdrawn Amounts, Males and Females



Notes:
1. Sample: aged 18-64.
2. N=782 (males) and N=680 (females).
3. Estimates weighted to reflect population totals.
4. Source: HILDA, wave 20.

Data, research approach and sample

The empirical analysis below is cross-sectional and employs data from Wave 20 (conducted in 2020) of the Household, Income and Labour Dynamics in Australia (HILDA) Survey. Logistic regressions are used, with the dependent variable a binary variable set equal to one if the respondent reported withdrawing money from any of their pension funds because of the coronavirus crisis and zero otherwise. The analysis is restricted to adults aged 18-64 and exploits information on the respondent's financial situation (e.g., their ability to pay bills on time), their financial literacy and their employment status at March 2020 and post March 2020. Information on household type (e.g., couple with dependents, lone parent etc.) is also employed, as is information on equivalised household income, number of dependent children and health status.

Financial fragility was measured using information from the HILDA self-completion questionnaire (SCQ) concerning household finances. Respondents were asked *"Since January 2020, did any of the following happen to you because of a shortage of money … could not pay electricity, gas or telephone bills on time; could not pay the mortgage or rent on time; pawned or sold something; went without meals; was unable to heat home; asked for financial help from friends or family; asked for help from welfare/ community organisations?".* A binary variable was created and set equal to one if any of these questions were answered in the affirmative. Around 12 per cent of the sample were missing information relevant to the construction of this variable. This was mostly as a result of individuals not completing the SCQ. While one could proceed by removing these missing observations, to do so would risk jeopardising the representative nature of the sample – a key advantage of the HILDA data. In the interest of retaining these observations a flag variable is employed. The latter is set equal to one (1) if information relevant for the construction of the financial fragility variable is observed and set equal to zero (0) otherwise. This is an established approach for dealing with missing observations (e.g., see Preston and Wright, 2019). Any significant difference in the groups with and without observable data will be picked up by this flag variable. The descriptive information in Table 2 below shows that around one in five adults aged 18-64 experience financial fragility in Australia in 2020. Women were significantly more likely than men ($p<0.001$) to be classified as financially fragile.

Financial literacy was measured using information on responses to three questions testing knowledge of basic financial concepts, namely interest rates, inflation and diversification. The wording of the three questions was as follows: Q1: Interest Rate: *"Suppose you put $100 into a no-fee savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?"*; Q2: Inflation: *"Imagine now that the interest rate on your savings account was 1% per year and inflation was 2% per year. After one year, would you be able to buy more than today, exactly the same as today, or less than today*

with the money in this account?"; Q3: Diversification: *"Buying shares in a single company usually provides a safer return than buying shares in a number of different companies."* [True, False].

These three questions are commonly referred to as the 'Big-3' and they are frequently employed global surveys measuring financial literacy (Clark, Lusardi and Mitchell, 2021; Lusardi and Mitchell, 2014). A binary measure was constructed from the responses. It was set equal to one if the respondent correctly answered all three questions and zero otherwise. Descriptive analysis shows that 60 per cent of men and 42 per cent of women in the sample (those aged 18-64) were financially literate in the sense that they could correctly answer all three questions (see Table 2).

A comparison of the financial literacy rates of those classified as financially fragile shows that, amongst men, 52 per cent of those who are financially fragile are financially literate; this compares to a 65 per cent financial literacy rate amongst those not financially fragile. Amongst women the corresponding financially literacy rate is 32 per cent amongst those who are financially fragile, compared to 46 per cent amongst those who are not financially fragile. A similar pattern is reported in Clark, Lusardi and Mitchell (2021) in the US with the suggestion "…that financial literacy could help people better prepare for unexpected expenses" (*ibid*., 294).

To examine the underlying factors associated with the withdrawal of pension savings as a result of the coronavirus, a logit regression is estimated. The marginal effects are reported in the next section. Table 2 details the variables included in the regression and presents associated summary statistics.

Sample

The sample, as noted, is comprised of persons aged 18-64 and includes those who are employed, unemployed and not in the labour force (NILF). It was not possible to identify and exclude those who had retired. Wave 20 of HILDA contains 12,919 individuals aged 18-64. Nineteen observations were excluded on account of missing information on rental/mortgage status and a further seven observations excluded because of missing information on employment status at March 2020. This reduced the sample to 12,886 persons, of which 6,128 (48 per cent) were male and 6,758 (52 per cent) were female.

Table 2: Variables in the regression and associated descriptive statistics

Variables	Persons	Male	Female
Dependent variable			
Made a withdrawal of pension (superannuation) savings because of coronavirus (=1 if made a withdrawal; = 0 otherwise)	11.1%	12.7%	9.5%
Gender			
Male (=1 if male; =0 if female)	48%	-	-
Financial fragility			
Financially fragile (=1 if respondent indicated that they had difficulty paying bills &/or rent, &/or went without meals, &/or unable to heat home, &/or sought financial help from family or friends, &/or sought assistance from a welfare organisation; =0 otherwise)	19.6%	17.0%	22.2%
Flag_fragile: =1 if information required to compute financial fragility status observed; =0 if missing	87.5%	84.8%	90.2%
Financial Literacy			
Financial literacy (=1 if respondent correctly answered three questions testing knowledge of interest rates, inflation and diversification; =0 otherwise)	50.9%	60.2%	41.9%
Age groups			
18-24 (base group)	13.9%	14.5%	13.3%
25-34	24.2%	24.2%	24.2%
35-54	42.9%	42.9%	42.9%
55-64	19.0%	18.4%	19.5%
Highest Qualification			
Less than Year 12 of high-school (base group)	13.8%	14.4%	13.3%
Year 12	19.2%	19.7%	18.7%
Diploma	33.0%	35.4%	30.7%
Degree	33.9%	30.5%	37.3%
Employment status at March 2020 and employment status after March 2020			
Employed at March==> employed after (base group)	72.4%	76.1%	68.7%
Employed at March=>unemployed	2.0%	2.4%	1.6%
Employed at March=>NILF (not in the labour force)	3.3%	2.6%	4.1%
Not-employed=>employed	2.7%	2.3%	3.0%
Not-employed=>unemployed	3.0%	3.7%	2.3%
Not-employed=>NILF	16.6%	12.9%	20.3%
Contract type after March 2020 if employed			
Casual (=1 if reports being employed on a casual basis; =0 otherwise)	11.7%	10.4%	13.0%
Self-employed (=1 if not employee)	10.0%	13.2%	6.9%
Household type			
Couple with no child(ren) aged < 15 (base group)	40.1%	41.2%	39.0%
Couple with child(ren) aged < 15	30.6%	30.5%	30.6%
Lone parent with child(ren) aged < 15	5.9%	2.9%	8.8%
Lone parent, no child(ren) aged < 15	5.6%	5.4%	5.9%
Other family type (including group households and multi- family households)	7.2%	7.1%	7.2%
Lone person	10.6%	12.9%	8.5%
Number of dependent children (children aged < 15)	0.6	0.5	0.6
	(0.97)	(0.95)	(0.99)

Table 2: continued

Variables	Persons	Male	Female
Household equivalised income grouping			
<25 percentile (base group)	25%	24%	26%
25-49 percentile	25%	25%	25%
50-74 percentile	25%	25%	25%
75+ percentile	25%	26%	24%
Mortgage status			
Renting (base group)	41.8%	41.3%	42.4%
Mortgaged	44.3%	44.7%	43.9%
Home paid	13.9%	14.1%	13.8%
Health status			
Self-assessed health (1 excellent; 5=poor)	2.51	2.47	2.55
	(0.89)	(0.87)	(0.90)
Flag_health (=1 if self-assessed health information observed; =0 otherwise)	91.2%	89.3%	93.1%
Regional controls			
Resides major city (base group)	65.0%	65.2%	64.9%
Resides other urban area	18.1%	18.0%	18.1%
Resides rural area	16.9%	16.8%	17.0%
State dummies			
New South Wales (base group)	32.3%	32.9%	31.7%
Victoria	26.7%	26.6%	26.8%
Queensland	20.0%	19.6%	20.4%
South Australia	6.7%	6.7%	6.7%
Western Australia	9.6%	9.6%	9.7%
Tasmania	2.2%	2.2%	2.1%
Northern Territories	0.8%	0.8%	0.8%
Australian Capital Territories	1.7%	1.7%	1.8%
Observations	12,886	6,128	6,758

Notes:
1. Sample: aged 18-64.
2. Estimates weighted to reflect population totals.
3. Standard deviation in parenthesis for continuous variables only.
4. Source: HILDA, wave 20.

Regression results

The results (marginal effects) from logistic regressions are presented in Table 4. There are six columns in total. Columns (1) and (2) present the results associated with a pooled regression with a male dummy variable employed to control for gender. Columns (3) and (4) show the results for men and columns (5) and (6) are for women. Within each of these three groups two different specifications are estimated. The first is the baseline regression with controls for financial fragility, demographic characteristics, employment status, household type (e.g., couple with children age less than 15, lone parents etc.), rental status, household income, self-assessed health and geographic controls. The second regression adds in a control for financial literacy (with the assumption that the latter is exogenous).

Focusing on column (2), the estimates show that men were 3.2 percentage points more likely than women to make an early withdrawal from their pension savings on account of the coronavirus. This estimate takes into account the fact that women are more likely to be out of the labour force and, therefore, not be eligible under the ERS. Descriptive data in Table 2 shows that 12.9 per cent of men and 20.3 per cent of women were not employed at March 2020 and NILF after March 2020.

Being financially literate reduced the likelihood of making a withdrawal. Interestingly, this relationship only holds for men (see columns (4) and (6)). Respondents who were financially fragile were significantly more likely (5.6 percentage points) to access their retirement savings, consistent with a financial needs-based explanation for access behaviour. The likelihood of making a withdrawal was lowest amongst those aged 18-24 (the base group) and highest amongst those aged 25-34 years. At a disaggregated level the results show that amongst men the likelihood of making a withdrawal was highest amongst 35-54 year-olds, while for women the likelihood was highest amongst 25-34 year-olds. Research elsewhere shows that breaks in contributions when young (which is similar to making a withdrawal) is an important factor contributing to gender gaps in pension savings in later life (Feng et al., 2019).

Consistent with studies elsewhere (e.g., Butrica, Zedlewski and Issa, 2010) the regression results also show that withdrawals are higher amongst the less qualified and those facing adverse life events such as becoming unemployed. Relative to respondents who were employed at March 2020 and who remained employed, those who were initially employed and subsequently unemployed ("Employed=>unemployed") were 19.1 percentage points more likely to access their pension savings. This likely also reflects the structure of the ERS and the fact that job loss was a specific eligibility criterion. Persons who transitioned from being employed to NILF were 11.4 percentage points more likely than those who remained employed to access their retirement savings. Persons not employed at March 2020 (presumably NILF) and NILF after March 2020 were significantly less likely to make a withdrawal. As noted, this result will be driven by the nature of the ERS and the fact that these individuals were not eligible to make a withdrawal.

The highly significant association between casual employment status and accessing retirement savings is noteworthy. It confirms the precarious nature of casual employment and the financial vulnerabilities that casuals faced during COVID-19, especially short-term casuals (those that had been with their employer for less than 12 months). Casual employment makes up a large share of employment in sectors such accommodation and food services (Gilfillan, 2020)[4] – i.e. sectors that were particularly hard-hit by the lockdown. Between February 2020 (before the start of COVID-19) and May 2020 employment amongst those without leave entitlements (the Australian Bureau of Statistics definition of casual employment) declined by 24 percentage points. The corresponding decline amongst those with leave entitlements was 3 percentage points (see Birch and Preston, 2021b, Figure A4 in their online supplementary appendix).

The controls for household type show that lone parents with dependent children (i.e., with children aged less than 15) were significantly more likely than the reference group (couples without dependent children) to access their pension savings, with the gendered analysis showing that this was purely driven by women. The income variables (household equivalised income) and rental status variables also show that access was higher amongst lower income groups and those who rented. Persons reporting poor health were also more likely to access their retirement savings. This health result, however, should be treated with caution given the significance of the associated flag variable. The latter suggests that there is a significant difference between those with observable health information and those who did not return the HILDA self-completion questionnaire or who refused to answer the question. Those with observable health information were significantly less likely to access their pension savings. When estimated across a restricted sample of those with observable health information the result (not reported) was marginally ($p<0.1$) significant for the health variable. It confirms an association between health status and withdrawal behaviour, consistent with recent evidence documenting a growth in early withdrawals to finance health related costs such as dental work and other procedures (Dalzell, 2022).

The various geographic controls show differential patterns in behaviour across Australia. Those residing in a major city or a rural area were significantly less likely than residents in other urban areas to make a withdrawal. Males in Victoria and South Australia were significantly less likely than their counterparts in New South Wales to make a withdrawal while women in Queensland were significantly more likely than their counterparts elsewhere to make a withdrawal. It is not clear why the patterns differ. If anything the expectation was that withdrawals may have been higher in Victoria given the extended lockdown experienced in that state. Differences may relate to occupational structures and/or to peer (socialisation) effects, although further research would be required to formally test this. The significantly lower incidence of withdrawal in the Australian Capital Territories likely reflects the fact that many public servants were able to work from home during the lockdowns and retain their jobs.

4 https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1920/StatisticalSnapshotCasualWorkersAustralia

Table 3: Logistic regression results:
Factors associated with the likelihood of withdrawing pension savings because of COVID-19

Controls	(1) Persons; base	(2) Persons; base + FL	(3) Men; base	(4) Men; base + FL	(5) Women; base	(6) Women; base + FL
Male	0.029*** (0.007)	0.032*** (0.007)	-	-	-	-
Financial Literacy (FL)						
Answered all questions in the 'Big 3' question set all correct	-	-0.017** (0.007)	-	-0.025** (0.012)	-	-0.009 (0.008)
Financial Fragility Index						
Financial Fragility	0.057*** (0.007)	0.056*** (0.007)	0.066*** (0.011)	0.065*** (0.011)	0.049*** (0.009)	0.049*** (0.009)
Flag_FinFrag (=1 if information observed; =0 if missing)	-0.002 (0.015)	-0.001 (0.015)	-0.004 (0.021)	-0.002 (0.021)	0.002 (0.022)	0.002 (0.022)
Age (base 18-24)						
25-34	0.060***	0.060***	0.061***	0.060***	0.061***	0.061***
	(0.009)	(0.009)	(0.013)	(0.013)	(0.012)	(0.012)
35-54	0.055***	0.057***	0.071***	0.074***	0.040***	0.041***
	(0.009)	(0.009)	(0.014)	(0.014)	(0.010)	(0.010)
55-64	0.021**	0.024***	0.027**	0.030**	0.016	0.018*
	(0.009)	(0.009)	(0.013)	(0.013)	(0.010)	(0.010)
Highest Qualification (base less than Year 12)						
Year 12 (High School)	-0.050***	-0.046***	-0.045***	-0.039**	-0.055***	-0.054***
	(0.011)	(0.011)	(0.016)	(0.015)	(0.017)	(0.016)
Diploma	-0.013	-0.010	-0.005	0.000	-0.020	-0.018
	(0.011)	(0.011)	(0.015)	(0.014)	(0.016)	(0.016)
Degree	-0.051***	-0.046***	-0.045**	-0.035*	-0.059***	-0.057***
	(0.013)	(0.013)	(0.019)	(0.019)	(0.018)	(0.017)
Employment status pre and post March 2020 (base employed before and after)						
Employed=>unemployed	0.194*** (0.044)	0.191*** (0.042)	0.291*** (0.065)	0.283*** (0.062)	0.075* (0.040)	0.075* (0.040)
Employed=>not-in-the-labour-force (NILF)	0.112*** (0.038)	0.114*** (0.038)	0.162*** (0.046)	0.164*** (0.047)	0.084* (0.047)	0.085* (0.047)
Not Employed=>employed	-0.012 (0.016)	-0.011 (0.015)	-0.004 (0.025)	-0.005 (0.025)	-0.017 (0.016)	-0.017 (0.016)
Not Employed=>unemployed	0.009 (0.017)	0.008 (0.017)	-0.007 (0.021)	-0.008 (0.021)	0.027 (0.028)	0.026 (0.028)
Not Employed =>NILF	-0.044*** (0.007)	-0.045*** (0.007)	-0.056*** (0.011)	-0.057*** (0.011)	-0.034*** (0.010)	-0.035*** (0.010)
Employment arrangement if employed (base, employees who are not casual)						
Casual	0.058*** (0.014)	0.056*** (0.014)	0.081*** (0.022)	0.077*** (0.021)	0.042** (0.017)	0.041** (0.017)

Table 3 continued

Controls	(1) Persons; base	(2) Persons; base + FL	(3) Men; base	(4) Men; base + FL	(5) Women; base	(6) Women; base + FL
Self-Emp	0.017	0.018	0.019	0.020	0.019	0.020
	(0.012)	(0.012)	(0.017)	(0.017)	(0.015)	(0.015)
Household type (base, couple with no dependent children)						
Couple+dependent children	-0.003	-0.003	0.008	0.007	-0.012	-0.013
	(0.009)	(0.009)	(0.013)	(0.013)	(0.013)	(0.013)
Lone parent+depependent children	0.038***	0.038**	0.050	0.049	0.033**	0.033**
	(0.015)	(0.015)	(0.034)	(0.034)	(0.016)	(0.016)
Lone parent, no dependent children	-0.010	-0.010	0.017	0.018	-0.033**	-0.033**
	(0.014)	(0.014)	(0.024)	(0.025)	(0.016)	(0.016)
Other family type	0.031*	0.029	0.070**	0.067**	-0.003	-0.004
	(0.018)	(0.018)	(0.029)	(0.028)	(0.022)	(0.022)
Lone person	-0.009	-0.009	0.005	0.005	-0.021	-0.020
	(0.010)	(0.010)	(0.015)	(0.015)	(0.014)	(0.014)
Number of dependent children	0.008**	0.008**	0.016***	0.016***	0.000	0.000
	(0.004)	(0.004)	(0.006)	(0.006)	(0.005)	(0.005)
Household equivalised income grouping (base, bottom quartile)						
2nd quartile	0.003	0.004	-0.012	-0.010	0.016	0.016
	(0.011)	(0.011)	(0.018)	(0.018)	(0.012)	(0.012)
3rd quartile	-0.018	-0.017	-0.023	-0.020	-0.015	-0.014
	(0.011)	(0.011)	(0.018)	(0.018)	(0.013)	(0.012)
4th quartile	-0.030**	-0.028**	-0.046**	-0.043**	-0.015	-0.014
	(0.012)	(0.012)	(0.019)	(0.019)	(0.015)	(0.015)
Housing status (base, renters)						
Home mortgaged	-0.033***	-0.033***	-0.054***	-0.054***	-0.013	-0.013
	(0.008)	(0.008)	(0.013)	(0.013)	(0.010)	(0.010)
Home paid	-0.063***	-0.062***	-0.075***	-0.072***	-0.051***	-0.051***
	(0.009)	(0.009)	(0.015)	(0.015)	(0.010)	(0.010)
Self-assessed health (scale of 1 (excellent) to 5 (poor)						
Self-assessed health	0.009**	0.008**	0.008	0.007	0.008*	0.008*
	(0.004)	(0.004)	(0.007)	(0.007)	(0.004)	(0.004)
Flag_health (=1 if health information observed; 0 if missing)	-0.037**	-0.036**	-0.037	-0.037	-0.039*	-0.040*
	(0.016)	(0.016)	(0.024)	(0.023)	(0.024)	(0.024)
Regional controls (base, major city)						
Other Urban	0.016**	0.016**	0.015	0.015	0.017**	0.017**
	(0.006)	(0.006)	(0.010)	(0.010)	(0.008)	(0.008)
Non-Urban	-0.004	-0.004	-0.015	-0.016	0.005	0.005
	(0.010)	(0.010)	(0.016)	(0.015)	(0.011)	(0.011)

Table 3 continued

Controls	(1) Persons; base	(2) Persons; base + FL	(3) Men; base	(4) Men; base + FL	(5) Women; base	(6) Women; base + FL
State controls (base, New South Wales)						
Victoria	-0.012	-0.012	-0.034**	-0.035**	0.008	0.008
	(0.009)	(0.009)	(0.014)	(0.014)	(0.010)	(0.010)
Queensland	0.009	0.010	-0.006	-0.004	0.021*	0.022**
	(0.009)	(0.009)	(0.013)	(0.013)	(0.011)	(0.011)
South Australia	-0.022*	-0.022*	-0.053***	-0.053***	0.003	0.003
	(0.013)	(0.013)	(0.019)	(0.019)	(0.017)	(0.017)
Western Australia	-0.004	-0.003	-0.007	-0.005	-0.001	-0.000
	(0.010)	(0.010)	(0.016)	(0.015)	(0.013)	(0.013)
Tasmania	-0.017	-0.017	-0.005	-0.005	-0.032*	-0.032*
	(0.017)	(0.017)	(0.028)	(0.028)	(0.019)	(0.019)
Northern Territories	-0.031	-0.031	-0.095*	-0.091*	0.012	0.012
	(0.037)	(0.037)	(0.052)	(0.053)	(0.048)	(0.047)
Australian Capital Territories	-0.112***	-0.110***	-0.144***	-0.140***	-0.084**	-0.083**
	(0.032)	(0.032)	(0.053)	(0.051)	(0.035)	(0.035)
Pseudo R^2(%)	12.6%	12.8%	14.4%	14.6%	11.9%	12.0%
Observations	12,886	12,886	6,128	6,128	6,758	6,758

Notes:
1. Sample aged 18-64.
2. Estimates weighted to reflect population values.
3. Marginal effects reported.
4. Robust standard errors in parentheses.
5. Significance given by: *** p<0.01, ** p<0.05, * p<0.1.
6. Source: HILDA, wave 20.

Conclusion

This paper examines the factors associated with making an early withdrawal of retirement savings under the Australian government's COVID-19 early release scheme (ERS). The analysis is based on a large, nationally representative, sample of adults aged 18-64 from wave 20 (2020) of the Household, Income and Labour Dynamics in Australia (HILDA) survey. The dependent variable is a binary variable set equal to one if the respondent made a withdrawal under the ERS. Logistic regressions are employed. The control set includes factors such as financial fragility, financial literacy, labour market status at March 2020 and post March 2020, casual and self-employment status, as well as demographic and household characteristics including age, qualifications, household type, equivalised household income and other wealth measures, health status and geographic controls. The aim of the paper is to contribute to ongoing debates regarding pension (superannuation) policy, including early release and preservation arrangements as well as debates concerning equity and the capacity of the retirement income system to deliver income security and income equality in old age.

The results demonstrate that those who are financially fragile, those with lower financial literacy, younger, less qualified, low income and precariously employed individuals were more likely to make a withdrawal under the COVID-19 ERS than their older, better educated and wealthier counterparts. It points to financial need as a key underlying motive with adverse events such as job loss a particularly important driver. Estimates for men show that those experiencing job loss were 28.3 percentage points more likely than their counterparts with ongoing employment to access their retirement savings. Amongst women the corresponding share was 7.5 percent.

It is not possible to infer from these data what the effect of these withdrawals will have on retirement savings over the longer term or on balances and equity outcomes at retirement. The opportunity cost of withdrawals when young (in terms of compound interest effects) is greater than withdrawals amongst older cohorts and, as the data consistently shows, it is younger individuals who had the greatest propensity to withdraw under the COVID-19 ERS. On-going monitoring of retirement savings of at risk groups will be important. This requires access to regular, disaggregated (e.g., by age, gender, marital and employment status) and accessible data. Additionally, policy makers may wish to explore means of rebuilding the retirement savings of those groups left at risk during the COVID-19 pandemic (e.g., short-term casuals). Measures might include government top-up contributions and/or co-contribution incentives.

Importantly, policy makers need to reflect on the goals of the Australian retirement income system. The latter, as noted, is comprised of three pillars; a means tested Age Pension; a compulsory component consisting of mandated employer contributions; and voluntary contributions into pension funds, incentivised by tax-concessions. The experience under the ERS raises questions about the role of these pillars, in particular Pillars 2 and 3. If the purpose of the system is to assist Australians achieve adequate incomes in retirement (Treasury, 2020b) then preservation needs to

be prioritised. Permitting early access to retirement savings should be discouraged and alternative measures used to support individuals and families in financial need. Funding for the latter might come from cancelling the tax-concessions that are used to incentivise voluntary saving within the retirement income system and which typically flow to high income earners.

Labour market reforms aimed at tackling rising casualisation and other precarious forms of employment provide another important way of reducing financial vulnerability and pressures / incentives to withdraw retirement savings during economic downturns. Financial education programs might also be embraced, particularly those targeted at financially vulnerable groups. Evidence shows that those more likely to make a withdrawal were generally less financially literate.

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