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Determinants of early-access to retirement savings: Lessons from the COVID-19 pandemic[☆]

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ABSTRACT

Australian regulations strictly limit early withdrawals from retirement plan accounts. However, in 2020, the Government made otherwise illiquid plan balances temporarily liquid, offering emergency relief during the pandemic. The COVID-19 Early Release Scheme allowed participants in financial hardship easy access to up to \$A20,000 of savings over two rounds. We use administrative and survey data from a large retirement plan to describe how and why participants withdrew savings under the scheme. A majority report that they needed the money immediately but around one quarter said they anticipated future needs. Most thought about the decision for less than a week, acted soon after each round opened, and withdrew as much as they could. Many people did not estimate, or appear to have mis-estimated, the impact the withdrawal could have on their retirement savings. Our findings offer insights into preferences for liquidity. They also raise questions about whether the features of the early release scheme, and their implied endorsement by the Government, influenced some withdrawers more than personal deliberations over financial welfare.

Superannuation is their money when they need it at a time in a pandemic we're going to make sure they can get access to it
(The Hon. Scott Morrison, Prime Minister of Australia, 25th August 2020)¹

Introduction

In March 2020, economic activity in Australia slowed sharply under restrictions designed to contain COVID-19. The Australian Government announced immediate support for displaced workers and small business owners.² One of the first support measures relaxed tight limitations on early withdrawals of retirement savings. The COVID-19 Early Release

[☆] We would like to thank Cbus, particularly Robbie Campo and David Constable for access to data from a survey of Cbus plan participants (members) who had taken early access to their retirement accounts (superannuation) in the first round of the COVID-19 Superannuation Early Release Scheme. We acknowledge helpful comments from Todd Morris and other participants at the 2022 CEAR-RSI Workshop in Montreal, 2021 ARIA Annual Meeting, 2021 CICIRM Meeting, and seminar participants at the Discipline of Finance, the University of Sydney, BI-Connect Seminar, BETA, Department of Prime Minister and Cabinet of Australia, and the Center for Retirement Research at Boston College.

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¹ House of Representatives Official Hansard, Tuesday 25th August 2020, page 62.

² For the impact of the COVID-19 pandemic on the economy such as consumption, see Bishop, Boulter and Roswall (2022).

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Scheme (ERS) allowed people in financial hardship to withdraw up to \$A20,000 of their retirement savings ('superannuation') in two rounds of up to \$A10,000 each.³ After nearly-three decades of mandatory retirement contributions and strict controls over early withdrawals, founding principles of the Australian pension system were, temporarily, radically changed.

In this paper we examine the motivations and decision-processes of people who withdrew retirement savings using the ERS. We analyze administrative data on all participants (called 'members'), and survey data from a sub-set of participants who withdrew money from their retirement account via the ERS, from a large Australian retirement plan. We also compare the surveyed plan withdrawers with a control sample who were eligible to withdraw, but chose not to, that we drew from the general population of plan participants. These three samples allow us to show: (i) who withdrew money from their retirement account under the ERS; (ii) how much they withdrew; (iii) why they took the money – specifically whether it was for immediate or future needs; and (iv) how they made the decision to withdraw, including how long it took them to decide and whether they estimated the impact of the withdrawal beforehand. We thus document the effect of a temporary rise in the liquidity of otherwise illiquid retirement balances during an economic crisis.

Before COVID-19, the Australian pension system tightly controlled withdrawals from retirement accounts. Australian workers who meet minimum age and income thresholds receive at least 10% of their earnings as employer contributions to individual defined contribution (DC) retirement accounts, similar to 401(k) accounts in the US.⁴ These retirement contributions are mandatory for almost all workers and attract lower tax on the premise that they are used to provide benefits during retirement. (Most retirement benefits are tax-free in Australia.) However, unlike U.S. 401(k) accounts, participants cannot withdraw or borrow their savings before reaching a minimum 'preservation' age (55–60, depending on birthdate) and retiring (or transitioning to retirement). Regulations do allow some limited exceptions in cases of extreme personal or financial hardship.⁵ In addition, access to retirement savings using the ERS was administratively easier than usual early access, imposed no direct tax penalties, and was activated without proof of eligibility. Participants simply applied for early withdrawals in a few steps through an online government portal. The ERS thus changed a fundamental element of the retirement savings system in Australia, which had maintained strict safeguarding of accumulations and minimal leakage (Beshears et al., 2015).

Along with Australia, Chile, Peru, India, Spain and Portugal made early access to privately managed retirement savings easier during the COVID-19 downturn (Mercer, 2020; OECD, 2020). Countries such as Switzerland, Singapore, New Zealand and the United States have more lenient preservation rules in normal times. But pre-retirement access is rare where retirement saving is mandatory. Australia usually limits early withdrawals to cases of disability and terminal illness or severe financial

hardship. And some restrictions apply to how early withdrawers can use the funds they access (Stewart et al., 2019). Early access to retirement savings could affect retirement income adequacy in the future. Research into 401(k) and State pension plans in the US raise these concerns (Quinby et al., 2020; Munnell and Webb, 2022). Similarly for Chile, where fund members could take up to 10% of their pension savings, in each of several rounds, as a response to COVID-19 (Fernández and Vilatoro, 2020; Lorca, 2021).

Economic theory predicts that access to retirement savings following an economic shock, such as the COVID-19-induced rapid slowdown of the economy, can help liquidity-constrained households to smooth consumption. For example, Catherine et al., (2020) calculate the current consumption that could be enabled by giving pandemic-affected US workers access to social security at actuarially fair rates. For Singapore's mandatory DC plan, Agarwal et al. (2020) found that access to some pension savings allowed liquidity constrained participants to better smooth consumption. Similar benefits have been confirmed in studies that evaluate shocks to income, health, and marital status (Amromin and Smith, 2003; Butrica et al., 2010; Argento et al., 2015). In addition to immediate consumption needs, people could access newly, and unexpectedly, liquid retirement savings as a precaution against possible future consumption needs (Berger, 2020; Briere et al., 2021, Briere et al., 2022).

Recent studies of socially optimal retirement system design propose that defined contribution systems serving participants with time-inconsistent preferences will be at least partially illiquid (Sourdin, 2008; Moser and Olea de Souza e Silva, 2019; Beshears et al., 2020a, Beshears et al., 2020b). For example, Beshears et al. (2020b) find that, where participants are heterogeneously present-biased, the optimal system is a combination of a completely liquid account, a completely illiquid account, and an account with a 10% early withdrawal penalty. In a related empirical study of French occupational pension plans, Briere et al., (2021) find evidence of 'precautionary demand for liquidity', where some participants forgo employer matches (i.e., accept a penalty) to meet anticipated needs.

Early-withdrawal penalties are a common measure of the liquidity of retirement balances. A completely liquid account applies no penalty for early withdrawals and a completely illiquid account applies an infinite penalty. In general, early-withdrawal penalties vary across developed country DC systems (Beshears et al. 2015). The Australian ERS did not apply any explicit tax penalty (up to the \$A20,000 limit) on withdrawals, which compares with a tax rate of up to 22% on standard early release funds.⁶ However, if participants subsequently saved sums they withdrew, earnings from those savings would be taxed as personal income, at marginal tax rates ranging from 0% to 47%. Income tax on earnings from withdrawn savings could be significantly higher than the flat 15% tax collected from earnings on savings retained inside the plan. Furthermore, large not-for-profit Australian retirement plans usually deliver higher rates of risk-adjusted return than can be achieved by individual investors, because of economies of scale and access to alternative assets (Cummings and Ellis 2015; Cummings 2016; APRA, 2021b). At the same time, plan returns are usually less than rates of interest on consumer debt. It follows that, although COVID ERS withdrawals were not taxed, the net outcome for participants depended on what they did with withdrawn funds and on their taxable income.

In our sample of ERS withdrawers, we found evidence of both consumption smoothing and a precautionary demand for liquidity: 58.7% of respondents reported that they withdrew from their retirement account to meet immediate expenses or to cover lost income; and 26.6% reported

³ The Government also introduced a one-off stimulus payment and an enhanced unemployment allowance (known as JobSeeker) and a wage subsidy for affected businesses (known as JobKeeper) which both had wide coverage. See press releases from the Treasurer, The Hon. Josh Frydenberg -<https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/media-releases/economic-stimulus-package> (Frydenberg, 2020a); <https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/media-releases/supporting-australian-workers-and-business> (Frydenberg, 2020b); <https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/media-releases/130-billion-jobkeeper-payment-keep-australians-job> (Frydenberg, 2020c).

⁴ Increased from 9.5% at the time of this study to 10% of earnings in July 2021.

⁵ <https://www.ato.gov.au/Individuals/Super/In-detail/Withdrawing-and-using-your-super/Withdrawing-your-super-and-paying-tax/?anchor=Whenyoucanaccessyoursuper#Whenyoucanaccessyoursuper>, accessed on 18 June 2020.

⁶ Australia has a TTE retirement savings tax system where pre-income-tax contributions by employers or participants (up to a \$A25,000 annual limit) are taxed at 15% (T), retirement plan investment earnings are taxed at 15% (T), and retirement benefits/withdrawals are tax-free (E) except for standard early-release payments which are subject to a tax rate of up to 22%.

that they were motivated by future needs. Furthermore, conditional on eligibility, the estimated probability of withdrawal was significantly higher where respondents were concerned about future needs and were uncertain of future employment.

We also find considerable heterogeneity in the way people made their decisions. Around 50% of respondents thought about the decision for less than a week and a large minority under-estimated, or did not estimate, the impact on their retirement savings. Also, withdrawal patterns align with administrative features of the scheme. We observe that most people withdrew as much as they could – either the \$A10,000 per round limit or (close to) their account balance. Withdrawals were bunched around the opening dates of each round and were made when other sources of financial support were available. While a rational participant could aim to smooth current or future consumption by choosing to withdraw the full amount immediately with little time spent thinking, the fact that so few participants deviated from this pattern suggests that the features of the scheme strongly impacted decisions.

Our research makes key contributions to several streams of research. First, we add to the literature on how people respond to economic shocks when given short-term access to previously illiquid retirement savings. We find evidence of both consumption smoothing (Stewart et al., 2019; Agarwal et al., 2020) and a precautionary demand for liquidity (Koopmans et al., 2021; Briere et al., 2022). Second, we add to the growing literature on the apparent difficulty people have estimating the impact of lifetime saving and spending decisions (McKenzie and Liersch, 2011). Finally, while several studies have examined how people have used COVID-19 stimulus payments and previously illiquid retirement savings (Bishop et al., 2022; Kubota et al., 2021 and references therein; Wang-Ly & Newell, 2022) and the impact of (lack of) trust in pension funds (López and Rosas, 2022), we examine the decision-making process and behavioral influences that precede the decision to withdraw money.

The paper is set out as follows. Section 2 provides background and the institutional setting. Section 3 describes our data and reports summary statistics. Section 4 details our empirical analysis results and Section 5 concludes.

Institutional setting

Superannuation is a key component of Australia's retirement income arrangements. Almost all Australian workers receive mandatory employer contributions of at least 10% of earnings in individual accounts in superannuation funds (pension plans) and a large minority top up with voluntary employee contributions. The contributions are generally invested in a broad portfolio of assets, are tax-favored relative to outside savings, and accumulating savings are preserved to retirement.⁷ Strict preservation is a feature of the Australian arrangements, with access prior to the preservation age or retirement available in very limited cases of extreme personal or financial hardship.

This feature changed on 22 March 2020 when the Australian Government announced a temporary relaxation of the strict preservation requirements as part of a suite of income support and economic stimulus measures introduced to address the effects of COVID-19 restrictions on the economy. The COVID-19 Early Release Scheme (ERS) allowed people to access up to \$A20,000 of their preserved retirement savings in two rounds. A first withdrawal of up to \$A10,000 could be made between April and June 2020 and a further \$A10,000 between July and September 2020, later extended to 31 December 2020. The early release withdrawals were tax free and did not affect means-tested social security payments.

Retirement plan participants were eligible for the ERS if one or more

of the following cases applied: they were unemployed; in receipt of a working-age social security payment (such as unemployment benefits or parenting payments); had been made redundant after the beginning of 2020; had their working hours reduced by 20% or more; they were self-employed, and their business turnover had reduced by at least 20%. To expedite access to savings, the usual administrative processes for early release of retirement plan savings were waived and replaced by a fast-track application process conducted through the Australian Taxation Office (ATO) using the (MyGov) online portal and without formal proof of eligibility at application.

All in all, early access to retirement savings via the ERS was therefore significantly less burdensome than standard early access and could be activated without verification. Furthermore, the industry regulator (the Australian Prudential Regulation Authority - APRA) instructed the retirement plans to make the early access withdrawals available to participants within five business days.

The take-up of ERS must also be considered in the context of other measures to support displaced workers and those whose working hours had been reduced. These included a wage subsidy scheme called JobKeeper and enhanced support for the unemployed through JobSeeker. JobKeeper supported over 3.5 million workers over May to September 2020, reducing to around 1 million by March 2021, at a total cost of \$A88.8 billion (Treasury, 2021). JobSeeker is a non-contributory unemployment benefits scheme funded from general revenue. In response to COVID-19 the Government temporarily expanded eligibility and doubled fortnightly payments (DSS, 2021).

Cbus, the retirement plan that provided the administrative data for this study, is one of Australia's largest profit-to-participants retirement plans, mainly serving the building, construction, and allied industries. Just before the introduction of the ERS, Cbus had around 756,000 participants and \$A52 billion in funds under management. Compared with the population of Australian retirement plan participants, and consistent with the sector that the plan mainly serves, Cbus participants are predominantly male (over 90% males compared with 50% males in the general plan population) and tend to have a lower average age and account balance. However, Cbus participants, like all pension plan participants receive mandatory employer contributions of at least 10% of earnings and similar to the population of plan participants most invest in the MySuper default that has an allocation of around 70% to growth assets.

By the end of the ERS, 3.5 million Australian retirement plan participants had made at least one successful application to withdraw from their accounts, at an average payment of \$A7,638. In total, around 15% of plan participants took early access of their retirement savings and just over 40% of these withdrew in both rounds, totalling \$A36.4 billion of retirement assets. Among Cbus participants, 24% accessed their retirement savings, with around half of these (12% of the Cbus membership) withdrawing in both rounds, taking an average amount of \$A8,327 per withdrawal. The Cbus drawdown patterns are similar to those of retirement plans for workers in industries most disrupted by the COVID-19-induced economic slowdown: around 24% and 18% of participants in the industry wide retirement plans for hospitality workers (Hostplus) and retail workers (REST) withdrew an average of \$A7,217 and \$A7,150 respectively, with repeat drawdowns by around 9% of Hostplus participants and 7% of REST participants. The withdrawal rates were much lower for retirement plans for workers in occupations less affected by the economic slowdown: the retirement plans Aware Super and QSuper, that cover public sector workers such as teachers and police, reported withdrawal rates of around 6% and 12% of plan participants, at average withdrawals of \$A8,619 and \$A7,762 respectively (APRA, 2021a; APRA, 2021b).

⁷ As noted earlier retirement plan contributions and pension fund investment earnings are taxed at 15%, compared to personal marginal tax rates of up to 47% (45% plus a 2% Medicare Levy), while benefit payments are exempt from taxation.

Table 1

Summary statistics: early release participants (Cbus and National); Cbus early release survey and control survey.

	Cbus Participants				National Retirement Plan Participants				Cbus Early Release Survey	Control Survey ^b
	Round 1 ERS	Round 2 ERS	Both Rounds	All Plan Participants	Round 1 ERS ^a	Round 2 ERS	Both Rounds	All Plan Participants		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
No. Participants	138,780	137,949	90,135	775,868	2,406,021	2,360,762	1,409,985	22,464,156	3,047	500
% Participants withdrawing	18%	18%	12%	–	11%	11%	6%	–	100%	0%
Gender (% Female)	8%	7%	7%	10%	–	–	–	47%	15%	60%
Age (median)	37	38	38	38	–	–	–	–	41	42
Tenure, years (median)	9	11	11	9	–	–	–	–	9	10
Withdrawal amount each round (average)	\$A8,353	\$A8,320	\$A8,916	–	\$A7,503	\$A7,040	\$A8,078 ^c	–	\$A8,449	\$A7,163
Withdrawal amount each round (median)	\$A10,000	\$A10,000	\$A10,000	–	–	–	–	–	\$A10,000	\$A8,000
% of account withdrawn (average)	43%	44%	53%	–	–	–	–	–	41%	25%
% of account withdrawn (median)	27%	27%	41%	–	–	–	–	–	24%	11%
Balance before early release (average)	\$A55,042	\$A56,670	\$A67,492	\$A67,215 ^d	–	–	–	–	\$A64,302	\$A139,552
Balance before early release (median)	\$A32,462	\$A33,763	\$A46,783	\$A29,706 ^d	–	–	–	–	\$A38,651	\$A53,000
Suspected ineligible	24%	22%	25%	27%	–	–	–	–	–	–

Notes:

^aWe use Australian Prudential Regulation Authority (APRA) data as of 28 June 2020 (the closest possible date to the end of Round 1), which implies a slight underestimate of the numbers of Round 1 and over-estimate of Round 2 early release. Average account balance for all plan participants at June 2020 was \$86,903.

^bControl survey asks for the current balance instead of balance at FY 2020, and it asks for the hypothetical early release amount if the respondent were to withdraw.

^cWe imputed the average payments by assuming the conversion rate from application value by the participant to the actual payment is the same between initial and repeat early release applications.

^dAccount balance as of June 30, 2020.

Data Sources: Cbus Retirement Plan, [APRA \(2021a\)](#), Cbus Early Release Survey, Control Survey.

Data and summary statistics

Data collection and samples

Our data come from three sources. The first source is administrative data covering the population of Cbus plan participants. This source records participants' socio-demographic background, investment decisions, and early access of retirement accounts. Administrative data show who withdrew money from their retirement savings under the ERS and how much they took.

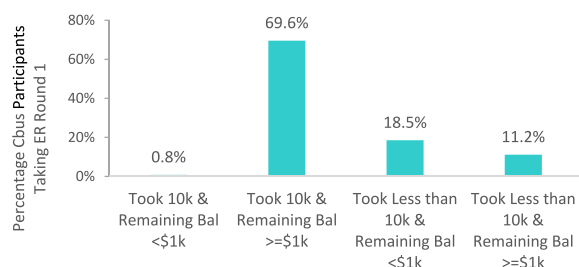
The second and third sources are survey data. We worked with Cbus to design and administer two online surveys about the motivation and decision-making process of retirement plan participants who withdrew money using the ERS. Cbus conducted the first survey by sampling Cbus plan participants who had withdrawn from their retirement account in the first round of the scheme. Questions covered information sources used to make the decision, timeframe for thinking about the decision, reasons for withdrawing money using the scheme, understanding of the consequences of the withdrawal, and plans to replace the savings withdrawn. The full Cbus Early Release survey is available at Online Appendix A. Cbus surveyed a random sample of 22,507 of its plan participants who had taken out retirement savings in the first round

between April and June 2020 and who had an email account. 3,047 participants completed the survey,⁸ and the data was augmented with matched Cbus administrative data on socio-demographics, retirement account characteristics, and plan engagement measures. We then administered a companion survey between July 27 and August 27, 2020, to collect data on a control group. We sampled 500 Australian retirement plan participants who were eligible to withdraw savings under the ERS but chose not to withdraw.⁹ We collected similar information to the first survey, including socio-demographic and retirement plan characteristics as well as their decision-making process around withdrawals using the scheme.¹⁰ The full survey administered to the control group is available at Online Appendix B. Key summary statistics are reported in [Table 1](#) and [Fig. 1](#). The complete set of summary statistics are reported in [Appendix Tables A1](#) (Cbus Early Release Survey) and [Online Appendix](#)

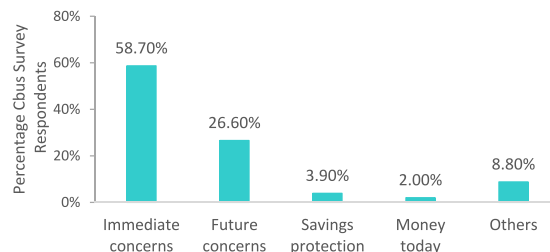
⁸ The survey was sent once every Friday between May 1 and July 3, 2020. An updated version of the survey with additional questions on the use of withdrawn money was introduced on June 19, 2020. Cbus offered respondents who completed the survey a place in a draw for 20 \$A100 gift cards. As can be seen in [Table 1](#), (columns 1 and 9) the characteristics of those surveyed by Cbus were similar to all participants in the Plan.

⁹ To avoid the risk of priming the Cbus plan participants with the idea of early release, we collected the data from a web panel from Pureprofile which covered the general population. Pureprofile rewarded respondents who completed the survey around \$A4 in cash or points redeemable for gifts.

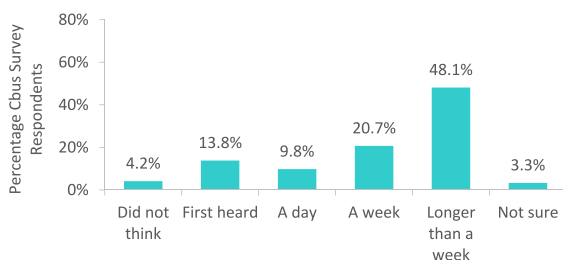
¹⁰ Although there are differences of opinion regarding the usefulness of ex-post self-reports of decision-processes (e.g., [Newell and Shanks, 2014](#); [Nisbett and Wilson, 1977](#); [Scollosi and Newell, 2020](#)), we find that responses are corroborated by other data sources and analyses of the impacts and use of early-release payments (see e.g., [ABS, 2020](#); [Wang-Ly and Newell, 2022](#)).



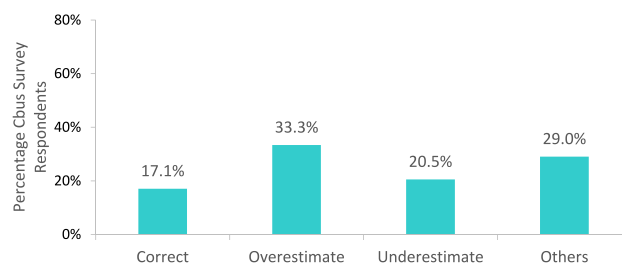
(a) Withdrawals relative to \$A10,000 limit and remaining balances



(b) Main reason for withdrawing using the ERS



(c) Time spent thinking before deciding to withdraw using the ERS



(d) Respondent's estimate of ERS Impact on Projected Future Wealth

Note: Participants were asked to choose one of six ranges of impact: \$5000 or less; \$5,000-\$10,000; \$10,000-\$20,000; \$20,000-\$50,000; \$50,000-\$100,000; More than \$100,000. We estimate the impact of early release on savings at retirement based on assumptions in official Cbus communications with their participants. The assumptions are: (1) Retirement balances are presented in today's dollars which means they have been adjusted for inflation; (2) Balance-dependent admin fee of 0.19% p.a. (inflating at CPI); (3) Investment return of 5.75% p.a.; (4) long term CPI of 2.5% p.a. and rise in living standard.

Fig. 1. Summary Statistics – Cbus Early Release Survey.

Table A5 (Control Survey).

Who withdrew money using the early release scheme and how much?

Table 1 reports the summary statistics for withdrawals using the ERS both for Cbus retirement plan participants and Australia-wide. Overall, Cbus participants were more likely to withdraw and took more when they did withdraw, compared to the national averages. Out of 775,868 Cbus plan participants, 138,780 (18%) withdrew money from their retirement account in the first round; 137,949 (18%) made a withdrawal in the second round and 90,135 (12%) withdrew in both rounds. The comparable percentages for all Australian retirement plan participants are 11%, 11%, and 6%, respectively.

For Cbus participants (columns 1–4), the average amount withdrawn in Round 1 and Round 2 are similar (\$A8,353 and \$A8,320), and those who withdrew in both rounds tended to take more in each round (\$A8,916). These amounts are also above national averages (columns 5–8), possibly because Cbus members are predominantly male (90%) and males have higher average plan balances than females. Only 8% (7%) of plan participants who withdrew in Round 1 (Round 2) were female, and 7% of those who withdrew twice were female, which is lower than their representation in the plan. In addition, Cbus estimated that over 20% of participants who withdrew were ineligible for the ERS.¹¹ Thus approximately-one fifth of withdrawers took out money that they were not entitled to because the ERS did not check eligibility.

The last two columns of Table 1 report summary statistics for socio-demographics and retirement plan characteristics for both the Cbus

¹¹ Cbus estimated the ERS eligibility of fund participants by comparing their recent Superannuation Guarantee (mandatory retirement saving) contributions to their Cbus account against the ERS eligibility criteria, assuming Cbus is their only or main retirement fund. We believe this measure, while imperfect, would be a reasonable proxy for the true ERS eligibility of the participants.

early release survey sample and the control survey sample. The data show that the Cbus early release survey respondents (column 9) who were asked about their motivations and decision-making process for withdrawing money in the first round of the ERS are more likely to be female than all members of Cbus who withdrew in the first round of the ERS (column 1). The Cbus ERS survey-respondents are also slightly older but have the same tenure in the plan as all members who withdrew in the first round. On average, a respondent in the Cbus early release survey had a balance of \$A64,302 before the withdrawal and withdrew \$A8,449 from their account in the first round. Their initial balance, withdrawal amount and percentage of account balance withdrawn are comparable to the average of all Cbus members who withdrew in the first round (column 1).

The control sample (column 10) has a much higher percentage of female respondents, a higher median age, and a higher account balance compared to Cbus survey respondents. When asked how much they would have withdrawn if they were to do so, control sample respondents reported a lower withdrawal amount, which accounts for a smaller proportion of their initial balance. This is not surprising, as these respondents were eligible for the ERS but chose not to withdraw. This reluctance to withdraw is consistent with the control-survey respondents being in a better financial situation in the pandemic compared to the Cbus participants who made withdrawals.

Since we match the Cbus early release survey data with Cbus administrative records, we know exactly how much the survey respondents withdrew in the first round of the ERS. Fig. 1a reports the distribution of the withdrawal amounts in the first-round relative to the \$A10,000 limit and the respondents' remaining balances. Most respondents withdrew either the \$A10,000 upper limit, or an amount very close to their account balance if their balance was less than the upper limit (the middle two bars in Fig. 1a comprising almost 90% of the

sample). Those who left small residual amounts could have been preserving life insurance cover (which requires a minimum account balance)¹² or may have been working from slightly dated balance information when making their application. The fact that only 11% of respondents withdrew less than the limit while still preserving more than \$A1,000 in their account demonstrates that respondents appeared to be strongly guided, and effectively constrained, by the \$A10,000 limit.

Reasons for withdrawal of retirement savings using the early release scheme

We asked survey respondents ‘why did you decide to withdraw your super?’ (from a list of ten options) and ‘what was the main reason?’ Fig. 1b summarizes the main reason to withdraw under the ERS. The Government intended that the ERS would help people who were unemployed, made redundant or who were experiencing reduced work hours, to meet expenses during the COVID-19-induced economic slowdown. We find evidence consistent with the policy intention: more than half (58.7%) of respondents reported that they withdrew funds to meet immediate expenses or to cover lost income. Notably, however, around one quarter (26.6%) were motivated by future financial pressures. In other words, one in four respondents appears to be expressing a demand for precautionary liquidity. Few respondents cited concerns about falling asset values or simple impatience as reasons for accessing their savings. The survey responses are also consistent with national data collected in the Australian Bureau of Statistics (ABS) Household Impacts of COVID-19 Survey which reported that 57% of those who had withdrawn under the ERS had used or planned to use the money to pay household bills, mortgages, rent and other debts and 36% planned to save the money (ABS, 2020). This convergence across different data sources raises confidence in the reliability of the self-report data from our survey.

The current and expected labor market status of participants who withdrew (reported in Table A1) is also consistent with a mix of immediate needs and precautionary motives: 44% of the sample who took ERS reported that they were unemployed before or because of COVID-19, while around half the sample reported that they were still employed with reduced hours, and around 5% had the same or increased hours. Furthermore, 55% of the respondents who were employed at the time of the survey expected to continue to be so throughout the crisis, with around third unsure. Among the entire sample, over half (57%) thought they would be eligible for and/or apply for government income support such as through JobSeeker or JobKeeper.¹³

How did members make their decision to withdraw their retirement savings?

We also asked questions to better understand how surveyed plan participants made their decision to withdraw using the ERS including, ‘how long did you think about it before deciding to withdraw?’ and ‘what impact do you think withdrawing your super will have on your retirement savings by the time you reach retirement age?’. We set the latter question to investigate respondents’ understanding of exponential growth in relation to the decision to withdraw using the scheme. In response to the first question, Fig. 1c shows that around half of respondents report spending a week or less thinking before they decided whether they would apply for early release, and 28% either made their minds up immediately or within a day of hearing about the scheme.

In answering the second question, we asked respondents to choose one of six ranges of impact on retirement savings or ‘no impact’, ‘don’t

know’ or ‘don’t care’. We compared their answers with our estimates of the impact on their retirement savings, where our estimates are based on assumptions in official Cbus communications with their participants. Fig. 1d compares respondents’ estimates of the long-term impact of their withdrawal to our estimates. Almost one third of respondents said that they were unsure about the impact of their withdrawal on their retirement balances or had not thought about it or did not care (‘Others’ 29%). These responses, combined with the fact that only 17% provided an estimate within the correct range, seem to indicate that the majority of withdrawers either could not, or did not, evaluate the impact of their decision. On the other hand, participants’ (unobserved) plans to replace withdrawn savings could also have affected estimates of impact. Moreover, despite a third of participants over-estimating the impact of withdrawal on their future retirement balance, there was no evidence that those who over-estimated withdrew less, on average (\$A8,896), than respondents who were correct (\$A8,377), underestimated (\$A8,336) or did not know or care about the impact (\$A8,040). Together, these results suggest some participants misunderstand exponential growth or are confused about, or indifferent to, the long-term impact on their retirement savings of their decision to withdraw. We note that unstated plans to save, confusion or indifference do not imply that the decision to withdraw was necessarily wrong for these individuals; an issue we return to in Section 5.

In terms of information used to help make their ERS decision, around two thirds of respondents interacted with their retirement plan (Cbus) by visiting the website or emailing or calling the plan. Around 80% of respondents used other information to help make their decision, most often by consulting family and friends or using an online calculator.¹⁴

Regression analysis of the early release decision

In this Section, we use regression analysis to identify those factors significantly associated with the decision and amount to withdraw, from a comprehensive set of socio-demographic variables and indicators of motivation for, and understanding of, the decision.

The decision to withdraw

First, to study the decision to withdraw, we use data from the Cbus Early Release survey of plan participants who took early release in the first round and the control survey of retirement plan participants who were eligible but did not withdraw. (Respondents to both surveys assessed their own eligibility to withdraw.) The regression sample comprises the two survey samples less five respondents to the Cbus survey whom we could not match to the larger administrative database.

We estimate the following logit model:

$$\log\left(\frac{P_i}{1-P_i}\right) = Account\ Balance_i * \beta_1 + Female_i * \beta_2 + Age_i * \beta_3 + Tenure\ with\ Fund_i * \beta_4 + Employment\ Status_i * \beta_5 + Expected\ Welfare\ Eligibility_i * \beta_6 + Thought\ about\ Impact_i * \beta_7 + DeliberationTime_i * \beta_8 + Information\ Source_i * \beta_9 + Main\ Reason_i * \beta_{10} + Estimation\ of\ Impact_i * \beta_{11} \tag{1}$$

where P_i is the probability of plan participant i , who is (self-assessed) eligible, making a withdrawal under the ERS, conditioning on account balance, gender, age, tenure with the retirement plan, employment

¹⁴ For details see Table A1: Questions Q3 & Q4.

¹² Under Australia’s mandatory pension arrangements plan participants are defaulted into life insurance cover.

¹³ For details see Table A1: Questions Q6-Q8.

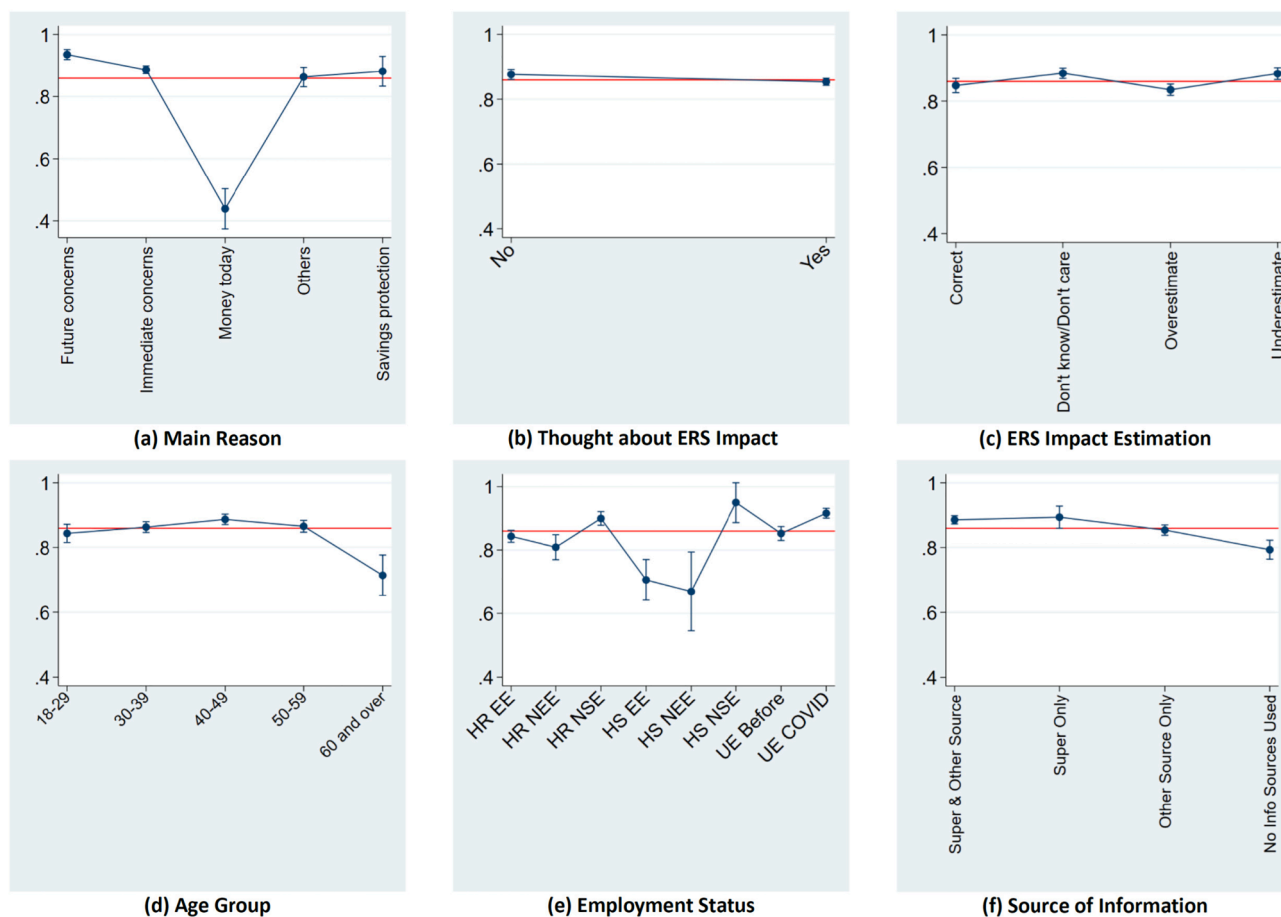


Fig. 2. Predictive Margins of the Probability of Taking Early Release.

status,¹⁵ expected eligibility for government income support, whether the participant thought about the impact of early release using the ERS, the time they spent making the decision, the source of information they used, the main reason for their decision to withdraw or not withdraw, and their estimation of the impact of withdrawal on their retirement accumulation compared with our estimates.

Fig. 2 presents the predictive margins for selected factors from the logit estimation of the decision to withdraw. The complete set of predictive margins and marginal effects are reported in Appendix Table A2. Our overall findings show that people who withdrew using the ERS were motivated by future needs and income uncertainty and might have required more guidance about the decision to access their retirement savings.

First, future concerns are positively related to the decision to withdraw. As shown in Fig. 2a, the probability of withdrawing retirement savings early, conditional on being (self-assessed) eligible, is 7 percentage points higher if the respondent reported future concerns as the main reason for the decision compared to those reporting other reasons. The importance of future concerns is also shown in Fig. 2e which shows that the probability of withdrawal is significantly higher where respondents were uncertain about future income. When the respondent's

work hours have reduced during the pandemic, and they are not sure about their future employment (HR NSE), the probability of taking the early withdrawal is 5 percentage points higher compared to the baseline group of those unemployed before COVID-19. This effect is even stronger for people who have maintained their hours of employment but are unsure about future employment prospects with a 10-percentage points difference compared to the baseline (HS NSE).¹⁶ Together these results support a demand for precautionary liquidity to manage possible future needs.

Second, Fig. 2b shows that, compared to those who thought about the consequences of withdrawing using the ERS in terms of the impact on their retirement, the probability of withdrawal is 3 percentage points higher if a member did not think about it or indicated that they were “not sure” or “don’t care”. In other words, participants who thought about the impact of a withdrawal also appeared to think more deliberately before deciding to withdraw. Further, the probability of withdrawal is 4 percentage points higher if the participant underestimated the impact of early release on their retirement wealth or indicated that they “don’t know” or “don’t care” about the consequences, compared to those estimated correctly (Fig. 2c). We interpret this estimate as consistent with people with higher financial competence being more cautious in accessing their retirement savings. Together these results indicate a higher probability of withdrawal where plan participants made the decision quickly and were unaware of, or did not care about, the long-term impact on their retirement savings.

¹⁵ The categories of employment are: unemployed before the pandemic; employed and working hours the same or increased and (i) expect to continue to be employed, (ii) do not expect to continue to be employed, (iii) not sure whether will continue to be employed; employed but working hours have been reduced since the crisis and (i) do not expect to continue to be employed, (ii) not sure whether will continue to be employed, (iii) expect to continue to be employed; lost job due to the crisis.

¹⁶ However, the probability of withdrawal for respondents who expected to be eligible for JobKeeper is 2 percentage points lower, compared with those who did not expect to receive this welfare payment.

Third, Fig. 2d shows that the probability of a withdrawal is 4 percentage points higher for those aged 40–49 (compared to the baseline group 18–29). A possible explanation is that people in this age group are more likely to be financially responsible for a family and thus have a more urgent need to access their retirement savings, suggesting a consumption smoothing response.

Finally, as shown in Fig. 2f, compared to those who have sought information from their retirement plans and other sources, those who have not used any source of information about the ERS are 9 percentage points less likely to make a withdrawal. This might reflect that those who were most interested in accessing their savings using the ERS also looked for information.

Overall, we see a mixed picture. Some of the significant associations indicate participants' responses to the short-term availability of previously illiquid retirement savings. These results are consistent with consumption smoothing, or a precautionary demand for liquidity amid pandemic uncertainty. However, other significant associations indicate quicker decision-making with less deliberation over the long-term implications for retirement security. Although, as we discuss in Section 4.2 and Section 5, an apparently fast and unconsidered decision does not necessarily imply that withdrawing money was the wrong decision for any given individual.

Maximum withdrawal

In our second analysis, we study the likelihood of taking as much as possible (i.e., \$A10,000 per round or one's entire balance) using Cbus administrative data on all the participants who withdrew in round 1 of the ERS and those who withdrew in round 2 separately. We estimate a logit model as follows:

$$\log\left(\frac{P_i}{1 - P_i}\right) = \text{Account Balance}_i \beta_1 + \text{Estimated Salary}_i \beta_2 + \text{Suspected Ineligible}_i \beta_3 + \text{Female}_i \beta_4 + \text{Tenure with Fund}_i \beta_5 + \text{State}_i \beta_6 + \text{Age Group}_i \beta_7 + \text{Retirement Preparedness}_i \beta_8 \tag{2}$$

where P_i is the probability of individual i making a maximum withdrawal under the ERS (either emptying their account or the \$A10,000 limit), conditional on making a withdrawal under the ERS in which she was (self-assessed) eligible to withdraw. We test the impact of the participant's account balance before withdrawal (in quintile groups), estimated salary (in quintile groups), whether the plan suspects the participant to be ineligible for early release, gender, tenure with plan (in quintile groups), state of residence, age, and a risk score on preparedness for retirement savings calculated by Cbus.¹⁷

Fig. 3 presents the predictive margins for selected factors from the logit model estimation of the choice of maximum withdrawal conditional on making a withdrawal. Panel A is for withdrawals in the first round and Panel B is for withdrawals in the second round. The full set of predictive margins and estimated marginal effects are reported in Appendix Table A3.

First, as shown in Fig. 3a (Fig. 3e), the probability of taking the maximum withdrawal is over 50 (over 30) percentage points higher in Round 1 (Round 2) if the member's account balance before withdrawal is in the top three account balance quintiles, or over \$A22,400 (\$A23,200), compared to others. Since there is no reason to believe that participants with higher account balances were in more urgent need of money, the results are consistent with our finding in Fig. 1 that people

¹⁷ The score considers the plan participant's expected retirement income and target income. The target income is calculated based on Cbus research and the Association of Superannuation Funds of Australia's (ASFA) Retirement Standard.

were guided by the \$A10,000 limit when deciding how much to withdraw.

Second, Fig. 3b and 3f show that, compared to the plan participants with an estimated salary in the lowest quintile, the likelihood of taking the maximum withdrawal is 1–2 percentage points lower for those in the second and third lowest quintiles (\$A21,000–\$A54,000 for Round 1; \$A22,000–\$A56,000 for Round 2). However, those in the highest quintile are about 2 percentage points more likely to withdraw the maximum amount possible. In other words, people with the highest salary ranges are most likely to withdraw the maximum amount, followed by those with the lowest salary ranges. We conjecture that low-salary participants may have been motivated by necessity, being likely to have suffered the most financial hardship during the pandemic. Higher salary participants may think the withdrawal is relatively easy to replace from future discretionary income, and therefore take out the maximum amount.¹⁸

Third, participants whose tenure with Cbus is in the top three quintiles (over 7 years for Round 1 and over 9 years for Round 2) are more likely to take the maximum amount, by 2–5 percentage points (Fig. 3c and 3g). Fourth, compared to the baseline age group (18–29), participants aged 30–59 were more likely to take the maximum withdrawal by about 3 percentage points in Round 1 and 5–6 percentage points in Round 2 (Fig. 3d and 3h). These two last features are consistent with mid-life participants managing the expenses of a family, as well as mortgage or rents, by drawing down retirement savings early.

Overall, the very low proportion of withdrawals below the account balance or statutory limit indicates that at least some participants did not only withdraw what they needed but were also guided by the limit itself, and possibly other factors. The fact that almost all withdrawals for relatively high salary and retirement account balances are at the \$A10,000 limit reinforces that likelihood.

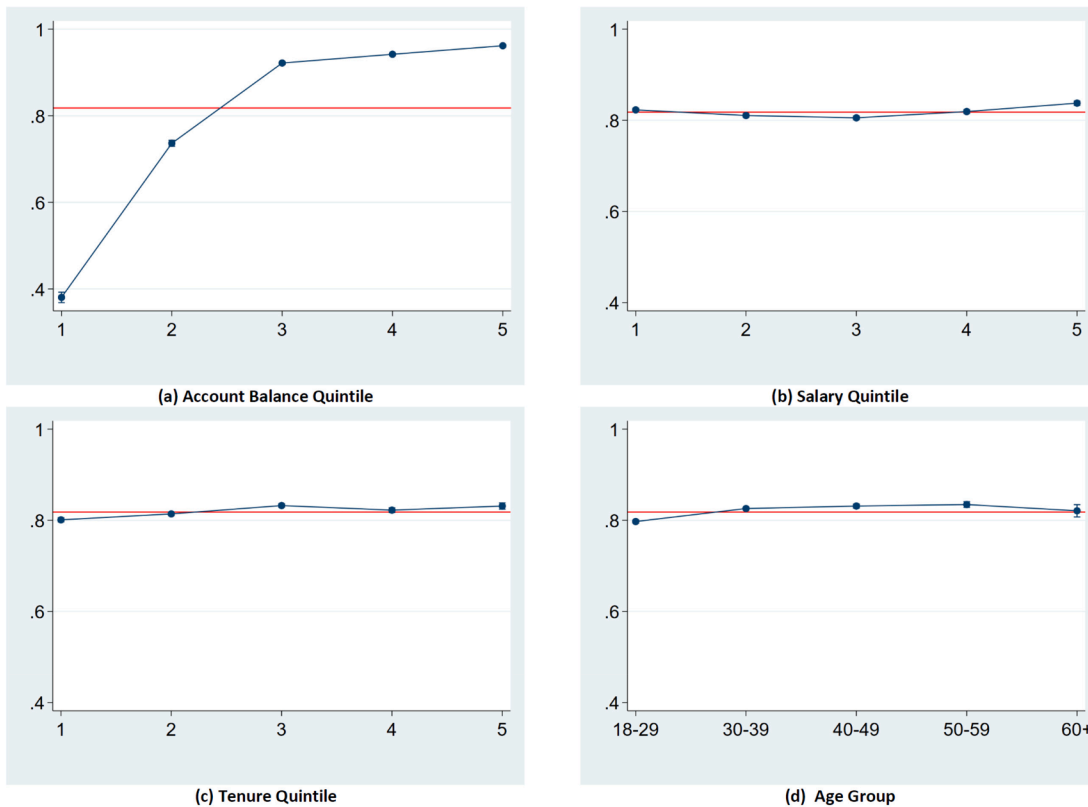
We repeated these regressions for two groups of survey respondents: those who self-reported that the main reason they withdrew using the ERS was for immediate concerns (n = 1,488), representing people motivated by consumption smoothing, and those whose main reason was future needs (n = 750), representing people motivated by a precautionary demand for liquidity. Results reported in Table A4 in the Online Appendix show little difference between the two groups in the decision to withdraw the maximum amount, with the exception of two factors. First, actual eligibility for the ERS matters for people motivated by consumption smoothing, who are less likely to withdraw the maximum amount if they were judged by Cbus to be ineligible for the ERS. In other words, this group is more likely to withdraw the full \$A10,000 or empty their account if they actually qualify for the ERS due to loss of job or reduced hours. Second, time spent thinking about the decision to withdraw only matters to those seeking precautionary liquidity, where thinking about whether to withdraw for longer than a week makes them less likely to take the maximum account, possibly because the participants in this group that spent less time deliberating had a pent-up demand for precautionary liquidity.

Unemployment and ERS withdrawal

Further evidence that accessing previously illiquid retirement savings using the ERS may not always be tied to immediate need can be seen in Fig. 4. Here we plot the unemployment rate in Australia from the second quarter of 2019 to the end of the fourth quarter of 2020 against the number of applications made for ERS. If applications were driven by an immediate loss of employment, we might expect to see a rise in applications concomitant with a rise in unemployment. Fig. 4 shows that this was clearly not the case. Rather the two prominent peaks for

¹⁸ Around 48% of survey respondents answered 'yes' to the question 'Will you make extra contributions into your super to replace the money you have withdrawn, when you can?'. The correlation between answering 'yes' and respondent income is 0.17.

Panel A: ERS Round 1



Panel B: ERS Round 2

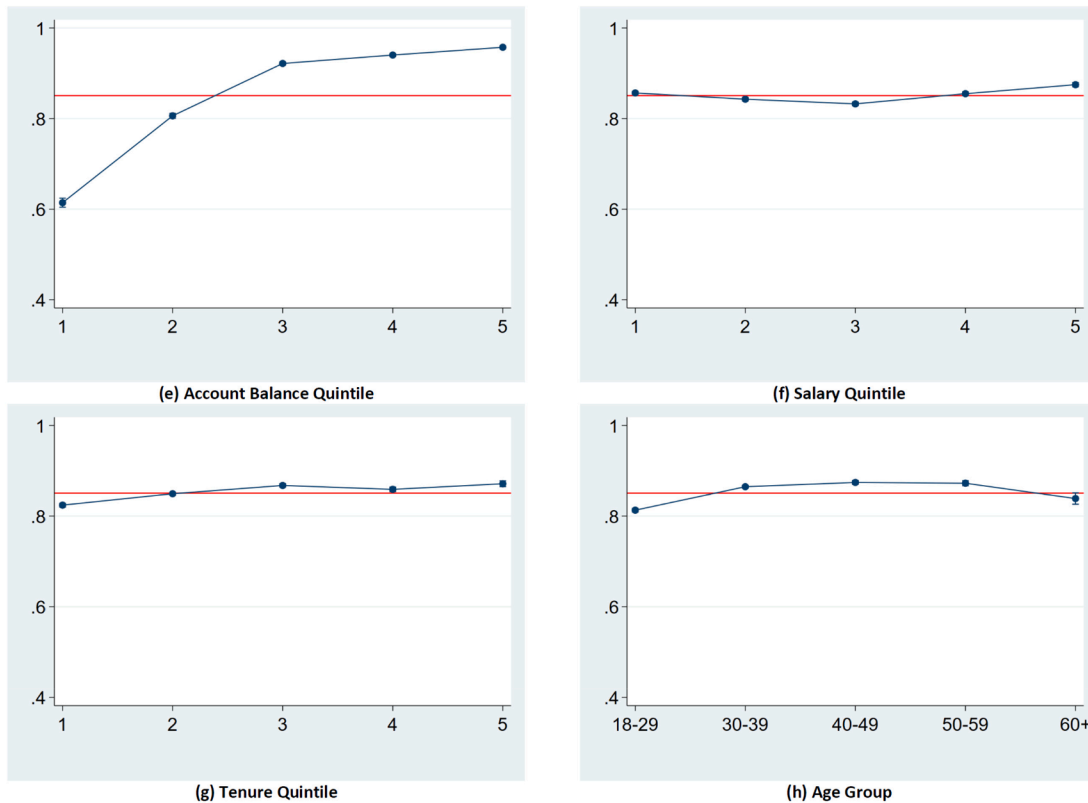


Fig. 3. Predictive Margins of the Probability of Maximum Withdrawal, Conditional on Taking Early Release.

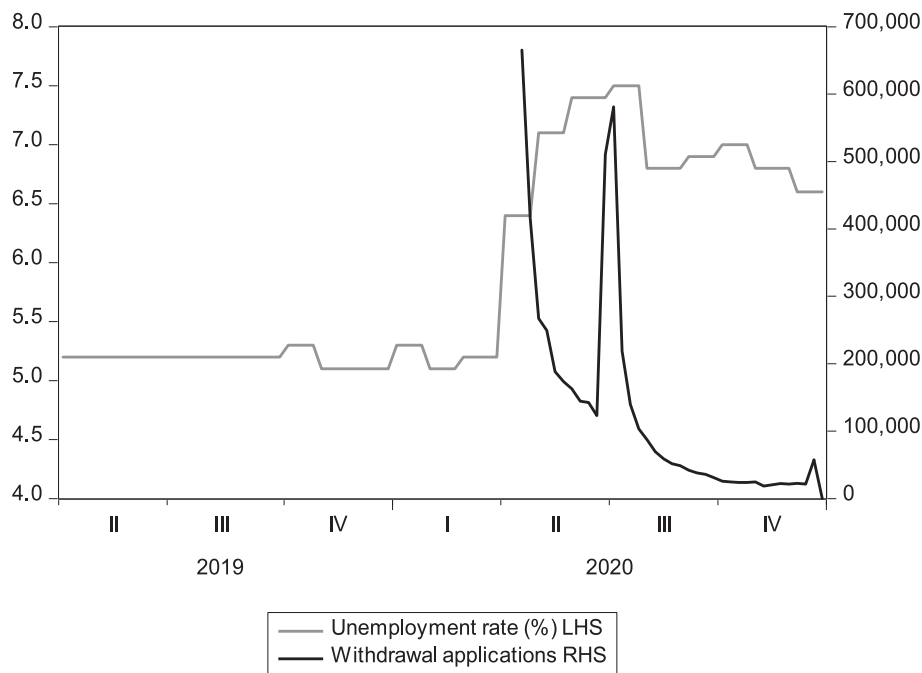


Fig. 4. Unemployment rates and number of ERS applications between 2019 Q2 and 2020 Q4.

Data Sources: APRA (2021a), ABS (2021).

withdrawals (darker line) correspond directly with the dates on which the first (April 2020) and second (July 2020) rounds of the ERS became available.

Furthermore, we highlight that in addition to the ERS, workers with reduced hours and the unemployed were supported by the wage subsidy (JobKeeper) and the enhanced unemployment benefits program (JobSeeker). JobKeeper supported over 3.5 million workers over the period May to September 2020, reducing to around 1 million by March 2021 (Treasury, 2021), while JobSeeker benefits were enhanced (via a supplement and expanded eligibility) and supported around an additional 400,000 persons who lost their jobs because of the COVID-induced economic slowdown (DSS, 2021). These data support the inference that ease-of-access and the mere availability of the ERS-savings were strong drivers of the timing and number of applications.

Conclusion

The COVID-19 ERS was designed to allow early withdrawal of retirement savings to support people who were unemployed or experiencing significant loss of income due to restrictions on work and movement because of COVID-19. In line with the principal policy aims, the majority of respondents in our survey of plan participants who withdrew under the scheme indicated that they planned to use withdrawn money to meet immediate consumption needs. However, a significant minority stated that their primary reason for withdrawal was precautionary. Such anticipation is understandable given widespread uncertainty about the length and extent of the pandemic-induced economic downturn, and since, by the start of the ERS, other government income support measures were not yet in place (e.g., the JobKeeper wage subsidy and the JobSeeker supplement).

In our sample of ERS withdrawers, we found evidence consistent with consumption smoothing and a precautionary demand for liquidity. Preliminary calculations showed that almost 60% of respondents reported that they withdrew from their retirement account to meet immediate expenses or to cover lost income (that is, to enable consumption smoothing), and just over a quarter reported that they were motivated by future needs. Further analysis of survey data using logit estimation of the probability of withdrawal conditional on self-assessed eligibility

confirmed the importance of precautionary liquidity: the probability of withdrawal was significantly higher for respondents who were more concerned about future circumstances and who reported some uncertainty around future job prospects. Our results add to other theoretical and empirical evidence that some participants in mandatory, preserved retirement savings systems would incur penalties to access precautionary liquidity (Beshears et al., 2020a, Beshears et al., 2020b; Briere et al. 2021, Briere et al., 2022).

Our focus on the motivations and processes underlying people's withdrawal decision permits an opportunity to go beyond these descriptive results and speculate on their potential implications for understanding *how* and *why* people arrived at their decision. Multiple studies of the psychology of human judgment and decision-making have proven the difficulties some people have in understanding exponential growth and in overcoming present bias (e.g., Luckman et al., 2020; McKenzie and Liersch, 2011; Soll et al., 2013), that combine to make the offer of immediately available large sums of money very tempting (Argento et al., 2015; Munnell and Webb, 2022). We found that many people made the decision to withdraw almost immediately, and did not, or could not, estimate the impact of the transfer on their longer-term retirement savings. Such results do not necessarily imply poor decision-making. As we note in Section 4.2, participants who might have been liquidity constrained for some time prior to the policy change could rapidly decide that extra money is desirable without considering future consequences. They may also have anticipated replacing withdrawn savings when estimating the long-term effects. Behavioral explanations may also be part of the story.

Reinforcing these tendencies is the potential for a kind of implied-endorsement by the Government that made the withdrawing of 'retirement' money a first-response for those in actual or perceived need (McKenzie et al., 2018). The priority of the ERS may have signalled to the public that the Government treated withdrawals from retirement plans as an acceptable, and possibly even desirable, response.

An additional feature of the scheme that might have imparted a signal was that participants who made withdrawals could do so via an internet portal and without any verification of hardship; they judged and stated their own eligibility to the tax authorities at the time they claimed the funds. This ease-of-access reversed a decades-old practice of inertia-

Table A1

Summary statistics (Cbus early release survey, N = 3,047 unless noted otherwise).

	Observations	% of Sample
Q1: Where did you find out about the early release scheme? (Tick any that are relevant)		
Source - newspaper	206	6.76%
Source - radio	322	10.57%
Source - family/friends	647	21.23%
Source - TV	1,357	44.54%
Source - online news	985	32.33%
Source - social media	592	19.43%
Source - employer	181	5.94%
Source - other	95	3.12%
Q2: How long did you think it over before you decided to withdraw your super?		
Took a day to think it over	299	9.81%
Took a week to think it over	631	20.71%
Took longer than a week to think it over	1,467	48.15%
When first heard about ERS	422	13.85%
Not sure	101	3.31%
Didn't think it over	127	4.17%
Q3: Did you use any information provided by Cbus to help make your decision? (Can choose multiple answers except the last one)		
Visited Cbus website	1,140	37.41%
Emailed Cbus email	576	18.90%
Called Cbus	233	7.65%
Did not use any Cbus info	1,296	42.53%
Q4: What other information did you use to help inform your decision? (Can choose multiple answers except the last one)		
Other info - newspaper	118	3.87%
Other info - radio	130	4.27%
Other info - TV	334	10.96%
Other info - social media	292	9.58%
Other info - online news	521	17.10%
Other info - family / friends	1,087	35.67%
Other info - calculator	597	19.59%
Other info - financial advisor	236	7.75%
Other info - accountant	313	10.27%
Other info - Moneysmart website	136	4.46%
Other info - employer	162	5.32%
Other info - other sources	175	5.74%
Didn't do any research	587	19.26%
Q5: Did you think about the impact of withdrawing your super on your insurance cover?		
Yes	1,717	56.35%
No	1,330	43.65%
Q6: How would you describe your employment situation?		
Unemployed before COVID	488	16.02%
Unemployed due to COVID	866	28.42%
Hours reduced	1,545	50.71%
Hours same or increased	148	4.86%
Q7(if employed based on Q6): Do you think you will continue to be employed through the crisis?		
If employed (n = 1,693)		
Definitely yes	270	15.95%
Probably yes	655	38.69%
Not sure	561	33.14%
Probably not	165	9.75%
Definitely not	42	2.48%
If employed with hours reduced (n = 1,545)		
Definitely yes	232	15.02%
Probably yes	609	39.42%
Not sure	517	33.46%
Probably not	151	9.77%
Definitely not	36	2.33%
If employed with hours same or increased (n = 148)		
Definitely yes	38	25.68%
Probably yes	46	31.08%
Not sure	44	29.73%
Probably not	14	9.46%
Definitely not	6	4.05%
Q8: Do you think you'll apply/be eligible for any of the following Government support? (Tick any which are relevant)		
JobSeeker	1,094	35.90%
JobKeeper	686	22.51%

Table A1 (continued)

	Observations	% of Sample
Small business assistance	123	4.04%
None of the above	756	24.81%
Don't know	556	18.25%
Q9: Why did you decide to withdraw your super? (Tick all that apply)		
Replace lost income	1,114	36.56%
Household member lost job	387	12.70%
Pay household expenses	1,601	52.54%
Future bills	1,346	44.17%
Extra savings	537	17.62%
Worried about nest egg	224	7.35%
Protect savings	182	5.97%
Don't have to wait	117	3.84%
Retirement savings not important	110	3.61%
Others	298	9.78%
Q10: And what was the main reason? (grouped by authors)		
Immediate concerns		
Replace lost income	506	16.61%
Household member lost job	121	3.97%
Pay household expenses	1161	38.10%
Future concerns		
Future bills	625	20.51%
Extra savings	185	6.07%
Savings protection		
Worried about nest egg	68	2.23%
Protect savings	51	1.67%
Money today		
Don't have to wait	42	1.38%
Retirement savings not important	20	0.66%
Others	268	8.80%
Q10a: And what did you do with the money (tick all that apply)? (n = 682)		
Spending	379	55.57%
Saving	220	32.26%
Put back into super	11	1.61%
Debt repayment	306	44.87%
Investment	57	8.36%
Helping family/friends	82	12.02%
Medical needs	78	11.44%
Q11: Did you think about the consequences of withdrawing your super in terms of the impact on your retirement?		
Yes	1,994	65.44%
No	426	13.98%
Not sure	295	9.68%
Don't care	332	10.90%
Q12: When you think about your decision to withdraw your super, which word best captures your motivation for doing so?		
Impatience	43	1.41%
Anxiety	423	13.88%
Mistrust	82	2.69%
Need	1,418	46.54%
Security	1,081	35.48%
Q13: What impact do you think withdrawing your super will have on your retirement savings by the time you reach retirement age?		
\$5000 or less	216	7.09%
\$5,000-\$10,000	237	7.78%
\$10,000- \$20,000	431	14.15%
\$20,000 - \$50,000	614	20.15%
\$50,000-\$100,000	298	9.78%
More than \$100,000	132	4.33%
No impact	234	7.68%
Don't care	207	6.79%
Don't know	678	22.25%
Q14: Will you make extra contributions into your super to replace the money you have withdrawn, when you can?		
Yes	1,513	49.66%
No	426	13.98%
Not sure	1,108	36.36%
Q15: (asked if answered Yes in Q14) When will you replace the money you have withdrawn? (n = 1,513)		
Once markets bounce back	212	14.01%
Next year	325	21.48%
When I have the spare money	509	33.64%
Not sure	240	15.86%
Others	227	15.00%

(continued on next page)

Table A1 (continued)

	Observations	% of Sample
Q16: (asked if answered Yes in Q14) How long do you think it would take you to replace the money you've withdraw? (n = 1,513)		
6 months	147	9.72%
1 year	359	23.73%
3 years	563	37.21%
5 years	309	20.42%
10 years	97	6.41%
More than 10 years	38	2.51%
Q16a: (asked if answered Yes in Q14) And when you are ready to make additional contributions to your super, how will you make them? (n = 346)		
Lump sum payments	37	10.69%
Regular payments	197	56.94%
Both lump sum and regular payments	62	17.92%
Don't know	50	14.45%
Q16b: (asked if answered Yes in Q14) And will you make them as salary sacrifice or voluntary contributions? (n = 346)		
Salary sacrifice (pre-tax) contributions	118	34.10%
Voluntary (post-tax) contributions	83	23.99%
Both salary sacrifice and voluntary contributions	72	20.81%
Don't know	73	21.10%
Q17: Putting aside your own situation and decision, do you think other people will regret withdrawing their super, because of the impact on their retirement savings?		
Yes	961	31.54%
No	696	22.84%
Don't know	1,390	45.62%

inducing barriers to pre-retirement withdrawal. It is thus unsurprising that the plan we study estimates that 20% of withdrawers were, in fact, not eligible. A very low-friction withdrawal process thus not only reduced the physical and mental load of making an application but may have reinforced the endorsement of the Government. This 'social sense-making' – or the implicit interaction between the policy maker and the public – is an often-underestimated feature of changes to choice-architectures, and yet it can have significant impacts (Krijnen et al., 2017).

A final feature of our results that aligns with this sensemaking interpretation, is the apparent reliance of participants in our survey on the \$A10,000 limit set by the Government. Participants appeared to be strongly guided, and effectively constrained, by this arbitrary limit on the size of withdrawals. In essence, the participants anchored on \$A10,000 a withdrawal amount. Our analysis indicates that if the limit were higher, participants who had enough savings in their plan accounts may well have withdrawn more.

It is important to note, however, that in this instance the public may have understood that withdrawals from retirement plans were legitimate under the exceptional circumstances of the pandemic. Such an interpretation might limit the potential for a lasting change in the mindset of participants about the use of retirement money.

Outside of these specific features of the scheme, it is possible that the complexity of carefully weighing up the pros and cons of a withdrawal could lead some people to choices driven by information overload (Briere et al., 2021), financial knowledge overconfidence (Lee and Hanna, 2020), a collapse of trust in savings institutions (López and Rosas, 2022)¹⁹ or the influence of political risk (Kay and Borzutzky, 2022). We did not measure any of these characteristics in our study so leave such questions to future research – should the (unfortunate) opportunity arise.

The overall implication of our findings is that future policy responses to economic shocks – whether in the context of the Australian pension system or any pension system globally - need to be cognizant of threats to the safeguards around retirement savings for *retirement*. In the original

¹⁹ Such trust deficit does not apply to Australian pension funds (Deetlefs et al., 2019; Table 2, page 926).

Table A2

Regression estimates on the decision to withdraw, conditional on eligible.		
	(1)	(2)
Y = 1[Take ER]		
	Predictive Margins	Marginal Effects
Balance Before ER		
Quintile of Balance before Withdrawal = 1	0.860*** (0.011)	/
Quintile of Balance before Withdrawal = 2	0.867*** (0.010)	0.007 (0.014)
Quintile of Balance before Withdrawal = 3	0.878*** (0.010)	0.018 (0.015)
Quintile of Balance before Withdrawal = 4	0.878*** (0.010)	0.018 (0.016)
Quintile of Balance before Withdrawal = 5	0.820*** (0.012)	-0.040** (0.018)
Gender		
Male	0.913*** (0.005)	/
Female	0.686*** (0.015)	-0.227*** (0.016)
Age Group		
18–29	0.843*** (0.014)	/
30–39	0.862*** (0.008)	0.019 (0.016)
40–49	0.886*** (0.008)	0.043** (0.017)
50–59	0.865*** (0.009)	0.022 (0.018)
60 and over	0.714*** (0.032)	-0.129*** (0.036)
Tenure with Retirement Fund		
Less than 10 years	0.871*** (0.006)	/
Over 10 years	0.847*** (0.008)	-0.024** (0.011)
Employment Status		
Hours reduced, expect to be employed	0.843*** (0.010)	-0.009 (0.015)
Hours reduced, not expect to be employed	0.809*** (0.020)	-0.043* (0.023)
Hours reduced, not sure to be employed	0.899*** (0.011)	0.047*** (0.016)
Hours same, expect to be employed	0.706*** (0.033)	-0.146*** (0.035)
Hours same, not expect to be employed	0.670*** (0.063)	-0.182*** (0.064)
Hours same, not sure to be employed	0.949*** (0.032)	0.097*** (0.034)
Unemployed due to COVID	0.915*** (0.008)	0.064*** (0.013)
Unemployed before COVID	0.852*** (0.011)	/
Expected Welfare Eligibility		
JobSeeker = 0	0.865*** (0.005)	/
JobSeeker = 1	0.850*** (0.009)	-0.015 (0.011)
JobKeeper = 0	0.866*** (0.005)	/
JobKeeper = 1	0.842*** (0.010)	-0.024** (0.012)
Small business assistance = 0	0.861*** (0.005)	/
Small business assistance = 1	0.846*** (0.023)	-0.015 (0.023)
Did you think about the impact of ER?		
Did not think/Not sure/Don't care	0.876*** (0.008)	/
Thought about the impact	0.853*** (0.006)	-0.023** (0.010)
Time Spent Thinking Before Deciding Whether to Withdraw		
A day or less	0.871*** (0.008)	0.039 (0.029)
A week or more	0.857*** (0.006)	0.025 (0.029)

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Table A2 (continued)

	(1)	(2)
Not sure	0.832*** (0.028)	/
Source of Info to inform ER decision		
Super & Other Source	0.885*** (0.006)	/
Super Only	0.893*** (0.017)	0.008 (0.019)
Other Source Only	0.853*** (0.008)	-0.031*** (0.010)
No Information Sources Used	0.793*** (0.015)	-0.092*** (0.017)
Main Reason Taking/Not Taking ER		
Future concerns	0.935*** (0.008)	0.072*** (0.018)
Immediate concerns	0.886*** (0.006)	0.023 (0.017)
Money today	0.439*** (0.033)	-0.424*** (0.036)
Savings protection	0.881*** (0.025)	0.018 (0.029)
Others	0.863*** (0.016)	/
Estimation of ER Impact		
Correct	0.847*** (0.011)	/
Don't know/Don't care	0.884*** (0.008)	0.037*** (0.014)
Overestimate	0.834*** (0.009)	-0.013 (0.014)
Underestimate	0.883*** (0.009)	0.036** (0.014)
Observations	3,542	3,542

launch of the ERS, there was no indication that the policy intended to provide precautionary savings at the expense of retirement provision. And yet, in practice, it seems that while some participants appeared to use the ERS to facilitate consumption smoothing during the COVID-19 induced economic slowdown, a large minority viewed this scheme not as offering emergency funds but as an opportunity to transfer tax-advantaged and otherwise illiquid retirement savings to more liquid precautionary savings. Such use of retirement savings has long-term implications not only at individual and household levels, but also for fiscal sustainability and future demands on government transfers.

The data available to us for this study does not show how ERS payments were spent, so we are only able to speculate on the efficiency with which funds were used by our sample. Recent research using administrative bank account data finds that the scheme was primarily accessed by individuals in poorer financial circumstances and helped withdrawers to pay down high-interest debts and avoid arrears. Thus, fast decisions that did not take longer-term future consequences into account could have been sensible for some individuals. However, the data also indicate increases in discretionary spending (shopping, entertainment, online gambling), indicating that at least some participants may have withdrawn opportunistically rather than out of need (Wang-Ly and Newell, 2022). This latter finding echoes patterns seen internationally that show considerable heterogeneity in consumption responses by recipients' financial status and demographic characteristics (Kubota et al., 2021). We also do not see whether participants who withdrew in the scheme have subsequently begun to replenish their retirement accounts. Extensions to this work employing longitudinal monitoring of the financial wellbeing of recipients of COVID-19 relief is an important goal for future studies.

CRedit authorship contribution statement

Hazel Bateman: Conceptualization, Methodology, Funding acquisition, Writing – original draft, Writing – review & editing. **Loretta I. Dobrescu:** Conceptualization, Methodology, Writing – review &

Table A3

Regression estimates on maximum withdrawal, conditional on withdrawal.

	Round 1 ER		Round 2 ER	
	(1)	(2)	(1)	(2)
Y = 1 [Maximum Withdrawal]	Predictive Margins	Marginal effects	Predictive Margins	Marginal effects
Balance Before ER				
Quintile of Balance before Withdrawal = 1	0.381*** (0.006)	/	0.614*** (0.005)	/
Quintile of Balance before Withdrawal = 2	0.736*** (0.004)	0.356*** (0.006)	0.806*** (0.003)	0.192*** (0.005)
Quintile of Balance before Withdrawal = 3	0.922*** (0.002)	0.541*** (0.006)	0.922*** (0.002)	0.307*** (0.005)
Quintile of Balance before Withdrawal = 4	0.942*** (0.002)	0.562*** (0.007)	0.940*** (0.002)	0.326*** (0.006)
Quintile of Balance before Withdrawal = 5	0.962*** (0.001)	0.581*** (0.007)	0.957*** (0.002)	0.343*** (0.006)
Estimated Salary				
Quintile of Estimated Salary = 1	0.823*** (0.002)	/	0.857*** (0.002)	/
Quintile of Estimated Salary = 2	0.811*** (0.002)	-0.012*** (0.003)	0.843*** (0.002)	-0.014*** (0.003)
Quintile of Estimated Salary = 3	0.805*** (0.002)	-0.017*** (0.003)	0.832*** (0.002)	-0.024*** (0.003)
Quintile of Estimated Salary = 4	0.819*** (0.002)	-0.004 (0.003)	0.855*** (0.002)	-0.002 (0.003)
Quintile of Estimated Salary = 5	0.838*** (0.002)	0.015*** (0.003)	0.875*** (0.002)	0.018*** (0.003)
Suspected Ineligible				
Ineligible = 0	0.826*** (0.001)	/	0.861*** (0.001)	/
Ineligible = 1	0.788*** (0.002)	-0.038*** (0.002)	0.808*** (0.002)	-0.053*** (0.003)
Gender				
Male	0.819*** (0.001)	/	0.852*** (0.001)	/
Female	0.809*** (0.004)	-0.010*** (0.004)	0.835*** (0.004)	-0.017*** (0.004)
Tenure with Cbus				
Quintile of Tenure = 1	0.801*** (0.002)	/	0.824*** (0.002)	/
Quintile of Tenure = 2	0.814*** (0.002)	0.013*** (0.003)	0.849*** (0.002)	0.025*** (0.003)
Quintile of Tenure = 3	0.832*** (0.002)	0.031*** (0.003)	0.868*** (0.002)	0.043*** (0.003)
Quintile of Tenure = 4	0.822*** (0.003)	0.021*** (0.004)	0.859*** (0.003)	0.035*** (0.004)
Quintile of Tenure = 5	0.831*** (0.004)	0.030*** (0.005)	0.871*** (0.003)	0.047*** (0.004)
State ACT	0.795*** (0.008)	-0.089*** (0.013)	0.819*** (0.009)	-0.133*** (0.012)

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Table A3 (continued)

	Round 1 ER		Round 2 ER	
	(1)	(2)	(1)	(2)
NSW	0.819*** (0.001)	-0.065*** (0.010)	0.851*** (0.002)	-0.101*** (0.008)
NT	0.800*** (0.011)	-0.084*** (0.015)	0.860*** (0.011)	-0.092*** (0.014)
QLD	0.815*** (0.003)	-0.069*** (0.010)	0.850*** (0.003)	-0.101*** (0.009)
SA	0.807*** (0.005)	-0.077*** (0.011)	0.852*** (0.004)	-0.099*** (0.009)
TAS	0.829*** (0.008)	-0.055*** (0.012)	0.843*** (0.008)	-0.108*** (0.011)
VIC	0.819*** (0.002)	-0.064*** (0.010)	0.851*** (0.002)	-0.100*** (0.009)
WA	0.817*** (0.003)	-0.067*** (0.010)	0.847*** (0.003)	-0.104*** (0.009)
Others	0.884*** (0.010)	/	0.951*** (0.008)	/
Age Group				
18–29	0.797*** (0.002)	/	0.813*** (0.002)	/
30–39	0.826*** (0.002)	0.029*** (0.003)	0.865*** (0.002)	0.052*** (0.003)
40–49	0.831*** (0.002)	0.034*** (0.003)	0.874*** (0.002)	0.061*** (0.003)
50–59	0.834*** (0.003)	0.037*** (0.004)	0.873*** (0.003)	0.060*** (0.004)
60 and over	0.821*** (0.007)	0.024*** (0.007)	0.839*** (0.006)	0.026*** (0.007)
Retirement Preparedness 2019				
2019 RAI Score		0.008 (0.006)		0.017*** (0.006)
Observations	115,380	115,380	118,454	118,454

editing, Funding acquisition. **Junhao Liu:** Methodology, Formal analysis, Writing – original draft. **Ben R. Newell:** Conceptualization, Methodology, Funding acquisition, Writing – original draft, Writing – review & editing. **Susan Thorp:** Conceptualization, Methodology, Funding acquisition, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A

Appendix B. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jeoa.2023.100441>.

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