

Revealing Member Income Preferences: A Scientific Path to Retirement Personalisation

Executive Summary

Capital Preferences studied 4,000 Australians' Retirement Income Certainty preferences using a rigorous method known as “revealed preferences”.

Super funds are missing essential data about their members' Retirement Income Certainty preferences.

It will prevent them from providing fit-for-purpose retirement assistance (and meeting their Retirement Income Covenant obligations).

RIC preferences are highly individualised, and do not correlate with demographic or financial data.

- Super providers cannot rely on demographic and financial data at hand, such as age and super balance, to know this about members.
- They should incorporate lifetime income into fit-for-purpose solutions that can flex to accommodate members' varied preferences.
- They must measure preferences with high integrity and fidelity to be in a position to provide fit-for-purpose assistance.

Based on high fidelity, scientific preferences measurements, we estimate an additional 40% of retirees and pre-retirees *should* have guaranteed lifetime income in their retirement income mix.

This compares to, at most, 8% today. That amounts to \$145B of additional superannuation balance that should be annuitized among over 2M members aged 55-74.

Guaranteed lifetime income product ownership is associated with much stronger feelings of retirement preparedness and lower anxiety about outliving savings.

Measuring and incorporating Income Certainty preferences as part delivering personalised, fit-for-purpose retirement assistance will help millions of Australian certainty seekers live a more dignified, confident and worry-free retirement.

My perspective—Guiding members to retirement with the help of science

If there is one thing I have learned as an executive and regulator, it's wise to stay curious.

There are those rare times, when being curious, brings you upon something truly transformative. This study by Capital Preferences is one of those moments for me and, I hope, for the industry. In these pages, you will find science, not just gut feel, speaking loudly. It should fundamentally change the way the industry thinks about its obligations and actions when it comes to assisting members in their Retirement.

My take-aways

To me, the most important insights from this study are:

1. Members are crying out to be better understood and science offers us the ability to do that, easily
2. Members are unique and largely unaware of the solutions that could best serve them
3. Members, despite not knowing what guaranteed income products are, DO have Retirement Income Certainty preferences that are unique to them and these preferences can't be predicted by available demographics like age, gender or super balance.

Regulator and industry to-dos

The key for policy makers is to remove barriers for super funds to measure this information at the member level.

Good news for the industry: the technology to measure preferences now exists—the hard work has been done, models tested and code written. It's a scalable, member-centric experience, grounded in a rigorous methodology. It is what doing right by members should look like. Our job in the industry is to pick it up and use it.

Closing thoughts

I'm excited to see how the industry responds to the study findings. To me, this opens the door to a member-centric, scientific path to retirement personalisation for millions of Australians who might otherwise receive misguided assistance or no assistance at all.

Enjoy what is within—I took an hour with this report helped by a cup of tea at the farm and I am glad I did.



Danielle F. Press

Danielle Press

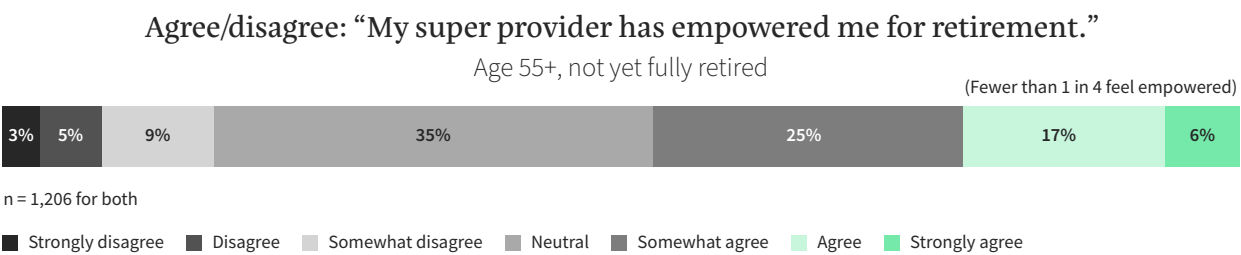
Danielle Press is an industry veteran and served as commissioner at ASIC. She is a senior adviser to Capital Preferences.

The member data gap is hindering progress against the RIC and the larger retirement preparedness challenge

The industry and government are rightly focused on improving retirement preparedness among pre-retirees and retirees. Over 3 in 4 pre-retirees report feeling not fully prepared for retirement.

And about the same proportion are ambivalent when it comes to feeling their super provider has empowered them for retirement.

The APRA/ASIC audit on implementation of the retirement income covenant underscores the member understanding and data gap that stands in the way of the industry making progress against the RIC and retirement preparation challenge.



“All RSE licensees were **missing data that is critical for developing an effective retirement income strategy.**”

“RSE licensees need to be aware that segmentation done based on very narrow member information and consideration **could potentially lead to developing inappropriate strategy and inadequate assistance to members.**”

Study details

Capital Preferences conducted a unique study to measure super members' Retirement Income preferences and gain a more holistic view into retirement preparation.

Survey population

4,012

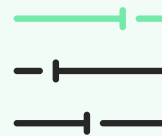
Australian superannuation members



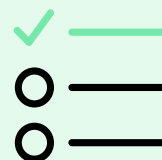
- Actual or projected super balance > \$100K
- Age 35 – 54: n = 1,625
- Age 55-65: n = 1,433
- Age 66+: n = 954

See appendix p. 20-21 for more details about the survey population.

Research methods



Revealed preferences component



Survey component

Measurements

Retirement Income preference parameters

- Income Certainty score
- Decision consistency

Survey data

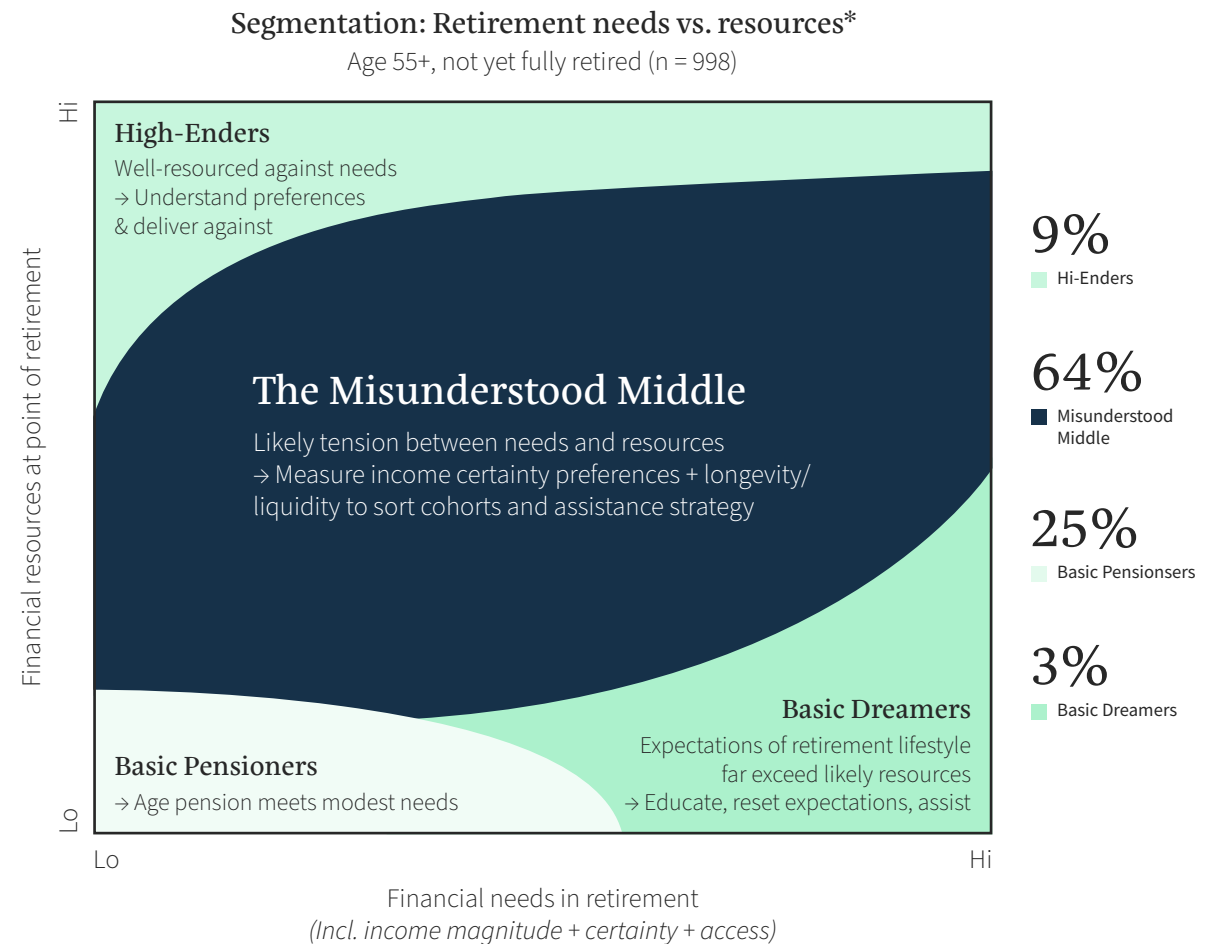
- Demographics & household finances
- Estimated financial needs in retirement
- Retirement attitudes, knowledge and behaviours

The Misunderstood Middle: A serious cohorting challenge for super funds

Segmenting on a more holistic picture of members' financial situation and financial needs for retirement reveals a large and critical segment – the Misunderstood Middle.

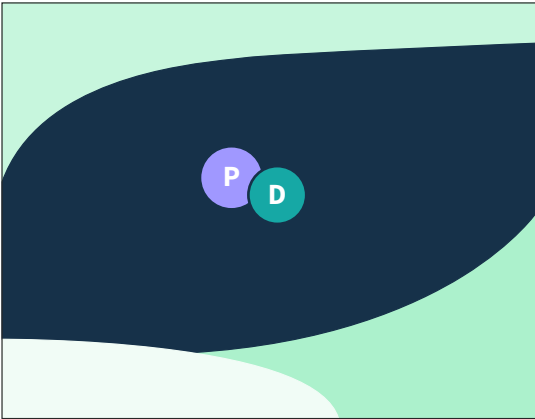
This segment faces a tension between their financial needs in retirement – based on their lifestyle, legacy and income preferences – and their financial resources at the point of retirement.

Whereas High-Enders are well resourced against their retirement needs, and Basic Pensioners will rely on Age Pension as their primary source of income, **the 64% of pre-retirees in the Misunderstood Middle require deeper understanding and the most personalised assistance.**



* See appendix p. 22 for segmentation methodology.

Case study: the cohorting challenge in the Misunderstood Middle



Peggy and Daniel are both in the Misunderstood Middle. To their super provider, they look the same – age 65, about \$600k super balance, similar wealth level.

But when you measure Peggy and Daniel's income certainty preferences, they are very different. Peggy is a certainty seeker – willing to trade off higher retirement income potential for greater certainty for however long her retirement lasts. Daniel is an income maximiser – happily accepting less certainty for higher income potential.

Fit-for-purpose retirement assistance looks very different for Peggy and Daniel.

Peggy and Daniel would be in the same age/super balance cohort...



Peggy

- 65 years old, widow
- \$610k balance

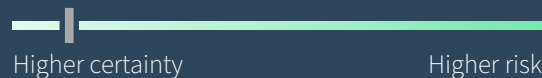


Daniel

- 65 years old, single
- \$605k balance

...but measuring their retirement income certainty preferences reveals key differences...

Income Certainty score



- Very healthy, active
- Worried about longevity risk
- Craves income certainty

Income Certainty score



- Wants to leave legacy for daughter
- Wealth maximiser
- Willing to accept lower income certainty

...that suggest very different cohorts and fit-for-purpose retirement assistance.

Guaranteed lifetime income/longevity insurance strategy.

Account-based pension w/ nominal drawdown and 50% growth assets.

We used a decision science-based method known as “revealed preferences” to measure members’ Income Certainty preferences.

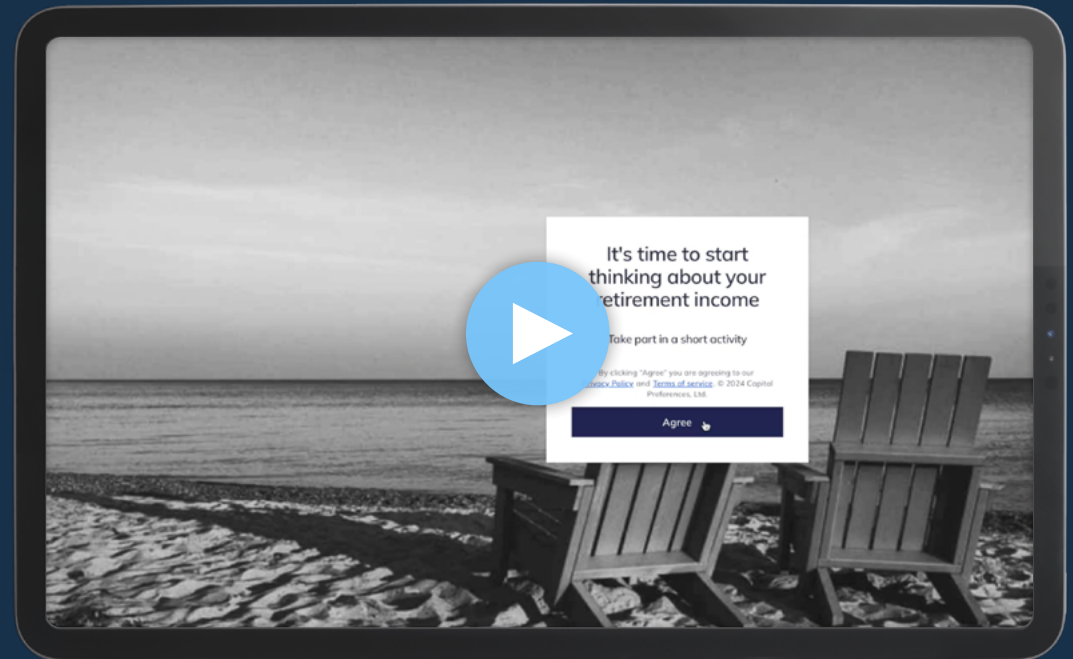
To see how it works, watch the video at right.

Retirement income planning is complex, with many risks and unknowns. So, most people have a hard time stating their retirement income preferences (an approach economists call “stated preferences”).

By contrast, revealed preferences works by the principle: “Actions speak louder than words.” It has respondents choose their most preferred points across a series of carefully crafted decision scenarios, which get at the core tradeoffs in retirement income.

From their decisions, we use economics and mathematics to model their preferences with rigour.

How the Retirement Income preferences activity works



Actions speak louder than words: Member decisions reveal their income certainty preferences

Based on each member's decisions, we use economics and math to calculate an Income Certainty Score (ICS) – a standardized score measuring their income certainty preferences.

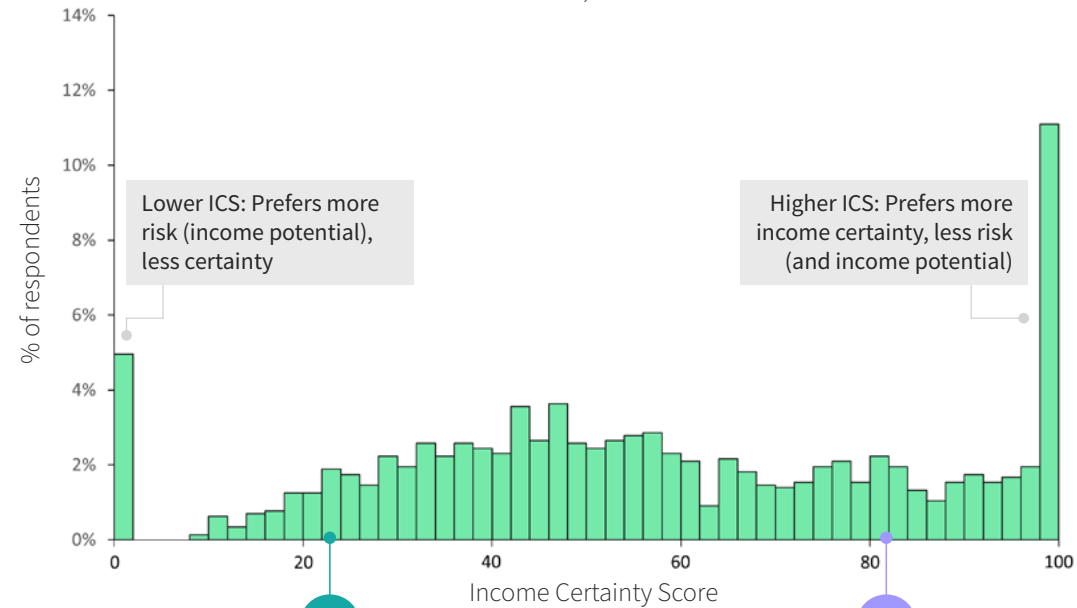
ICS ranges from 0 to 100, where 0 corresponds to those who maximize returns and 100 for those who maximize certainty.

In the ICS distribution at right, for 55-65 year olds, there is high variance in ICS distribution. Income certainty preferences are highly individualised.

Given the same six decision scenarios, Daniel's decisions reveal he prefers more risk (and higher retirement income potential). Conversely, Peggy's decisions reveal she prefers less risk, but more certainty around a lower expected retirement income.

Income Certainty Scores for 55-65 year olds

n = 1,433

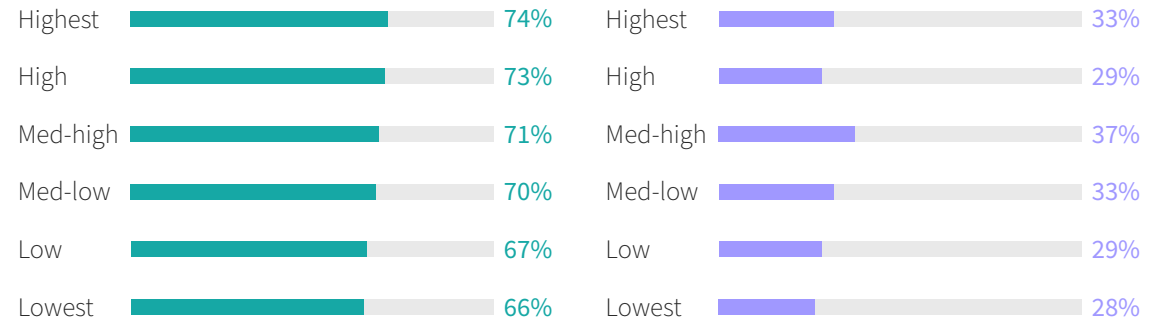


23

Daniel

83

Peggy



These are the preferred points for Daniel and Peggy in the revealed preferences activity

Bar length shows where respondent put slider as "most preferred point" in each decision scenario

Percentage indicates what percent of the potential upside was risked (corresponds to slider placement)

Income Certainty preferences don't correlate to age or super balance

Income Certainty preferences do not correlate to common demographic or financial variables, such as age and super balance.

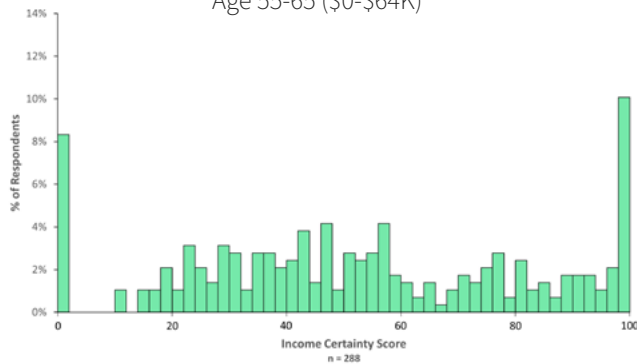
As shown below, the ICS distributions are highly varied and similar across all super balance quintiles, even within a pre-retiree age band, age 55-65. We observe the same pattern across other age bands and income bands, as well (see appendix p. 23-25).

Implications for super funds

1. Don't rely on readily available demographic or financial data to estimate a member's income certainty preferences, or for RIC cohorting. Assume widely varied Income Certainty preferences for your membership.
2. Construct a flexible retirement and guaranteed lifetime income product menu that can accommodate these varied preferences.
3. Measure member's preferences at an individual level as a precursor to providing them fit-for-purpose assistance.

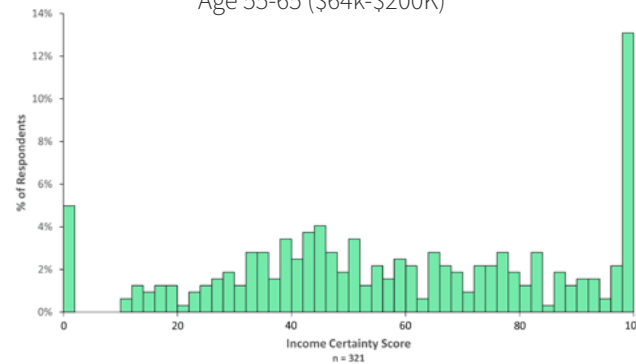
Certainty Score, 1st super balance quintile

Age 55-65 (\$0-\$64K)



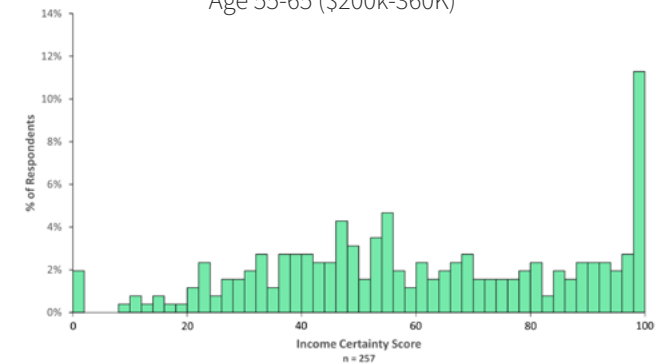
Certainty Score, 2nd super balance quintile

Age 55-65 (\$64K-\$200K)



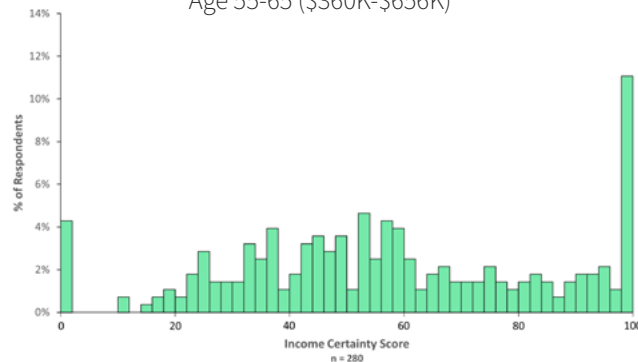
Certainty Score, 3rd super balance quintile

Age 55-65 (\$200K-\$360K)



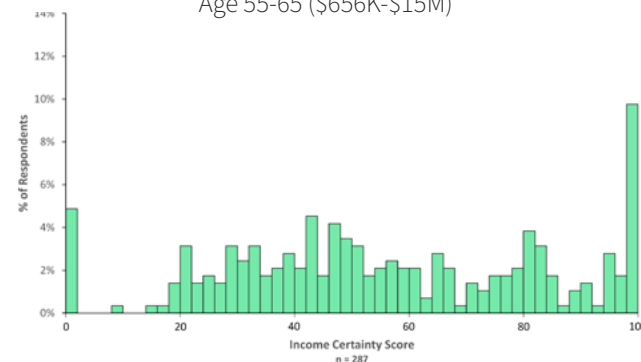
Certainty Score, 4th super balance quintile

Age 55-65 (\$360K-\$656K)



Certainty Score, 5th super balance quintile

Age 55-65 (\$656K-\$15M)



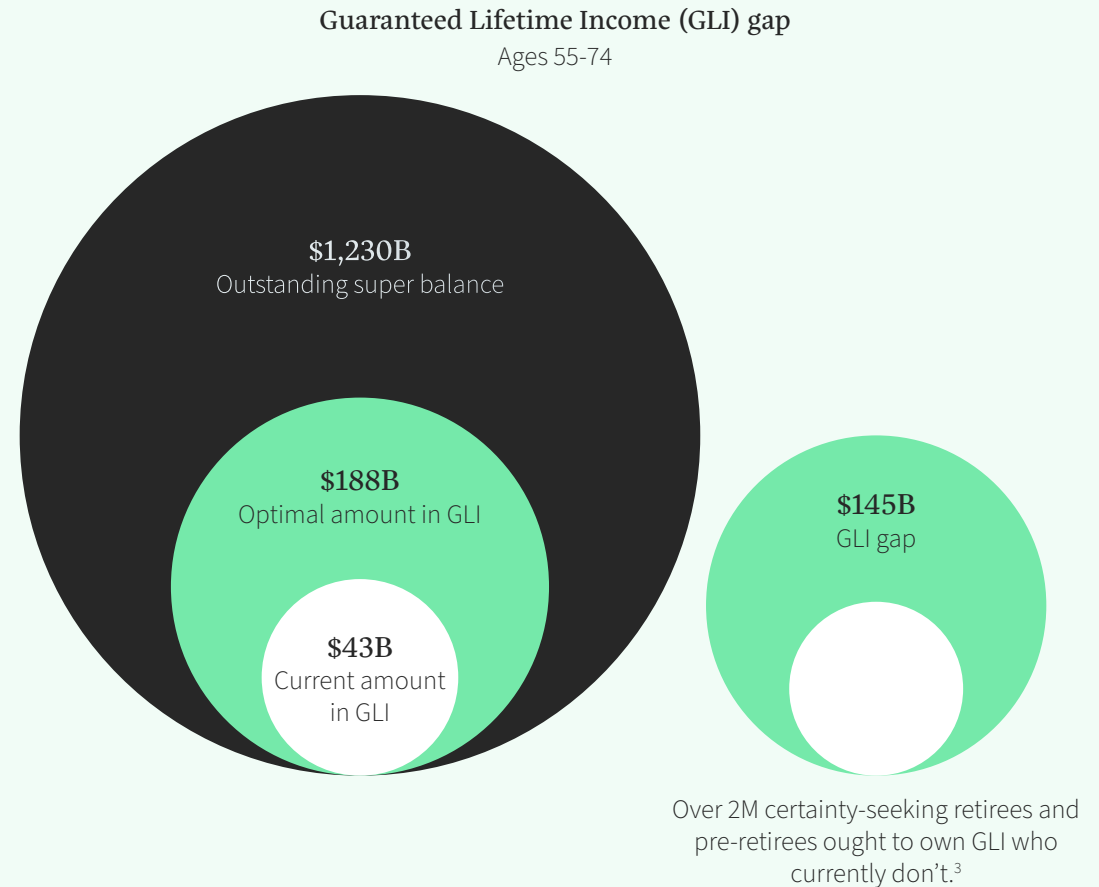
Sizing the Guaranteed Income gap

We can use each individual's Income Certainty preferences to estimate the optimal amount of super balance they should exchange for guaranteed lifetime income.

Current penetration of Guaranteed Lifetime Income products (GLI) is about \$43B among 55-74 year olds, which represents 3.5% of the total outstanding super balance of \$1.23T.¹

We applied a utility model that uses certainty preferences to find the optimal fraction of savings that should be exchanged for GLI.² Per that model, we estimate that a little over 15% of aggregate savings should be exchanged for GLI among 55-74 year olds (ranging from 0% to 40% for any individual, based on their preferences).

That amounts to an additional \$145B of super balance that ought to be exchanged for GLI, over and above the current amount, affecting over 2M certainty-seeking Australians in this demographic.³



1. APRA Annual superannuation Bulletin, June 2022, table 8.

2. See appendix p. 25-26.

3. Figures computed from account and average balance per account for 55-74 year olds, per [APRA Quarterly Superannuation Industry Publication](#); see appendix p. 27 for further methodology notes on sizing the GLI gap.

Members with guaranteed income feel much more prepared for retirement and less anxious about outliving their savings

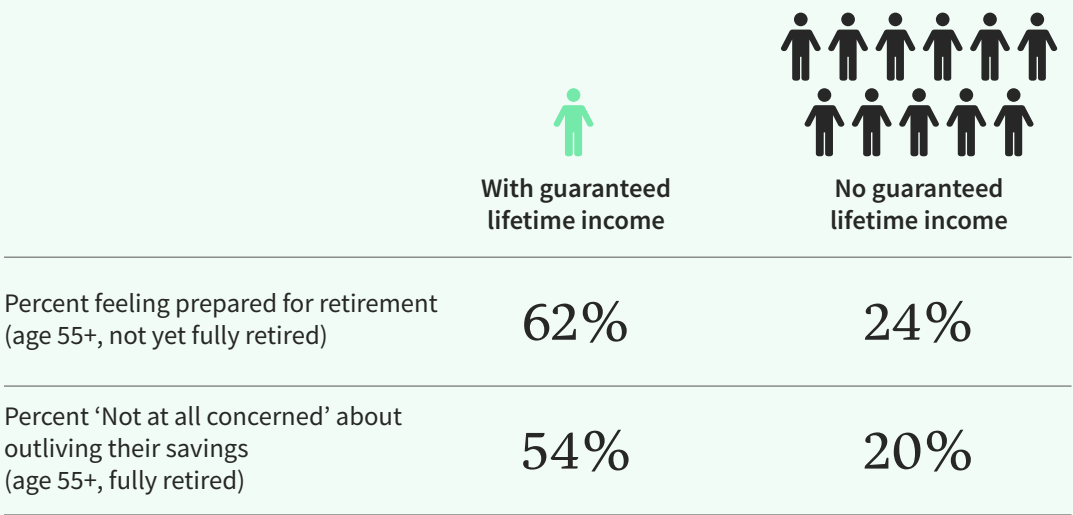
When guaranteed lifetime income (GLI) is in a member’s retirement income strategy, it is associated with feeling much more prepared for retirement and having lower anxiety about outliving one’s savings.

When we conducted deeper regression modelling against feelings of retirement preparedness, it shows the association for GLI product ownership is on the same order of magnitude as renting vs. owning one’s home free and clear.

And that controls for other factors, such as age, wealth, partner status, financial literacy and adviser status.

Measuring members’ certainty preferences and guiding certainty-seekers to the right, personalised level of GLI is a very promising path for lifting retirement preparedness and confidence.

At most, 1 out of 12 Australian pre-retirees and retirees own a guaranteed lifetime income product today



The increase in feelings of retirement preparedness associated with owning a GLI product is equivalent to that of owning a home, free-and-clear of a mortgage.

Members who access guaranteed income strategies via their super provider show higher empowerment and advocacy

Pre-retirees and retirees with GLI products report higher favourability toward their super providers, both in advocacy/Net Promoter score, as well as a sense that their super has empowered them for retirement.

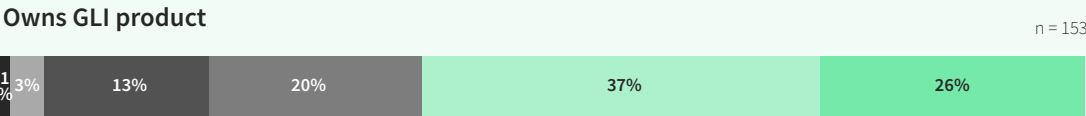
Higher advocacy naturally comes with higher retention. A critical point of departure for super members comes at retirement, estimated to run at 17-18% churn.¹

Based on the study data, we believe super providers that can engage members to measure their income preferences and show how that plays into personalised (i.e., fit-for-purpose) assistance, stand to benefit greatly in reducing churn at retirement.

¹ Rice Warner, 2017.
www.ricewarner.com/retention-by-prediction-departures-from-superannuation-funds/

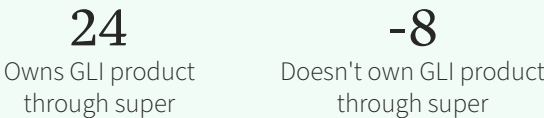
GLI Ownership Association with Retirement Empowerment*

Q: To what extent do you agree? My super provider has empowered me for retirement.



Strongly disagree Disagree Somewhat disagree Neutral Somewhat agree Agree Strongly agree

Net Promoter Score toward Super Provider**



*Charts here don't include Commonwealth super or State super respondents due to high proportion of members with classic defined benefit pensions.

**Net Promoter Score is a measure of advocacy. 0-10 scale, how likely would you be to recommend your super provider. NPS calculated as % promoters minus % detractors, where promoter = 9/10s and detractors = 0-6s.

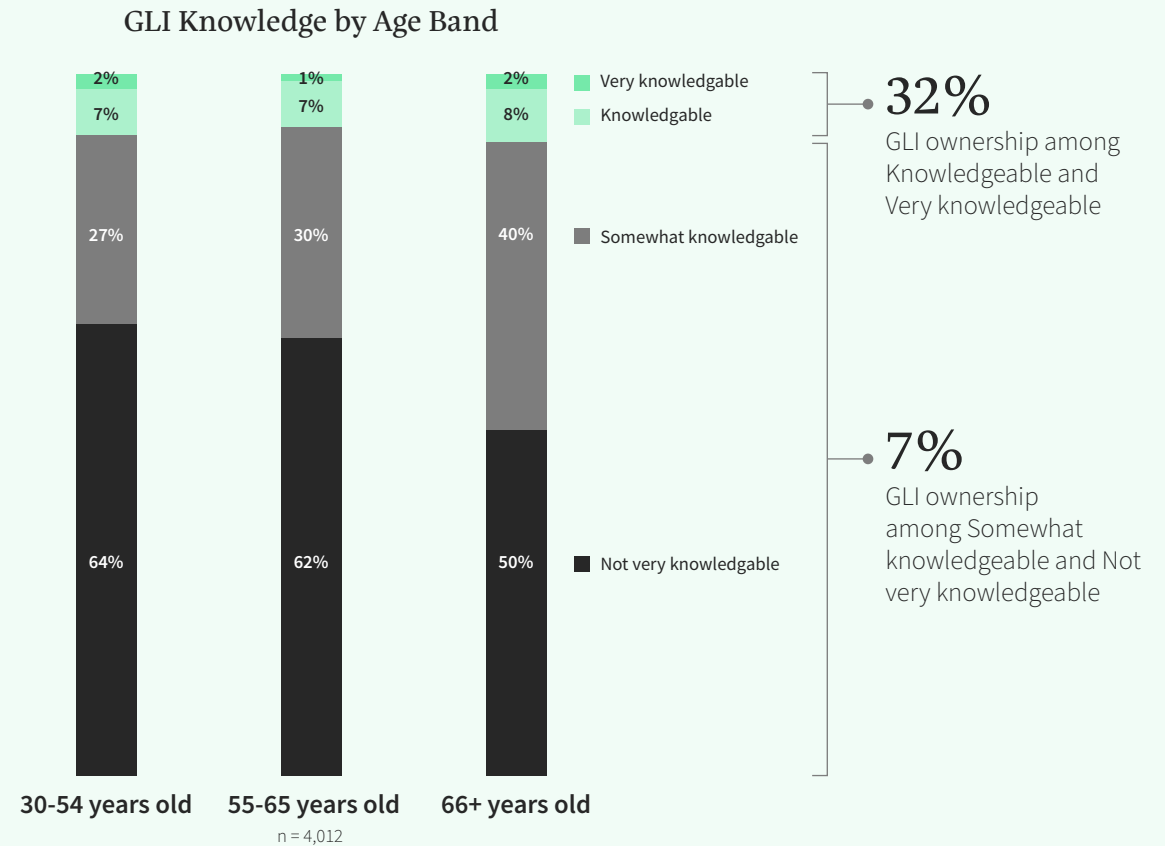
Knowledge about Guaranteed Lifetime Income strategies is a critical barrier to adoption

Member knowledge of GLI is very limited. Even among age 66+, 90% report being not at all or only somewhat knowledgeable.

Among those who report being knowledgeable or very knowledgeable, GLI ownership rates are over 4x higher (32% vs 7%).

Our view is that it would be a fool's errand for industry and government to try for a broad "GLI literacy" lift across the general populace.

A more effective strategy is first to engage members as they enter pre-retirement years to measure and help them discover their income certainty preferences. Then, provide targeted "just-in-time" GLI information tailored to each member and their unique preferences.



Guidance for super funds

Key study insight: Retirement Income Certainty preferences are highly individualised and don't correlate to member demographic and financial variables. Regulators and superannuation funds will need to re-think cohorting and what fit-for-purpose assistance looks like under the Retirement Income Covenant (RIC).



Cohorting

- Super funds should measure a representative sample of their members' retirement income certainty preferences.
- Incorporate income preferences + holistic member resources and needs into cohorting for product strategy purposes.



Product strategy

- Incorporate lifetime income into fit-for-purpose solutions that can flex to meet members' varied income certainty preferences.



Member engagement and experience

- Use interactive digital experiences to engage pre-retirees and retirees, measure and “awaken” them to their income preferences, as the “first step” on the retirement prep journey.
- Connect engaged members to adviser assistance as an interim next step, while industry awaits regulatory clarity on guiding/recommending personalised RI strategy.



Fit-for-purpose assistance

- Develop digital and hybrid fit-for-purpose assistance paths that incorporate preference measurement and then fit members to retirement strategies personalised to their preferences.
- Set retirement income strategy defaults by cohort as a "last resort" for members who do not engage in fit-for-purpose assistance journeys

Capital Preferences independently originated, designed, fielded and conducted analytics for this study.

About Capital Preferences

Capital Preferences is a personalisation technology firm that uniquely understands and models human behaviour. Our purpose is to help individuals make more purposeful decisions with their time and money.

Our suite of profiling tools helps the world's top financial firms understand latent insights about their clients, spanning Risk, Retirement Income, Values/ESG, Goals, Liquidity and Spending preferences. We enable financial services firms to improve the quality of advice and create more personalised and engaging experiences.

We pride ourselves in our collaborative and agile spirit. We believe in working with customers to deliver breakthrough client and member-centric solutions that create differentiation in a highly competitive marketplace.

Every member understood, every cent makes sense.™



Challenger provided critical support to bring the insights and results of the study to the Australian market.

About Challenger

Established in 1985 and listed on the Australian Securities Exchange (ASX:CGF) in 1987, Challenger Limited (Challenger) is an investment management firm managing \$105 billion in assets*. Challenger is focused on providing our customers with financial security for retirement. We do this by offering investment strategies that exhibit consistently superior performance, and by helping customers in retirement with safe and reliable income streams.

Challenger operates three core investment businesses - a fiduciary Funds Management division, an APRA regulated Life division and an APRA regulated authorised deposit-taking institution.

Challenger's Funds Management division manages and comprises Fidante Partners as well as the Challenger Investment Partners business. Challenger Life Company Limited (Challenger Life) is Australia's largest provider of annuities and a life company registered under the Life Insurance Act 1995.



* As at 30 June 2023

The Capital Preferences research team



Schahar Kariv, Ph.D.
Co-founder and Chief Scientist

Benjamin N. Ward Professor of Economics,
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Dan Silverman, Ph.D.
Co-Founder and Head of Research
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Matthew Polisson, Ph.D.
Senior Research Adviser

Professor of Economics, University of Leicester



Tyler Maxey, Ph.D.
Research Director



About revealed preferences

Revealed preferences has its roots in the Nobel Prize winning work of Paul Samuelson in the 1940s. More recently, behavioural economics has contributed to the application of revealed preferences in real-world situations.

In the past 15 years, Professor Shachar Kariv's (of the University of California at Berkeley) research and innovations in experimental methods led to the practical application of revealed preferences in the financial services domain, first in understanding investor risk preferences.

Rather than filling out a risk tolerance questionnaire, investors complete a quick, interactive digital activity where they make tradeoffs between gain and loss at varying levels of investment risk. The method measures risk tolerance and loss aversion according to their mathematical definition in economics, enabling financial services firms to understand clients in dimensions and with precision simply not possible before.

These risk parameters are plugged into an expected utility framework, enabling each client to be positioned at her optimal spot along the efficient frontier of a portfolio lineup.

Professor Kariv co-founded Capital Preferences in 2015 to carry forward the effort in further developing and applying his experimental methods. Since founding, Capital Preferences has gone on to develop revealed preferences diagnostics for measuring members' and clients' Retirement Income, Values/ ESG, Goals, Liquidity and Spending (time) preferences.



About the authors



Pat Spenner

Pat heads marketing and strategy at Capital Preferences, driving go-to-market strategy, messaging and thought leadership. He is a co-author of *The Challenger Customer*, a Wall Street Journal best-selling book on B2B marketing and sales, and has contributed to Harvard Business Review and blogged for Forbes. Pat lives on New Zealand's South Island with his wife, four children and two border collies.



Tyler Maxey

Tyler is the Research Director at Capital Preferences, heading up our economic modeling, parameter estimation, and experimental design. He earned his PhD in economics from Princeton University. Tyler lives in Berkeley, CA.



Youxiang Lei

Youxiang is a Summer Analyst at Capital Preferences and a final year student at the University of Auckland, pursuing a Bachelor's Degree with Honours in Engineering Science, Accounting and Finance. He lives in Auckland, New Zealand.

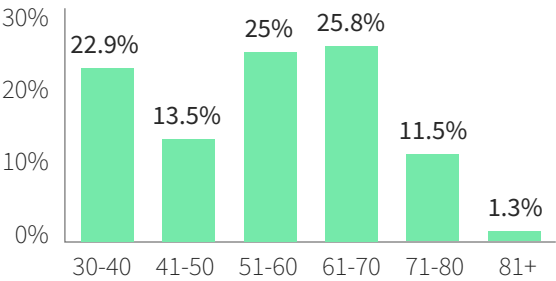


Nick Smith

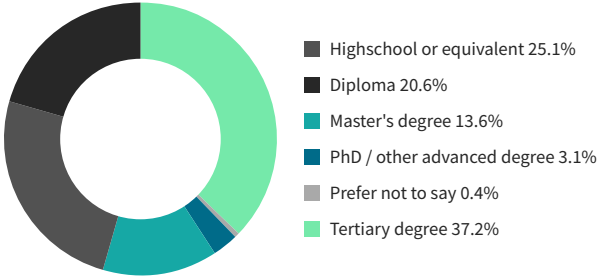
Nick is a Product Owner at Capital Preferences, focusing on research and product development. He has a passion for data. Nick is a graduate of University of Canterbury and lives in Christchurch, New Zealand.

Survey population statistics

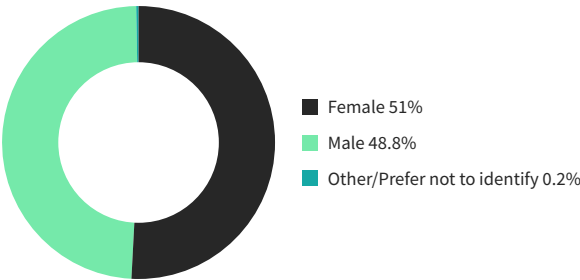
Age distribution



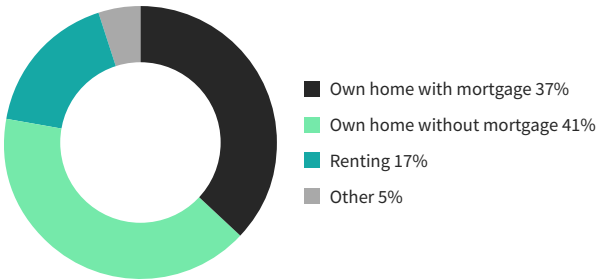
Education distribution



Gender distribution

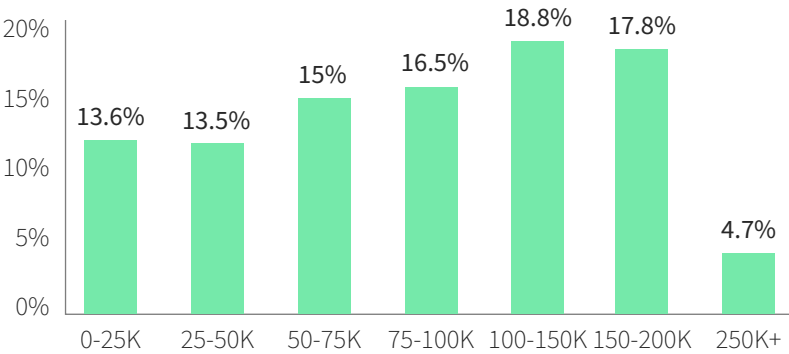


Home ownership distribution

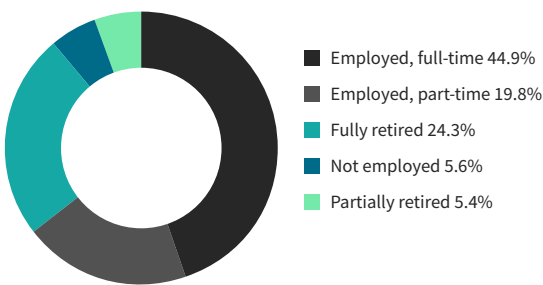


Survey population statistics

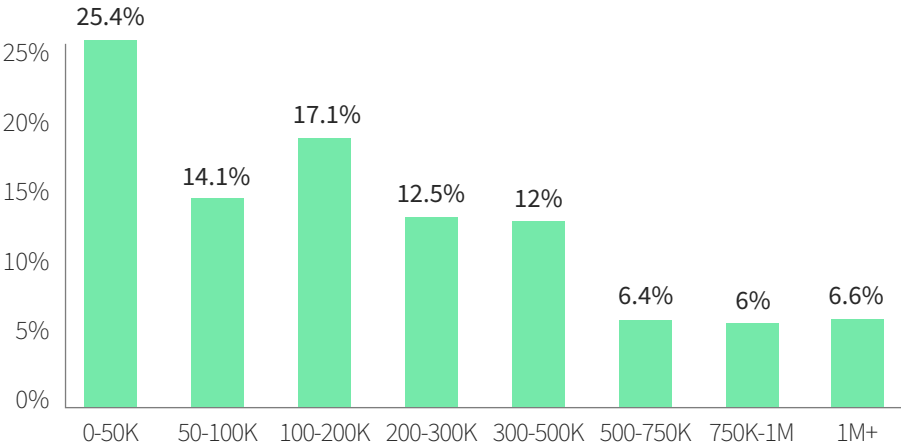
Annual pretax household income distribution



Employment distribution

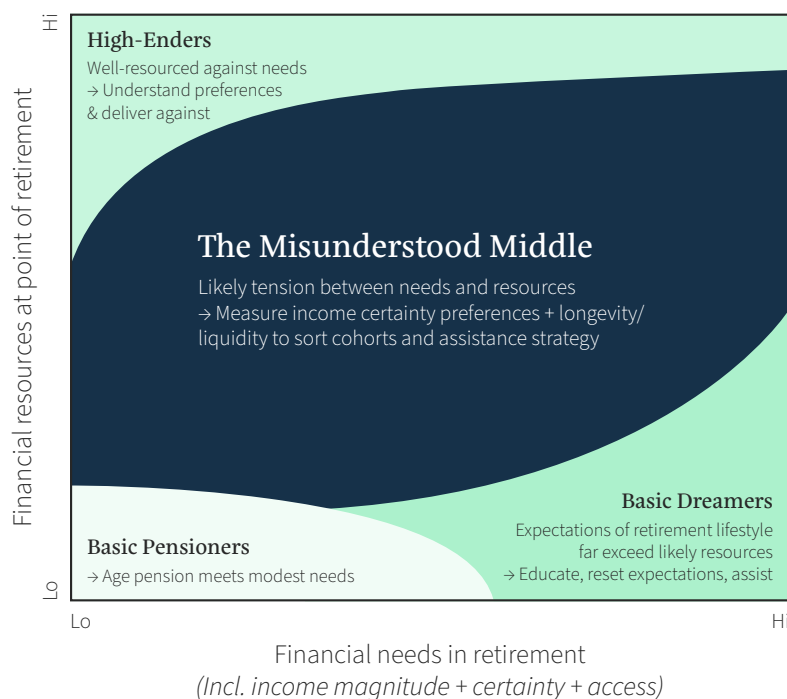


Individual super balance distribution



Basic RIC segmentation methodology

We applied the following RIC segmentation methodology on study participants who were 55+ years old and not fully retired.



Basic Pensioners & Dreamers

We looked at self-assessed age pension qualification. Those who indicated they expected full qualification were assigned “Basic Pensioner”. A further subset of individuals with total resource needs that were greater than 20% of their available resources in retirement (see below) were classified as “Basic Dreamers”.

High-Enders & Misunderstood Middle

“High-Enders” & the “Misunderstood Middle” were categorized based on their annual-retirement-needs-to-resources ratio, as per below:

1. Estimate financial resources available for retirement
 - The super balance amount available for retirement is taken as the current amount with a 6%¹ CAGR for # years until planned retirement age.
 - This is further supplemented by self-reported annual savings and the SG rate (11%) of reported individual income for # years until planned retirement age.
 - For singles with full (partial) age-pension eligibility, an age pension resource is added as \$25k (\$12.5k) multiplied by number of years spent in retirement² above the age of 66. This increases to \$38k (\$19k) for couples.
 - If have a partner, add the larger of \$150k or estimated partner super balance.³
 - If own home with mortgage, add \$500k; if own home with no mortgage, add \$750k
2. Estimate total resource needs in retirement
 - Total resource needs in retirement is computed by estimating the number of years in retirement² and multiplying this by their selected preferred lifestyle⁴
 - For those with a reported legacy goal and emergency fund amount, this is also added to their resource needs.
3. Calculate ratio of annualized financial needs (computed as total resource needs divided by estimated retirement duration) to estimated financial resources available for retirement
4. Those with a ratio $\leq 2.5\%$ were assigned “High-Enders”; those with a ratio $> 2.5\%$ who are not Basic Pensioners or Dreamers were assigned “Misunderstood Middle”

¹ A 3% CAGR was applied for individuals who were ‘partially retired’.

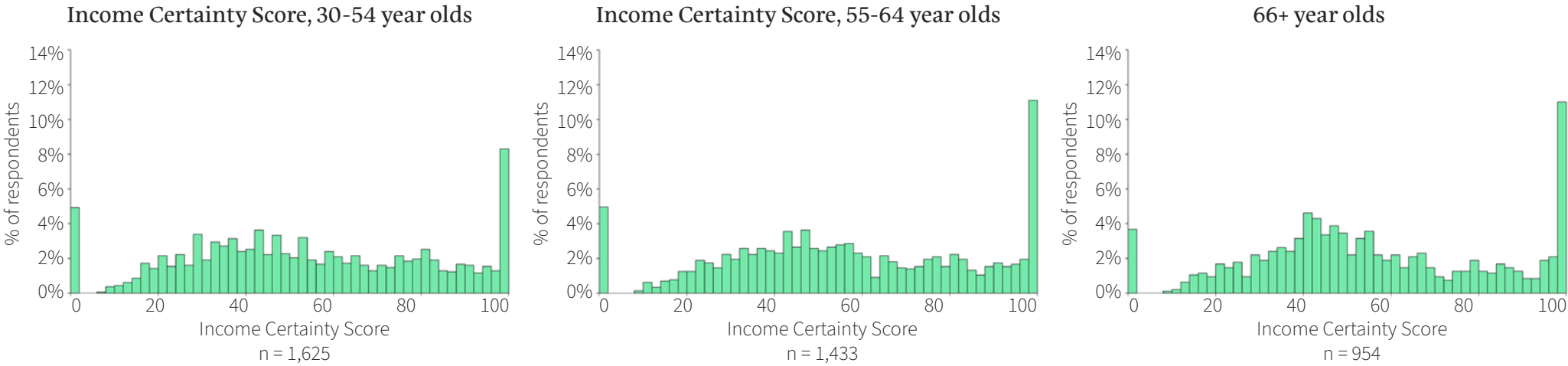
² Number of Years in retirement is calculated as the larger of an individual's reported life expectancy or expectancy based on actuarial tables minus their reported planned retirement age. Smokers had nine years deducted from their actuarial life expectancy.

³ Partner super is estimated by taking the mid-point of an individual's ‘household superannuation fund’ response minus their ‘current superannuation balance’ response.

⁴ Single monthly income by lifestyle: Basic \$2,100; Modest \$2,700; Comfortable \$4,200; Affluent \$5600; Affluent Plus \$7,300.
Couple monthly income by lifestyle: Basic \$3,200; Modest \$3,800; Comfortable \$6,000; Affluent \$8000; Affluent Plus \$10,000.

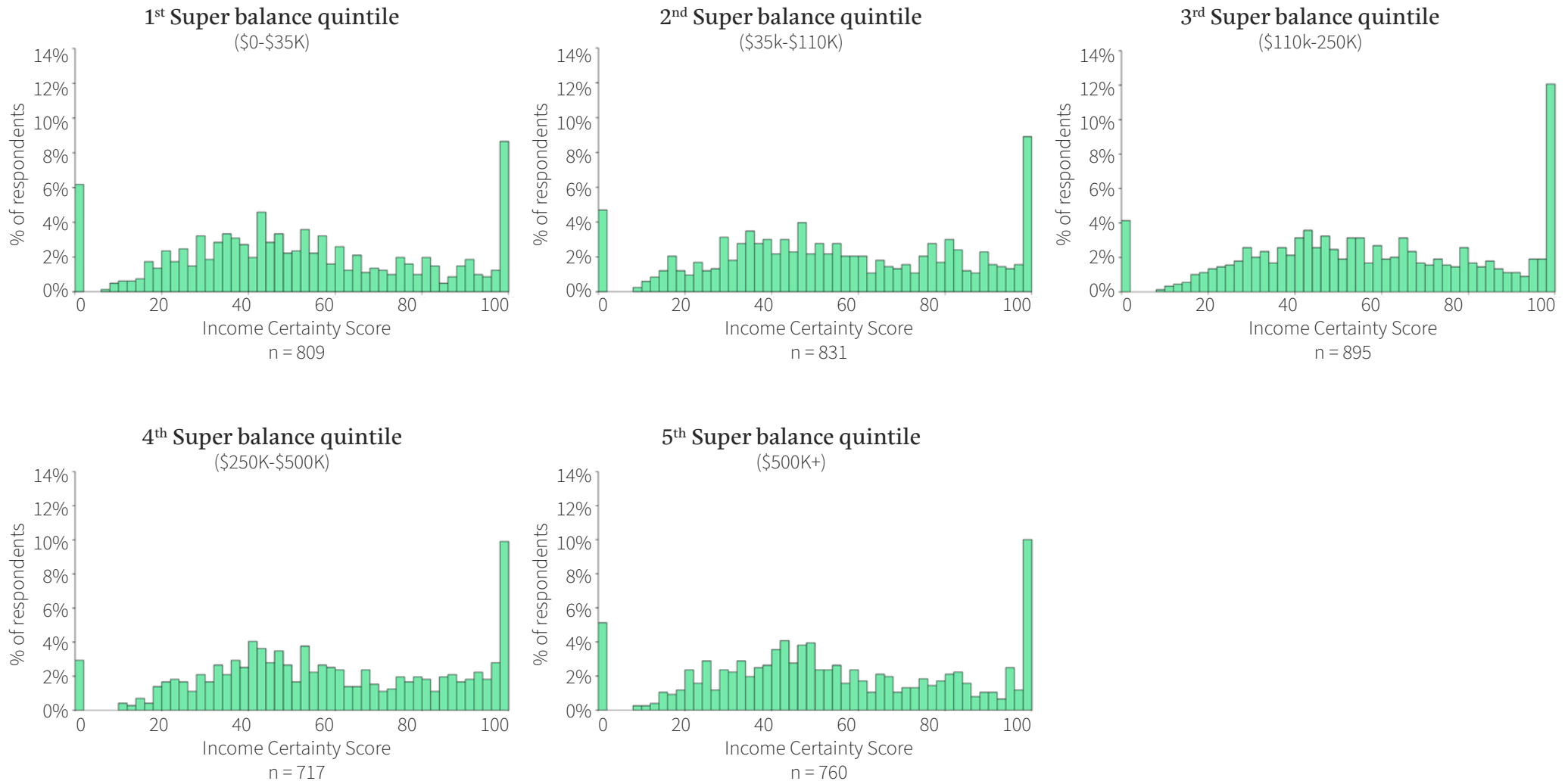
Appendix: Income Certainty Score distribution by age band

Based on each member’s decisions, we use economics and math to calculate an Income Certainty Score (ICS) – a standardized score measuring their income certainty preferences. ICS ranges from 0 to 100, where 0 corresponds to those who maximize returns and 100 for those who maximize certainty.



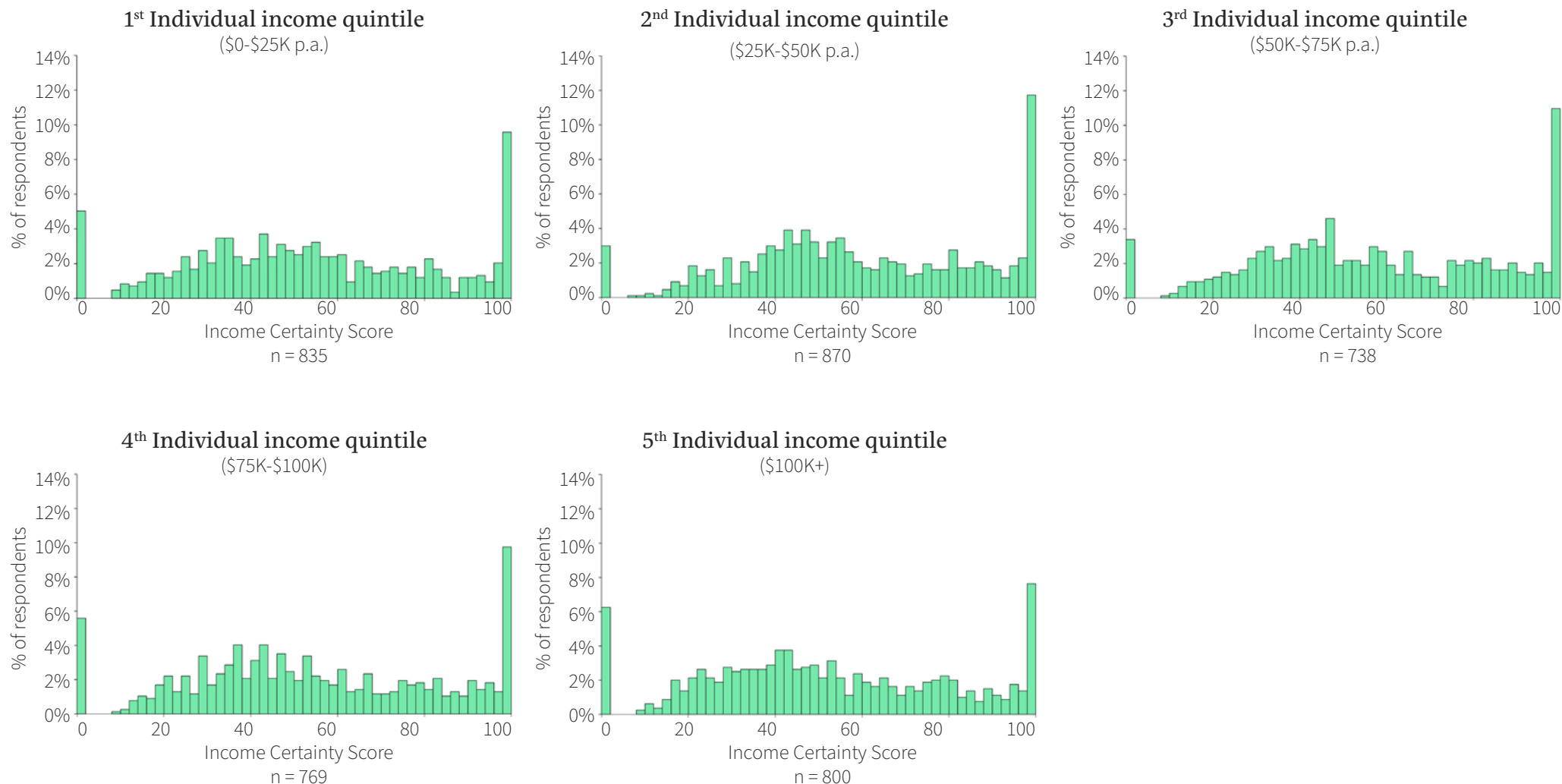
Appendix: Income Certainty Score distribution by superannuation balance

Based on each member's decisions, we use economics and math to calculate an Income Certainty Score (ICS) – a standardized score measuring their income certainty preferences. ICS ranges from 0 to 100, where 0 corresponds to those who maximize returns and 100 for those who maximize certainty.



Appendix: Income Certainty Score distribution by income band

Based on each member's decisions, we use economics and math to calculate an Income Certainty Score (ICS) – a standardized score measuring their income certainty preferences. ICS ranges from 0 to 100, where 0 corresponds to those who maximize returns and 100 for those who maximize certainty.



Appendix: Guaranteed Lifetime Income recommendation method

Trade off

GLI provides constant stream of income for life vs. portfolio draw down with some uncertainty (with mean/variance dependent on market and lifetime simulations).

Allocation

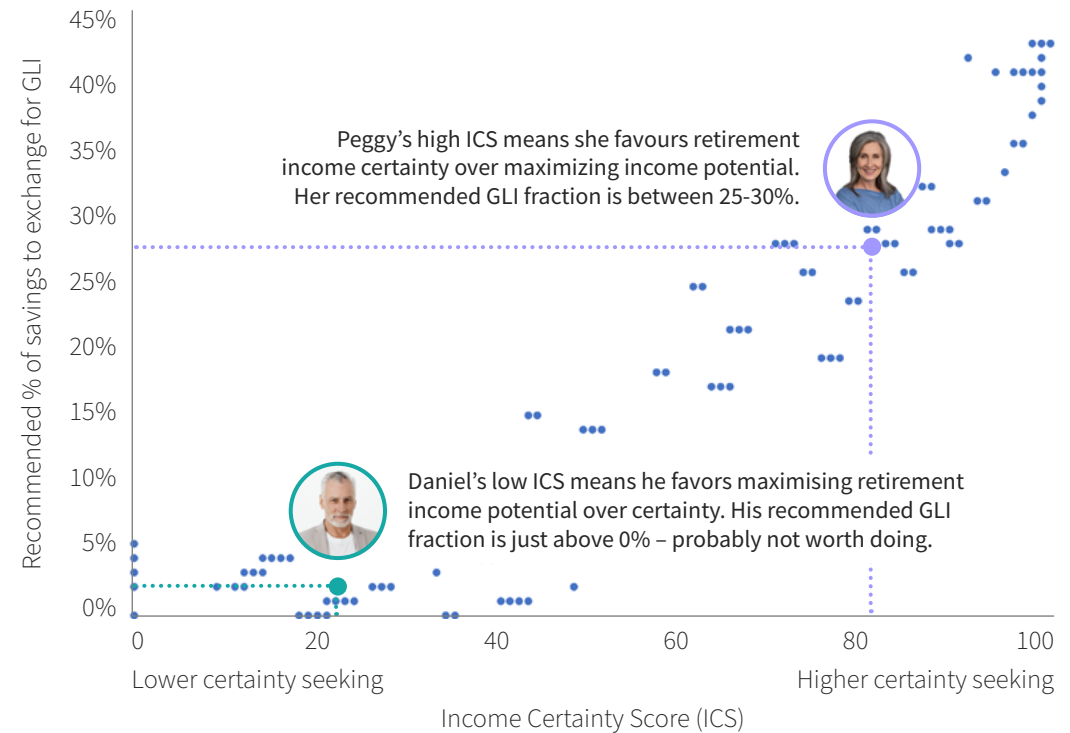
A utility model that uses Income Certainty Score (ICS) to find the optimal fraction of savings to go to GLI and portfolio (equity %) for remainder, subject to maximum GLI of 40%. We cap at 40% to follow industry standards.

Effect

Lower ICS favours higher expected returns at cost of higher uncertainty (like Daniel). Conversely, higher ICS accept lower expected returns for more certainty (like Peggy).

GLI recommendation by Income Certainty score

Age 55 – 65, Misunderstood Middle (n = 1,025)



Appendix: Guaranteed Lifetime Income gap estimation method

Implicit assumptions

- The relevant age for purchasing GLI products is between 55-74 years old.
- Income Certainty Scores (ICS) are independent of age and super balance
- For the purposes of this calculation, we assumed all 55-74 year olds have the same average balance amount of \$222K.

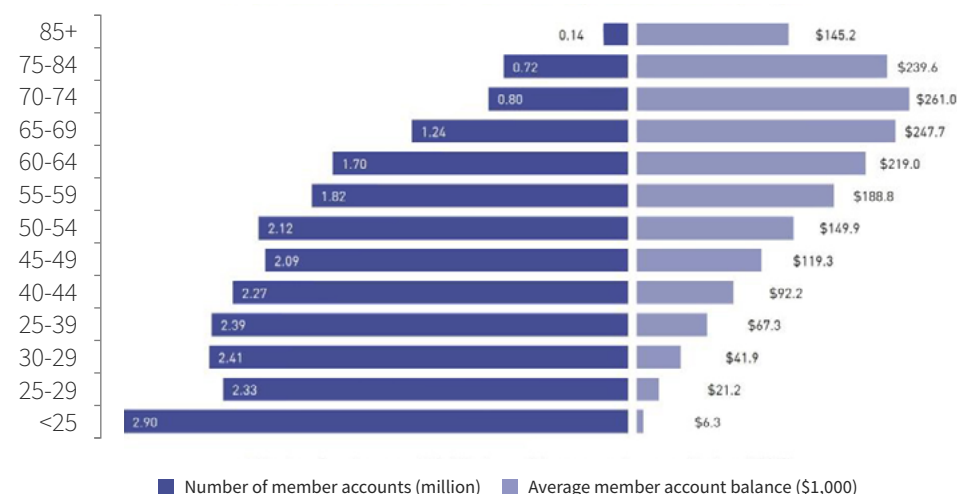
Methodology

The total addressable market for GLI products in Australia is taken as the total super balance of 55-to-74-year-old Australians as per the APRA (see graphic at right). To compute the recommended annuitization amount that maximizes utility, we mapped the sample income certainty score distribution, hence recommended annuitization % (see p. 26), for 55+ year olds in our study to the entire population.

From our study data, we found ~51% of individuals should annuitize between 0-10% of their balance, ~13.4% of individuals should annuitize between 10-20%, ~18.2% of individuals should annuitize between 20-30%, and 17.5% should annuitize between 30-40%.

Therefore, taking the middle-ground under each recommendation bracket, we estimate the market size for maximum retirement utility to be ~\$188B. To estimate the market gap, we subtracted out an estimated 3.5% of super currently in GLI products (~\$43B). This gives the estimated market gap figure of \$145B.

Member accounts and average balance by age



^aData is current as at 30 June 2023 and covers all APRA regulated superannuation entities with more than six members. Product composition data excludes Exempt Public Sector Superannuation Scheme entities.

^{*}There is a difference of \$85 billion in investments which were classified as MySuper investments in the previous publication (Quarterly Superannuation Performance). The majority of the difference is due to members who have a partial interest in the option underlying the MySuper product, as well as an interest in other investment options available through a Choice product. These members and the associated member assets are included in totals for choice products, and are excluded from the MySuper product classification. The remaining amount is due to reclassification of investments as not being a MySuper interest, and differences in the definition of total investments. See explanatory notes for further information.