

THE ORFORD INITIATIVE



ALLOCATING RETIREMENT FUNDS AND ANNUITY ATTRIBUTE PREFERENCES; FINDINGS FROM 2 CHOICE EXPERIMENTS JANUARY 2020 REPORT

Written by Teagan Altschwager and Jody Evans

Acknowledgments

This report presents the findings of two experiments with older Australians, exploring how they allocate money across retirement products and their preferences for various lifetime annuity attributes.

These two studies form part of a series of quantitative surveys and experiments conducted across 2019-2020 by Melbourne Business School. The project, entitled '*The Orford Initiative: Improving the retirement outcomes for Australians by optimising their retirement income and financial security*' is funded by the Orford Foundation in collaboration with the Melbourne Business School. The project team acknowledges the invaluable support of the Orford Foundation.

Please see the <u>Orford Initiative webpage</u> for further information on the background, motivations, and other research conducted as part of this project.

Project team

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The project team wish to acknowledge and thank Associate Professor Patrice Auger for his contributions to the design and analysis of the choice modelling studies in this report.

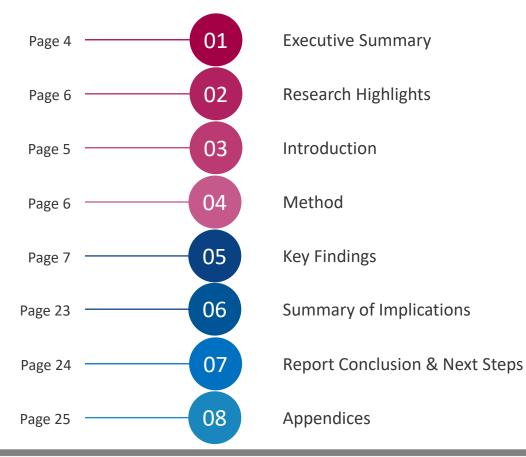
Research approach

The team adopts an engaged research approach to all projects. Engaged research is based on authentic partnerships with communities and organisations to craft a research program that creates value with and for communities or organisations and that has aligned academic outcomes.

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Table of Contents



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1. Executive Summary

Despite ageing population trends and the increasing risk of outliving our retirement savings, Australians are underprepared and disengaged with retirement. In response, the Melbourne Business School's Orford Initiative conducted two major experiments employing *choice modelling techniques* with older Australians. These experiments investigate how people allocate their retirement savings across a series of options (experiment 1), and how they make decisions about lifetime annuities when faced with varying product attributes (experiment 2).

The results highlighted in this report reveal two major findings. **First**, when asked to allocate retirement funds across various products and options, there is a distinct segment – referred to in experiment 1 as the 'Annuity segment' – who have an appetite for annuity products. Our findings demonstrate that members of the Annuity segment allocate almost half of their funds (46%) in a lifetime annuity , and a further 20% of funds across other annuity options (fixed-term and deferred). For this segment, annuity options represent their dominant retirement income strategy.

Overall, when given a simple retirement savings allocation task, there is demand for annuities – particularly for the Annuity segment – however overall figures also indicate allocation patterns of lifetime annuities as similar to 'cash in the bank' and 'personal investment' options (all hovering within the 15-20% allocation bracket).

The **second** major finding is the dramatic shift in behaviour that occurs when consumers are faced with making decisions across complex annuity attributes. When consumers are *forced to choose* between annuity products (experiment 2), they prefer products that provide *a death benefit, higher monthly income,* and a *period certain guarantee.* However, when given the option to 'not choose either product', the preference to avoid the choice dominated decision making. In fact, the importance of the 'no choice' option is greater than the importance of all other attributes *combined*.

The stark contrast in findings across experiment 1 and 2 speaks to a consumer desire to avoid complex product decisions. Experiment 1 shows that there is demand for annuity allocations; people are simply scared by the terminology and the complex detail presented in experiment 2, they would rather avoid the decision alltogether.

For products that are, by their very nature, complex, these findings suggest that the complexity of annuity attributes is overwhelmingly prohibitive to consumer decision making. A drastic shift towards simplification of information and choice (while adhering to product disclosure requirements) is recommended for annuity and retirement income product providers.

3. Introduction

Australians need to make important decisions about how to allocate their money as they enter retirement; they also need to compare and make choices across complicated retirement products.

To better understand these decision making processes, the Melbourne Business School's *Orford Initiative* explores the retirement income preferences and trade-offs of older Australians through two choice modelling experiments.

Experiment 1 investigates how people allocate their funds across seven retirement income options, including

- Account-based pensions
- Lifetime, Fixed-term, and Deferred annuities
- Personal investments
- Cash in the bank
- Funds for immediate use

Experiment 2 focuses specifically on the relative importance of various lifetime annuity attributes, including

- Monthly income
- Death benefits
- Reversionary pensions
- Period certain guarantees
- Investment type (capital guaranteed versus investment-linked)
- Access to capital

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The Orford Initiative aims to help retirees in Australia to optimise their lifestyle for the duration of their retirement, through addressing the following research objectives:

- 1. To objectively investigate the value of lifetime pensions, annuities and other forms of optimising income and financial security in retirement.
- 2. To test and identify the most effective mechanisms that
 - Reach retirees (or those nearing retirement)
 - Educate and inform them about their retirement planning options
 - Engage them in the decision-making process
 - Influence their choices so that they make the optimum decisions to suit their lifestyle and retirement goals

4. Method

Each experiment reflects a representative cross-section of Australians nearing or in retirement.

Experiments were distributed by Qualtrics, and took an average (median) of 18m (experiment 1) and 14m (experiment 2) to complete. Data quality was assessed for speeders¹, flatliners² and those who provided incomprehensible responses to a written question. Responses that did not satisfy quality requirements were removed from analysis. 616 (experiment 1) and 538 (experiment 2) quality responses were maintained for analysis.

Quotas were employed to ensure balance across key population characteristics and representation of relevant groups of interest. Respondents are representative of Australian demographics in terms of gender and age³. Respondents also represent a cross-section of education levels, household annual income brackets, and stages of retirement (not retired, partially retired, fully retired, and never worked). See Appendix A1 for a summary of respondent characteristics. The survey was constructed using established measures from academic literature, (see Appendix A2 for a complete list of measures and their sources).

Each experiment was designed using Sawtooth Choice Modelling software. Experiment 1 employed a *percentage allocation design* to

understand allocation preferences across product options (see page 7 for more detail and appendix A4 for choice design) and experiment 2 employed a *discrete choice design* to uncover relative importance of annuity attributes across various levels (see page 13 more for detail and appendix A7 and A8 for choice design).

The benefit of choice modelling methods is in the creation of *tradeoffs* – these tasks force people to make sacrifices and decisions between products/ attributes, rather than simply stating that 'everything is important'. Tradeoffs are more reflective of real life decision making – often the 'perfect product' with *all of the best features* either does not exist or is prohibitively expensive; therefore people are forced to make sacrifices in order to get the attributes that are of greatest value to them.

Notes:

¹ Speeders complete the survey significantly shorter or longer than average.

² Flatliners answer questions in noticeable patterns or give exactly the same response to majority of questions (e.g. all 7s).

³ Peopled aged 50+ qualified to participate in the survey given their proximity to retirement, and likely recency of considering retirement issues and engaging in retirement decision making.

Experiment 1 investigates how people allocate their retirement savings across a series of options by employing a percentage allocation choice modelling design.

In this choice task, respondents were asked to imagine they had a certain amount of retirement savings* that they must allocate across the following seven options;

Account based pension	Lifetime annuity	Fixed-term annuity <i>(15 years)</i>			
Deferred annuity (from age 80)	Personal investments	Cash in the bank (no investment plans)			
Funds for immediate use (e.g. to pay debts or make a large purchase)					

Over 7 tasks, respondents were shown various combinations of 5 *product options* (see appendix A4 for an outline of product combinations displayed in each task). A balanced choice design ensured all options were equally represented (i.e. each option appeared 5 times across the 7 options).

Prior to the choice tasks, respondents were shown a table of key product/ option features (see appendix A3). They were also provided a condensed table *during* each task to enable quick and simple comparison of the specific options within that task (see appendix A5 for an example).

Notes:

* Respondents were randomly shown one of three retirement savings amounts - \$100,000, \$300,000 or \$500,000. Results found no significant differences in allocation behaviour across retirement savings conditions; therefore the results are reported in aggregate.

Initial patterns and preferences in allocation behaviour; the power of three.

The findings revealed interesting patterns of respondent behaviour;

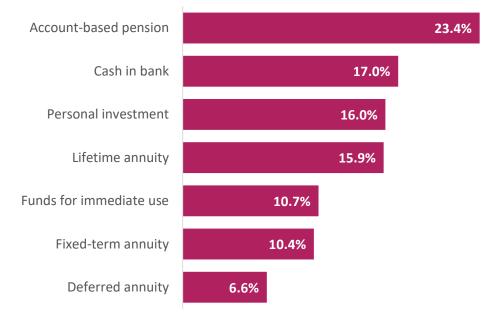
- On average, respondents allocated their funds across 3 options (mean = 2.80)
- Almost 40% of respondents allocated their funds to the same number of options across the 7 allocation tasks, irrespective of the choices available to them;
 - 16% always allocated 100% of funds to 1 option
 - 15% always allocated funds to all 5 options

In promoting retirement income products, recognition should be given to the tendencies and heuristics that people employ to help them make decisions. A preference towards *three* may indicate that choices involving more than three options is 'too many' for a consumer to meaningfully or comprehensively evaluate (cognitive overload), particularly for complex products.

Account-based pensions dominate allocation preferences *on average*; however, averages can be misleading

Figure 5.1 reflects the general allocation preferences for the overall sample of respondents (n=616). This indicates that on a broad level account-based pensions dominate allocation preferences, with an average of 23.4% funds allocated to this option. *Cash in the bank, personal investment, and lifetime annuities* have a similar level of demand, and demand is lowest for the deferred annuity option with an average of 6.6% funds allocated.

However, averages can be misleading when there are significant differences in behaviour between distinct groups of people. Segmentation analysis allows the identification and comparison of groups more accurately, and better captures the allocation preferences among similar people.



5.1 AVERAGE PERCENTAGE ALLOCATION ACROSS PRODUCTS

Five distinct consumer segments were identified

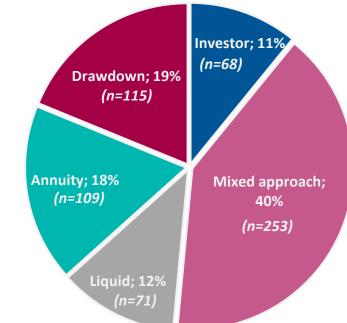
Five key consumer segments were identified based on how they allocate their retirement funds. Figure 5.2 identifies each of the 5 segments and their relative size (based on the overall sample of 616 respondents).

The *mixed approach* group are the largest segment (40% of respondents), followed by the *drawdown* segment (19% of respondents).

The annuity segment comprises 18% of respondents, and – as the name suggests – their main allocation preferences are towards lifetime annuities and other annuity options. This segment of almost 20% of respondents reflects that there is indeed a demand for annuities among consumers; a strong contrast to some perceptions in the industry that 'Australians hate annuities'.

Each segment is now explored in detail.

5.2. CONSUMER SEGMENTS BASED ON ALLOCATION PREFERENCES



These five segments help to explain allocation preferences

Figure 5.3 compares the average allocation behaviours across each of the 5 segments.

- The *investor* segment is mainly allocating towards personal investments or account-based pensions. The *drawdown* group have similar product preferences to investors but in reverse; they are using ABP predominantly (56.8% average allocation) and then the next highest is personal investment.
- The *mixed approach* group 'hedge their bets' by allocating a little money across all options*, with a slight preference for account-based pensions and fixed-term annuities.
- Members of the *annuity* segment allocate on average 46% of funds in a lifetime annuity, and another 20% to other types of annuity, reflecting a major preference for annuity options. This shows that there is a strong level of interest, at least by this segment of people, to allocate money towards annuities.

Product	Investor	Mixed Approach	Liquid	Annuity	Drawdown
ABP	20.4%	18.1%	11.9%	10.1%	56.8%
Cash	14.8%	14.9%	52.4%	9.6%	8.0%
Personal investment	49.6%	13.0%	6.9%	7.1%	16.9%
Lifetime annuity	3.3%	14.6%	3.1%	45.8%	5.6%
Funds for immediate use	6.7%	12.2%	23.4%	6.8%	5.7%
Fixed-term annuity	3.8%	17.1%	1.1%	10.6%	4.9%
Deferred annuity	1.4%	10.1%	1.2%	10.1%	2.1%

5.3. ALLOCATION PREFERENCES ACROSS SEGMENTS

Notes:

* The mixed approach does not reflect an inattentiveness or evidence of 'speedy' answers from the respondent – respondents who allocated 20% to all 5 options across all 7 choice tasks were removed during data cleaning.

Segment membership is mainly driven by level of retirement savings

Level of *retirement savings* is a major factor in determining segment membership, as well as *annuity purchase intention* (appendix X). Figure 5.4 graphs the relationships between segment membership retirement savings across three brackets.

- People with high retirement savings (<\$500,000) are more likely to be in the *Drawdown* group (those who mainly allocate to ABP) than those with low savings for retirement.
- The opposite is true for the Liquid group; people with low retirement savings (>\$100,000) prefer liquid assets (cash and immediate funds) compared to those with higher savings. Those with low retirement savings are also more likely to be in the Mixed approach group.
- The Annuity segment shows relatively stable membership likelihood across savings levels (a v-shaped curve with no significant difference between retirement savings brackets). This means that an individual's level of retirement savings does not seem to effect the level of investment they are willing to allocate to a lifetime annuity.



5.4. DRIVER OF SEGMENT MEMBERSHIP - RETIREMENT SAVINGS

Immediate funds are being used for travel.

On average 10.7% of funds are allocated to 'funds for immediate use' (figure 5.1), with above average allocations made by the Mixed approach group (12.2% and the Liquid group (23.4%) (figure 5.3). Respondents were also asked how they might use their funds immediately at retirement (rather than investing or managing that money to use later in retirement).

Figure 5.5 shows how respondents wish to use this money; the main use is for travel, while other popular uses of these funds are to pay off *other* debts (other than home mortgage), and pay for home renovations and upgrades.

'Other' uses for this money include 'to set aside for emergency funds', 'large purchases needed to make retirement comfortable' and 'preparing the home for homecare services'.

These findings reflect a desire for people to embrace their new retirement lifestyle by taking time for themselves to travel, as well as wanting to begin this new phase of life unburdened by debt.

5.5. IMMEDIATE CONSUMPTION OF FUNDS IN RETIREMENT



Notes:

* Respondents could select more than one answer; frequency values are reported.

Experiment 2 investigates how people make decisions about lifetime annuities when faced with varying product attributes by employing a discrete choice modelling design.

In this choice task, respondents were asked to imagine they were 65 and considering putting \$100,000 of their retirement savings into a lifetime annuity. Over 16 choice tasks, respondents were presented with 2 lifetime annuity products, each with different product attributes (see appendix A6 for an overview of attributes and levels, and A7 for product attribute combinations across each task). These attributes include;

Starting monthly income (\$250, \$350, \$450, \$550)	Reversionary pension (none, partial, full)	Period certain guarantee (none, 10-year, 20- year, 30-year)
Payout at death <i>(yes, no)</i>	Investment type (capital guaranteed, investment linked)	Access to capital (yes, no)

A balanced choice design ensured adequate representation and variation across attributes and levels to allow for accurate analysis of tradeoffs (without having to include *every possible* combination of attributes/levels). This approach also excludes 'extreme' attribute combinations (i.e. a product will not have *all* of the best (worst) level of features and the highest (lowest) price, as these are clearly (inferior) superior product choices that don't aid in exploring attribute tradeoffs.

First, respondents was asked to select their preferred product (A or B), and were then asked 'given the option, would you really buy the annuity you chose above' (yes or no) (see appendix A8 for an example of the task). This allowed us to capture a 'forced choice' (where respondents had to select a product) as well as a 'full choice' (where they were given the option to not make a choice).

Prior to the choice tasks, respondents were shown a table that explained each annuity attribute, and possible levels (see appendix A6). They were also presented the 2 annuity products in a table detailing the attributes *during* each task for comparison (see appendix A9 for an example).

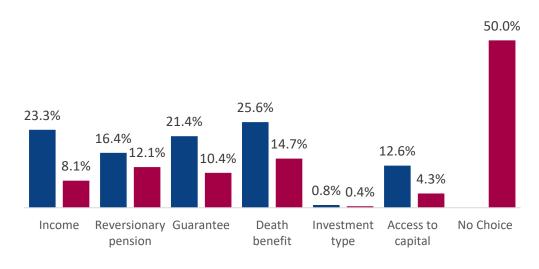
Relative importance of Attributes – Forced choice versus Full choice

Figure 5.6 shows the relative importance for each annuity attribute, across both forced choice (people had to choose between products) and full choice conditions (people had the option to choose 'neither' product).

When forced to make a choice, the dominant drivers of choice are *death benefits, income* and *period certain guarantee*. *Reversionary pension* and *access to capital* drive choice to a lesser extent, and *investment type* (investment-linked versus capital guaranteed investment options) has zero impact on product choice.

However, once respondents are given the option of 'no choice' (the 'full choice' values charted in maroon), then this option dominates all other attributes (with 50% importance given to 'no choice').

5.6. RELATIVE ATTRIBUTE IMPORTANCE (%)



■ Forced choice ■ Full choice

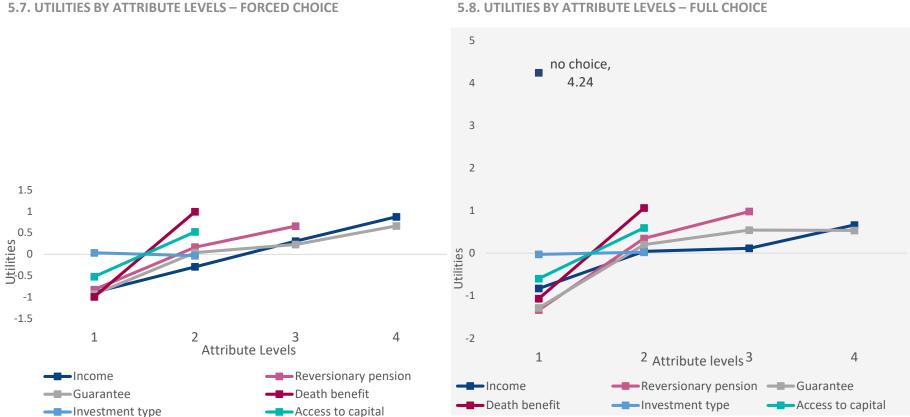
Two utility graphs are compared on the next page to demonstrate the relative importance of attributes across attribute levels, and to further highlight the dramatic impact of giving people the choice *to not choose*.

Figure 5.7 (left) maps the relative importance (utility) of attributes across attribute levels when respondents are forced to choose a product. When forced to make a choice, respondents evaluate the product attributes rationally across attribute levels. They prefer:

- Higher income over lower income
- Full reversionary pension over partial and none
- Longer guarantee over shorter guarantee
- Death benefits over no death benefits
- Access to capital over no access to capital

However, the introduction of 'no choice' (figure 5.8) dramatically alters choice behaviour:

- The "no choice" option has the same relative importance as the other 6 product attributes *combined*.
- The *income* attribute in the forced choice graph (figure 5.7) indicates a strong linear relationship, with increased relative utility across each attribute level (i.e. as income increases). However, when the 'no choice' option is introduced, income levels 2 and 3 now have essentially the same level of importance (figure 5.8); only at the highest and lowest income levels is a difference in importance apparent.

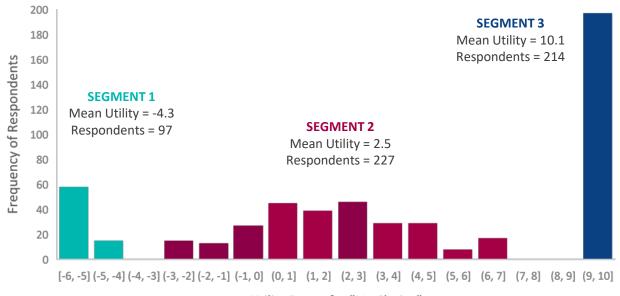


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3 Segments based on Propensity to Choose the No Choice Option

Figure 5.9 identifies three key segments that emerged based on the relative importance (utility) of the 'no choice' option.

This segmentation method allows us to compare people based on their propensity to choose the 'no choice' option, which is either extremely high (Segment 3), moderate (Segment 2) or very low (Segment 1).



5.9. FREQUENCY OF 'NO CHOICE' UTILITY

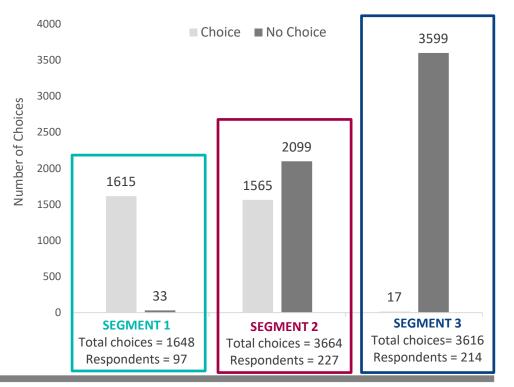
Utility Range for "No Choice"

Number of Choice and No Choice per Segment

Figure 5.10 illustrates how dramatic the choice differences are between segments. For each segment, a 'choice count' is reflected (how many times in total did respondents in each segment make or not make a choice).

- In segment 1, out of 1648 available choices, respondents made 1615 choices and only 33 'no choice'
- The complete reverse is seen for segment 3 where out of 3616 available choices, 3599 decisions were 'no choice'.
- This shows how dramatically different the segments are in their behaviour some make a product choice all the time, some never choose, and then segment 2 is somewhere in the middle with greater balance, however with a preference to not choose.

5.10 NUMBER OF 'CHOICE' AND 'NO CHOICE' PER SEGMENT



Drivers of Segment Membership

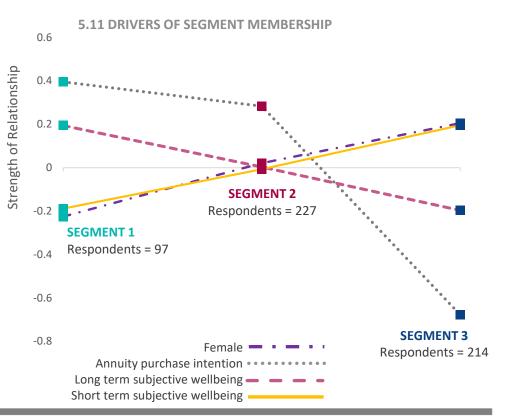
Figure 5.11 demonstrates the drivers of segment membership to determine common traits between members.

- Females are more likely not to choose between annuity products (are more likely to be in segment 3)
- In contrast, people with higher *annuity purchase intentions* are more likely to be in segment 1 (those who almost always make a product choice).

An individual's *subjective financial wellbeing*, from both a short term and long term perspective, is also a significant driver of segment membership (see page 21 for further details). While the graph appears to show inverse relationships for short term and long term wellbeing, both are in fact positive relationships;

• The greater an individual's subjective *short term* and *long term* financial wellbeing, the more likely they are to make annuity choices (segment 1) and vice versa.

This is because the short term wellbeing questions are reversecoded (outlined on page 21).



Subjective financial wellbeing

Figure 5.12 details respondents' subjective wellbeing in both the long term (questions 1-3) and short term (questions 4-8 outlined in maroon). Note the short term questions are each presented in a *negative frame* (referred to as 'reverse-coded'), i.e. greater agreement with these statements indicates *lower* wellbeing, versus greater agreement with the long term questions indicates *greater* wellbeing.

Findings reveal that, in the long term, 60% of respondents strongly or partially believe that *their money will not last as long as they do* (Q2 & 3). However, in the short term, they do not report strongly negative wellbeing; only 25% strongly believe that they are behind on their finances (Q5), and only 18% strongly feel that they are unable to enjoy life because of money (Q8).

This disconnect between short and long term subjective financial wellbeing perceptions may reflect a tendency to ignore or deflate the importance of financial stress in the long term and instead focus on immediate financial priorities.

5.12. SUBJECTIVE FINANCIAL WELLBEING

I will achieve the financial goals that I have set for myself	30%	22%	48%	4.2
I have saved/will be able to save enough money to last me to the end of my life	43%	17%	40%	3.8
I will be financially secure until the end of my life	42%	18%	40%	3.8
Because of my money situation, I feel I will never have the things I want in life	43%	20%	38%	3.9
I am behind with my finances	59	%	16% 25%	3.1
My finances control my life	49%	2:	1% 30%	3.5
Whenever I feel in control of my finances, something happens that sets me back	46%	20%	6 35%	3.7
I am unable to enjoy life because I obsess too much about money	6	5%	17% <mark>18%</mark>	2.9

■ Does not describe me (1-3) ■ Neutral (4) ■ Describes me completely (5-7)

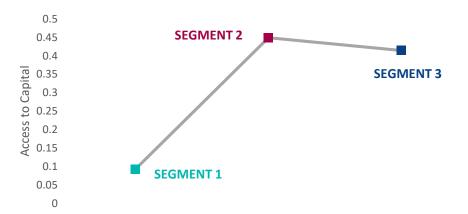
Average

Differences Between Segments for Forced Choice

Figure 5.13 reports comparisons in attribute preferences between the three consumer segments – this process is to check for systematic ways that segments might make choices when they are forced to do so. This is most important for segment 3 (who never make a choice when given the option) and segment 2 (who tend towards the 'no choice' when given the option).

Figure 5.13 demonstrates that segments 2 and 3 systematically give preference to products with *access to capital* (all other annuity attributes were insignificant). This finding indicates that when people are forced to make a choice, they favour access to capital i.e. the attribute that essentially 'gets them out of that choice'. This result may also provide an explanation for low annuity demand from these segments – these individuals may dislike annuities because it provides them with little access to funds.

5.13. DIFFERENCES BETWEEN SEGMENTS AND FORCED CHOICE



6. Summary of implications

The findings demonstrate two somewhat conflicting phenomena; there is a definite demand for lifetime annuities, however when faced with specific annuity comparisons people refuse to make choices.

1. A demand for annuities. Findings from experiment 1 reveal a segment of consumers (almost 20% of the sample) who make significant allocations to annuity options (particularly lifetime annuities). This indicates that, when given a simple choice, and without an abundance of overwhelming options, attributes and financial jargon, there are Australians who would consider annuities as a fairly significant retirement income strategy as they reach retirement.

In addition, while *retirement income savings* helped to derive meaningful consumer similarities for some segments (e.g. people with high savings are more likely in the *drawdown group* whereas people with low savings are more likely in the *liquid* segment), it did not explain membership into the annuity segment. While this finding does not illuminate consumer segmentation insights for annuities per se, it does imply that broadly consumers have similar interest in this style of product, rather than only appealing to a niche market with a particular level of retirement savings. It is recommended that this segment be investigated further to find the underlying mechanisms driving membership, to better understand these consumers and tailor messages accordingly.

2. An aversion to complex comparisons and decision making. The overwhelming message from experiment 2 is that people are uncomfortable making choices, even when there is no 'skin in the game' (these choices are theoretical in an experiment). The importance of the 'no choice' option is greater than *the sum of* the importance of the other factors combined, which speaks volumes about the extent to which people want to avoid making a choice. Observed in isolation, this result might lead one to believe that consumers simply have no interest in lifetime annuities; however, we know from experiment 1 that there is a clear segment who is willing to invest almost half of their retirement funds in a lifetime annuity.

So why do we see such a vast difference in behaviour in experiment 2? We believe the key difference lies in the complexity of the choice; when asked to make complex trade-offs between attributes and across various levels, the best choice is simply *to not choose at all*. Annuity providers are urged to consider the complexity of their messaging and what strategies might help break complex decisions down into smaller, more digestible steps for the consumer.

7. Report Conclusions and Next Steps

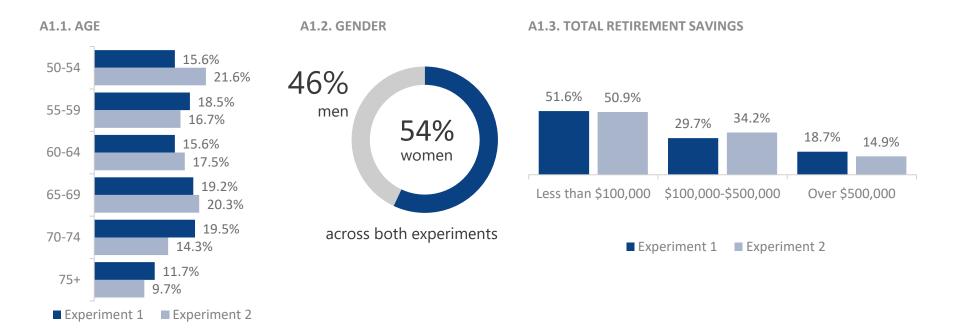
In conclusion, this report has highlighted the key findings of two choice modelling experiments from *the Orford Initiative*.

When faced with a simple retirement savings allocation task, people are willing to consider lifetime annuities – in particular those in the *annuity* segment are willing to allocate almost half of their funds to lifetime annuities, and a further 20% to other annuity options, making 'annuity options' their prominent retirement income strategy.

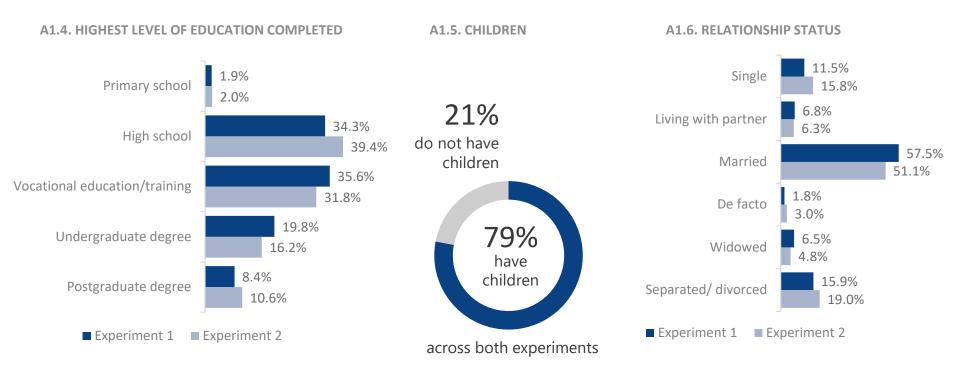
However, once complex trade-offs and information about annuity attributes are introduced, the demand for annuities declines substantially. Consumers either become scared or no longer care about the decision, and prefer to avoid making a choice entirely. Product messaging must be simplified (within regulatory boundaries) so that people do not decide to just walk away. Additional drivers of segment membership and potential messaging interventions are identified as beneficial next steps in the research. Follow-up experiments are currently in development.

- 1. Emotional messaging appeals will be tested to explore any mitigating effects it might have on an otherwise overwhelming level of complicated attribute information (which has led to the dominance of 'no choice' decision making).
- We wish to explore other potential mechanisms at play that might be driving segment membership, for example an individual's appetite for risk might explain why some consumers 'hedge their bets' across various retirement income products or choose particular lifetime annuity attributes.

A1 Respondent Characteristics: Demographics

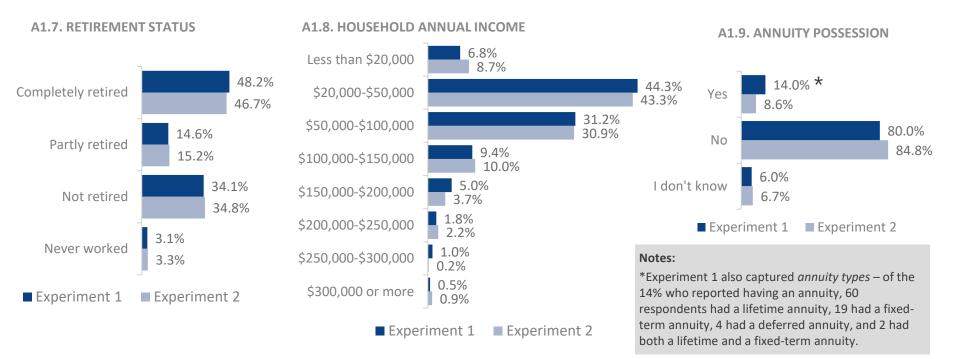


A1 Respondent Characteristics: Demographics



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A1 Respondent Characteristics: Retirement status and intention



A2 Survey measures – Experiment 1 - questions and sources

Each question begins with 'Please indicate how much you agree or disagree with each of the following statements', rated on a 7point Likert scale (where 1=strongly disagree, 7=strongly agree), unless indicated otherwise.

Subjective Financial Wellbeing (expected future financial security and current money management stress)¹

- 1. I will achieve the financial goals that I have set for myself
- 2. I have saved (or will be able to save) enough money to last me to the end of my life.
- 3. I will be financially secure until the end of my life.
- 4. Because of my money situation, I feel I will never have the things I want in life. (R)
- 5. I am behind with my finances. (R)
- 6. My finances control my life. (R)
- 7. Whenever I feel in control of my finances, something happens that sets me back. (R)
- 8. I am unable to enjoy life because I obsess too much about money. (R)

Financial literacy²

1. Suppose you put \$100 into a no-fee savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?

- More than \$102 Exactly \$102 [correct]
- Less than \$102
- Don't know

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2. Imagine now that the interest rate on your savings account was 1% per year and inflation was 2% per year. After one year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?

- More than today
- Exactly the same as today
- Less than today [correct]
- Don't know

3. Do you think that the following statement is true or false? "Buying shares in a single company usually provides a safer return than buying shares in a number of different companies."

- True
- False [correct]
- Don't know

4. Again, please tell me whether you think the following statement is true or false: "An investment with a high return is likely to be high risk."

- True [correct]
- False
- Don't know

5. Suppose that by the year 2025 your income has doubled, but the prices of all of the things you buy have also doubled. In 2025, will you be able to buy more than today, exactly the same as today, or less than today with your income?

- More than today
- Exactly the same as today [correct]
- Less than today
- Don't know

Annuity possession³

An annuity is a retirement income product which pays you a regular income throughout your retirement. There are three main types of annuities;

- A fixed term annuity pays you a regular income for a fixed amount of time (e.g. 15 years).
- A deferred annuity pays you a regular income commencing at a certain age (e.g. 80 years old) and lasting for the rest of your lifetime.
- A lifetime annuity pays you a regular income commencing when you retire and lasting for the rest of your lifetime.

To receive these benefits, an initial investment is paid to a provider before the annuity starts. This style of product is designed by large financial firms, like insurance companies and superannuation funds, to cover spending and manage financial risks in retirement.

Do you own an annuity? (please select all that apply)

- Yes a lifetime annuity
- Yes a fixed term annuity
- Yes a deferred annuity
- No
- I don't know

A2 Survey measures – Experiment 1 - questions and sources continued

Product Comprehension Matrix⁴

Based on the information above, please check all of the following statements that apply to each product. There is no penalty for getting an answer wrong, we simply want to know whether the product information was difficult or easy to understand. Statements were asked for each product in the allocation task (Lifetime annuity, deferred annuity, fixed term annuity, account based pension, cash in the bank, personal investments, and funds for immediate use).

- I can withdraw a lump sum for unforeseen events.
- If I die, payments stop.
- I will receive a regular income for as long as I live.
- My balance will fluctuate with financial markets.
- Payments are guaranteed to me/beneficiaries for the first 15 years.
- None of these apply.

Immediate consumption/needs⁴

In at least one of the previous tasks, you allocated some money for immediate use. How would you spend this money? Please select all that apply

- To pay off my home mortgage
- To pay off other debts
- To buy a car, caravan, boat or other leisure craft
- To buy consumer durables (household white goods, a new car)
- To travel
- To provide a gift to family members
- To reduce assets/income in order to qualify for the Age Pension
- To pay for home renovations/upgrades
- Other (please specify): ______

Attitude towards annuities⁵

Please evaluate your view on purchasing a pension/annuity according to the following attributes. (7pt semantic differential) Purchasing a lifetime pension/annuity is... 1. 1= Harmful; 7= Beneficial 2. 1=Foolish; 7=Wise 3. 1=Unnecessary; 7=Essential 4. 1=Difficult; 7=Easy

Behavioural intention (shown to respondents who did not report having an annuity) ⁵

Please indicate how likely or unlikely it is that you will engage in the following behaviours: (*7pt Likert*)

- 1. I intend to buy a lifetime pension/annuity in the future
- 2. I will make an effort to buy a lifetime pension/annuity in the future
- 3. I want to buy a lifetime pension/annuity in the future

Net Promotor Score (shown to respondents who did report having an annuity)

On a scale from 0-10, how likely are you to recommend a lifetime annuity to a friend or colleague? (0 = not at all likely, 10 = extremely likely)

A2 Survey measures – Experiment 2 - questions and sources

Each question begins with 'Please indicate how much you agree or disagree with each of the following statements', rated on a 7-point Likert scale (where 1=strongly disagree, 7=strongly agree), unless indicated otherwise.

Subjective Financial Wellbeing – same as experiment 1¹ Financial literacy – same as experiment 1²

Annuity possession³

A lifetime annuity is a retirement income product which pays you a regular (usually monthly) income starting at a stipulated age of retirement and lasting for the rest of your lifetime. To receive these benefits, an initial investment is paid to the company before the annuity starts. This style of product is designed by large financial firms, like insurance companies and superannuation funds, to cover spending and manage financial risks in retirement.

Do you own a lifetime annuity?

- Yes
- No
- I don't know

Comprehension quiz (developed based on information presented to respondents)

Based on the information above, please answer the following short quiz to the best of your ability. There is no penalty for getting an answer wrong, and a 'don't know' option is available (please select this is you are genuinely unsure, rather than picking an answer at random). We simply want to know whether the product information was difficult or easy to understand.

1. With a reversionary annuity, your monthly income is paid (in part or in full) to your spouse/dependents after you pass away.

- True [correct]
- False
- I don't know

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2. What is the difference between a payout at death and period certain guarantee?

- There is no difference between a payout at death and a period certain guarantee.
- A payout at death only pays a very small fixed amount (e.g. \$10,000), while the period certain guarantee pays the total remaining balance of your annuity (initial investment minus what income has already been paid)
- A period certain guarantee pays the total remaining balance of your annuity if you pass away within a certain time period (e.g. 10 years, 20 years), while a payout at death pays the total remaining balance regardless of when you pass away. [correct]
- I don't know

3. _____ is likely to pay you a higher income over the life of the product, however you might experience payment fluctuations depending on the market conditions at the time. What type of investment option is this?

- A capital guaranteed annuity
- An investment linked annuity [correct]
- Account based pension
- I don't know

A3 – Experiment 1 – retirement product/option information

On leaving the workforce, most people need to use money from their superannuation and other savings to cover their spending. Industry and Government are looking for simple financial products to help Australians manage their superannuation and savings during retirement. Imagine you are nearing retirement and need to make decisions about your retirement income – i.e. how to spend versus conserve your retirement savings. The following are examples of *some* of the options available to you.

Lifetime annuity	Fixed term annuity (15 years)	Deferred annuity (from age 80)	Account based pension		
Large life insurance firms. These firm product.	Large life insurance firms. These firms must meet strict government regulations to be allowed to sell this type of product.				
You will receive a fixed regular income for life, and this income will increase with inflation.	r life, and this income will fixed regular income for 15 years. This fincome, commencing when you				
You will receive payments for as long as you live, regardless of how long or short that is.	ou will receive payments for as your beneficiaries for the first 15 80, you will receive payments for years even if you die within that		There is no guarantee you will have a lifetime income. How long payments last depends on investment returns, fees and your withdrawals.		
If you die, payments stop. No payments are transferred to your beneficiaries.	beneficiaries or estate, up to the end beneficiaries		If you die, any remaining money in your account goes to your beneficiaries or estate.		
	Yes. You can take all or a part of any remaining money out, but if you do it will not be available to pay you income in the future.				
	Large life insurance firms. These firm product. You will receive a fixed regular income for life, and this income will increase with inflation. You will receive payments for as long as you live, regardless of how long or short that is. If you die, payments stop. No payments are transferred to your beneficiaries. No. To purchase this product, you pa	Large life insurance firms. These firms must meet strict government regulationYou will receive a fixed regular income for life, and this income will increase with inflation.You or your beneficiaries will receive a fixed regular income for 15 years. This income will increase with inflation.You will receive payments for as long as you live, regardless of how long or short that is.Payments are guaranteed to you or your beneficiaries for the first 15 years, even if you die within that periodIf you die, payments stop. No payments are transferred to your beneficiaries.If you die within this 15 year period, payments are transferred to your beneficiaries or estate, up to the end of the 15th year.No. To purchase this product, you pay a lump sum to the insurance firm in exp	Large life insurance firms. These firms must meet strict government regulations to be allowed to sell this type of product.You will receive a fixed regular income for life, and this income will increase with inflation.You or your beneficiaries will receive a fixed regular income for 15 years. This income will increase with inflation.You will receive a fixed regular income, commencing when you turn age 80. This income will increase with inflation.You will receive payments for as long as you live, regardless of how long or short that is.Payments are guaranteed to you or your beneficiaries for the first 15 years, even if you die within that periodOnce payment commences at age 80, you will receive payments for as long as you live, regardless of how long or short that is.If you die, payments stop. No payments are transferred to your beneficiaries or estate, up to the endIf you die, payments stop. No payments are transferred to your beneficiaries or estate, up to the endIf you die, payments stop. No payments are transferred to your beneficiaries or estate, up to the endIf you die, payments stop. No payments are transferred to your beneficiaries or estate, up to the endIf you die, payments stop. No payments are transferred to your beneficiaries or estate, up to the end		

A3 – Experiment 1 – retirement product/option information continued

(PAGE 2)	Cash in the bank (no investment plans)	Personal investment	Funds for immediate use (e.g. to pay debts or make a large purchase)
Who provides this product?	Money is transferred to your bank account. Your money is held in a regular transaction or savings account and earns modest level interest on the account balance.	Your money is invested in financial assets like shares and bonds. You can invest this money yourself or use a broker or a financial adviser.	Money is transferred to your bank account for immediate use.
How much income will I receive?	You decide how much of your balance to spend each year. You may also pay modest account fees to the bank and/or earn modest interest each month depending on the conditions of your account	Your investment balance will fluctuate each year with financial markets. You may also pay fees, charges, and commissions depending on how you invest and the level of advice you receive.	This money would not contribute to your income, but would pay off outstanding debts or used to make a large purchase, such as a new car, home renovations, a holiday etc.
How long do payments last?	There is no guarantee you will have a lifetime income. How long payments last depends mainly on your withdrawals.	There is no guarantee you will have a lifetime income. How long this money lasts depends on investment returns, fees and your withdrawals.	This is an immediate one-time lump sum payment that you specifically use to pay a debt or make a purchase.
What happens if I die?	If you die, remaining money in your account goes to your dependents or your estate.	If you die, your investments go to your dependents or your estate.	If you die, remaining debts and assets are settled through your estate or your dependents.
Can I withdraw money for unforeseen events or changes of plans?	Yes. You have immediate access to all of this money, but whatever you spend now you will not have available to pay you income in the future.	Yes. You can take all or a part of any remaining money out of investments, but whatever you spend now you will not have available to build interest and pay you income in the future. You may also need to pay exit fees or charges.	This is an immediate one-time lump sum payment that you specifically use to pay a debt or make a purchase. After you have used this money to pay a debt or make a purchase, you would not have it available in the future unless you sold those assets (e.g. your home, car, possessions).

A4 - experiment 1 - percentage allocation choice design

Task	Product 1	Product 2	Product 3	Product 4	Product 5
1	(4) account based pension	(5) cash in the bank	(2) fixed term annuity	(7) funds for immediate use	(3) deferred annuity
2	(2) fixed term annuity	(7) funds for immediate use	(3) deferred annuity	(1) lifetime annuity	(6) personal investment
3	(1) lifetime annuity	(6) personal investment	(4) account based pension	(5) cash in the bank	(7) funds for immediate use
4	(3) deferred annuity	(4) account based pension	(1) lifetime annuity	(2) fixed term annuity	(5) cash in the bank
5	(6) personal investment	(3) deferred annuity	(7) funds for immediate use	(4) account based pension	(1) lifetime annuity
6	(7) funds for immediate use	(2) fixed term annuity	(6) personal investment	(3) deferred annuity	(5) cash in the bank
7	(5) cash in the bank	(1) lifetime annuity	(4) account based pension	(6) personal investment	(2) fixed term annuity

Notes:

The percentage allocation choice task requires respondents to allocate a percentage of retirement funds across a selection of *5 random products* in 7 tasks. The products presented within each task are shown in the rows above; the product columns represent the *location* or *order* in which each product is presented (for a comparison please see appendix A5 for an example of *task 1*).

The allocation design (developed using Sawtooth software) ensures a balanced representation of products across all tasks - each product is presented 5 times across 7 tasks, and each product is missing in 2 tasks (for example the products (1) lifetime annuity and (6) personal investment are missing in task 1). There is minor duplication of certain products appearing in the same *location* in the table - e.g. product (4) account based pension appears twice in the 'product 3' column, and product (5) cash in the bank appears twice in the 'product 5' column. This does not influence the validity of the results; it is a symptom of this style of design, and a necessary trade-off to ensure that the same product does not appear multiple times in the same *task*.

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A5 – experiment 1 – percentage allocation design – example of task presentation

Imagine you are at retirement and have saved \$100,000 through superannuation and savings. You now need to make decisions about how to allocate/use this money. In this task, we would like you to allocate your funds across FIVE different options. You will repeat this task *seven times*, and each time there will be different product/option combinations available to you. Please imagine that these are the *only options available to you*. You can allocate between 0% and 100% to each option, but to continue the survey the allocations **must total 100%**.

	Option 1	Option 2	Option 3	Option 4	Option 5
	Account based pension	Cash in the bank	Fixed term annuity (15 years)	Funds for immediate use	Deferred annuity (from age 80)
Estimated yearly income per \$50,000 allocated to this option	You decide how much to withdraw each year.	You decide how much to spend each year.	\$4,000 (and increases with inflation)	N/A	\$8,500 (and increases with inflation)
Immediate access to money?	Yes	Yes	No	Yes (for immediate use)	No
Bequest?	Yes	Yes	Yes (if you die within the 15-year period)	Yes (in remaining assets)	No
Likelihood that income will run out during retirement (if 100% of money was allocated to this option)	Unknown. This depends on how much you withdraw and investment performance.	Unknown. This depends on how much you spend.	You will not run out of income in this 15-year period. However, you may live beyond the 15 years.	Your income will definitely run out	After you reach 80, your income will never run out.
TOTAL	%	%	%	%	%

A6 – experiment 2 - Annuity attributes information

There are various features to choose from when purchasing a lifetime annuity to suit different people's needs and preferences. However, each of these options generally means trade-off in terms of your monthly income (i.e. a lifetime annuity with less features will generally pay you more per month. A lifetime annuity with more features will pay you less per month, but will include added assurances that some people may find valuable). Here is a brief overview of what these features are:

Starting monthly	The amount of money paid to you each month (income per year is also included for your reference). This payment amount is accurate for the
income	first 1 year of payments, and will then increase according to the specified terms of the annuity.
Reversionary	A reversionary annuity means that when you pass away, your annuity payment is transferred to your spouse/ dependents. The payment
annuity	amount can be transferred in full (100% of payments are maintained), or a partial payment (2/3 or ¾ of payments are maintained).
Period certain	This feature guarantees that if you pass away within a designated time period (e.g. 10, 20 or 30 years), your spouse/ dependents will receive
guarantee	the total remaining balance of your annuity investment (the initial investment minus what income the company has already paid to you).
	e.g. You invested \$100,000 in an annuity with a 5-year guarantee. You passed away after 2 years, and had received \$7,000 of income in this
	time. Your partner/dependents would receive \$93,000.
Payout at death	This is a similar feature to the period certain guarantee, however there is no time period condition. This means that, regardless of when you
	pass away, your spouse/dependents receive the total remaining balance of your annuity investment (the initial investment minus what income
	the company has already paid to you).
Investment	There are 2 main types of annuity investment options:
option/type	Capital guaranteed annuity – you have little control over how your money is invested, and the company guarantees a consistent (but modest)
	annual increase in payments (usually consistent with CPI). There are little/no fluctuations in payments.
	Investment linked annuity – you have more control over investment decisions, and your payments are likely to be higher over the life of the
	annuity. However, you may experience greater payment fluctuations depending on the market conditions at the time.
Access to capital	This feature gives you the ability to take out a lump sum if your circumstances change or you are facing an unforeseen event.

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A7 – experiment 2 - discrete choice design – attributes and levels

ATTRIBUTES		LEVELS				
1. Starting monthly income	\$250	\$350	\$450	\$550		
2. Reversionary pension	No reversionary pension (payments do not transfer to spouse/dependents)	Partial reversionary pension (2/3 of payments transfer to spouse /dependents)	Full reversionary pension (100% payments transfer to spouse/ dependents)			
3. Period certain guarantee	No period certain	10-year period certain guarantee	20-year period certain guarantee	30-year period certain guarantee		
4. Payout at death	No payout at death	Payout at death to spouse/ dependents (80% of initial investment less what has already been paid)				
5. Investment type	Capital guaranteed annuity (less control over investment decisions, annual payment increases are fixed)	Investment linked annuity (more control over investment decisions, annual payments fluctuate with market conditions)				
6. Access to capital	No access to capital (you cannot withdraw a lump sum)	Access to capital (you have the option to withdraw a lump sum)				

8. Appendices A8 - experiment 2 - discrete choice design

Task	Concept	Att 1 - starting monthly income	Att 2 - reversionary pension	Att 3 - period certain guarantee	Att 4 - payout at death	Att 5 - investment type	Att 6 - access to capital
1	1	\$550	full	30 year	yes	capital guaranteed	no
1	2	\$250	none	20 year	no	investment linked	no
2	1	\$450	full	10 year	yes	investment linked	yes
2	2	\$350	full	none	no	capital guaranteed	yes
3	1	\$350	partial	30 year	yes	investment linked	no
3	2	\$250	none	20 year	no	capital guaranteed	yes
4	1	\$450	none	10 year	no	capital guaranteed	no
4	2	\$550	partial	none	yes	investment linked	yes
5	1	\$550	partial	30 year	no	capital guaranteed	no
5	2	\$250	none	10 year	yes	investment linked	yes
6	1	\$350	partial	20 year	yes	capital guaranteed	no
6	2	\$250	none	30 year	no	investment linked	yes
7	1	\$350	full	10 year	yes	capital guaranteed	yes
7	2	\$450	partial	none	no	investment linked	yes
8	1	\$350	none	none	yes	capital guaranteed	no
8	2	\$450	full	20 year	no	investment linked	no
9	1	\$550	full	20 year	yes	capital guaranteed	yes
9	2	\$450	partial	10 year	no	investment linked	no
10	1	\$250	full	20 year	yes	investment linked	no
10	2	\$250	partial	none	no	capital guaranteed	yes
11	1	\$550	none	10 year	no	capital guaranteed	yes
11	2	\$450	none	30 year	yes	investment linked	no
12	1	\$350	full	none	no	investment linked	no
12	2	\$450	partial	30 year	no	capital guaranteed	yes
13	1	\$550	partial	none	yes	investment linked	no
13	2	\$250	partial	30 year	yes	capital guaranteed	yes
14	1	\$550	full	none	yes	capital guaranteed	no
14	2	\$350	none	10 year	no	investment linked	yes
15	1	\$350	none	20 year	yes	capital guaranteed	yes
15	2	\$450	full	30 year	no	investment linked	yes
16	1	\$450	none	none	yes	capital guaranteed	no
16	2	\$250	partial	10 year	no	investment linked	no
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A9 – experiment 2 - discrete choice design – example of task presentation

Based on the information in the previous scenario, if you were 65 and considering putting \$100,000 of your retirement savings into a lifetime annuity, which of the following would you choose?

Task 1	Product A	Product B
Starting monthly income	Monthly payments start at \$550	Monthly payments start at \$250
Reversionary annuity	Full reversionary annuity (100% of payments are transferred to spouse/ dependents)	No reversionary annuity
Period certain guarantee	30-year period certain guarantee	20-year period certain guarantee
Payout at death	Payout at death	No payout at death
Investment type	Capital guaranteed annuity	Investment linked annuity
Access to capital	No access to capital	No access to capital

I would select: Product A / Product B

Given the option, would you really buy the annuity you chose above?

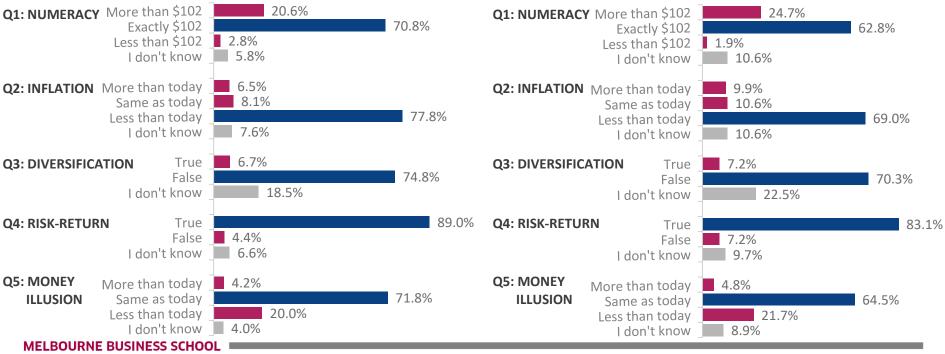
- Yes
- No: If these were my only options, I would not make a purchase. I would self-manage my retirement savings.

A10 Financial literacy results

A10.1. FINANCIAL LITERACY: DISTRIBUTION OF RESPONSES – *EXPERIMENT 1*

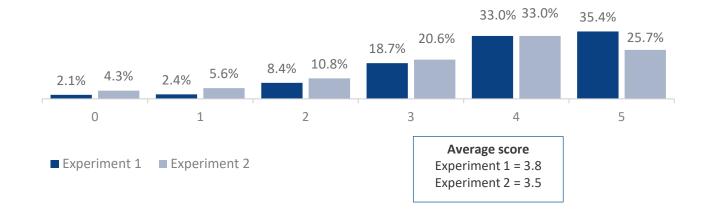
Notes: See Appendix 2 for questions Maroon shading = incorrect answer Blue shading = correct answer

A10.2. FINANCIAL LITERACY: DISTRIBUTION OF RESPONSES – EXPERIMENT 2



A10 Financial literacy results continued

A10.3. FINANCIAL LITERACY: DISTRIBUTION OF SCORE

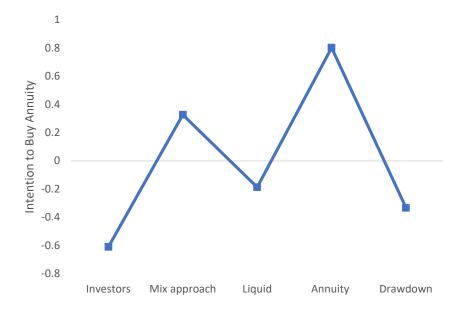


A11 - Driver of Segment Membership – Annuity Purchase Intentions

Annuity purchase intention is another major factor in determining segment membership. Figure A11.1 graphs the relationships between segment membership and annuity purchase intention.

- People with a high intention to purchase an annuity are more likely to be in the *annuity* segment, and the Mixed approach segment to a lesser extent.
- People with a low purchase intentions are more likely to be in the *Investor* and *Drawdown segments*.





A12 – Reference list

Listed in order of appearance

- 1. Netemeyer, R. G., Warmath, D., Fernandes, D., & Lynch Jr, J. G. (2017). How Am I Doing? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being. *Journal of Consumer Research*, 45(1), 68-89.
- 2. Wilkins, R. K., & Lass, I. (2018). *The Household Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16.* Melbourne Institute: Applied Economic and Social Research, University of Melbourne.
- 3. Goedde-Menke, M., Lehmensiek-Starke, M., & Nolte, S. (2014). An empirical test of competing hypotheses for the annuity puzzle. Journal of Economic Psychology, 43, 75-91.
- 4. Bateman, Hazel, Christine Eckert, Fedor Iskhakov, Jordan Louviere, Stephen Satchell, Susan Thorp (2018). Individual capability and effort in retirement benefit choice. Journal of Risk and Insurance, 85(2), 483-512.
- 5. Nosi, C., D'Agostino, A., Pagliuca, M. M., & Pratesi, C. A. (2014). Saving for old age: Longevity annuity buying intention of Italian young adults. Journal of Behavioral and Experimental Economics, 51, 85-98.