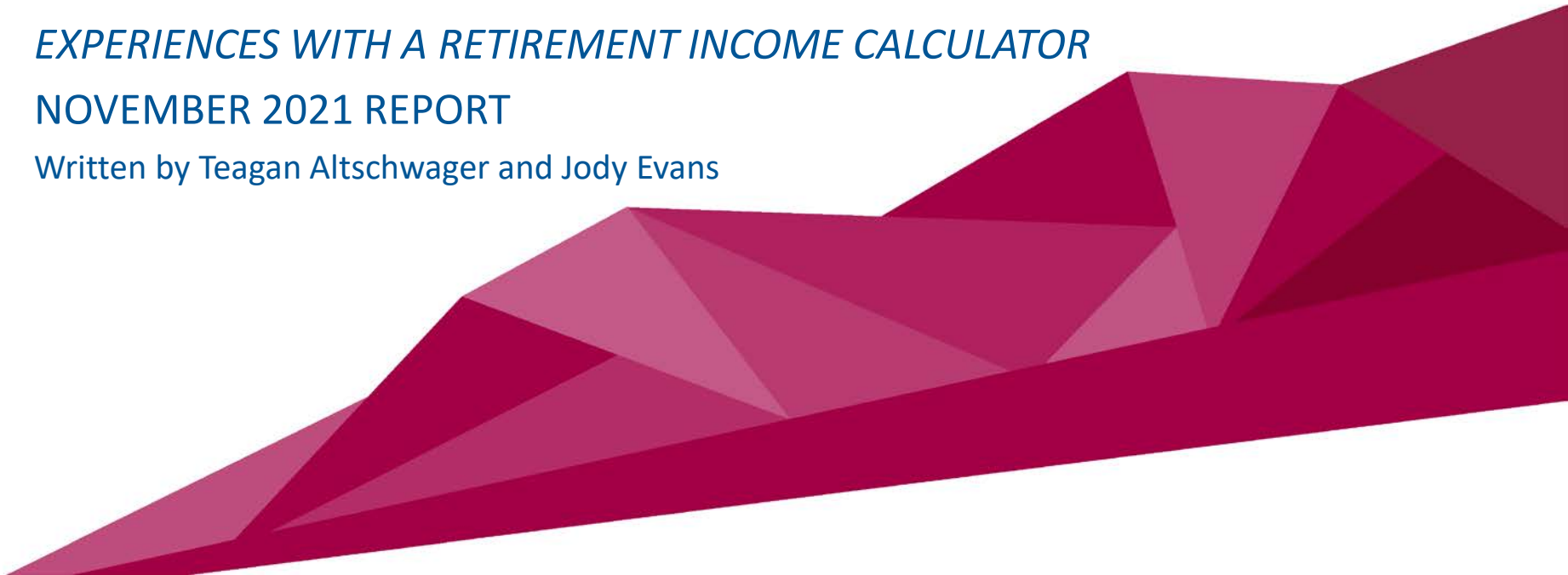


THE ORFORD INITIATIVE

EXPERIENCES WITH A RETIREMENT INCOME CALCULATOR

NOVEMBER 2021 REPORT

Written by Teagan Altschwager and Jody Evans



Acknowledgments

This report presents select findings from a group decision-making study with older Australians, exploring preferences, responses to, and level of engagement with an online retirement income calculator tool.

This mixed-method study was conducted in 2021 as part of a 3-year independent research and engagement project 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 [Orford Initiative webpage](#) for further information on the background, motivations, and other research conducted for this project.

Project team

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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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Executive Summary

This report describes the perceptions, behaviours and responses to a retirement income calculator. The calculator provides various retirement income projections based on two key products – an account-based pension, and a lifetime annuity.

Fifty-five online sessions were undertaken with 91 Australians (24 couples, 12 parents with an adult child, and 19 singles), and this report specifically focuses on their interactions with an online retirement income calculator (one of the various tasks asked of them). Further insights from this study will be shared in a group decision-making dynamics report, please look on the [Orford Initiative website](#) in late 2021 for further details.

Participants were asked to engage with the calculator by providing some key initial inputs (their relationship status, level of retirement savings, and home ownership). They were then encouraged to interact with the calculator, make different allocations and compare the different income scenarios.

The calculator comprises of **5 key components**;

1. The slider scale (allocation preferences)
2. Annualised income year 1 (text + value)
3. Retirement income breakdown (graph)
4. Cumulative Total Income to Key Ages (table)
5. Amount you could Withdraw (graph)

Overall reflections of participant dynamics with the calculator indicates four key behaviours:

1. **Low levels of engagement generally.** Forty percent of participants completed the calculator task in less than 3 minutes.
2. **Minimal 'play' with the calculator.** Sixty-five percent of participants made one allocation decision and did not waver.
3. **Comprehension problems throughout**, particularly with the *Cumulative Total Income to Key Ages* table.
4. **Distracted by various projections to age 110**, featured in the Retirement Income Breakdown graph, and the Amount you could Withdraw graph.

Implications and recommendations are provided for those seeking to use these insights to better design and communicate retirement income projections. It is advised that recommendations require adaptation depending on their intended use (for private/independent calculator use online versus a tool used by a financial adviser during a client consultation).

These recommendations include;

- Being cautious of **information overload**, with a view to streamline content for easy digestion.
- Identify and eliminate **points of distraction**, particularly references to age 110 which proved to significantly deter attention from the main message of the calculator.
- Avoid **points of confusion**, particularly when communicating cumulative income across retirement.
- Need for **expertise** in guiding people through the calculator.

Introduction

This report conveys the experience of 91 Australians with an interest in understanding their behaviours, perceptions, and interactions with a *retirement income calculator*.

Retirement income calculators are commonplace online; they feature on government financial websites, are included on annuity product websites, and appear in many other digital places (financial adviser websites, bank websites, blogs, etc.). These calculators respond to a need from older Australians to access specific and customised information about their own financial situation, at a time that suits them, and at little to no cost. Effectiveness of these calculators as a personal online tool relies heavily on individuals engaging with the calculator in a meaningful way, as well as accurate interpretation of its output.

Financial advisers commonly utilise retirement income calculators (online, commissioned, or in-house tools) to provide accurate projections of retirement income for their clients. When used correctly, calculators can elevate the advice they provide clients with detailed and tailored graphs and tables. Points of confusion can still cloud client judgments even in the presence of an adviser.

This report takes a closer look at how people (couples, parent and adult child pairs, and singles) interact with various components of a retirement income calculator online, and unveil issues that can arise.

Mixed-method research was undertaken via 55 in-depth interviews and online survey activities. Participants included men and women across various Australian states and territories.

Australian companies and policy makers are advised to consider:

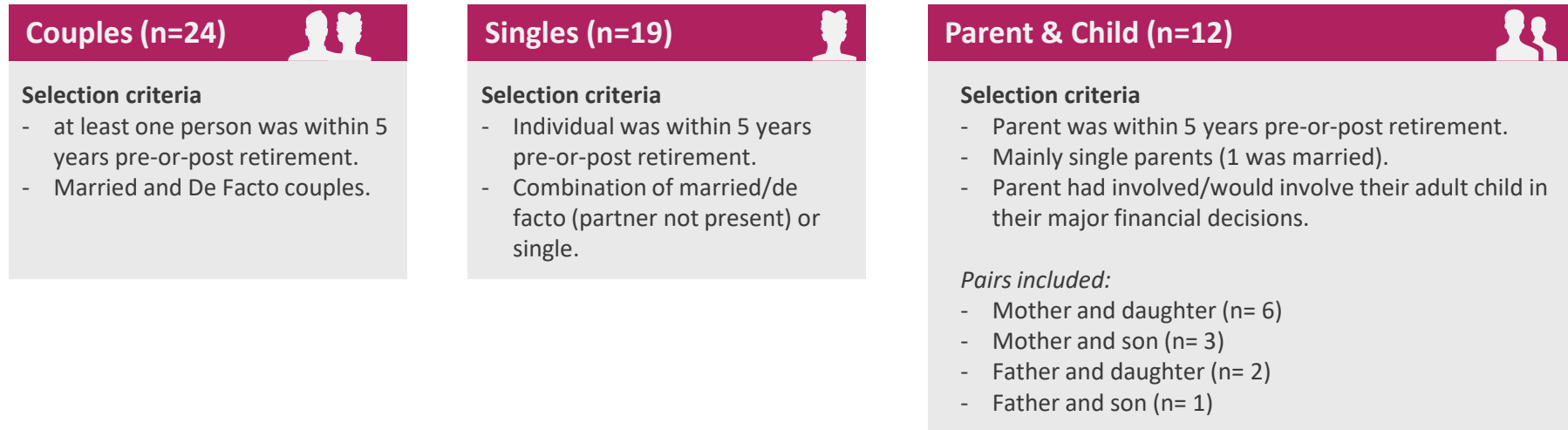
- How to provide enough key information without reaching information overload
- What elements of calculator input might cause unnecessary distraction
- Where comprehension issues may lie, particularly in the case of private use where an adviser is not present to clarify or explain complex information.

Research Overview

Profile of Participants

A total of 55 sessions were run with 91 Australians (24 couples, 12 parents with an adult child, and 19 singles). Sessions involved a pre-session survey (completed individually), in-depth interview and online activities via zoom (pairs completed together), and a brief post-session reflection (completed individually). Interviewees consisted of 57 women and 34 men, across Victoria (26), Queensland (9), New South Wales (9), Western Australia (6), ACT (3), South Australia (1), and Northern Territory (1).

Figure 1: Participant profile overview



Research Overview

Retirement income calculator task

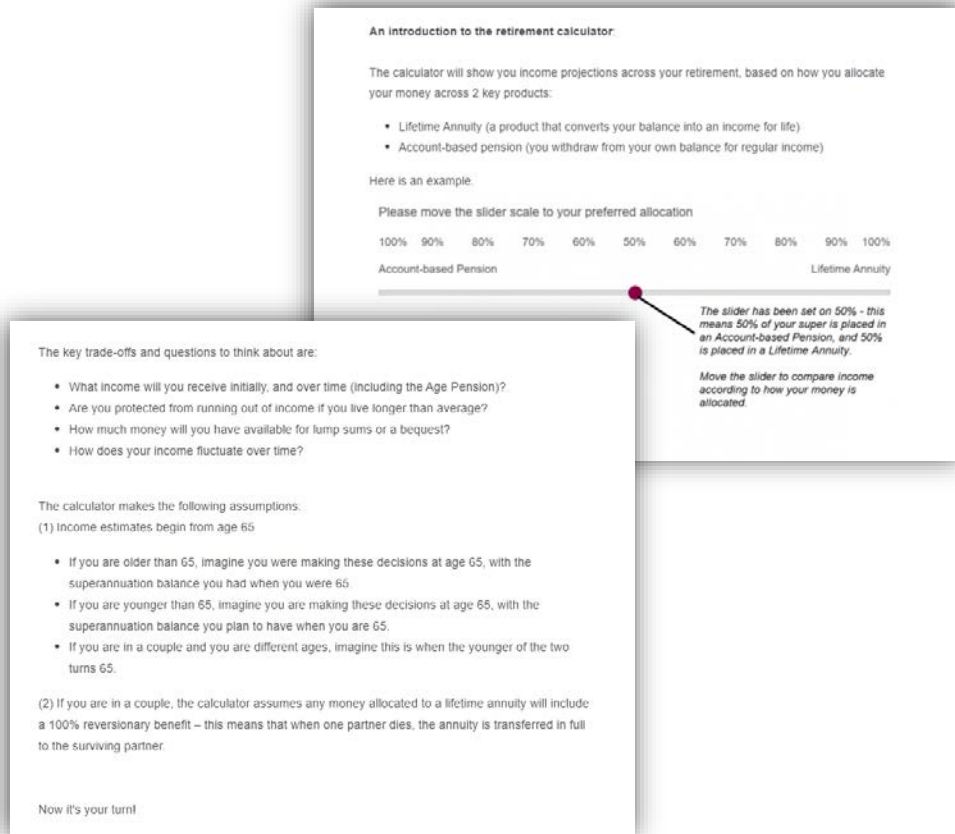
Participants completed a series of initial questions which provided the necessary inputs to customise the retirement income calculations.

These questions included;

- Are you single or in a couple? (yes or no)
- What value nearest reflects your retirement savings at age 65? (\$50,000, \$250,000, \$500,000, \$750,000, or \$1,000,000)
- Are you a home owner? (yes or no)

Participants were then presented with a written explanation of the basic mechanics of the calculator (with descriptions of the two product options; an account-based pension and lifetime annuity) how the calculator works, examples of the various calculator outputs, and what their task would entail (figure 2 shows an example of part of the task instructions. Please see the appendix for complete details). They were encouraged to interact with the calculator, make different allocations and compare the different income scenarios.

Figure 2: Example of task instructions



Calculator Insights Overview

Observational analysis of interactions with the calculator tool yielded several interesting findings.

1. Low level of engagement overall.

40% of participants completed the calculator task in less than 3 minutes. There were only minor differences across groups; 32% of singles, 50% of parent and child pairs, and 42% of couples respectively completed the calculator task in less than 3 minutes.

2. Minimal play with the calculator.

65% of participants made one allocation decision and did not waver (average number of allocations = 2.1). Again, there were only minor differences among groups; 63% (avg. = 2.3) of singles, 67% (avg. = 2.3) of parent and child pairs, and 67% of couples (avg = 1.8) respectively made one allocation decision at the beginning of the task and did not change it.

3. Comprehension problems.

The researchers detected comprehension issues with calculator output, particularly with the *Cumulative Total Income to Key Ages* table. Participants often called on the interviewer for further clarification of the product options (account-based pension and annuity), and calculator output. Comprehension issues regarding particular calculator elements will be identified in the following analysis.

4. The problem with projecting to age 110.

Participants constantly made reference to the age 110 projections (featured in the Retirement Income Breakdown graph, and the Amount you could Withdraw graph). Participants did not find this projection realistic, and its inclusion proved to be a considerable distraction from the other calculator output.

Each of the 5 calculator components will now be explored in more detail;

1. The slider scale (allocation preferences)
2. Annualised income year 1 (text + value)
3. Retirement income breakdown (graph)
4. Cumulative Total Income to Key Ages (table)
5. Amount you could Withdraw (graph)

Calculator – Allocation slider scale

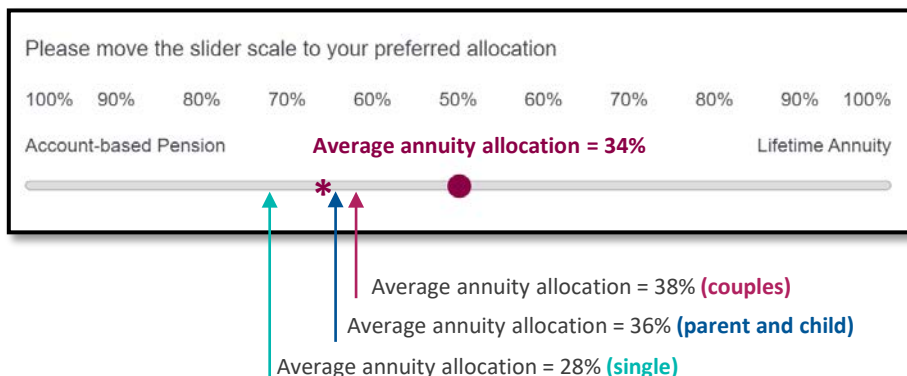
Allocation behaviours and preferences

The task instructions were to interact with the calculator by moving the slider scale according to the participants' preferences, and encouraged them to try multiple scenarios to see how their income projections might differ. Despite this, participants were reasonably decisive in their allocation preferences at the beginning of the task (65% of participants made one single allocation decision). Of the groups, **couples** were most decisive (67% made only one allocation; average number of changes = 1.8), while **singles** were slightly more likely to make multiple allocations (63% made only one allocation; average number of changes = 2.3).

As shown in figure 3, in the task participants allocated on average 34% of their retirement funds to a lifetime annuity and 66% to an account-based pension. **Singles** allocated less than average (28%) to a lifetime annuity, and **couples** allocated slightly more than average (38%).

These behaviours indicate that, even when encouraged to observe multiple allocation scenarios, participants were not using the calculator as intended. Their pre-established sentiments towards the products available - and existing ideas/strategies of how they would allocate their money in retirement - meant they showed little interest in exploring different retirement income scenarios.

Figure 3: Calculator allocation slider scale



The major benefit of calculators is their ability to provide dynamic comparisons of different product allocations, allowing users to see the implications of their decisions in real time. In the absence of dynamic interactions, core calculator benefits are left unutilised. Additional prompts could be integrated to encourage users to test various allocation scenarios. Results also indicate that calculators might be more suited to users who are undecided in their retirement strategy, so encouraging people to access calculators earlier would be of benefit.

Calculator – Annualised Income Year 1

Interactions with *Annualised Income Year 1* information

The first output reiterated the information inputted (namely, the allocation and the superannuation balance) and provided a *Total Annualised Income Year 1* value.

Figure 4: Annualised Income Year 1 output

You allocated 50% to an Account-based pension, and 50% to a Lifetime Annuity.

Based on this allocation, your \$500,000 super balance would provide you with the following level of income over your retirement:

Total Annualised Income Year 1: \$24,600

The vast majority of participants paid attention to this information. Many participants (particularly those with lower superannuation balances) found the value surprisingly low, and at times had quite a noticeable negative emotional reaction to this information. For example;

[Woman]: *“It’s not much is it?... We can’t pay the bills and live on that.”* (Couple 58)

[Parent]: *“Yep, this is why I need to keep working.”* (Parent and Child 57)

“I’m thinking I’m going to be up the creek without a paddle.” (Single 44)

As the calculator assumed income from age 65, the total annualised income for year 1 excluded Age Pension entitlements. This significantly reduced the annual income compared to age 67 and beyond. Despite this annualised income value appearing immediately above the Retirement Income Breakdown graph (page 11) which shows the increase in income from age 67, many focused mainly on this value alone and initially interpreted this as anticipated yearly income *across* their retirement, not just for the first couple of years.

Given this negative reaction, it is recommended that advisers explain the correct interpretation of this value immediately, and in the case of online calculators intended for private use, that the tool be modified to very clearly explain this value excludes the Age Pension (or include a ‘with pension’ equivalent in brackets next to this value)

Calculator – Retirement Income Breakdown

Interactions with Retirement Income Breakdown Information

The second calculator output was the retirement income breakdown graph. The vast majority of participants paid attention to this information (very similar levels of attention to the *annualised income year 1* value).

A surprising response to this graph (and equally to the *amount you could withdraw* graph) was the amount of participants who remarked on the projection to age 110. This factor was mentioned in at least 22 sessions (and in 7 of those sessions it was brought up multiple times/in response to multiple outputs). This response was often in the form of laughter or surprise, but also in comments about one's longevity. For example;

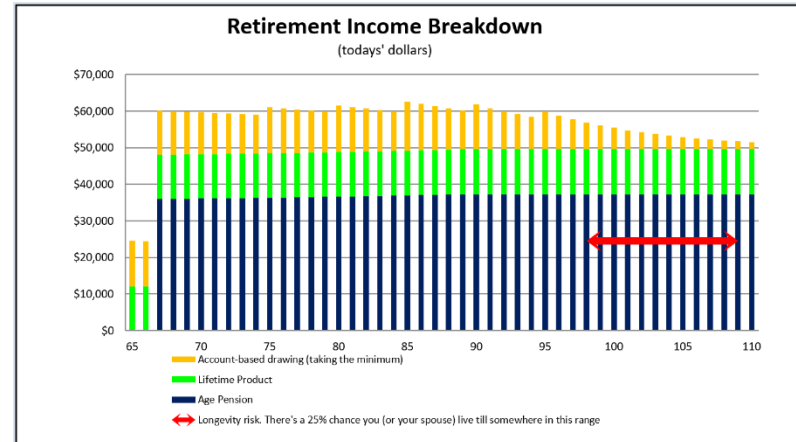
"I don't think I'm going to live to 105 thank you very much!" (Single 19)

More to this point, participants seemed to focus on the earlier income projections, overlooking how income tapers in later years. For example;

[Parent]: "I'd discount everything above 85, you need to be sensible about these things." (Parent and Child 15)

This was also evidenced by participants remarking at the surprisingly little to no change in income if allocations were mainly account-based pension versus lifetime annuity.

Figure 5: Retirement Income Breakdown output



The major advantage of the lifetime annuity offering is the stability of income in the later years of retirement – if people are not observing the projections in the final third of the graph, then the benefits of annuities are essentially being ignored and ineffectively communicated.

Calculator – Cumulative Total Income

Interactions with Cumulative Total Income to Key Ages Output

The third calculator output was the *cumulative total income to key ages* table. Of all the calculator information, there was the most disengagement and confusion with this table. Participants would generally spend less time observing this information, and made fewer comments on the output. Those who did engage often displayed comprehension issues, asking more questions (or simply stating their confusion) to the interviewer, or providing incorrect comments/reflections.

[Man]: “*I don't understand that. Is that our assets?*” (Couple 9)

A common point of confusion was whether these values reflect annual income. Several participants also raised a worthy comment about the ambiguity of the term ‘up to age’. Using the values in figure 6 as an example, people commented that the income reporting for the Age Pension was too high, as they would divide 108,083 across 2 years (from 67 to 69), rather than 3 years (from 67 to 69, inclusive of the 69th year). This caused annoyance and disengagement in those who raised this issue, as they perceived the calculator output to be incorrect.

A further finding was that the cumulative values seemed to inflate some participants’ perceptions of their financial position in retirement.

Figure 6: Cumulative Total Income to Key Ages output

| CUMULATIVE TOTAL INCOME TO KEY AGES: (today's dollars) | | | | |
|---|----------|---------------|-------------|-----------|
| Up to age | Lifetime | Account-based | Age Pension | Total |
| 69 | 60,561 | 60,332 | 108,083 | 228,976 |
| 74 | 121,270 | 115,524 | 289,098 | 525,892 |
| 79 | 182,127 | 174,893 | 471,356 | 828,376 |
| 84 | 243,133 | 233,835 | 655,228 | 1,132,195 |
| 89 | 304,287 | 293,793 | 841,034 | 1,439,114 |
| 94 | 365,591 | 345,904 | 1,027,740 | 1,739,235 |
| 99 | 427,045 | 387,347 | 1,214,446 | 2,028,838 |

[Parent]: “*wow, what am I going to do with all that at 99?*” (Parent and Child 18)

[Child]: “*this is how all your money is adding up - what are you going to spend it all on?*” (Parent and Child 12)

For these participants, the cumulative values seem to have the opposite effect of what was seen in output 1 (where income was seen as lower than reality); here they commented on having more money than what they could spend in retirement (seemingly disregarding that this money is distributed across 30 years). This could be problematic if it is creating a false sense of financial security in retirement projections.

Calculator – Amount you could withdraw

Interactions with Amount you could withdraw Output

The final calculator output was the *amount you could withdraw* graph. There was a moderate level of disengagement with this graph, although not to the same extent as the *cumulative income* output. This may reflect the occurrence of information overload, which will be discussed in *implications*.

For those who did engage, there was also the most divergence in responses (compared to the previous outputs). Some participants felt this validated their decision in allocating their money to an account-based pension, as they were ensured access to a lump sum whenever they might need it;

“Yeah, I wouldn't like something where I couldn't withdraw.” (Single 13)

Others commented on not needing or wanting to withdraw lump sums;

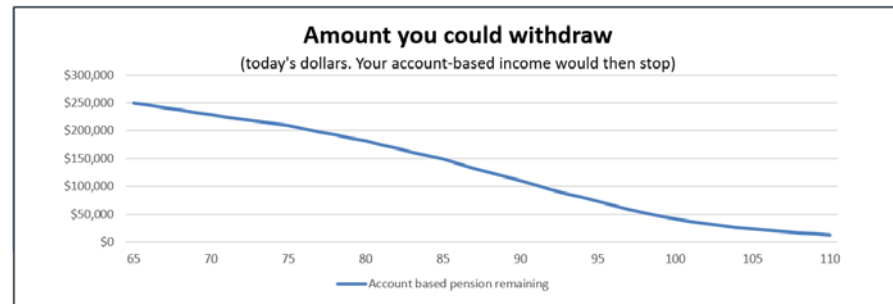
“There's nothing to stop you taking out the whole lot, as foolish as that would be.” (Single 5)

[Child]: *[Reads title]* *“But that doesn't really matter.”* (Parent and Child 12)

There were also a few comprehension issues with this graph; in particular, some would interpret this as directly relating to income (even if they had allocated some funds to a lifetime annuity). For example;

[Child]: *“so if you live to 110 you'll have no money”* (Parent and Child 16)

Figure 7: Amount you could withdraw output



Similar sentiments to the *retirement income breakdown* graph were expressed here regarding the graph projection to age 110. For example;

[Female]: *“So optimistic, 110 years. I hear about knee and hip joints being replaced... The whole body will have to be replaced by then! Who wants to live like that?”* (Couple 10)

[Male]: *“I hope I'm not kicking about at 110...”* [female agrees] (Couple 48)

Overall, the reference to 110 seemed to dominate people's attention (for those who verbally raised it) and distracted them from the key message of the graph.

Implications and recommendations

This research report has analysed participant interactions with and responses to five key components of a retirement income calculator. For providers and policy makers seeking to use these insights to better design and communicate retirement income projections, we include the following implications and recommendations.

Private use versus a tool to engage with an adviser

The calculator tool in this study required participants to mainly interact with the tool independently (although the interviewer answered questions and clarified output when requested). This more closely represents private use - someone accessing a retirement income calculator online at home by themselves – rather than a financial adviser using the same tool to demonstrate income projections for a client. For private calculator design, there is a need for tools to be streamlined to better articulate key information and avoid confusion or unnecessary distractions. For advisers seeking to integrate calculators within their consultations, additional explanation is required ensure client understanding. To help advisers optimally utilise calculators, calculator designers should also consider creating training packages that outline best practice on calculator use, and strategies for effective integration within consultation to aid in client engagement and comprehension.

Information overload

Engagement with the earlier calculator output (*annualised income year 1*, and the *retirement income breakdown* graph) was generally higher than later output (*cumulative income* table and the *amount you could withdraw* graph). This could indeed reflect the relevance of the output itself, but it may also indicate the occurrence of information overload;. Participants were perhaps too overloaded with information that they disengaged after the first two outputs. Consideration should be given to what information is absolutely necessary, and what information could be removed. Alternatively, more dynamic calculators that provide a simplified output, with opportunity to click through for more detailed explanations, more granular information etc. could be a way to maintain the same information overall, but dispersed in digestible pieces. By scaffolding information (using simple, interesting content early, moving to complex information once users are engaged) calculator designers can prepare people for complexity while avoiding confusion and overload.

Implications and recommendations *continued*

Points of confusion

There were various comprehension issues throughout the calculator output, but the *cumulative income* table was of particular concern. Attention needs to be paid here to integrate information (written for private use or verbally in the case of adviser consultations) that aids in comprehension of cumulative values. Specific recommendations include;

- The use of a synonym to describe cumulative (e.g. increasing, accumulating, growing)
- The option to click through for a definition or simplified explanation of cumulative
- Clarification around 'up to age' (e.g. up to *and including*)
- Articulating/reiterating the length of time rather than just the age (e.g. *over 30 years* instead of/ in addition to *up to age 99*).
- The use of voice overs or video explanations to reduce the cognitive burden and information overload of text-heavy content

Points of distraction

Three key points of distraction were identified;

1. The reference to age 110
2. The annualised income year 1 value (when it was perceived as too low, causing stress and concern)
3. The cumulative values to age 99 (when it was perceived as much higher than anticipated)

It is recommended that calculator designers consider these factors in creating retirement income tools, especially if intended for private use where there is no possibility in explaining why projections were made to a particular age (nor the benefits of doing so), or why values might seem unusually low or high.

Possible solutions include;

- Including longevity projections as part of the initial calculator questions to allow for customisation – at this moment information can be provided on longevity risk, and users can make the choice of how far they would like their income projections to be made.
- Better educating people on longevity. Australians are living much longer than they expect; by 2050, it is projected that over 3.7 million people will be aged 100+ globally (Steppler, 2016). Rather than seeing living to 110 as unrealistic and humorous, education is needed to show people this is becoming a likely reality.

Conclusion

In conclusion, this report has highlighted the level of engagement and points of interest of older Australians interacting with a retirement income calculator.

This report unveiled a low level of engagement with the calculator overall, minimal play with different allocation scenarios, various points of low comprehension, and some factors that distracted from the key message of the output.

Those seeking to better design retirement income calculators or integrate such tools within their consultations with clients are encouraged to consider;

- The potential for information overload
- Points of distraction (in particular, output projections to age 110)
- Points of confusion (in particular, when communicating cumulative income across retirement).

Further information about the Orford Initiative

To find out more about our previous research, please visit the Orford Initiative webpage:

<https://go.mbs.edu/orford/>

Report Reference:

Stepler, R. (2016), 'World's centenarian population projected to grow eightfold by 2050', *Pew Research Center*, 21 April 2016: <https://www.pewresearch.org/fact-tank/2016/04/21/worlds-centenarian-population-projected-to-grow-eightfold-by-2050/>

Appendix

Calculator task instructions and components

The calculator comprised five components:

The slider scale – participants shifted the slider to represent their allocation preferences, with 100% account-based pension at one end, and 100% lifetime annuity at the other. Participants could select any allocation along the slider in 10% increments.

The instructions presented to participants is shown to the right.

An introduction to the retirement calculator:

The calculator will show you income projections across your retirement, based on how you allocate your money across 2 key products:

- Lifetime Annuity (a product that converts your balance into an income for life)
- Account-based pension (you withdraw from your own balance for regular income)

Here is an example.

Please move the slider scale to your preferred allocation

100% 90% 80% 70% 60% 50% 60% 70% 80% 90% 100%

Account-based Pension Lifetime Annuity



The slider has been set on 50% - this means 50% of your super is placed in an Account-based Pension, and 50% is placed in a Lifetime Annuity.

Move the slider to compare income according to how your money is allocated.

Appendix

Calculator task instructions and components

Once participants made their allocation, the calculator generated four outputs (and changed dynamically each time the slider was shifted):

Annualised income year 1 – this included *text* that reiterated their allocation across the two products, the superannuation balance the outcome was based upon, plus an annualised income *value* for the first year of retirement (assumed age 65).

You allocated 50% to an Account-based pension, and 50% to a Lifetime Annuity.

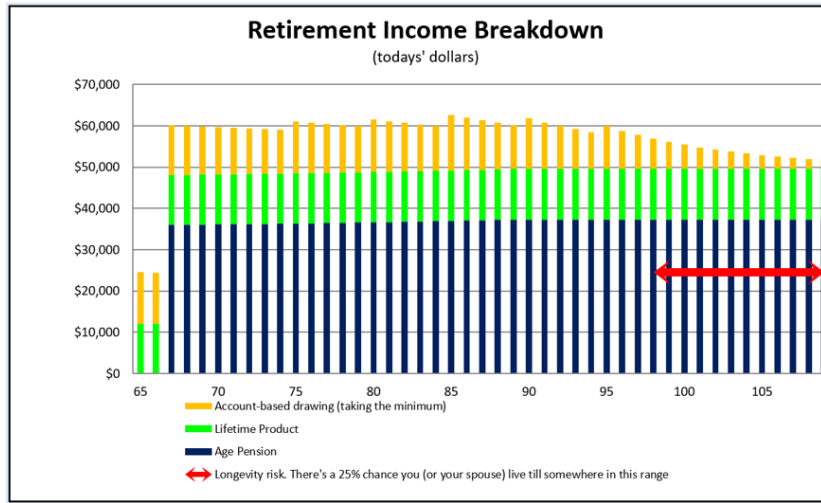
Based on this allocation, your \$500,000 super balance would provide you with the following level of income over your retirement:

Total Annualised Income Year 1: **\$24,600**

Appendix

Calculator task instructions and components

Retirement income breakdown – this graph projected retirement income from age 65 to 110, based on (1) account-based pension, (2) lifetime annuity, and (3) Age Pension entitlements if applicable. A longevity risk bracket was also included to represent the age to at least which one partner had a 25% chance of living. The instructions presented to participants is shown below.



In the Retirement Income Breakdown, you can see **estimated yearly income** (income amounts listed on the left) over the **course of your retirement** (age listed along the bottom), and **from what source** (Account-based pension in yellow, Lifetime Annuity in green, and the Age Pension in navy blue if that applies). **Longevity risk is also shown with the red arrow** (there's a 25% chance you or your spouse will live till somewhere in this range).

Appendix

Calculator task instructions and components

Cumulative Total Income to Key Ages – This table demonstrated how income (according to each income source as well as a total) would accumulate over time (from age 69 to 99 in 5 yearly increments). The instructions presented to participants is shown below.

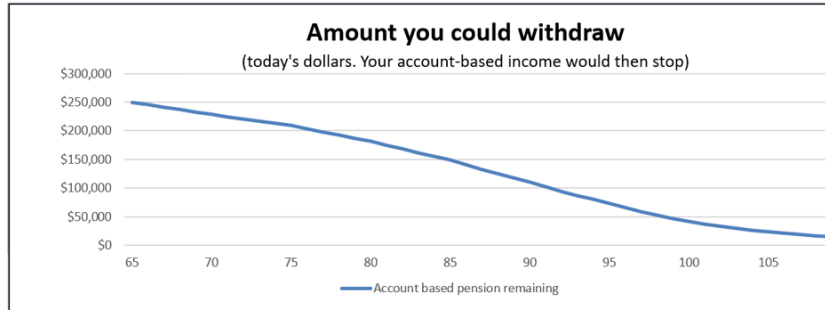
| CUMULATIVE TOTAL INCOME TO KEY AGES: (today's dollars) | | | | |
|---|----------|---------------|-------------|-----------|
| Up to age | Lifetime | Account-based | Age Pension | Total |
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| 94 | 365,591 | 345,904 | 1,027,740 | 1,739,235 |
| 99 | 427,045 | 387,347 | 1,214,446 | 2,028,838 |

The Cumulative Total Income table shows you how your **income adds up over time** (different ages are shown in the left column).
Income is presented according to **each income source** (appearing in the middle columns), and **as a total** (on the right).

Appendix

Calculator task instructions and components

Amount you could withdraw – This graph projected the amount available to withdraw over the course of retirement (age 65 to 110). The instructions presented to participants is shown below.



This table shows the **amount you could withdraw** (money amount listed on the left) over the **course of your retirement** (age listed along the bottom). This is based on how much money you put into your **Account-based Pension** (any money placed in a Lifetime Annuity is not available to withdraw). If you withdrew *all* of this money, you would no longer receive an income from your Account-based Pension.