

Retirement explainer series

Behavioural influences on retirement decisions

Edition 11

Updated February 2025

Hazel Bateman¹, David Bell & Geoff Warren

Technical rating

Boffin

Industry professional

Novice

Brief synopsis: A selection of behavioural influences is discussed that are important in the context of retirement decisions by members of superannuation (super) funds. We address five types of bounded rationality that may restrict the capacity of members to make good decisions; two sources of poor self-control that can lead to members failing to take appropriate action; and eight decision biases that might result in poor decisions. Each behavioural influence is briefly explained, after which the implications for decision-making around retirement are outlined and suggestions offered for actions to reduce any adverse impacts while encouraging beneficial choice. We wrap up by recommending that super funds focus on how options are being framed to members, nudges with opt-outs, and crafting of member communications; meanwhile conducting member testing where possible.

Questions addressed:

1. What are the key behavioural influences on decision-making for retirement?
2. What are the potential implications of these influences?
3. What actions might be taken to protect members from poor decision making, and encourage them to make sensible choices?

Key terms: Behavioural finance; retirement decisions; bounded rationality; poor self-control; decision biases; cognitive limits; financial literacy; complexity

Who should be interested? Retirement specialists, retirement leads, super fund management and board members, member servicing personnel, product designers, financial advisers, policymakers and regulators, people wanting a career in the retirement income space, current or impending retirees.

Introduction

In this explainer we turn to the topic of ‘consumer choice’ by examining the behavioural influences on super fund members who are making retirement decisions. We unpack why members often have difficulty in making well-informed retirement decisions for themselves. The broad theme is that there are many reasons why members may fail to

make sensible decisions about retirement; and that awareness of the drivers of poor decisions can help super funds to devise strategies and actions to assist members to make better decisions. We describe a range of behavioural effects, outline their potential implications, and suggest some actions that super funds might consider taking to encourage members to make sensible choices, i.e. choices that suit their preferences and individual circumstances.

¹ Hazel Bateman is a Professor in the School of Risk & Actuarial Studies at UNSW Sydney, and a member of the Conexus Institute Advisory Board. Hazel’s research focuses on consumer choice in pension settings.

We focus on the most relevant behavioural influences that may impact on decisions in the retirement phase. This explainer is unavoidably lengthy given the broad scope of the topic. Nevertheless, we have done our best not to overburden the piece by providing short and focused overviews and avoiding citing from what is a massive body of academic literature. Selected references are listed in an Appendix at the end for readers who want to delve deeper.

Three categories of behavioural influences

This explainer is arranged around three categories of behavioural influences or effects:

- A) **Bounded rationality** – This category refers to limits on the capacity of individuals to gauge if their decisions are in their own best financial interests. This set of influences reflect the fact that many members do not have the skillset or knowledge needed to make well-informed and well-considered choices. Sitting under this category are factors such as low financial literacy, lack of knowledge of relevant policies and products, and cognitive decline. The consequence is limited ability for effective choice and a tendency to resort to short cuts and rules of thumb.
- B) **Poor self-control** – This category includes a group of behavioural influences that lead to limited self-control or willpower. We discuss influences that result in inaction (i.e. putting off decisions) and short-termism.
- C) **Decision biases** – This category covers a wide range of behavioural biases they may lead to poor decisions. This large group includes effects such as narrow framing, anchoring and much more.

The above three categories of influences interact, with bounded rationality and poor self-control serving to make members more susceptible to decision biases. Behavioural influences can also interact. An example is that myopia may interact with loss aversion to give rise to ‘myopic loss aversion’, which can lead to heightened concern over reductions in the retirement balance even though they may be only short-term in nature. Some effects are manifestations of similar underlying behavioural tendencies, and thus may have similar implications and suggest similar actions.

The behavioural effects discussed are listed in the box above. For each we first outline the nature of the effect, then discuss the implications and suggest some possible actions to improve member decision making from the super fund perspective.

Behavioural effects discussed

A) Bounded rationality
<ul style="list-style-type: none"> • Low financial literacy and numeracy • Poor longevity awareness • Lack of knowledge • Decision states • Cognitive decline
B) Poor self-control
<ul style="list-style-type: none"> • Inaction – procrastination, status quo bias • Short-termism – myopia, present bias
C) Decision biases
<ul style="list-style-type: none"> • Acquiescing to defaults and recommendations • Anchors, reference points and loss aversion • Framing • Mental accounts • Exponential growth bias • Wealth or money illusion • Rules of thumb • Implied endorsement • Trust

Complexity as a compounding element

Complexity compounds the difficulty of making informed decisions and exacerbates vulnerability to behavioural influences. This is particularly pertinent in retirement where decisions are both ‘new’ and complicated.

The issues around complexity go beyond the classic William Sharpe quote of retirement as the “*nastiest, hardest problem in finance*”. Sharpe was referring to designing a suitable retirement solution. In this context, retirees are confronted with solving for how to invest and then draw down on their assets under uncertainty over both investment returns and how long they may live. Complexity doesn’t stop there. The rules around the Age Pension, other publicly provided benefits and aged care are difficult to navigate. The household situation, homeownership status, other financial savings and any debt should ideally be taken into consideration. Plus members may be confronted with retirement solutions (see [Explainer #7](#)) and products (especially lifetime income streams or LIS, see [Explainer #9](#)) that are quite unfamiliar.

Retirement decisions are so complex and understanding often so low that it is unsurprising that members may procrastinate or make impulsive decisions, resort to simple rules of thumb, respond to what is most visible (salient), or take what is offered on trust. The consequence is that they become vulnerable to making poor choices.

A) Bounded rationality ... why retirees can have difficulty in making decisions

We start by considering five effects that limit the capacity of individuals to make decisions that are in their own best financial interests.

Low financial literacy and numeracy

The fact that many members have low financial literacy as well as poor numeracy skills seems not only self-evident, but is also strongly confirmed by academic research from around the world.

Implications

Many members are unable to comprehend information even in a basic form, often including numbers, percentages, graphs and figures. Many of the concepts being presented to them are unfamiliar e.g. real and nominal effects can be confused, and risk is often poorly understood. Lack of comprehension of financial concepts exacerbates the inability of members to understand the characteristics of retirement solutions and products and the retirement system itself. The consequence can be confusion and inaction. Where action is taken, there may be a tendency to act out of trust (discussed later) or use rules of thumb (or 'heuristics') that may lead to unintended outcomes.

Actions

Actions that super funds could take to address low financial literacy falls into three areas:

- *Communications* – Communication with members should be framed in ways that they can understand and does not rely heavily on technical knowledge and numeracy skills. This entails making things as simple as possible while describing concepts in words rather than assuming members necessarily understand tables, charts or interactive retirement calculators.
- *Clear direction* – Some members with low financial literacy may prefer forms of hand-holding such as recommendations or suggestions for action rather than being left to decide for themselves. While scope to do so safely may be constrained where the trustee has limited knowledge of the member's circumstances and needs (perhaps inhibited by the financial advice rules²), funds may nevertheless set out to provide 'nudges' to members while keeping low financial literacy in

mind – at least where a nudge is feasible and likely to be beneficial. Nudges are discussed further below.

- *Boost basic financial literacy* – Super funds might aim to educate members on the three basic building blocks of financial literacy: compound interest, impact of inflation and diversification.

Poor longevity awareness

Longevity is very poorly understood by most members. Research shows people tend to underestimate life expectancy prior to and earlier in retirement, and then overestimate how long they still have remaining to live at older ages.

Implications

Members can be quite poor at incorporating considerations of how long they could live and hence the time frame over which their assets need to generate income. The tendency to underestimate the risk of living to an old age could lead to under-saving or contribute to reluctance to purchase a LIS. Interestingly there seems to be an accompanying reluctance to draw down assets in part due to the 'fear of running out', which suggests that members might have an intuitive appreciation for longevity risk on some level. Some industry and academic studies find concern about health and aged care expenses in later life add to the reluctance to draw down. In any event, issues around longevity are often approached in a non-rigorous manner by the vast majority of members.

Actions

There may be value in providing some 'longevity education', including introducing members to the concept of life expectancy, probability of survival and longevity risk to support better informed decisions. In particular, information and tools provided to members to assist retirement planning should avoid focusing too much on a fixed planning horizon, such as life expectancy or even age 92 as highlighted in the ASIC regulations for retirement income estimates³. Longevity education might be accompanied by outlining how longevity risk could be managed, including highlighting the potential role of the Age Pension and LIS as alternatives to limiting spending to help ensure that the assets saved for retirement last. Unfortunately, there is no standard globally on how longevity concepts should be communicated to a broad fund membership, suggesting scope for research or consumer testing.

² The progress of the [Delivering Better Financial Outcomes](#) reforms will be relevant in this regard.

³ See ASIC [Regulatory Guide RG 276 Superannuation forecasts: Calculators and retirement estimates](#).

Lack of knowledge

An important contributor to bounded rationality is sheer lack of knowledge of how the system works and what options are available. For instance, some members may be unaware of the existence and features of account-based pensions (ABPs) and have poor knowledge of social security⁴ and tax settings, let alone the existence of LIS and their characteristics relative to ABPs. Knowledge gaps are exacerbated by a lack of standard product names and descriptions across super funds and providers.

Implications

It is extremely difficult for members to make informed decisions without a basic understanding of what is available to them. This can further fuel confusion and inaction, heighten the tendency to use rules of thumb, and increase the likelihood that recommendations are taken on trust even where sourced from potentially uninformed sources such as social media, friends or family.

Actions

Super funds can take a range of actions to help address member lack of knowledge of the basics:

- *Provide information and education* – Information and education should be made readily available, e.g. via the website, or directing members to ASIC Moneysmart as appropriate. An effective strategy may be to provide access to information on a ‘just in time’ basis when members are making a decision, or will soon be required to do so. It is also important that members have access to a full set of information – such as about both ABP and LIS products, with the latter generally being unfamiliar to super fund members.
- *Encourage members to find out more* – Funds might start with sending general communications or information to members, and then encourage them to find out more and making it easy to do so.
- *Focus on characteristics rather than features* – Retirement solutions or products might be described by what they do, rather than focusing on technical features. For example, LIS may be described in terms of how they can alleviate risks in retirement, rather than by features such as income rates (i.e. income per amount invested) or death and exit benefits. Similarly, the flexibility of an ABP may be conveyed so it is not overlooked.

- *Offer clear direction, where appropriate* – Similar to dealing with low financial literacy, one strategy for addressing lack of knowledge could be to provide members with clear direction on what to do, i.e. more hand-holding for those who need it.

Decision states

The concept of decision states combines the impact of lack of knowledge and poor financial literacy with allowance for decision making and learning over time. The idea is that members are likely to need to move through a series of decision states before they are ready to take an action, such as adopt a retirement solution or product option. Initially, they must become aware that the option exists. Once aware, they will only move closer to a decision if they are interested in the solution or product on the basis that it could benefit them. Finally, once they are both aware and interested, they need to be capable of understanding the solution or product option before they are ready to make a choice.

Implications

The decision state concept applies to many retirement decisions. It helps to explain behaviours such as some members who are retired remaining in accumulation accounts, delays in applying for the Age Pension, and lack of take-up of some retirement solutions or products. In particular, the decision state framework appears to explain much in terms of the limited take-up of LIS where awareness, interest and understanding is often lacking.

Actions

The decision states concept suggests that retirement decisions might be treated as a ‘journey’ rather than a single shot decision. Engaging with members over retirement solutions or products might be approached from the perspective of ‘walking members through the decision states’ This implies starting off by making members aware of their options, before then explaining the benefits to pique interest, and finally getting down to the details to build the required understanding to act. The process should commence well before the member retires. Decision states might also be viewed as a manifestation of both limited financial literacy and lack of knowledge, implying that the actions suggested above for each of these effects may help.

⁴ [Research by Link Advice and Retirement Essentials](#) in 2022 found that only 44% of Age Pensioners applied on time, with 32% applying more than 1-year late and

16% were more than 3-years late, thus missing out on a significant amount of income.

Cognitive decline

Capacity to make informed decisions deteriorates with age. In part this is just the natural process of ageing. However, the decline may become extreme under cognitive impairments such as dementia⁵. Further, many people don't realise their own decline and can become over-confident of their ability to make good decisions.

Implications

Retirees often become more prone to making poor decisions as they age, with some becoming quite incapable of making decisions for themselves. Exposure to elder abuse may also increase.

Actions

Super funds should consider the robustness of retirement solutions to cognitive decline. Potential actions include:

- Introduce and highlight the benefit of committing to simple strategies that do not require ongoing decisions. For example, placing some funds in a LIS that pays ongoing income with capital access (at least once reaching an older age) might serve to deliver income while protecting the member from making poor decisions or elder abuse.
- Keep tabs on members as they age, say by conducting occasional check-ins or raising flags or querying actions made by older members that may seem questionable. (For instance, asking: "Are you sure you really want to do this?", while warning it may have consequences ...".)
- Nudge members to have an enduring power of attorney with a trusted party in place.

B) Poor self-control ... why retirees may fail to take appropriate actions

We discuss inaction and short-termism, both of which relate to two broad groups of influences that have the effect of leading to limited willpower or poor self-control.

Inaction

A class of behavioural influences have the effect of resulting in inaction, i.e. failure to take action or make a choice when it is appropriate to do so. Two influences included in this class:

- **Procrastination** – Propensity to delay decisions, especially where they are difficult.
- **Status quo bias** – Preference for maintaining the current situation rather than making a change.

Implications

Example of the implications of inaction in the retirement phase include:

- Remaining in accumulation after retirement, leading to loss of tax benefits and access to savings
- Failing to apply for Age Pension
- Sticking with the existing super fund, even if another provider might better meet their needs
- Failing to respond to change, e.g. not updating the retirement solution upon death of a spouse or receipt of a large bequest.

Actions

Members might be spurred into action through the following measures:

- *Choice architecture* – Appropriate action may be encouraged through various form of nudges, including defaults, recommendations and suggestions (all discussed below). Providing incentives can also help to spur action. For example, offering tax bonuses may encourage members to move from accumulation to retirement.
- *Active choice* – Requiring members to make a choice can help overcome inertia. However, this can be difficult to do in the retirement phase of super where it is hard for funds to require members to take initial action.
- *Strategic communications and 'action' nudges* – Prompts to members to take some action may be effective in some cases. An example would be asking members who appear to have retired if they want to investigate their retirement options or apply for the Age Pension. Contacting members at life events can be effective as they are often thinking about what to do at this point, provided that the fund is able to detect a change in circumstances.
- *Precommitment* – Precommitment can help spur action when the time comes. An example would be a tick box to receive advice upon retirement.

⁵ [Alzheimer's Society](#) notes that around 2% of people aged 65-69 have dementia, with the risk roughly doubling every five years to about 33% after age 90.

Short-termism

Another group of influences have the effect of members focusing on the short term and not giving due consideration to long-term outcomes. This is an issue in retirement, which could potentially span a few decades. Examples include:

- **Myopia** – Pursuing short-term outcomes without taking into account any future consequences.
- **Present bias** – Tendency to give stronger weight to payoffs that are closer to the present time. Also known as hyperbolic discounting.

Implications

The most notable implication of short-termism is investing too conservatively due to concerns that return volatility could result in a reduced the balance, which in turn then lowers expected income for the long run. Another might be some members not saving enough, over-spending or failing to take out longevity protection. However, surveys of members often find that many members are highly concerned with running out of money, which hints at concern over the long-term on some level.

Actions

Actions that might encourage members to pursue options which are beneficial for the long run include:

- *Choice architecture* – Take-up of appropriate options may also be encouraged through nudges, coupled with information of the long-term benefits.
- *Visualisations of future self* – Assisting members to visualise their future self can help overcome myopia, e.g. painting a picture of how certain choices such as purchasing a LIS or investing in higher returning assets may play out as they age.

C) Decision biases ... why retirees make bad choices, and what can be done about it

We discuss eight behavioural effects that have potential to lead to poor decisions, although some may be exploited to encourage sensible choices.

Acquiescing to defaults and recommendations

Many people tend to accept options that are presented to them. We discuss this effect in the context of defaults and recommendations, which might be viewed as part of a spectrum of ways in which proposed actions may be put to members.

Defaults have been the subject of much research. A key feature of a default, as opposed to compulsion, is

the opportunity to 'opt out'. Nevertheless, propensity to accept and then stick with default settings is high for a variety of reasons including salience, perceiving a default as a recommendation, trust in the offeror and a way of easing the burden of choice under complexity.

Strictly speaking, a default is what happens when no choice is exercised. True or 'hard' defaults are currently not accommodated in the retirement phase of the Australian retirement system, where members must take action to shift into retirement solutions and products. This compares with the accumulation phase where members can (and many do) default into MySuper accounts.

The Australian super system also accommodates recommendations in various forms, ranging from financial advice to recommended solutions for particular member types, to recommended settings such as proposed drawdown rates. The industry sometimes refers to these as (soft) defaults or settings, although they might equally be described as forms of nudges. Recommendations and suggestions may be accepted for similar reasons to defaults, and may be considered forms of nudges.

The aim is that members be placed into or select a suitable retirement solution entailing allocating assets to investments and perhaps a LIS coupled with a drawdown strategy (see [Explainer #7](#)). This opens up scope for defaults or recommendations to be provided with respect to either overall solutions or particular settings with solutions. This gives rise to the matrix in the figure below.

Defaults or recommendations in retirement

	'Hard' default <i>(acceptance not required)</i>	Recommendation or 'soft' default <i>(acceptance required)</i>
Integrated retirement solutions	Member is placed in a retirement solution upon retiring without prior assent. Not currently facilitated.	Retirement solution is recommended for a member or member type (e.g. personas) with opt-out.
Settings, e.g. drawdowns or asset mix	Setting is applied if member does not select an option.	A recommended setting is presented to members, perhaps beside other options.

Implications

Defaults and recommendations can be influential. This is a two-edged sword. While defaults or recommendations may be used to direct people towards better choices, they can cause harm if an unsuitable option is offered.

The risk of providing an unsuitable default or recommendation is heightened in retirement given large differences in member needs and wants, particularly if provided by a super fund with incomplete knowledge of the member. [Explainer #4](#) discusses the wide range of member characteristics that can impact on a suitable retirement solution. Providing recommendations as 'soft' defaults or nudges along with opt-outs may be safer than imposing 'hard' defaults in the retirement phase. This approach greatly reduces decision complexity and related confusion for members.

Actions

Recommendations and default settings may be used to encourage beneficial choice around retirement solutions (in the absence of a member taking personal financial advice) as follows:

- Recommended retirement solutions might be presented either as an outcome from a self-driven digital process or as a recommendation for member types (personas) with which members can self-identify.
- ABP application forms could present 'default' drawdown rates above the minimum drawdown rates (MDRs) or investments with a generous growth allocation to boost expected income.
- LIS might be presented as components of integrated retirement solutions as an implied endorsement to encourage take-up by members who would benefit (see [Explainer #9](#), page 9). This would enhance awareness of LIS, noting that currently they are invisible to many members.
- Measures should be taken to ensure that defaults and recommendations are suitable (i.e. carefully designed) before providing them. A 'minimise potential harm' approach seems sensible.
- Opt-outs, reversibility (perhaps with time limits) and information about the member type for which an option was designed should be provided to further guard against having presented members with an unsuitable default or recommendation.

⁶ It might be argued that loss aversion may be a more accurate reflection of income preferences for many individuals, rather than a behavioural 'bias' that leads to decisions that are at odds with what matters to those individuals. Research suggests that the alternative of expected utility theory appears to do a poorer job of explaining preferences for a majority of people.

Anchors, reference points and loss aversion

People can be influenced by anchors or reference points. This behavioural effect may appear as the tendency to focus on arbitrary benchmarks or rely too heavily on the first piece of information that is offered when making decisions. Past experiences and recent quantities (e.g. current retirement balance) can also act as anchors.

The importance of reference points may be enhanced by loss aversion preferences, which refers to the tendency to feel losses much more acutely than equivalent gains framed relative to some reference point⁶. Loss aversion is a foundational element in prospect theory⁷, where the authors (Kahneman and Tversky) and subsequent research tends to find that losses are felt around twice as heavily as gains. This results in a desire to avoid losses if possible.

Implications

Members may be influenced by anchors such as the first or most prominent action in forms, the first choice in a list of options, and suggested amounts to be accumulated (e.g. '\$1 million needed to retire') or spent in retirement (e.g. ASFA retirement standard). Anchors can also be two-edged swords. They can be beneficial where they nudge members towards good decisions, but detrimental if they suggest actions that are unsuitable given a member's circumstances.

Income target objectives (see [Explainer #3](#)) such as income replacement rates or income standards could align with the genuine preferences of some members, and may be validly analysed through the lens of loss aversion expressed relative to the income target as the applicable reference point.

While loss aversion may describe preferences of some members, it can lead to poor decisions in certain situations. For instance, concern over potential to suffer near-term losses in the ABP arising from using the current balance as a reference point can induce an aversion to investing in growth assets and reduce expected income for the long run⁸. Loss aversion can also discourage LIS purchase if giving up control of capital or dying early and thus sacrificing capital are perceived as potential 'losses'.

⁷ Prospect theory incorporates other elements, including: initial editing of prospects; risk seeking in the realm of losses and risk aversion in the realm of gains; and distorted probabilities.

⁸ Relatedly, studies show that people can be more reluctant to drawdown savings when shown account balance estimates rather than income estimates.

Actions

Presentation of information and options should be carefully designed, giving consideration to whether they could be perceived as an anchor or reference point. The aim would be either use anchors as a nudge where there is a choice that is clearly beneficial, or otherwise position the information or options in a neutral fashion. Another aim is to ensure that poor decisions are not encouraged by invoking framing where losses are evaluated against an inappropriate reference point. Some actions include:

- Desirable options should be placed in prominent positions, e.g. at the top of the list.
- Potential anchors should be used strategically but carefully, ensuring that they are indeed appropriate for the member and ideally pre-tested for impact, i.e. member testing.
- Consideration might be given to suggesting calibrated income targets rather than just relying on ASFA retirement standards, to better align the anchor with member circumstances. For instance, income targets might be based on replacement rates or affordability given the available balance.
- Focus should be placed on income rather than depletion of assets.
- Avoid encouraging members to assess outcomes relative to a reference point that is set in the context of mental accounts, and rather maintain focus on overall outcomes. For example, the propensity to focus on shorter-term losses in the ABP might be mitigated by reminding that the ABP is one component of an overall solution, and that income is being buffered by any LIS and the Age Pension. Reminders that markets are likely to recover over the longer run may also be helpful.

Framing

The same information presented differently can impact on how that information is perceived and thus have an influence on decisions.

Implications

Framing has important implications in a retirement context, which calls for focusing on income rather than on assets and balances, and encouraging drawing down rather than hoarding or accumulating capital. Nevertheless, people often still think in terms of returns and protecting their capital rather than generating income from their assets,

perhaps as a carry-over from the framing applied in accumulation.

A key example is the presentation of LIS in an 'investment' frame rather than a 'consumption' or 'insurance' frame. Viewed in an investment frame, LIS can be perceived as an asset that offers a yield and a 'bet' with an insurance company where you lose if you die early (and win if you survive to old age). Viewed in a consumption or insurance frame, LIS may be perceived as providing guaranteed income for life, i.e. offering protection against longevity risk and the fear of running out; which is traded for access to capital (see [Explainer #9](#)).

Actions

Considerable care should be taken in how information and choices are framed for members. In retirement, the aim should be to frame around the income being delivered and the management of income risks. Framing might also be used as a form of nudge to influence choice. Specific actions might include:

- Present LIS in a consumption or insurance frame, i.e. as guaranteeing some income for life, and consequently acting to buffer 'confidence'.
- Focus should be squarely placed on the income delivered by the retirement solution rather than return-driven components such as the ABP.
- Regulators might consider holding back on performance testing of ABPs until a broader assessment regime⁹ is in place, lest they reinforce the tendency to frame around returns and asset values rather than income.

Mental accounting

Mental accounting is a form of 'narrow framing' reflecting a tendency to mentally segregate financial resources into different categories rather than considering the sum of the whole. A classic example is assessing individual investments in isolation rather than considering the overall portfolio. In a retirement context, mental accounting can emerge as the tendency to treat an ABP, LIS, financial assets outside super, the family home, etc in isolation rather than focus on how the components can contribute to the overall retirement solution.

Implications

The propensity of members to embrace mental accounting is another two-edged sword. The main

⁹ See "[Assessing retirement income strategies...](#)

[when outcomes are but a promise](#)", *Conexus Institute Thought Piece*, November 2022

risk of mental accounting in a retirement setting is that it can lead to inefficient use of available resources, i.e. the components that sum to a sub-optimal retirement solution. Examples include:

- Limiting the amount of risk taken in an ABP due to considering it in isolation, even though income risk might be adequately addressed by the Age Pension or perhaps a LIS.
- Insisting on access to capital within a LIS, even though it may result in reduced income and access to capital may be better provided through other avenues (e.g. ABP or contingency account)¹⁰.
- A couple who operate as a couple managing their assets separately.
- Quarantining housing from the 'retirement provision' pot, leading to home equity loans to be eschewed as a way of supplementing retirement income or covering lumpy expenses.

Mental accounting can also have positive impacts. It can help reduce decision load by breaking the problem into smaller pieces. Further, it can be used to positive effect where different mental accounts are integrated into a suitable retirement solution. Using mental accounts in this way can support engaging with members in ways that are easier to comprehend while leading them towards a better overall solution.

One such technique is '*income layering*' whereby income is constructed by layering on different income sources, e.g. the Age Pension, a LIS, and drawdowns from an ABP. Assets can be allocated and a drawdown plan devised to build income layers and deliver an aggregate income stream with desired characteristics.

Another technique is '*bucketing*'¹¹ whereby assets are allocated into different accounts that perform different functions and together add to a suitable overall retirement solution. For example, assets might be allocated to a contingency (rainy day) account as precautionary savings, a LIS to guarantee some minimal level income for life, a defensive bucket to support near-term income needs, and a growth bucket to boost expected income.

Actions

The idea that many members think in terms of mental accounts can be used to lead them toward better solutions. Specific actions might include:

- Presenting components in ways that members can see how they build towards an integrated retirement solution, e.g. use income layering or bucketing.
- Contingency accounts might be used to address the desire for some precautionary funds, and in doing so thus provide confidence to spend and invest more aggressively within other solution components (see [Explainer #3](#)).
- Communications might be directed at mitigating the adverse effects from mental accounting. For example, a fund might encourage members to also consider their assets outside super; explain that access to capital (i.e. death and exit benefits, see [Explainer #9](#)) may be better facilitated outside of the LIS; and highlight the potential to use a family home as a resource, if it is really needed.

Exponential growth bias

Exponential growth bias is characterised by a tendency to linearise exponential functions when assessing them intuitively. In essence, people find compounding difficult to understand,

Implications

Exponential growth bias leads to underestimation of outcomes from both saving in accumulation and how much income may be drawn in the retirement phase.

Actions

The following actions may help limit the impacts of exponential growth bias:

- Helping members to better understand compound interest (a key building block of financial literacy).
- Providing income and wealth projections in the retirement phase, which embeds the impact of compounding in the outcomes being presented.

Wealth or money illusion

This bias involves thinking of wealth or income in nominal terms rather than real terms. The consequence is loss of the line of sight between decisions about wealth (such as retirement assets) and the impact on spending power.

¹⁰ Access to capital in a LIS can be restricted by the capital access schedule, which rules out death and exit benefits beyond life expectancy (see [Explainer #9](#)).

¹¹ Bucketing is closely related to 'goal-based investing' whereby assets are allocated into pots each directed towards meeting a given goal.

Implications

Wealth or money illusion can emerge in a number of forms with respect to retirement:

- Saving too little for retirement or retiring too early due to incorrectly concluding that the amount saved suffices to support a desired level of nominal income.
- Confidence that accumulated wealth is more adequate than the equivalent annuitised income stream.
- Viewing LIS that pay a nominal fixed income as more attractive than LIS paying real (inflation-adjusted) income due to focusing on the higher immediate income rate, thus overlooking the benefit of the inflation protection.

Actions

The following actions might help to dilute the effects of wealth and money illusion:

- Income projections should be presented in real terms, e.g. showing the pattern of real income over time. This would help highlight whether the current balance is sufficient to sustain spending, as well as conveying the message that nominal income streams generate declining spending power with age in the presence of inflation.
- Information might be provided on what options could provide a decline in spending power under an inflation shock, thus explicitly highlighting exposure to inflation risk.
- Member education on the impact of inflation (also a key component of financial literacy) could be made available.

Rules of thumb

People often resort to rules of thumb or heuristics when making decisions. A good example is the mantra of 'don't put all of your eggs in one basket', which can be (mis)applied by allocating assets equally to all options that are being presented, i.e. naïve diversification, or the '1/n' rule. Rules of thumb that may be applied to retirement decisions include using readily available benchmarks such as the idea of needing '\$1 million to retire', applying an ASFA retirement standard or following the MDRs.

Implications

While rules of thumb help to reduce cognitive load, they need to be appropriate for the member else they could lead to poor decisions. The risk of this occurring is heightened in retirement given the large difference in member circumstance and needs. For

instance, following rules of thumb such as 'needing \$1 million to retire' or targeting ASFA comfortable as a rule of how much needs to be spent for a good retirement might lead to some members over-spending, and may cause unnecessary stress over not having enough savings leading to over-saving or retiring later than required.

Actions

The broad aim should be to deflect members from following rules of thumb that are unsuitable given their circumstances.

- Communications might include a warning against the risk of relying on rules of thumb because 'everyone is different', thus reminding members of the need to do what is best for themselves given their circumstances.
- Take care that the presentation of information does not inadvertently invoke an inappropriate rule of thumb. For example, a pie chart presenting the break-up across a range of asset classes may lead people to think they have a diversified allocation, even if most of the assets are a form of equity exposure. A pie chart of the growth/defensive mix may be more informative.
- Where there is risk of invoking an unhelpful rule of thumb, an alternative rule or anchor might be created. This idea could extend to presenting different rules or anchors for different cohorts of members.

Implied endorsement

An implied endorsement amounts to a nudge from some 'authority' that influences behaviour. While this often occurs through a government-regulated action, it may also arise in other settings when a member is dealing with another party that they may assume 'knows best'. An example is some members may receive the MDRs as an implied endorsement from the government. Implied endorsement is closely related to 'defaults and recommendations' as discussed earlier.

Implications

Implied endorsement offers the potential to nudge members towards desired behaviours, but only if an appropriate suggestion is being made. The risk is that implied endorsement leads to members adopting the suggestion without thinking about its suitability and alternative course of action. For instance, the MDRs may be inappropriate for some members and lead to them drawing less income than they can afford.

Actions

Super funds should remain alert to the propensity of some members to receive suggested actions as implied endorsements, and aim to ensure that the suggestions are followed only where beneficial. Possible actions include:

- Ensure that alternatives are being presented where the ‘endorsed’ action may be unsuitable, especially when it arises from ‘trusted’ sources such as the government. For instance, alternative drawdown strategies to the MDRs should not only be presented to members but the suggestion made that they may be preferable for many members.
- Super funds might set out to create endorsement for certain actions where likely to be beneficial. For example, a super fund might recommend that members in some situations consider a particular choice because it has been suggested by experts or is made by members in similar circumstances.
- Member communications designed to facilitate implied endorsement should be consumer tested prior to adoption. Research finds that while information on peer group behaviour generally invokes behavioural change towards peers, it may also result in feelings of discouragement that have the opposite effect.

Trust

Research shows that many (but certainly not all) members operate by trusting agents such as their super fund or financial adviser. Trust can have similar effects to implied endorsement in the sense that a retirement solution, product or course of action may be taken on trust without thinking about its suitability and alternative courses of action. As the underlying motivations behind trust differ from implied endorsement, the appropriate actions can also differ.

There is an interplay between trust, engagement and interest. What appears to be disengagement may reflect high trust rather than lack of interest, i.e. an explicit choice by the member to trust the provider or advice being given. Meanwhile, engagement may occur not just out of high interest but also out of low trust, i.e. feeling the need to check up on the provider. This suggests a complex matrix of how members engage with their super fund and hence retirement decisions. Research suggests that members are spread across the matrix.

Implications

Similar to implied endorsement, the risk with trust is that it can lead to actions being taken without much thought for their suitability or alternatives. Even ‘interested’ members may be at risk of taking an inappropriate course of action under the influence of trust, such as accepting an unsuitable retirement solution or product because it was suggested by their super fund.

Actions

The following actions that might help guard against situations where some members could be at risk of accepting an unsuitable solution or product offering because they take it on trust:

- Review member characteristics (as available) when presenting offerings to members, with the aim to reduce the chances of making unsuitable offers that might be taken up out of trust.
- Require members to review offerings, including describing the type of member for which the offering is suitable, and then request the member to indicate their acceptance.
- Categorise members through the lens of trust, engagement and interest to assist with more targeted communications.

The presence of trust in super funds by some members also calls for vigilance from policymakers and regulators to ensure that trusting members are being protected. Nevertheless, we also see trust as potentially beneficial in helping super funds to guide members to better retirement solutions. Our proposal to facilitate ‘trustee direction’, where members could request their fund to recommend or assign them to a retirement solution¹², would be a mechanism to leverage trust provided that it is coupled with appropriate consumer protections.

Importance of seeking evidence

Jumping straight from behavioural research to developing a strategy to address potentially adverse behavioural effects can easily go awry. One can never be sure how members will respond until an initiative is applied in practice. Sometimes the reactions can deliver perverse outcomes. Indeed, some of the actions we suggest in this explainer are untested ideas. Evidence should be sought to confirm that an action is likely to actually improve

¹² See “[Pathways for directing members into](#)

[retirement solutions](#)” *Conexus Institute*, November 2023.

the decisions made by members while limiting the risk of inadvertently making matters worse. We do not recommend that super funds blindly apply 'rules of thumb' or other commonly used interventions without first seeking evidence of their potential impact.

For instance, provision of peer information to modify behaviour is often highlighted by super funds as a key intervention. However, academic research on the impact of provision of peer information to modify behaviour is mixed.

Another example is that variations on the message "Congratulations, you are on target for ..." may be interpreted by some members that there is no need to do anything more. This may lead to failure to take further appropriate action.

Evidence that an action being considered is likely to be beneficial could come in three forms:

- *Analysing past behaviour* – This requires having access to data that is relevant to the action.
- *Referring to existing research* – Care needs to be taken that the circumstances or assumptions underpinning the research are applicable.
- *Undertaking formal member testing* – We strongly favour member testing as the 'gold standard', given that testing can be tailored to examine the specific action.

Our take: Importance of recognising and engaging with behavioural influences

Most super funds seem aware of the importance of recognising and engaging with the behavioural influences on retirees as a key element in guiding members towards suitable retirement solutions. Funds might adopt two broad aims in doing so:

- A) Prevent members from making poor decisions; and
- B) Use behavioural influences and techniques to encourage good decisions.

In this explainer we have discussed a wide range of behavioural influences that are relevant for decision making in the retirement phase. It begs the question of what are the broad priority areas that super funds might focus on. We suggest four:

1. *Framing* – The way that options are framed can be a powerful tool, and thus should be presented to encourage sensible choices. This might include embedding an appropriate anchor or reference point or using mental accounting to lead members toward a better overall solution, e.g. bucketing. Framing can also help overcome short-termism through making the long term more tangible. Framing around income rather than assets is important, especially in retirement.
2. *Nudges with opt-outs* – Issuing nudges (i.e. defaults, recommendations or suggestions) with opt-outs can start members on their retirement journey from a reasonable departure point while allowing them to choose another course if they wish. Nudges can help overcome propensity towards inaction. Suggesting or recommending a retirement solution or certain settings may get members thinking about what is being offered as the baseline choice, especially where there is an element of trust involved. What super funds are able to do in this regard may depend on the boundaries around personal financial advice and hence the outcome of phase two of the [Delivering Better Financial Outcomes package](#).
3. *Member communications* – Great care should be taken with member communications. Communications should be clear and understandable, and formulated on the assumption of low financial literacy and numeracy. Education is an important component. As well as aiming to improve financial literacy and understanding, 'just-in-time' education and information might be provided when a member is thinking about making a decision. Members might be led through a 'journey of discovery' as they move through decision states. Communications are central to implementing framing and nudges, and can help address adverse effects from behavioural biases such as money illusion and reliance on rules of thumb.
4. *Seek evidence that actions will work as intended* – We recommend that super funds seek out clear evidence that any action to address behavioural effects will work as intended, ideally by undertaking member testing.

APPENDIX

Selected references

This list of references with links was curated by Hazel Bateman. It is provided for those readers who want to explore further. Some references require a subscription or access to university libraries to download the paper, although in some cases an alternative version may be found online. In any event, an abstract and full citation details can usually be found through accessing the links.

Effect	References
General	
References that summarise of range of effects	Benartzi, S. 2010. Behavioral Finance and the Post Retirement Crisis Chomik, Yan, Anstey and Bateman, 2022. Financial decision making for and in old age . Mitchell, O.S and Roussanov, N.L., <i>Lessons from Behavioral Research for Retirement Saving, Investment, and Spending</i> – forthcoming book. Chapter 1 (overview) can be found on SSRN; while the chapters can be found as 2024 working papers #11 to #23 on the Pension Research Council Working Papers website .
A) Limited understanding	
Low financial literacy and numeracy	Financial Literacy and Retirement Planning in Australia – illustrates low levels of financial literacy and implications for retirement planning. Updated and more detail in Chomik et al. (2022) Section 2.1.
Poor longevity awareness	Illustrated for the US - TIAA-Institute-GFLEC Longevity-literacy-financial-literacy-and-retirement-readiness-TI-January-2023.pdf . Note: Findings are similar for Australia, with research forthcoming as a CEPAR industry paper. Testing methods to enhance longevity awareness – looks at impact of showing people subjective life expectancy vs. survival probabilities at old age. Experimental subjects have a greater propensity to choose annuities with the latter presentation. Cohort and target age effects on subjective survival probabilities – evidence of pessimism about overall life expectancy but optimism about survival at advanced ages, and with older people being more optimistic than younger people
Lack of knowledge	Individual Capability and Effort in Retirement Benefit Choice – shows how ‘just in time’ education can help people understand risk management features of annuities and non-annuitised products.
Decision states	Explaining consumers' progress through life insurance decision states - discusses how individuals move through a series of decision states before purchasing insurance. Forthcoming CEPAR follow-up paper will show similar findings for annuities.
Cognitive decline	CEPAR Research Brief Financial decision making for and in old age - describes prevalence of cognitive decline (see Section 2 from Section 2.5).
B) Poor self-control	
Inaction: - Procrastination - Status quo bias	Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior - original paper on auto (default) enrolment to increase participation in retirement savings plans in the US. Smaller than We Thought? The Effect of Automatic Savings Policies - New paper showing that auto enrolment impact dissipates over time, suggesting follow-up required even in a default setting. Save more tomorrow.pdf (ucla.edu) - original paper advocating pre-commitment.
Short-termism: - Myopia - Present bias	Hershfield Goldstein et al Increasing Saving Behavior Age Progressed Renderings Future Self - initial paper which uses/tests visualisations of ‘my future self’ Also see Benartzi (2010) as above

(Table continued over)

Effect	References
C) Decision biases	
Defaults	<p>Annuitization Puzzles – reports data from Switzerland and the US showing a high propensity to stick with benefit type (lump sum/annuity) defaults. This explains the apparent preference for annuities in Switzerland.</p> <p>Default and naive diversification heuristics in annuity choice – choice experiment showing that a proportion of respondents stick with the default allocation between an annuity and account-based pension with three treatments (25/75, 50/50, 75/25).</p> <p>Retirement Savings: A Tale of Decisions and Defaults – structural model showing welfare cost of sticking with inappropriate default settings</p>
Anchors and reference points	Impact of Information Architecture on Retirement Savings Decumulation – forthcoming paper examining member response to income projections and different drawdown patterns in retirement. Finds that people respond to 1) invitations to draw down an alternative to the minimum; 2) anchors/reference points
Framing	<p>Why Don't People Insure Late-Life Consumption? A Framing Explanation of the Under-Annuitization Puzzle - seminal paper on annuity framing, finding 21% chose the annuity in the 'investment' frame and 70% in the 'consumption' frame.</p> <p>Behavioral Impediments to Valuing Annuities: Complexity and Choice Bracketing – identifies how to offset narrow framing through product information.</p>
Mental accounts	Perspectives on mental accounting: An exploration of budgeting and investing – general paper on mental accounting
Loss aversion	Effect of Myopia and Loss Aversion on Risk Taking - finds greater willingness to take risk if portfolios are evaluated less often, reflecting interaction with aversion to loss
Wealth or money illusion	<p>Impact of projections on superannuation contributions, investment choices and engagement - also demonstrates wealth illusion in super fund context</p> <p>The Illusion of Wealth and Its Reversal – finds that wealth illusion can influence how lump sums versus LIS are perceived</p>
Rules of thumb	As easy as pie: How retirement savers use prescribed investment disclosures – analysis shows that asset allocation pie charts invoke the '1/n heuristic' and thereby dominate information about returns, risk and fees in choice of investment options.
Implied endorsement	<p>Spending from Regulated Retirement Drawdowns: The Role of Implied Endorsement - power of implied endorsement is shown experimentally.</p> <p>The Effect of Providing Peer Information on Retirement Savings Decisions – peer information does not always lead to behavioural change towards peer behaviour.</p>
Trust	Just Interested or Getting Involved? An Analysis of Superannuation Attitudes and Actions as well as Engagement with Retirement Savings: It Is a Matter of Trust – examines the interaction of engagement, interest and trust. Finds that many members are willing to place trust in their super fund