

The science behind retirement saving that we can't ignore

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The challenges to provide ageing populations with a financially secure retirement are well known. Individuals are having to take more responsibility and risk to achieve comfortable lifestyles in retirement, yet many do not participate or save enough in retirement savings vehicles. The World Economic Forum found the shortfall in pensions savings for eight countries¹ to be \$70 trillion in 2015 and estimates this could grow to over \$400 trillion by 2050. Governments, policymakers, employers and financial institutions all have a responsibility to ensure retirement savings systems are sustainable, inclusive and able to provide future retirees with financial security. We argue that to do this requires a deeper focus on behavioural science and for insights to be considered in all aspects of retirement savings design.

Introduction

Traditional economics assumes that people are rational. They take decisions to maximise their utility, and they correctly update their opinions and beliefs based upon new information that is received. It relies on there being little room for irrational behaviour.

In contrast, decades of research have shown that how people actually behave is significantly less rational. In fact, human psychology can limit an individual's ability to make decisions in their own best interest. There is also growing evidence that when people make decisions based on irrational biases they do so in predictable ways. Behavioural science is a toolset that combines economics, psychology, neuroscience and sociology. By challenging traditional models of behaviour, it provides a more realistic understanding of what drives our decisions. In doing so, behavioural science should facilitate better decision making.

These irrational beliefs or behaviours that can unconsciously influence our decision-making process are often referred to as 'behavioural biases'. Biases can be split into two categories – cognitive (resulting from incomplete information being made available, or the inability to analyse the information that is available), and emotional (where actions are taken based on feelings instead of fact).

There are over 20 behavioural biases, many of which work in tandem with each other. In this paper we investigate those most common in retirement planning, explore what has been done to date to help mitigate against these, and consider the opportunities for further improvement.

Common behavioural biases

1. Inertia (the status quo bias)

Research has shown that humans naturally lean towards the path of least resistance, meaning that we are unlikely to make changes to our habitual behaviour without a strong motivation or incentive. Examples of this in our everyday lives may be mobile phone contracts or gym membership contracts where money is taken automatically out of our bank account.

This is particularly heightened once we perceive the task in hand to be difficult, important, or a 'hassle'. Cognitive overload¹ leaves individuals feeling overwhelmed and under-confident and ultimately leads to **procrastination or 'inertia'**. We cannot underestimate the innate tendency of individuals to avoid change. Within the context of retirement savings, rather than try to overcome this, we can seek ways to harness the power of inertia.

Schroders Portfolio
Solutions Team

¹ Australia, Canada, China, India, Japan, Netherlands, UK, USA, World Economic Forum report Investing in and for our future, 2019.

2. Present-day bias

A common trait amongst individuals is the tendency to have '**present-day bias**', being solely immersed in today and ignoring the future.

Many people regard retirement saving of lesser importance than their immediate or short-term goals. As a result, people become tempted to treat themselves today, reducing, and perhaps even eliminating, their financial ability to save for retirement. Bryan et al (2011) found that 38% of people preferred a good standard of living today to saving for retirement. Additionally, individuals tend to ignore the need to start a retirement plan as they feel too busy, prioritising 'urgent' short term tasks.

3. Optimism

"According to popular belief, people tend to think that they are invulnerable. They expect others to be victims of misfortune, not themselves" (Weinstein, 1980). When thinking about retirement, many individuals assume that their existing or potential savings will be sufficient, and this reduces the importance they place on retirement planning. The risk for individuals falling victim to '**optimism bias**', is they underestimate how much they need to save.

Additionally, we see many individuals are too optimistic about their potential investment gains, and optimistic on how little they will need to spend once in retirement. Schroders Global Investor Study 2019, a survey of investors, found that 32% of people expect to achieve an investment return between 10% and 20% p.a. over the next five years.

4. Regret aversion

Conversely, individuals may fall victim to '**regret aversion**'. Behavioural economics finds that for many the potential to feel regret is a strong force in not planning for retirement, fearing the worst and therefore avoiding the prospect of regretting a decision. Those who are regret-averse may fear errors of omission (e.g. not investing into the right kind of investment strategy) or not contributing enough. The most often cited example of a regret-based decision is when deciding what lottery numbers to play. Most people tend to play the same lottery numbers each week – the justification being that although this does not improve the chances of success, there would be a high level of regret associated with changing from 'your' numbers on a given week and then seeing those numbers appear as winning numbers.

Tversky and Kahneman (1992) found that an individual's behaviour may differ when faced with the prospect of financial loss rather than gain. Here, people are more likely to focus on the risks or potential losses that come with investing, rather than the potential gains and improved outcomes. This, coupled with regret aversion, may explain why many avoid planning for retirement (as they see potential for loss and regret) or are investing in 'safe' or cautiously managed investment strategies achieving little to no growth.

5. Over-confidence

'**Over-confidence**' bias is where an individual puts more confidence in their judgement that can be justified. Among investors, over-confidence has been associated with excessive risk-taking in portfolios, although it can manifest in day-to-day activities. For example, where people underestimate the length of time it will take them to complete a task, often ignoring past experience.

6. Anxiety

People often experience negative emotions when they hear or see the word 'retirement'. For many, the thought of the future is daunting and can often be coupled with feelings of '**anxiety**' or guilt that they have not saved enough for the future and therefore may struggle in the post-retirement phase.

When individuals are probed or encouraged to think about the future through retirement planning, some, due to their heightened emotional state may avoid the task completely. Others, alternatively, due to heightened anxiety may make inferior choices due to their judgement being clouded and the desire to complete the task quickly, potentially leading to poorer outcomes.

7. Projection

In our opinion, '**projection bias**' is an under-cited trait. It refers to people's assumption that their tastes or preferences will remain the same over time (Loewenstein et al., 2003). In simple terms, we tend to assume that the way our lives are right now is how they will continue to be in the future. It's one of the reasons why pessimists tend to be better savers than optimists.

Within the context of retirement planning, individuals may reassure themselves that, if they are comfortable now, they should be comfortable in the future. They may for example under-appreciate that their consumption levels will not always stay the same and therefore fall into the trap of not having enough savings. The trick is for individuals to accept that their future will be different, and to adapt accordingly.

8. Herding

Our natural tendency to follow other humans stems from our tendencies to want to conform to social norms- we want to fit in. We may do this consciously or unconsciously. '**Herding**' refers to the extent to which an individual's decisions are influenced by group behaviour, whether this leads to good outcomes or worse ones. As Keynes (General Theory, 1936) observes, "worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally."

Herding behaviour is a common bias in financial markets. For example, individuals can be swayed by the movements of the markets – on the grounds that if the markets are going up, other people probably know something, and as a result it drives more individuals to invest, a phenomenon largely behind the dotcom bubble in 1999-2000. Individuals often justify this behaviour on the grounds that 'this time is different'.

Within retirement planning, the 'crowd' that an individual is influenced by plays heavily on potential outcomes. For example, if surrounded by people who believe in having a retirement plan, individuals are more likely to save themselves.

9. Mental accounting

According to Thaler (1999) people treat money differently, depending on factors such as the money's origin and intended use, rather than thinking of it in terms of the 'bottom line' as in formal accounting. This is known as '**mental accounting**'. In doing this, savers make decisions on each 'bucket' separately, for example pay day money versus bonuses, birthday money and lottery winnings, and in doing so can lose sight of the big picture. An example that many of us may be familiar with is the notion of keeping money in a savings account that earns little or no interest, yet at the same time keeping an outstanding balance on a credit card or a loan at a much higher APR.

Behavioural intervention examples from around the world

Arguably, the most important objective for industry stakeholders has been to expand access to and increase participation in retirement savings vehicles. Once in, stakeholders have focussed on supporting individuals in building financial adequacy, through education and engagement strategies.

Across the world many governments and fiduciaries have adopted the use of 'nudges'. Nudges have been particularly useful in many sectors/situations where decisions are complex and difficult to translate or understand.

A nudge is “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives”

That said, we have seen little adoption within the retail/individual savings industry. Perhaps scale has been a problem given the breadth of individual circumstances and requirements, and the customisable nature of the solutions required. For ease of reference, we set out some examples of successfully deployed strategies using the Behaviour Insights Team (BIT) framework EAST (Easy, Attractive, Social, Timely) developed in 2012. This BIT framework sets out four principles for applying behavioural insights effectively in the real world.

Make it easy

1. Introducing defaults

Over the past two decades, and against poor financial literacy rates, many fiduciaries and governments have harnessed the power of inertia in investment decision making, by defaulting pension savers into a 'default fund'.

This could be a balanced/target risk fund, a target date fund, or a lifecycle fund. Savers still have the option to 'opt-out' of this default, and make their own investment choices. However, anecdotal evidence suggests that where a 'default investment strategy' exists, the majority (over 80%) use it.

2. Reducing the hassle factor

Given the power of inertia, it is not surprising to see that when using an 'opt-out' approach, there is a higher participant rate compared to a positively elected 'opt-in' approach (Choi, Laibson, Madrian & Metrick, 2002, 2003, 2004, Madrian & Shea 2004). This was behind the introduction of 'auto-enrolment' (AE) in the UK. Since coming into force, there has been a 29 percentage point increase in the proportion of employees enrolled in a workplace pension from 47% in 2012 to 76% in 2018 (ONS, 2018). Equally encouraging to see is that drop-out rates have been lower than expected, at an average of 9%, (Automatic-Enrolment Evaluation Report, DWP, 2018) suggesting that people are not unhappy with the savings they are making. Auto-enrolment is not a new concept. New Zealand introduced it in 2007, the same year when many US companies actively adopted this strategy. Although not mandatory in the US, the majority of companies (70%) offer it (Plan Sponsor Council America Study, 2018). This year, Poland introduced auto-enrolment, and Ireland plans to implement in 2020.

Although default design and auto-enrolment frameworks around the world have been successful to different degrees, they are typically established with low contribution rates (in the

UK the initial rate was 2% p.a., which increased to 8% p.a. from April 2019), and often with conservatively managed investment strategies. Therefore, although they successfully encourage participation into retirement savings, it may be that they will still not sufficiently provide for an individual's income needs once in retirement. This is particularly true given that individuals rarely change their savings rate (inertia), even if over time they could afford to save more.

To tackle this ongoing issue, Thaler and Benartzi (2004) developed a financial nudge named '**Save More Tomorrow**'. It requires individuals to sign up in advance to a pre-programmed increase in their contribution rates, in line with future pay increases. By establishing these programmes, traits of procrastination and lack of self-control are reduced. In the US, three-quarters of the plans that have adopted auto-enrolment have also adopted auto-escalation (Plan Sponsor Council America Study, 2018).

Some argue that relying on inertia does not encourage individuals to buy in to the importance of owning their retirement planning. An alternative approach is '**enhanced active choice**' (Keller et al., 2011). Here Keller presented individuals with a choice of two options, forcing the individual to make an explicit choice on their own behalf, rather than their choice being automatically elected for them. The wording of the options presented to individuals should be constructed in order to 'nudge' the individual into choosing the 'correct' perceived option by the fiduciary. Keller found this approach within the context of medical adherence to be far more effective than 'opt-in' and 'opt-out' strategies.

“I want to save for my retirement and take advantage of my employer’s contributions” vs. “I do not want to save for my retirement and take advantage of my employer’s contributions”

An enhanced active choice framework should enhance confidence in decision making, and potentially lead to higher levels of responsibility and satisfaction over long time periods.

3. Keeping it simple

BIT UK (2017) carried out research to improve engagement with pension decisions. They found that there was a significant increase in the likelihood of visiting the UK government led 'Pension Wise' website and in the likelihood of calling the booking line on the website, if the standard information pack on retirement planning was condensed to one side of A4. This 'pension passport' included only essential information about open market options and a clear call to action around the next steps for the individual.

Other recommendations include:

- 'Chunking' the retirement planning process into a series of simple, understandable steps, supported by checklists to help implement their decisions more easily (BIT Canada 2018)
- The use of simple, text based descriptions rather than number tables and graphs (BETA Australia, 2018)
- Giving people easy access to information, for example through the use of pension dashboards (Australia, Netherlands, Sweden, and coming this year in the UK), on the provision that savings/pensions information is complete
- Using technology to help savers manage their personal finances (Source Mercer 2018, or Schroders GIS)

Make it attractive

1. Loss prompts are more impactful than gain prompts

Aside from condensing information, it is also important to consider how it is presented or framed as this can help to reduce inevitable tendencies such as loss aversion. Those that book holidays online may be familiar with the 'Only 1 room left' visuals that tap into this concept.

Within retirement planning, information could be presented in a way that highlights the risks of not having a pension plan. By drawing attention to the risks of losing out on gains, the individual is forced to think of the potential losses that come with not saving for retirement, and our innate tendency to avoid this will in turn encourage saving.

In the UK, the DWP found that the main trigger for taking a pension for young people was the receipt of contributions from an employer, and the fear of losing out on 'free money' if they waste this opportunity (DWP, 2007).

2. Make it visual

We cannot forget that individuals are also more likely to do something if they are drawn towards it. Ideas42 (a non-for-profit research organisation) trialled two techniques with a Mexican retirement fund administrator. The first required the individual to answer a series of questions about their future goals that are fed into the app and in turn created a storyboard about their future that the individuals had to read aloud. This acted as a prompt, putting the individual's imagination into the future. At the end of this, there was an increase of 2.2% in account holders signing up for automatic savings contributions.

Hershfield et al (2011) suggest that individuals fail to identify sufficiently with their future selves. Their study showed people a realistic age-progressed rendering of themselves, and gave them a slider scale to choose a level of saving. Depending on the level of saving, their future self would either frown or smile. Their results found that those who saw a simulated photo of their future self allocated on average more than twice as much as those who did not. Ideas42 conducted a similar exercise in Mexico with similarly positive results.










3. Make it personal

Many people discount general information or incorrectly assume that it does not apply to them. Karlan et al. (2010) found that reminders that highlighted a client's specific goal was twice as effective at encouraging general saving behaviour than reminders that did not mention these goals.

By creating this personalised customer experience, there is an increased potential for brand loyalty and integration (Atos, 2019) and a solution to the issue of complexity. Individuals will feel more connected and confident in their financial decisions if the information given is tailor made to them. New technologies are advancing at such a fast pace, and the expectations of customers are running parallel. Thus, by using technology of the future to engage with customers and provide personalised options, retirement may no longer be viewed as a daunting subject.

Make it social

As we know that individuals like to do what others do, we can use the power of networks to shape actions. '**Social proof**' can be described as the tendency to see an action as more appropriate when others are doing it'. This technique has been well adopted

	Biases	Description
	Inertia	Behaviour that leaves individuals to avoiding change and not taking any action, often as a result of feeling overwhelmed and under-confident
	Present-day	The tendency to regard retirement saving of lesser importance than more immediate needs or short term goals
	Optimism	The risk that individuals under-estimate how much they need to save for retirement
	Regret aversion	The propensity for individuals to regret a decision they have made so much so that it prevents them from not planning for their retirement
	Over-confidence	Where individuals place more confident in their judgement and abilities than can be justified
	Anxiety	Tendency to worry and be daunted about retirement, triggering off negative emotions
	Projection	Assuming future tastes, preferences and requirements remain the same over time
	Herding	The extent to which individuals are influenced by group behaviour and social norms, whether negative or positive
	Mental accounting	The process of treating sources of income and wealth differently, often as separate buckets

in other sectors. Amazon shoppers may be familiar with this technique when purchasing items and they see the tagline 'Frequently bought together...' and 'Amazon's choice'. Similarly Netflix viewers will be familiar with the phrases 'trending now' to make viewers want to follow the crowd and see what they might be missing out on. Other techniques include user ratings and customer reviews, also used successfully by Amazon.

The use of social proof within traditional retirement savings has been limited. The administrator Empower Retirement created a comparison tool that allowed individuals to see the average percentage of salary that peers in the same age bracket were saving into their retirement accounts. In their study using the tool, about 17% of employees modified their savings rate upward after using the tool to mirror their fellow employees' average savings (Deloitte, 2016). By applying these basic principles, employers could encourage employees to put into their pension, just like their peers are.

Make it timely

According to behavioural science, prompts such as emails, letters or text messages should be sent out at times when the individual is most likely to respond. This may vary by day of the week or time of the day.

In addition, major points of time in an individual's life can lead to a change of habits and behaviours, which disrupt and reshape our existing habits. This may include a significant birthday, change of job, having a child or moving home. We can use these life events as prompts to influence behaviour.

"Hi, it's your birthday, have you thought about your savings goals?"

Future opportunities

1. Embrace technology

As the World Bank (2016) observes: "Inclusion, efficiency, innovation – these are the main mechanisms for digital technologies to promote development".

We have already seen how digital IDs (e.g. biometric ID in India) and mobile banking (M-Pesa in Kenya) have become an essential part of creating a financial inclusion ecosystem. We have also seen how digital technologies have helped to open up the financial services markets to new providers (e.g. fintechs) with potential to disrupt the competitive landscape. We believe the retirement savings industry is no different, and similar advances are likely to come.

Further benefits within retirement savings can be leveraged by coupling technology with data and artificial intelligence, allowing more personalised content and products to be given to individuals, taking into account their behavioural biases.

As more digital tools and strategies develop, there is a growing need to put a robust regulatory oversight framework in place to oversee identity verification, consumer privacy and data protection.

2. Be realistic about the role of education

It is well known that low levels of financial illiteracy discourage the retirement saving process as individuals often choose to ignore it altogether. Additionally, financial terminology can be difficult for the average person to comprehend. For these reasons, many industry stakeholders have been implementing different techniques to tackle this in the hope of improving engagement and savings levels. However, little data is available to evidence their success.

If we cannot measure the success of retirement educational programmes, perhaps we can learn from wider studies on decision making, which compare the value of subjective knowledge (how confident the individual feels in their knowledge of a subject area) to objective knowledge (how much the individual actually knows). Hadar et al (2013) found that individuals who were more confident were more likely to take investment risk than those who felt more technically knowledgeable about retirement planning. Schroders tested this out on 25,000 individuals we surveyed in 32 locations across the world in our Global Investor Study 2019, and found that 44% of investors who classified themselves as 'expert' took more investment risk in their personal savings compared with their retirement savings. This was 20% more than those who regard themselves as beginners.

3. Not everybody will react in the same way

Not all cohorts of individuals behave in the same way, nor are they likely to respond to nudges equally. For example, Millennials have a tendency to check and offer reviews. This 'herding' tendency and bias is not a new phenomenon but the ease and transparency with which technology provides this on a real time basis, suggests that this trend is on the upswing. For Millennials, harnessing sources for social proof will play an increasing role in encouraging saving for retirement. Being more in tune with technology has its downsides. More information is available, and as a result, Millennials could find themselves with choice overload. Default options, or review scores, are likely to help in this scenario.

In contrast, while social proof can be equally relevant to elderly people, they may want this from different sources – for example through community based evidence.

4. Ethics: to avoid a 'nanny state'

Are we in control of our own decisions? It might seem a ridiculous question at first; however, from the moment we wake up we are being 'nudged'. From the 'footprints' at train and tube stations, calorie labels, risks about medications, to the 'recommended' contract that comes with a new phone. Companies nudge. Governments nudge too.

By using 'nudge' methods informed by behavioural science to encourage retirement savings, we face ethical challenges. Although individuals are acting as free agents and are permitted to engage with the behavioural interventions on their own accord, it could be argued that individuals should simply have their own right to be wrong. The government or fiduciaries may be perceived as pushing an ideology which is beneficial in their eyes, perhaps leading to what people could see as a 'nanny state' intervention – a dictation of what activities we should and should not do. The goal of using nudges is to improve the welfare of the people it targets. Thaler (2015) suggest that to do this, three guiding principles need to be followed: nudges should be transparent, it should be easy to opt out, and the behaviour change should be in the user's best interest.

5. Supporting advisers to support savers

When supporting individual savers, advisers need to be mindful of their own potential behavioural biases as well as their customers. To help understand their own biases, tools and tests that tease these out can help build understanding.

In addition, checklists already utilised by advisers as part of their fact-finding exercise could be widened to cover behavioural questions. In this way, the advisor may uncover their customer's biases to over-optimism or regret, for example. In doing so, the adviser should get a better understanding of why the customer is making their particular retirement decision, and provide feedback to their customer on their potential biases. It can then help to provide a more personalised experience to the customer.

Conclusion

Just like our health and happiness, retirement planning is something that everyone needs to think about.

Within the context of retirement savings, we have seen how small changes have led to successful outcomes. That said behavioural interventions have been utilised in only a handful of retirement systems around the world. This, coupled with the success stories we see in other areas – the healthcare sector for example, suggests that more can be done.

By combining the concepts from classic economics and behavioural insights, we can obtain a more realistic picture of what people actually do. By understanding the traits that act as barriers to retirement planning, we can make design choices that encourage individuals to behave in a way that will benefit their future selves.

We at Schroders have devised a digital engagement platform to encourage savers to start their investment journey as a means of planning for their retirement. It will encompass tools and educational materials for those in retirement. It focuses on positive, emotional story-telling and people's

real life needs, goals, lifestyle and behavioural traits in the accumulation and decumulation stage. Behavioural finance principles underpin the entire experience, capitalising on what we have learned from investIQ launched in 2017 www.schroders.com/investIQ.

However, to overcome the barriers that many individuals face when saving for retirement and recognising the benefits from embracing technology, we believe that establishing a digital retirement savings framework is key to future improvements. Using a single form of I.D. for verification, and providing individuals with real time access to all their retirement savings accounts are critical components of this. This will then allow financial institutions to utilise digital engagement strategies to improve user experience and personalise products and service. To do this requires government endorsement and a single regulatory framework.

In doing so, we believe we can all help to create more sustainable retirement systems, build confidence from savers and improve the future outcomes of retirees.

Appendix

According to the World Bank (Behaviour Science Around the World report, 2019), there are 10 countries that are pioneering the use of behavioural insights: Australia, Canada, Denmark, France, Germany, the Netherlands, Peru, Singapore, the UK and the US. We are seeing growing evidence in Canada and Mexico.

Within the rest of Asia, there has been limited policy work done using behavioural insights. That said, there are a growing number of academic papers written showcasing findings from Hong Kong, China and Malaysia on individual behaviour within the context of retirement savings.

BIT: The Behavioural Insights Team, founded in London, has offices in London, Manchester, New York, Singapore, Sydney, Toronto and Wellington.

BETA: The Behavioural Economics Team of the Australian Government.

Ideas 42: A non-for-profit behavioural science research organisation, founded in Harvard, with offices in New York, Boston, Washington DC, San Francisco and New Delhi.

Schroders Global Investor Study 2019 survey. Schroders commissioned Research Plus Ltd to conduct an independent online survey of 25473 investors in 32 locations around the world, with fieldwork held between 4th April – 7th May 2019. This research defines 'investors' as people will be investing at least 10,000 euros (or the equivalent) in the next 12 months and who have made changes to their investments within the last 10 years; these individuals represent the views of investors in each country included in the survey. Retired investors were boosted in each location, where it is feasible.

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