How does your retirement philosophy help clients navigate the low rate environment?

April 2020

Managing retirement finances is a challenge at the best of times. With record low interest rates and the collapse in markets as a result of the COVID-19 pandemic, 2020 creates an especially difficult time to generate retirement income. As retirees seek safety in retirement, advisers who adopt a 'safety-first' approach can help their clients through the worst of this environment and provide these clients with peace of mind for retirement.[1]

Interest rates are important for safety measures

A natural response for retirees worried about market volatility is to reduce their exposure to volatile markets and seek the safety of bonds and term deposits. Ideally, the exposure is reduced at retirement or before the volatility, not in the middle of a market panic. Bonds and deposits are less risky, or safer, for a capital balance over a certain period. However, low interest rates and low returns mean that more needs to be invested in safe assets to generate the same level of income.

A 'bucket' approach is a strategy where cash is typically put aside to meet spending for the next (say) two years. Let's look at this strategy for someone spending $4,000 a month. If interest rates of 10% p.a. were paid monthly, you would only need $87,742 to fund two years' spending at that rate. The apparently 'missing' $8,258 would come from interest earned on the (declining) capital. When interest rates are only 1% p.a., only $911

interest would be earned, so you would need $95,089 to fund two years' spending, nearly 9% more at the start to achieve the same rate of spending.

The increased cost of safety provides a challenge for retirees who want their income to last as long as they do. For some, the cost will be too high, and they will keep more money in risky assets, but they could regret that decision when markets fall. Most retirees, however, will want to maintain some security for their income in retirement.

1. Cost of maintaining capital – a term deposit strategy

A simple approach adopted by some retirees is to maintain capital and live off the interest. Australians typically do this through term deposits, and historically rates have been high. While it is a long time since double-digit rates were the norm, Figure 1 shows that term deposit rates used to average 6%, ranging between 4% and 8% between 1992 and 2013.

---

challenger

Figure 1: Australian term deposit rates

Source: RBA. Rate is 1-year term deposit prior to 2002 and the RBA calculated 'special' rate from 2002-2020.

For a retiree to earn $10,000 a year to spend, they would need $166,667 invested in term deposits with rates at 6% p.a. At current rates near 1% p.a., that capital will only provide $1,667 a year to spend. To achieve $10,000 in interest income, the retiree would need to have $1,000,000 saved up (more than five times more capital than at a 6% interest rate). This is the increased cost of the term deposit strategy.

As the capital is not consumed, the Age Pension assets test outcome is static over time, with the only adjustment relating to the indexation of thresholds which will result in a small part Age Pension increase (if relevant) regardless of the level of interest rates.

2. The cost of safety in a probability-based retirement income strategy

A probability-based approach will typically use a diversified fund with exposure to both shares and bonds. It is the bonds, and other rate-sensitive investments, that will provide the safety for a retiree and so we will use a bond investment in this example. One way to measure the cost of safety in retirement is to calculate how much capital is needed to provide $10,000 a year through retirement. However, the length of retirement

is not known in advance. The probability-based approach needs to select a length for a reasonable probability. The 4% rule was based on 30 years, which is a reasonable estimate. For a 66-year-old Australian female today, 22% are expected to live another 30 years. The survival probability by age is show as the green area in Figure 2.

The line in Figure 2 plots how much $10,000 a year of income through retirement would cost, in net present value terms, at an interest rate of 6% p.a. For 30 years, the cost would be $139,300. In roughly four out of five cases, the money would last as long as the retiree. Taking the average result, just over 50% of women would live 24 years to age 90 which would cost $127,800 at the start of retirement, assuming a 6% interest rate.

If you wanted a lower probability of failure, say only one in ten, then the planning horizon would need to be 33 years to age 99, which has a cost of $143,700. The additional $15,800 over the average cost is the buffer required under a probability-based approach to have higher confidence that the plan will work even for those with much longer than average lives.

Figure 2: Survival of 66-year-old females and the cost of retirement (NPV)

Legend: Survival | Cost of $10,000 through retirement
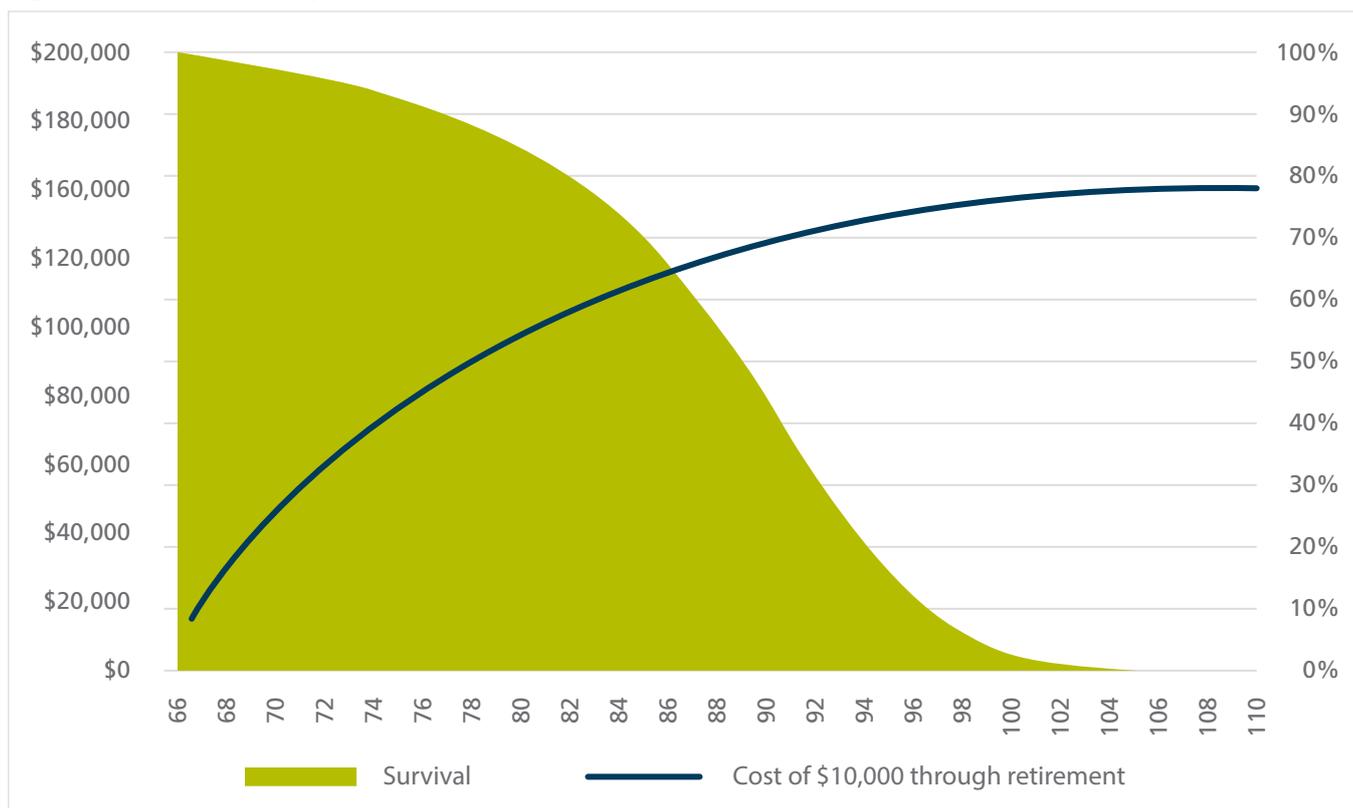
3. The cost of safety in a safety-first strategy

Using an income layering approach, a safety-first strategy, combines a lifetime annuity with a balanced investment portfolio. The safety for the retiree comes from the lifetime annuity, so it is easy to calculate the cost of an additional $10,000 of safe income through retirement, however long that lasts. When actuaries do this, they calculate the probability of survival to discount the cost. In practical terms, annuity prices reflect higher survival rates because people who are very sick don't tend to buy annuities. This has been factored into the theoretical prices here by shifting survival rates three years longer.

The theoretical annuity cost for $1 of income per year for life, when interest rates are 6%, is $12.51.[2] Thus, a guaranteed $10,000 a year for life requires $125,100 at the start of retirement.

The cost to reduce risk depends on the strategy used

The examples above provide a comparison for reducing risk across the different approaches. These numbers highlight a key benefit of the safety-first approach. Additional safe income is less costly if a safety-first approach is implemented. In fact, the costs are marginally lower under the safety-first approach ($125,100) than the average outcome under a probability-based approach ($127,800). Most retirees will not want to pay more for something that only has a 50% chance of success.

The cost of preserving capital is significantly higher at $166,667. The other strategies spend the capital which reduces the cost of income. The children of a retiree who preserves capital will get a higher inheritance.

So far, we have had the rose-coloured glasses on in assuming a 6% interest rate, but what happens to the cost of safety when interest rates are low, as they are now? This is shown in Figure 3 which plots the theoretical cost for a 66-year-old female of an additional $1 a year with the safety-first approach (using a lifetime annuity) and a probability-based approach (using bonds) over a 30-year period, noting that 22% of that cohort are expected to live longer than this.[3]

---

2 If everybody bought the annuity, the theoretical cost would be only $11.72. Academic research often uses this lower rate with the difference, labelled as an annuity 'loading' (which can also include other costs).

3 Wade Pfau produced a similar chart to age 100 in 'Safety-First Retirement Planning: An Integrated Approach for a Worry-Free Retirement', p308.

Figure 3: Theoretical cost of $1 a year in income over a 30-year period
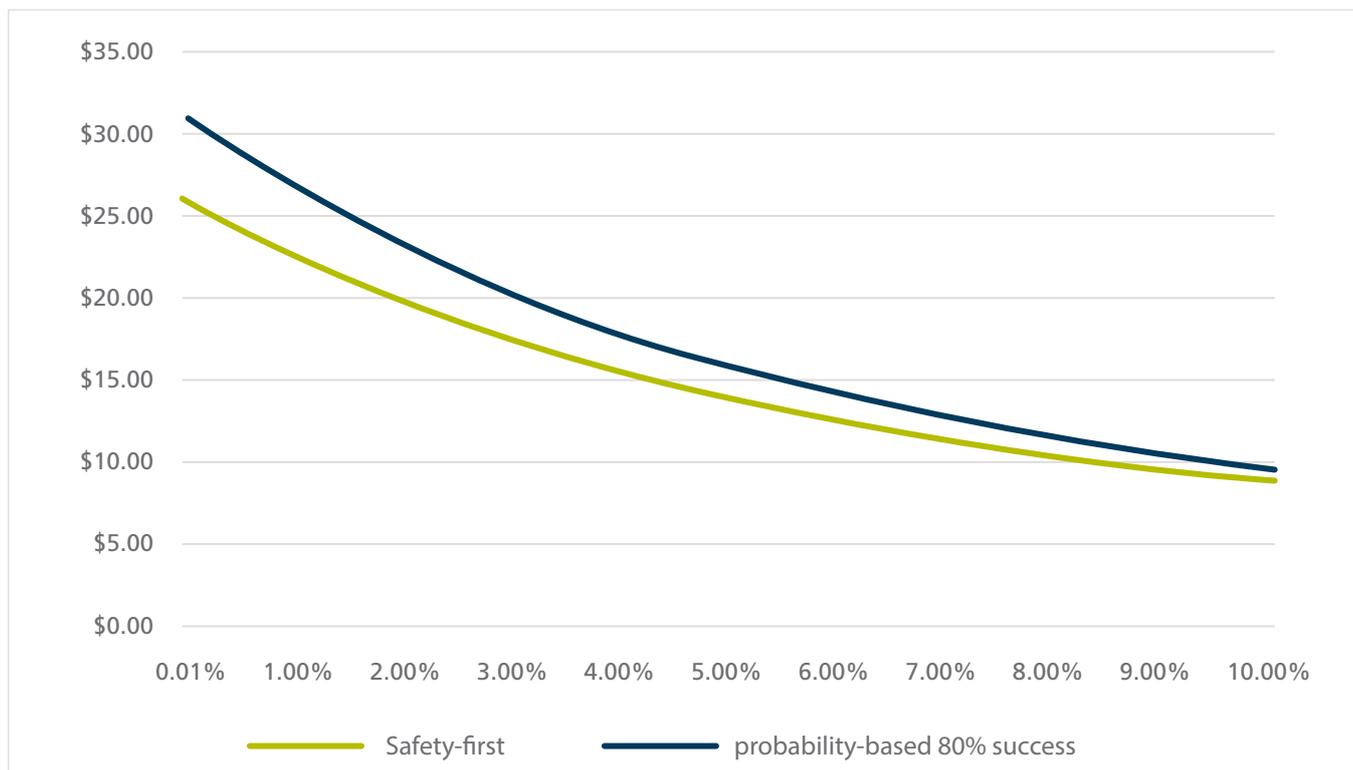
The chart shows that a safety-first approach with a lifetime annuity has a lower cost to generate income through retirement than a probability-based approach using bonds. At lower levels of interest rate, the difference is greater. The 11% gap ($125,148 v $139,291) in costs at 6% p.a. increases to 16% ($197,178 v $229,377) when average interest rates are close to 2% p.a.[4]

When interest rates are low, an annuity provides even better value than bonds for safe income in retirement. If interest rates were zero, the cost of each additional dollar would be approximately $25 representing the average time people will spend in retirement. For a bond (probability-based strategy) the average cost would also be $25, but when you don't know how long you live you would need $30 so that you would have enough, 80% of the time. Earning interest can reduce this cost, but using a safety-first approach will always be a cheaper way to de-risk the portfolio in retirement.

For the term deposit strategy, there is no limit on the cost of income. As rates fall toward zero, the cost of income increases infinitely. Even at 1% p.a., every $1 of income requires $100 of capital, so only ultra-high-net-worth retirees would be able to implement a strategy that preserves capital and provides secure income. Other retirees have to choose between the money they will have to spend and what they leave for the next generation to spend or take on more market risk.

Age Pension impacts

One last comment is needed to keep this analysis relevant in Australia. The above calculations have ignored the Age Pension, or equivalently assumed that the Age Pension entitlement is fixed over retirement. As such, the analysis will be relevant for retirees with very low balances who will always get the full Age Pension and also for those with sufficiently high balances that they don't expect to receive any Age Pension at any stage.

For those in the middle, the cost of safety will depend on the relative treatment under the income and assets means tests. The 2019 asset test simplification for pooled lifetime income streams means that the Age Pension entitlement associated with a lifetime annuity will be higher when the retiree is assets tested and lower when the retiree is income tested. Thus, retirees who are impacted by the income test, will have a similar cost of additional income under either approach. It would be a very unusual situation for a retiree with part-time earnings and income tested to have a lower cost under the probability-based approach after including age pension adjustments.

Those subject to the assets test will find the cost under a safety-first approach even lower than the above examples. For example, the actual cost of the annuity provided above was $189,580 but the assessed asset value is only $113,748 being 60% of the purchase price. For a retiree who was asset-tested, their part-age pension would increase by $5,915 in the year after purchase of the annuity.

Summary

Most retirees seek some level of security for their income in retirement because it is not easy to return to work to replace diminished savings. In a low interest rate environment, many retirees will be sensitive to the increased cost of reducing risk to their income. Using a safety-first approach to generating income is the cheapest way to secure additional cash flows for spending through retirement. Adopting these strategies with your clients will provide them with the security that they are seeking and allow more of their investments to be put to work in markets so that they can get more upside, safe in the knowledge that their essential spending needs are secured.

The information in the report has been compiled by the Challenger Retirement Income Research team.

Jeremy Cooper
Chairman, Retirement Income
02 9994 7178
jcooper@challenger.com.au

Aaron Minney
Head of Retirement Income Research
02 9994 7107
aminney@challenger.com.au

We're always ready to support you and your clients

Challenger has a range of tools to help you and your clients with their retirement and aged care planning, including calculators, videos and case studies.

To access them or find out more:

- ◢ Visit **challenger.com.au**
- ◢ Log in, or register for AdviserOnline at **adviseronlineportal.com.au**
- 👤 Speak to your Challenger BDM
- 📞 Call Adviser Services **1800 621 009**

challenger.com.au