

# RETIRE SMARTER

## NEW STRATEGIES TOWARDS A COMFORTABLE RETIREMENT

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## About the author

Dr David F Babbel, PhD, is a Professor Emeritus of Business Economics and Public Policy, Professor of Insurance and Finance, and Fellow in the Financial Institutions Centre at the Wharton School of the University of Pennsylvania.

He has been a consultant to some of the largest financial institutions in the world and has published over 130 books and scholarly articles on investment and insurance topics.

In 2017, Professor Babbel was asked by Commlnsure to research the Australian annuity market and provide strategies to address key challenges facing Australian retirees.



## Co-contributors

**Greg Ballard, MBA GAICD F Fin CPA ACIS AIMM**, is the General Manager, Super and Investments Commlnsure, responsible for the management of a \$12bn portfolio of superannuation and retirement assets. Greg has over 20 years' financial services experience in a range of executive management roles.

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## Preface

Last year, I was approached by Commlnsure, a leading annuity provider in Australia, to review the local annuity market and provide insights into strategies that I had developed (and personally used). I was asked to adapt my own retirement funding philosophy to the situation facing Australians, in light of the financial tools and products typically available to you.

You may ask why they approached me? I have written in many scholarly and professional journals and presented at symposia and forums around the world about retirement strategies and hope to share some of my research findings with you. A greater appreciation of the benefits of annuity-related strategies, including my personal and other related strategies, is one of the reasons why the defined contribution retirement savings programs in the USA increasingly feature deferred and immediate annuities among the investment options available.<sup>1</sup>

Hopefully the strategies discussed will provide you with some valuable insights that you can use with your clients to help them achieve a smarter retirement.

I was asked to consider certain challenges that face pre-retirees as they enter and retirees already in retirement. I have identified in Figure 1 five major challenges that people who have accumulated or are on track to accumulate sufficient retirement savings for a comfortable living face, and I have written the paper in five parts; one for each of them. Some of the ideas I share may also be helpful for the many who are not (yet) on that track.

- 1 **Dealing with lifetime uncertainty** – it would be simple to design a retirement strategy if we knew in advance our life span, but challenging for those of us who don't.
- 2 **The challenge of uncertain inflation** – to economists and others who have a keen understanding of the eroding purchasing power of money over time, this is an enormous and daunting challenge.
- 4 **Secure your lasting inheritance** – for those who want to leave an inheritance for children or other beneficiaries, we have a very novel and welcome solution.
- 5 **How staggered annuitisation can assist liquidity and diversification:**
  - a This part will show how the **need for liquidity** can be a double-edged sword. The strategy we propose will address this directly.
  - b The **role of diversification** is commonly recommended to reduce risk, but what is more important is safety. We will show how diversification among appropriate retirement vehicles can promote safety.

I didn't forget **3**. Rather, I decided to reserve the third part for sharing with you the conservative **retirement strategy** for addressing all five of the aforementioned challenges that I have developed, and that my wife and I have also used for our own personal situation. I'm not trying to tease and have readers wait until the end of the paper. It is positioned strategically as the third part to have readers integrate the first two major challenges of lifetime and inflation uncertainty, while serving as a segue to address the ensuing three challenges.

This is the complete paper. I hope the information and strategies discussed will provide you with the opportunity to help retirees, retire smarter. Let's begin!

Figure 1:

## Five major challenges when entering retirement



1 See, for example, [www.kiplinger.com/article/retirement/T003-C000-S001-annuities-on-the-rise-in-401-k-plans.html](http://www.kiplinger.com/article/retirement/T003-C000-S001-annuities-on-the-rise-in-401-k-plans.html)



# **PART 1:** **DEALING WITH** **LIFETIME UNCERTAINTY**



# PART I: DEALING WITH LIFETIME UNCERTAINTY

**Last summer, I was interviewed by a personal finance press magazine on retirement planning, and was asked the following question: “What is the biggest mistake people make when planning their retirement?”**

**My concise answer: “Trying to calculate their life expectancy and basing their plan on that.”**

That reply surprised the editor, because it was at odds with traditional thinking.

But later, I elaborated that no matter how many factors you may take into account, like whether you exercise regularly, your family history and so on, it amounts to a gamble to attempt to guess your date of death and such a gamble can have dire consequences if you guess wrong.

## Exceeding life expectancy

We all know people whose lifestyle and health are such that they were not expected to live very long, yet some of them continue to live on well past life expectancy.

A more prudent approach is to prepare for **maximum probable lifespan** (i.e. the age where there is a one in 10 chance that you exceed), not merely prepare for your life expectancy. An even safer approach is to ensure you have enough money saved to fund your maximum possible lifespan, because otherwise, you're still taking a gamble.

Addressing the uncertainty of our lifetimes is the most important challenge of retirement planning. If you use the standard population mortality tables to estimate your life expectancy, you will have underestimated your lifetime, on average, about half of the time.

That's because roughly half of all people die before reaching life expectancy, and half live beyond it, often far beyond it. To base a retirement plan on average life expectancy would be foolhardy because everyone is an individual, not a population. It would be sort of like playing Russian roulette with a two-shooter. Not too many people play that game.<sup>2</sup> Unlike an insurer, individuals don't have the luxury of 'diversifying' the timing of their death across a large number of people of similar age and relying on the law of large numbers to reduce the variation around their own timing.<sup>3</sup>

Speaking of insurance, when one purchases life insurance to provide an inheritance in case they die prematurely, through pooling large numbers of people, an insurer can offer a policy that costs much less than if you were trying to accumulate such a financial legacy without insurance, especially during the years prior to reaching life expectancy. That's because through risk pooling, an insurer can price policies based on averages. For example, a 25-year-old has about a one in 1,000 chance of dying during the year. By pooling numerous 25-year-olds, an insurer can charge them, for example \$100 each plus administrative expenses and margins, for \$100,000 of coverage. It would require much more saving to amass such a legacy without insurance.

<sup>2</sup> Attempting to project one's own lifespan, if you correctly evaluate enough factors, may reduce the odds to those of a three-shooter, or perhaps even a four-shooter, but basing a retirement plan on that is still unwise.

<sup>3</sup> Alan Kohler of ABC News put it more starkly: “So once they retire, Australians are exposed to the greatest risk of them all: that they will have the misfortune to live a long time.” [www.abc.net.au/news/2012-10-31/kohler-australia-super-disgrace/4343108](http://www.abc.net.au/news/2012-10-31/kohler-australia-super-disgrace/4343108) published 31 October 2012.

## Managing the risk of uncertain lifetimes

Another financial contract is available in Australia that is designed specifically to handle the risk of uncertain lifetimes. It is called a lifetime income annuity, and is most often sought by people preparing for, or already in, retirement. The contracts are priced as if you were an average healthy person at the time of purchase with a life expectancy typical of those who buy annuities.

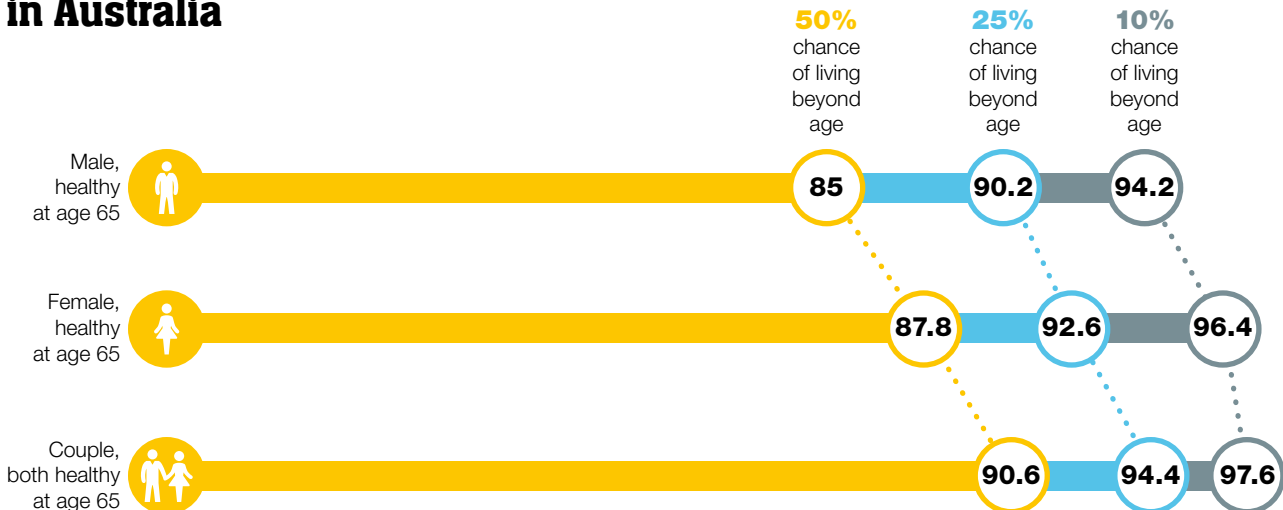
Through pooling large numbers of people, a provider can charge merely what it would require to cover the investor through to that average life expectancy, plus a margin, yet generate enough contributions to provide an income throughout the remaining lifetime, regardless of how long it takes before passing away.

## Helping to secure your retirement with annuities

Here's the bottom line – for a 65-year-old person in decent health to have enough retirement money to securely last throughout their remaining life, it would most likely cost more without lifetime income annuities than it would if the same person took advantage of them. In other words, you would need to accumulate a lot more savings to last equally securely throughout your uncertain lifetime if you didn't shift that risk to an insurer that can handle and price it based only on expected lifetime, not maximum probable lifetime. The Lifespans in Australia in Figure 2 below<sup>4</sup> shows length of life probabilities in Australia. A prudent 65-year-old needs to start thinking about providing for adequate retirement income to at least age 95 and a couple to age 98 and beyond. Planning for retirement needs to last the distance.

That is why most models developed by economists demonstrate that annuities are a preferred retirement option.<sup>5</sup> Except for two things – uncertain inflation and illiquidity. But don't despair. There are simple and effective solutions that you can take (based on an adaptation of my retirement strategies) to retirement.

Figure 2:  
**Length of life probabilities in Australia**



4 Sourced from Commlnsure and is based on Australian Life tables, 2010-2012 including expected mortality improvements.

5 I have identified and read dozens of economic studies that concur with regard to the key attributes of certain lifetime income annuities designed to address this lifetime uncertainty. They are listed in an appendix to an article I wrote entitled "Lifetime Income for Women: A Financial Economist's Perspective." Wharton Financial Institutions Center, July 2008. A link is available at: [https://www.academia.edu/17826536/Lifetime\\_Income\\_for\\_Women\\_A\\_Financial\\_Economists\\_Perspective](https://www.academia.edu/17826536/Lifetime_Income_for_Women_A_Financial_Economists_Perspective)



# **PART 2:** **THE CHALLENGE OF INFLATION AND INTEREST RATE UNCERTAINTY**



# PART 2: THE CHALLENGE OF INFLATION AND INTEREST RATE UNCERTAINTY

**Imagine you're setting up a retirement goal that provides an annual income of \$100,000 per year for as long as you live. You're enjoying the good life and feeling pretty secure about your financial situation – at least for a while.**

But then as you age another twenty years, the buying power of that \$100,000 can buy goods and services worth only \$17,000 (refer to Figure 3). By then it's too late for you to do anything to remedy the situation because you're far past your working years. And even worse, suppose your health remains sufficiently good and you're expected to live another 10–13 years, although you might worry yourself to death before that because of your financial situation. Could this happen? Absolutely. This is exactly what happened to some Australians who retired in the not so distant past.

Previously discussed were the perils associated with creating a financial plan based on life expectancy, and the need for being very conservative when structuring a plan based on such assumptions. It was then discussed that lifetime income annuities can address that major challenge better and less expensively than alternatives, but I warned that if not used appropriately, the plan would introduce significant exposure to the erosive effects of inflation on lifetime income.

Lifetime income annuities provide the retiree with a constant yearly income throughout the remainder of their life. While there is great comfort in not outliving your income, the purchasing power of that income may diminish over time.

## The real impact of inflation

Consider the various inflation patterns of Australia. Figure 3 shows that an annuity which delivers a sum of \$10,000 per year throughout one's life, provides diminishing purchasing power as time passes.<sup>6</sup>

The chart depicts all of the past levels of purchasing power erosion since 1966, for periods lasting 5, 10, 15, 20, 25, and 30 years.<sup>7</sup> For example, the five-year loss in purchasing power from 1966 to 1971 was 16.9%. From 1967 to 1972 it was 18.9%. From 1972 to 1977 it was 23.8%.

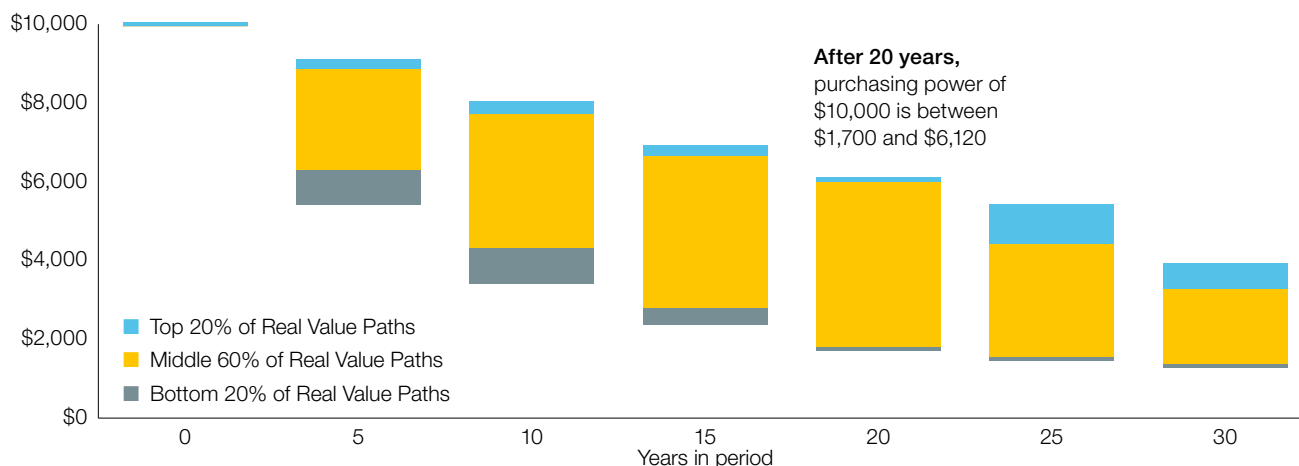
The first vertical bar at five year's duration displays the range of purchasing power, from the worst loss to the least loss, over every five-year period considered. (There are 46 such overlapping five-year periods.) That five-year range goes from a low of \$5,120 (which happened during the 1972–1977 time interval) to a high of \$9,100 (2011–2016) in purchasing power.

It's reassuring the lowest loss in purchasing power was during the most recent five-year period, and that inflation has been modest in Australia over the past 15 years, but it's wise to prepare for the possibility that such low inflation rates will not persist over the 20–35 years of your retirement. Therefore, you simply can't afford to make a mistake in this matter unless you are willing to gamble with your future.<sup>8</sup> You won't have the luxury of time to help cushion any bad choices as it becomes more difficult after retirement to re-enter the workforce to make up for investments that don't deliver.

Figure 3:

## The impact of inflation

Real Value of \$10,000 over Periods of up to 30 Years  
– Full sample is 1966 to 2016



Source: Based on annual inflation data from Reserve Bank of Australia.

6 I fully recognise that \$10,000 per year won't get you very far in retirement, but the numbers shown can be multiplied to whatever level you need. For example, if you require \$60,000 per year during retirement, merely multiply all of the dollar numbers shown by six.

7 The chart begins with 1966 because that's when decimal currency was introduced in Australia, which simplifies the calculation.

8 Before retirement, your continuing income and the luxury of time can help cushion some bad choices, but after retirement, you don't have that cushion. It becomes increasingly difficult after a few years of retirement to re-enter the workforce for three to five years to make up for a risky investment that winds up a losing gamble.



Similarly, Figure 3 shows the levels of value erosion over every overlapping ten-year period since 1966 (all 41 of them).

A sum of \$10,000 in annual payments had purchasing power after the passage of 10 years ranging from only \$3,330 up to \$8,040. When it reaches 20 years, the value erosion is more significant.

For instance, if you were 65 when you purchased the annuity stream, your \$10,000 in annual income would be able to purchase goods and services worth somewhere between \$1,700 and \$6,120 by the time you reach 85, depending on what year you arrived there.

Those levels may suffice, depending on the evolution of your needs and desires as you age, but it is doubtful. They likely will not meet your needs, considering the state of your health, family, and other factors. One thing that is readily apparent is the wide range of your possible financial wellbeing as time passes.

## The inherent risks of escalation

Some types of lifetime income annuities have been developed to provide increasing payments each year which rise by a pre-specified amount, or the Consumer Price Index.

For example, you could purchase an annuity that would start with a reduced initial payment, say \$8,000 per month, and climb by one per cent to six per cent each year, depending upon the percentage selection at the outset. If a five per cent annual escalation factor was used, after 10 years, you'd receive \$13,031 per year ( $= \$8,000 \times 1.05^{10}$ ). But even professionally trained economists are not very adept at projecting future inflation beyond a year or two. How then are you supposed to know which escalation rate to select over the next 20–35 years?

By selecting too high of an escalation factor, you'd be foregoing a lot of consumption during the early years and have more to spend than you might need in later years.

Alternatively, if you select too low of an escalation rate, you may quickly have a strained budget.

But there's something far more important to consider. The Consumer Price Index may not reflect your cost of living. A Consumer Price Index compares how much it would cost now to purchase exactly what consumers did last year and what it cost then. The way it works in Australia, is the Australian Bureau of Statistics selects a 'basket of goods and services' that reflects an average consumer. That basket includes eleven major groupings, such as food and non-alcoholic beverages, transport, housing, education, and seven other categories. These are subdivided into 87 CPI expenditure classes. Within these, the prices of approximately 1,000 types of goods and services are weighted according to their importance in the representative basket.

That representative basket, and its' percentage change in price year to year, may not reflect your own consumption basket and its changing composition as you age. Therefore, even if you purchased a lifetime income annuity with an escalation feature, and even if you correctly guessed the annual inflation rates over the duration of your retirement, you may be far off from what you'll need to maintain your desired lifestyle.

## It's about your changing needs

What matters is *your* changing needs, not those of some hypothetical composite citizen based on eight urban areas across Australia whose consumption patterns of good and services may be far different than yours, particularly as you age.

There is a useful study that illustrates the changing consumption basket for Australians as they age, and I recommend it for background reading.<sup>9</sup> Nonetheless, your changing needs may not mirror those even of the average ageing population cohort. In the next section you will discover a simple and conservative approach that provides flexibility that allows you to adapt the strategy to your retirement needs.

9 "Spending patterns of retirees as they age – the needs of older retirees." Association of Superannuation Funds of Australia, July 2011. [https://www.superannuation.asn.au/ArticleDocuments/359/rc1107\\_SpendingPatternsOlderRetirees\\_July2011.pdf.aspx](https://www.superannuation.asn.au/ArticleDocuments/359/rc1107_SpendingPatternsOlderRetirees_July2011.pdf.aspx)

# **PART 3:** **STAGGERED** **ANNUITISATION -** **OUR CONSERVATIVE** **STRATEGY, ADAPTED** **TO AUSTRALIA**



# **PART 3:** **STAGGERED ANNUITISATION – OUR CONSERVATIVE STRATEGY, ADAPTED TO AUSTRALIA**

## **The power of staggered annuitisation**

**Previously, we have described what, to an economist, are the two largest challenges to funding retirement throughout one's remaining lifetime: uncertain lifetime and uncertain inflation.**

The first dealt with how long the money needs to last while the second focused on what the money can actually buy as uncertain inflation erodes the purchasing power of money over the uncertain lifespan. Now, we will describe the heart of this (and our own) conservative strategy and how it addresses these two major challenges. After gaining an understanding of this strategy, you will be better equipped to see how it also deals with three additional important challenges, which are discussed later.

So here's how we have managed it ourselves, except modified slightly to how we would have done it in Australia, were we privileged to live there. We'll describe the strategy and its key elements (putting tax considerations aside for now – we'll broach that topic later).

The key element of this strategy is now used by an increasing number of retirees in the US. I have also presented this around the world and it has been referenced in recent journals.<sup>10</sup> The greater appreciation of the benefits of this and related strategies is one of the reasons why there is a growing annuitisation rate in the USA.

But there's one more thing we need to get under our belts before proceeding. I will compare it to what happens with a home mortgage. With a typical mortgage, each payment made by the homeowner consists of two parts: an interest component and a repayment of principal component. Over time, as the principal is paid down, a smaller and smaller component of the fixed monthly payment consists of interest and a larger component goes toward paying down principal.

For example, if you have a \$100,000 10-year mortgage, you will need to repay the entire principal in 10 years, averaging \$10,000 per year. At a four per cent mortgage interest rate, that will elicit \$12,144 in annual payments (or \$1,012 monthly), so approximately \$2,144 of that will be the annual interest, on average.<sup>11</sup> If the term of the mortgage were 20 years, it would require an average annual principal repayment of \$5,000 per year on a four per cent mortgage to extinguish the debt. The total payment, including interest, would be \$7,272 (or \$606 monthly), so the extra \$2,272 would be the average amount of interest paid per year.<sup>12</sup>

With annuities, the monthly payments are analogous to a mortgage, with the main difference being that there are three components instead of two. There are the familiar components of interest and repayment of principal, which work in a similar way to those of a mortgage. Repayment of principal will return the entire purchase price of the annuity over the expected remaining lifetime of the annuitant. For example, if you purchased the annuity at an age where you had an additional 20 years of life expectancy, the annuity would be priced to return that purchase price in monthly installments over 20 years. If your lifetime income annuity cost \$100,000, the principal repayment would average \$5,000 per year for 20 years.

The second component that you receive is an 'interest credit' and stems from the interest the insurer earns on the premium paid.

Thirdly, there is also a 'mortality credit' component, which effectively represents the unrepaid principal contributed by those annuitants who are no longer alive to receive payments. The amount of a monthly payment funded by mortality credits starts at zero, but increases exponentially over time, funding survivors' annuity income streams long after capital has been repaid. Generally speaking, the longer you live the more mortality credits you receive.

Above I've been referring to average annual principal repayments and average annual interest earnings, although the actual patterns of these payments over time are not level. Neither is the pattern of mortality credits, as shown in Figure 4. However, what is important to the annuitant is that the uneven pattern of the three components to each payment, combine to produce level monthly and annual payments.

But unlike the mortgage, which may be scheduled to mature in (say) 20 years, the annuity expires only when you do. As the return of principal and interest payments dwindle away, the mortality credits take over and ensure that your payment stream is not interrupted nor reduced. Now, equipped with an understanding of these three components (see Figure 4), we may proceed with our discussion.

<sup>10</sup> Moshe Milevsky of York University in Toronto is a leading researcher. His most recent 14 books can be found at [milevsky.info.yorku.ca/published-books/](http://milevsky.info.yorku.ca/published-books/) Olivia Mitchell of The Wharton School is a prominent scholar who has studied retirement products for decades. Her important contributions to the literature are listed at: <https://bepp.wharton.upenn.edu/profile/mitchelo/#research>. James Poterba at MIT, Michael Sherris and John Piggott at UNSW, and Raymond Maurer at Goethe University Frankfurt are focusing increasing attention on the use of retirement products discussed in this article. My most recent contribution to this burgeoning literature is "Staggered Annuitiation: Dealing with the Top 10 Financial Challenges." NAFA Annuity Outlook, July/August 2013.

<sup>11</sup> I emphasised above the word "average". Over time, as the principal is paid down, a smaller and smaller component of the fixed monthly payment consists of interest and a larger component goes toward paying down principal. The pattern of principal repayment itself within the ten-year term of the mortgage does not affect the total payment, which remains level throughout the mortgage period.

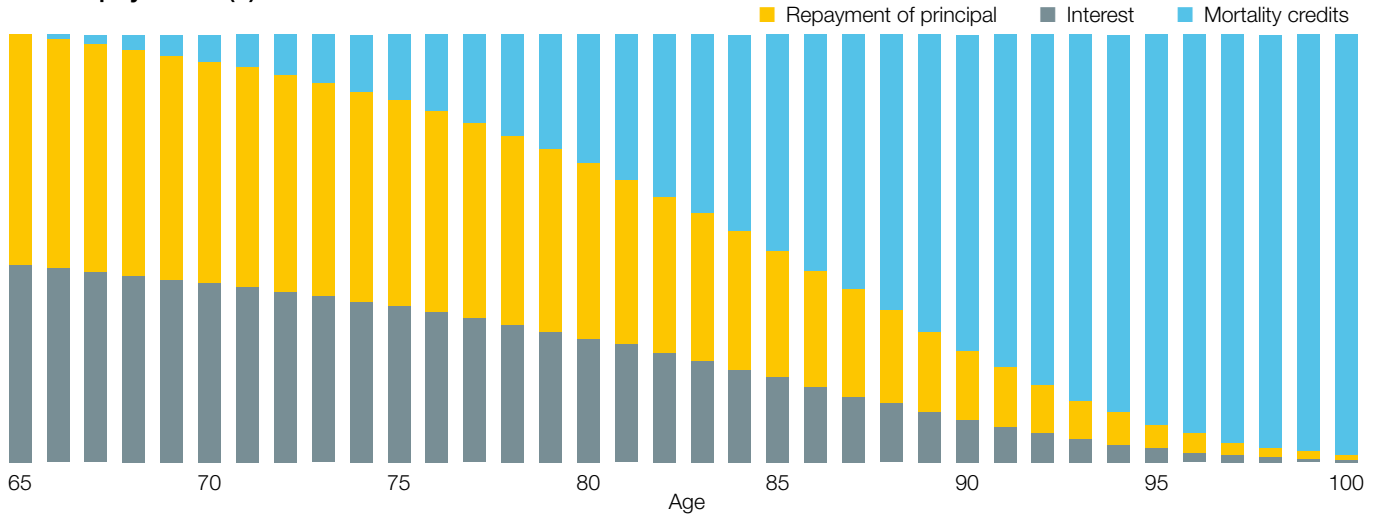
<sup>12</sup> These calculations are verifiable by referencing the link below. To calculate the average annual principal repayment, you take the total size of the loan and divide by the term of the mortgage. To calculate the average yearly interest, you take the total accumulated payments over the entire term of the mortgage, subtract the entire principal, and you get the total interest payable. Divide the total interest by the term of the mortgage to get the average annual interest payable. <https://www.commbank.com.au/digital/home-buying/calculator/home-loan-repayments>



Figure 4:

## Composition of lifetime annuity payments

Annual payments (\$)



### Staggering a retirement plan

You start by identifying the overall risk profile and typically, this could range anywhere from risk averse to risk seeking. For us, as we approached retirement and identified the top two risks that faced us, we determined that they were the uncertainty of life span and inflation risk (examined previously). We did not want to risk our hard-earned retirement savings and took a risk averse approach.

A client who is less risk averse might adapt the strategy by simply investing only the defensive portion of their portfolio according to the principles described below (e.g. if they had \$1m in retirement savings and based on a balanced risk profile, (60 per cent growth assets and 40 per cent defensive assets), the defensive allocation of their risk profile was 40 per cent, they would invest up to \$400,000 into annuities.

We divided our retirement savings into three 'buckets' for planning purposes.

One bucket was designated for lifetime income annuities to begin making payments upon retirement.

Our second bucket was reserved for future annuity purchases, as needed.

Our third bucket was set aside for other needs that will undoubtedly arise over time.

We actually had a fourth bucket as well, but that will be discussed in the next paper on inheritance provisions, and it probably isn't being used in the manner most people think.

### Beginning at age 65

We began in the U.S. at age 65 by purchasing a simple five-year term annuity with our \$1m (buckets one and two) to help us get to age 70. That simple annuity makes large, equal monthly payments without recourse to our age or mortality status. The payments are large because the entire purchase price, plus interest, is returned over a five-year period. Our reason to opt for this is because the repayment of principal is more rapid for a lifetime income annuity purchased at age 70 rather than at age 65, resulting in a much larger payout rate. Together with other available funds, this five-year term annuity enables us to get by until we reach age 70, where the payout rates begin to be more attractive.

You might reasonably ask, "Why use a five-year term annuity to cover the first five years? Why not use a bond or something else?" For us, annuities have two advantageous features. The most important, of course, is the provision of mortality credits throughout one's life or throughout a designated period. But they are not relevant here because our fixed-term annuity has no lifespan contingencies. The second is that from the purchaser's viewpoint, they can avoid the risk of loss due to bad timing (as detailed in Extract 1 on page 16), since the payment stream is locked in at the annuity rate on purchase. We have also described some viable alternatives to this strategy (in Extract 2 on page 17).

## Getting ahead at age 70

Our strategy really begins at age 70. At that point, we will annuitise about 60 per cent of our remaining retirement savings and would do the same in Australia.

For illustrative purposes, I have constructed a chart with simple numerical values that reflect our strategy based on Commlnsure annuity pricing (as at 31 January 2017), although not scaled to our particular expenditures (see Figure 5).

Suppose, for illustrative purposes, that a couple had put aside adequate liquid funds for a rainy day (bucket three) and had also allocated \$1m for retirement income (buckets one and two), which they might need to last for somewhere between one year and 35 years, depending on how long they live. In Figure 5, assume that the couple placed \$600,000 of that (bucket one) in a lifetime income annuity and set aside the remaining \$400,000 (bucket two) in secure investments earning about three per cent per year<sup>13</sup>, reserved for possible future annuitisation, as the need arises. That would furnish enough reserves to purchase up to four supplemental annuities in the future of at least \$100,000 each. (Note: There is no reason that the supplemental annuities need to be in equal increments, nor purchased at equal intervals, but we show it that way merely for graphical convenience. By using \$1m as the starting point, you can adjust this strategy for your specific portfolio by simple multiplication, i.e. multiplying by 4/10 for \$400,000 portfolio, etc).

## Providing for a comfortable living in retirement

In Australia in February 2017, each \$100,000 invested in a Commlnsure Lifetime Income annuity generated an income of about \$7,080<sup>13</sup> for a male of 70 years, and somewhat less for a female.<sup>14</sup>

Therefore, \$600,000 of lifetime income annuities would provide annually about \$42,500 (which is approximately equal to \$7,080 per \$100,000 × 6), as shown in Figure 5 – Hypothetical staggered annuitisation annual payouts.

This income closely approximates the amount required to provide for a 'comfortable living' for a single person aged 65 of \$43,695, according to the ASFA Retirement Standards.<sup>15</sup>

Assuming again that three per cent is the rate of interest, an alternative to a stream of annuity payments would be to invest the \$600,000 in secure bonds, which would generate \$18,000 in interest per year, with a return of principal at the bond's maturity. That principal could be reinvested to provide income for later in life, or the bonds could be sold off in parcels each year to make up the \$24,500 shortfall (= \$42,500 – \$18,000) in comparative income between the bond and the annuity. This approach would be a bit trickier, because once the principal is invaded, you would be generating less than \$18,000 in interest each year, and spending lower over time to only a fraction of that.<sup>16</sup> But if you don't live very long, much of the principal would remain to bequeath to someone else.<sup>17</sup>

<sup>13</sup>For illustrative purposes. Commlnsure Term Annuity rates as at 31 January 2017 were 1 Year at 2.85% pa, 2 Year at 3.05% pa, 3 Year at 3.15% pa and 5 Year at 3.55% pa.

<sup>14</sup>Women in Australia, on average, have life expectancies of about 35 more months than men, and can therefore expect to receive 35 more monthly payments than men, to make pricing actuarially fair for both sexes, women receive somewhat lower monthly amounts. However, from an economic point of view, they can expect to receive the same in present value terms as men can expect to receive.

<sup>15</sup><https://www.superannuation.asn.au/resources/retirement-standard> (June quarter, 2017)

<sup>16</sup>According to my calculations, the \$600,000 bond strategy would run out of money after 17 years if interest rates remained constant over those 17 years. Fat chance of that happening! However, if interest rates were to rise, the value of the bonds would go down and you would have to invade principal more often and by higher amounts in order to meet the \$42,500 annual withdrawal demands. Then there would remain fewer bonds to ride the market back upward, should bond prices recover. This pattern would likely recur over time, accelerating the bond portfolio losses in value. Under such conditions the bond may last much less than 17 years before all of the funds are exhausted. (This phenomenon – timing risk – is particularly pernicious to retirees when they depend on accumulated assets such as stocks and bonds exhibiting volatile market prices. I discuss this more thoroughly in Extract 1 at the end of this essay.)

<sup>17</sup>Of course, there may be no remaining principal at all if interest rates have risen in the interim, causing the bonds' values to decline so that you've had to cash out your bonds early to meet your retirement needs.

## Cost of living considerations

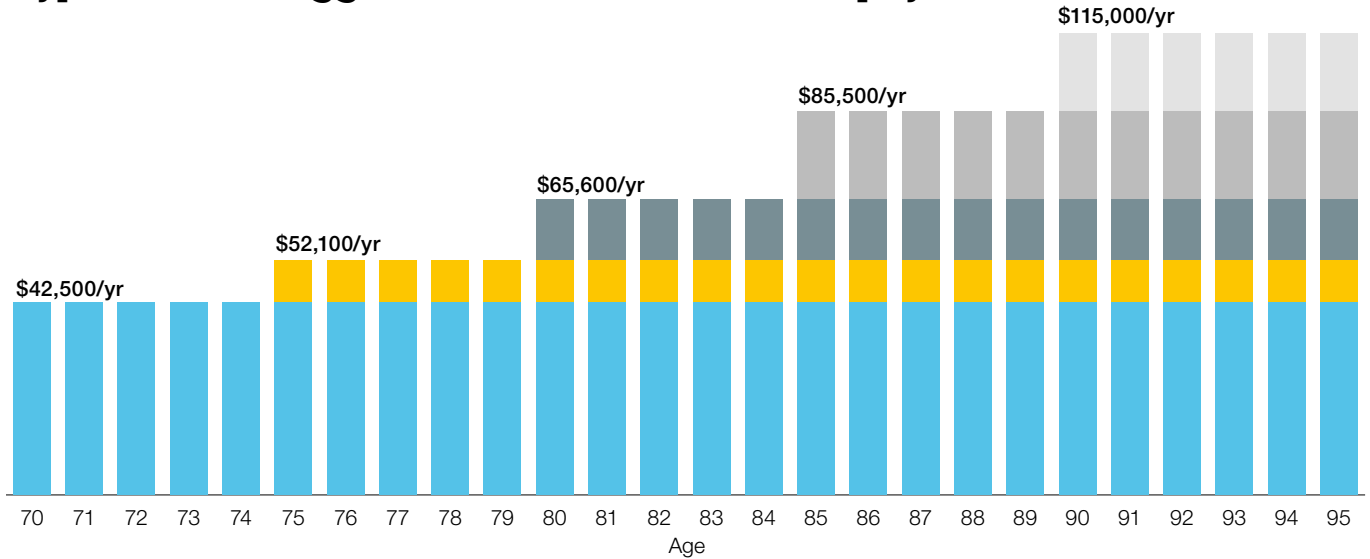
Continuing with our example, suppose your cost of living goes up over time for whatever reasons, including general inflation and specific needs. In the illustration below, we assume that after five years we will extract \$100,000 from our \$400,000 reserve (bucket two) and annuitise that amount, which at age 75 would bump up our annual lifetime income by 22.6 per cent to about \$52,100, assuming the interest rate environment stayed the same as today.

That hike in income derived from two factors. First, we assumed that the reserve funds were invested safely at three per cent per year. Therefore, the \$100,000 used here would have grown over five years to \$116,000, taking into account the compounding effect of interest.

Second, the payout rate that a lifetime income annuity would provide when purchased at age 75 is almost 17 per cent higher than at age 70, at \$8,280 per \$100,000 instead of \$7,080.

Figure 5:

## Hypothetical staggered annuitisation annual payouts



Assumes \$600K initial annuity and \$100K each for four additional annuities, purchased later as needed.

For illustrative purposes, the lifetime annuity rates are sourced from CommInsure as at 31 January 2017 for a male, nil guaranteed period and nil indexation, with each subsequent \$100,000 investment based on rates applicable for that age, plus accrued interest up to the time of additional investment, assuming an interest rate of 3%.

- \$600K investment at age 70, paying \$42,500 pa (or equivalent to \$7,080 pa for \$100k investment)
- \$100k investment at age 75 paying \$9,600 pa
- \$100k investment at age 80 paying \$13,500 pa
- \$100k investment at age 85 paying \$19,900 pa
- \$100k investment at age 90 paying \$29,500 pa

Before we proceed any further, it is worthwhile to take a closer look at Figure 5.

Notice how each of the vertical bar increments to the medium blue 'base annuity' bars, which extend across the entire horizontal length of the chart, has increasing vertical lengths as the person ages.

Recall that the first \$600,000 was able to purchase an annual income stream of \$42,500. The next \$100,000, or 1/6 (16.67 per cent) of the initial purchase amount, which was set aside in the second bucket for delayed annuitisation, ultimately provided an incremental income stream that was about 23 per cent as high as the base.

The short yellow bars show this. The dark grey bars, representing the second supplemental annuity purchased with \$100,000 of the money set aside at the outset, but accumulating interest in the interim, are now about 32 per cent as high as the base annuity.

The third supplemental annuity, represented by the mid-grey bars, provides almost half as much annual income as the base annuity, but uses only 1/6 of the cost of the base annuity (plus its accumulated interest).

The fourth supplemental annuity, represented by the light grey bars, provides about 70 per cent as much extra income as the base annuity.

Does this make sense? If so, I've got something bordering on the spectacular to reveal!



## The power of staggered annuitisation

Figure 5 reflects the assumption that interest rates (and inflation, which is highly correlated with interest rates) remained the same as when the initial annuity was purchased.

The genius of what is dubbed our 'staggered annuitisation strategy' is that if interest and inflation rise, the increment to annual income from redirecting amounts from the reserve (bucket two) to a supplemental annuity is as if it were on steroids. Let me explain.

Suppose that after purchasing the initial annuity in the three per cent interest rate environment, interest rates climbed over the ensuing five years to six per cent (and inflation along with it, perhaps from two per cent to five per cent). Three things would be working in your clients favour.

First, if they had short-term assets in their reserve funds, they would begin earning more than the assumed three per cent, unless you had invested them in fixed long-term assets. Therefore, they'd have earned more interest than assumed above and thereby be able to purchase an even larger supplemental annuity with the funds set aside for that purpose.

Second, the interest credit component that is baked into the new annuity would reflect the new six per cent interest rate, because annuity payout rates echo the interest rates existing at the time of their purchase.

Third, as before, the later age of annuity purchaser would elicit a more rapid repayment of the principal, resulting in a higher overall payment rate.

These three factors combined could produce a minimum of 34 per cent higher payouts per \$100,000 (assuming reserve funds earned nothing during the five-year period) and as much as 80 per cent higher payouts, if able to take full advantage of the higher interest earnings on set-aside funds.

We're not illustrating here what would happen with the annual payouts if interest and inflation rates continued at the higher levels, because the incremental vertical bars would soar far above the chart.

The vertical bars representing some of the later supplemental annuities might even extend above the page. That's how powerfully these factors work together to hedge against the loss of purchasing power over time. And it's fairly automatic. It doesn't depend on your inflation forecasting ability.

You may ask what happens if interest rates and inflation dropped? This would simply mean that you would generate lower incremental annual income from the purchase of supplemental annuities, than would otherwise have been the case. Yet presumably, because in this situation your cost of living would also decrease, you would still have adequate income.

To summarise, there are three factors that largely determine the payout rates received from assets held in the bucket two reserve:

- 1 How long you wait before purchasing a supplemental annuity
- 2 What the interest earnings are on those assets held in reserve
- 3 What the embedded interest rates are in the new annuity prices when you purchase supplemental annuities from the reserve assets

So let's review these three factors and examine how they work together to produce increased payouts over time:

- 1 If you wait for five years, the payout rate on the annuity will increase over time simply because of the increased age. The older you are, the shorter the actuarially assumed remaining life expectancy and therefore the annual payout rates will be calibrated to return total principal over a shorter horizon, resulting in a larger overall annuity payout rate for the rest of your life. The annual payout per \$100,000 goes from about \$7,080 to \$8,280 by waiting five years (from age 70 to 75), assuming that interest rates remain constant. That is an increase of 17 per cent.
- 2 You will gain interest earnings over those five years while you are waiting, enabling you to purchase larger annuities should the need arise. For example, if you earn three per cent on the reserve assets over five years, each \$100,000 in reserve will accumulate to about \$116,000, so your supplemental annuity purchases could be 16 per cent higher simply by delaying their purchase. But if you are able to invest those same assets at six per cent, they will accumulate to roughly \$134,000, or 34 per cent higher.
- 3 The interest rates embedded in the supplemental annuities would go from current levels to six per cent, under our scenario, because as we have stated, annuity pricing reflects the interest rates at the time of purchase. If you do the annuity calculations, that would amount to an annual payout rate of about \$9,512 instead of the \$8,280 that you get from the ageing effect alone. That's a pick-up of an extra 15 per cent in payout.

When you multiply these three factors together, you get an increase in the new payout rate of:

$$(1+17\%) \times (1+34\%) \times (1+15\%) - 1 = 80\%,$$

or 80 per cent more than you would have gotten had you purchased the supplemental annuity for \$100,000 at the outset. That's enough to offset a lot of purchasing power loss, and then some. Of course, the middle factor (1+34%) depends on your interest earnings while delaying the purchase of the supplemental annuity, and it could be as low as (1+16%), if your investments during the delay period are not able to benefit from the changing interest rates. Whether or not you can benefit will depend on how quickly the interest rates change and how long your funds are invested before they can be reinvested at the higher earning rates. If your savings instrument has a term of five years, then you are pretty much stuck with the three per cent annual earnings while they're waiting to purchase the supplemental annuity, in which case the increase in the new payout rate would be:

$$(1+17\%) \times (1+16\%) \times (1+15\%) - 1 = 56\%,$$

or \$56,000 more than you would get had you purchased the supplemental annuity for \$100,000 at the outset. Either way, you would be able to compensate for a rise in your cost of living.

In dollar terms, instead of receiving an incremental \$9,600 per year beginning at age 75 and continuing throughout the remainder of your life, you'd be receiving somewhere between \$11,034 and \$12,746 extra per year, again depending on your interest earnings on the reserve during the prior five years. These dollar figures produce 56 per cent to 80 per cent more income than you'd get if you used the \$100,000 reserve assets to purchase an extra annuity at the outset (and spent it all), returning \$7,080 per year.

On the other hand, delaying the purchase of that supplemental annuity would mean forfeiting five years of higher income from age 70 to 75, or  $\$7,080 \times 5 = \$35,400$ . The comparison is \$7,080 from age 70 until the end of life, or \$9,600 from age 75 until the end. 'Break-even analysis' found that if investors were to forego the \$35,400 in additional retirement income during those first five years, in favour of receiving the higher payout rate beginning at age 75, it would take until age 88 before breaking even in terms of accumulated payouts, assuming someone lived that long.

Of course, if interest rates increase, break-even would be earlier. How much earlier would depend on how high interest rates went.

But that's the point! This strategy is not to maximise lifetime income, but instead is designed to have enough income available at each age regardless of how the economy advances. If instead we were to try to game the retirement and collect more income early, we would need to save an unknown amount of that extra income at an unknown rate of interest in order to be safe, should the purchasing power of money decline over time.

Is it worth drastically adjusting lifestyle expectations to structure retirement assets in a way that will address possible rises in the cost of living? That is for you and your clients to decide, but in the USA, we recognise that the erosion in purchasing power can be significant, and are concerned about its recurrence, especially since we have a \$20 trillion national deficit and can foresee the possible return of inflation. For this reason, it is better to be safe than sorry.

Thus far, we have discussed the challenges of uncertain lifetime and uncertain inflation. Here we discussed our own conservative, yet powerful approach toward dealing with those two important challenges to prudent retirement funding, which has been adjusted for the Australian market. The final parts of the paper will show how to deal with three other important challenges to retirement funding. We'll discuss inheritance issues and provide a simple key to help determine when to activate the supplemental annuities discussed here with bucket two money. It is simpler than you might think and easy to remember. We'll also discuss insolvency risk, provider risk and illiquidity issues.

## Extract I: The insidious nature of timing risk

Timing risk is particularly troublesome when one enters into retirement. Suppose your client needs \$2,000 fortnightly to cover their retirement expenses. You sell your client an account-based pension each period in order to cover their expenses. When the markets are down, you need to sell more assets in order to meet those needs. If the markets then go back up, you have fewer assets to ride up with the market. Thus, although your assets have gone up in price, you now have fewer of them available to cash in to meet your expenses. Then when markets recede again, you have to sell an inordinate amount of assets to meet your recurring needs. These fluctuations are likely to continue throughout your retirement.

The cumulative effect of volatility during retirement can be disastrous. It is well known that if you leave assets exposed to volatility and a significant downturn occurs early in retirement, it is very difficult to ever recoup the losses, which can have a huge impact on retirement spending. A comprehensive set of simulation studies by Canadian Jim Otar<sup>18</sup> showed that a \$1 million retirement portfolio composed of 40 per cent stocks and 60 per cent bonds, designed to last at least 30 years under typical withdrawal rates where the portfolio earned average, albeit steady rates of return during retirement actually failed 87 per cent of the time to make it through the 30 years, even though the average returns were equal to the targeted returns. His simulation was based on the actual sequences of returns experienced in the USA from 1900 to 2000, and those 70 sequences of 30 years each exhibited more unfavourable sequences than favourable, as described above.

The retirement portfolio was often exhausted many years before the 30 years. When another portfolio of 100 per cent stocks was tested over the same periods, it failed to last the full 30 years 89 per cent of the time. In the worst case, the \$1 million portfolio was completely exhausted after only six years. In most cases the portfolio was depleted in less than 20 years. If average returns had been steady, the portfolio easily would have lasted the full 30 years. But when the same average returns were achieved, in their actual unsteady sequences, they didn't last long enough in most cases. Much of this underperformance was due to the adverse effects of adverse timing risk. (His simulations, many of which are chronicled at [retirementoptimizer.com](http://retirementoptimizer.com) for interested readers.)

Bottom line: volatility can be hurtful toward maintaining sufficient value in a retirement portfolio of volatile assets to last through retirement. Assets with steady values don't suffer from this timing risk. Of course, the average returns over time on instruments featuring steady returns may differ from those on securities exhibiting unsteady returns, but so are the risks different, and a person has to evaluate the options based on their tolerance for risk.

**Caution:** the simulations are based on past returns, and while they illustrate the past effects of unhelpful sequences of market fluctuations, the future may be far different.

<sup>18</sup> "On the Case: Jim Otar Answers Our Income Challenger", Retirement Income Journal, 3 August 2017

## **Extract 2:**

### **Low-risk alternatives to delayed annuitisation**

I mentioned how we personally decided to cover much of our need for income between age 65-69 by purchasing a five-year “period certain” annuity. This enabled us to wait until age 70 before annuitising a major portion of our retirement savings. The five-year annuity had the advantage of avoiding any timing risk from having to cash in securities at unfavourable prices to meet our own income needs.

But there are alternatives to the way we did it that might be preferred by some people.

One method is to purchase a delayed or deferred lifetime income annuity. With such a product you commit to annuitisation today, but begin to receive income at some future date several years out. How many years out, be it 5, 10, or some other number of years depends on today’s current decision.

This approach has some attractive attributes. First, by locking in your client’s commitment today to begin receiving income a few years hence (when their expected future lifetime will be less), you’re locking in a higher payout rate than they’d get if they begin receiving income today, since their initial principal must be paid back at a quicker rate.

Second, they’d also receive the benefits of accumulated interest over the interim that will be factored into the eventual income level.

Third, and this point is subtle, because there is a small chance that you will not survive until the income stream begins, your income level will reflect that chance by being bumped up a little via increased mortality credits. If instead you decided simply to delay your purchase of an annuity until the income would otherwise begin, you will not get this income bump.

Fourth, the deferred annuity income level will have baked into it today’s expected mortality rates for that future period.

If life expectancy lengthens over the delay period, waiting to annuitise will result in lower annuity income.

There are also some drawbacks to the deferred lifetime income annuity. The first is that there is some chance you will not survive until the income begins to flow, in which case your investment will be forfeited and shared with others who live longer. Whether or not that matters to you depends on what use you had for those funds. But remember, this potential sacrificed income actually is factored into a higher level of income, should you survive long enough to receive it, as discussed in the prior paragraph.

The second potential drawback is that the income level you will begin to receive later has baked into it not only current mortality rate projections, but also current interest rates. That means you will forfeit the natural inflation/interest rate hedge that would otherwise be available to you, as awaiting to purchase a lifetime income annuity until a later date will provide different annuity pricing based on whatever the going interest rates happen to be then.

Another alternative, should you decide to delay annuitisation until reaching 70 years of age, is to handle your income needs by withdrawing money from your retirement savings, stay in the labor force a little longer, or use otherwise available funds during this time. This may be a sensible approach.

A third alternative is to invest in some short-term securities and draw your income from their interest and dividend payments, cashing in some of the securities to supplement the distributions where needed. This involves more risk if the securities are volatile. The risk would increase greatly if these securities included shares of stock and longer-term bonds than the period that you wish to delay. A less risky alternative would be to place your funds in term deposits of laddered maturities and use these to fund the delay.



# **PART 4:** **SECURING YOUR LASTING INHERITANCE**



## **PART 4:** **HELPING TO PROVIDE FOR AN EARLY INHERITANCE**

### **Helping to provide an early inheritance**

**Some but not all retirees would like to leave something of monetary value to their heirs. Most who do will simply leave what remains, if anything, after expending their assets as needed to support themselves throughout their lives.**

This sets up a potential conflict of interest. Those heirs who may wind up sacrificing and providing significant assistance to you in your most senior years will likely receive less and less the longer you live, and perhaps may even feel obligated to pay your living and burial expenses when you run out of money.

Such a conflict of interest is particularly likely if it follows a retirement strategy that avoids the lifetime income guarantees of annuities, because they will be much more exposed to the risks of outliving their income.

### **An early inheritance for your beneficiaries**

One option for dealing with this (and one that we personally used and which is explained in the first three parts of this research) is to annuitise approximately half of your clients' retirement savings (bucket one) to provide a base retirement income and set aside in stable savings instruments another large portion of retirement savings (bucket two) for possible future annuitisation. This provides the opportunity to greatly reduce the risk of outliving savings, the greatest challenge to retirement, and also addresses the second most serious challenge to retirement – the uncertain rising cost-of-living risk, as previously discussed.

More pertinent to the inheritance issue, by not having to set aside considerable additional monies to cover lifetime uncertainty, you can set aside inheritance monies upfront. By using this strategy, my wife and I were able to gift to our four children much of their own inheritance upfront.

Recall I wrote earlier in Part 1 that without using our strategy, we would most likely need to use more of our savings to prudently cover our lifetime uncertainty. Rather than observe and enjoy (or rue, as the case may be) their inheritance spending choices from above (or below, as our case may be), we have been able to see each of our children wisely invest most of their inheritance in graduate education and housing.

Normally, without our staggered annuitisation strategy, they would be relegated to receiving their inheritance, if any surplus remained, only after we passed away, presumably in our 80's or 90's. They would all be in their 60's if that were to occur, with their children already raised. But by getting much of their inheritance upfront, they are able to lead lives of less quiet desperation than otherwise would be the case.<sup>19</sup> It will immediately and ultimately have a far greater impact on their financial wellbeing, and the opportunities they can provide their own offspring. As the Wall Street Journal reaffirmed earlier this year, "It is better to give with a warm hand than with a cold one."<sup>20</sup>

There is an alternative to the way we provided for an upfront inheritance that is easily adaptable. Many purchasers of lifetime income annuities get contracts with provisions that guarantee to pay to heirs whatever portion of the purchase price hasn't already been received by the annuitants, if the latter pass away before receiving sufficient monthly payments to surpass what they originally paid for it. Another available product variation is that you could elect a lifetime annuity with a guaranteed minimum payout period of, say, 5, 10 or 20 years. In that case, your heirs may receive something if you die prematurely, but receive nothing if you survive the stipulated period. Worse, in any of those contract variations you will receive significantly lower monthly payments during the rest of your life by having opted for such payout provisions, especially if you select a full return of principal or a guaranteed payout period longer than 10 years. Essentially, you may be losing some of the benefit of the annuity mortality credits by transforming a lifetime income annuity, with its relatively high monthly payouts, into something more closely approaching a bond with lower payouts.

<sup>19</sup>The American transcendentalist author of *Walden* (1854), Henry David Thoreau, aptly observed that "The mass of men lead lives of quiet desperation."

<sup>20</sup>See April 24th 2017 issue, which repeated the wisdom earlier articulated by Dr. Robert A. Rohm.

## Staggered versus laddered annuitisation

Recall that a major element of this approach to retirement funding is what we refer to as 'staggered annuitisation'. It is to be distinguished from a better-known strategy called 'laddered annuitisation', which is a tactic already well understood in retirement circles.

Laddered annuitisation is an investment strategy for retirees or near-retirees that entails the purchase of immediate annuities at regular intervals over a period of years, to provide guaranteed income while minimising interest-rate risk. The purchase prices of such annuities will presumably be diversified across different interest rate environments. A reason to prefer to stagger than ladder the purchase of annuities is that we can't predict our personal cost of living very well. Remember that hedging against general inflation is not really the goal here. What we need to hedge against is our personal cost of living. Because the repayment of the principal component of a lifetime annuity grows at an increasing rate as we age, there is a healthy, built-in incentive to forestall supplemental annuitisation until we simply cannot maintain the lifestyle we desire without activating another annuity. There is a simple trigger to remember: If you can't afford your current lifestyle, you either need to adjust your spending or activate a supplemental annuity. In the example provided in our prior paper, for us, we have four chances to do this throughout retirement, which should more than suffice. But if we ever reach an age where our income no longer suffices, and we have inadequate funds for the purchase of another supplemental annuity, we will have to reduce our expenditures.<sup>21</sup>

## An early inheritance

This staggered annuity approach addresses the inheritance challenge in **three** ways. **First**, by holding in abeyance the annuitisation of almost half of retirement funds, those funds are all inheritable until actually annuitised. In the illustration 'Hypothetical staggered annuitisation annual payouts' (refer to Figure 5 in Part 3), all of the funds held in abeyance for supplemental annuities, should they be needed (bucket two), are inheritable until annuitised.

**Second**, by having a financial plan that will help us manage longevity risk in retirement, my wife and I through our remaining lifetimes are able to bequeath funds to our children upfront, before we die as we do not need to hold onto excess funds 'just in case'.

**Third**, our children are unlikely to ever have to sacrifice their own needs to compensate for our poor planning. Note also that in Australia, by giving money to children upfront, it may help keep some of you below the maximum wealth caps that preclude receiving age pension benefits.<sup>22</sup>

There is another advantage of holding lifetime income annuities. The portion of their value that is included in 'assessable value' for the purposes of determining eligibility for the Australian Age Pension vanishes over time, even though the income continues throughout life. Thus, when you reach life expectancy, there is no more value imputed to your annuities and you may be eligible for the age pension, unless your other non-annuity assets are too high.

<sup>21</sup> Figure 5 in Part 3 presented earlier may appear to depict a "laddered" approach in the sense that initial annuities are illustrated to be supplemented in regular five-year intervals. But our staggered approach in no way requires such regularity. Indeed, depending on how the cost of living evolves, we may not need to purchase any supplemental annuities, or may need to purchase them at different intervals, such as the first supplemental purchase after two years, the second after eight years, and the third after 11 years, and so on. We chose regular intervals in the chart simply for the ease of illustration.

<sup>22</sup> Subject to the Department of Social Security (DSS) gifting rules.



# **PART 5:** **HOW STAGGERED ANNUITISATION CAN ASSIST LIQUIDITY AND DIVERSIFICATION**





# PART 5: HOW STAGGERED ANNUITISATION CAN ASSIST LIQUIDITY AND DIVERSIFICATION

## The need for liquidity

**One goal of this (and our) strategy is to have sufficient savings in liquid assets to handle emergencies. Having all of one's money tied up in lifetime annuities generally is not prudent, because most annuities make level or slowly rising payments over time.** However, if a cyclone rips off your roof, a car needs replacing, or some other incident requires sizeable expenditure, the regular monthly payments in retirement may be insufficient to cover the cost. This is not dissimilar to still working for a salary and something goes bump in the night. In both cases, one needs to have a reserve available to handle such things, to the extent that they are not insurable.

This retirement strategy includes a reserve for such things.

## Addressing liquidity issues

This entails purchasing initial base retirement annuities (with funds from bucket one) as well as setting aside money for future supplemental annuity purchases as we age further, with a sizeable reserve in case something major happens with funds allocated to bucket three. (Recall from the previous section that bucket four allowed us to bequeath a financial inheritance upfront, instead of having us and our beneficiaries await our death. This approach also provided for an uncertain end-of-life bequest.)

But in some sense, the lower liquidity of lifetime income annuities can be a blessing as well. It is an all too common human tendency to be biased when it comes to financial decisions. There is always some seemingly 'urgent' need that confronts most of us which, if all of our assets were fully liquid, we would be more inclined to deplete in order to satisfy our present desires. Doing so would, of course, jeopardise our future wellbeing. But having some of our assets tied up in lifetime income annuities serves as a protection against our own natural tendencies. Moreover, maintaining a fully liquid retirement portfolio is expensive because we'd be sacrificing the higher yields that less liquid instruments like annuities usually garner in the marketplace.

## Managing provider risk

If you are considering a risk-averse approach toward retirement funding, such as what we have adopted, it goes without saying that you should select annuity products only from reliable providers.

Fortunately, Australia has more stringent capital requirements for annuity providers than most, thereby furnishing not only sufficient funds to cover a company's expected commitments, but a sizeable cushion of excess funds in case projections don't turn out as anticipated. Nonetheless, it is prudent to invest carefully.

In this regard, the U.S. Department of Labor has issued an interpretive bulletin relating to the fiduciary standards under Employee Retirement Income Security Act when selecting an annuity provider for a defined benefit pension plan.

These standards are designed for professionals who guide investment decisions, but also shed some light that may be helpful to individual investors. The type of factors a fiduciary should consider would include, among other things:

- 1 The quality and diversification of the annuity provider's investment portfolio
- 2 The size of the insurer relative to the proposed contract
- 3 The level of the insurer's capital and surplus
- 4 The lines of business of the annuity provider and other indications of an insurer's exposure to liability
- 5 The structure of the annuity contract and guarantees supporting the annuities, such as the use of separate accounts
- 6 The availability of additional protection through state guaranty associations and the extent of their guarantees.

In my view, these guidelines provide a very good basis for assessing annuity providers in most countries around the world, including Australia.

For the non-professional, two good indicators of an annuity provider's reliability are how long they have been in business and what their credit ratings are.

I also consider their surplus ratio (i.e. capital and surplus to liabilities) is also a consideration. This important ratio measures the size of the provider's cushion against unanticipated events.

Suffice to say that when you're looking for a provider who can back up its promises for the remainder of your lifetime, you don't merely look for the 'best' (i.e. lowest) annuity prices or (equivalently) highest payout rates.

In fact, that could be a negative indicator of quality if the insurer is aggressively looking to pick up volume by lowering price, unless it has a substantial surplus backing its promises and the discipline to close off the 'special pricing' when its surplus begins to be strained.

## Employing a smart strategy

One smart strategy, should one decide to purchase several annuities, is to diversify across providers. For example, if you are planning to purchase \$600,000 of annuities, you might wish to spread that money across a couple of strong providers.

There are three main providers of annuities in Australia, and a sprinkling of smaller players. You should study the quality of the providers before buying.

## Get professional advice

I have mentioned briefly some of the tax issues that should be taken into account when designing a retirement plan. In preparing for my essay, I studied in some depth the tax protocols in Australia. Suffice to say that they are intricate and complicated, even for a PhD in finance. Particulars should be discussed with a tax professional.

Thank you for reading, and cheers!

## Dr David F Babbel, PhD

Professor Emeritus, The Wharton School, University of Pennsylvania

Dr. Babbel received a B.A. in economics, an MBA in international finance and a PhD in finance. He has taught investments courses, fixed income, portfolio management and insurance courses since 1978, when he began his academic career at the University of California at Berkeley. After serving on that faculty for six years he completed a postdoctoral fellowship in risk and insurance at The Wharton School of the University of Pennsylvania and later became a professor there, where he taught courses both in finance and insurance. He has published over 130 books and scholarly articles on investment and insurance topics.

He has been a consultant to some of the largest financial institutions in the world, and has also consulted with various governmental agencies including the U. S. Treasury, Federal Reserve, Office of the Comptroller of the Currency, Pension Benefit Guaranty Corporation, and other governmental and non-governmental organisations around the globe. During leaves of absence from Wharton he worked on Wall Street at Goldman Sachs and the World Bank. At Goldman he was a member of the Financial Strategies Group, lead researcher in the Pension and Insurance Department, and consulted for Goldman Sachs Asset Management. Later he worked as a senior financial economist at the World Bank, where he helped developing countries strengthen their capital and retirement markets. He became a professor emeritus a few years ago and entered the consulting world full time, where he continues to conduct research and advise financial firms around the world. His specialty is helping financial firms invest in such a way that their economic risk is minimised in the face of volatile market conditions.

Dr. Babbel has appeared on many television and radio programs, and his research is frequently cited in magazines and the popular press for its emphasis on safety and addressing the most major challenges facing retirees.

Dr. Babbel was awarded a Fulbright Fellowship to study financial contracts under inflationary conditions and went to Brazil, to study up close (in Rio de Janeiro) the havoc that it creates, particularly for retirees and related financial products. He wrote his doctoral dissertation and first three publications on inflation's impact on life insurance products and then extended his research to its impact on other fixed-income instruments – particularly those used in retirement programs. He was one of the earlier proponents of inflation-linked bonds and advised the U.S. Treasury and Federal Reserve on approaches to those securities.

His investigations into various inflation indexing methods toward shielding investors from the harmful effects of inflation found that even inflation-linked contracts provided inadequate protection. His focus evolved to the need to provide instruments or strategies that would address changes in the cost of living over time **for a particular individual or couple**, and not merely create hedges against changes in the general inflation rate.

Recently he was challenged to study the Australian economy, its available financial instruments, and adapt his risk-averse approach to one that could work in Australia.

A few years ago Dr. Babbel became Professor Emeritus of The Wharton School of the University of Pennsylvania, having begun his career as a finance and international business professor at the University of California at Berkeley. He has been on both the finance faculty and the insurance and risk management faculty and in recent years has focused much of his research and publications on retirement planning.

In researching and addressing the challenges facing retirees in Australia, he has adapted a conservative, practical and personal strategy that he and his wife developed for their own retirement funding. It is being mimicked by an increasing number of people who have become acquainted with it in the US.

**Things you should know:**

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