



RETHINK RETIREMENT

A GUIDE TO BLENDING RETIREMENT INCOME

From theory to individual application

A white paper

This document is intended only for investment professionals and financial advisers.



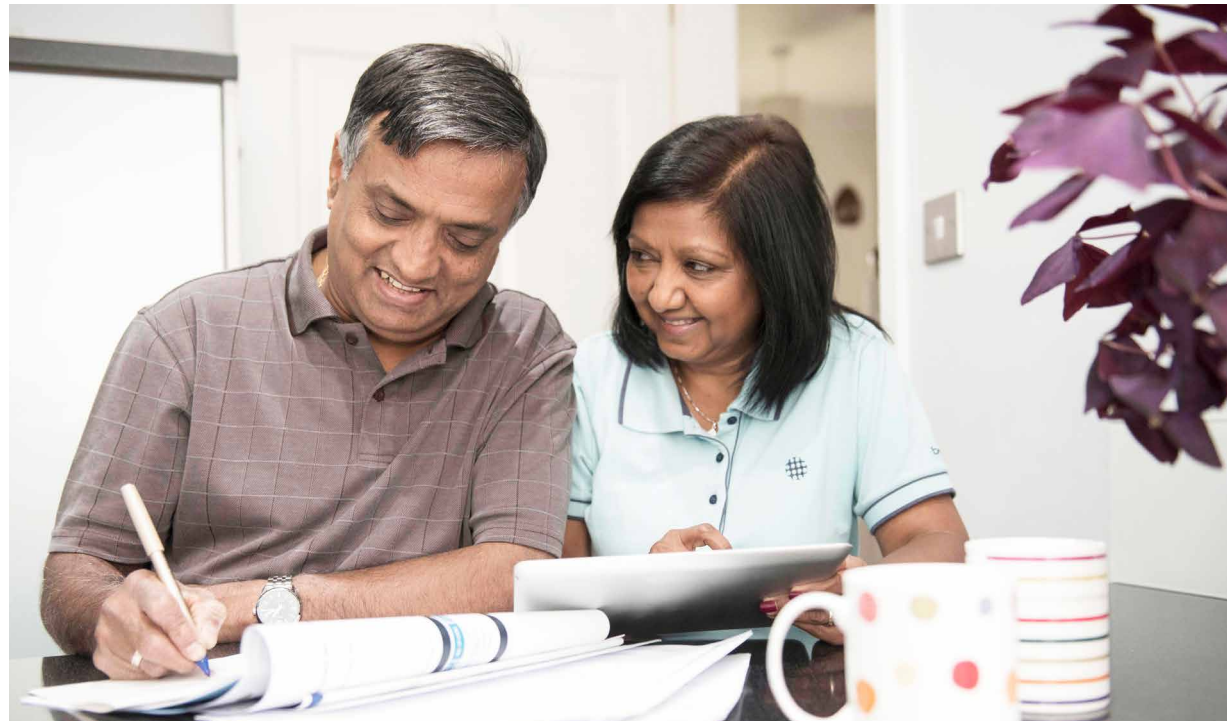
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Introduction

This paper provides an overview of blended living annuities as a holistic retirement income solution. It explains what blending is – combining guaranteed income from a life annuity with the growth potential of a living annuity – and uses Income Sustainability Maps to illustrate when blending is most appropriate for an individual based on age and withdrawal rate.

The document outlines a practical framework and benchmark blend percentage calculation to determine the optimal allocation to each component for an individual. Finally, it discusses common behavioural biases and myths that are barriers to annuitisation and offers counters to address these misconceptions, emphasising the balanced approach that blending offers for capital growth and income security.



What is blending?

The concept of blending, in the context of retirement income solutions, is directly associated with achieving the **best of both worlds**.

Blending is an innovative retirement income solution that combines the desirable characteristics of both a life annuity and a living annuity.

The **best of both worlds** refers to bringing together:

- The **security of guaranteed income** that will never decrease, typically associated with a life annuity. This component provides income for life and eliminates the risk of running out of money.
- The **flexibility of a living annuity** that allows an individual to freely choose the investments, to increase or decrease the withdrawal rate, and to leave a **financial legacy** (income or capital). This component also offers the potential for capital growth.

The structure facilitating the blend is commonly known as a **blended living annuity**.

By integrating these two components, the blended solution aims to provide a **balance** between secure income and growth. It is a means to vastly improve income sustainability without reducing drawdown. The secure income from the life annuity component

helps to mitigate the sequence-of-returns risk on the liquid portion by reducing the necessary drawdown on that part of the investment.

Ultimately, a blended living annuity provides the **optimal balance between capital growth and income security**, serving as a holistic retirement income solution that offers a sensible approach.

Figure 1: Blending: The best of life and living annuities

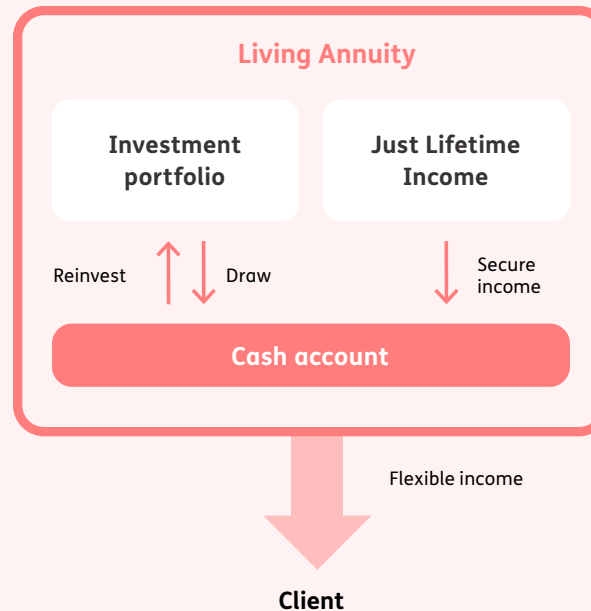
Retirement objectives	Life Annuity	Living Annuity	Blended Annuity
Flexibility to increase or decrease withdrawal rate	✗	✓	✓
Guaranteed income that will never decrease	✓	✗	✓ Life annuity component
Income for life	✓	✗	✓
Protection from inflation	✓	✗	✓ Life annuity component
Ability to leave a financial legacy	✓ Income legacy	✓ Capital legacy	✓ Income and capital legacy
Enhanced income subject to medical underwriting	✓	✗	✓ Life annuity component

The blended living annuity structure

A blended living annuity is presented as a standard living annuity wrapper, rather than two separate products. Within this wrapper, an investment portfolio (the liquid portion) sits alongside the lifetime income component (the life annuity or secure income portion).

Essentially, the structure provides a single, unified framework that houses both the guaranteed income stream from the life annuity component and the flexible, growth-oriented investment portfolio in the living annuity, allowing income to be managed across both elements. Figure 2 shows a simplified blended annuity structure, illustrating each element.

Figure 2: The blended living annuity structure



- The **overall structure is a standard living annuity**. This means blending operates within a conventional living annuity wrapper.
- Within this living annuity wrapper, two main components **sit alongside each other: the investment portfolio(s) and the lifetime income** component.
- **One income is withdrawn from the entire blended solution**, rather than separately from each component, and is paid to the client.
- The secure income from the lifetime portion can be **reinvested into the investment portfolio** or used to **supplement the overall drawdown**. Income is withdrawn from the entire solution.
- Fees are applied to the entire living annuity wrapper and not to each component of it.

The blended living annuity structure *continued*



To summarise, a blended annuity is a holistic retirement income solution. Key characteristics and benefits of blending include:

- **Combination of security and growth:** It explicitly combines the security of a guaranteed income from a life annuity (provided by expertise in life annuities) with the growth potential of a living annuity (leveraging investment manager strength).
- **Single solution:** It is structured as one overall solution, not two separate products.
- **Balance:** It aims to provide investors with a balance between a secure income stream and the potential for capital growth.
- **Innovation and simplification:** It is an innovative approach that provides a curated, simplified solution for clients.
- **Comprehensive consideration:** The solution considers both the client's investment risk profile and their drawdown risk profile.
- **Structured process:** Determining the appropriate allocation involves steps such as determining the investment risk profile and then the drawdown risk profile.

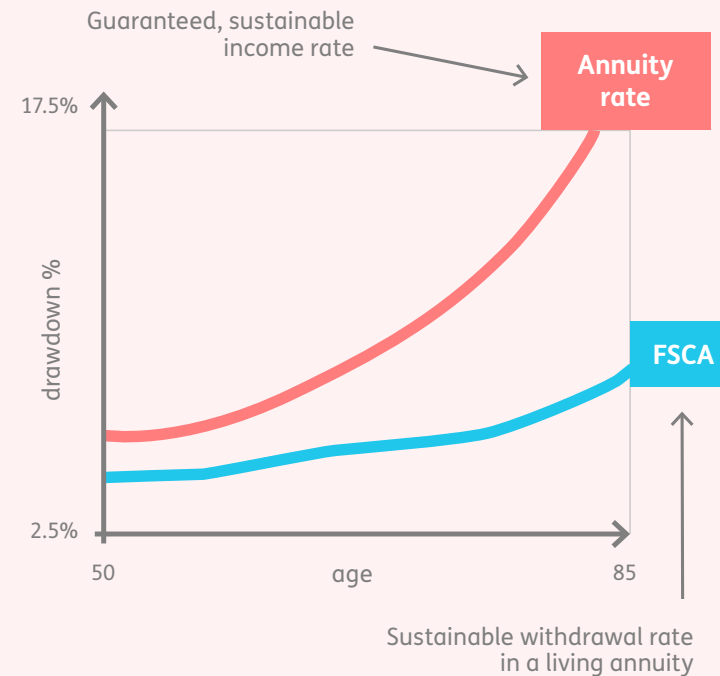
This paper describes how a simplified blending matrix can be used to determine **how much should go into the lifetime income portfolio** (how much to blend). After considering the client's risk profile, this practical mapping provides the necessary proportions to achieve the appropriate balance between the secure income stream and the remaining portion invested for growth or to leave as a legacy. We start this discussion by looking at the concept of Income Sustainability Maps.

Income Sustainability Maps

Income Sustainability Maps are tools created by Just SA. The maps have great value within the larger context of blending because they provide a visual framework to understand income sustainability and, importantly, help to prescribe when blending is the optimal retirement income solution for an individual.

An **Income Sustainability Map** gives an overview of the distribution of living annuitants by age and their current drawdown percentage. A key feature of the map is the overlaying of two lines: life annuity rates and the recommended drawdown rate by age, as seen on Figure 3.

Figure 3: Simplified income sustainability mapping



A **blue line** representing the FSCA safe drawdown rates by age¹.

A **coral line** representing life annuity rates by age.

These lines delineate three different zones, and these zones determine the level of income sustainability. The optimal retirement income solutions are then mapped to these zones.

¹ As published in the Financial Sector Conduct Authority's (FSCA's) draft Conduct Standards for default living annuities

Income Sustainability Maps *continued*

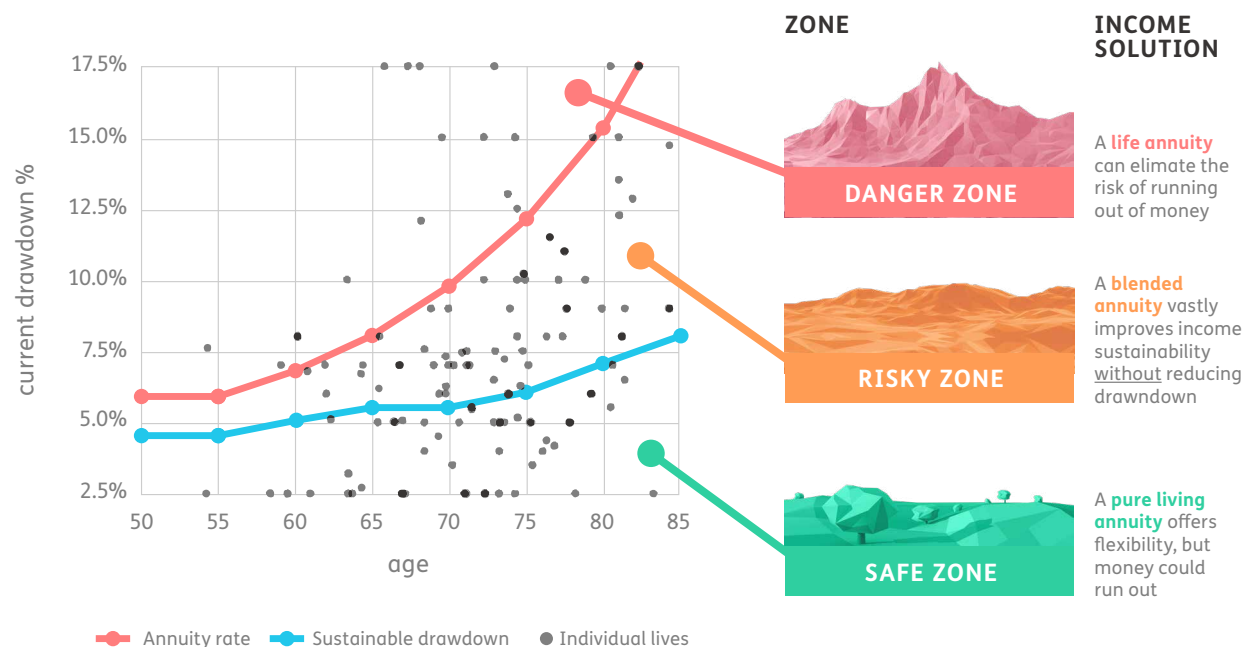
Each dot on a map represents an individual life.

- In the **danger zone**, the optimal solution is a pure life annuity, which can eliminate the risk of running out of money.
- In the **risky zone**, the optimal solution is a blended annuity, which can vastly improve income sustainability without reducing drawdown.
- In the **safe zone**, the optimal solution is a pure living annuity, which offers flexibility but carries the risk of running out of money.

Income Sustainability Maps serve as diagnostic tools to identify the risky zone, which is where blending is positioned as the most sustainable and effective retirement income strategy.

The principles derived from the Income Sustainability Maps are also used to help answer the related question of **how much to blend** when a client is in the risky zone.

Figure 4: Income Sustainability Map zones



How much to blend?

Income Sustainability Maps help identify the risky zone where a blended annuity is the optimal solution. Once a client is identified as being in this blending zone, the next crucial step is to determine **how much to blend**.

We can use the principles of Income Sustainability Maps to answer this question. Fundamentally, the question is about how much of the retirement capital should be allocated to the secure lifetime income portion (the lifetime income portfolio) and how much should be allocated to the liquid portion (the remainder of the retirement capital that will be invested in the living annuity). Determining **how much to blend** can be approached theoretically or practically.



How much to blend? *continued*

Theoretical approach: The benchmark blend

Our benchmark blend calculation is based on the idea that the **combined income rate** from the blended solution is **a weighted average of the income rates from its two main components**:

- 1 The **liquid portion** (the remaining investment portfolio), which uses the **safe drawdown rate**.
- 2 The **lifetime income portion** (or Just Lifetime Income component), which uses the **annuity rate** as its income rate.

So, for the calculation that forms the basis of determining the benchmark blend percentage:

- The **blend %** is the percentage of a portfolio allocated to the lifetime income portfolio, which means that (100% – blend %) is the portion of their portfolio not in the lifetime income portfolio.
- The **safe drawdown %** is the percentage they can safely withdraw each year from the non-lifetime income portion (the liquid portion).
- The **annuity rate %** is the annual income rate provided by the life annuity.

$$\text{combined income \%} = (100\% - \text{blend \%}) \times \text{safe drawdown \%} + \text{blend \%} \times \text{life annuity rate \%}$$

Adding both parts together gives the **required drawdown rate %** from the entire portfolio.

We now show how **different blend percentages** result in **different combined income rates**.

For this example, we have used assumptions that are broadly realistic for a couple aged 75: a safe drawdown rate of 5% p.a. and a life annuity rate of 10% p.a.

Blend %	Safe drawdown % p.a.	Life annuity rate % p.a.	Combined income % p.a.
25%	5%	10%	6.25%
50%	5%	10%	7.50%
75%	5%	10%	8.75%

The benchmark blend percentage is derived by setting the **required drawdown rate** equal to this **combined income rate** and solving for the blend percentage, by transforming the formula to the following:

$$\text{benchmark blend \%} = \frac{\text{required drawdown \%} - \text{safe drawdown \%}}{\text{life annuity rate \%} - \text{safe drawdown \%}}$$

This calculated benchmark blend percentage provides a theoretical answer to the question of how much to blend for a specific required **drawdown rate**, **safe drawdown rate** and **annuity rate**. The safe drawdown rate and annuity rate are, in turn, determined by the age and sex of the client.

However, Just SA also offer a pragmatic mapping approach to help determine the percentage to blend. This involves a matrix based on age bands and drawdown risk profile levels, providing a simpler way to guide how much should go into the lifetime income component.

How much to blend? *continued*

Pragmatic approach: Determining the blend percentage

This section provides a pragmatic mapping or a practical framework to give guidance on how much to annuitise. The approach is designed to provide a curated, simplified solution for clients and allows advisers to determine their optimal blend percentage in a straightforward way, as opposed to potentially more complex theoretical calculations.

The approach provides a practical guide on how much should go into the lifetime income portfolio based on current age and drawdown percentage. This blend percentage should provide an appropriate balance between a secure income stream and the remaining portion invested for potential capital growth.

It simplifies the process of determining the blend percentage by using a matrix based on two factors:

- 1 Age bands
- 2 Drawdown risk profile levels

Figure 5 presents the theoretical optimal blend percentage for virtually every combination of age and required drawdown rate within relevant ranges. The calculation relies on specific assumptions about safe drawdown rates (e.g. FSCA recommended drawdown rates) and life annuity rates at a point in time from a life annuity provider.

Figure 5: Benchmark blend % at various drawdown levels (in 0.5% steps) and ages (in 5-year steps)

	55	60	65	70	75	80	85
17.5%	100%	100%	100%	100%	100%	100%	100%
16.5%	100%	100%	100%	100%	100%	100%	100%
16.0%	100%	100%	100%	100%	100%	100%	100%
15.5%	100%	100%	100%	100%	100%	100%	100%
15.0%	100%	100%	100%	100%	100%	100%	95%
14.5%	100%	100%	100%	100%	100%	100%	90%
14.0%	100%	100%	100%	100%	100%	100%	85%
13.5%	100%	100%	100%	100%	100%	100%	80%
13.0%	100%	100%	100%	100%	100%	100%	70%
12.5%	100%	100%	100%	100%	100%	100%	65%
12.0%	100%	100%	100%	100%	100%	100%	60%
11.5%	100%	100%	100%	100%	100%	95%	55%
11.0%	100%	100%	100%	100%	100%	85%	50%
10.5%	100%	100%	100%	100%	100%	80%	40%
10.0%	100%	100%	100%	100%	100%	70%	35%
9.5%	100%	100%	100%	100%	100%	60%	30%
9.0%	100%	100%	100%	100%	95%	50%	25%
8.5%	100%	100%	100%	100%	80%	45%	20%
8.0%	100%	100%	100%	100%	65%	35%	10%
7.5%	100%	100%	100%	100%	55%	25%	5%
7.0%	100%	100%	100%	80%	40%	15%	0%
6.5%	100%	100%	100%	60%	25%	10%	0%
6.0%	100%	100%	80%	40%	15%	0%	0%
5.5%	100%	100%	40%	20%	0%	0%	0%
5.0%	100%	60%	0%	0%	0%	0%	0%
4.5%	75%	0%	0%	0%	0%	0%	0%
4.0%	0%	0%	0%	0%	0%	0%	0%
3.5%	0%	0%	0%	0%	0%	0%	0%
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2.5%	0%	0%	0%	0%	0%	0%	0%

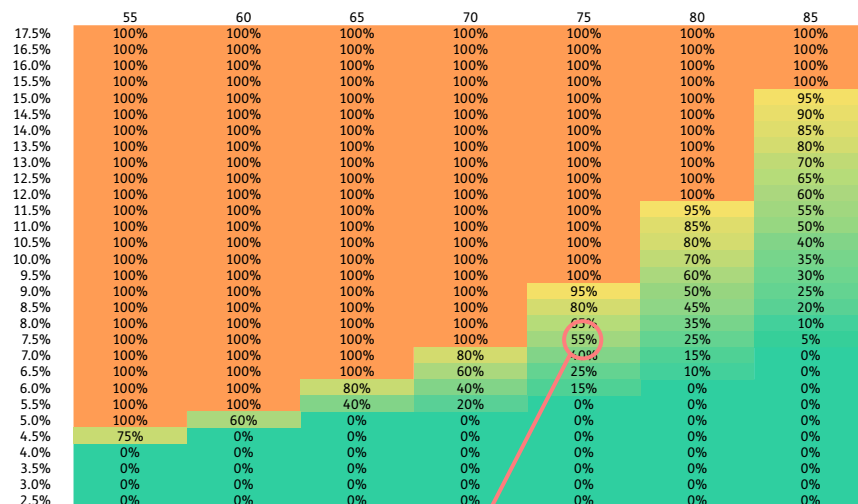
Assumptions

- Safe drawdown = FSCA recommended drawdown rates, taken from the second draft default living annuity standards (which assumes lives are single female).
- Life annuity rates = JuLI StableGro, single female, no minimum payment period (as at July 2024).

How much to blend? *continued*

To give more context, if we look at one example for a 75-year-old client drawing down 7.5%, the benchmark blend % is approximately 55%, based on the relevant safe drawdown (5.5%) and annuity (9.3%) rates at that age.

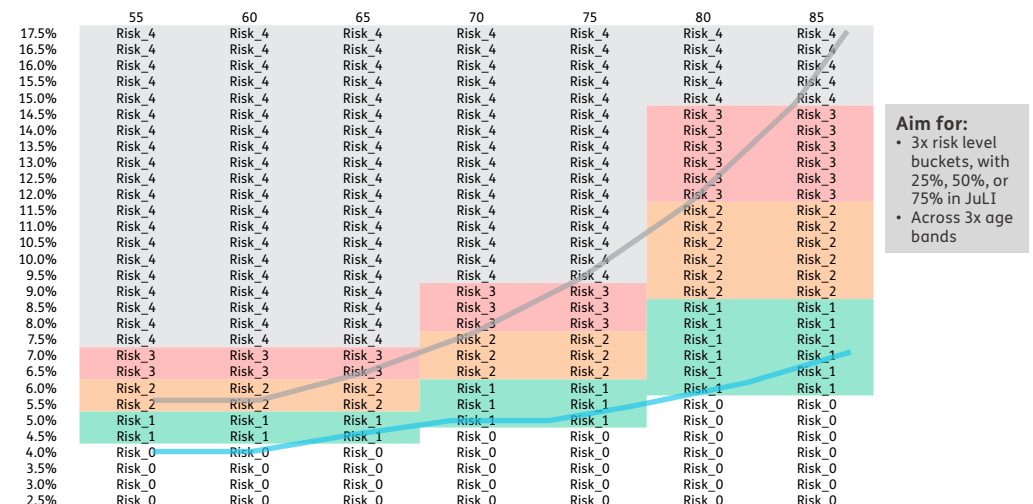
Figure 6: Example benchmark blend calculation



$$\begin{aligned}
 \text{benchmark blend \%} &= \frac{\text{required drawdown \%} - \text{safe drawdown \%}}{\text{life annuity rate \%} - \text{safe drawdown \%}} \\
 &= \frac{7.5\% - 5.5\%}{9.3\% - 5.5\%} \\
 &\approx 55\%
 \end{aligned}$$

If we apply a more pragmatic approach, based on this theory but easier to understand, the following provides a good mapping:

Figure 7: Risk buckets across age bands



Aim for:

- 3x risk level buckets, with 25%, 50%, or 75% in JuLI
- Across 3x age bands

This mapping results in a **3 x 3 matrix** (see Figure 8), where a client's age is matched with their drawdown risk profile level.

Blending simplified

Instead of using the detailed data, the pragmatic mapping approach simplifies the decision by using the 3x3 matrix. This matrix categorises clients based on broader age bands and three drawdown risk profile levels, corresponding to specific drawdown rate ranges.

By looking up the client's age band and drawdown risk level in this matrix, the adviser is provided with a direct, recommended percentage to allocate to the lifetime income component.

The recommended percentages in this simplified matrix are set to 25%, 50%, or 75%.

Therefore, the initial section is the complex, theoretically derived set of ideal blend percentages, while the table is the simplified, actionable framework that takes the core principles and translates them into an easy-to-use matrix. It provides a curated, simplified solution to help advisers determine a client's optimal blend percentage in a simple manner.

This practical mapping provides a guide on how much should go into the lifetime income portfolio for a range of client ages and drawdowns, ultimately offering an appropriate balance between a secure income stream and the remaining growth potential for a more sustainable income in retirement.

Figure 8: 3x3 matrix

Drawdown risk profile	Age			% JuLI
	55-69	70-79	80+	
Level 1	4.5 - 5.4%	5.0 - 6.4%	6.0 - 8.9%	25%
Level 2	5.5 - 6.4%	6.5 - 7.9%	9.0 - 11.9%	50%
Level 3	6.5 - 7.4%	8.0 - 9.4%	12.0 - 14.9%	75%

To apply this table, follow these steps:

1. Pick the applicable **column** based on the age of your client
2. Look up the required drawdown rate in the applicable **row** of that column

The column furthest to the right gives you the recommended percentage to blend.

Barriers to annuitisation

Calculating how much to blend offers a clear way forward for the client who is unsure about the specifics. But broader uncertainty about annuitising or blending can prevent your client from even getting to the point where they want to find out how much to blend. There are several behavioural reasons for this.

Fear often leads to delaying big financial decisions, not because people are unaware of what to do, but because taking an action feels risky or irreversible. When there is fear about loss, it is also human nature to believe misleading ideas that support hesitation, reinforcing the belief that it is better to wait, even when the data says otherwise.

Fear also makes people more sensitive to losing control. Since annuitising or blending is a one-way decision (it can't be undone) it can feel like giving up flexibility, which your loss-averse clients could find especially uncomfortable.



Barriers to annuitisation *continued*

Understanding and countering these biases

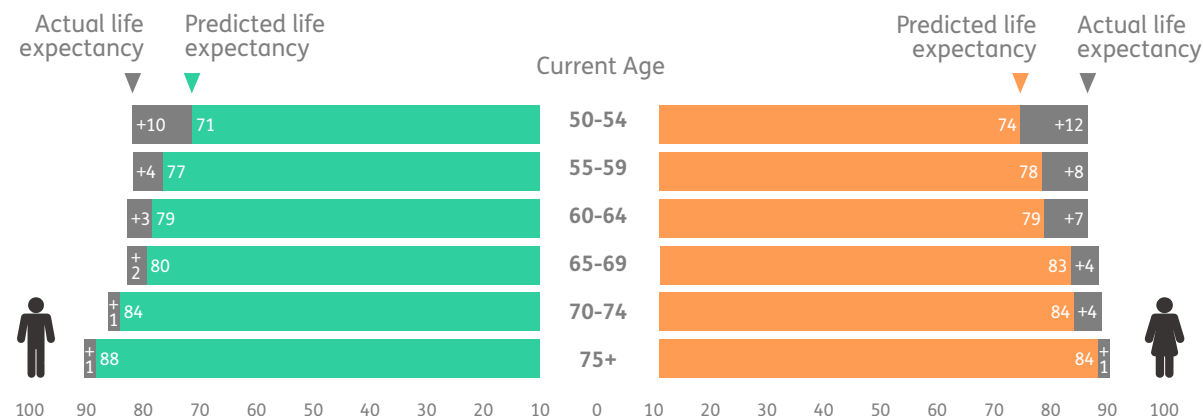
Despite the theory and practical frameworks showing when and how much to annuitise, there is still some reluctance to do so. This is because of certain barriers, which are primarily a result of **behavioural biases and myths** prevalent in the South African retirement context. Understanding and countering these biases is crucial for effective decision making regarding annuitisation or blending.

1. Loss aversion

Loss aversion is the intense fear of immediate loss even when better gains lie ahead. When people focus on avoiding loss, they're also more likely to favour immediate rewards no matter the long-term cost. This mindset helps explain why many defer buying a life annuity: they avoid the immediate 'loss' of capital, even though delaying usually reduces future income and increases overall costs.

People might feel they will 'lose out' in a life annuity if they pass away earlier than expected. Research suggests that retirees underestimate their own life expectancies by five years on average, which often leads to retirees opting for a living annuity or deferring annuitisation.

Figure 9: Perceived versus actual life expectancy



Source: Just Retirement Insights

Myth buster: There is a 50% chance of living longer than the average life expectancy. A life annuity should be viewed as financial security protecting against outliving savings, rather than a restrictive investment. The guaranteed income provided is a valuable protection against the unknown.

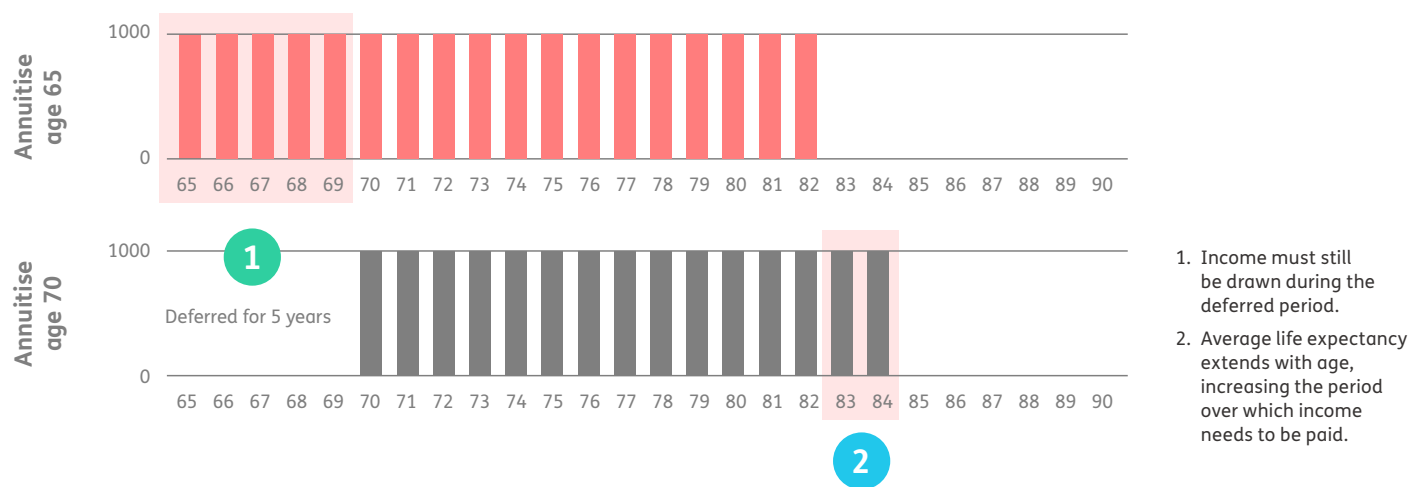
Barriers to annuitisation *continued*

2. Present bias

Present bias is the tendency to prefer immediate rewards over larger delayed rewards.

Many defer annuitisation to retain immediate benefits like flexibility and full capital access, valuing these over the long-term financial advantage of annuitising earlier. The perception is that since annuity rates increase with age, deferring is beneficial.

Figure 10: Comparison of immediate versus deferred annuitisation



Myth buster: Comparing like-for-like scenarios shows that an additional cost of deferring increases the relative cost of annuitisation by 5% to 10% over five years.

Barriers to annuitisation *continued*

3. Endowment effect

The endowment effect is assigning higher value to something simply because you own it.

A living annuity tends to provide a greater sense of ownership due to its flexible nature and the availability of the capital to beneficiaries upon death. This creates an unwillingness to transfer a portion to a lifetime income portion, which cannot be surrendered.

Myth buster: In a blended living annuity, the client owns the entire living annuity, which consists of the lifetime income component and the liquid portion. Flexibility is retained on the liquid portion, similar to a pure living annuity. Furthermore, survivorship benefits like a spouse's benefit or minimum payment period can be added to the lifetime income component, providing value for beneficiaries after the annuitant's death.

4. Ambiguity aversion

Ambiguity aversion is the avoidance of options that have unknown or uncertain outcomes.

Despite the long time horizon of retirement (30 to 35 years) and the devastating impact of inflation, retirees often choose fixed increases (e.g. 5%) due to the perceived certainty, rather than increases that match or target inflation.

Myth buster: Inflation is a key risk over long retirement periods. Historically, inflation has often exceeded fixed-increase percentages (South African CPI has been above 5% for approximately half of the last 25 years). It is important to select lifetime income increases that match or target inflation, such as inflation-linked annuities (increases equal to CPI) or investment-driven lifetime income (increases linked to underlying fund performance).

Barriers to annuitisation *continued*

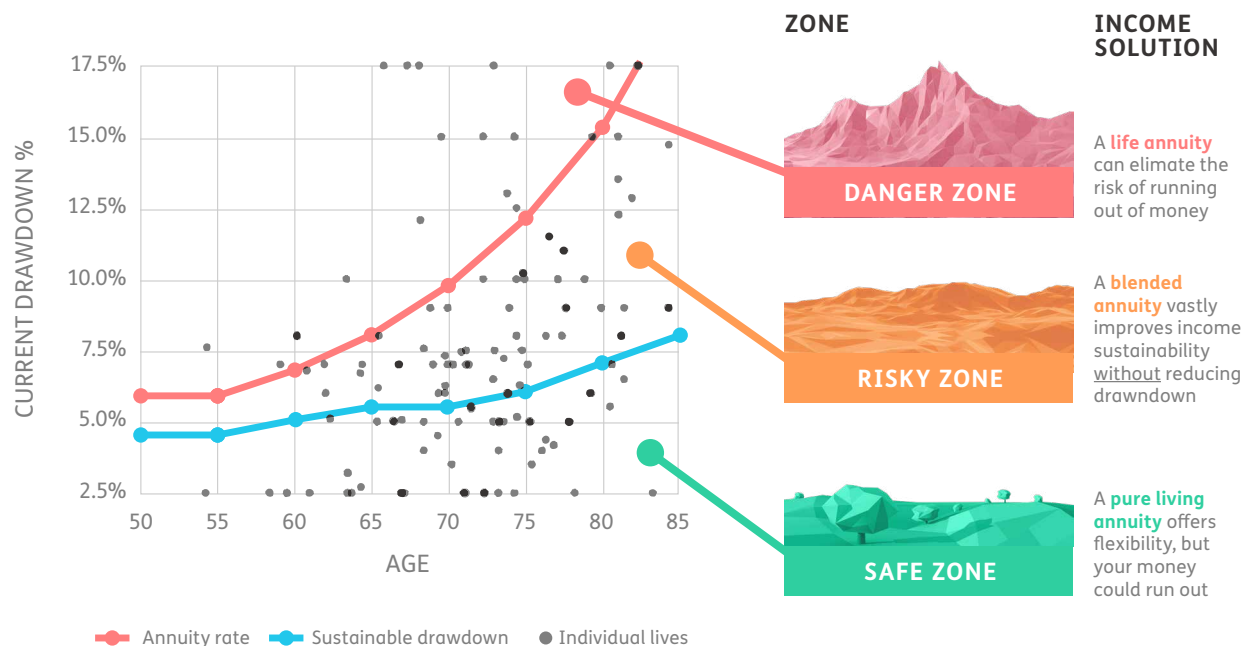
5. Framing effect

The framing effect suggests that decisions are influenced by how options are presented.

For many years, life annuities were framed as 'old-school' and 'boring' compared to 'modern' living annuities. This was exacerbated by inconsistent commission structures where ongoing advice fees could be paid on living annuities (typically 0.5% p.a.) but only an upfront fee (max 1.5% once-off) on life annuities. All of this led to living annuities being favoured, with up to 90% of retirees allocating retirement monies to living annuities.

Myth buster: Decisions should be based on the client's position within the Income Sustainability Map zones: pure living annuity for the safe zone, blended living annuity for the risky zone, and pure life annuity for the danger zone. In recent years, we have seen a shift in the proportion of retirement monies being allocated to living or life annuities from a 90/10 split to a 70/30 split.

Figure 11: Optimal retirement income solution for each zone



Barriers to annuitisation *continued*

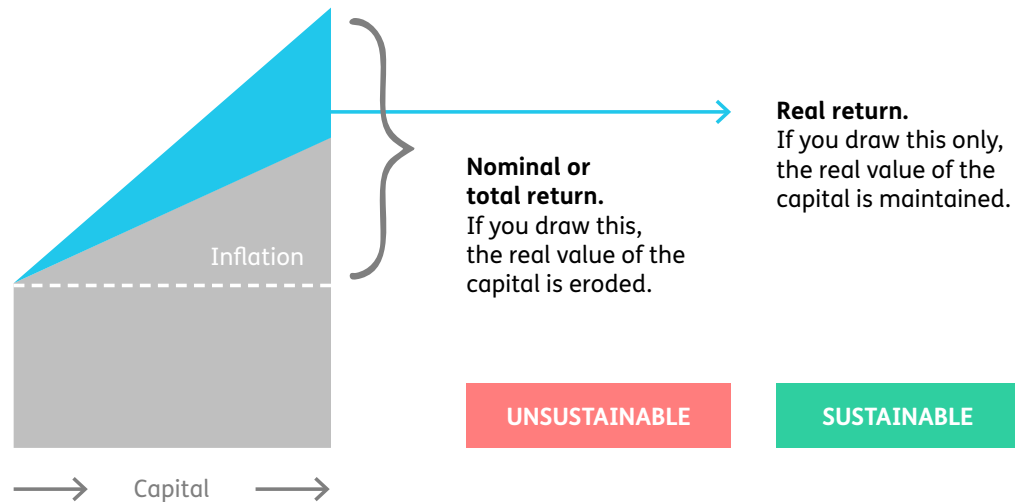
6. Money illusion

People view things in nominal terms, not in real terms.

Individuals may believe their capital is preserved if withdrawals don't exceed the nominal return, ignoring the impact of inflation. They might draw the nominal or total return.

Myth buster: The real return (nominal return minus inflation) is what matters for sustainability and maintaining purchasing power. Withdrawing more than the real return erodes the real value of the capital, making the capital unsustainable. Only drawing the real return maintains the real value of the capital. Therefore safe drawdown rates at the start of retirement are closely aligned with the long-term real return expected on a diversified investment portfolio.

Figure 12: Nominal versus real return



Conclusion

In our first white paper – Optimal Retirement Income Strategies – we covered the detail on optimal retirement income solutions based on the three Income Sustainability Map zones. This, our second white paper, covers how to make a solution personal, customising it for your individual clients.

We want to reinforce the core message behind blending for retirement income and tie together the benefits, the practical application, and the challenges of blending.

Blending provides an optimal balance between capital growth and income security, offering the best of both in one single solution.

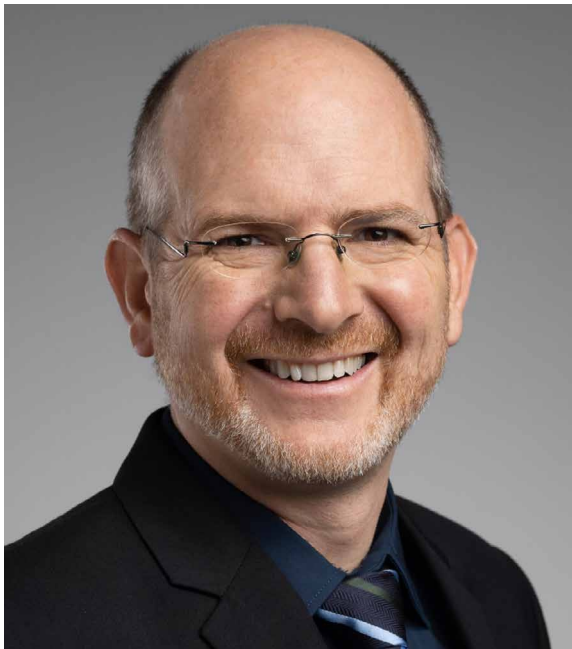
By applying practical frameworks, advisers and clients can determine their optimal blend percentage in a simple manner, particularly the pragmatic 3x3 matrix based on age and drawdown risk profile, which guides the percentage to allocate to the lifetime income portfolio.

Behavioural biases are significant barriers and can hinder effective decision making regarding annuitisation. To counter these biases, our myth busters help reframe clients' thinking to drive more logical decision making.

Blending is a holistic retirement income solution. It is an innovative, curated, simplified solution that considers both investment and drawdown risk profiles. It represents a balanced approach designed to achieve both capital growth and income security where a living annuity investment portfolio and a lifetime income portfolio co-exist within one environment.



About the author



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Bjorn has over 25 years' local and international experience in the insurance industry, which includes seven years' reinsurance experience in longevity risk. Bjorn's exposure to the insurance markets of South Africa, the UK, Ireland, Germany and Switzerland complements his depth of expertise in the pricing, design and structuring of enhanced annuities and longevity swaps. He is a qualified actuary and has held positions at Old Mutual, Hannover Re, PartnerRe and Medscheme.



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