

STAGGERED ANNUITISATION IN PRACTICE

A GUIDE FOR FINANCIAL ADVISERS

To be used in conjunction with:

Retire Smarter: new strategies towards a comfortable retirement,
Dr David F Babbel PhD, October 2017



CommInsure



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About this guide

This information guide (“guide”) has been prepared by CommInsure to help financial advisers further understand the merits of staggered annuity strategies and enable them to discuss those strategies with their clients. We hope you find it useful.

This guide is designed to be used in conjunction with *Retire Smarter: new strategies towards a comfortable retirement*, a paper published in October 2017 by Dr David F Babbel PhD, Professor Emeritus, The Wharton School, University of Pennsylvania (hereafter “Dr Babbel’s paper” or “the paper”) and should be read in conjunction with it.

The information in this guide was prepared by George Lytas, MBA (Exec) BCom, Head of Annuities and Investment Bonds CommInsure, and himself a co-contributor to Dr Babbel’s paper.

This guide provides worked examples of the staggered annuitisation strategy (“staggered annuitisation”) described in Dr Babbel’s paper and compares it, in two different age-based scenarios, with an indexed lifetime income annuity strategy (“indexed lifetime annuity”). The same comparison is then made via a more comprehensive case study.

Strategy recap

In 2017 CommInsure approached Dr David Babbel to review the Australian annuity market and provide insight into strategies that he had developed in the United States (and personally used). We asked him to adapt his own retirement funding philosophy in light of the financial tools and products typically available in Australia.

In the preface to the paper that Dr Babbel subsequently produced, he identified five major challenges faced by Australians who have accumulated, or are on track to accumulate, sufficient retirement savings for a comfortable living: lifetime uncertainty, uncertain inflation, securing a lasting inheritance, the need for liquidity and the role of diversification.

Five major challenges when entering retirement



In Part 3 of his paper Dr Babbel set out the staggered annuitisation retirement strategy that he has developed as a way to address these five challenges. This guide builds on the paper’s Part 3, and readers should read Dr Babbel’s paper before approaching the scenarios and case study in this guide.

SCENARIO 1: COMPARING STAGGERED ANNUITISATION AND AN INDEXED LIFETIME ANNUITY FOR A 65-YEAR-OLD

This hypothetical scenario compares staggered annuitisation and an indexed lifetime annuity. It assumes a 65-year-old individual with \$800,000 in retirement savings and a balanced risk profile made up of 50 per cent growth assets and 50 per cent defensive assets.

The first part of Scenario 1 describes how **staggered annuitisation** could work for a 65-year-old and the second part describes how an **indexed lifetime annuity would work** for a 65-year-old. The results are then compared.

In Australia in January 2018, each \$100,000 in a lifetime income annuity (with no indexation and nil guaranteed period) generated an income of about \$5,837 per annum for a male of 65 years. A CPI indexed lifetime income annuity (with nil guaranteed period) generated an income of about \$4,193 per annum for a male of 65 years.

Staggered annuitisation for a 65-year-old

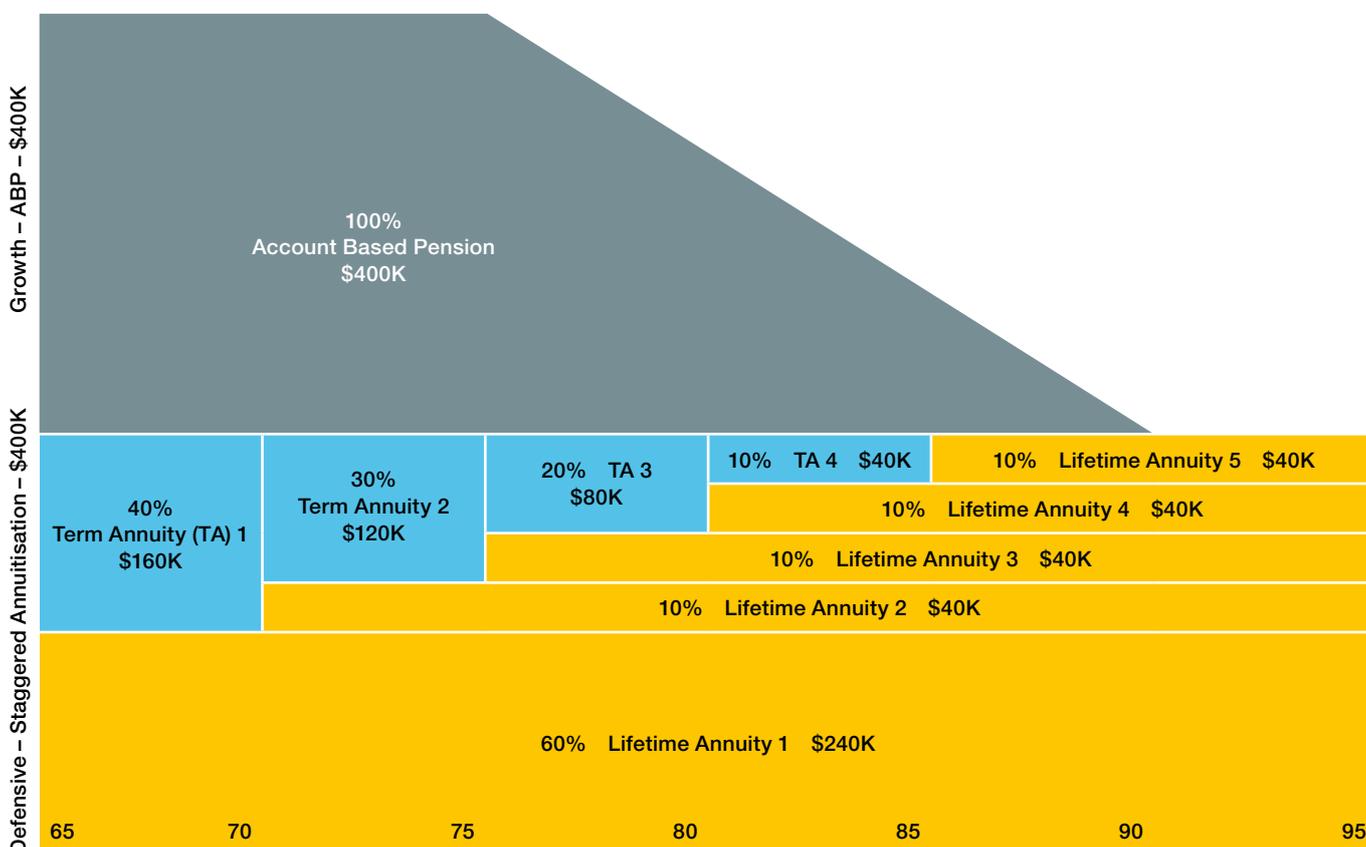
The first step in executing the staggered annuitisation strategy is to transfer the \$800,000 in superannuation savings into the retirement phase. The 50 per cent growth allocation (\$400,000) is then placed into a mix of growth assets in an account based pension (ABP). The defensive allocation, being the other 50 per cent of the portfolio (the remaining \$400,000), is then used for the **staggered annuitisation strategy**.

Initially, 60 per cent of the defensive allocation, or \$240,000, is used to purchase a lifetime annuity. The remaining \$160,000 is set aside in short-term annuity investments earning about three per cent per year, reserved for possible future annuitisation, as the need arises. (This provision is referred to in Dr Babbel’s paper, and subsequently in this guide, as “reserves” or “reserve funds”.)

This furnishes enough reserves to purchase up to four supplemental annuities in the future of at least \$40,000 each.

Figure 1 illustrates the total portfolio, utilising the staggered annuitisation strategy for the defensive portion of the portfolio using Australian pricing (as at January 2018). The supplemental annuities purchased with the reserves do not need to be in equal increments nor purchased at equal intervals, but are shown as such below for illustrative ease.

Figure 1: Total retirement portfolio using staggered annuitisation for a 65-year-old



Staggered annuitisation – performance

The initial investment of \$240,000 into a lifetime annuity provides an annual income of \$14,010 (approximately equal to \$5,840 per \$100,000 × 2.4).

The reserve funds are invested at 3.4 per cent per annum in a five-year term certain annuity. The \$160,000 would generate income of \$5,440 per annum for the first five years, giving a total income of \$19,450 per annum for the first five years.

An individual's cost of living may rise over time, due to general inflation and changes to their specific needs. So in both Figure 1 and Figure 2, it is assumed that after five years, at age 70, \$40,000 is extracted from the \$160,000 reserve and annuitised, giving an income of \$2,670 which at age 70 would bump up their annual income from the lifetime annuity component by 19.1 per cent (from \$14,010 to \$16,686), assuming the interest rate environment stayed the same as today.

The payout rate that a lifetime income annuity would provide when purchased at age 70 is almost 14.4 per cent higher than at age 65, at \$6,680 per \$100,000 instead of \$5,837. The term annuity is also generating 3.4 per cent income on the remaining \$120,000 of \$4,080 per annum. The total income would be \$20,760 per annum for the next five years, comprising \$14,010 from the original lifetime annuity, \$2,670 from the \$40,000 annuitised from the reserve, and \$4,080 from the five-year term certain annuity.

An indexed lifetime annuity for a 65-year-old

This second part of Scenario 1 also assumes a 65-year-old individual with \$800,000 in retirement savings and a balanced risk profile made up of 50 per cent growth assets and 50 per cent defensive assets.

In this case, the whole \$400,000 to be invested in defensive assets is invested into an indexed lifetime income annuity.

Indexed lifetime annuity – performance

Income in the first year would be \$16,770 (approximately equal to \$4,190 per \$100,000 × 4). In year two, assuming a CPI inflation rate of 2.5 per cent per annum (higher than the current actual inflation rate), the income would increase to \$17,190 per annum. At age 70 with indexation, this would have increased to \$18,975 per annum.

Comparison of staggered annuitisation versus an indexed lifetime annuity for a 65-year-old

Figure 2 shows the total income per annum of the two strategies as applied in the hypothetical scenario above:

- ◆ The staggered annuitisation strategy – shown by the coloured bars with each colour representing each subsequent annuity purchase.
- ◆ The indexed lifetime annuity – shown by the solid line with a steady increase in income each year due to the annual indexation.

Note how in the staggered annuitisation strategy each of the vertical bar increments to the dark blue 'base annuity' bars, which extend across the entire horizontal length of the chart, has increasing vertical lengths as the person ages. This shows the impact of purchasing at later ages.

The indexed lifetime annuity shows a steady increase every year at an assumed CPI rate of 2.5 per cent p.a. (current CPI as at December 2017 at 1.9 per cent p.a.).

Figure 2 – Hypothetical staggered annuitisation annual payouts versus an indexed lifetime annuity from age 65

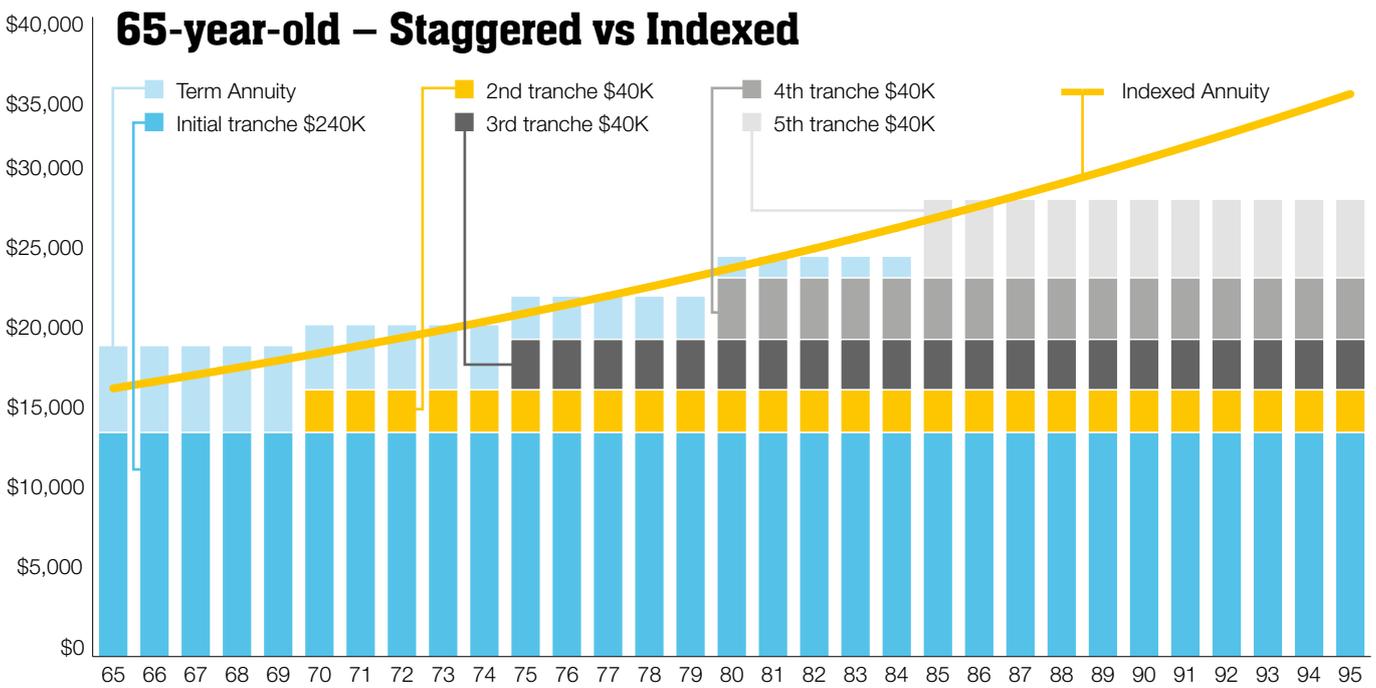
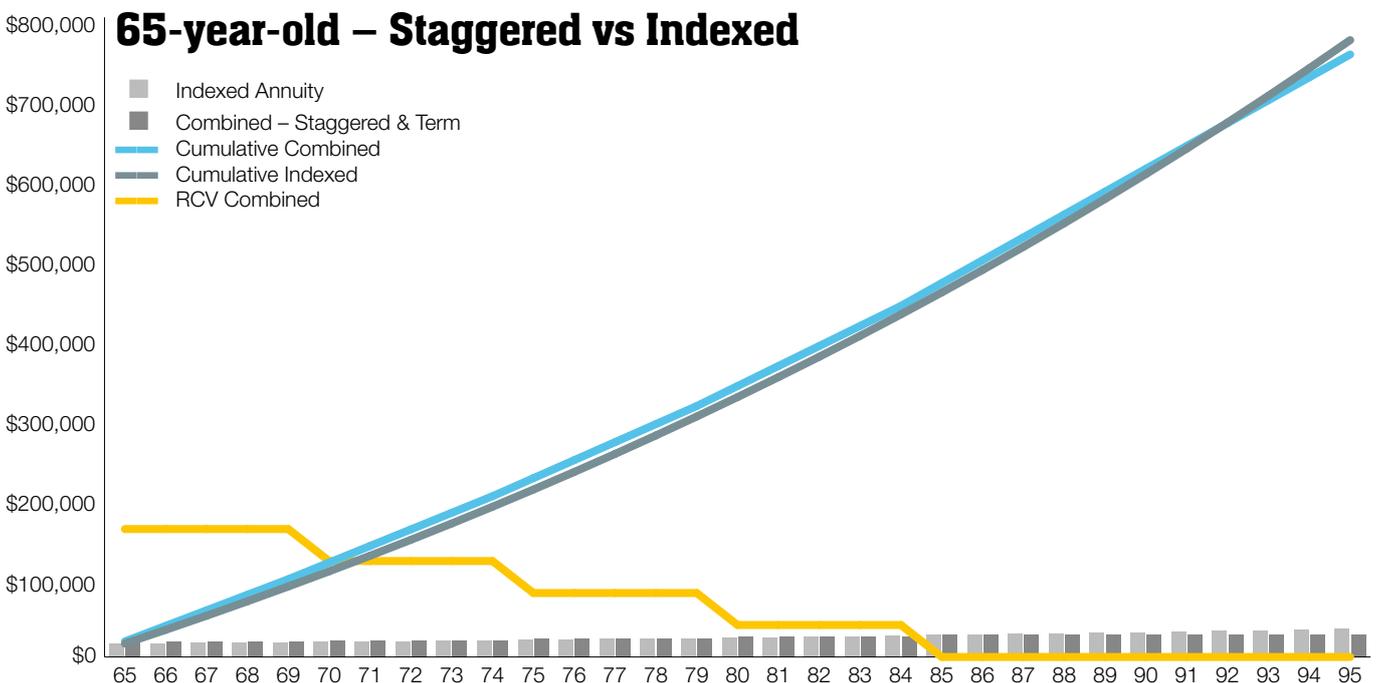


Figure 2: Commentary and explanatory notes

- ◆ The blue bar depicts a \$240,000 investment at age 65, paying \$14,010 p.a. (or the equivalent of \$5,840 p.a. for \$100,000 investment).
- ◆ The yellow bar depicts \$40,000 investment at age 70, paying \$2,670 p.a. (or the equivalent of \$6,680 p.a. for \$100,000 investment).
- ◆ The dark grey bar depicts \$40,000 investment at age 75, paying \$3,150 p.a. (or the equivalent of \$7,875 p.a. for \$100,000 investment).
- ◆ The light mid-grey bar depicts \$40,000 investment at age 80, paying \$3,850 p.a. (or the equivalent of \$9,620 p.a. for \$100,000 investment).
- ◆ The light grey bar depicts \$40,000 investment at age 85, paying \$4,920 p.a. (or the equivalent to \$12,300 p.a. for \$100,000 investment).
- ◆ The light blue bar represents the income from the five year term certain annuity, paying 3.4 per cent p.a.
- ◆ The solid yellow line depicts a \$400,000 investment at age 65, paying \$16,770 p.a. (or the equivalent to \$4,190 p.a. for \$100,000 investment) indexed annually to CPI.

Figure 3 below shows the cumulative payments of the two strategies. The staggered annuitisation strategy provides similar total income to age 90 to an indexed lifetime annuity, with various crossover points over the period. The staggered annuitisation strategy also has the additional flexibility of having a withdrawal value as shown by the Residual Capital Value (RCV) of the remaining short-term annuities up to age 85, should the individual's circumstances change and they need to access some funds.

Figure 3 – Hypothetical cumulative payments for staggered annuitisation versus lifetime annuity from age 65



SCENARIO 2: COMPARING STAGGERED ANNUITISATION AND AN INDEXED LIFETIME ANNUITY FOR A 70-YEAR-OLD

This second hypothetical scenario illustrates the comparison between a staggered and an indexed annuitisation strategy assuming that the purchase of annuities is delayed until age 70 (as in Dr Babel's paper).

As in Scenario 1, the individual has \$800,000 in retirement savings and a balanced risk profile – 50 per cent growth assets and 50 per cent defensive assets.

In Australia in January 2018, each \$100,000 in a lifetime income annuity (with no indexation and nil guaranteed period) generated an income of about \$6,680 per annum for a male of 70 years. A CPI indexed lifetime income annuity (with nil guaranteed period) generated an income of about \$5,052 per annum for a male of 70 years.

The chart below shows the hypothetical staggered annuitisation annual payouts versus a lifetime annuity purchased at age 70. The staggered annuitisation strategy similarly performs well, relative to an indexed lifetime annuity.

Figure 4 – Hypothetical staggered annuitisation annual payouts versus lifetime annuity at age 70

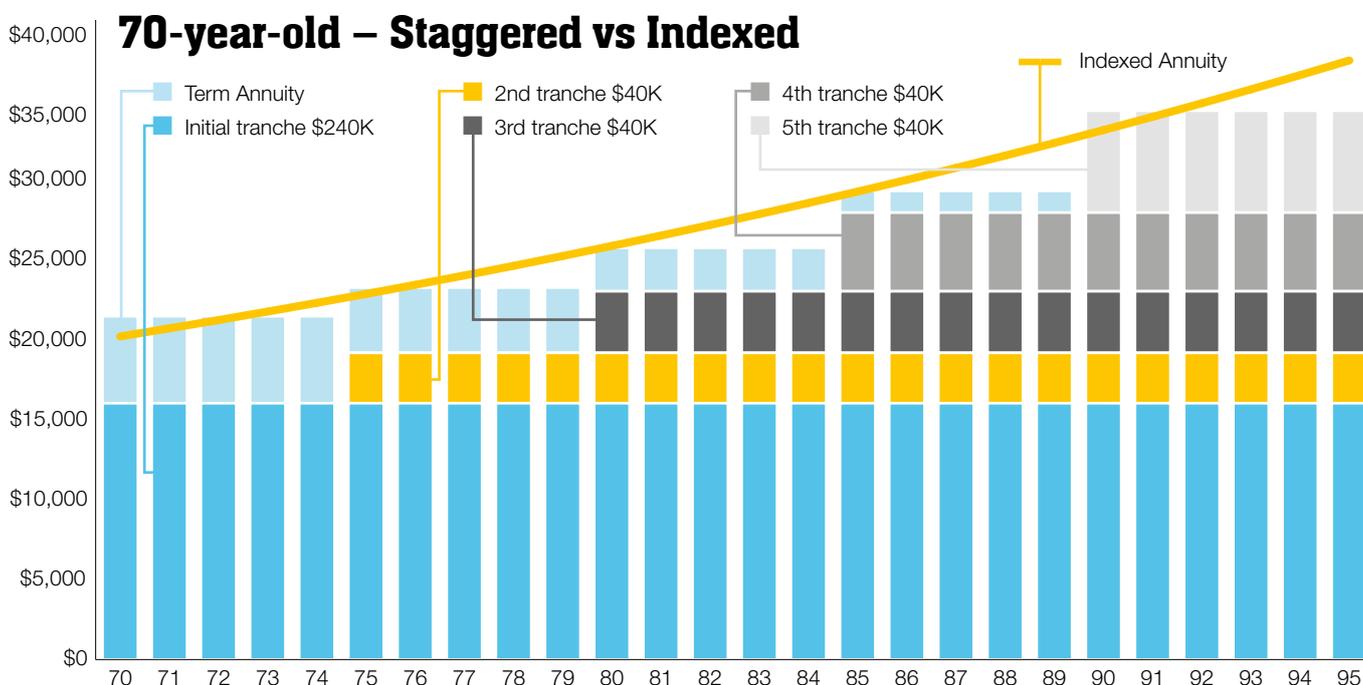


Figure 4: Commentary and explanatory notes

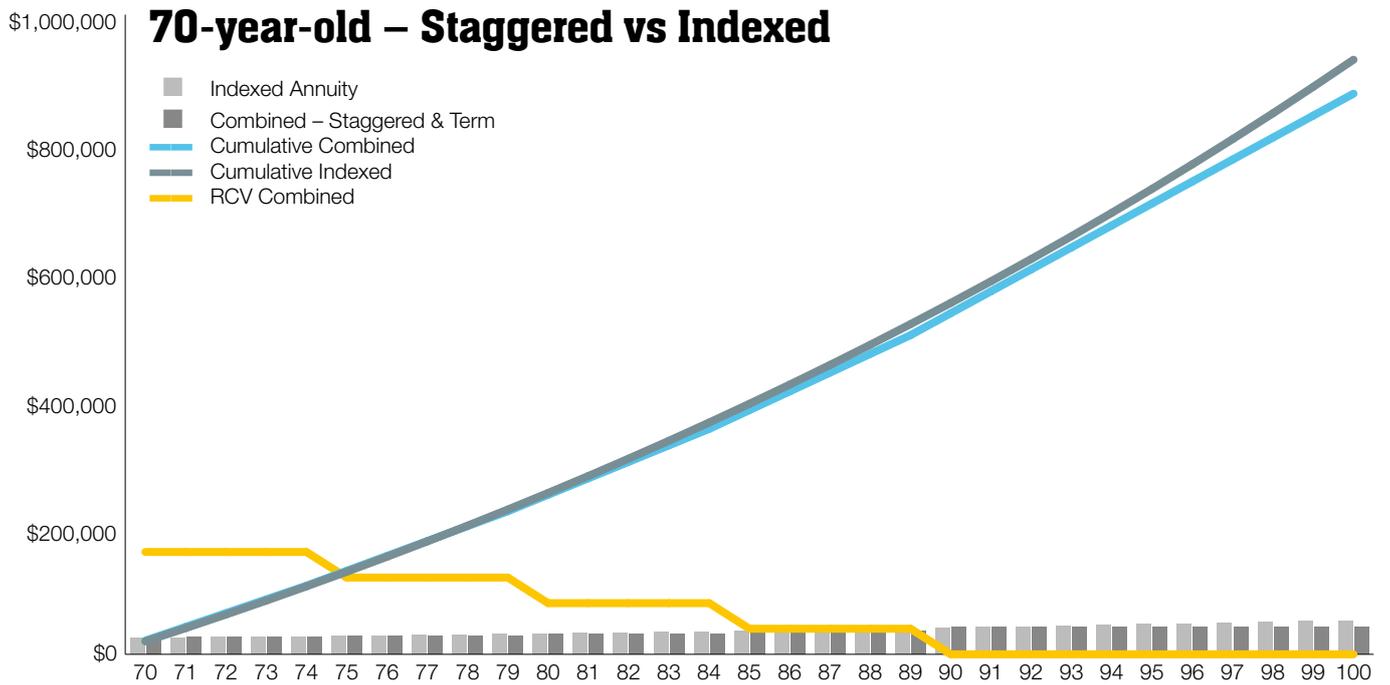
- ◆ The blue bar depicts a \$240,000 investment at age 70, paying \$16,030 p.a. (or the equivalent of \$6,680 p.a. for \$100,000 investment).
- ◆ The yellow bar depicts \$40,000 investment at age 75, paying \$3,150 p.a. (or the equivalent of \$7,875 p.a. for \$100,000 investment).
- ◆ The dark grey bar depicts \$40,000 investment at age 80, paying \$3,850 p.a. (or the equivalent of \$9,620 p.a. for \$100,000 investment).
- ◆ The mid-grey bar depicts \$40,000 investment at age 85, paying \$4,920 p.a. (or the equivalent of \$12,295 p.a. for \$100,000 investment).
- ◆ The light grey bar depicts \$40,000 investment at age 90, paying \$6,370 p.a. (or the equivalent of \$15,930 p.a. for \$100,000 investment).
- ◆ The light blue bar represents the income from the five year term certain annuity, paying 3.4 per cent p.a.
- ◆ The solid yellow line depicts a \$400,000 investment at age 70, paying \$20,210 p.a. (or the equivalent to \$5,050 p.a. for \$100,000 investment) indexed annually to CPI.

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

The indexed lifetime annuity shows a steady increase every year at an assumed CPI rate of two per cent per annum (CPI as at December 2017 at 1.9 per cent p.a.).

The chart below shows the cumulative payments of the two strategies. The staggered annuitisation strategy provides similar total income over the period to age 85 to an indexed lifetime annuity, with a crossover point at age 80. The staggered annuitisation strategy also has the additional flexibility of having a withdrawal value as shown by the RCV of the remaining short-term annuities up to age 90, should the individual's circumstances change and they need to access some funds.

Figure 5 – Hypothetical cumulative payments for staggered annuitisation versus lifetime annuity from age 70



CASE STUDY

So far, this guide has presented two hypothetical scenarios to demonstrate the comparisons between a staggered annuitisation strategy and an indexed lifetime annuity for a 65-year-old and then for a 70-year-old. For illustrative purposes, these scenarios for the most part deliberately examined annuitisation strategies in relative isolation, without bringing into the picture the effect of Age Pension benefits on total retirement income.

We'll now look at a comprehensive (fictitious) case study that demonstrates more holistically the impact of the staggered annuitisation strategy versus an indexed lifetime annuity on a client's retirement income portfolio, taking into account the impact of Age Pension benefits.



Tom and Lisa

Tom is a Paralegal and his wife, Lisa, is an Accountant. They are both aged 65, are in good health, and are about to retire with \$800,000 in super and personal assets of \$20,000. They own their own home outright.

They plan to enjoy an active retirement and are interested in exploring options to maximise their overall income, including Age Pension benefits, while maintaining some flexibility in when they access their funds in case their circumstances change.

Tom and Lisa consult their financial adviser, Olivia, who presents two options for them to consider.

Tom and Lisa must decide whether to purchase the annuity with superannuation or non-superannuation funds. This decision impacts the taxation of both the annuity payments as well as voluntary commutations and death benefits. If using superannuation funds, the annuity must meet the minimum payment standards. As the couple are both age 65, and their selected annuity has a commutation value, the lifetime annuity must pay at least five per cent in the first year. Due to the current interest rate environment, it may not be possible to meet the minimum payment standard, if options such as CPI indexation or 100 per cent payable on death to a reversionary beneficiary are chosen. In this case, to simplify the analysis we've used ordinary annuities so as not to have to meet the minimum payment standard.

Option 1 – Account based pension plus indexed lifetime annuity

In this first option, Olivia explains how they could invest \$400,000 into an ABP and \$400,000 into an indexed lifetime annuity.

Figures 6 and 7 below detail the amounts received from the ABP, indexed lifetime annuity and Age Pension over a 30-year period using the following assumptions:

- ◆ Age Pension figures based on the current indexation rate
- ◆ Tom and Lisa draw the minimum income from the ABP and spend all the income from both the ABP and indexed lifetime annuity
- ◆ ABP earning rate is five per cent p.a. net of fees
- ◆ Figures are expressed in future dollars
- ◆ Thresholds are indexed at two and a half per cent p.a. future value
 - ◆ Commlnsure Lifestream Income annuity quotes as at 16 January 2018, guaranteed period is life expectancy, reversionary payments on death 50 per cent, 2.5 per cent indexation p.a. Annual payment at age 65 is \$3,622.

Figure 6 – Account based pension plus indexed lifetime annuity

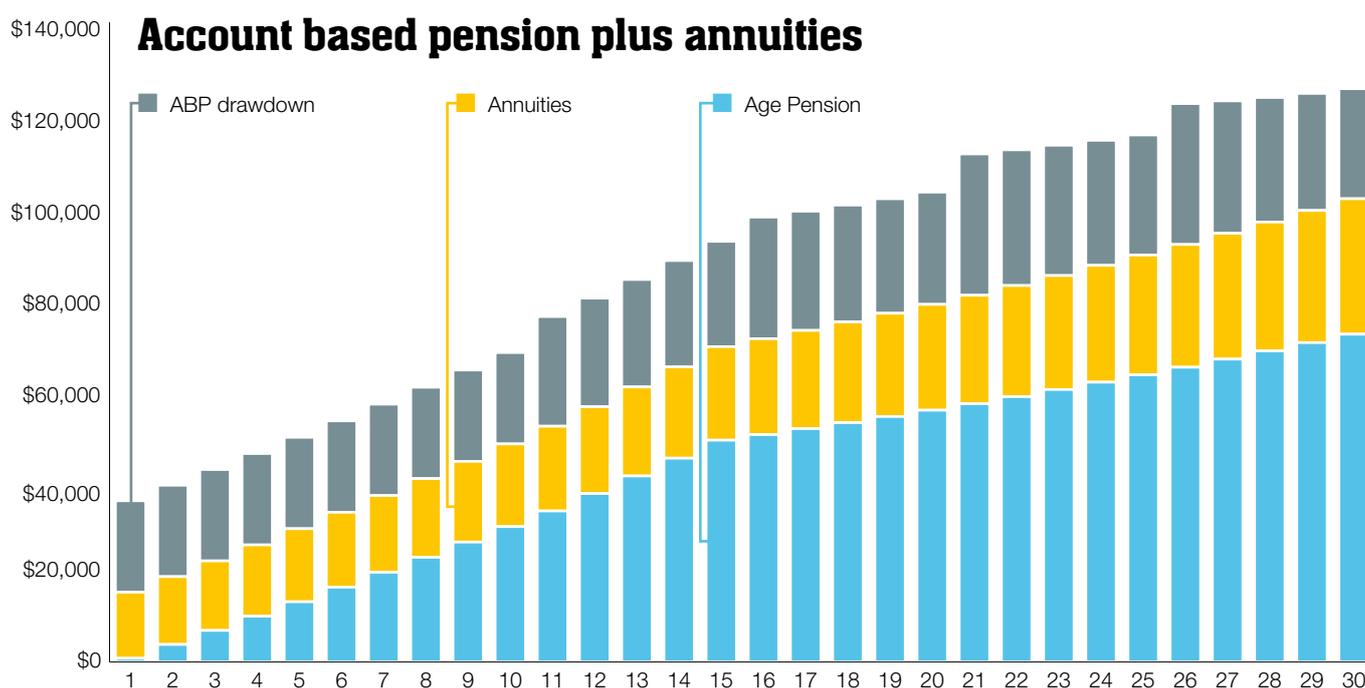


Figure 7 – Account based pension plus indexed lifetime annuity (with annuity withdrawal values and Age Pension)

Year	1	5	10	15	20	25	30
Lifetime annuity strategy							
Age Pension	\$777	\$13,158	\$29,608	\$48,521	\$55,087	\$62,836	\$71,722
ABP drawdown	\$20,000	\$20,000	\$20,000	\$23,054	\$24,561	\$26,284	\$24,078
Indexed lifetime annuity income	\$14,488	\$15,992	\$18,094	\$20,471	\$23,161	\$26,205	\$29,648
Total income from ABP + indexed lifetime annuity strategy	\$35,265	\$49,150	\$67,701	\$92,046	\$102,809	\$115,325	\$125,449
Annuity Withdrawal Value	\$306,087	\$250,561	\$181,154	\$111,746	\$42,339	\$0	\$0

Option 2 – Account based pension plus staggered annuitisation

The second option Olivia presents to Tom and Lisa would require them to invest \$400,000 into an ABP and \$240,000 into a lifetime annuity.

Their remaining \$160,000 is invested in a five-year term annuity (100 per cent RCV) and then every five years, \$40,000 is invested in a lifetime annuity and the remainder invested in a five-year term annuity (100 per cent RCV).

Figures 8 and 9 below detail the amounts received from the ABP, staggered annuitisation strategy and Age Pension over a 30-year period using the following assumptions:

- ◆ Age Pension figures based on the current indexation rate
- ◆ ABP earning rate five per cent p.a. net of fees
- ◆ Figures are expressed in future dollars
- ◆ Thresholds are indexed at two and a half per cent p.a. future value
- ◆ Commlnsure Lifestream Income annuity quotes as at 16 January 2018, guaranteed period is life expectancy, reversionary payments on death 50 per cent, nil indexation
 - ◆ annual payment at age 65 is \$5,089
 - ◆ annual payment at age 70 is \$5,711
 - ◆ annual payment at age 75 is \$6,576
 - ◆ annual payment at age 80 is \$7,822
 - ◆ annual payment at age 85 is \$9,719

Figure 8 – Account based pension plus staggered annuitisation

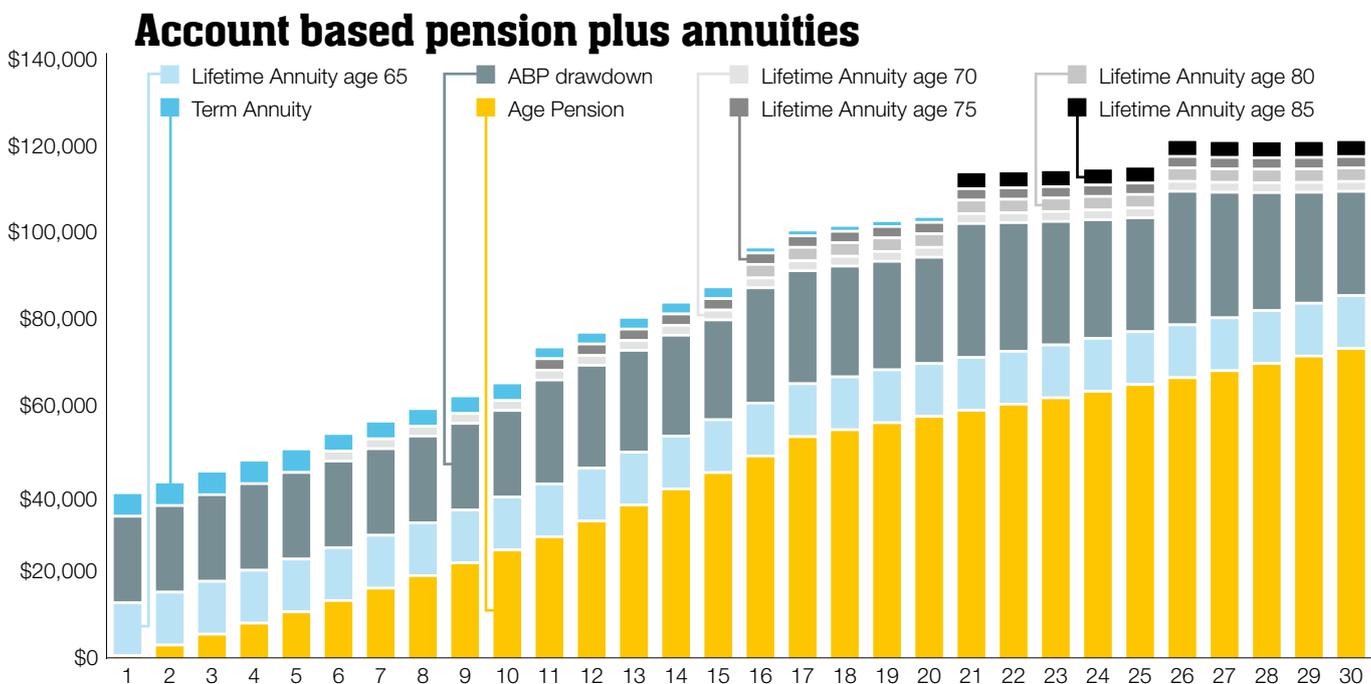
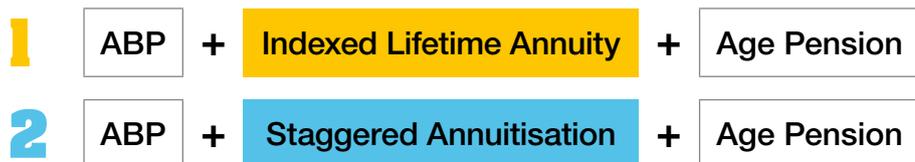


Figure 9 – Account based pensions plus staggered annuitisation (with annuity drawdowns and Age Pension)

Year	1	5	10	15	20	25	30
Staggered annuitisation strategy							
Age Pension	\$777	\$10,894	\$25,215	\$43,077	\$56,046	\$63,411	\$71,744
ABP drawdown	\$20,000	\$20,000	\$20,000	\$23,054	\$24,561	\$26,284	\$24,078
Staggered annuity income	\$17,654	\$17,654	\$18,578	\$19,848	\$21,617	\$24,145	\$24,145
Total income from ABP + staggered annuity strategy	\$38,431	\$48,547	\$63,793	\$85,980	\$102,224	\$113,840	\$119,967
Staggered Annuity Withdrawal Value	\$343,652	\$310,337	\$252,123	\$183,109	\$99,926	\$15,761	\$0

Comparing Tom and Lisa's two options

Tom and Lisa now have two options to consider:



The table and graph below compare the income received under each of the two options.

Specifically we have taken:

(Income from Option 2 – ABP + staggered annuitisation) less
(Income from Option 1 – ABP + indexed lifetime annuity)

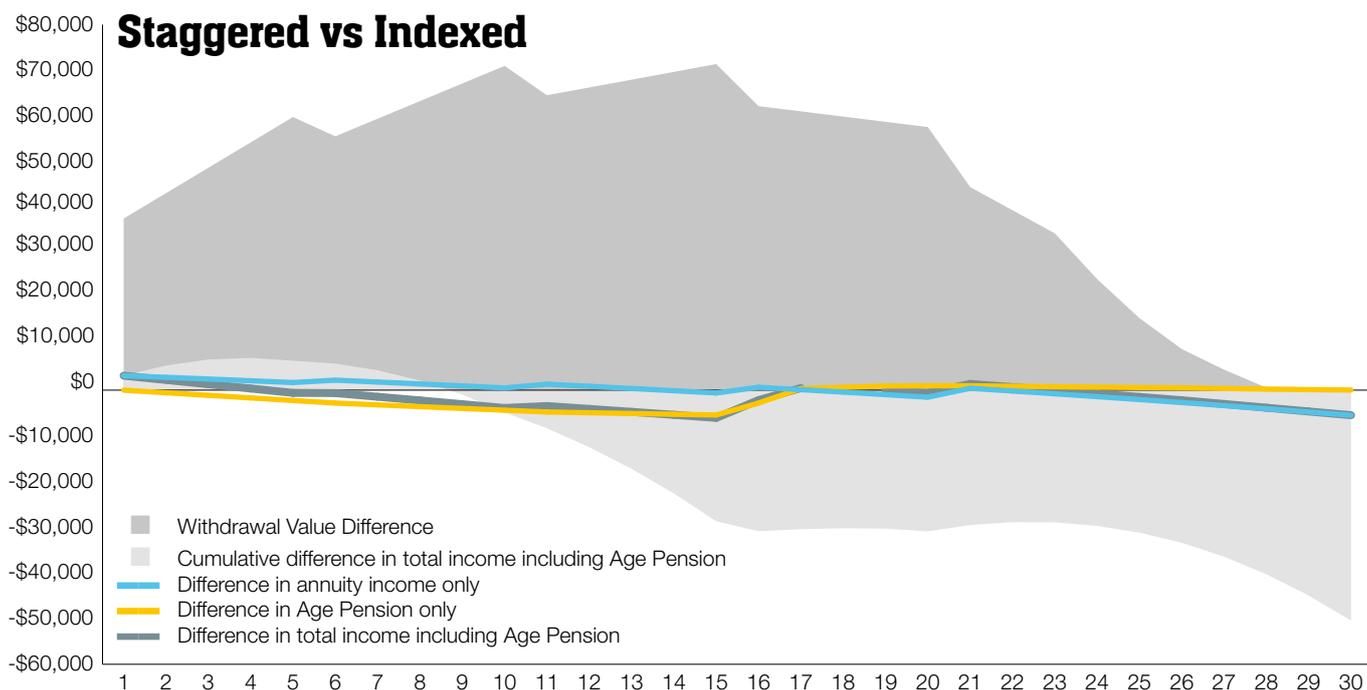
A 'Positive value' value reflects that Income from Option 2 – ABP + staggered annuitisation is higher

A 'Negative value' value reflects that Income from Option 2 – ABP + staggered annuitisation is lower

Figure 10 – comparison of ABP + indexed lifetime annuity with ABP + staggered annuitisation

Year	1	5	10	15	20	25	30
Difference in Age Pension only	\$0	-\$2,264	-\$4,393	-\$5,444	\$959	\$575	\$22
Difference in annuity income only	\$3,166	\$1,662	\$484	-\$623	-\$1,544	-\$2,060	-\$5,504
Difference in total income including Age Pension	\$3,166	-\$602	-\$3,908	-\$6,067	-\$585	-\$1,485	-\$5,482
Difference in withdrawal values	\$37,565	\$59,776	\$70,969	\$71,363	\$57,588	\$15,761	\$0

Figure 11 – Comparison of ABP + indexed annuity with ABP + staggered annuitisation showing cumulative difference in total retirement income



Analysis

A comparison of Tom and Lisa's two options shows that:

- ♦ The staggered annuitisation strategy produces slightly more total income in the early years and the indexed lifetime annuity more total income from year five onwards. The cumulative income provided by the indexed lifetime annuity becomes greater in later years.
- ♦ The indexed lifetime annuity strategy provides more Age Pension due to lower assessable assets and income in the early years. Under the staggered annuitisation strategy, assessable assets are higher, because fixed term annuities with nil RCV are asset tested and deemed. The staggered annuitisation strategy provides slightly more Age Pension from year 20 onwards as total annuity income is lower.
- ♦ The staggered annuitisation strategy provides greater flexibility with a higher withdrawal value over the majority of the period.

CONCLUSION

Annuitisation strategies may be suitable for clients who want some level of income security throughout their lifetime and social security entitlements including the Age Pension.

However, there are a number of considerations that also need to be taken into account including locking in funds at relatively low interest rates, limited access to capital and estate planning.

The staggered annuitisation strategy helps address many of these issues and can provide clients with a conservative strategy that will last for as long as they live, provide greater flexibility in accessing funds should the client's circumstances change and help retirees 'retire smarter'. But let's leave the final word to Dr Babbel:

"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."¹

To receive regular product updates, strategy papers and weekly CommInsure annuity rates sign up today at www.comminsuredadviser.com.au/retirement or for more information speak to your retirement business development manager.

¹ *Retire Smarter: new strategies towards a comfortable retirement*, Dr David F Babbel, October 2017, page 16.

Things you should know:

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