

A Market-Linked Annuity

Cepar Superannuation Colloquium

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Overview

The annuity puzzle and traditional annuities

What is a market-linked annuity

How does the new market-linked annuity work

Case study: using the market-linked annuity in a portfolio

The traditional annuity puzzle

People do not tend to annuitise as much of their wealth as the economic theory suggests.

Various reasons for this observation:

- Bequest motive
- Pre-existing annuitised wealth
- Behavioural biases
- Lack of exposure to high returning assets

The market-linked annuity address the exposure to the underlying investments

Why Now

Products with market exposure and longevity protection have been launched before, but with limited success in Australia

Three key legislative changes:

- Innovative Retirement Income Streams (2017)
- DSS changes (2019)
- Retirement Income Covenant (2022)

A maturing super system means that balances at retirement are growing.

Pricing an investment linked annuity

$$P_x = (1 + \delta) \cdot I_x \cdot \frac{n_x}{(1 + AIR)} \sum_{t=1}^T \frac{{}_{x+t}p_x}{(1 + AIR)^{t-1}}$$

Where P_x is the initial premium amount for the purchase of n_x units;

δ is the loading applied to the annuity price

I_x is the price of a unit in the underlying investment at time x ;

T is the maximum remaining life (reduced from ∞ for computational efficiency);

${}_{x+t}p_x$ is the probability of survival from age x to age $x+t$; and

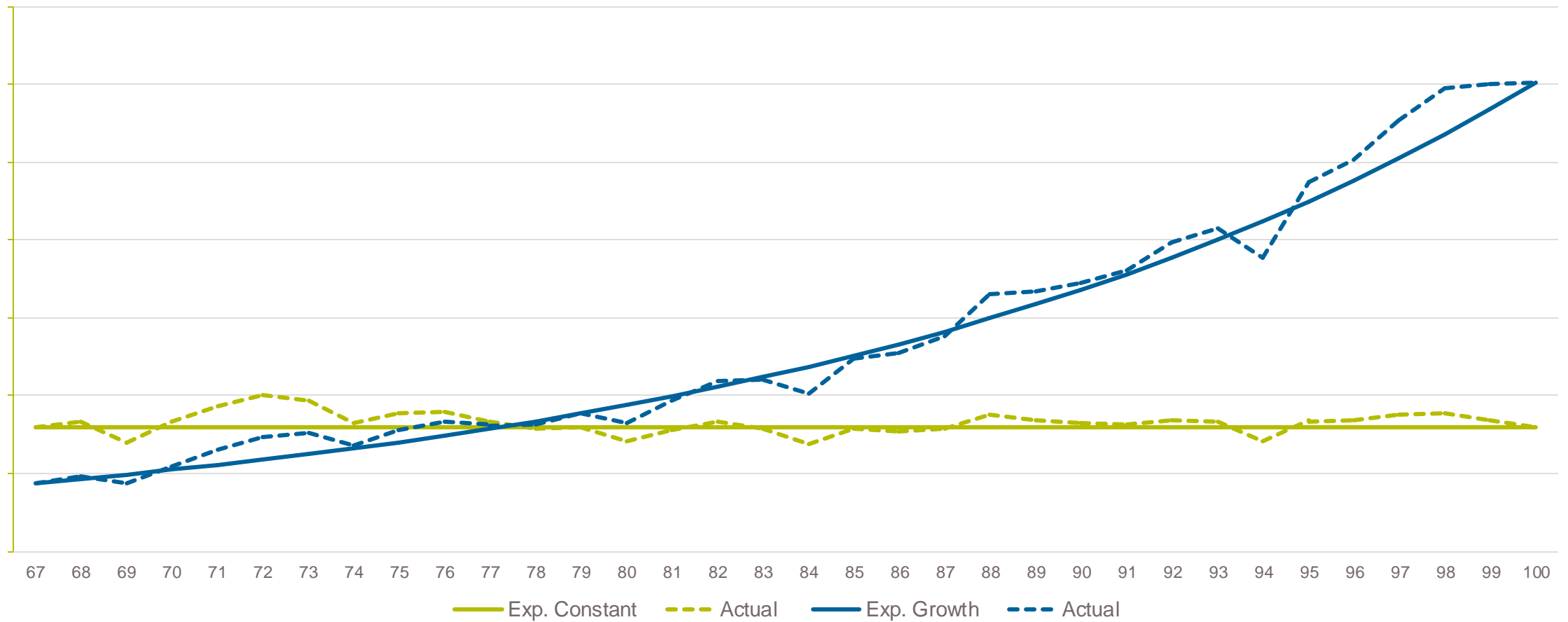
AIR is the assumed interest rate applied to the variable annuity.

The Market-linked annuity

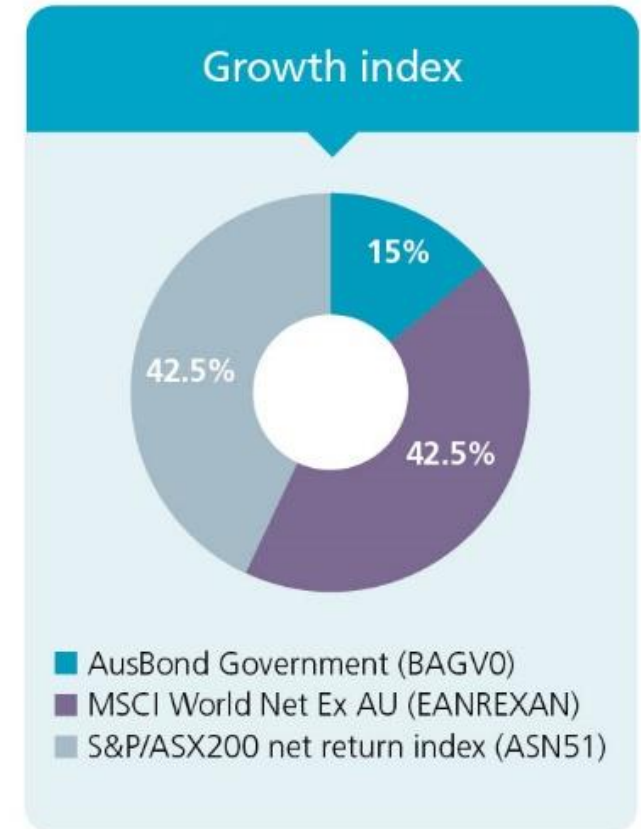
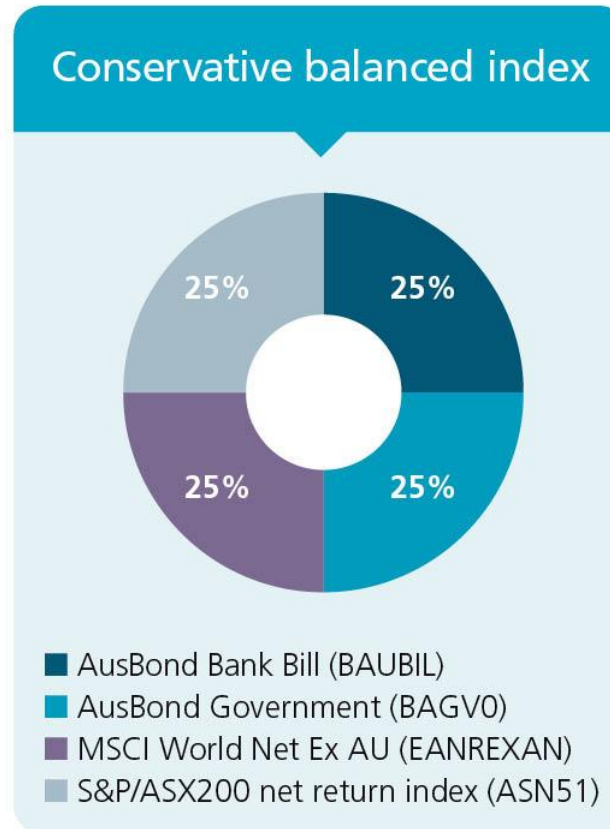
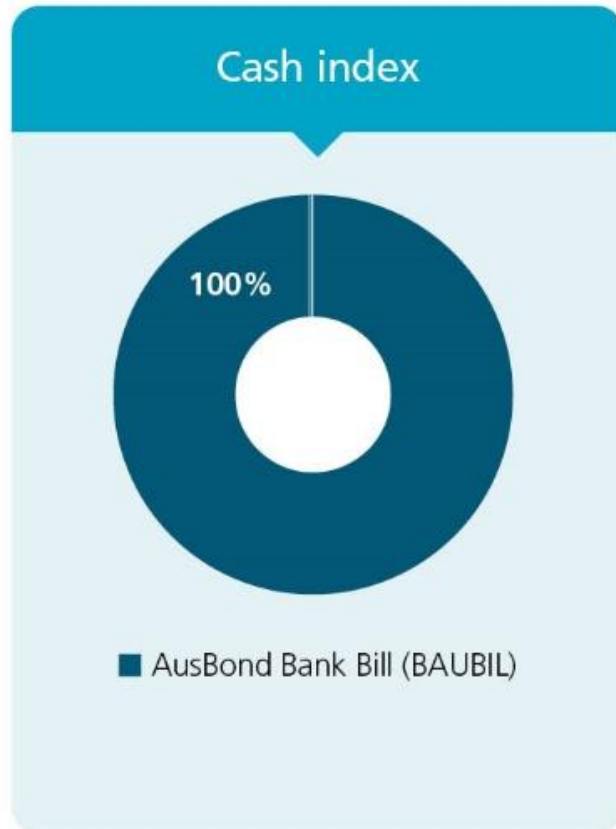
$$A_x = (1 + \delta) \cdot \sum_{t=1}^T {}_{x+t}p_x$$

Where A_x is the initial premium amount for the purchase a units paying \$1;
 T is the maximum remaining life (reduced from ∞ for computational efficiency); and
 ${}_{x+t}p_x$ is the probability of survival from age x to age $x+t$.

Alternative paths for different AIR assumptions

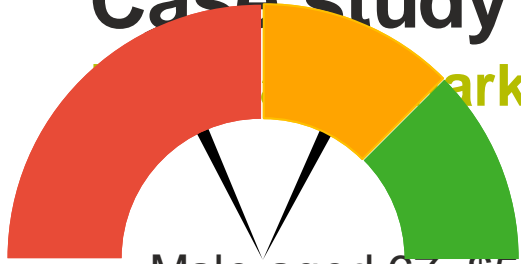


Some consumer alternatives



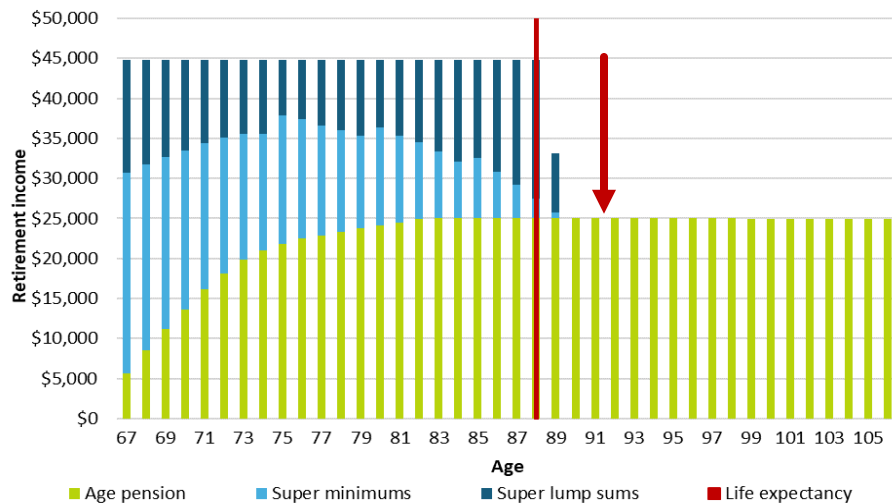
Case study

Market-linked annuity be used in a retirement portfolio

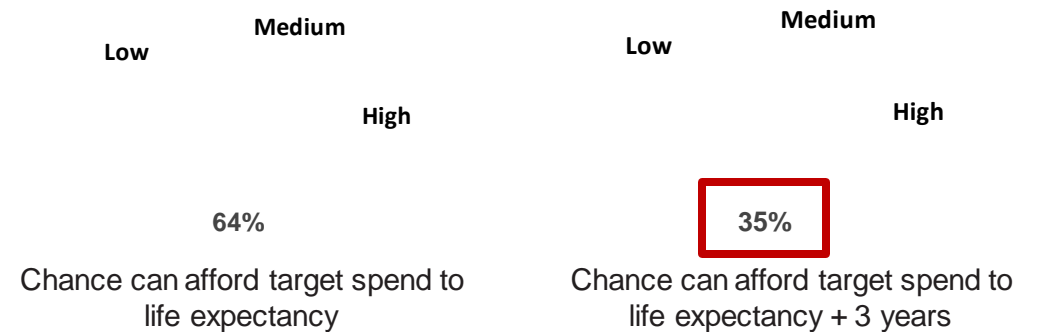


- Male aged 67, \$500k in ABP (50% growth), \$20k personal assets, spend ASFA comfortable \$44,818¹
- Illustration² of current retirement strategy with ABP alone:

Median retirement income



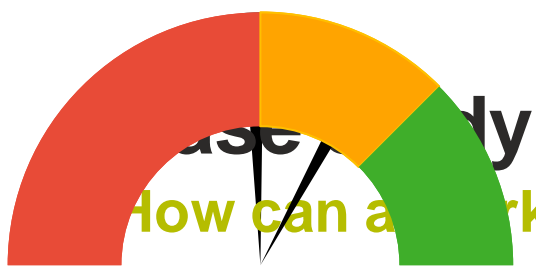
Sustainability of target spend



Little longevity protection provided by the ABP alone

1. June quarter 2021 ASFA retirement standard

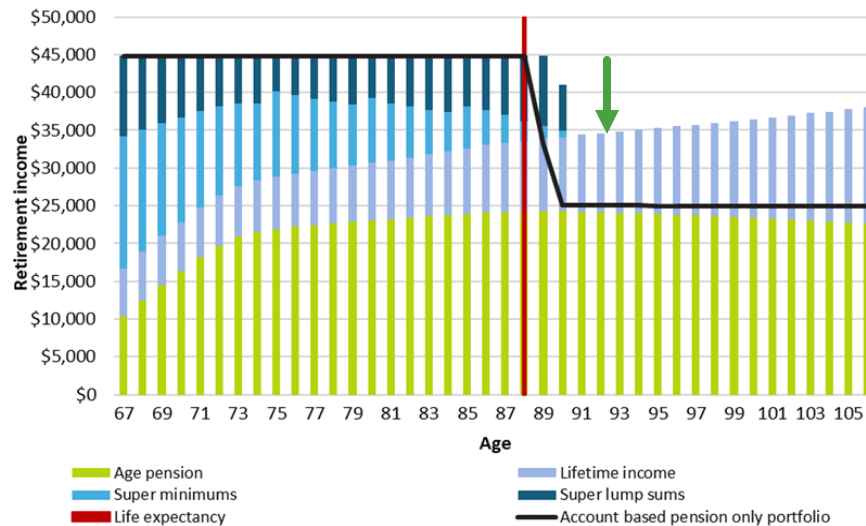
2. Illustrations completed using Challenger's retirement income model allowing for Age Pension means tests and target spend of \$44,818 p.a. increasing annually with inflation. 2,000 simulations of asset class data provided by Willis Towers Watson (average return net of fees over 40yrs ABP growth 5.3% p.a. (including franking credits) and ABP defensive 1.6% p.a.)



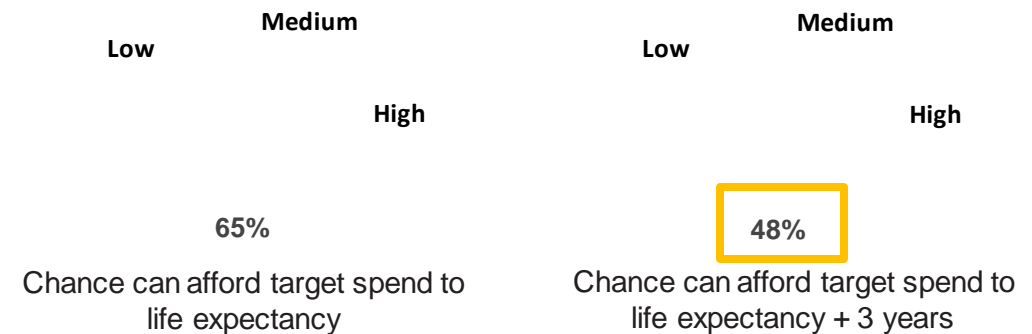
How can a market-linked annuity be used in a retirement portfolio

- Invest 30% of super into a MLA with same 50% growth risk profile
- Illustration² of retirement strategy when incorporate a MLA:

Median retirement income



Sustainability of target spend



Increased confidence to spend at target lifestyle with longevity protection once ABP does run out

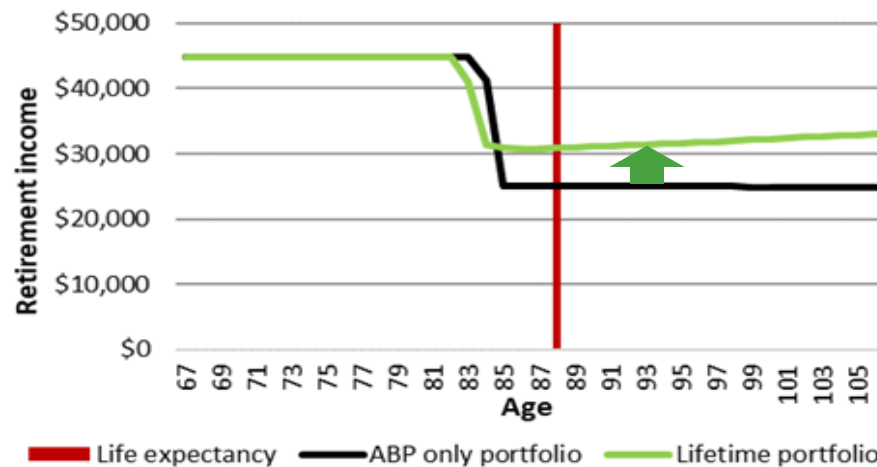
1. Illustrations completed using Challenger's retirement income model allowing for Age Pension means tests and target spend of \$44,818 p.a. increasing annually with inflation. Lifetime income strategy uses Challenger Lifetime Annuity Flexible Income (Market-linked payments) with conservative balanced payment option, pricing as at 9 November 2021. 2,000 simulations of asset class data provided by Willis Towers Watson (average return net of fees over 40yrs ABP growth 5.3% p.a. (including franking credits) and ABP defensive 1.6% p.a. and conservative balanced payment option 4.3%p.a.)

Case study

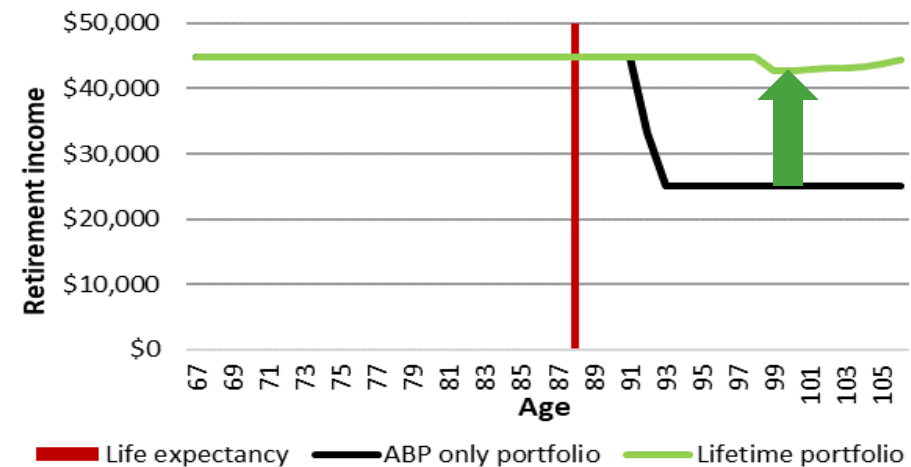
How can a market-linked annuity be used in a retirement portfolio

- Lifetime income retirement strategy¹ is robust to market performance:

10th percentile 'poor' income outcomes



90th percentile 'great' income outcomes



Income floor in poor and good outcomes higher with lifetime income strategy

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