



Actuaries Institute.

Retirement Incomes: Approaches to Member Cohorting and Outcome Analysis

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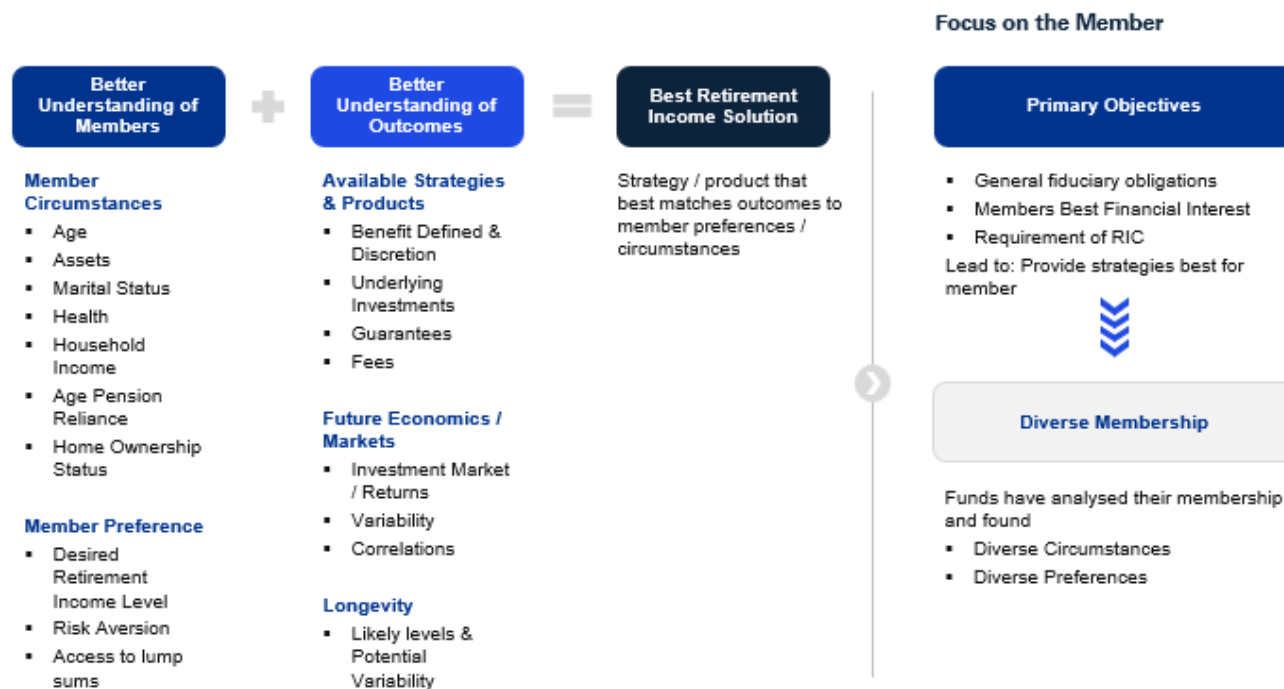
Introduction

Introduction

Solving the Retirement Income Covenant

Retirement Income Strategy Requirements:

- i) To maximise expected retirement income over the period of retirement
- ii) To manage expected risks to the sustainability and stability of retirement income
- iii) To have flexible access to expected funds over the period of retirement



Is current strategy (products, services, member information) adequate to meet members' RI needs?
Offer new product(s)? Refer? Need a manageable structure of offerings



Retirement Income Covenant and Member Attributes

How do Trustees approach decision-making?

Solving the Retirement Income Covenant

Trustees make decisions in the best financial interests of members as a whole

Trustees need to consider the expected member impacts (both positive and negative) for a proposed decision / strategy

Practically Trustees do this by considering the different impacts on cohorts / classes

Interaction with strategic business planning
With RIS to be incorporated in business plan and business processes (e.g. MOA and BPRP)

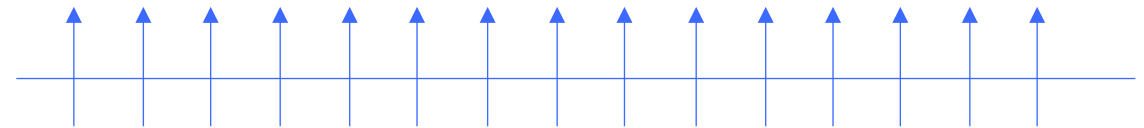
Trustee Decision-making

Cohort

Cohort

Cohort

Cohort



Attributes of members

(What do you know now?
What are planning to understand?)



Understanding Members

Attributes and Cohorting – the details

Understanding Members - the “What and How”

What do we need to understand?

Member attributes:

- **Demographic and household**
- **Financial Circumstance**
 - Superannuation account balance
 - Assets outside of super
 - Homeownership
- **Preferences**
 - Stability of income
 - Death benefit
- **Health Status**

How funds might be addressing getting the information:

Surveys
Calculators
External data sources
External research
Phone members up
Advice instances



Attributes and Cohorting – the details

Members are diverse – Illustrative Analysis

As a starting point to **better understanding members**, it is important for superfunds to have insight similar to the below.

| Illustrative Analysis of Profile of Superannuation Fund Membership for Females Reaching 67 Year-Old | | | | | | | | | | |
|---|----------------------|----------------------|-------------------------------|----------------|-------|--|------|--|---|-----------------------------|
| Spouse Status | | Member Health | | Home Ownership | | Superannuation Balance / Eligibility Age Pension | | Assets Outside of Superannuation | | |
| | | | | | | | | Low \$50,000 prsnl - no fncl assets | Medium \$50,000 prsnl - \$150,000 fncl | High More than \$500,000 |
| Single 37% | Good Health 27.8% | Homeowner 21% | Low Superannuation Balance | | 14.1% | 7.0% | | 5.6% | 1.4% | |
| | | | Medium Superannuation Balance | | 4.5% | 2.2% | | 1.8% | 0.4% | |
| | | | High Superannuation Balance | | 2.7% | 1.4% | | 1.1% | 0.3% | |
| | | Non-Homeowner 7% | Low Superannuation Balance | | 5.5% | 2.7% | | 2.2% | 0.5% | |
| | | | Medium Superannuation Balance | | 0.8% | 0.4% | | 0.3% | 0.1% | |
| | | | High Superannuation Balance | | 0.2% | 0.1% | | 0.1% | 0.0% | |
| | Poor Health 9% | 9% | 9.3% | | 4.6% | | 3.7% | 0.9% | | |
| Couple 63% | Good Health 47% | Homeowner 36% | Low Superannuation Balance | | 24.0% | 12.0% | | 9.6% | 2.4% | |
| | | | Medium Superannuation Balance | | 9.6% | 4.8% | | 3.8% | 1.0% | |
| | | | High Superannuation Balance | | 2.7% | 1.4% | | 1.1% | 0.3% | |
| | | Non-Homeowner 11% | Low Superannuation Balance | | 10.2% | 5.1% | | 4.1% | 1.0% | |
| | | | Medium Superannuation Balance | | 0.6% | 0.3% | | 0.2% | 0.1% | |
| | | | High Superannuation Balance | | 0.3% | 0.2% | | 0.1% | 0.0% | |
| | Poor Health 16% | 16% | 15.8% | | 7.9% | | 6.3% | 1.6% | | |
| Total | 100% | 100% | 100% | 100% | | 50% | | 40% | 10% | |

Attributes and Cohorting – the details

Members are diverse – Health Status

Health status is a key attribute to consider and is likely to **vary significantly** by individual superannuation fund.

Complex to determine precisely what proportion of Australian superannuation fund members at age 67 are unhealthy.

Our illustrative analysis has assumed a proportion of 25% will have a reduction in life expectancy relative to healthy lives.

| Disease/Condition | Prevalence in Population at age 65 | Published Information on Life Expectancy |
|-----------------------------------|------------------------------------|--|
| Type 2 Diabetes | 10.9%-19.6% | 3-10 years |
| Hypertension | 33.7%-35% | 2-5 years |
| Obesity (BMI 30+) | 31%-36% | 3-10 years |
| COPD | 7.0% | 6-15 years |
| Dementia | 2.5% | 5-10 years |
| Heart, Stroke or Vascular Disease | 10%-14% | 5-10 years |
| Cancer | 3.7%-6.8% | 1-7+ years |
| Smoker (Regular) | 9.6%-12.8% | 3-10 years |



Understanding Outcomes

Understanding outcomes

Example

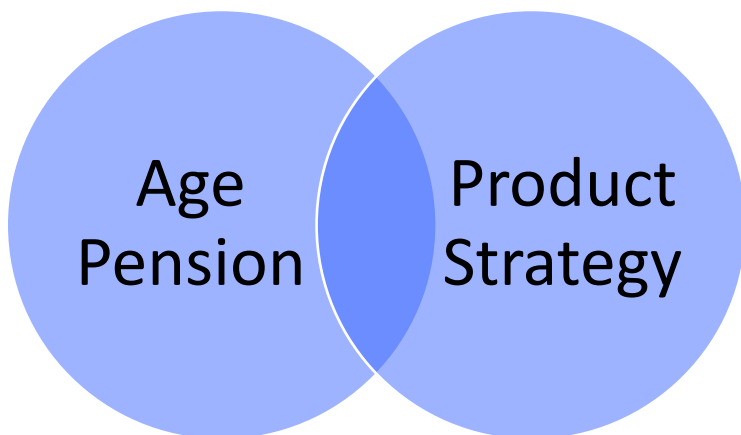
- 67 year old female, single, home owner
- \$500,000 super balance
- Compare two strategies
 - 100% Account Based Pension: balanced option – common approach
 - 60% Account Based Pension / 40% longevity product
- Rate of draw down such that run out of ABP under 100% ABP strategy at age 93 (Two years past life expectancy of 91 and when investment returns are as expected).



Understanding Outcomes

Strategies and measures

- Understanding available strategies and how they deliver to member preferences
- Universe of potential strategies



Meeting RIC objective is complex:

Maximise expected income

Decrement adjusted value
Maintain market exposure unequivocally
demonstrates superiority of longevity solution /
independent of market performance

Manage risks to income

Longevity – inflation (same market exposure in
the base and alternate strategy)

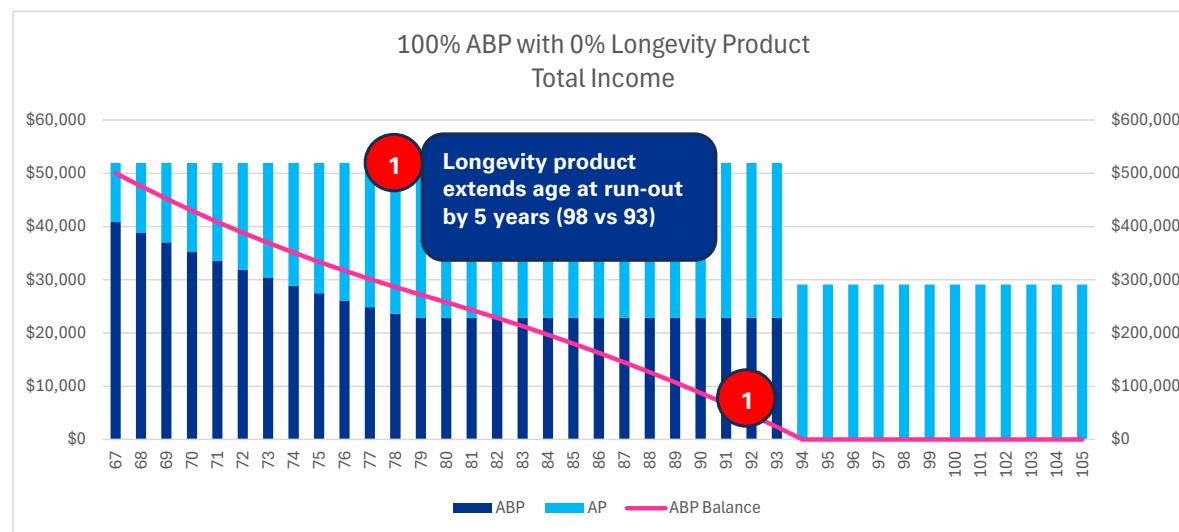
Access to lump sums

blended strategy likely adequate – actually can
be higher for longevity solution at later ages

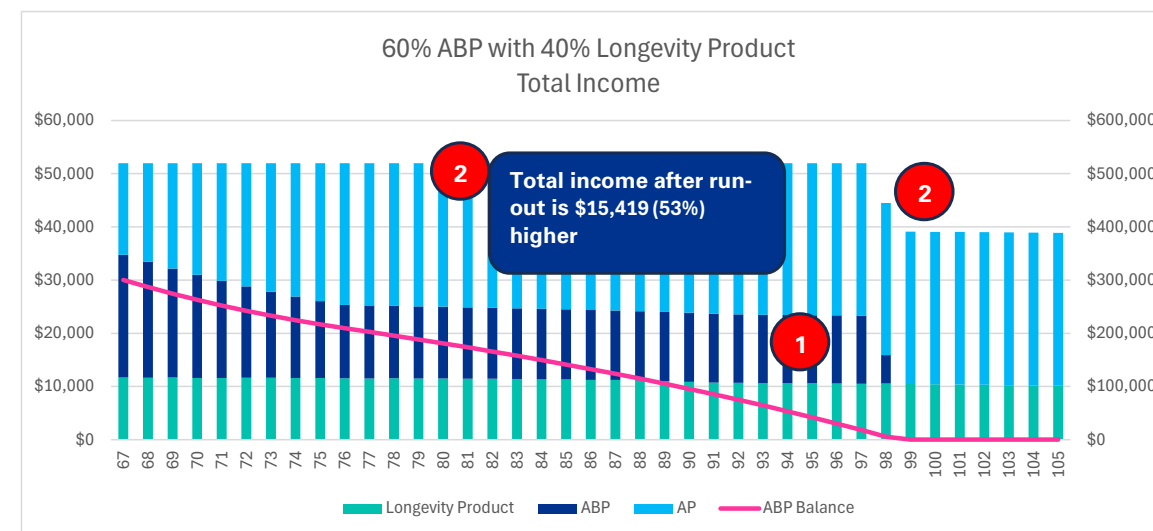


Understanding Outcomes

Illustrative 67 year-old female



- Target income lasts a further 5 years, running out at age 98

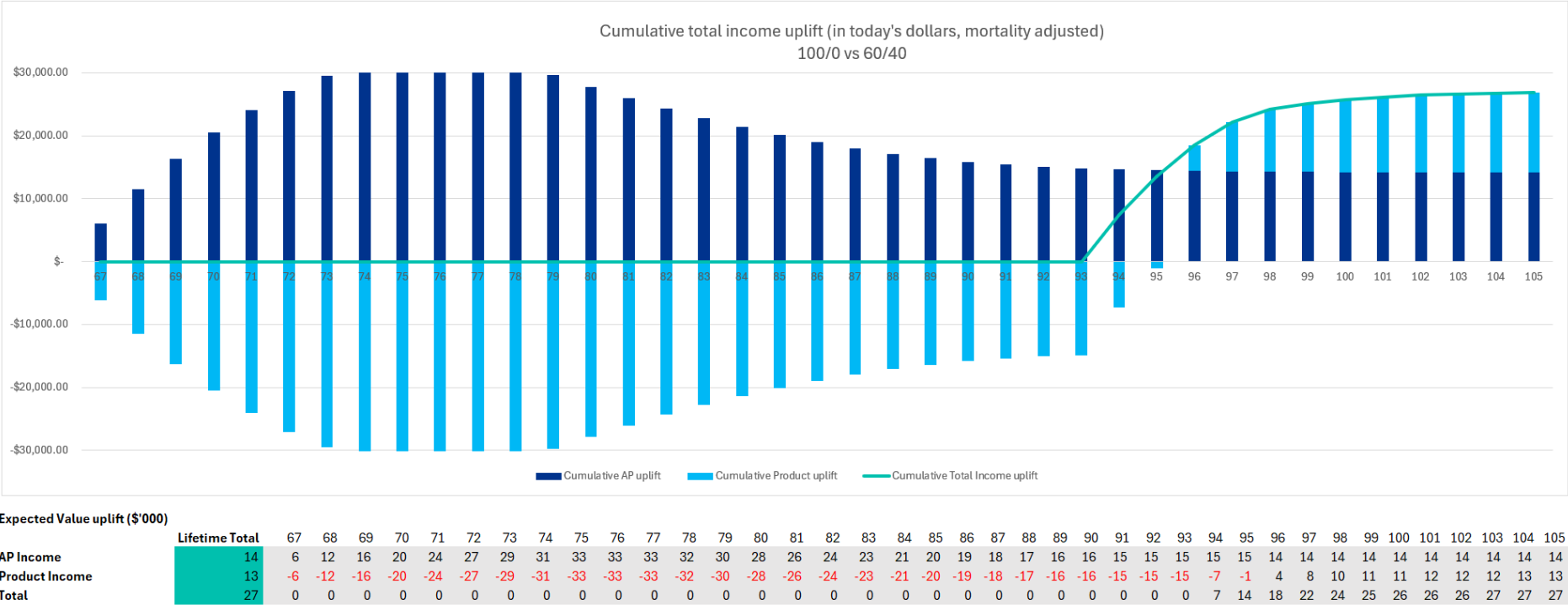


- Real income in retirement under base and alternate strategies



Understanding Outcomes

Illustrative 67 year-old female



- Cumulative Retirement Income by Source (Product vs Age Pension) and Expected Retirement Income

Measures Focused on Outcomes at Older Ages

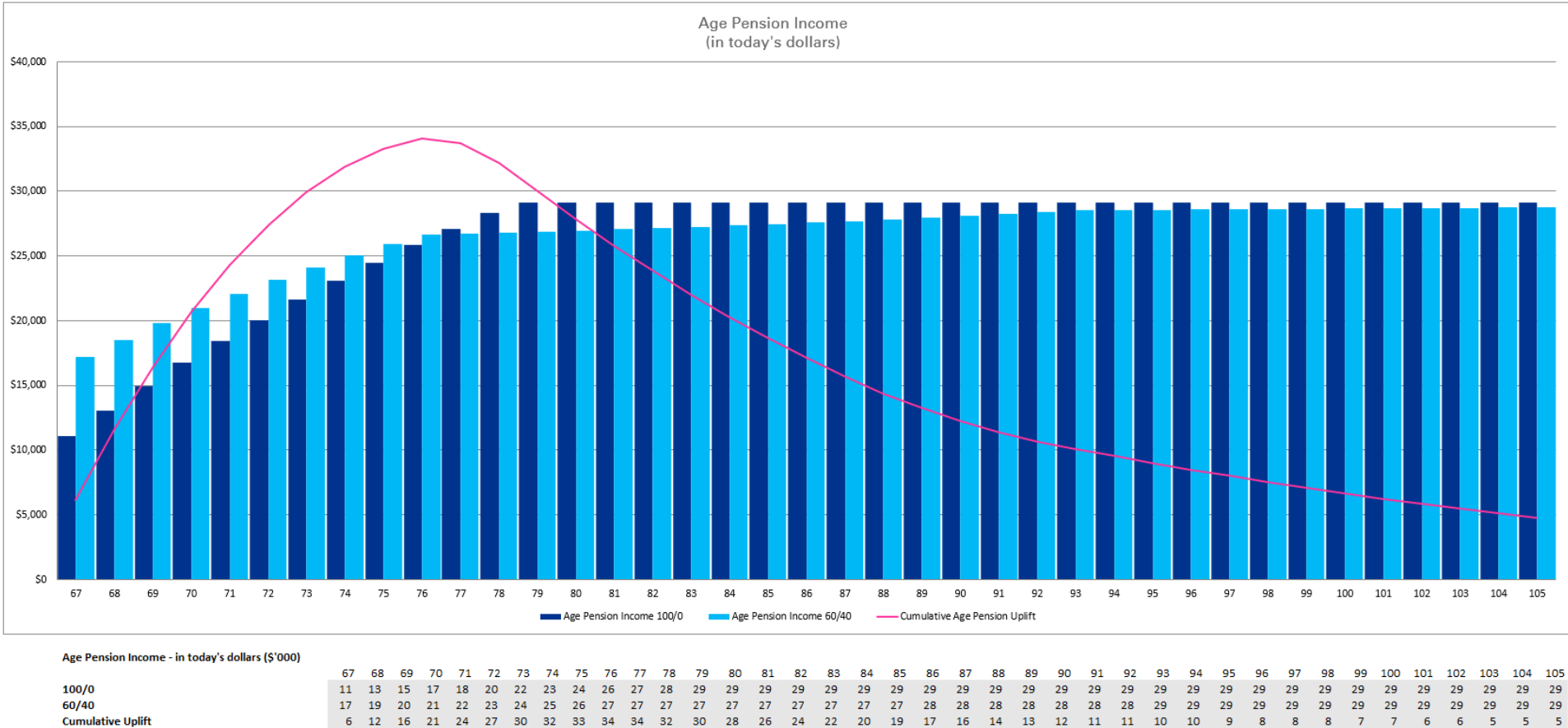
| Strategy | Expected Income over Lifetime | | Income p.a. - post ABP runout | | | Expected Value Income - post ABP runout | | |
|------------------|-------------------------------|------------|----------------------------------|---|-------------|--|--|-----------------|
| Product mix | Uplift Overall | | Age target income achieved until | Average level of income after ABP exhausted | | Age first strategy stops achieving target income | Total Expected Value of all income received thereafter | |
| | \$ Total | % of Total | | \$ | % of target | | Total | Uplift vs 100-0 |
| 100% ABP / 0% LP | | | 93 | 29,094 | 56% | 93 | 155,415 | 0 |
| 60% ABP / 40% LP | 26,868 | 2.25% | 98 | 39,004 | 75% | 93 | 225,145 | 69,729 |



Understanding Outcomes

Illustrative 67 year-old female

- Age Pension Income Uplift under Alternate Strategy



Understanding Outcomes

Further Insight

Universe of potential strategies

What suits certain types of members better than others

What results not that sensitive to:

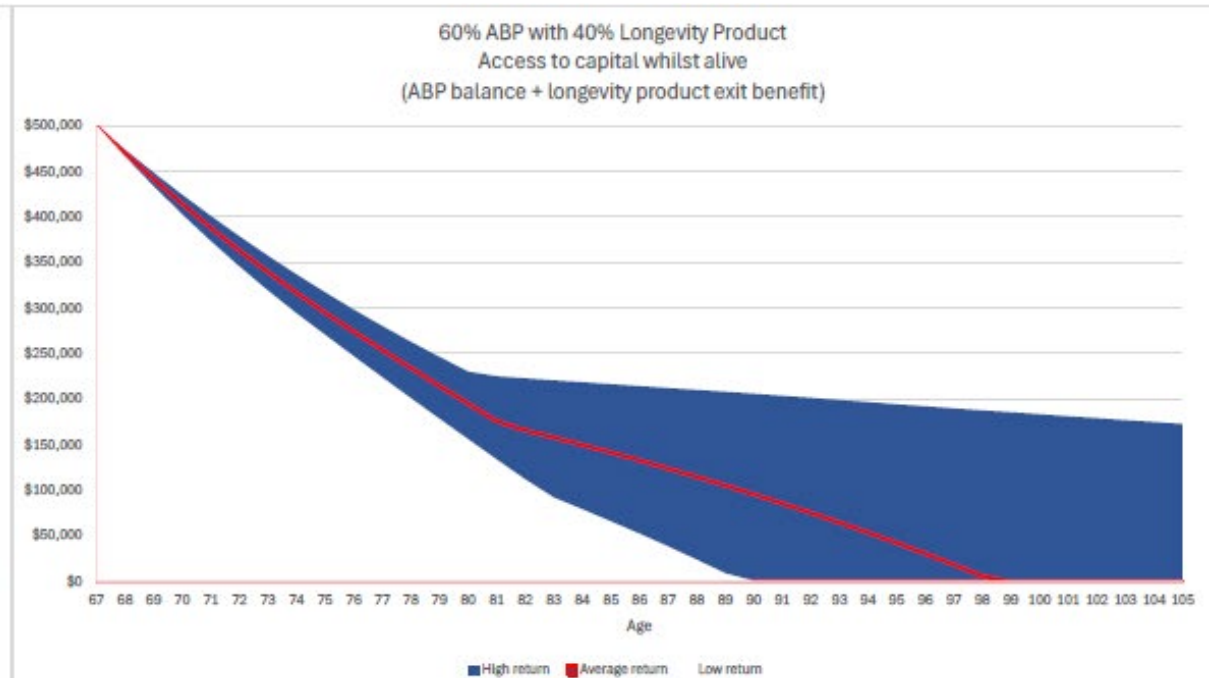
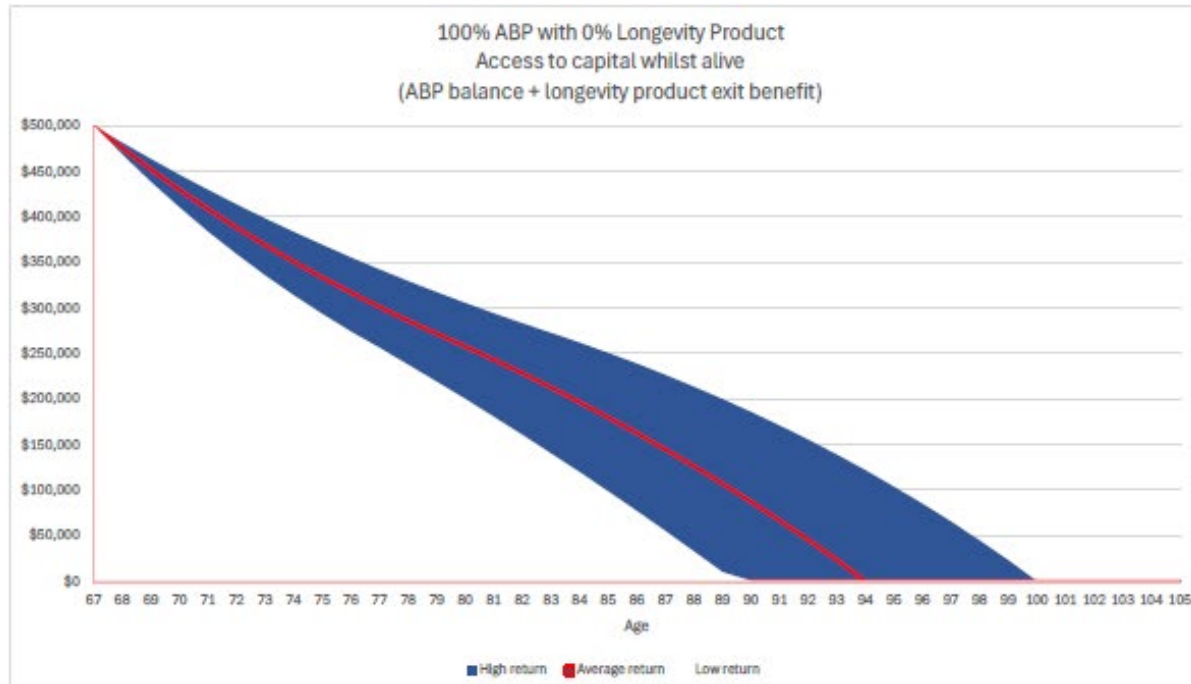
- Draw down rate – target age at run-out
- Level of wealth
- Changed investment assumptions – market performance
- Couple vs Single

What results are sensitive to:

- Age pension entitlement – includes some of the below
- Desire for death benefit
- Home ownership
- Health



Access to Lump Sums



Conclusion



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Conclusion

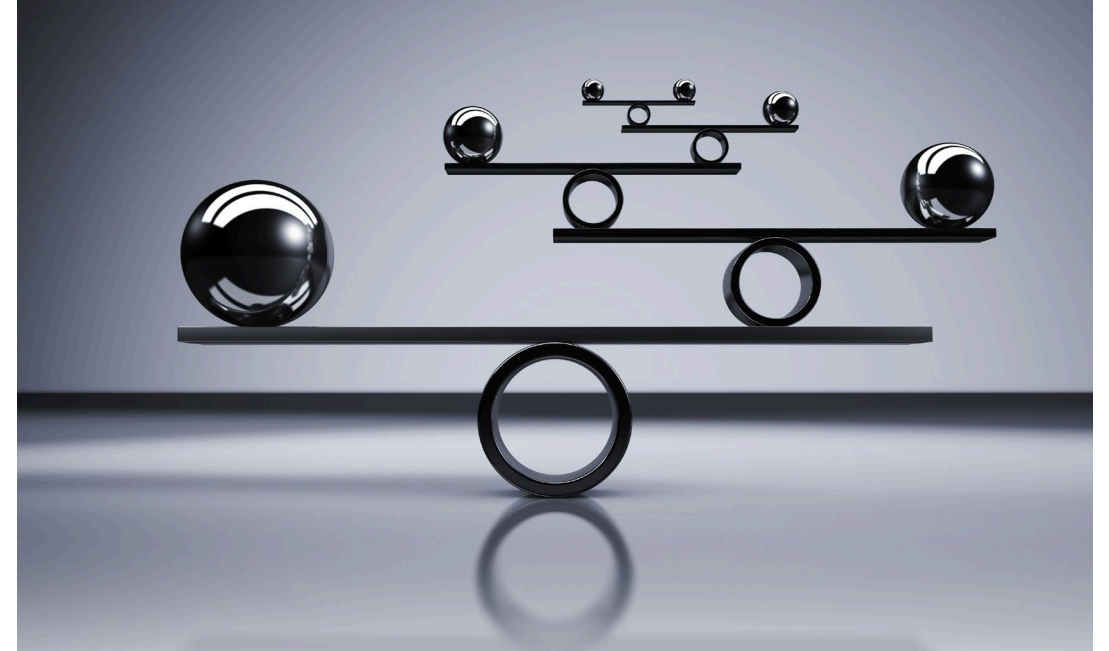
Further Insight

“Better Understand Members”

Funds understand some member attributes, but for others is in development:

- Preferences
- Evolving understanding on health and mortality.
- Current and longer-term age pension eligibility/CAS compliant products.

→ role of actuaries



“Better Understand Outcomes”

Funds are improving their understanding available strategies and the outcomes they deliver. This has a way to go and a key one where actuaries have a role to play.

Funds need to link member outcomes analysis for retirees to their business plan.



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Thank you

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