

Actuaries Summit

Think Differently



**Actuaries
Institute**

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How can life insurers optimise customer outcomes in a low yield world?

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Acknowledgements to Chao Yang

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Overview



Recent context: the impact of low interest rates on global life insurance markets and Australian retirees



Outlook: will the interest rates remain low and what are the implications for retirees?



Potential solutions: how life insurers think differently to assist customers in a low interest rate environment

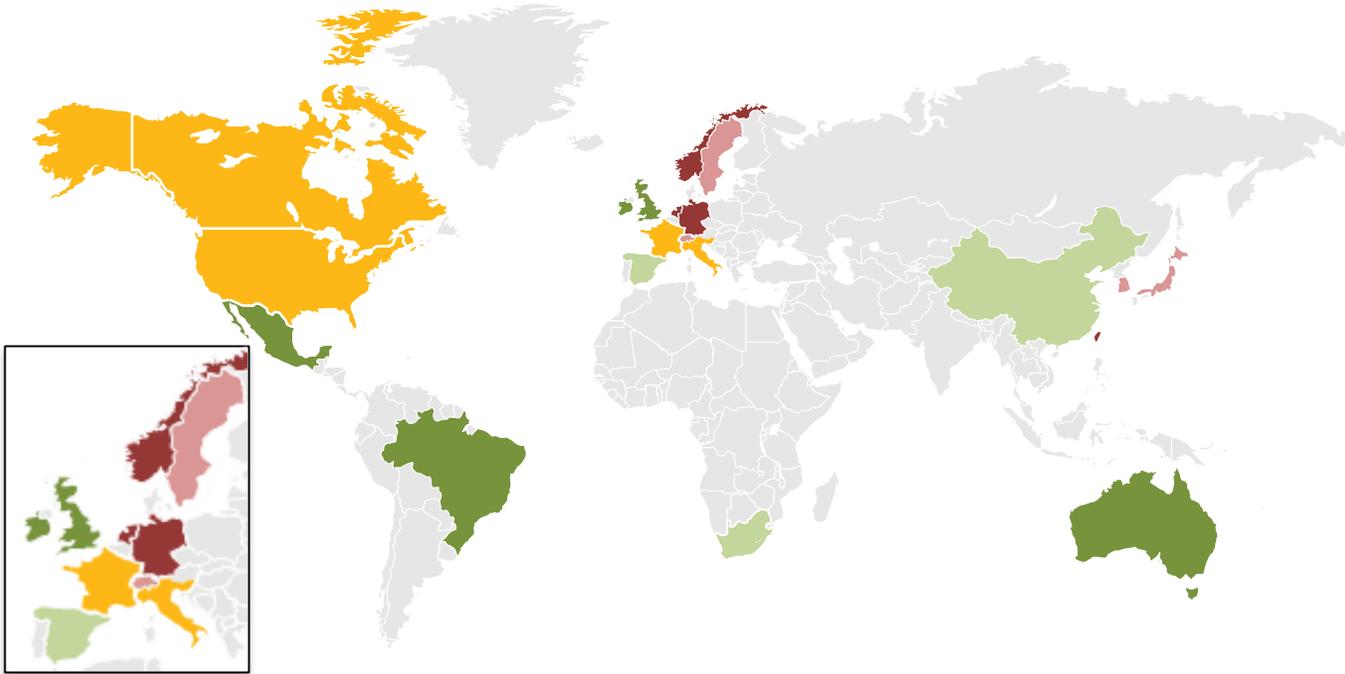
What impact have low interest rates had on global life insurance markets and Australian retirees?

Recent context



Background

Profitability risk in selected life insurance markets¹



Risk Level	If interest rates stay low for the next 5 years...
Very low risk	Minimal risk of profit deterioration.
Low risk	Slight profit deterioration likely.
Moderate risk	Profits will gradually deteriorate but risk of losses are limited.
High risk	Profits will deteriorate; capital of some insurers may progressively deteriorate.
Very high risk	Profits of many insurers and the capital of some will deteriorate.

Impact on Australian retirees

141% Growth in the number of Australians living past 85 between 1996 – 2016, compared to 33% for all ages².

36%

 Of pensioners in Australia are living below the poverty line⁴

70%

 70% of people live their entire life below ASFA's "comfortable" standard⁵

53%

 Of couples are on track to achieve a comfortable level of retirement income³

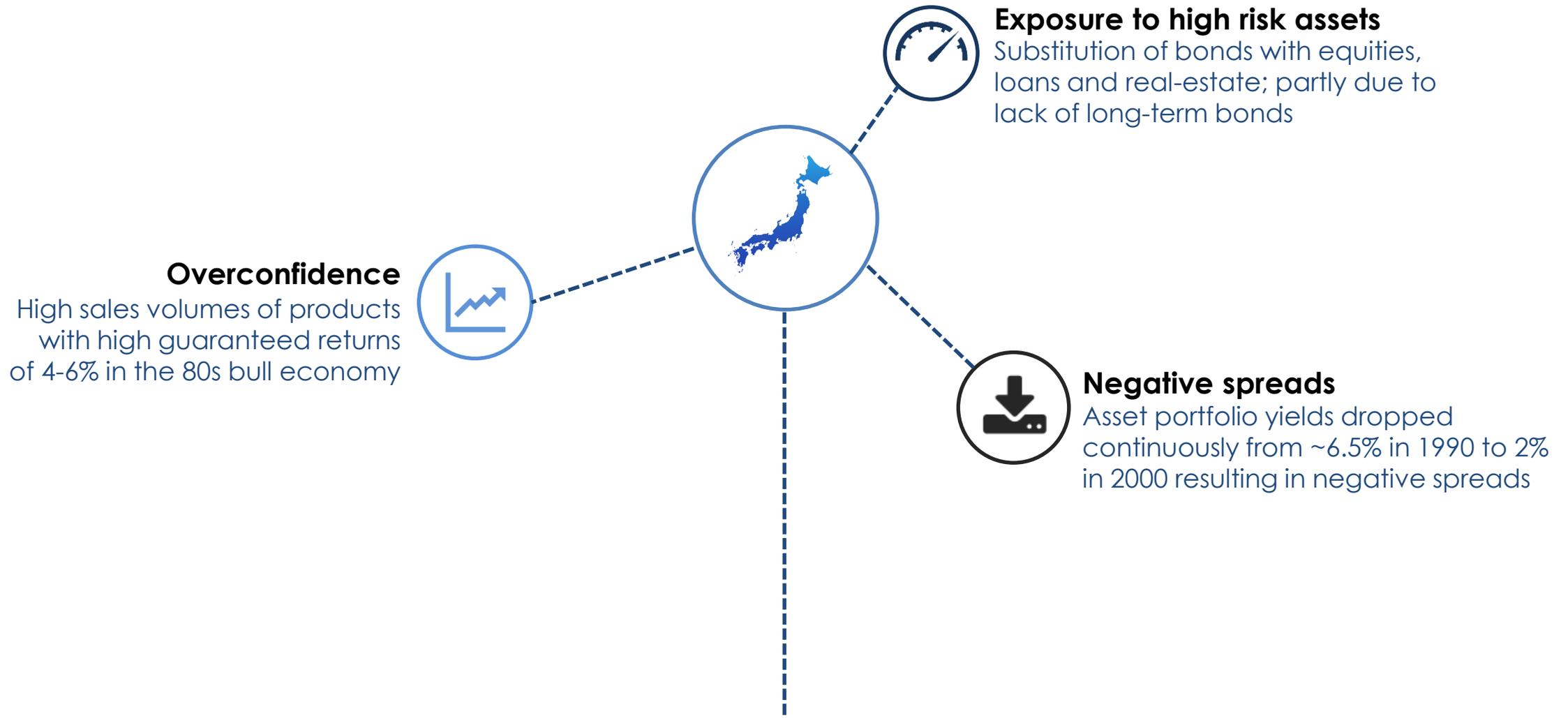
22%

 Of singles are on track to achieve a comfortable level of retirement income³

Australian life expectancy in 1910 when the first age pensions were introduced.

55-60

Japanese experience



Fire sale of assets

Panic manifested itself in increased surrenders forcing insurers to realise illiquid assets at distressed prices



Bankruptcy

Matters culminated with the bankruptcy of 7 of 18 traditional insurers (between 1997-2001).

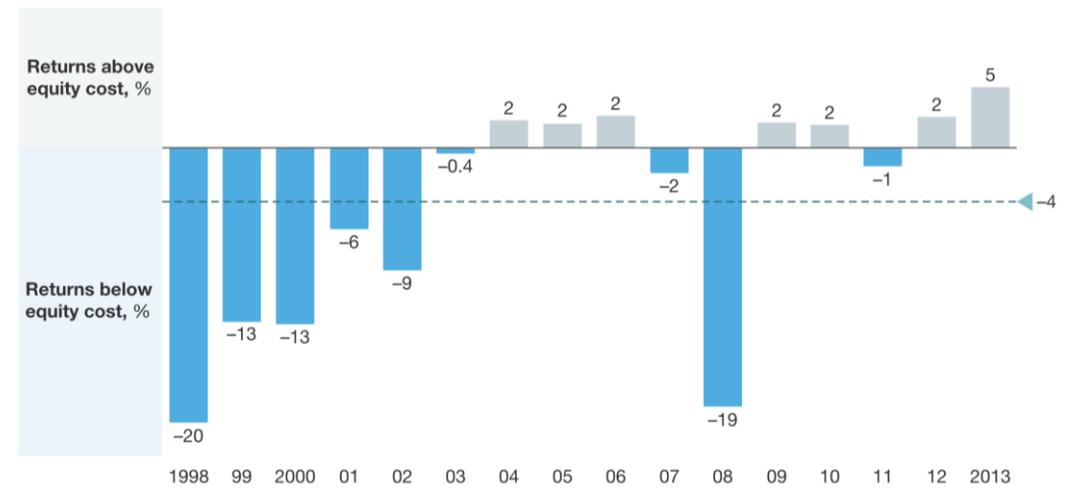


Long-term stagnation

The industry has returned less than its cost of equity since the 1990s, with limited shareholder value creation.

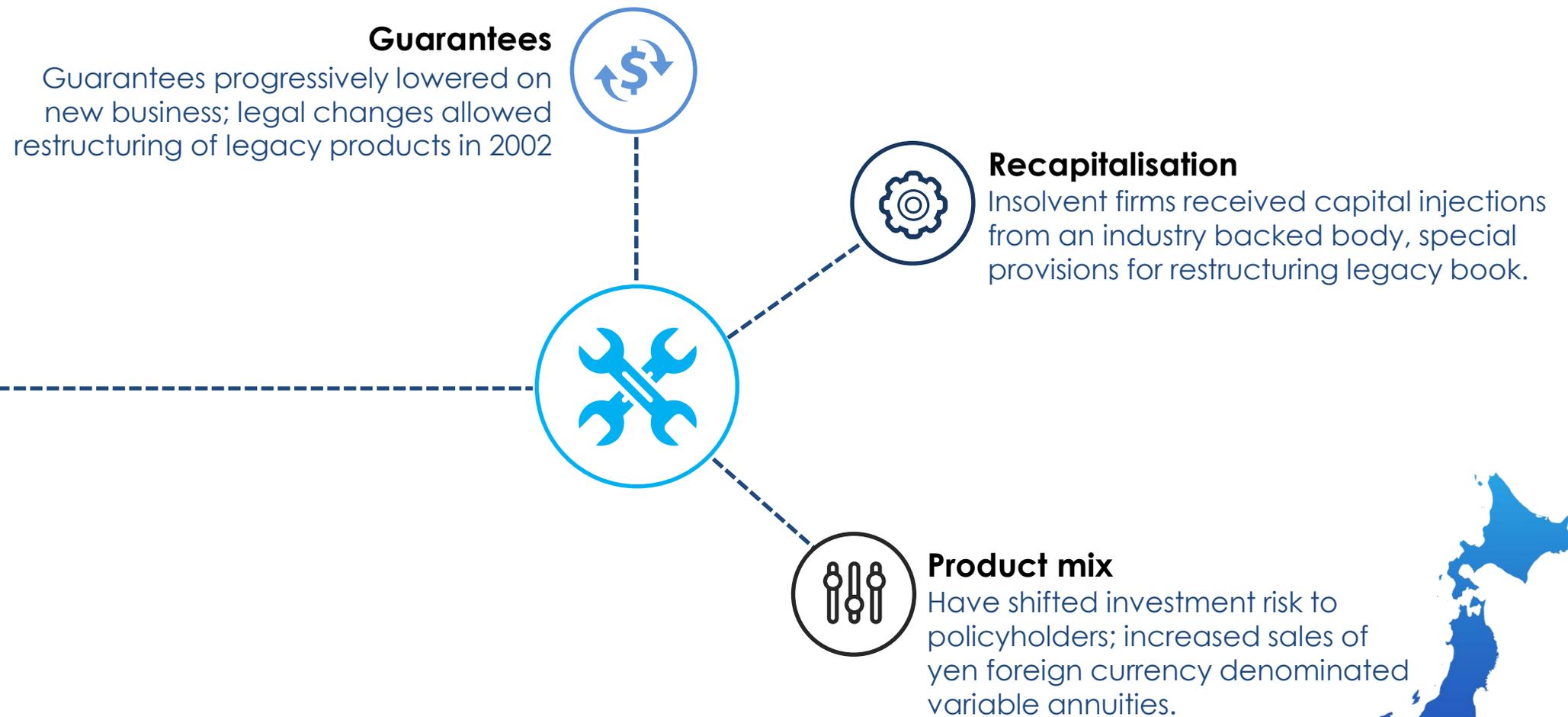


Life industry performance, 1998–2013, ROE – COE¹



¹ROE estimated as net surplus (including realized capital gains adjusted dividend reserves) divided by average net assets adjusted unrealized securities gain and loss. Cost of equity (COE) estimated by calculating industry beta for life insurance companies and utilizing capital asset pricing model (CAPM). Excluded all policy dividends for mutual companies. Figures have been rounded.

McKinsey&Company | Source: Bloomberg; Japan Life Insurance Association



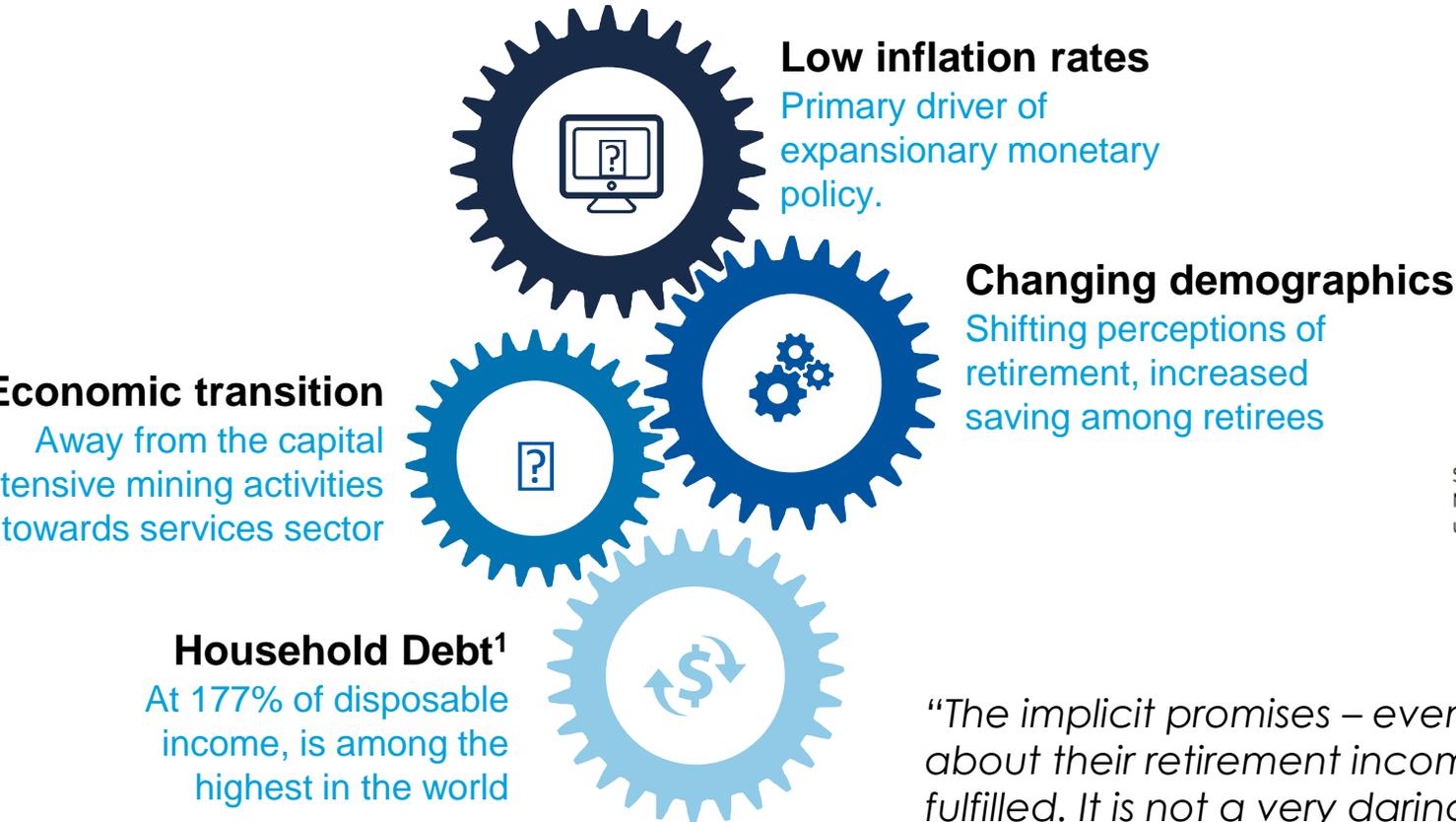
Will interest rates remain low
and how will this affect
Australian retirees?

Current outlook

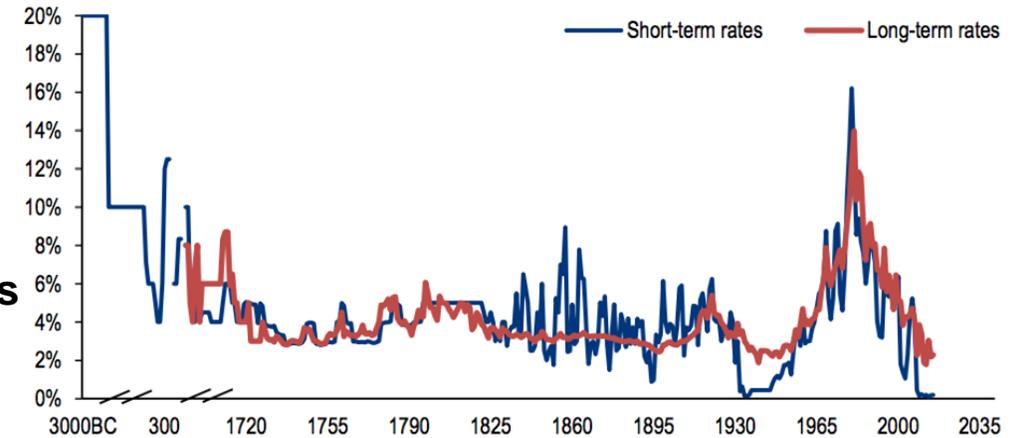


Will interest rates remain low?

Drivers of prevailing low interest rates



Historic interest rates



Sources: Bank of England, Global Financial Data, Homer and Sylla "A History of Interest Rates"
Note: the intervals on the x-axis change through time up to 1700. From 1700 onwards they are annual intervals. Full methodology available upon request

"The implicit promises – even if made only to themselves – about their retirement incomes are in danger of not being fulfilled. It is not a very daring prediction to say that these issues will loom ever larger over the years ahead,"

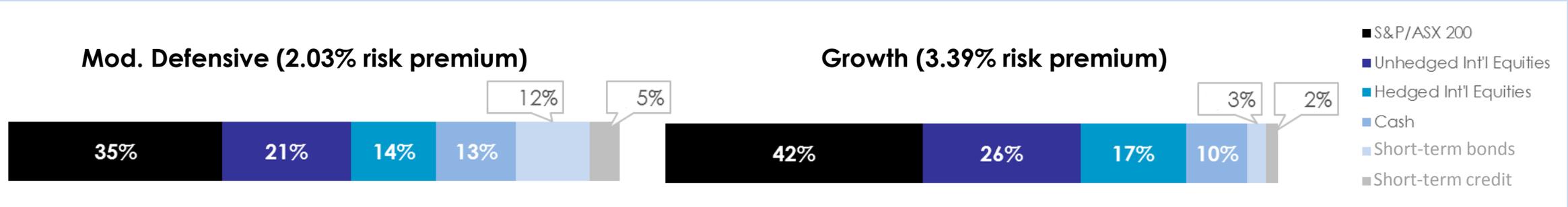
- Glenn Stevens, Former Governor of the Reserve Bank



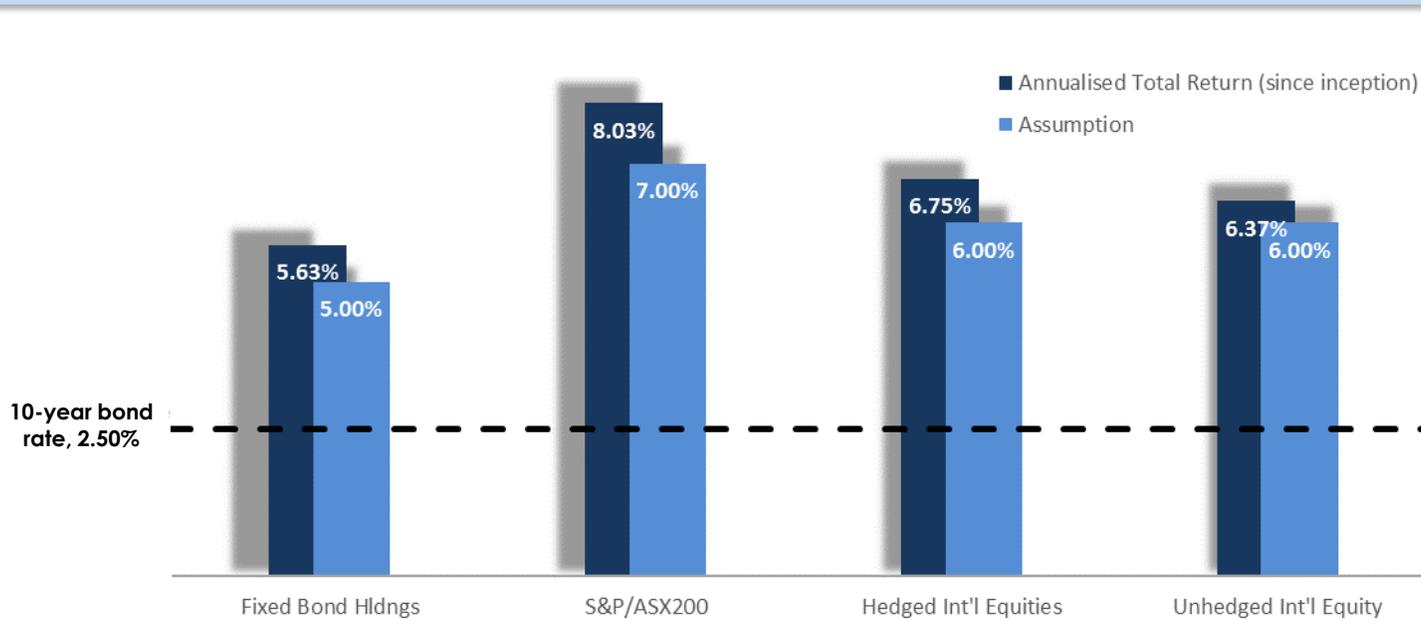
Future economic scenarios

We will look at likely customer outcomes for each product under a low interest rate scenario.

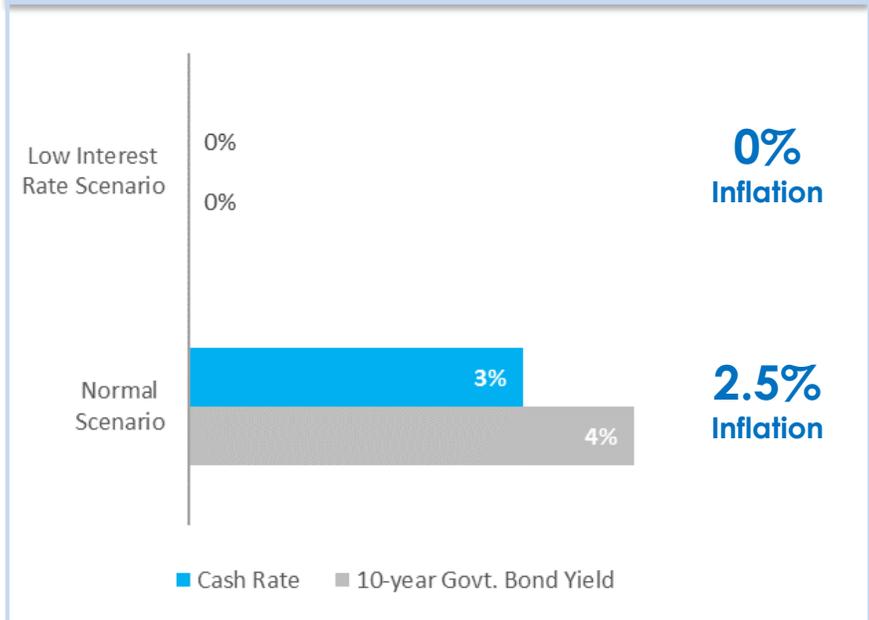
Key asset allocations



Assumed asset class returns (based on current interest rates)



Interest rate scenarios

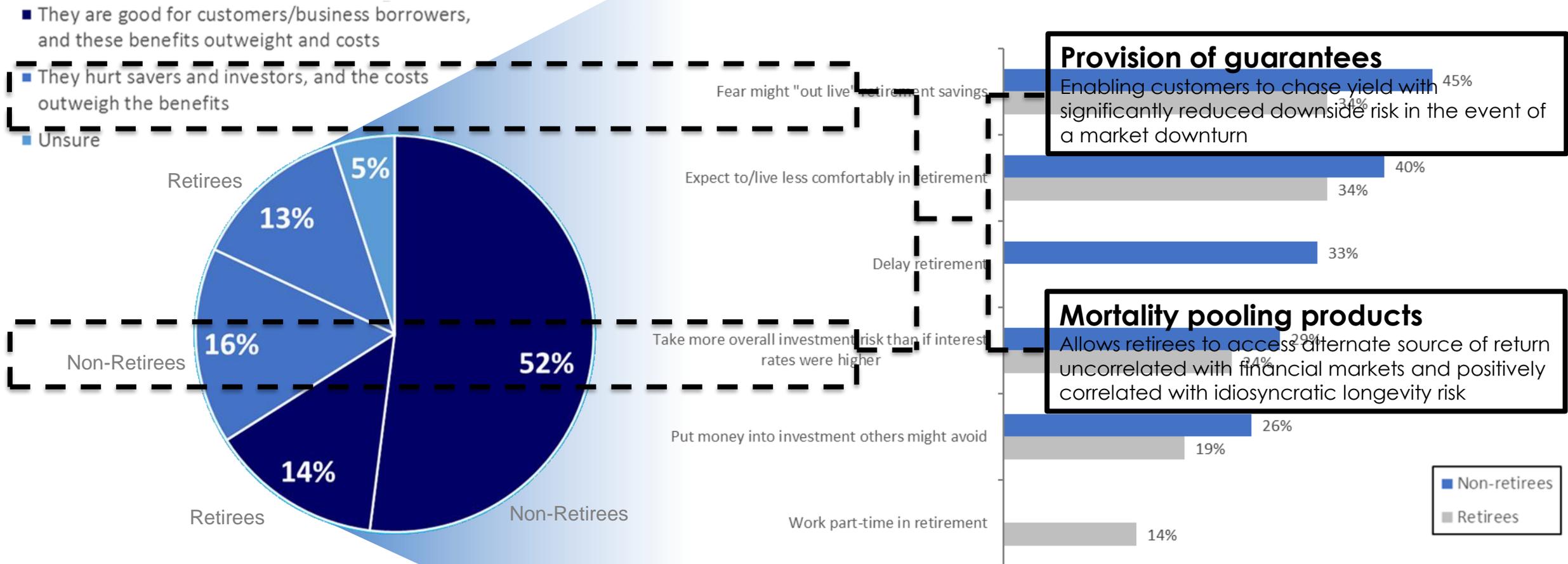


¹BlackRock Indexed Australian Bond Fund (since Nov. 2001) ²BlackRock Indexed Hedged International Equity Fund (since Apr. 2001) ³BlackRock Wholesale Indexed International Equity Fund (since Nov. 1993)

Implications for retirees

Percent of respondents, 1018 non-retirees, 420 retirees

How life insurers can help



How life insurers can help customers prepare for a protracted low interest rate environment

Retiree case study



Retiree case study

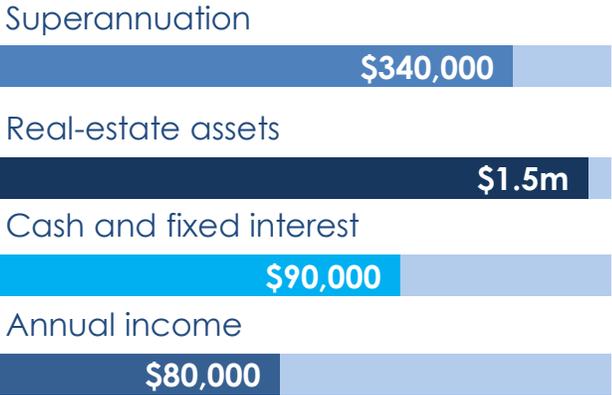
Meet Jane Jones



About Jane

Jane Jones is a 62 year-old widowed engineer, currently working part-time and preparing for retirement at age 70.

Current Assets



Objectives

-  Income
At least \$43,000 p.a.
-  Health
Fund own aged care
-  Bequest
Leave family home to kids.
-  Education
Fund grandkid's education
-  Personal
Buy a new car

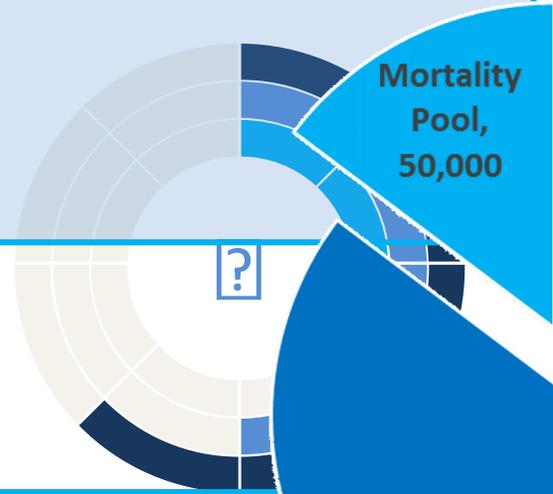
- Longevity protection
- Investment protection
- Explicit fee levels



Allocated pension

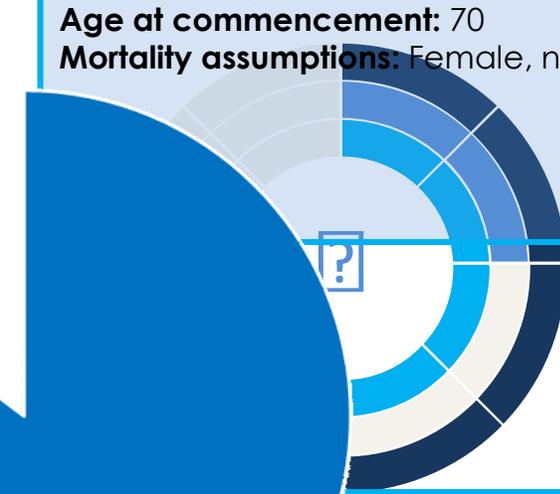
A generic investment account made up of a combination of cash, fixed interest and equities (see appendix).

Initial balance: \$340,000 (+ SGC till age 70)
Risk profile: Moderately defensive
Investment horizon: medium-term
Investment fee: 1.05%p.a.

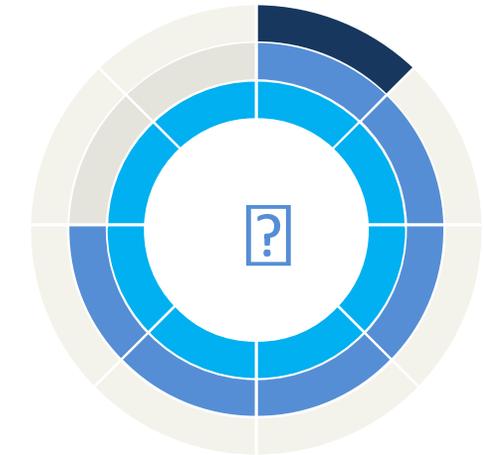


Initial Balance: \$340,000 (+ SGC till age 70)
Risk profile: Growth oriented
Guarantee type: Guaranteed Minimum Accumulation Benefit (GMAB)
Guarantee period: 10 year
Guarantee level: guaranteed positive return before investment fees and charges.
Investment fee: 2.05%p.a. while guarantee in-force, 0.40% without guarantee

Cost: \$400,000 (at age 70)
Type: fully guaranteed whole life annuity.
Indexation: indexed to CPI.
Death benefit: nil.
Withdrawal guarantee: nil.
Age at commencement: 70
Mortality assumptions: Female, non-smoker



Initial Balance: \$340,000 (remainder, 290,000)
Risk profile: Moderately defensive.
Guarantee type: 100% withdrawal value.
Guarantee period: distributed to survivors until death. No guarantees.
Member profile: all members are assumed to be female non-smokers with identical duration in-force for simplicity.
Capital repayments: 5% of initial balance returned per annum after 85.



Life annuity

Provides a guaranteed income stream to the policyholder until their death.

*Guaranteed Minimum Accumulation benefit, reverts to non-guaranteed investment account after 10 years.

Risk transformation

“To access the benefits of risk transformation clients need be aware of the risks they face and the options they have and insurers need to be willing to construct products that facilitate choices”

Choice of risk

Solidarity

Business model

Engagement



Distribution of outcomes

Defensive assets or growth plus a guarantee.



Need

Income security from the pool or the family?



Sustainable competitive advantage

Maintain higher margins thru guarantees
Where can google or amazon compete?



Communicating the trade offs

????

Growth Fund with 10-year GMAB (Income)

Low interest rate environment

Notes

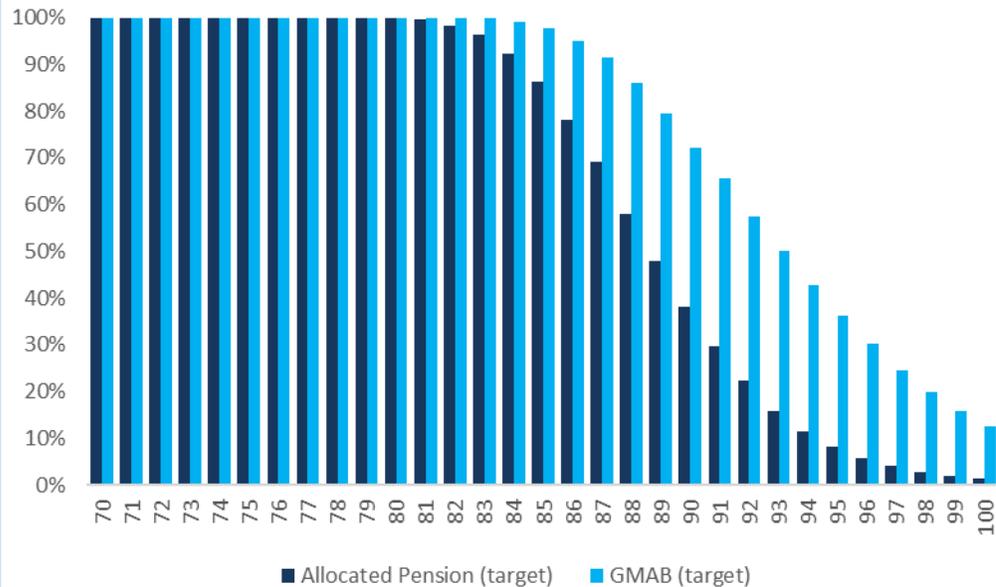
Benefits

- Allows customers to chase yield with reduced downside risk by protecting their account balance leading into retirement
- By gaining access to this risk premium Jane can achieve her target income at higher ages with greater certainty, pursue her ancillary goals and leave a larger bequest to her children

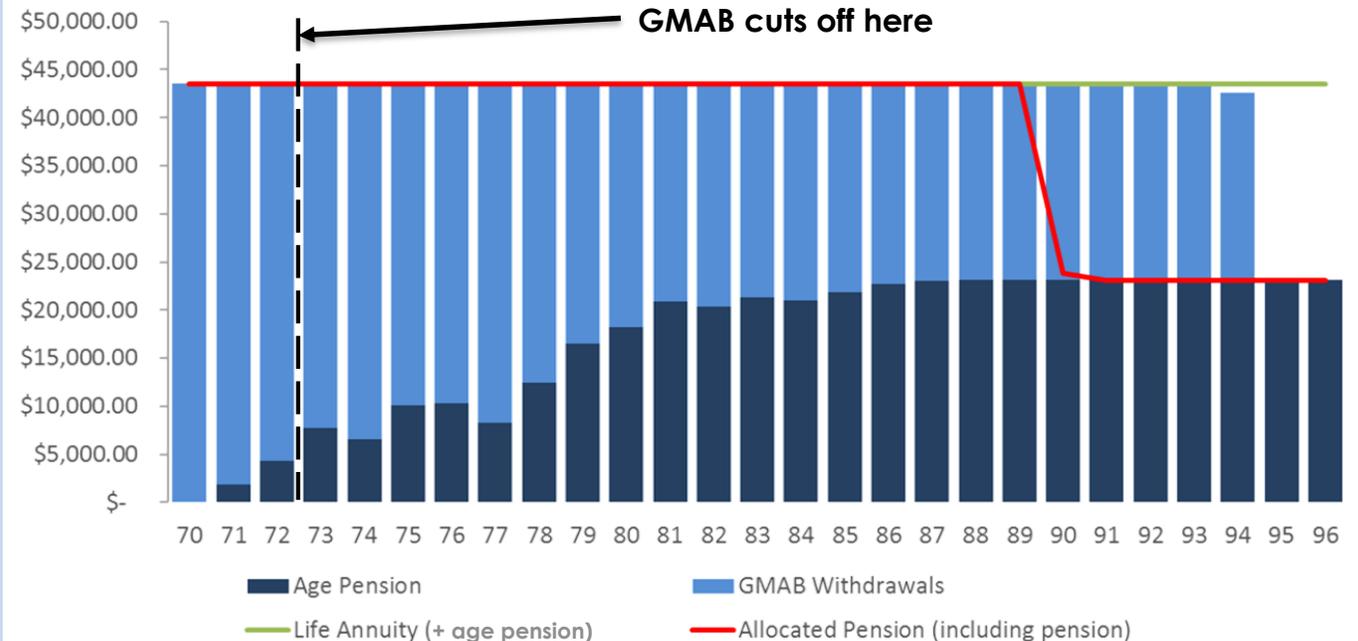
Potential issues

- After guarantee period (age 72) Jane's assets are again fully exposed to fluctuations in investment markets

Probability of achieving income goal (\$43k p.a.)



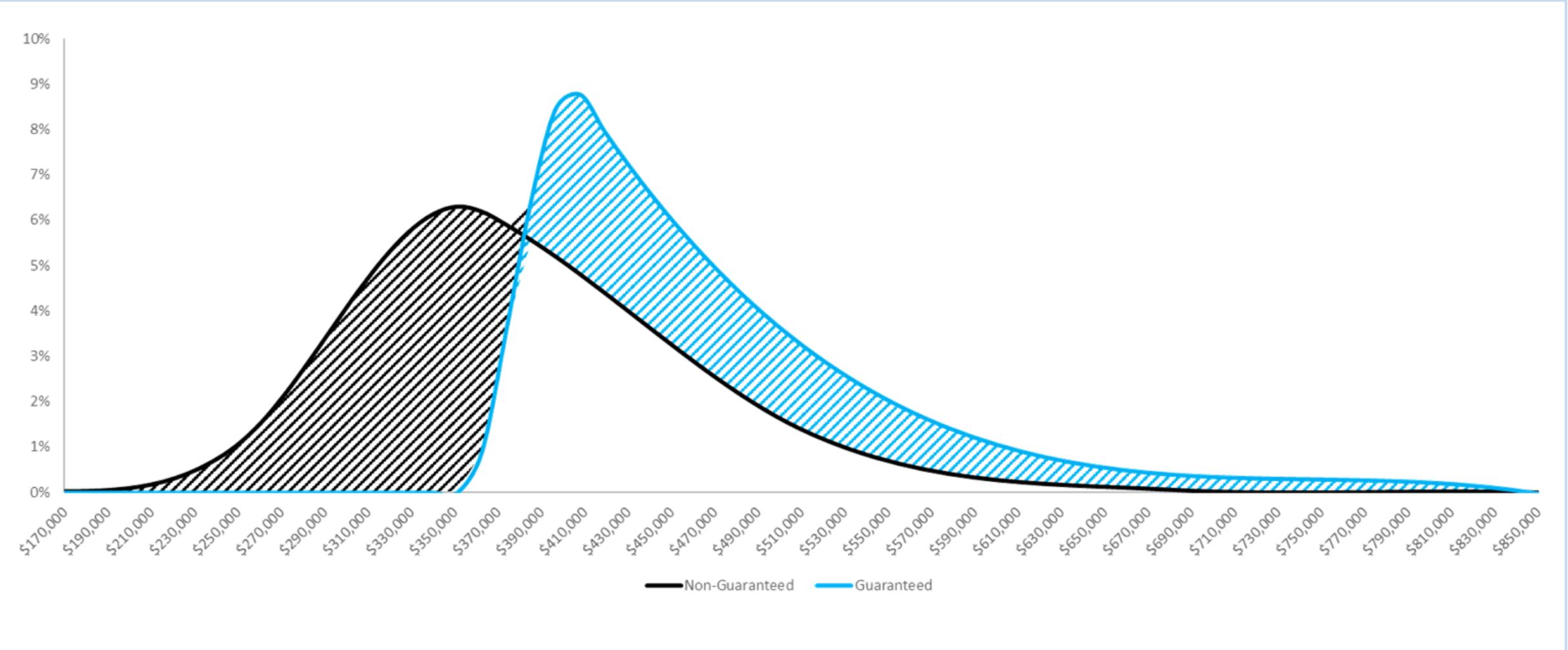
Breakdown of income for median scenario



Growth Fund with 10-year GMAB (Account Balance)

Transforming risk outcomes

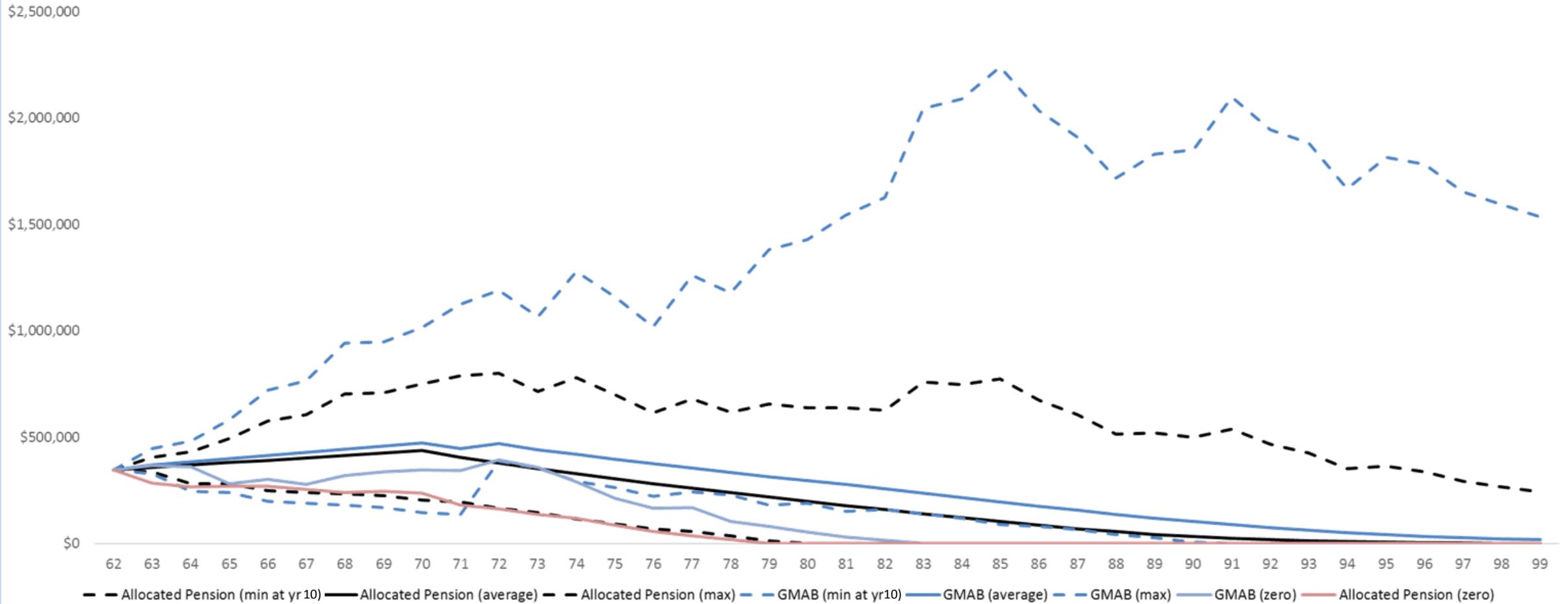
Account balance distribution at end of 10-year guarantee period



Growth Fund with 10-year GMAB (Account Balance)

Low interest rate environment

Account balance forecasted



Mortality pooling fund (Income)

Unlocking alternative sources of return

Notes

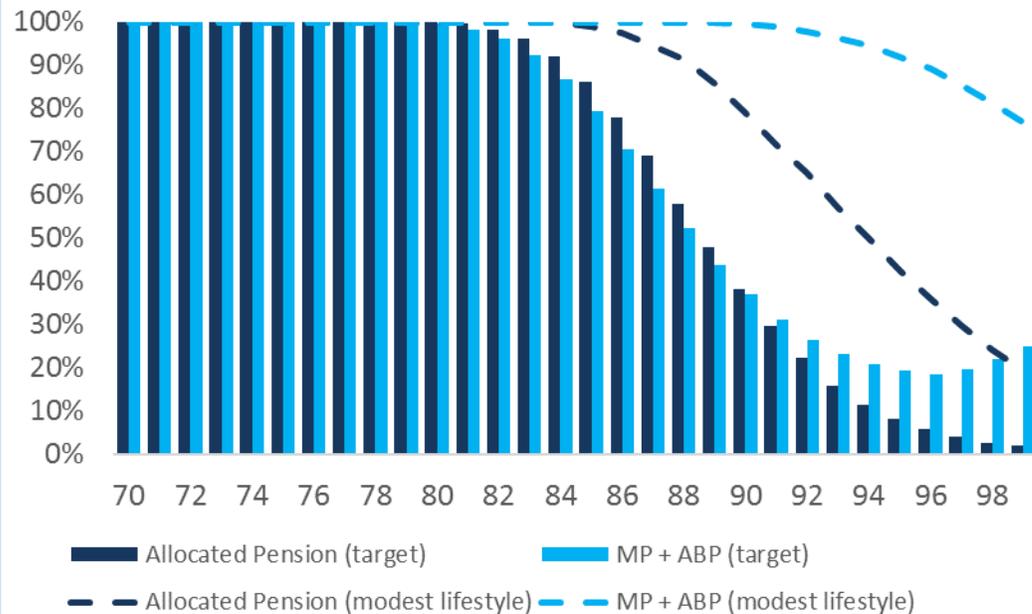
Benefits

- Higher probability of achieving a level of income required to live a modest lifestyle (defined by ASFA) for rest of life
- Higher probability of achieving income target in 90s
- Lower account balance in early years, but converges to allocated account at age 90

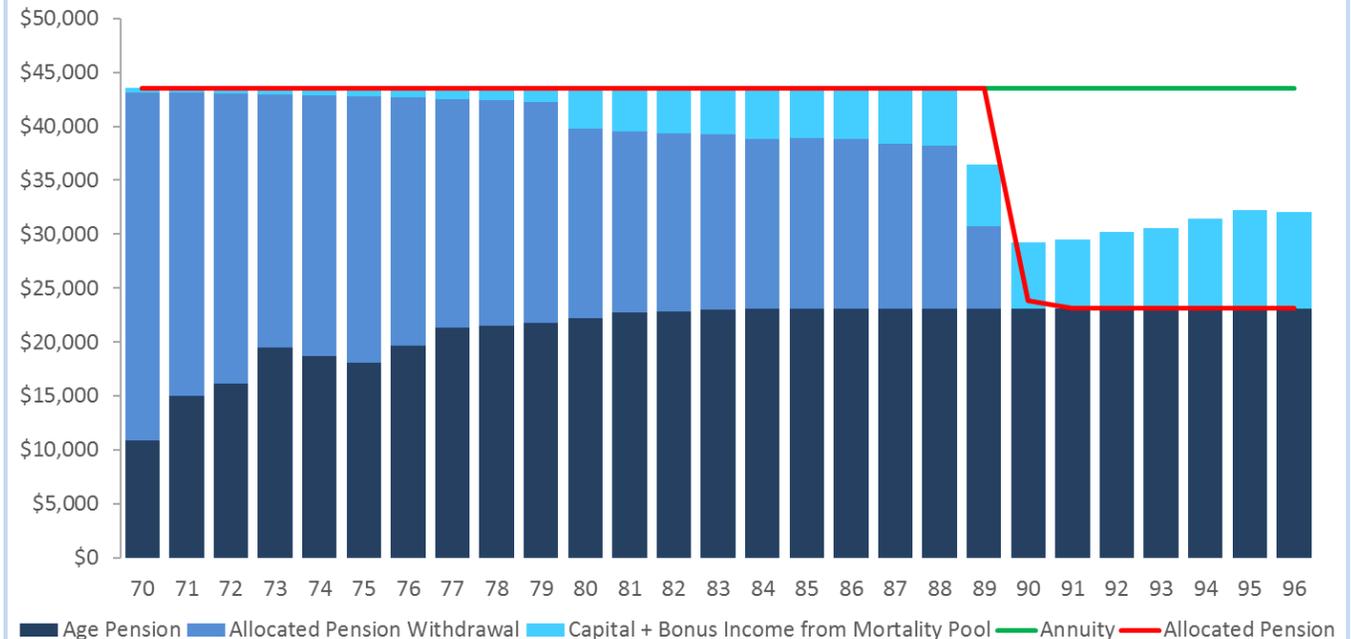
Potential issues

- Anti-selection likely to be an issue; projections reflect this
- Mortality improvements also undermine survival benefits; projections reflect this
- Product complexity
- Less flexibility with regards to how withdrawals can be made

Probability of achieving income goal (\$43k p.a.)



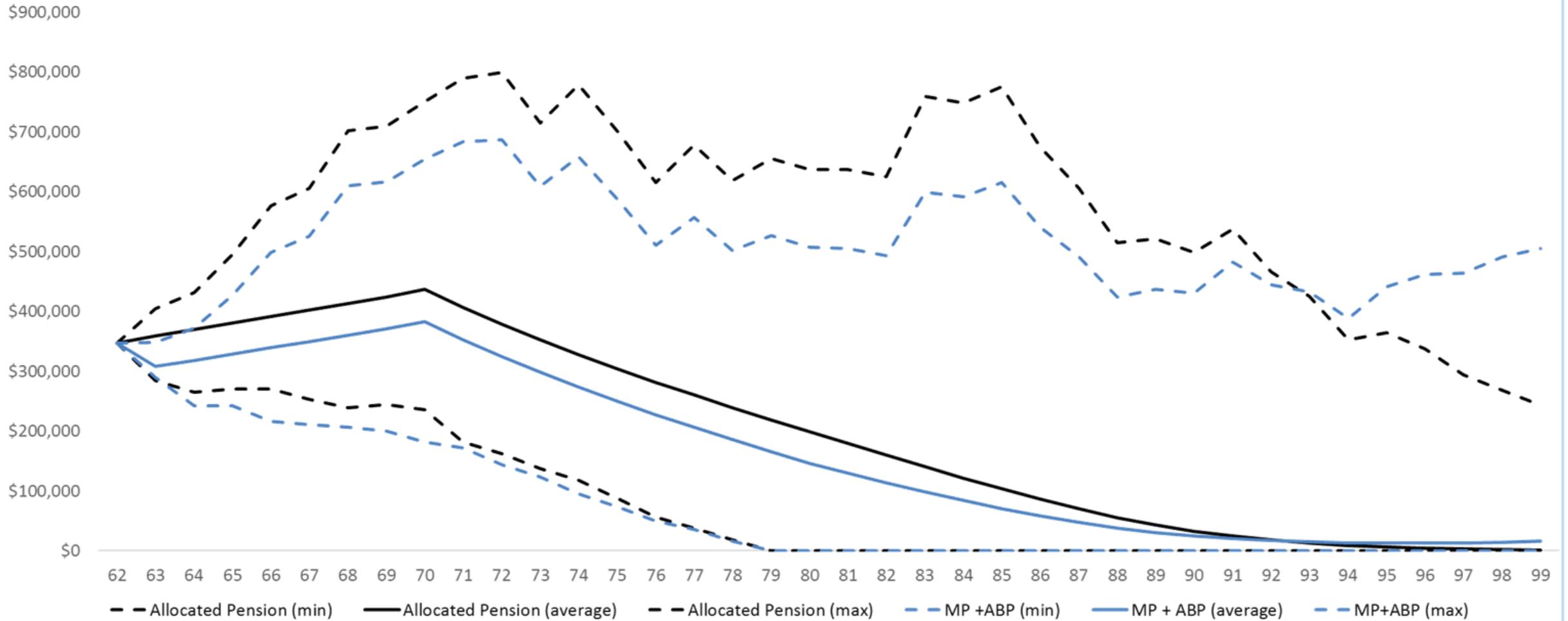
Breakdown of income for median scenario



Longevity pooling fund (Account Balance)

Low interest rate environment

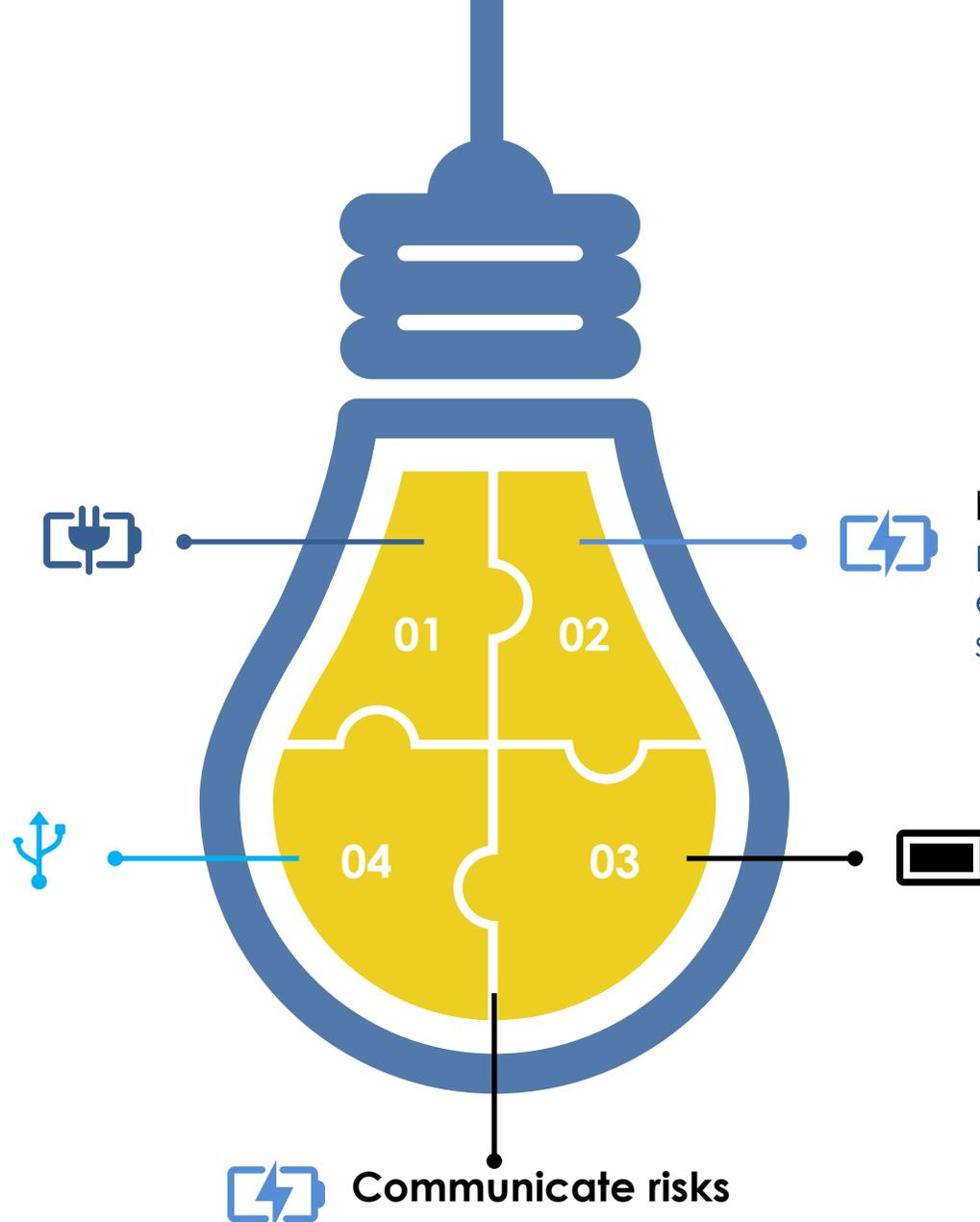
Account balance forecasted



Conclusion

Current challenges
Low rates undermine life insurer's profitability and increase risk. Australia is doing relatively well.

Retirees bearing risks
In Australia, investment and longevity risk is being borne by clients, including interest rate risk.



Interest rate outlook
Financial markets have embraced a reflationary scenario in recent months.

Alternative investment vehicles
Guaranteed and pooled products allow clients to chase yield, access alternative sources of returns.

Communicate risks
Need to provide communication of key risks clients face and how they can be transformed.