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# The Next Generation In DC Management – QSuper's Approach

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# Background



# Australia

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- Means-tested age pension (Centrelink) from age 65 (moving to 67)
- Compulsory occupational defined contribution system
- Mandatory employer contributions (currently 9.25%)
- Voluntary employer and member contributions
- Less than 200 large industry and retail funds
- Self managed superannuation funds (maximum 4 members)
- Mandatory preservation until age 55 (moving to 60)
- Tax-free cash lump sum at retirement (if moved to a pension account)
- No lifetime annuity market – account based withdrawals



# QSuper

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- Fund for Queensland public service (two-thirds Health and Education)
- 540,000 members (55,000 DB; 250,000 inactive; 27,000 pension)
- Closed DB section ~ \$25billion
- Default DC with 9 investment options ~ \$40billion
- Soft compelled 17.75% contribution rate (5% member)



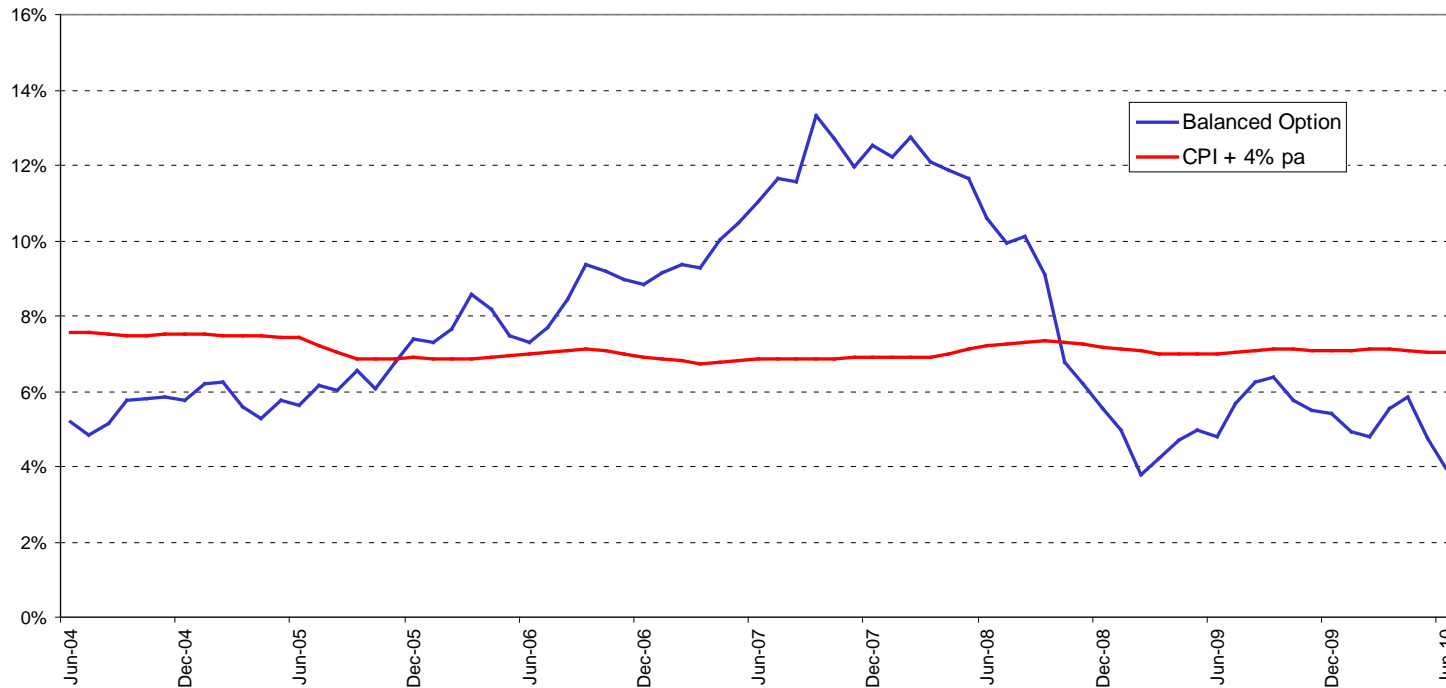
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# QSuper's previous default arrangements and a rationale for change



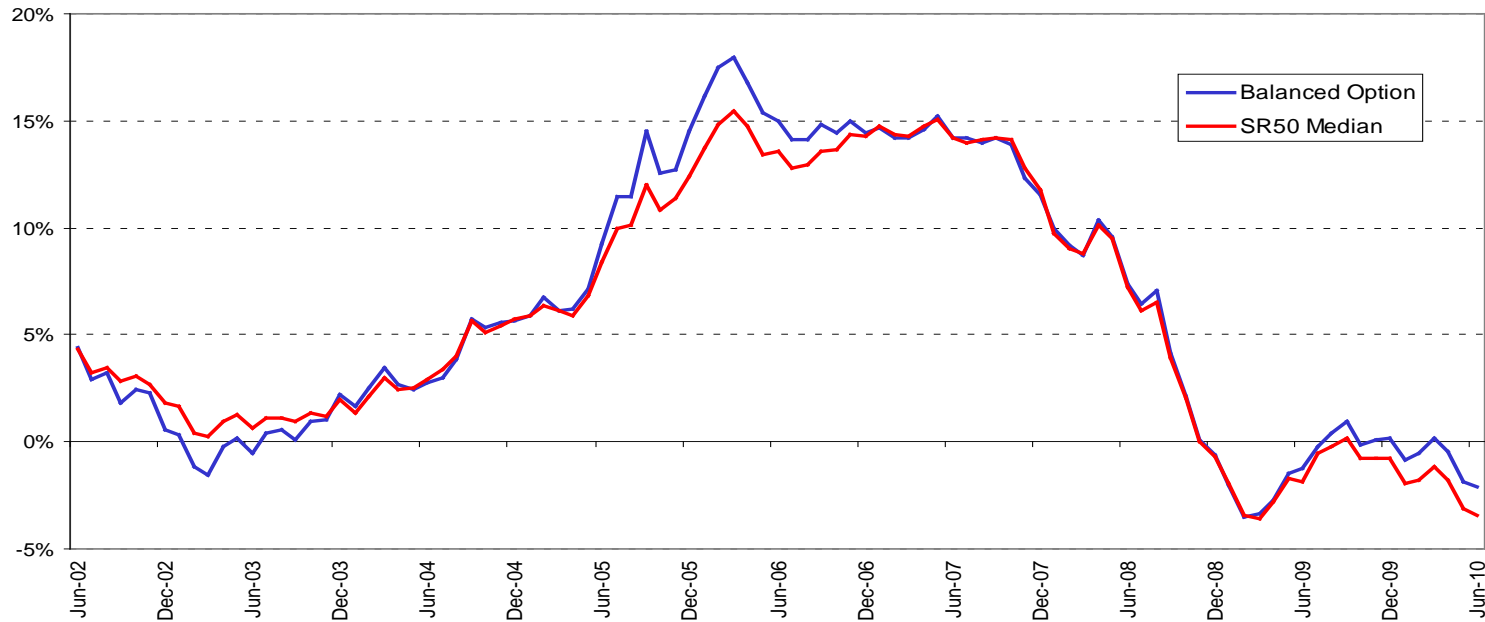
# Absolute Return objective

Rolling 5 Year Returns  
Balanced Option Vs CPI + 4%



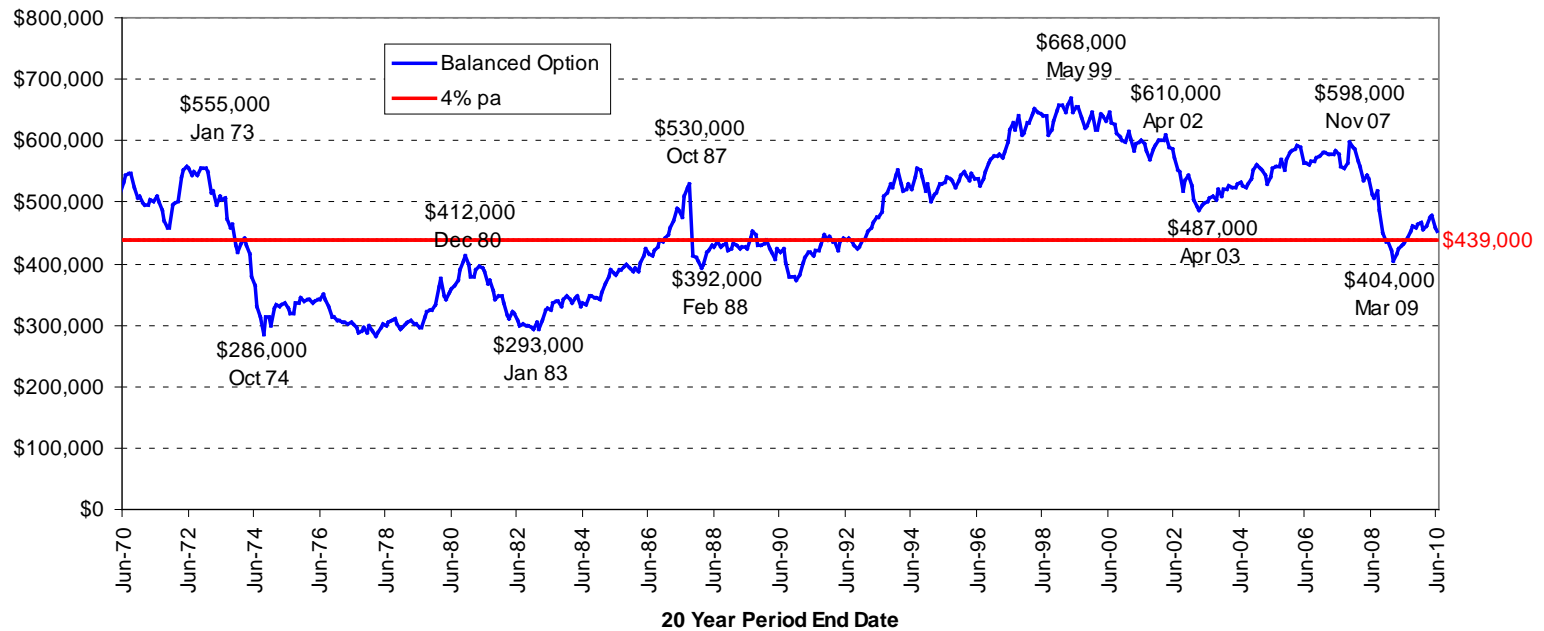
# Peer Relative Return objective

**Rolling 3 Year Returns  
Balanced Option Vs SR50 Median**



# Actual member outcomes

**Future Values of Members Investing for 20 Years  
Balanced Option Real Return (17.75% cont) Vs 4% pa**



**Assumptions**

- Initial investment of median 40 y.o. member balance
- Monthly contributions of 17.75% of median 40 y.o. salary
- Investment returns based on a proxy Balanced return to June 1991
- Investment returns based on Balanced unit price growth from July 1991 to June 2010

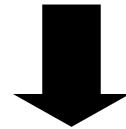




# QSuper wants to change the game

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From delivering uncertain lump sum accumulation style benefits



more certain targeted retirement income with mass-personalisation of advice  
(in accumulation and de-cumulation)



# The path QSuper is following

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- As a first step, the Balanced Option has been changed (objective and strategy) and been withdrawn from industry peer surveys.
- As a subsequent step:
  - Segregating default Accumulation members;
  - Segmenting these into meaningful cohorts;
  - Developing an investment strategy for each cohort using the principles of asset-liability management (ALM)
- This is not “target date” or “lifecycle” funds which are an asset-only rather than an asset-liability construct.



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# ALM Process and Methodology



# ALM objectives

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- Current objective is CPI + 4% pa over ten years, but little relevance to members:
  - Most have longer or shorter horizons than 10 years
  - They do not accrue an average return, so move from TWR to IRR in structuring objective
- They will understand an objective to accrue a dollar amount, sufficient to fund a reasonable income in retirement. Alternatives could be:
  - Fixed dollar amount (e.g. \$550,000)
  - ASFA Comfortable income level (e.g. \$40,000 pa)
  - Individual replacement rate (e.g. 70% of salary)
- The Trustee will set this target for each cohort of default members.

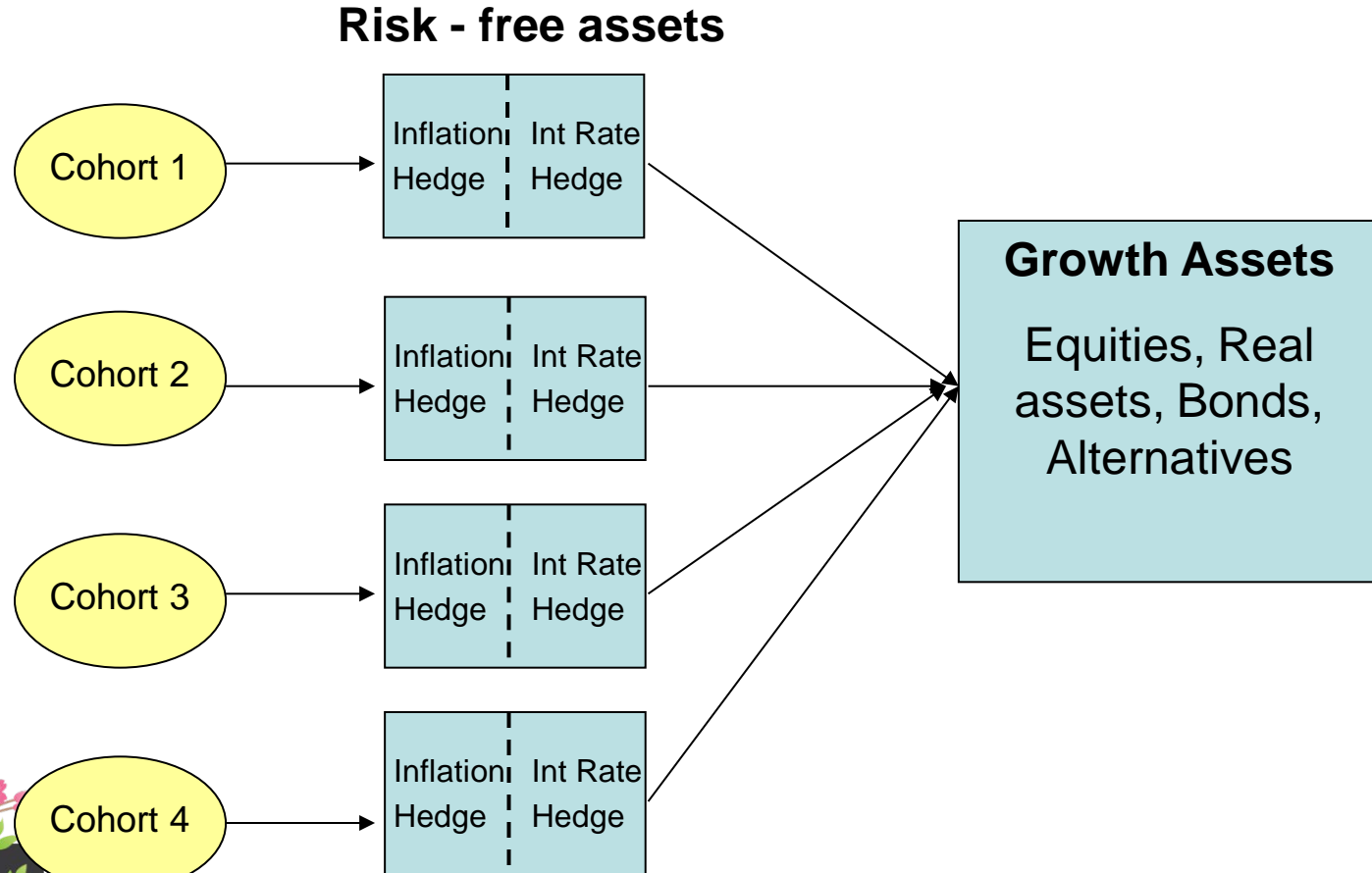


# Re-defining risk = liabilities related

- The target lifetime cash flow creates a liability for the member (cohort), i.e. achieving the \$ required to provide the income objective.
- **Risk**
  - Historically → variance of annual returns
  - Now → variance around objective (target annual \$ income)
- We will measure that as a probability and expected size of “shortfall”
- Focus on downside measures because members are more concerned with having less than overshooting target.
- We can estimate this regularly and tell members where they stand.
- This is similar to the concept of managing the “surplus” in DB fund.



# Implementation structure



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# Data Analysis and creating cohorts



# Segmenting cohorts of default members

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- Use age as a starting point. Age is a good proxy for:
  - Investment horizons
  - Member risk tolerance around adequacy vs. certainty
- But it is imperative to also include other factors:
  - Account balance
  - Salary
  - Contribution rate
  - Variable retirement dates (later)
- Make assumptions regarding unknown data
- Establish homogeneous cohorts with reasonably narrow distributions

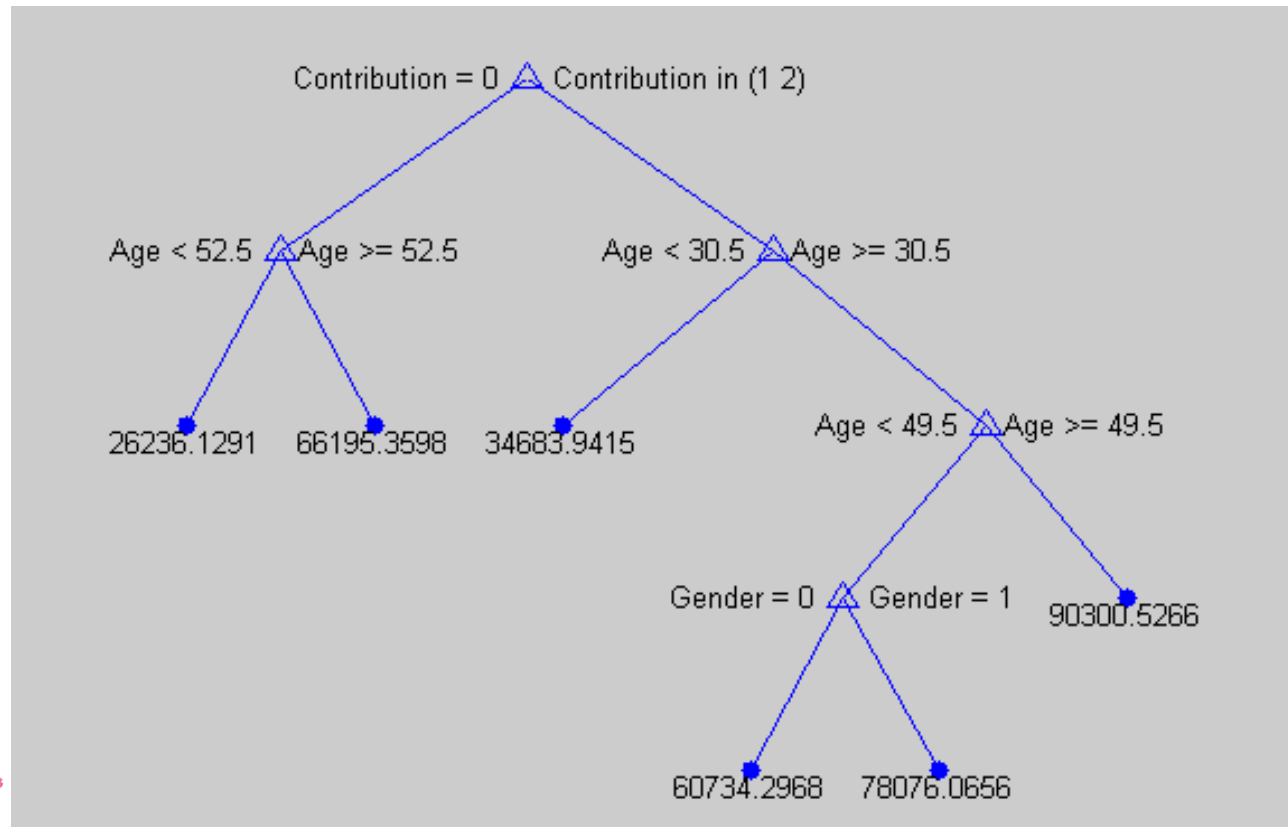
} Funded status





# Sample CART

Age between 20 and 58, balances less than \$2000 out



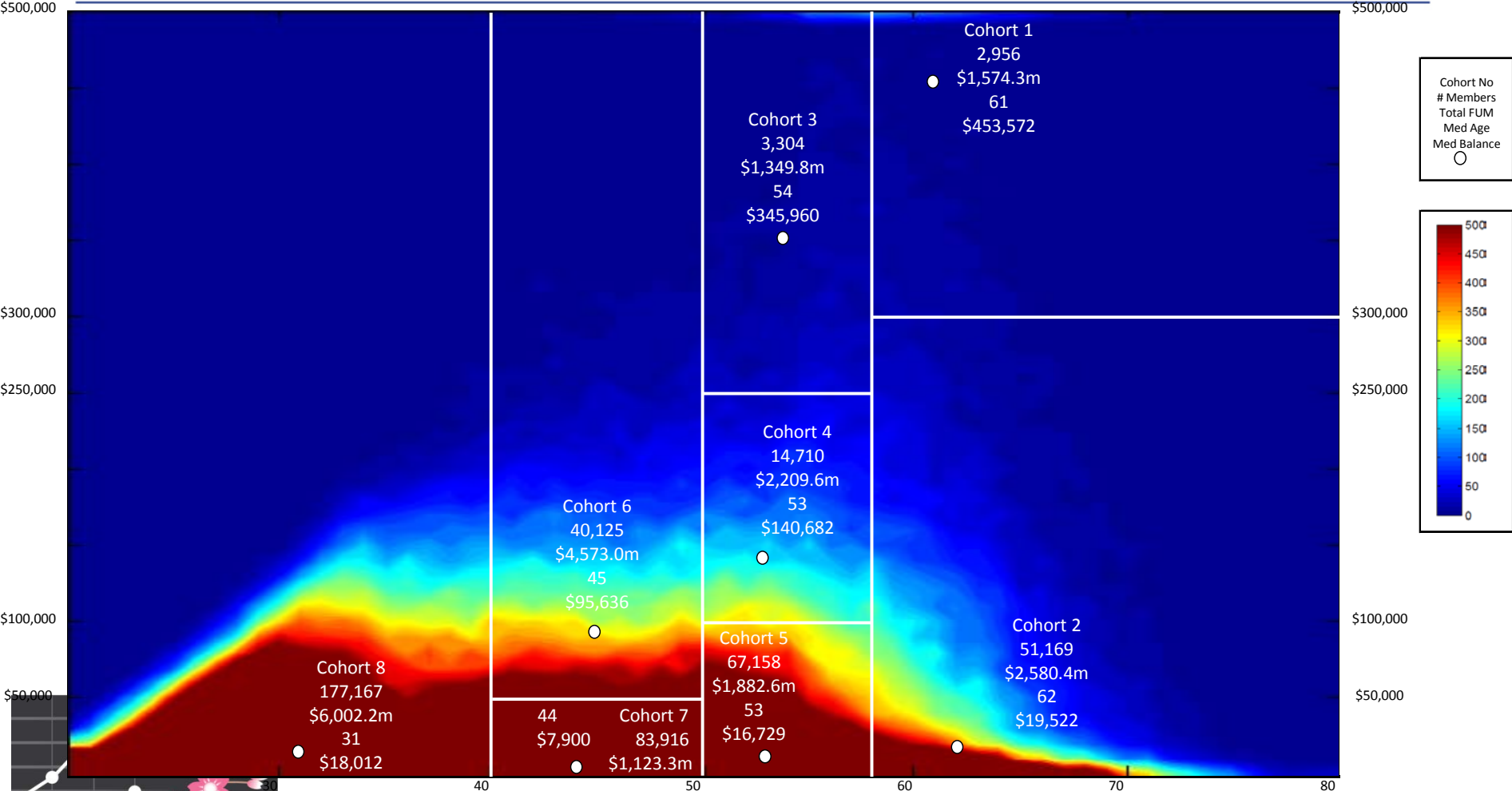
# Cohorting the total membership

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- Three phases to implementation
- Administration considerations
- Portfolio size limitations
- Member communication and engagement strategies
- CART analysis
- Basic lifecycle principles
- Subjective and qualitative overlay



# Membership data and cohort structure



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# Investment objectives and strategies



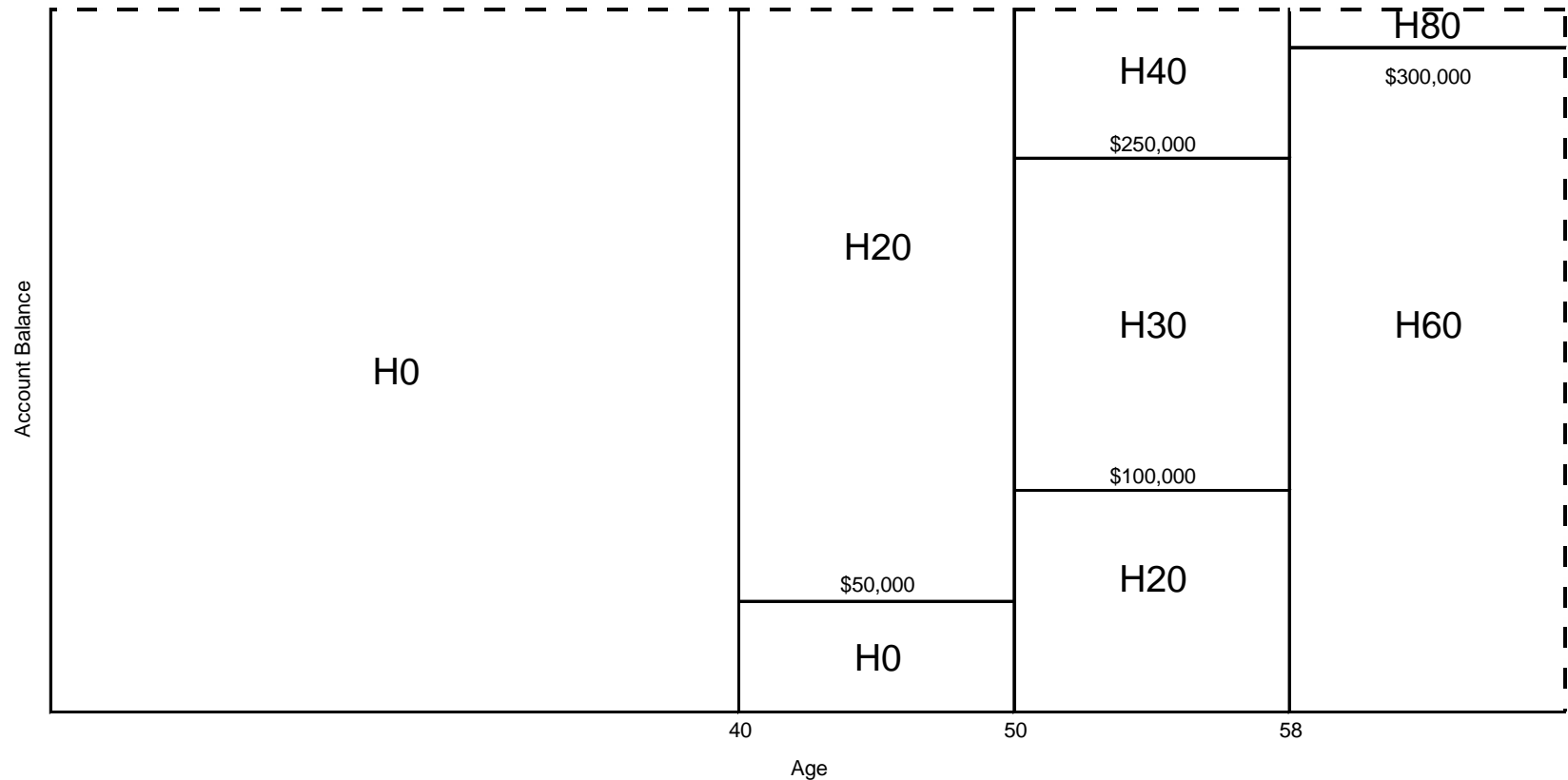
# General strategy considerations

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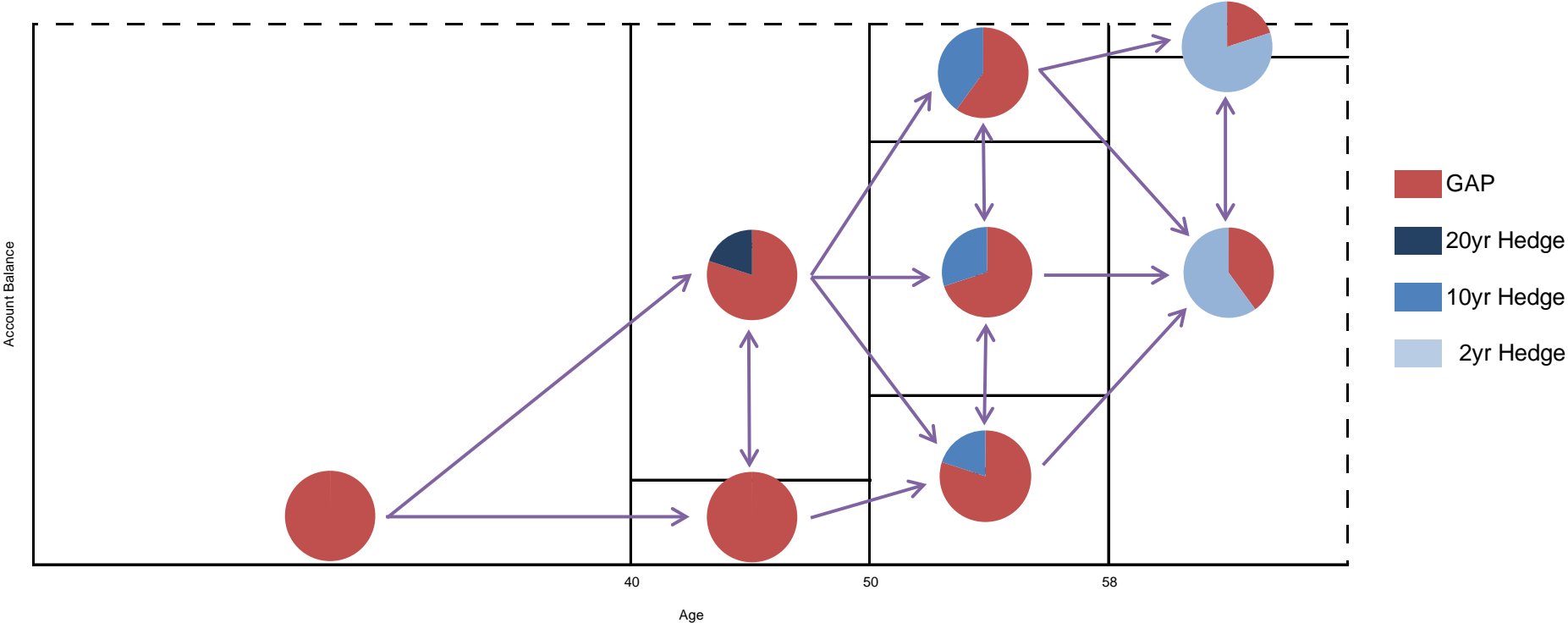
- Investment risk will reduce as age increases:
  - Members have shorter horizons to smooth cycles in investment markets
  - Asset values increase so effective financial risk increases.
  - Sequence of returns risk is very high at and around retirement
- Investment risk will reduce as account balance increases:
  - The impact of investment risk on final retirement incomes is amplified.
  - Centrelink impacts on retirement income diminish. This means that retirement incomes are more volatile as account balances increase.
- The traditional industry expectation is that risk would follow these paths in lifecycle funds, predominantly to mitigate sequence of returns risk.



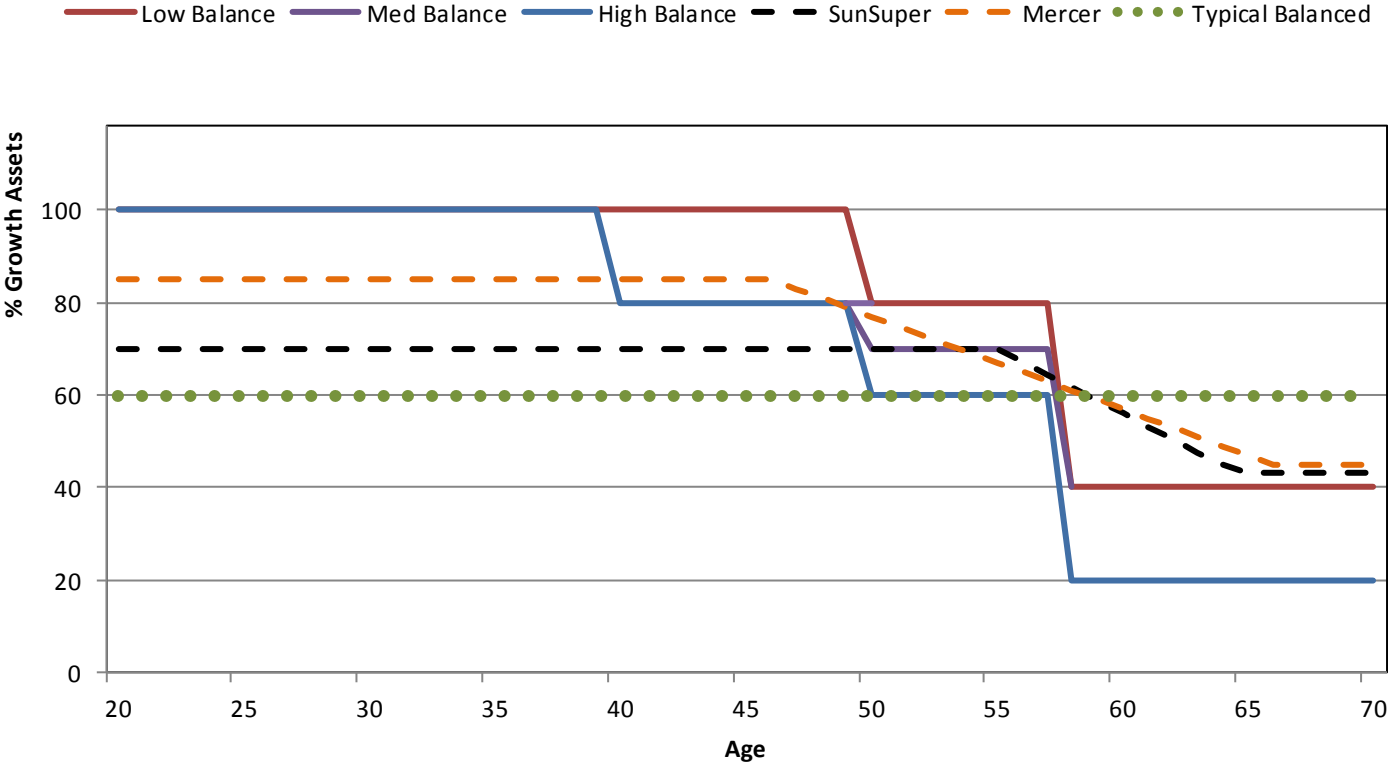
# Summary of strategies



# Illustration with pie charts



# Industry benchmark





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# Conclusion



# Conclusion

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- Material change to the way we manage default accumulation monies
- Initially based on two factors: age and account balance
- No perfect solution but we start here and improve over time
- Remain flexible (e.g. to incorporate MySuper)
- Limited number of initial cohorts allows us to test decision making process and make administrative adjustments
- ALM methodology has been used in DB fund since 2006

