# Principles and Rules for Translating Retirement Objectives into Strategies

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# What does academic modelling imply about 'optimal' retirement strategies?

- Quite a bit of modelling has been done in an Australian context by both ourselves and other academics (as well as overseas)
- We have imputed from this research:
  - Member attributes that matter to the 'optimal' strategy
  - Principles and rules for linking strategies to objectives
- Heterogeneity is an important theme

# Some academic studies influencing our formulations

**Australian based**

Andréasson Shevchenko (Risks, 2017; wp, 2019)

Andréasson, Shevchenko and Novikov (IME, 2017)

Bell, Liu and Shao (wp, 2017).

Butt, Khemka and Warren (EcRec, 2019; wps, 2021)

De Ravin, Liu, van Rooyen, Scully and Wu (wp, 2019)

Hulley, Mckibbin, Pedersen and Thorp (EcRec, 2013)

Iskhakov, Thorp and Bateman (EeRe,c 2015)

Kingston and Thorp (JPEF, 2005)

Warren (FAJ, 2019; AJM 2021)

**International**

Bengen (JFP, 1994)

Blake, Wright and Zhang (JEDC, 2013)

Klement (CFA RF, 21018

Lockwood (AER, 2018)

Waring and Siegel (FAJ, 2015)

# Attributes that matter to the 'optimal' strategy

| **Objectives and preferences:** | **Other key attributes:** |
| --- | --- |
| 1. Any minimum acceptable income | 5. Individual or couple |
| 2. Type of income stream | 6. Homeowner or renter |
| a) Income target, e.g. replacement rate, ASFA standard; may vary over time | 7. Other available assets |
| b) Maximise income extracted from available assets, while managing risk | 8. Precautionary savings |
| 3. Bequest motive | **What else might matter:** - Health / longevity - Other income sources - Family situation |
| 4. Risk tolerance | |

# Strategies for a minimum acceptable income

**Principle:**

- *Secure any minimum acceptable income, if possible.*

**Rule**:

- Purchase sufficient annuities to secure the minimum, accounting for other available income.

**Issues:**

- No need if Age Pension is enough, or balance is large
- Renters vs. homeowners
- If can't secure the minimum … go for growth, or batten down?

# Strategies for an income target

**Principle:**

- *Invest with the aim of delivering the income target for as long as possible, by combining annuities, growth and defensive assets.*
- *Draw sufficient amount to deliver the income target, until available assets are exhausted.*

**Rules:**

- Secure the target by allocating to annuities, up to some maximum
- If unable to secure target, scale back annuities to lock-in minimum
- Invest remainder in growth assets, as much as can be tolerated

**Issues:**

- Deferred annuities vs. immediate annuities
- Other strategies to help secure income, e.g. defensive assets, products

# Strategies for income maximisation

**Principle:**

- *Drawdown and investment strategy jointly directed at converting assets into income, leaving behind no more assets than intended*

**Rules:**

- Determine how much income to protect using annuities
- Invest remainder in growth assets, as far as can be tolerated
- Establish affordable drawdown strategy, and review occasionally

**Issues:**

- Affordable drawdown might be viewed as a ‘conditional investment-linked virtual annuity’; likely exceeds minimum drawdown rules
- Products emerging that embed this type of strategy with longevity insurance element *(QSuper, Optimum Pensions, now Challenger)*

# Under a strong bequest motive

**Principle:**

- *Restrict drawdowns to tolerable levels, and direct the investment strategy towards building assets.*

**Rules:**

- Use annuities only to secure any minimum acceptable income
- Drawdown only what is needed
- Invest in growth assets, as far as can be tolerated

**Issue:**

- Strategies aimed at building bequests should be a choice product

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# Under high risk tolerance

**Principles:**

- *Reduce annuity use in favour of additional growth assets, and use the opportunity to increase their expected income (or bequest).*
- *Set growth asset exposure at the maximum that can be tolerated.*

**Issue:**

- Strategies built for high risk tolerance should be choice product

# Basic example – four strategies

**Two income objectives and related drawdown strategies:**

A. Target income, based on ASFA Comfortable
   ⇒ draw to meet target, until account-based pension (ABP) exhausted

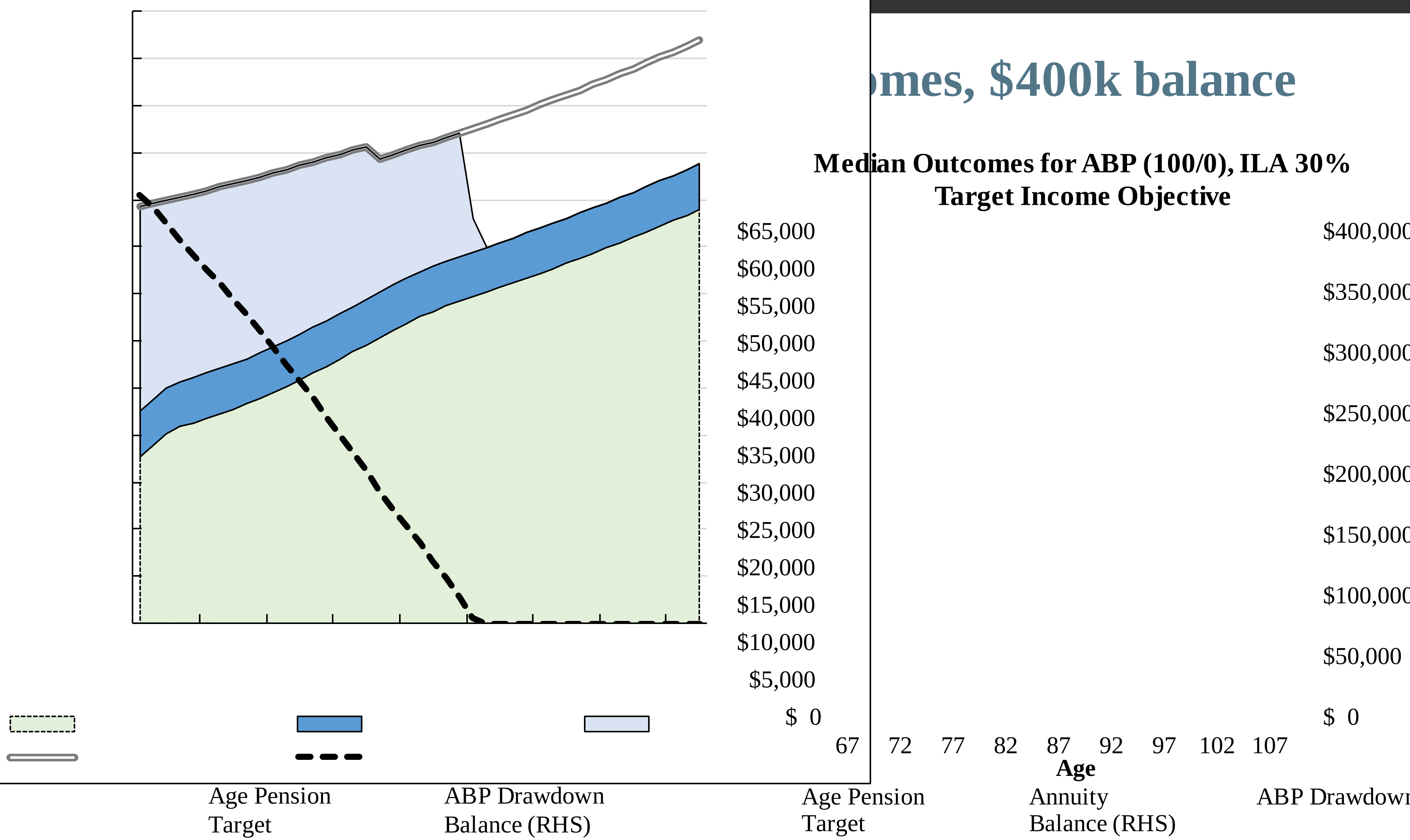
B. Maximise income extracted from available assets
   ⇒ draw 'affordable' drawdown, re-estimate each year conditional on balance, expected return and life expectancy given age

**Two investment strategies:**

1. 100% ABP with 70/30 growth/defensive mix
2. 70% ABP invested 100% in growth;
   30% real immediate life annuity (ILA)

*(Note: Modelling allows for Age Pension and minimum drawdown rules)*

## …omes, $400k balance



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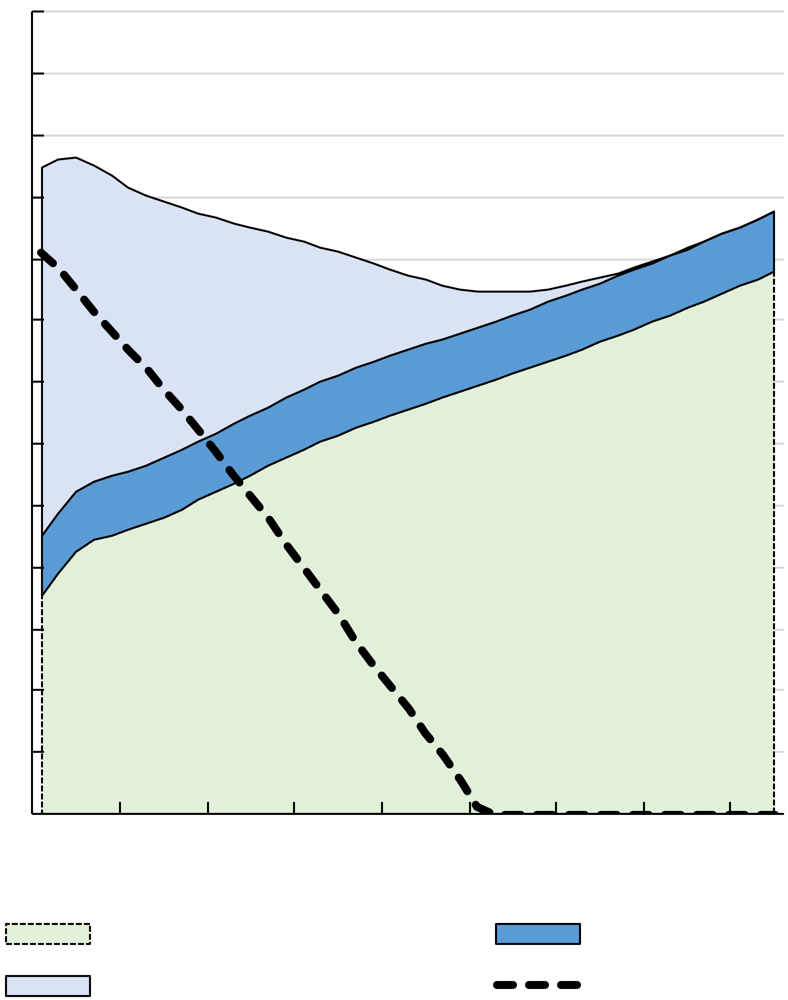

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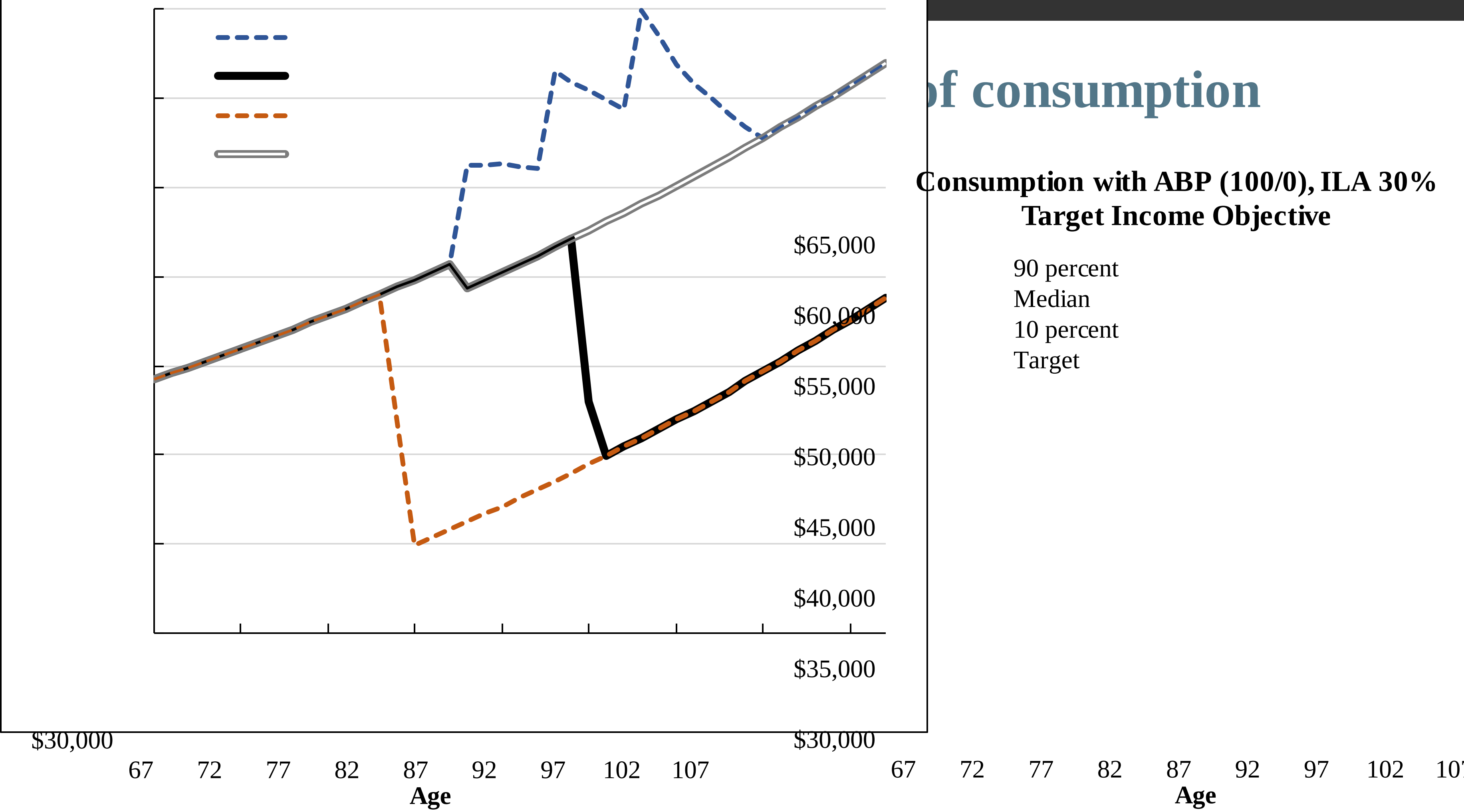

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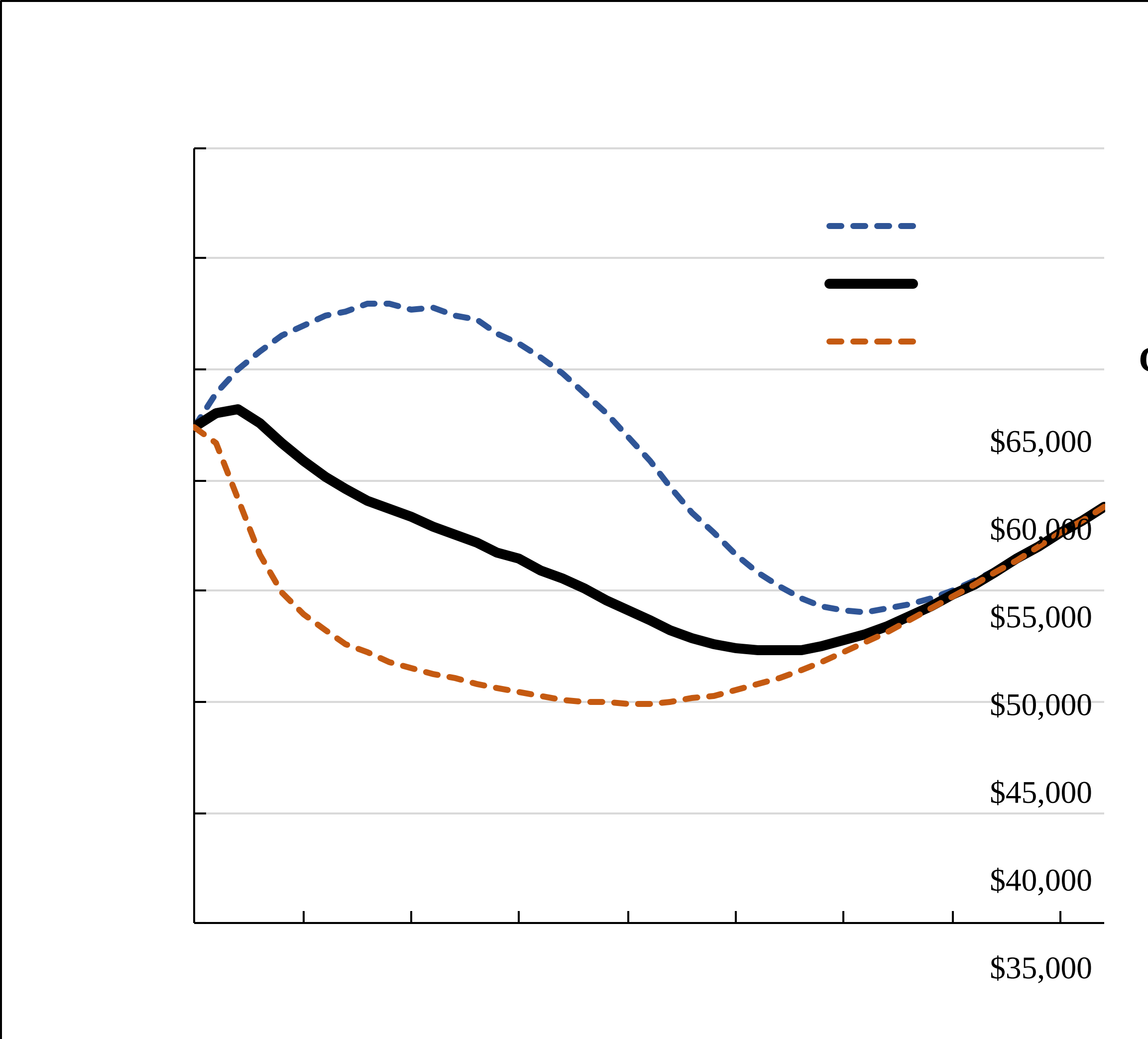

# A related aside – Utility vs. metrics

- Utility and metrics might be used in tandem

- *Utility analysis*
  - Summarise entire distribution in one number (e.g. certainty equiv)
  - Use to compare strategies, or find optimal strategy
  - Apply different utility functions to capture differing objectives

- *Metrics*
  - Characterise distribution of outcomes
  - Communicate outcomes
  - Reality check that strategy is delivering intended outcomes

# Key takeaways

1. ***Two main types of income objectives*** – strategies differ markedly
2. ***Minimum acceptable income*** – worth thinking about if there is some minimum income level to be protected, if at all possible
3. ***Member heterogeneity*** – it matters, and should be addressed directly

# *Questions*

# *and*

# *Discussion*