Optimal for Whom?

Is the Retail Investor at the Table or on the Menu?

ICCF 2026

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A primary focus of retail investors is a secure and adequate retirement.

Portfolio structure gets a lot of attention.

What else matters?

Retirees Consume Income, Not Wealth

Canadian Retirement Reality

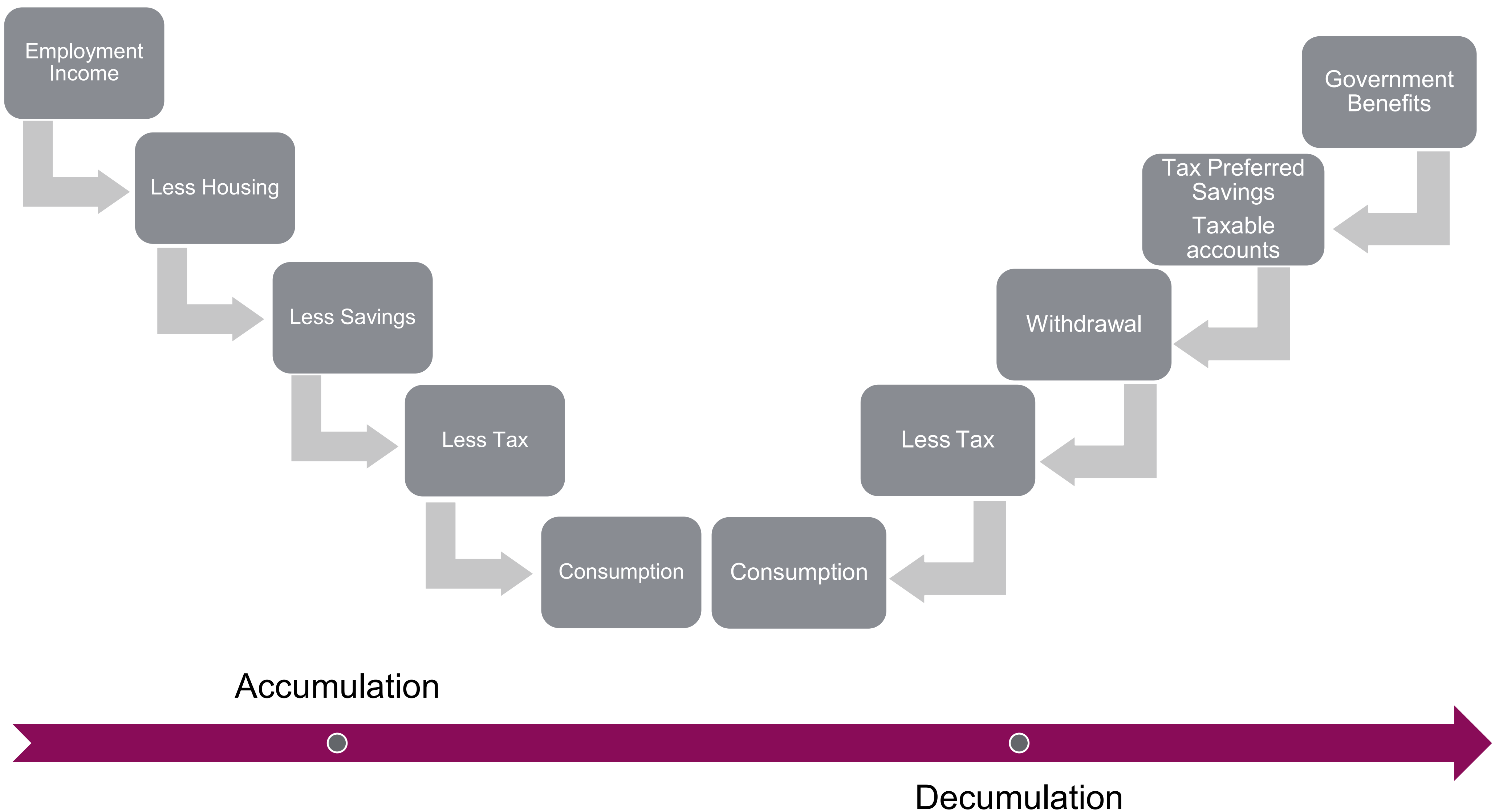
1. **Retirees appear reluctant to decumulate portfolios**
   - Micro portfolio data (Daraei & Sendova) suggest many Canadians withdraw less than standard lifecycle theory predicts, treating financial assets as precautionary or bequest capital rather than a primary source of consumption.
2. **Retirement is experienced as an income problem**
   - National accounts and household surveys are organized around income, consumption and saving. Spending behaviour appears more closely linked to income streams than to portfolio values.
3. **Public policy is built around income streams**
   - Government benefits, defined benefit pensions and DC savings minimum withdrawals all frame retirement resources as income rather than as a stock of wealth to be optimally spent.

Benefits and Savings

Type	Canada	US	UK	Tax Treatment
National Pension	Canada Pension Plan (CPP), Old Age Security (OAS)	Social Security, SSI	State Pension, Pension credit	Taxable benefit
Individual Retirement Savings	Registered Retirement Plan (RRSP)	401(k), IRA	Workplace Pension, SIPP	EET*
Tax free account	Tax Free Savings Account (TFSA)	Roth IRA	ISA	TEE

* EET = tax exempt contributions and account growth, taxable on withdrawal

Modelling Retirement as a Household System



Model Components

Market Return Data 1926:1-2023:12

- Stationary block bootstrap resampling (100,000 paths)
- 2 Asset portfolio: U.S. T-bill, U.S. stock

Return: Annual after-tax real retirement consumption

Risk: Expected Shortfall, ES(5%): mean of worst 5% of outcomes

30 Years Accumulation (TFSA(TEE)->RRSP(EET)->Taxable)

30 years decumulation (Taxable->RRSP->TFSA)

Ontario Tax Module (2025) for individual

Housing cost: 30-year mortgage based on house value 6 times employment income

Retirement After-tax Consumption: mean of last 5 employment years, C*

Base Case: $100K real income, 15% savings rate, 60% equity.

Withdrawal Policies

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Target (“Fixed Withdrawal”)

- Strives to maintain a **constant** real after tax consumption, C*, in retirement

Arva_bounded (“Variable Withdrawal”)

- **Annually Recalculated Virtual Annuity (ARVA)** is a dynamic withdrawal model:
  - Calculates an annual withdrawal based equal to a payout on a notional inflation-linked annuity based on current portfolio value, remaining life expectancy, and prevailing real interest rates.
  - Floor and Cap constrains ARVA (base case +/- 20%) to within retirees’ preferences
  - The floor is a measure of the client’s essential retirement consumption
  - The cap is the level at which the client would reinvest rather than consume.

- In both cases, borrow against house equity if savings exhausted
  - 3% borrowing fee.

Spending Flexibility Matters

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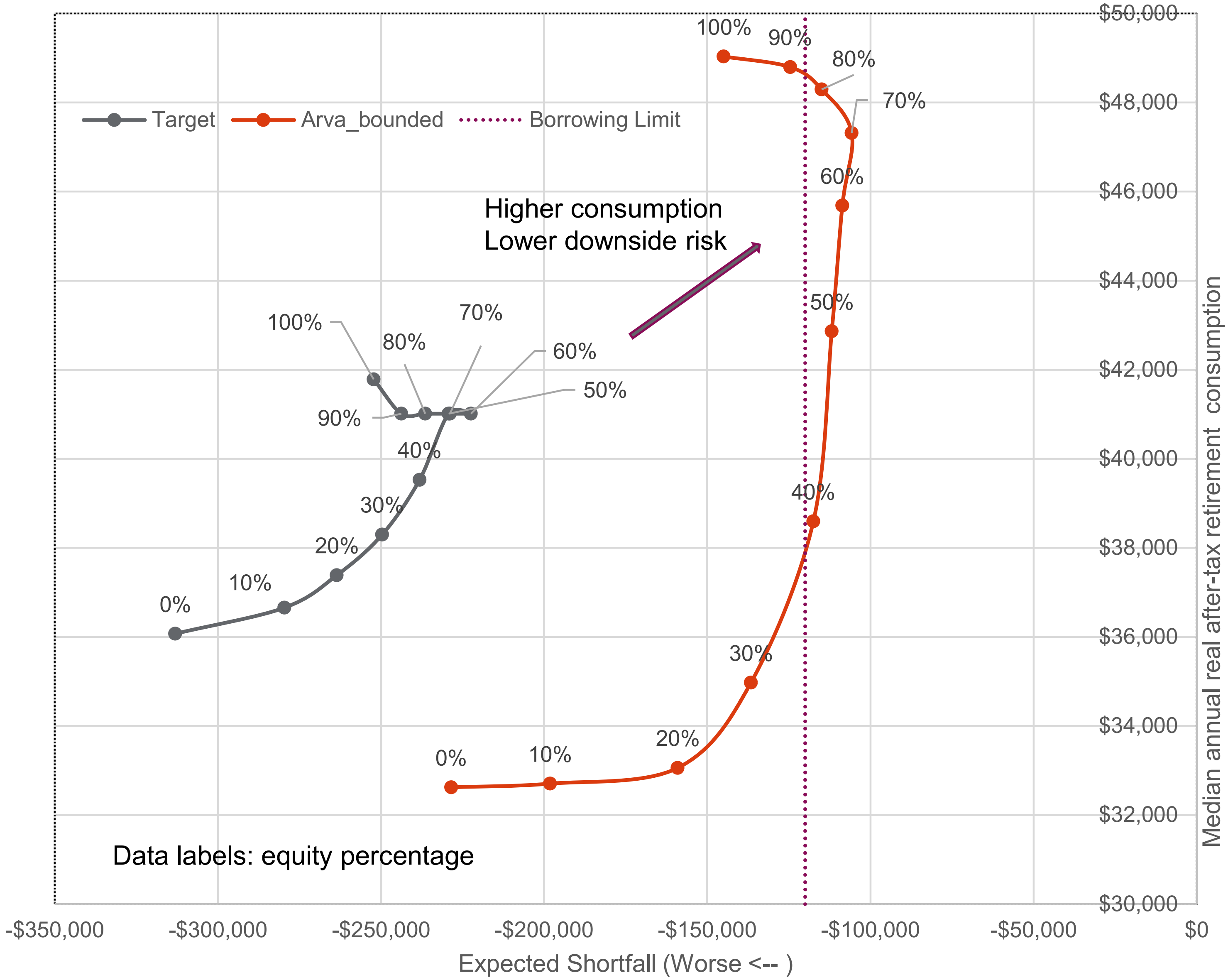

Asset Allocation Matters. Just Not As Much As We Think.

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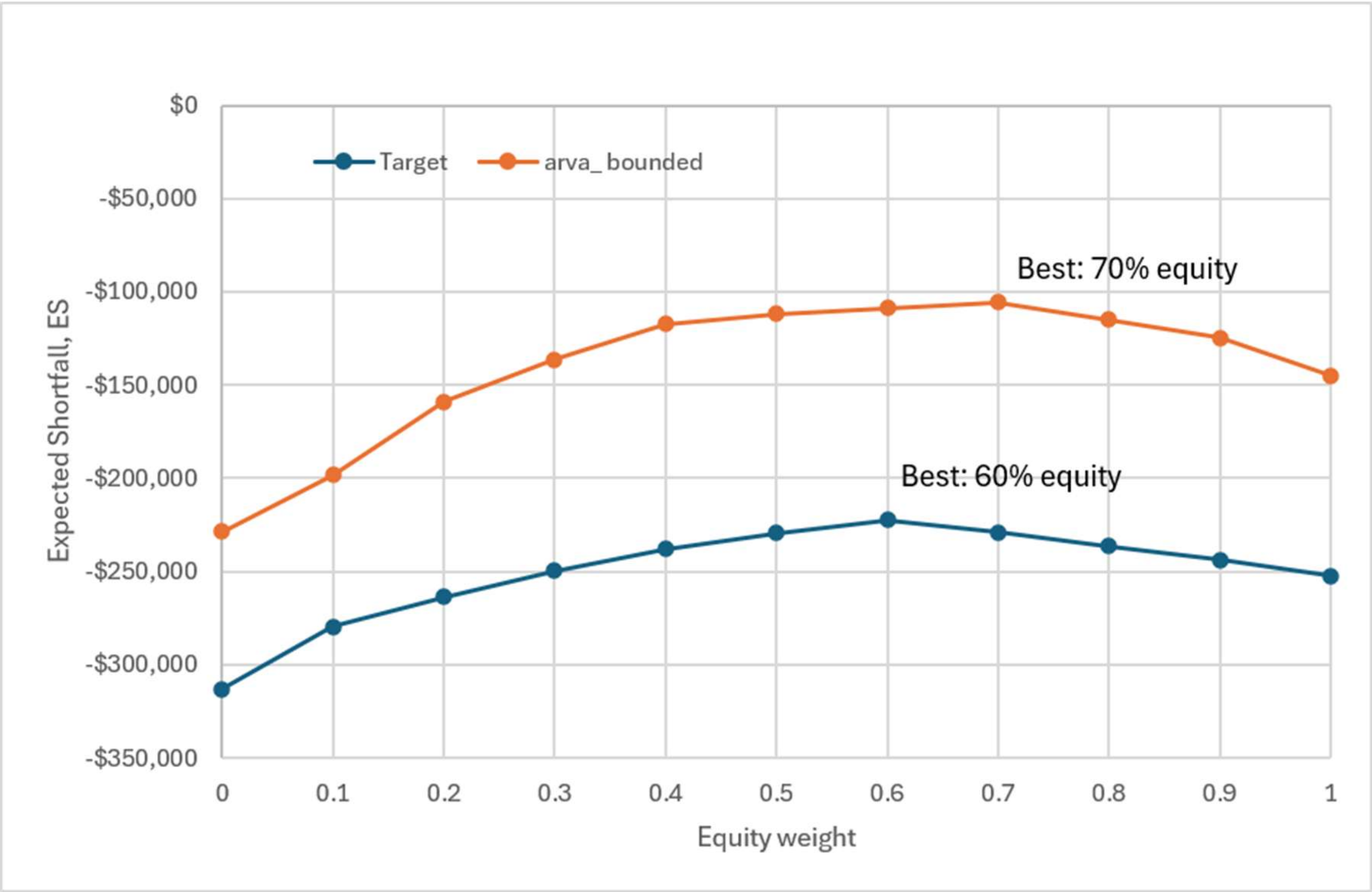
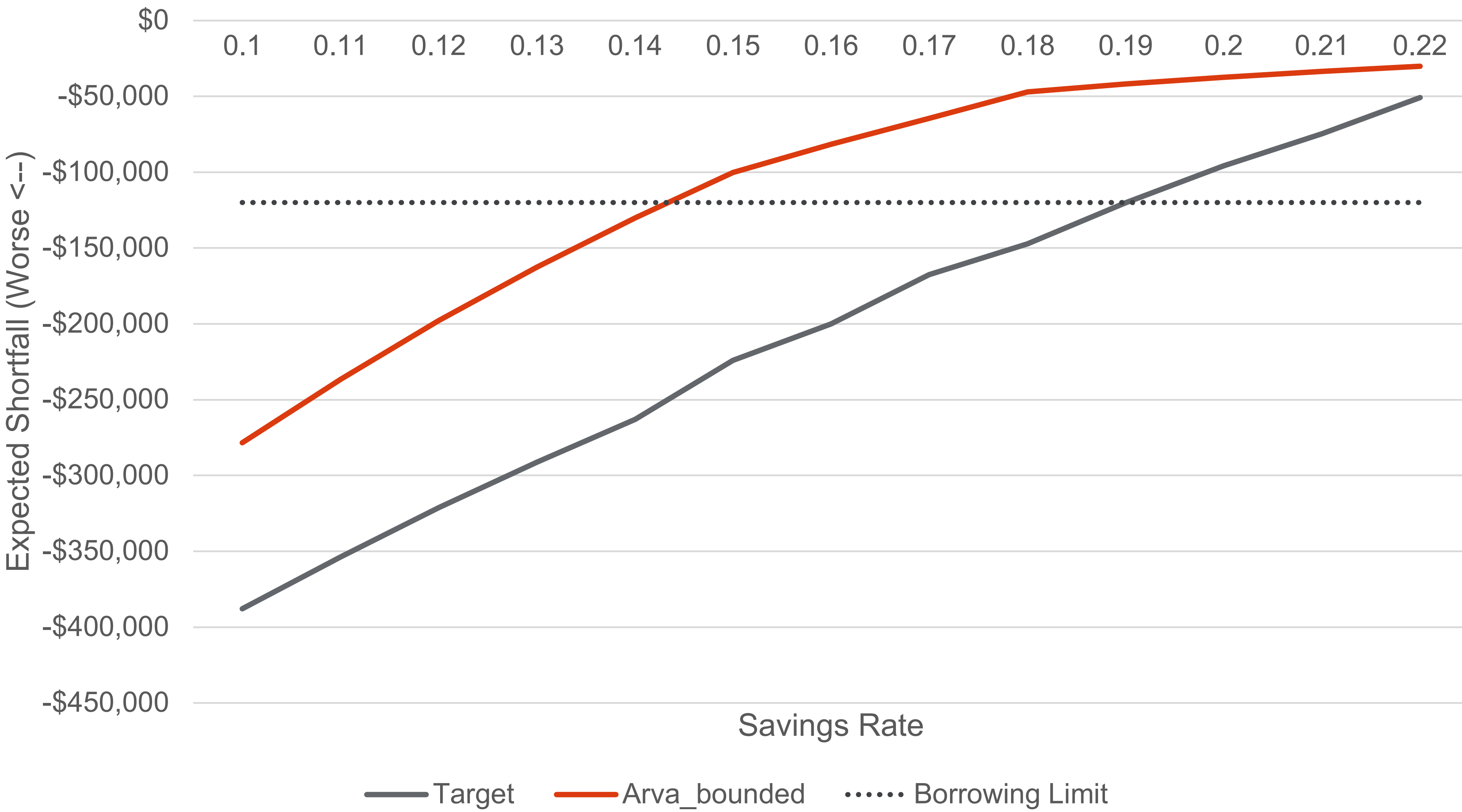
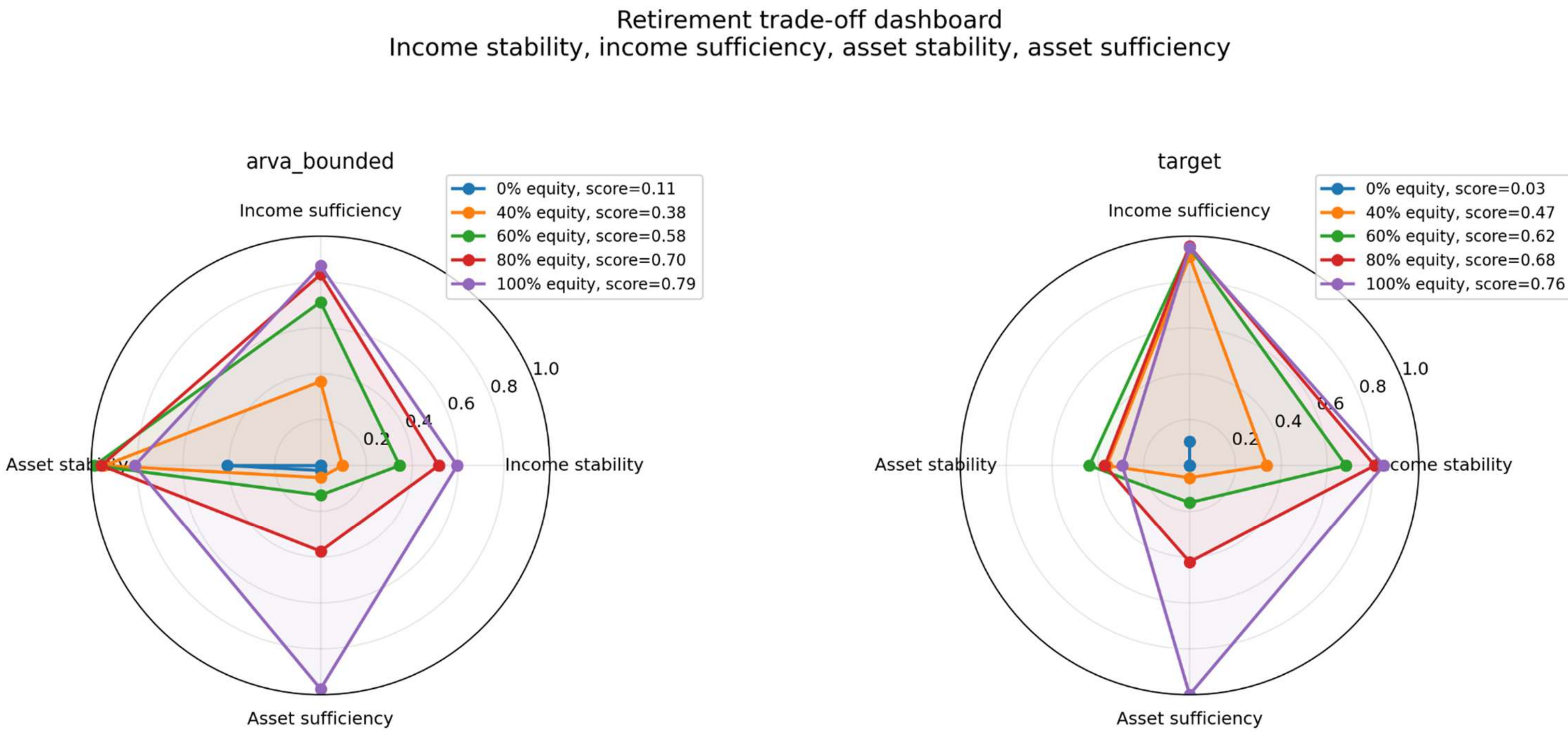


Savings Behaviour Dominates Many Portfolio Decisions



Retiree Preferences Drive Policy



Scores are normalized to [0,1]. Composite score = 30% income stability + 30% income sufficiency + 25% asset stability + 15% asset sufficiency.

Retiree Preferences Drive Policy

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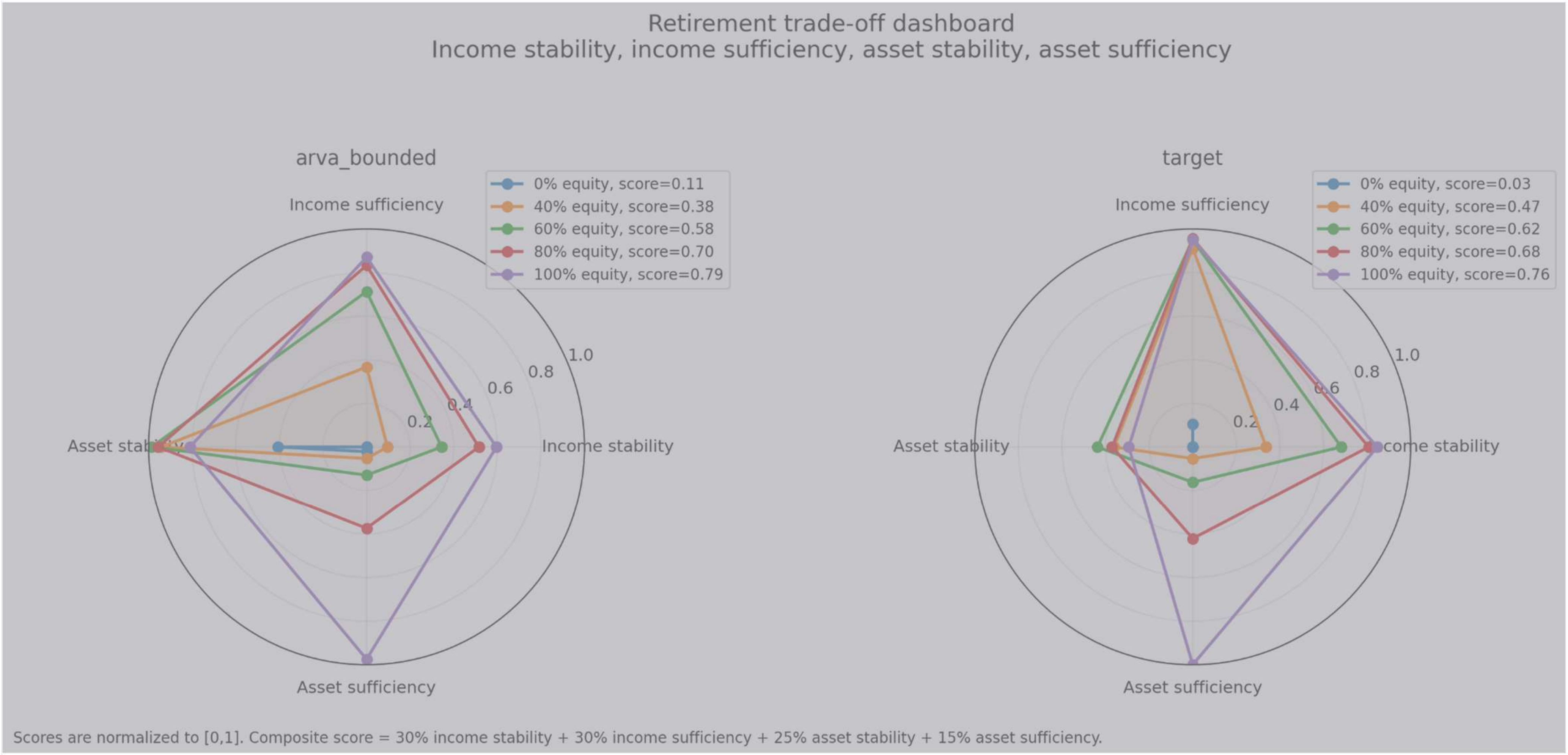

"If economists wished to study the horse, they wouldn't go and look at horses. They'd sit in their studies and say to themselves, 'What would I do if I were a horse?' And they would soon discover that they would maximize their utilities."
- Ronald Coase, 1999

Or maybe preferences should resolve policy uncertainty?

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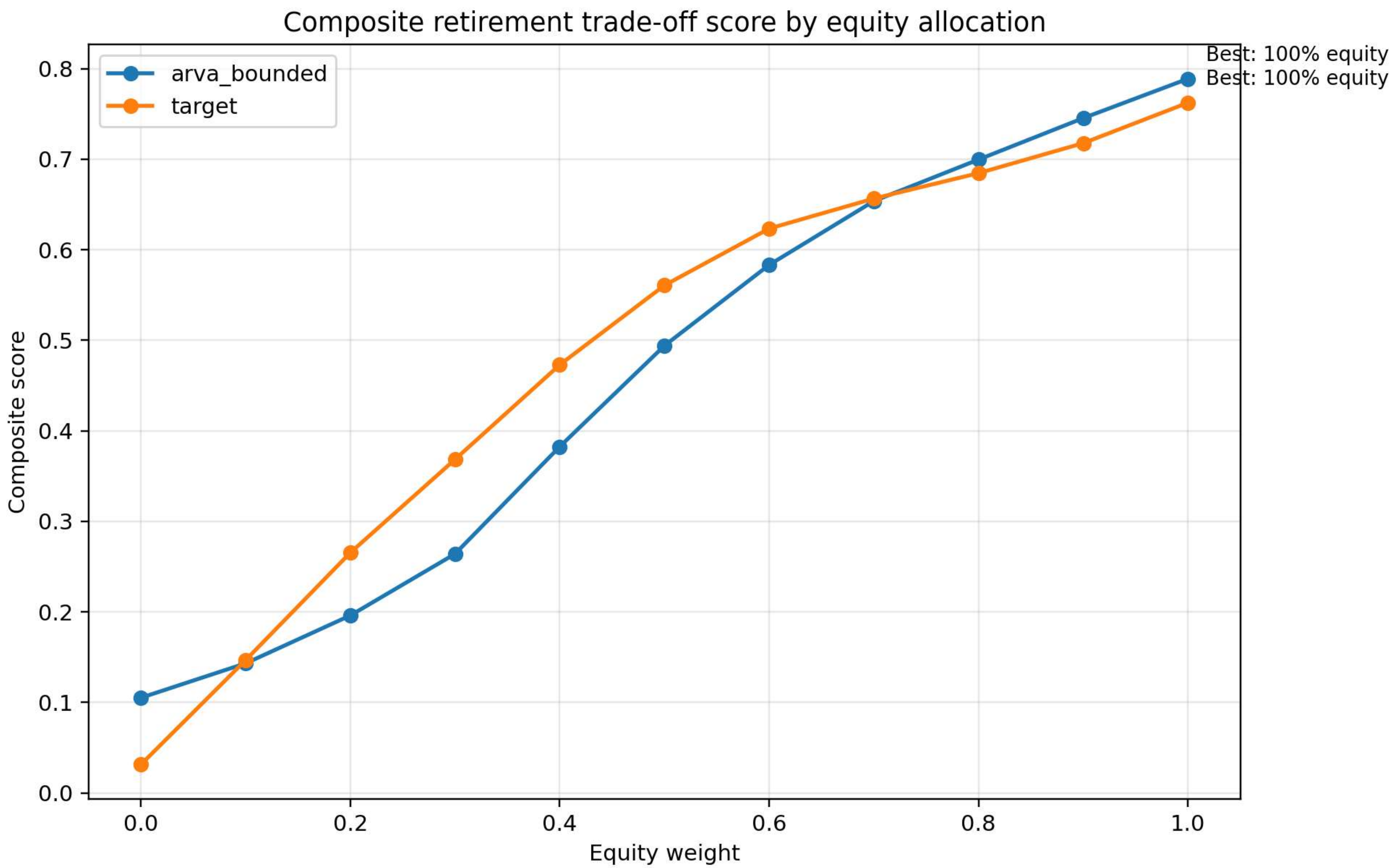

Composite score combines income stability, income sufficiency, asset stability, and asset sufficiency.

Temporal Preferences

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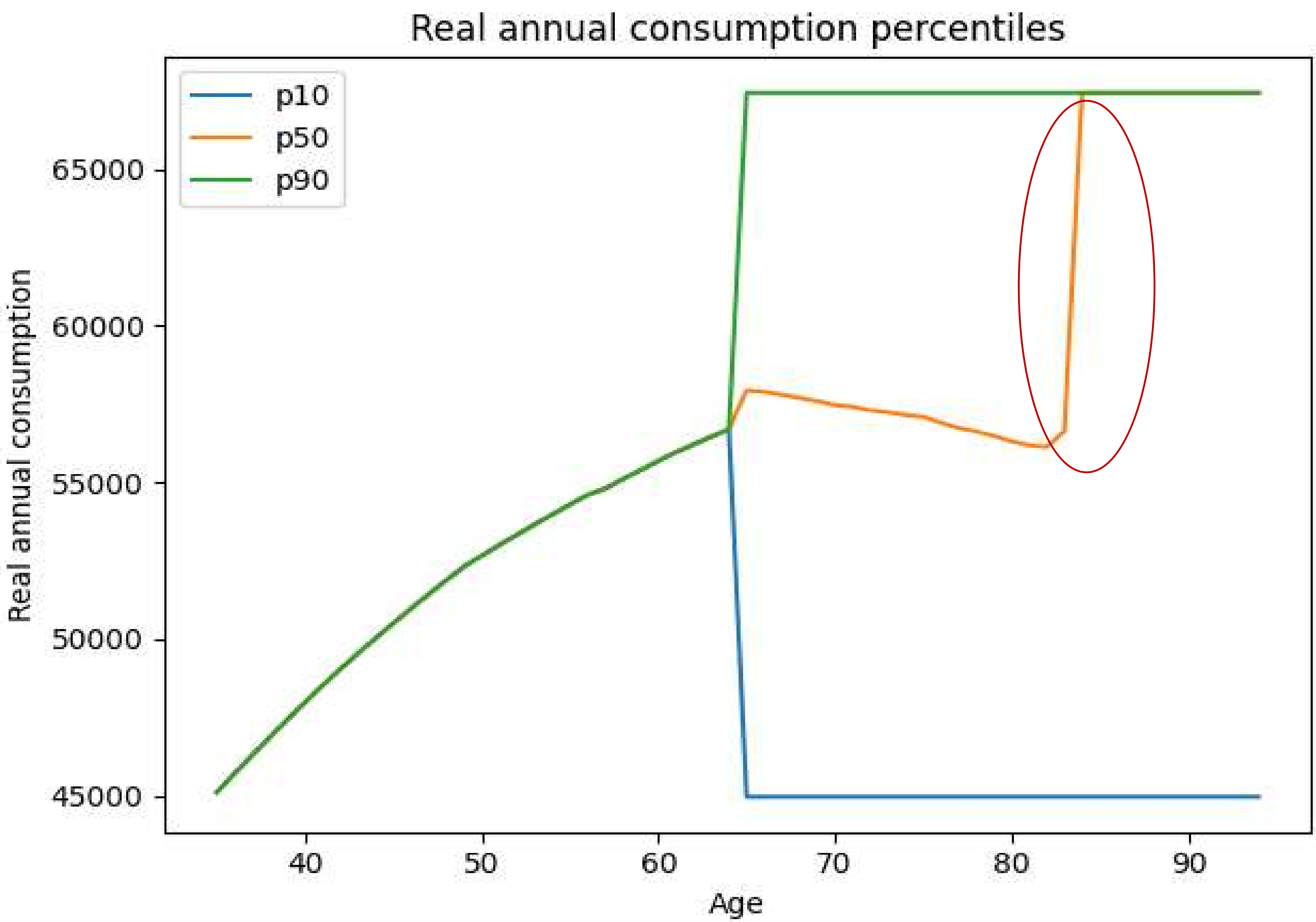

Income: $150K, saving rate: 17%, Policy: arva_bounded

Retirement Age and Fees Matter

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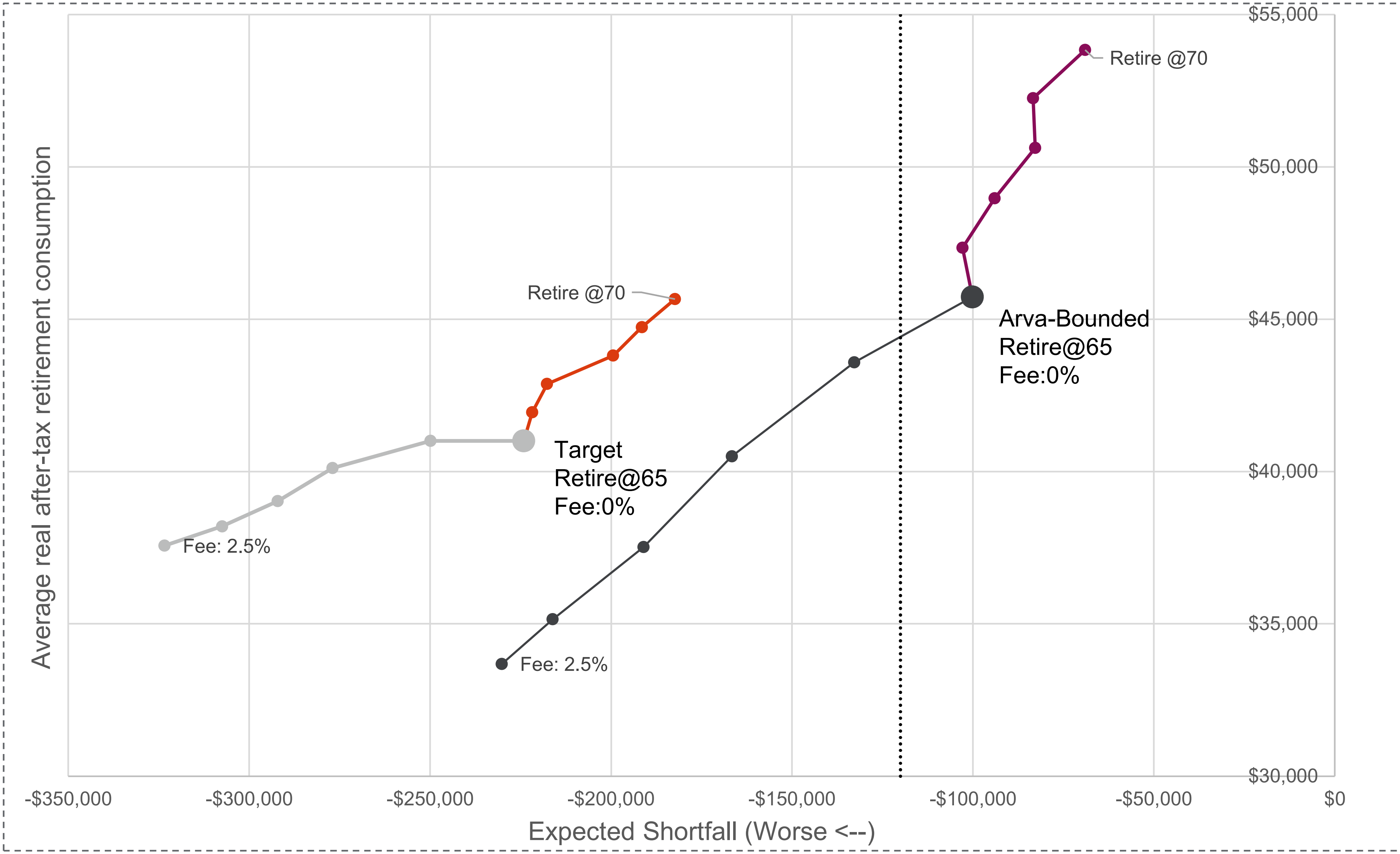

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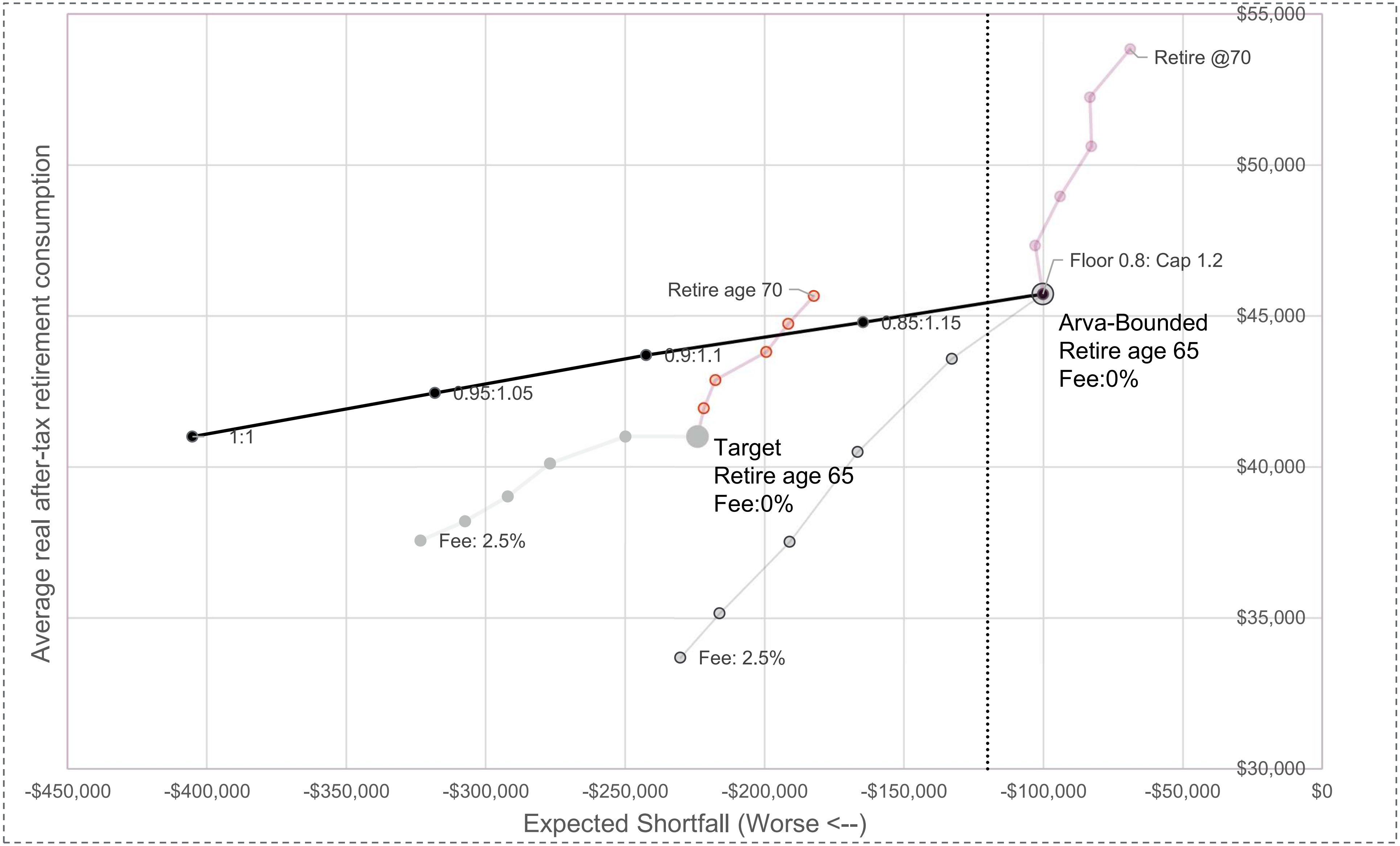

A Framework for Retirement Strategy

First-order influences

- Spending flexibility
- Savings rate
- Retirement age
- Fees

Second-order influences

- Equity allocation
- Glide paths
- Tactical allocation
- Manager selection

Policy Design → Preference Discovery → Execution → Observed Outcomes

- *The most influential drivers of retirement success may be the ones that receive the least attention in traditional portfolio management.*
- *The greatest improvements in retirement outcomes may come from understanding retiree preferences and using them to discriminate between retirement policies.*

Questions?

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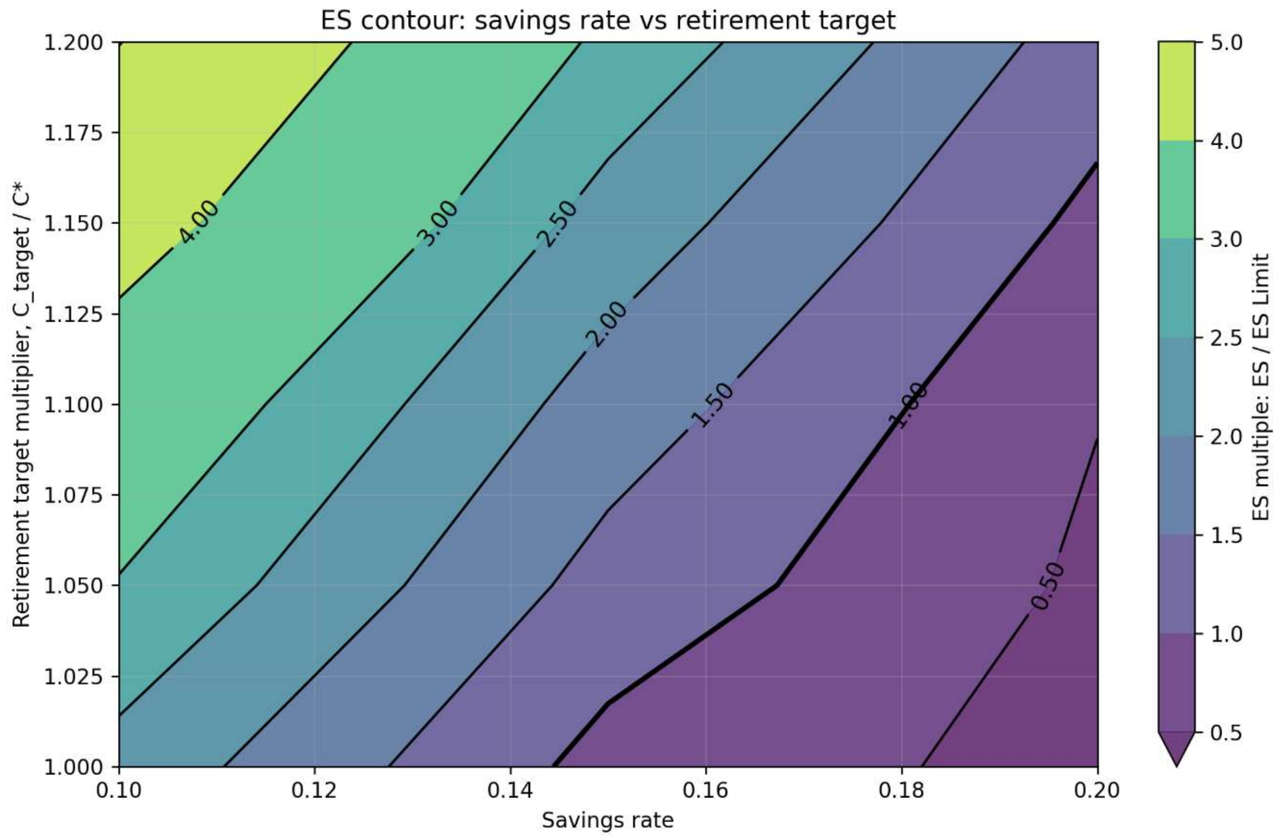
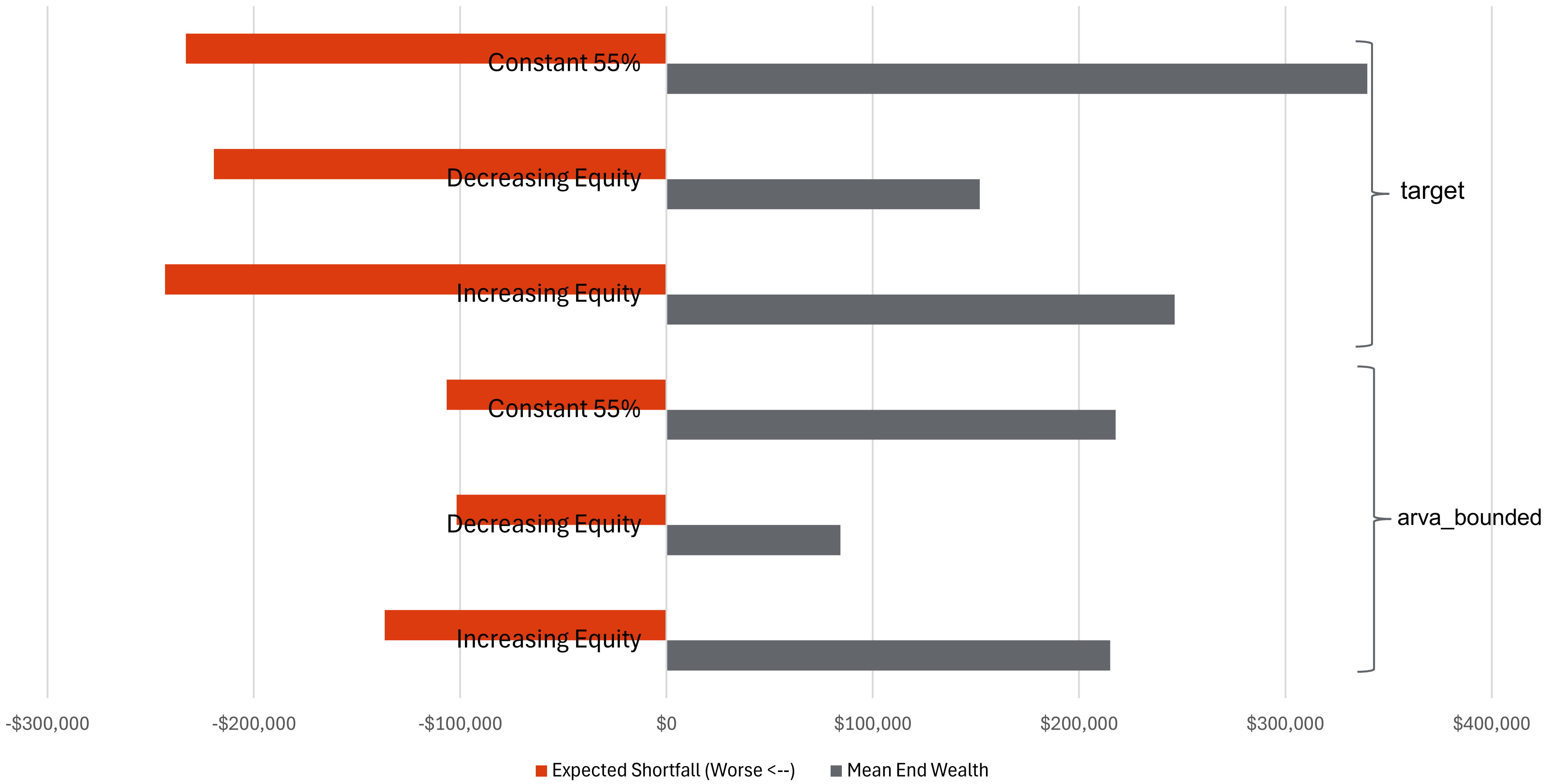
Spending Flexibility Matters



Values below 1.0 are better than the ES Limit; values above 1.0 are worse. Both ES and ES Limit are assumed to be negative shortfall values.

Glide Paths: Behavioural Benefits, Limited Economic Benefits



International Diversification

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Policy	Policy Summary	Mean end wealth	ES
US	60% U.S. Equity, 40% U.S. TBill (1926:2024)	$527,238	-$222,448
US_Short	60% U.S. Equity, 40% U.S. TBill (1969:2024)	$679,493	-$156,433
World	60% World Equity, 40% U.S. TBill (1969:2024)	$606,135	-$190,845
Canada	60% Canada Cap Weighted equity , 40% Canada Tbill (1950:2024)	$359,738	-$187,237

Disclaimers