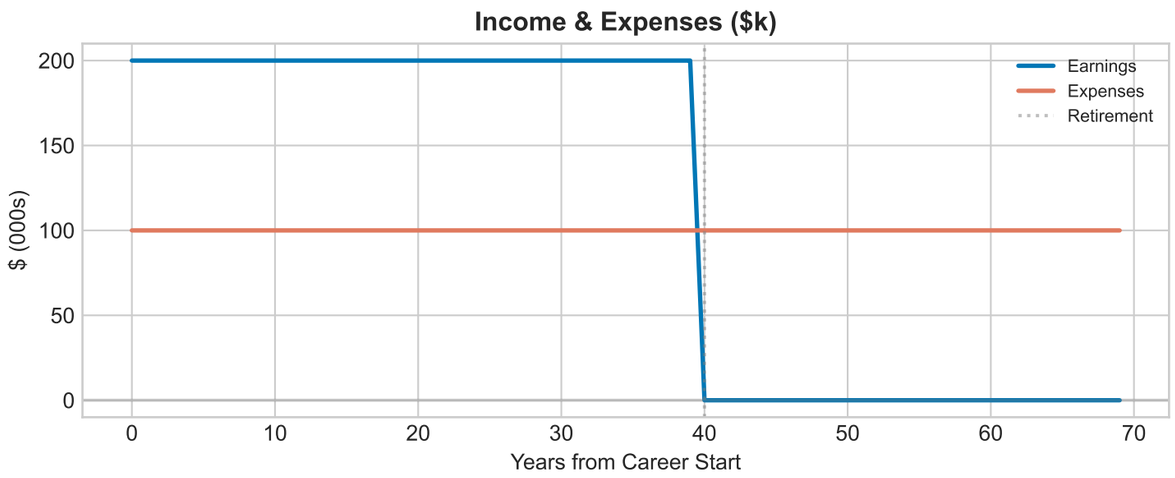
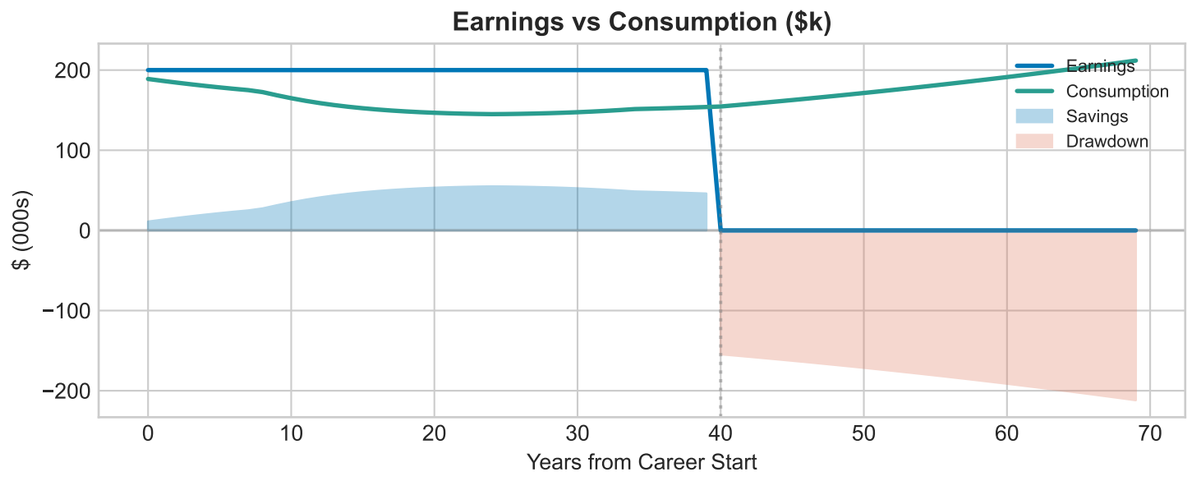
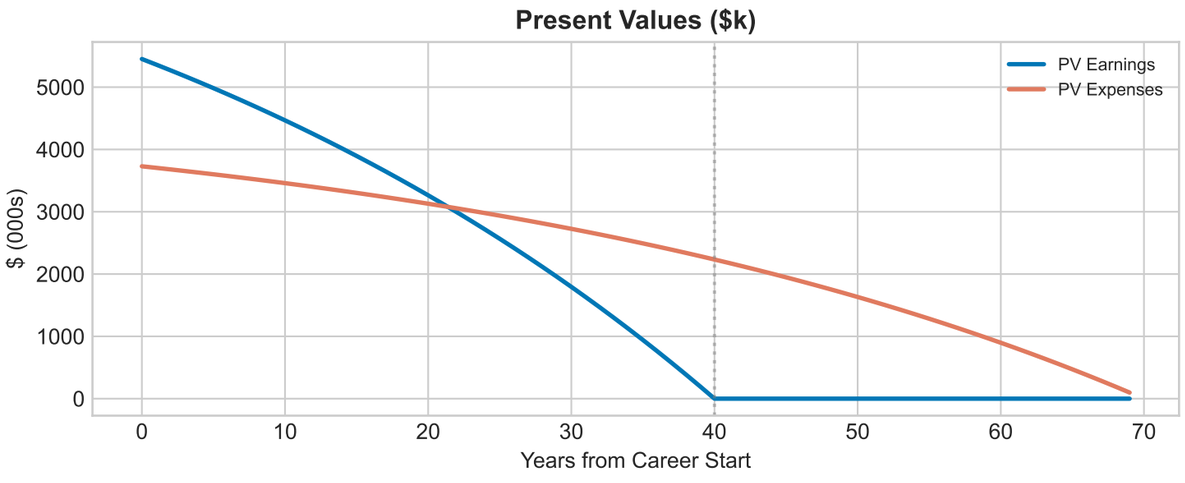
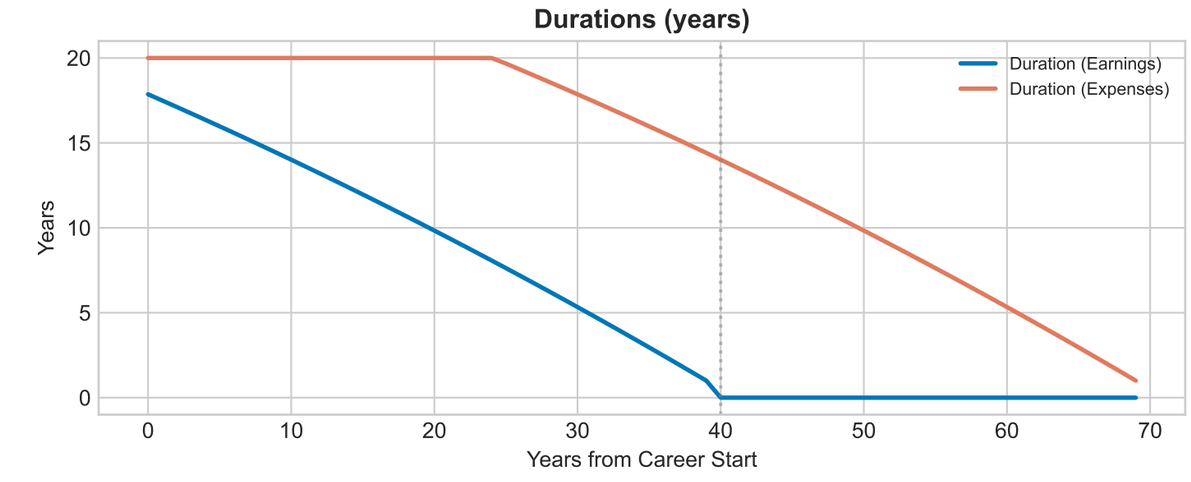
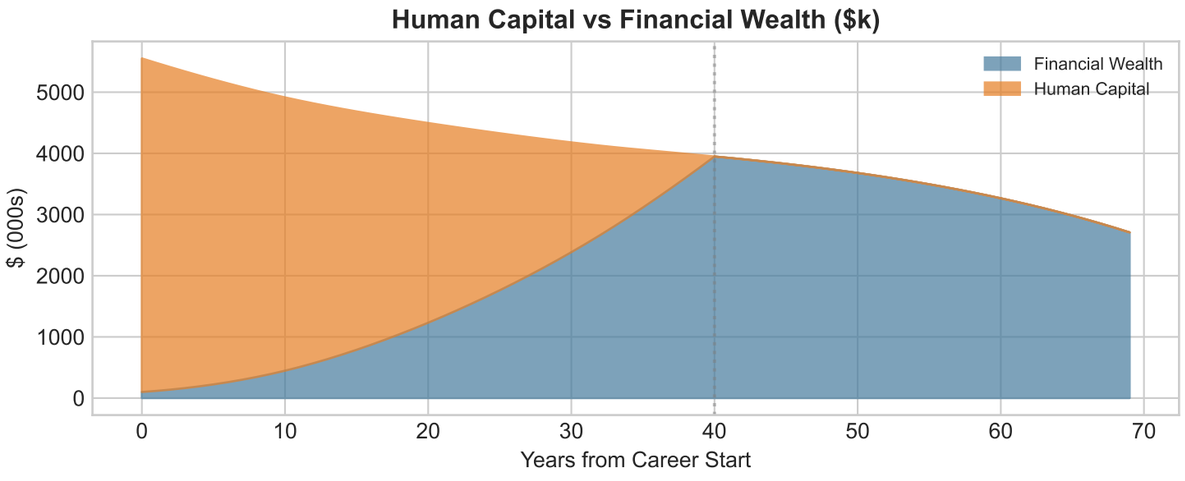
PAGE 1: DETERMINISTIC MEDIAN PATH (Beta = 0.0)

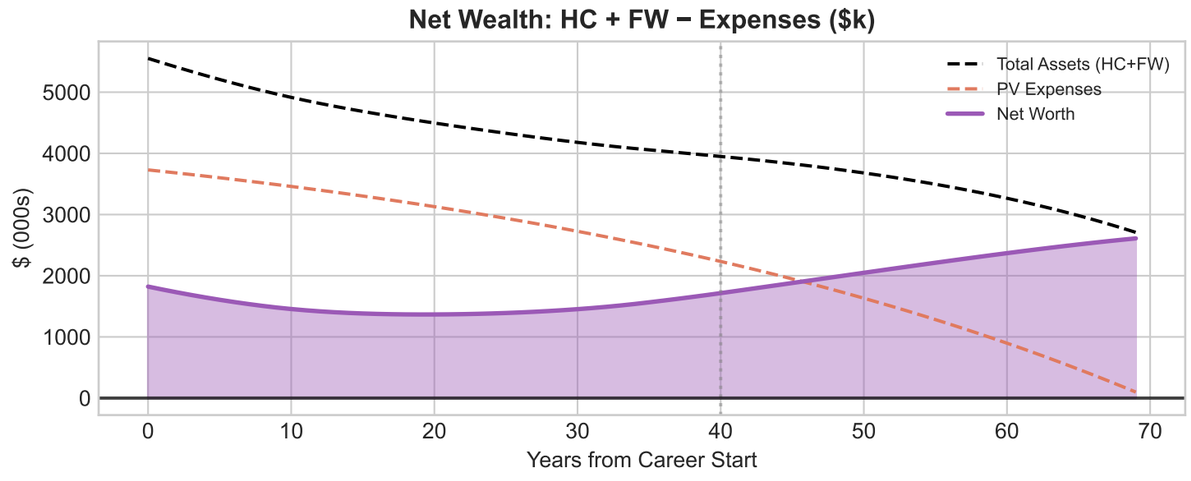


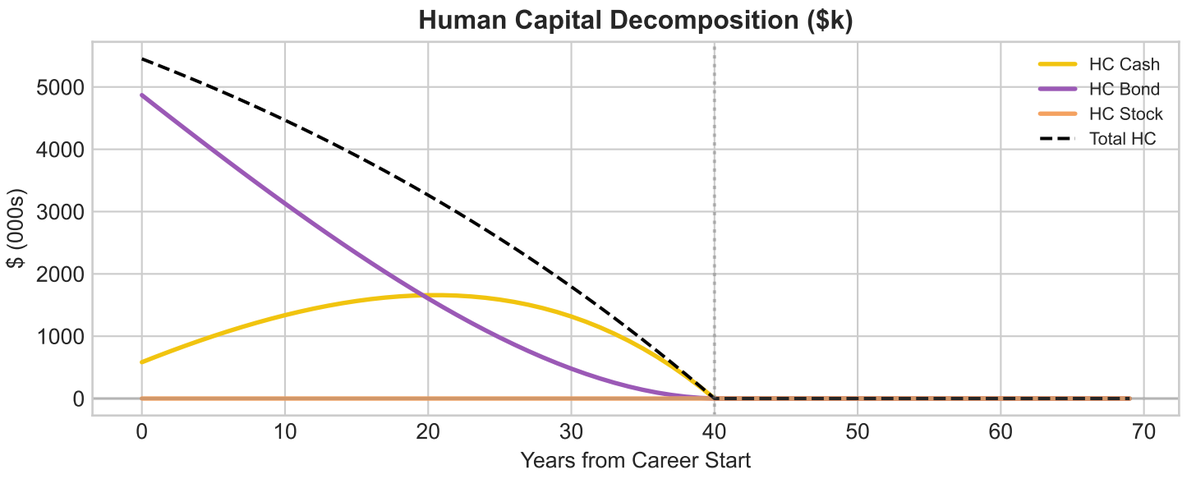


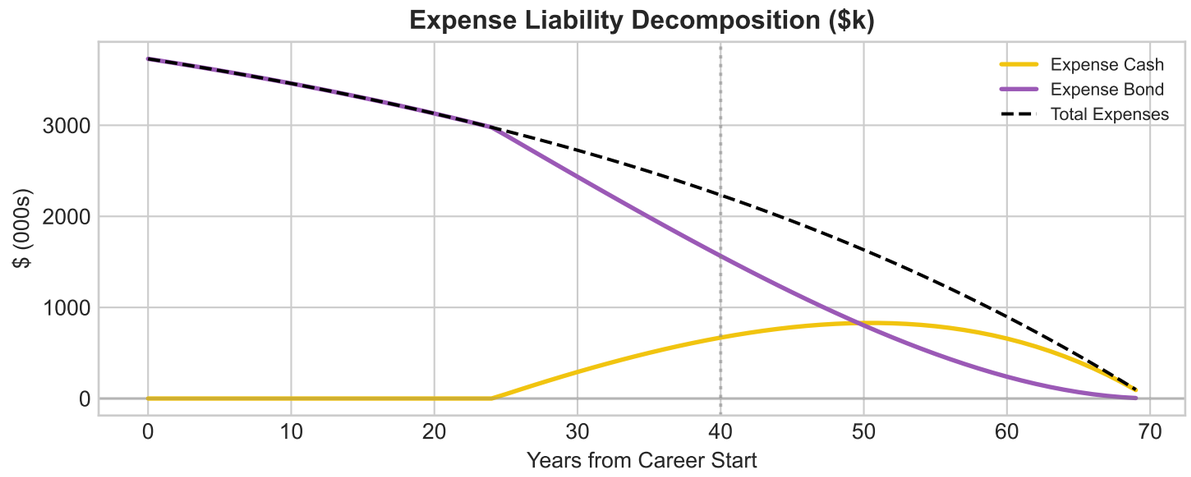


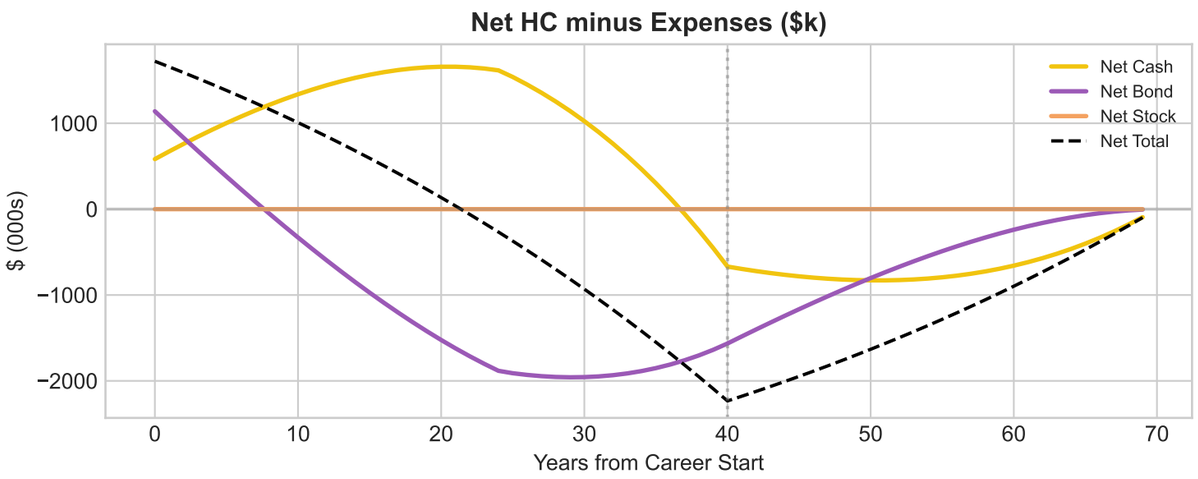


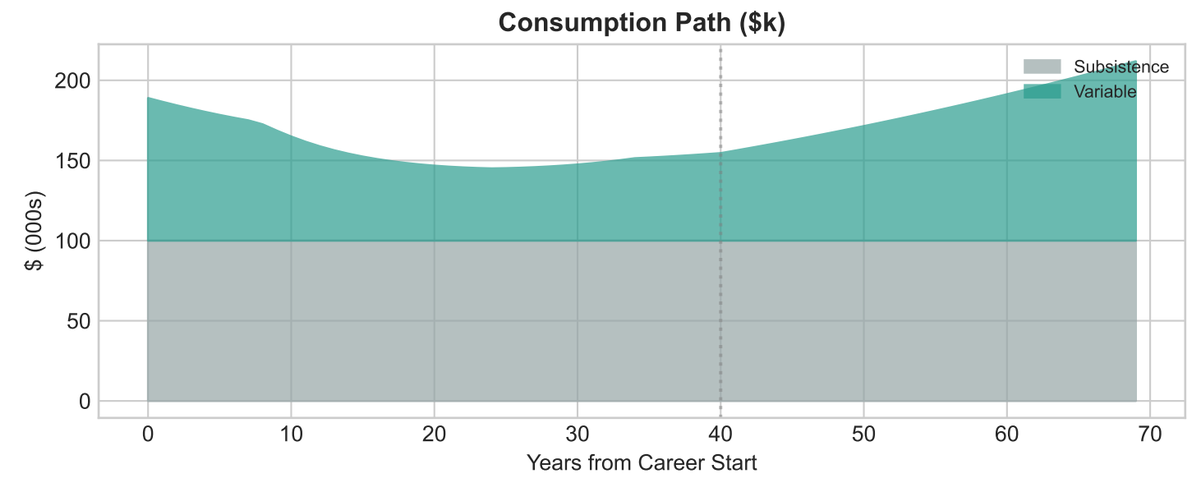


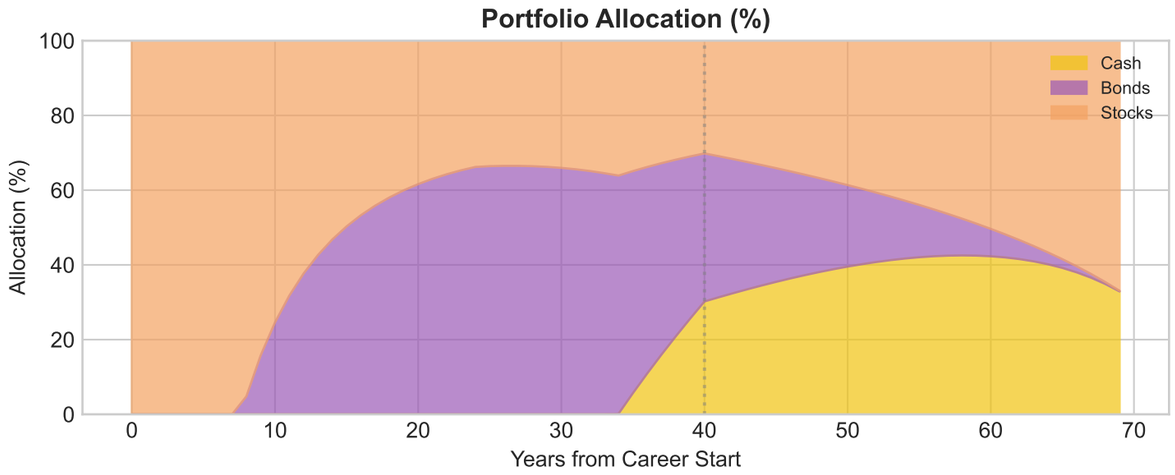


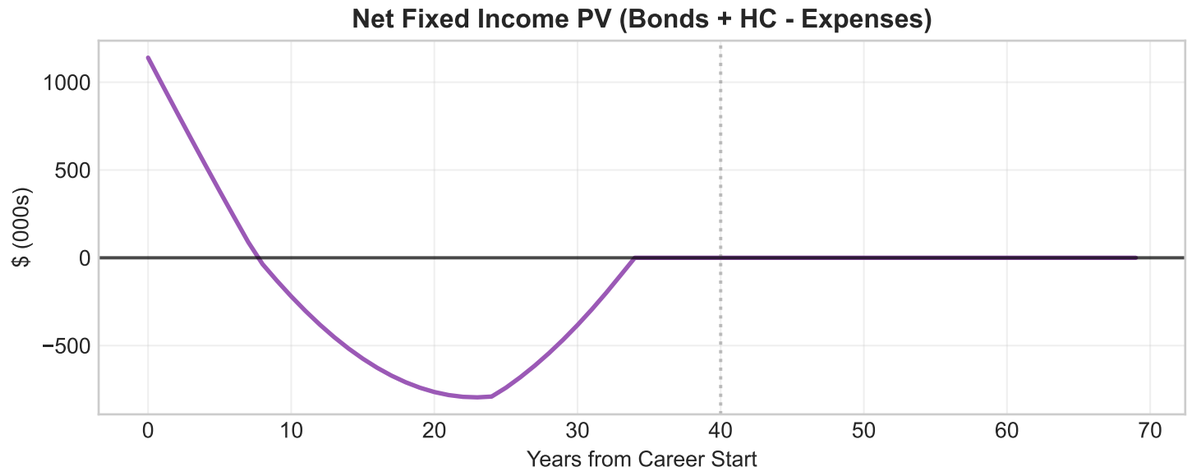


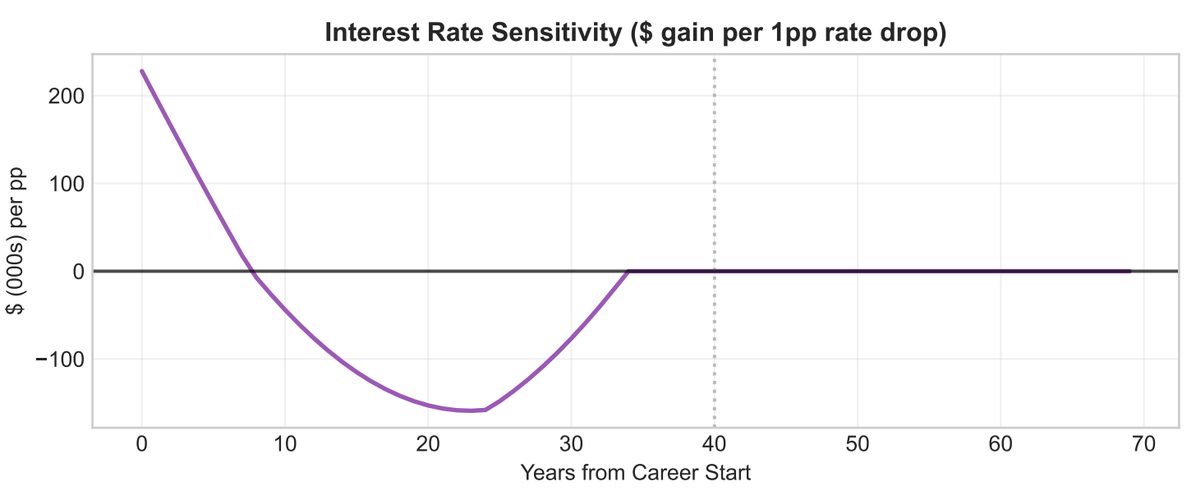












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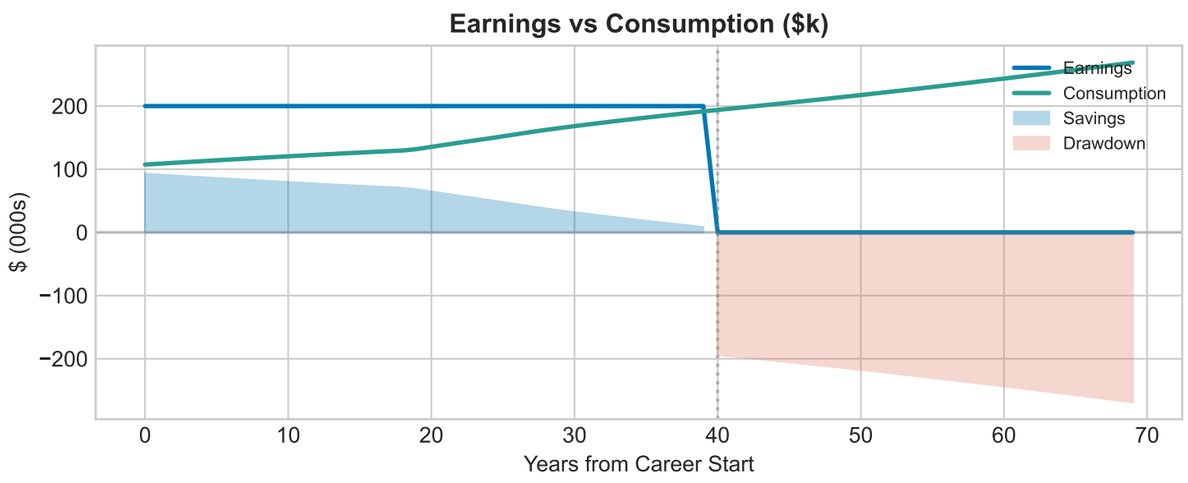
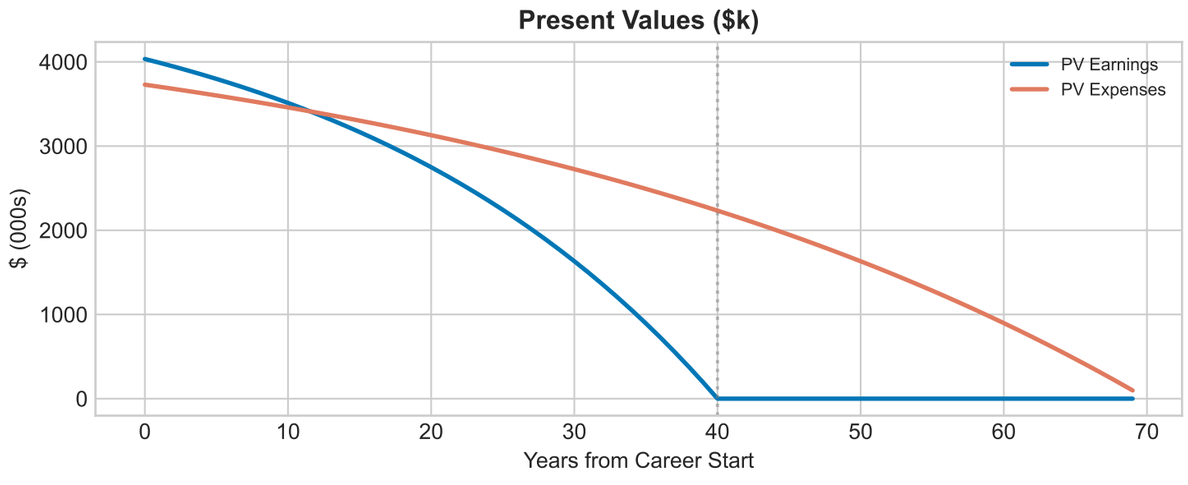
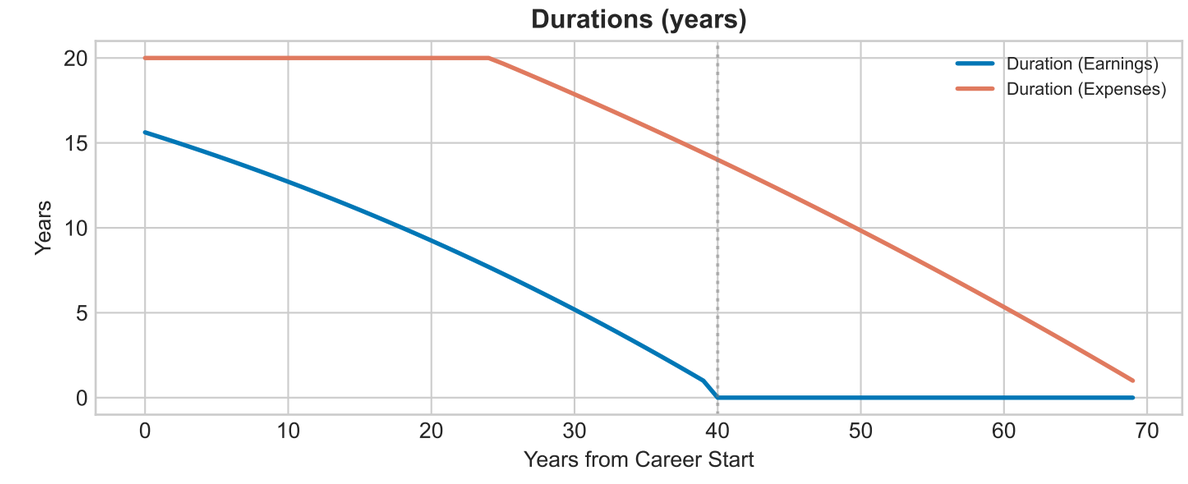
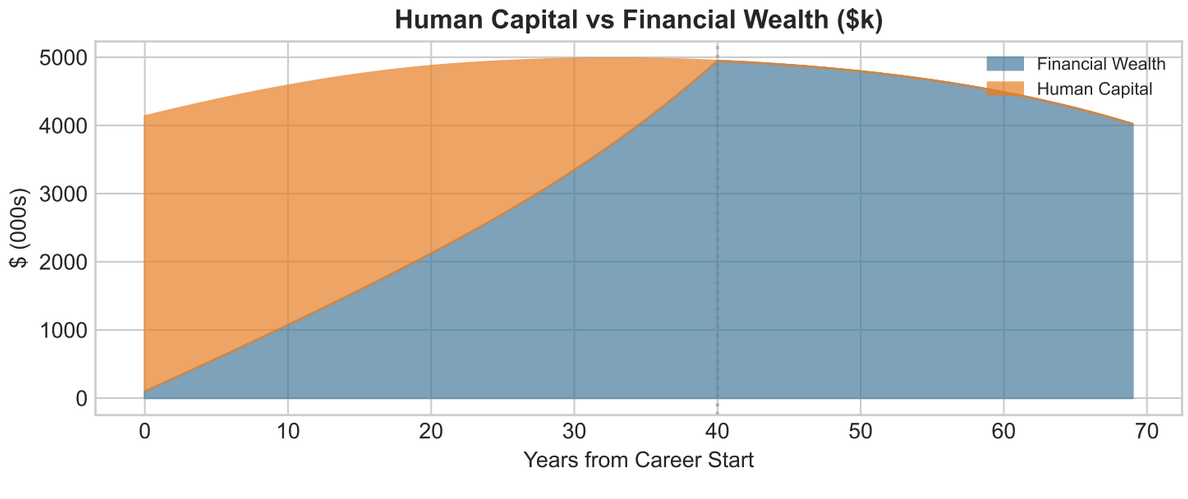
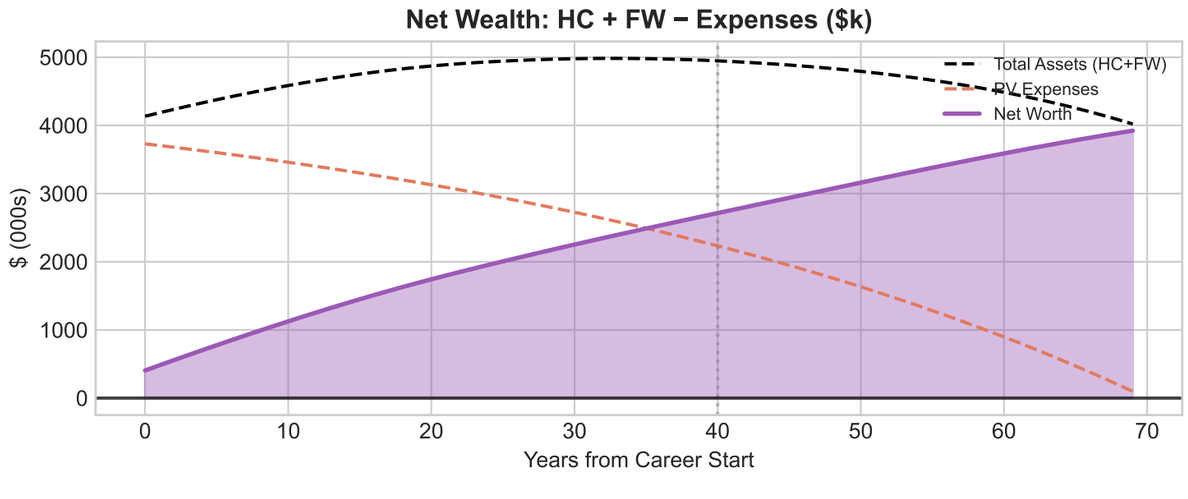
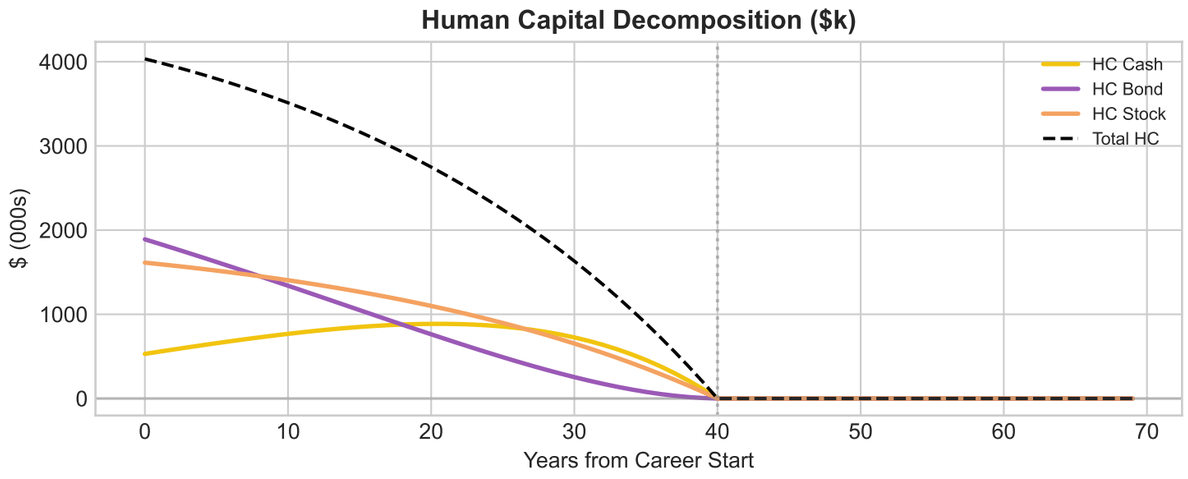


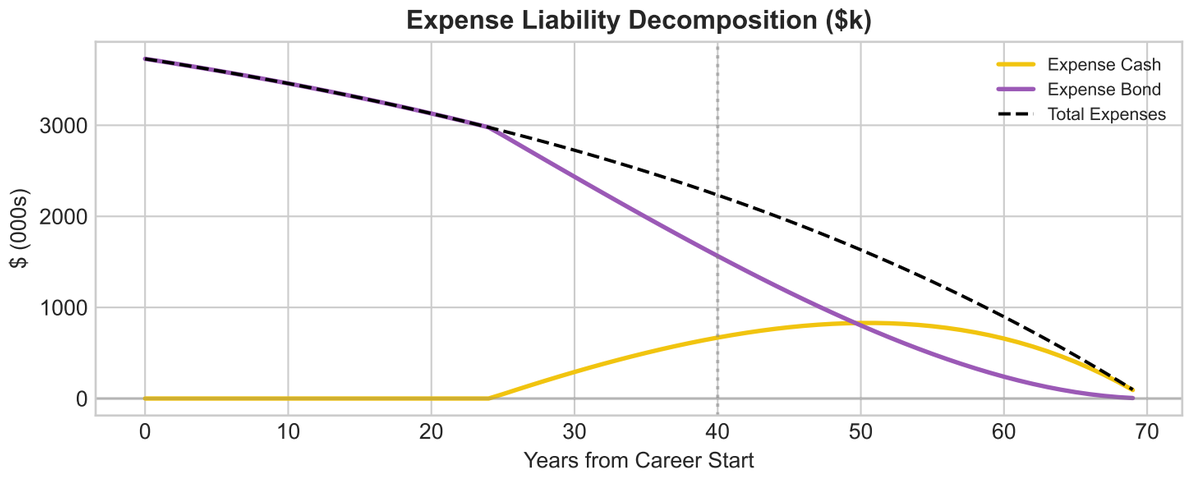


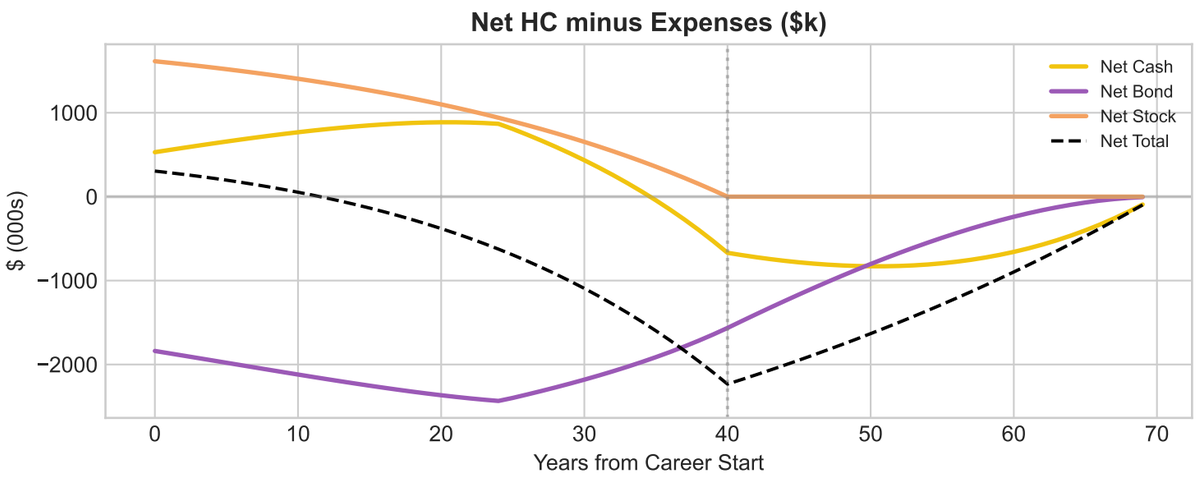


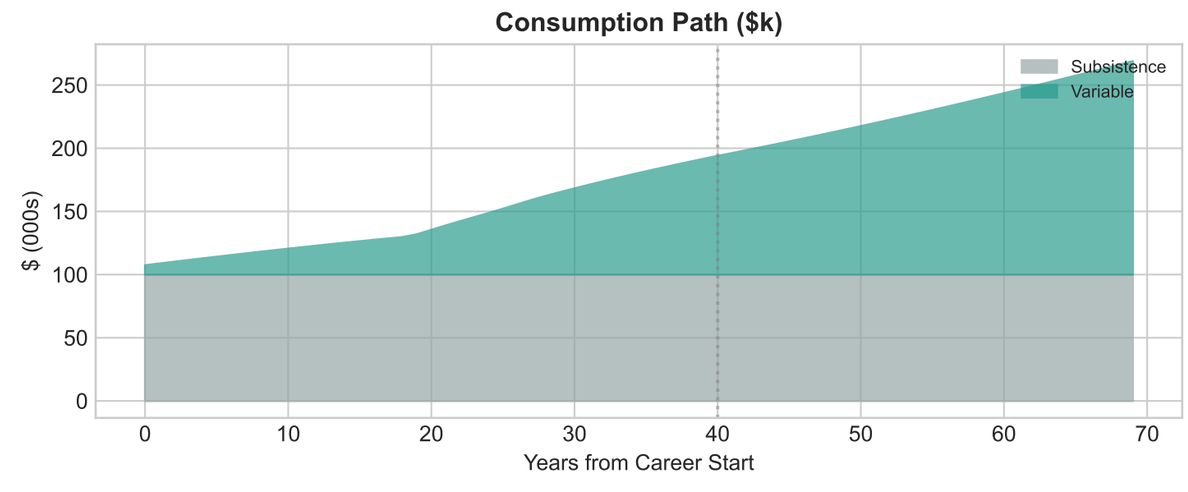


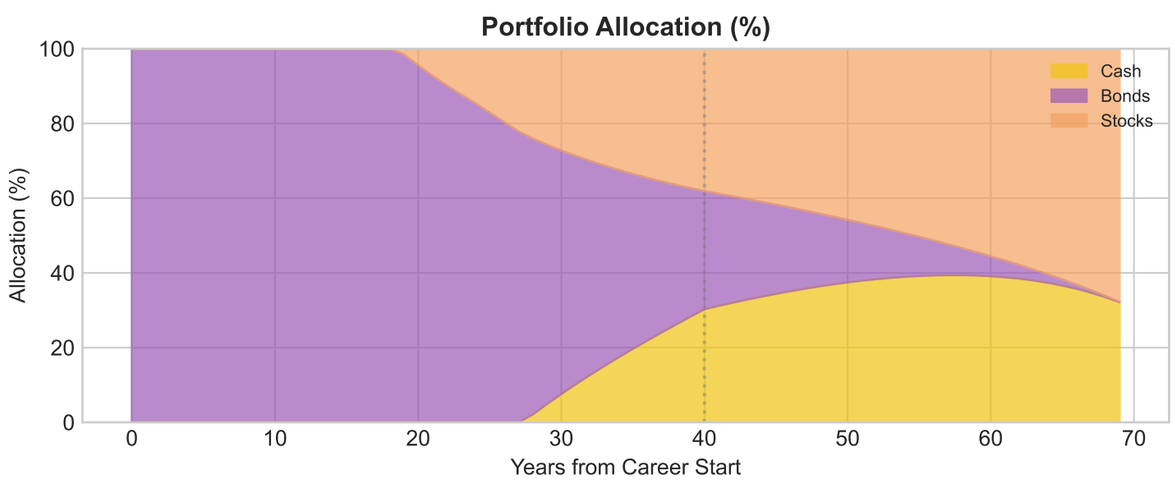


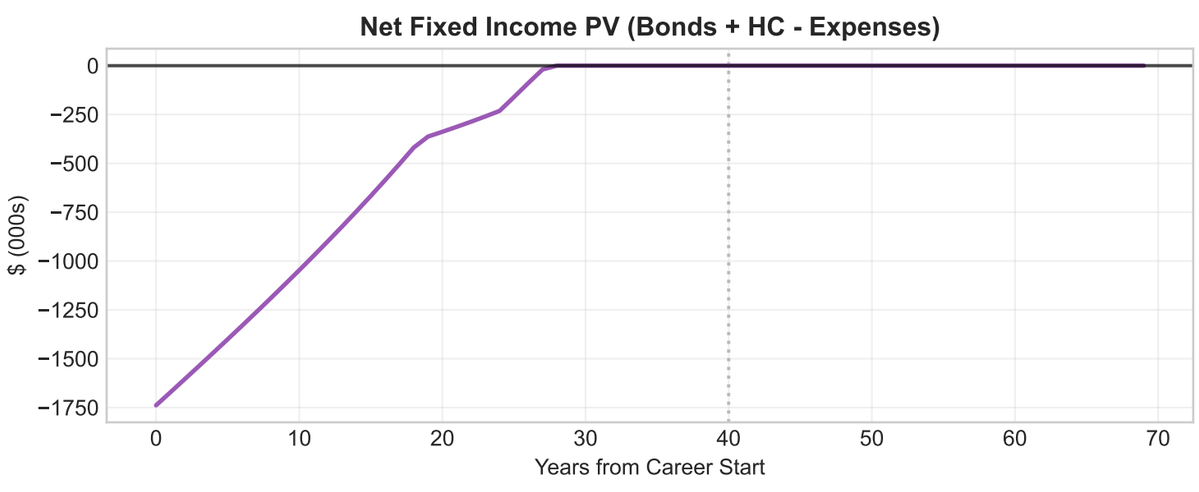


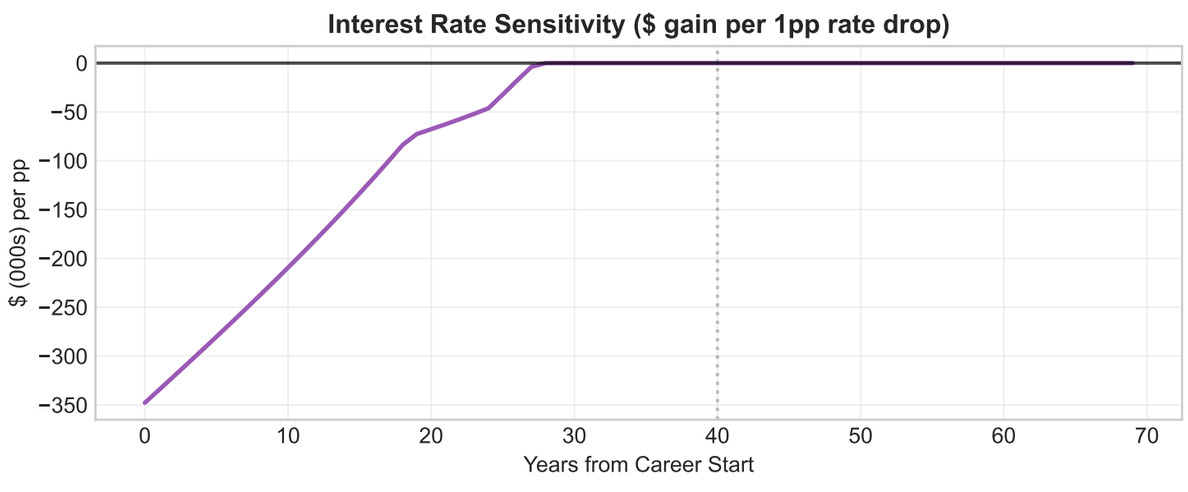




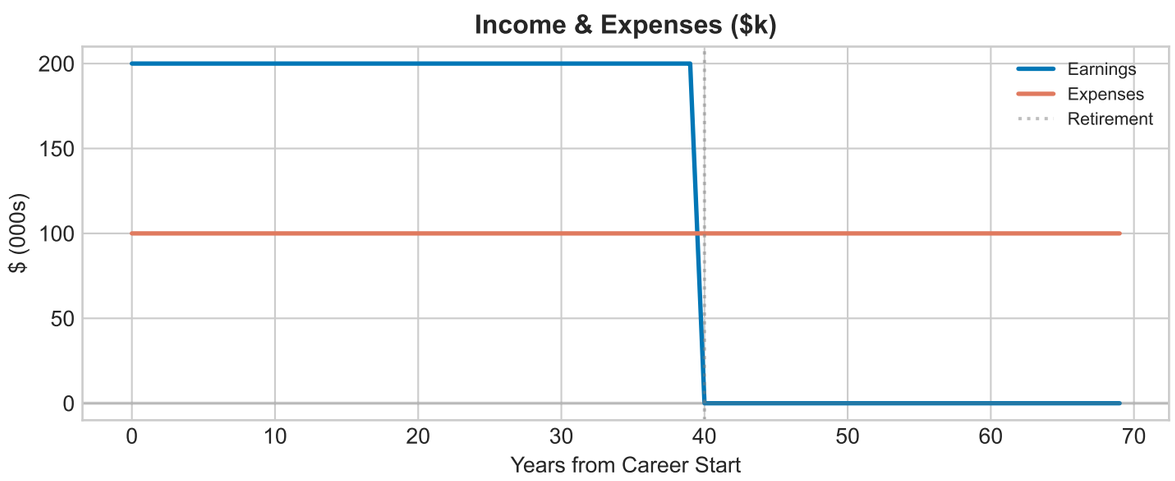


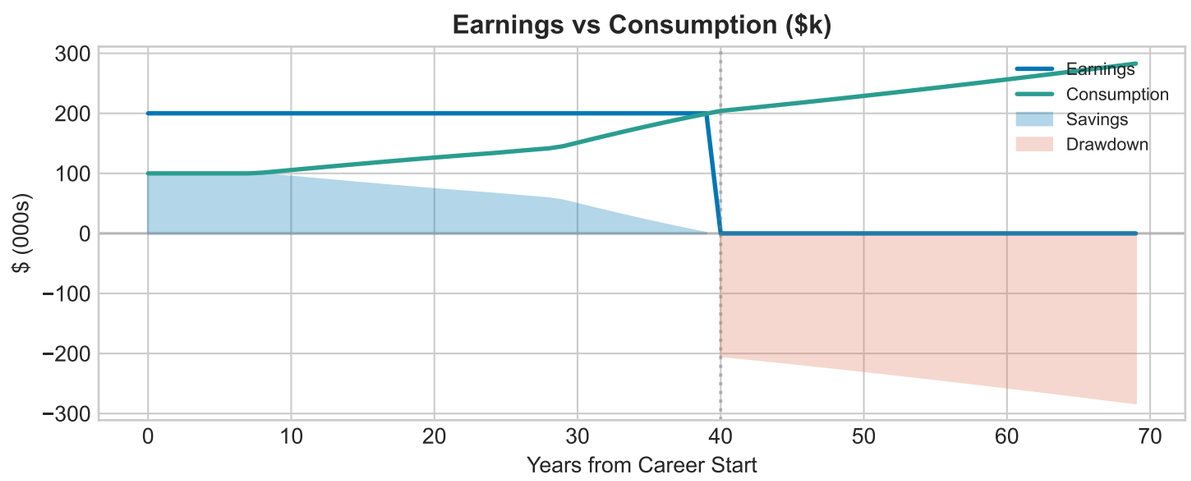


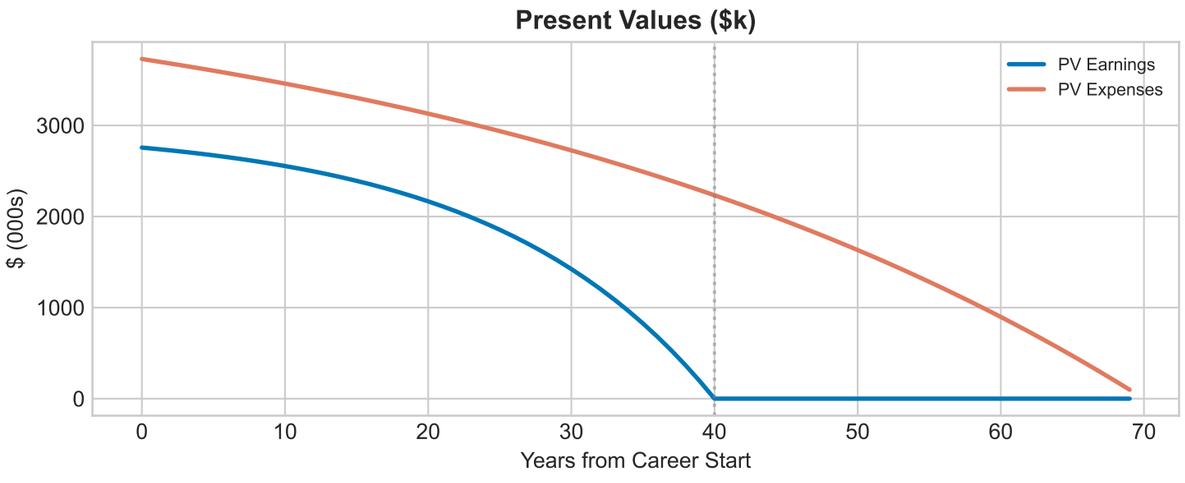


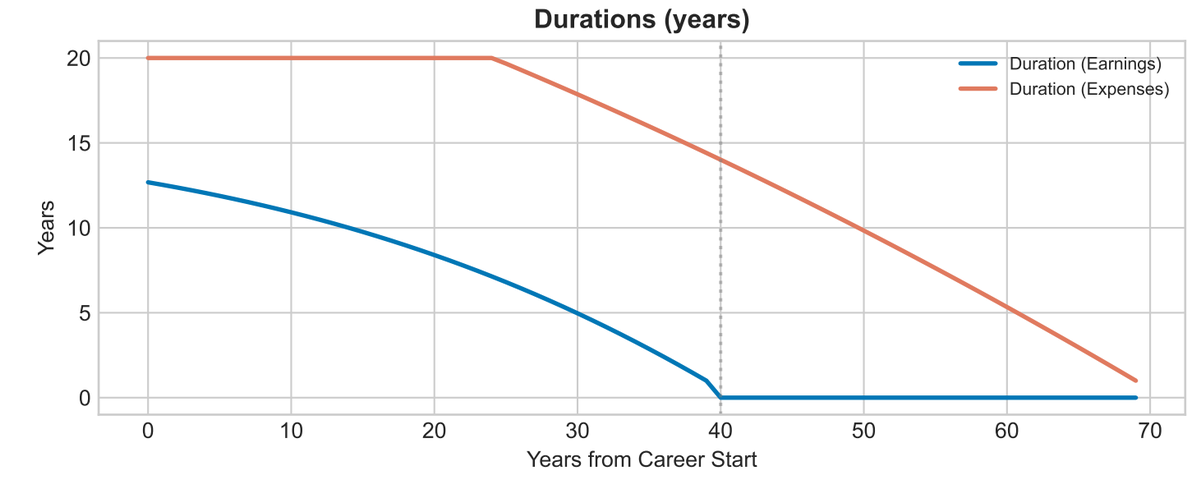


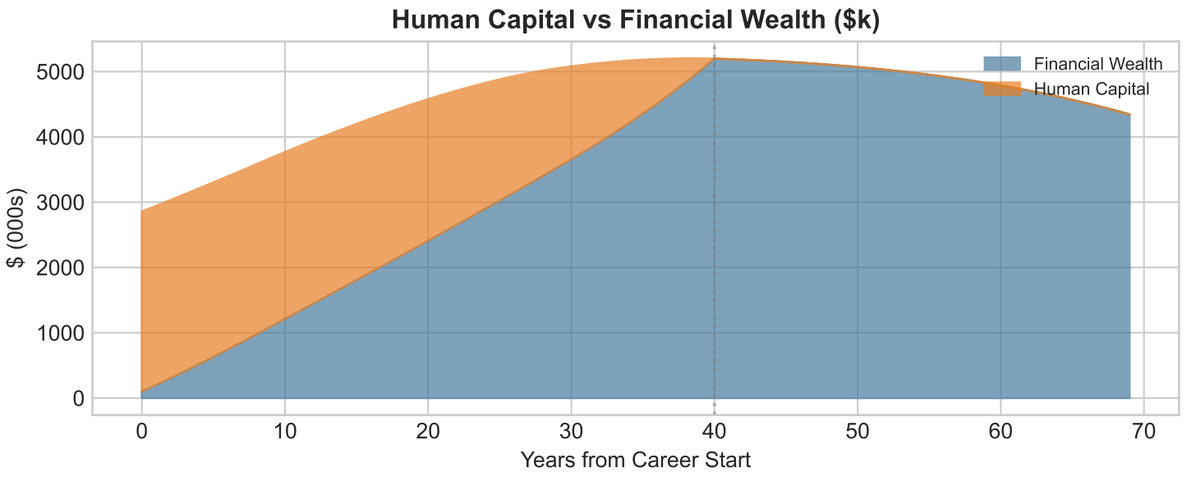
PAGE 3: DETERMINISTIC MEDIAN PATH (Beta = 1.0)

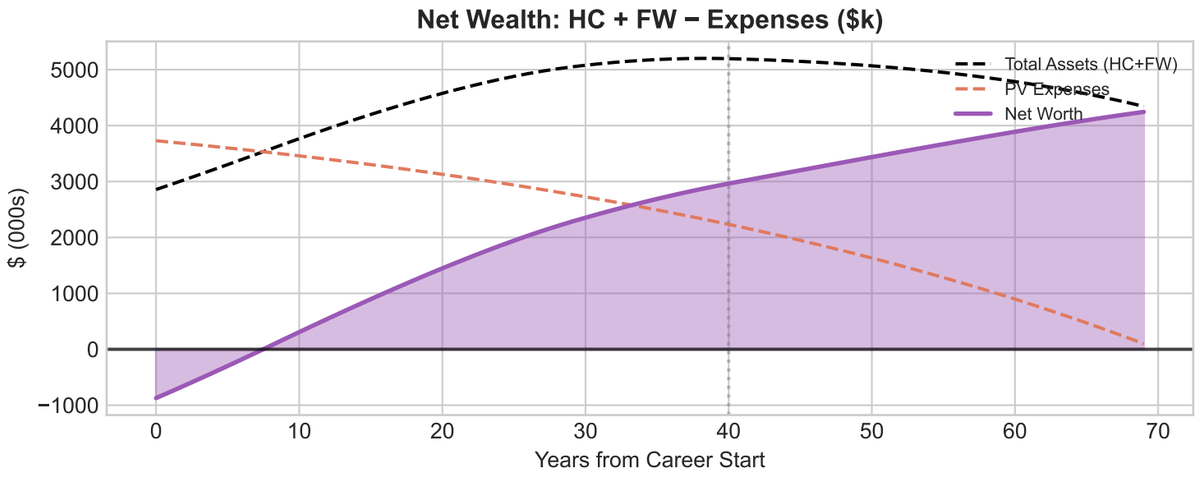


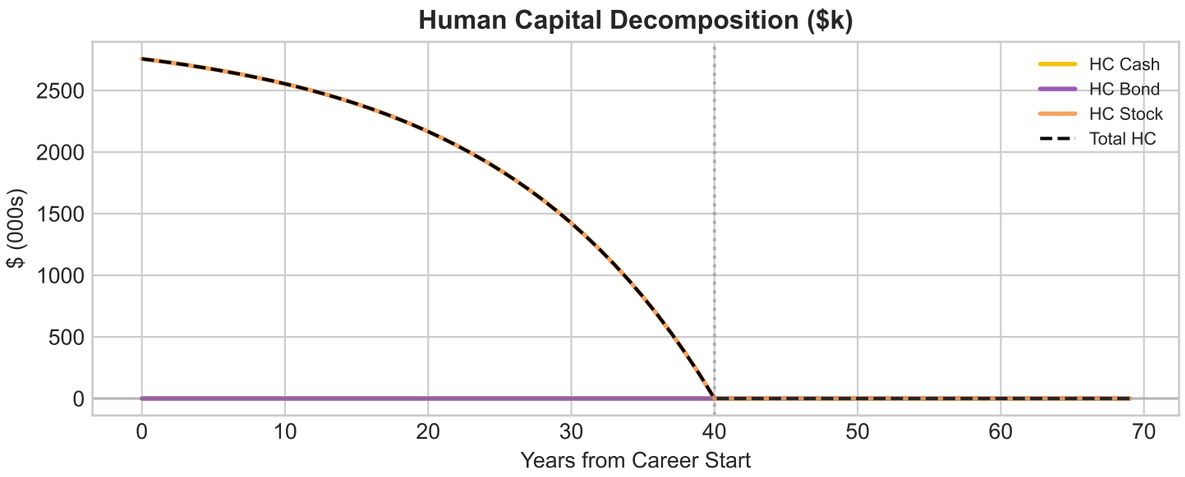


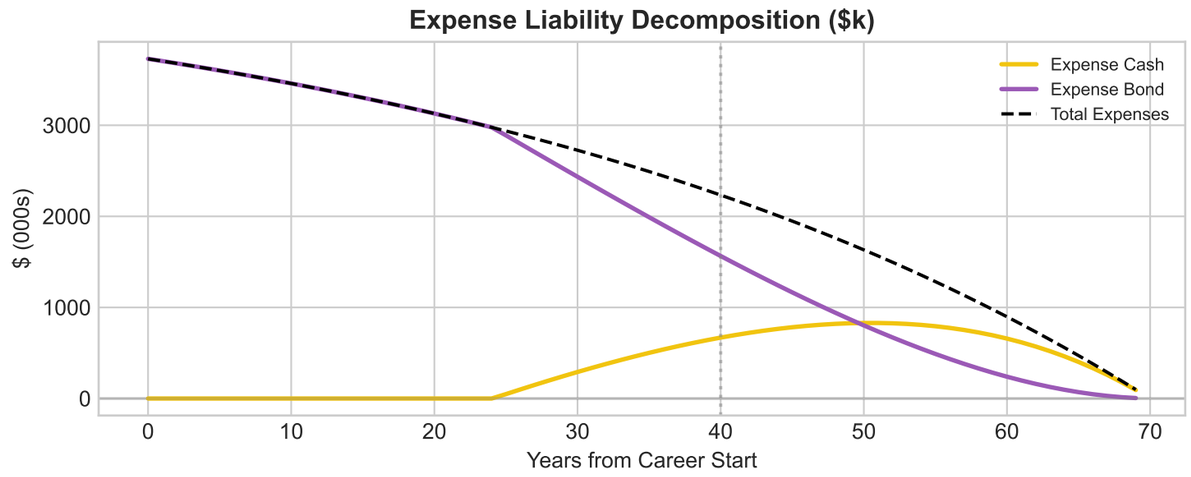


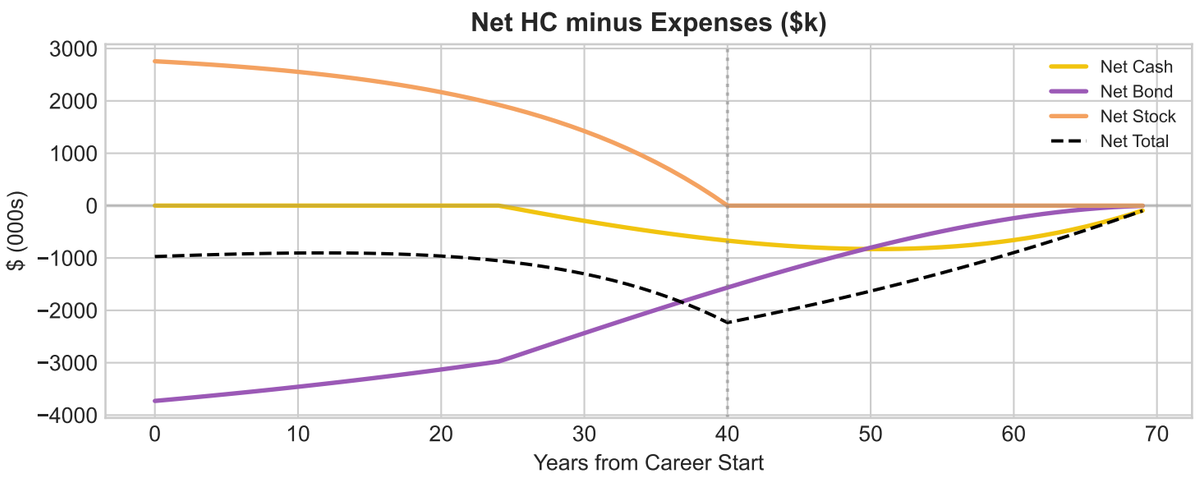


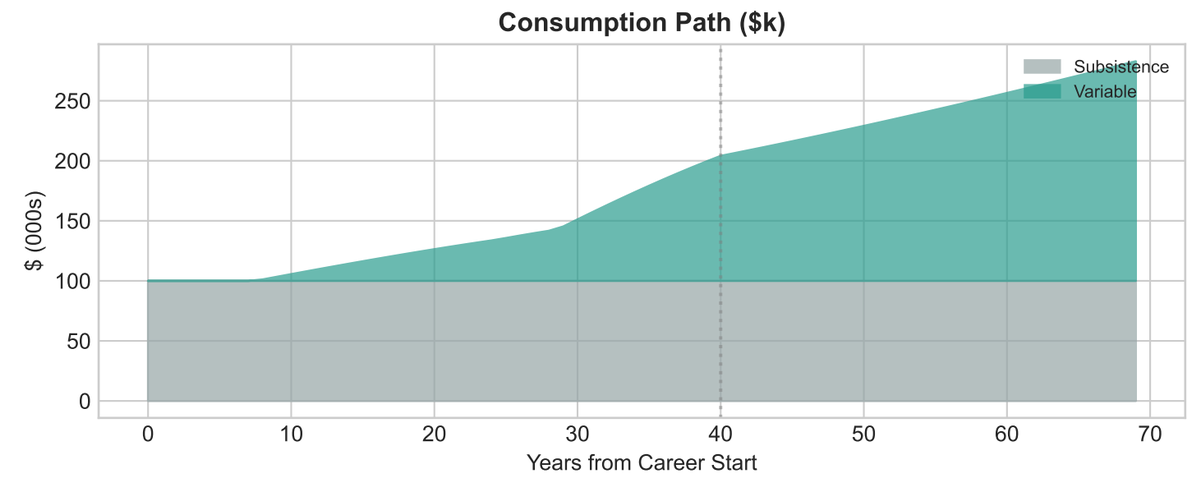


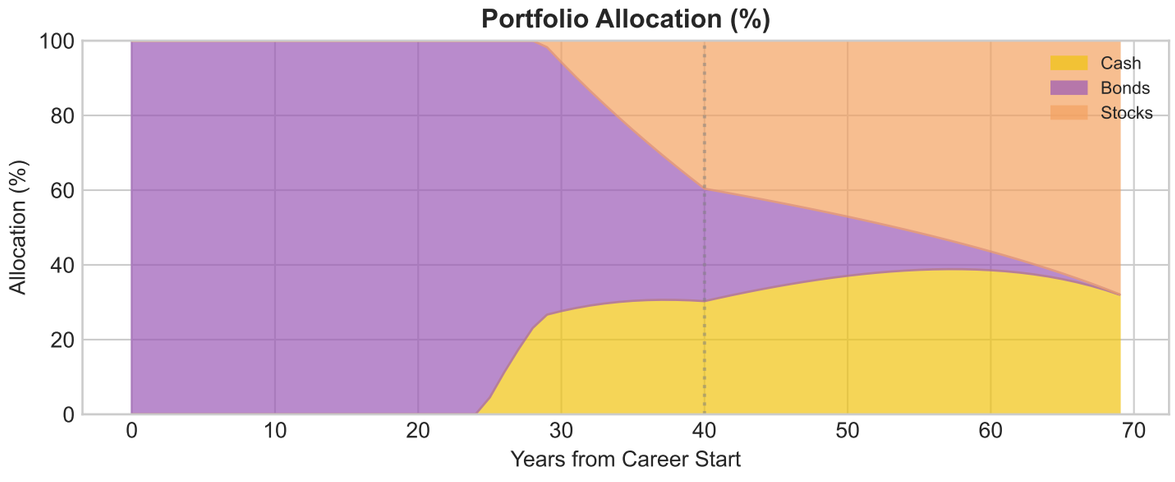


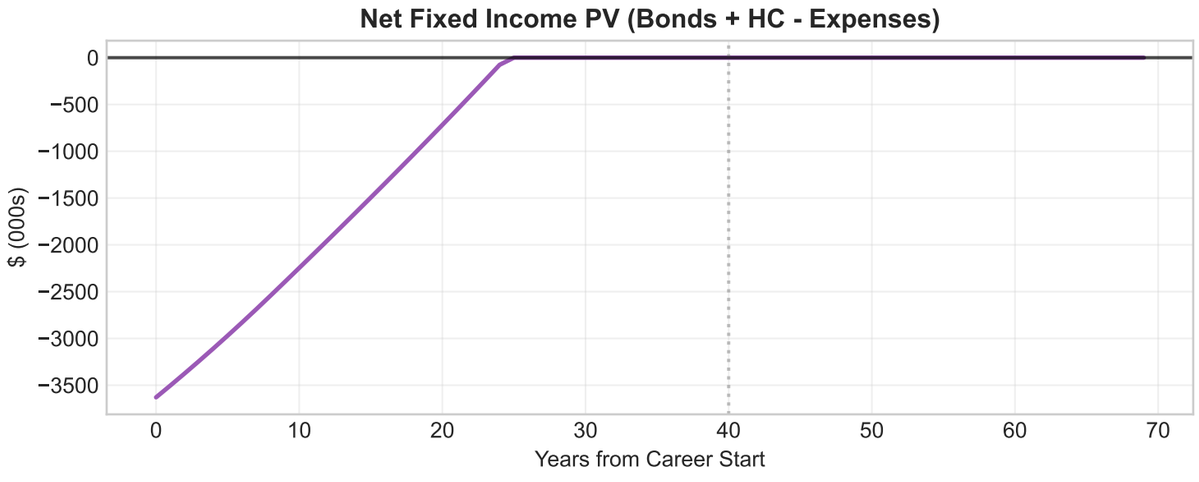


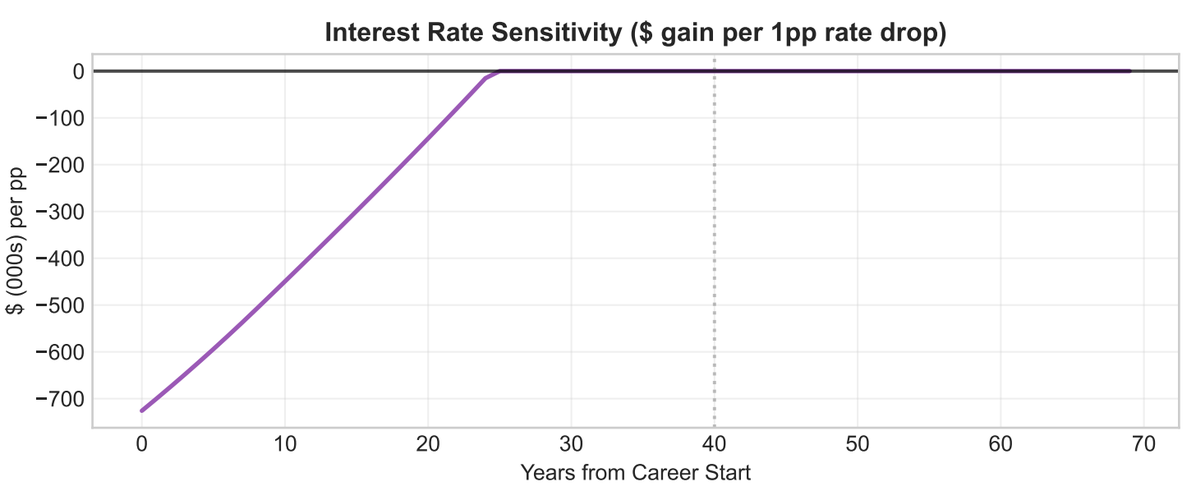




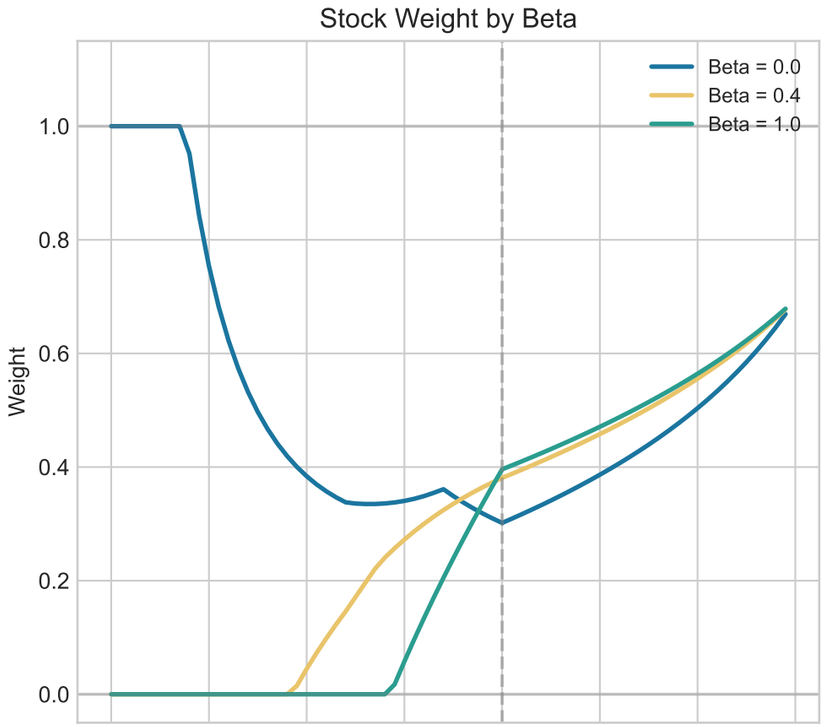


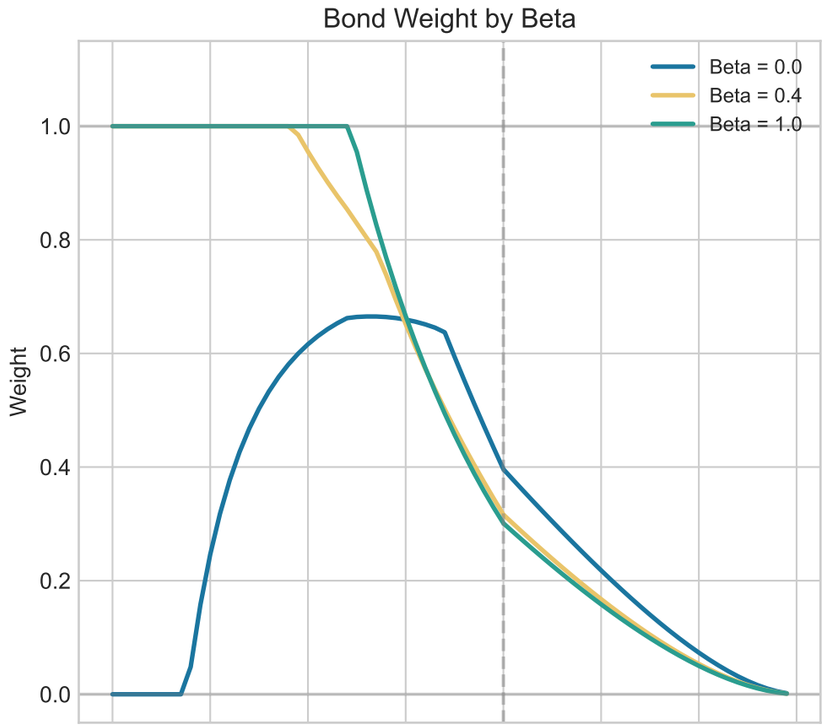


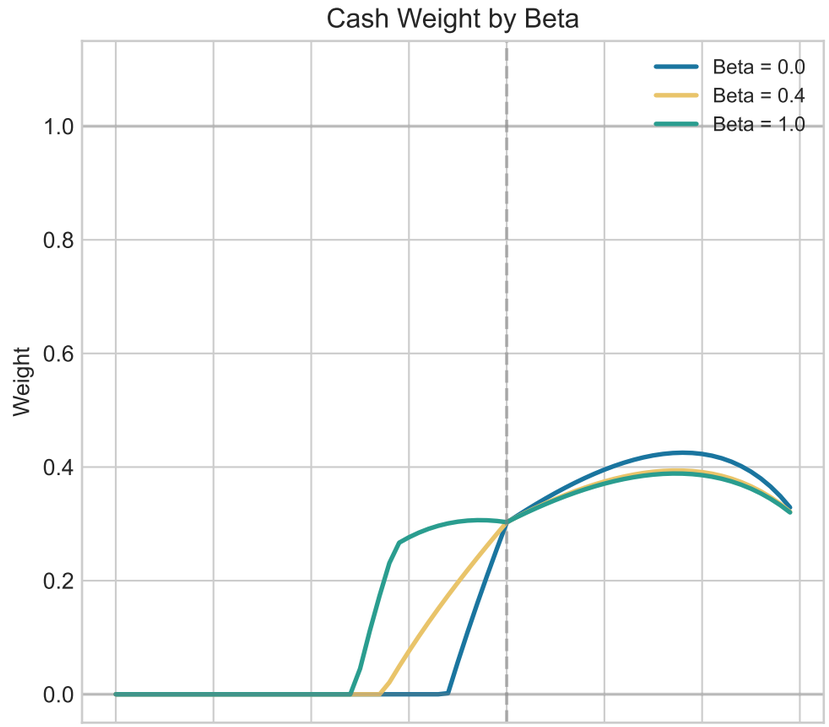


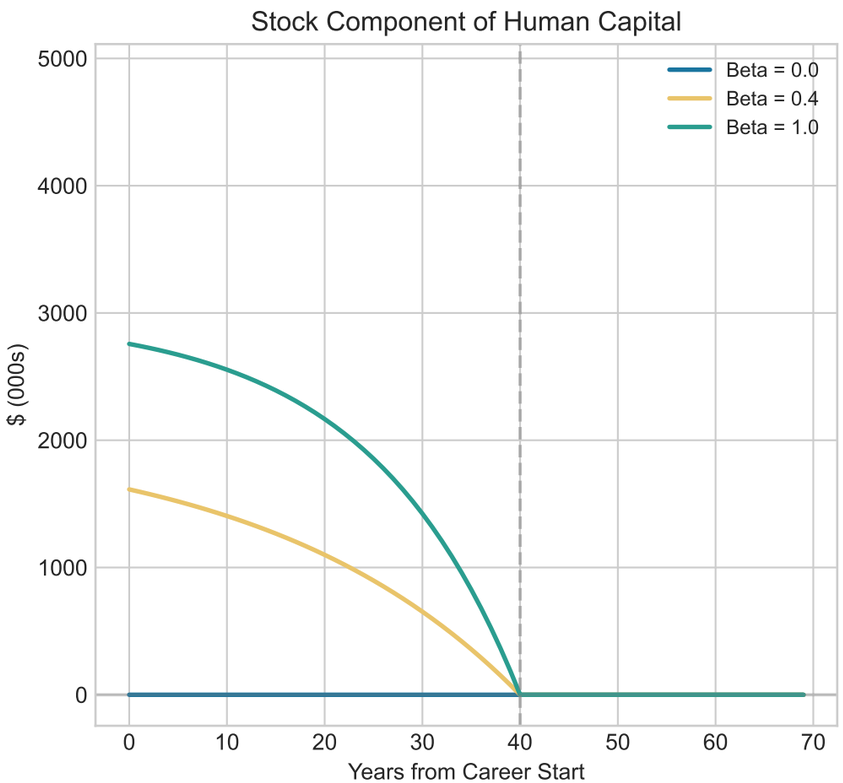


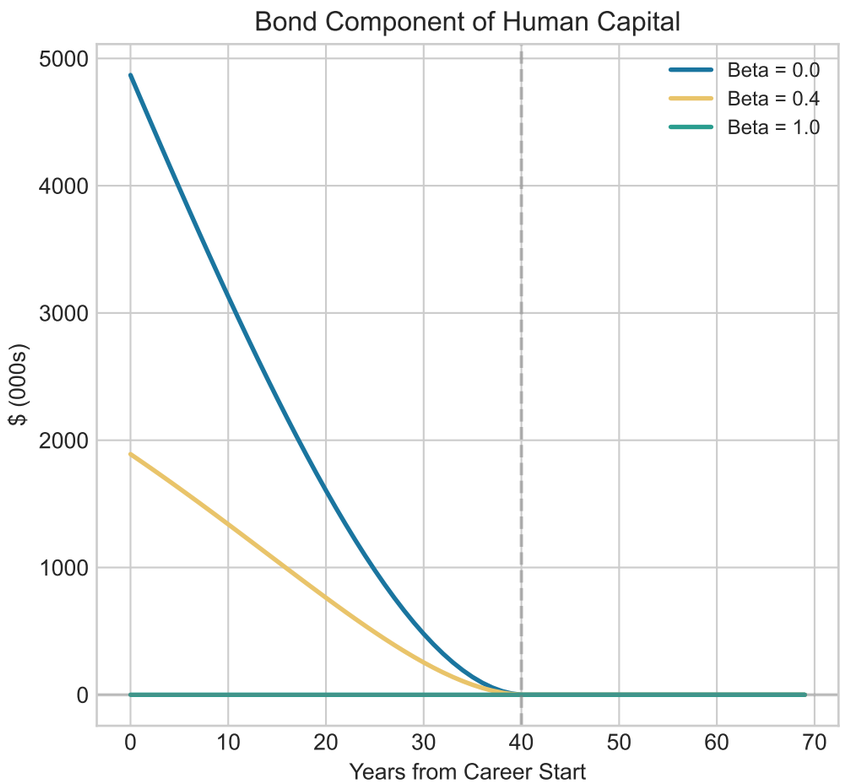
Effect of Stock Beta on Portfolio Allocation & Human Capital

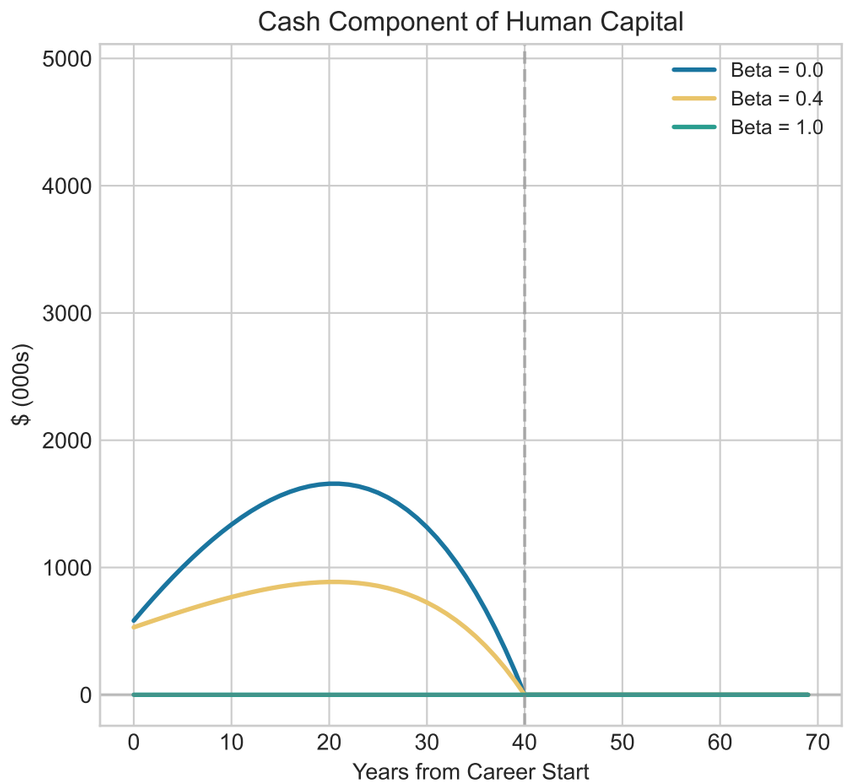




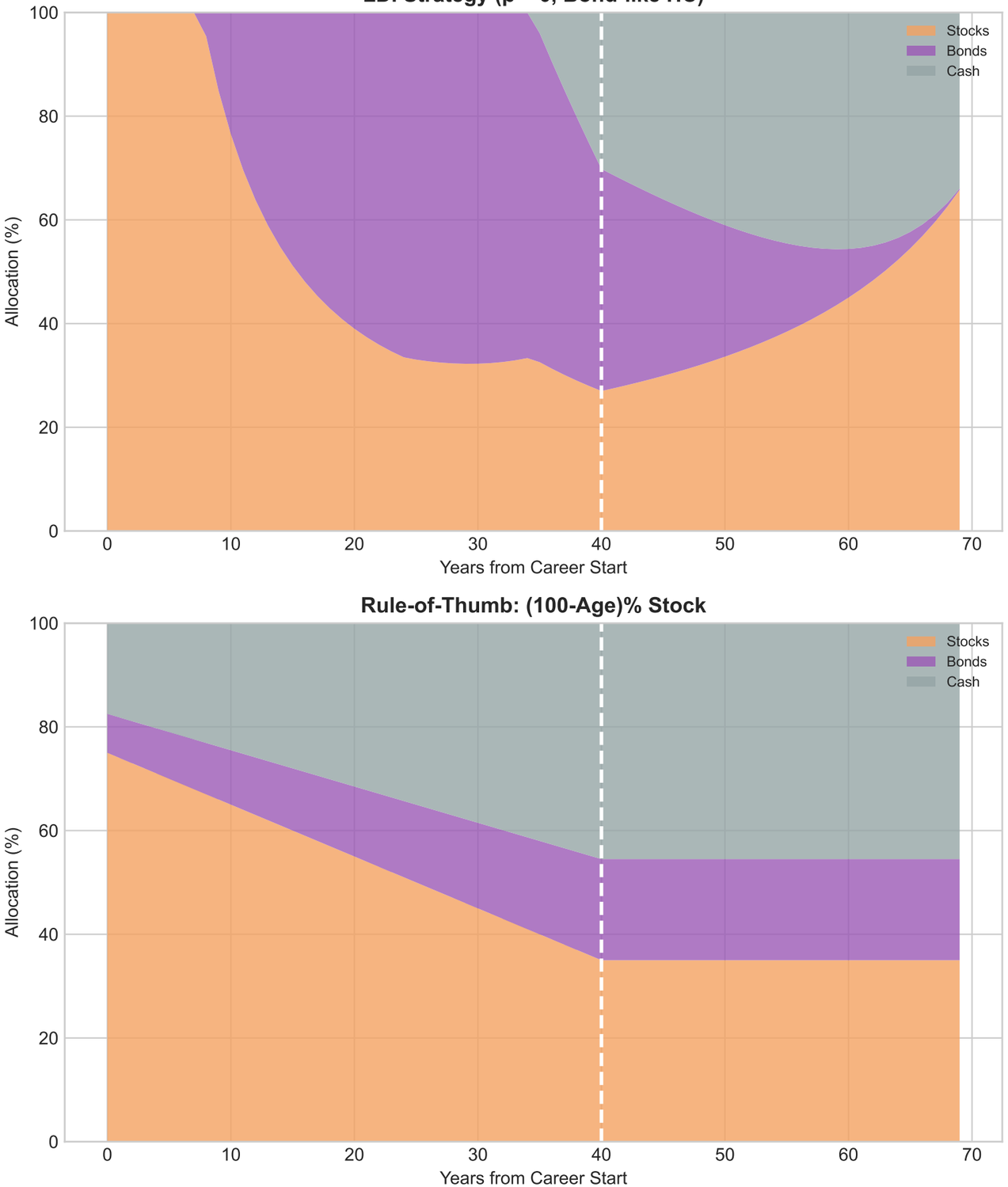


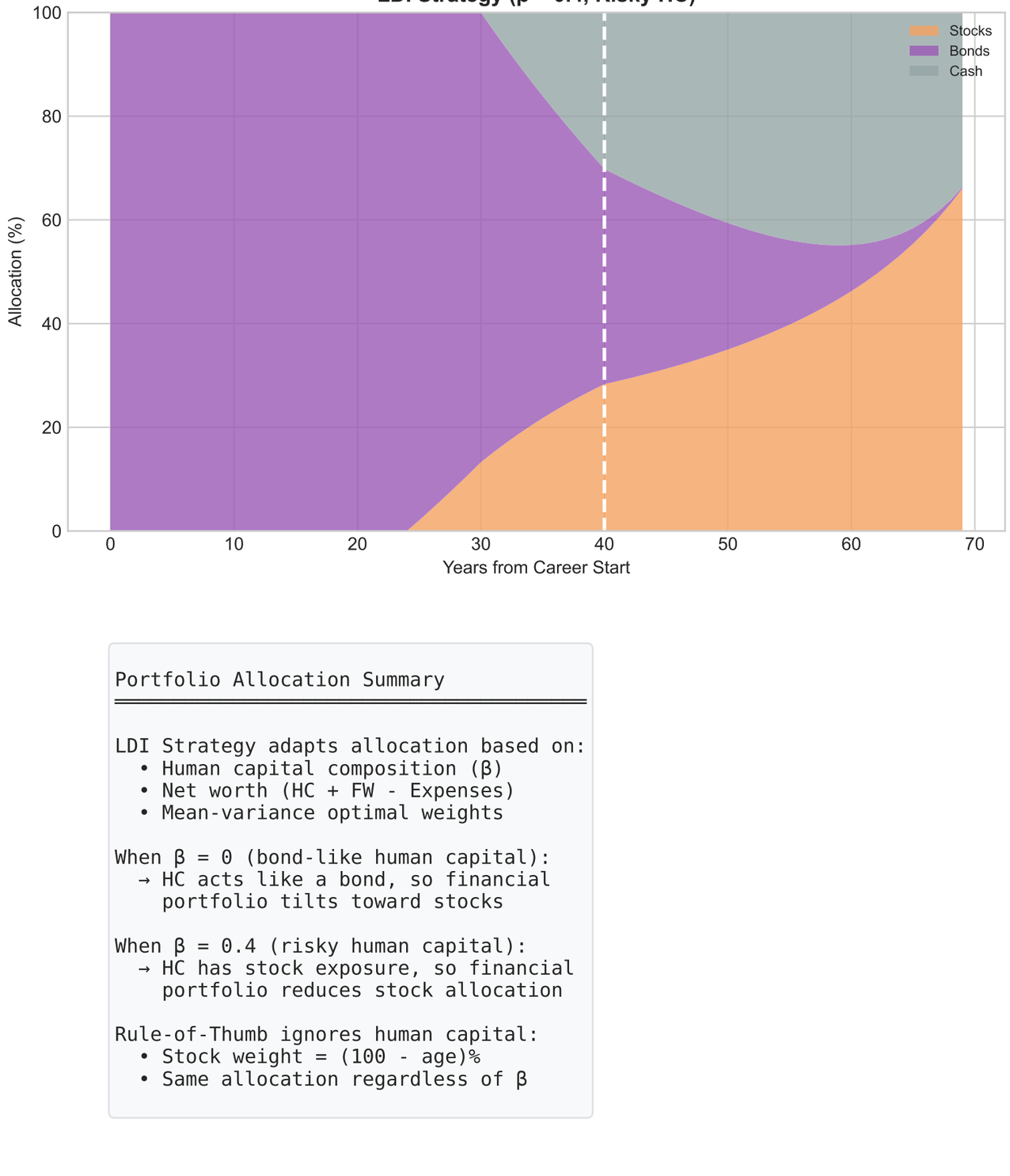






PAGE 5: Portfolio Allocation Comparison — LDI vs Rule-of-Thumb



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Portfolio Allocation Summary
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LDI Strategy adapts allocation based on:
  • Human capital composition (β)
  • Net worth (HC + FW - Expenses)
  • Mean-variance optimal weights

When β = 0 (bond-like human capital):
  → HC acts like a bond, so financial
    portfolio tilts toward stocks

When β = 0.4 (risky human capital):
  → HC has stock exposure, so financial
    portfolio reduces stock allocation

Rule-of-Thumb ignores human capital:
  • Stock weight = (100 - age)%
  • Same allocation regardless of β
```

Lifecycle Investment Strategy Parameters
==========

Age Parameters:
  - Career Start: 25
  - Retirement Age: 65
  - Planning Horizon: 95

Income Parameters:
  - Initial Earnings: $200k
  - Earnings Growth: 0.0%

Expense Parameters:
  - Base Expenses: $100k
  - Retirement Expenses: $100k

Initial Wealth: $100k

Economic Parameters:
  - Risk-Free Rate: 2.0%
  - Equity Premium: 4.5%
  - Stock Volatility: 18%
  - Risk Aversion (gamma): 2.0

Human Capital:
  - Stock Beta: 0.00
  - Bond Duration: 20.0 years

Target Allocation (Mean-Variance Optimization):
  - Stocks: 69.4%
  - Bonds: 0.0%
  - Cash: 30.6%