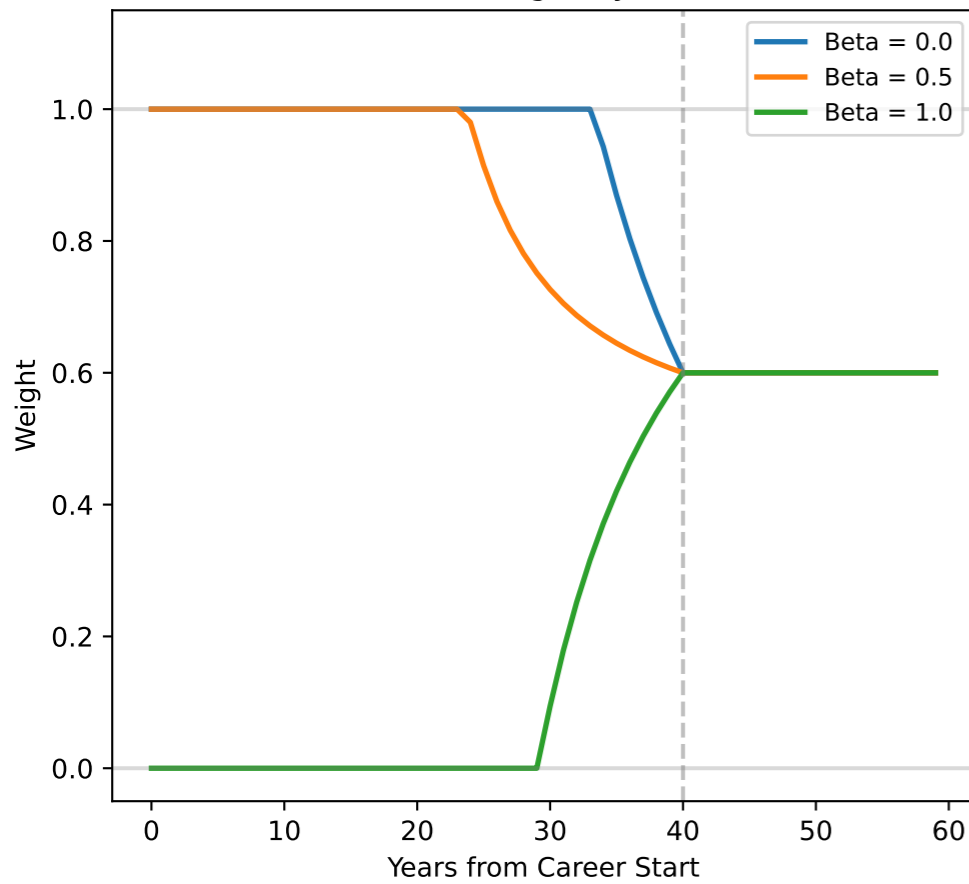
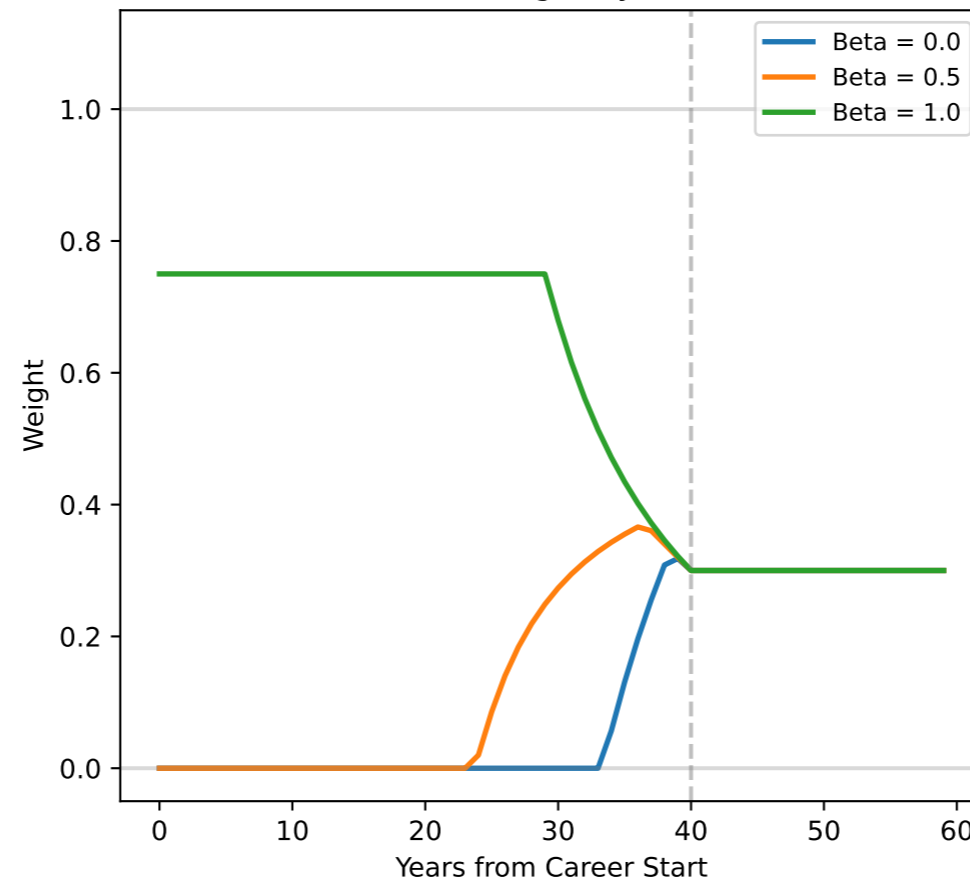


# Effect of Stock Beta on Portfolio Allocation

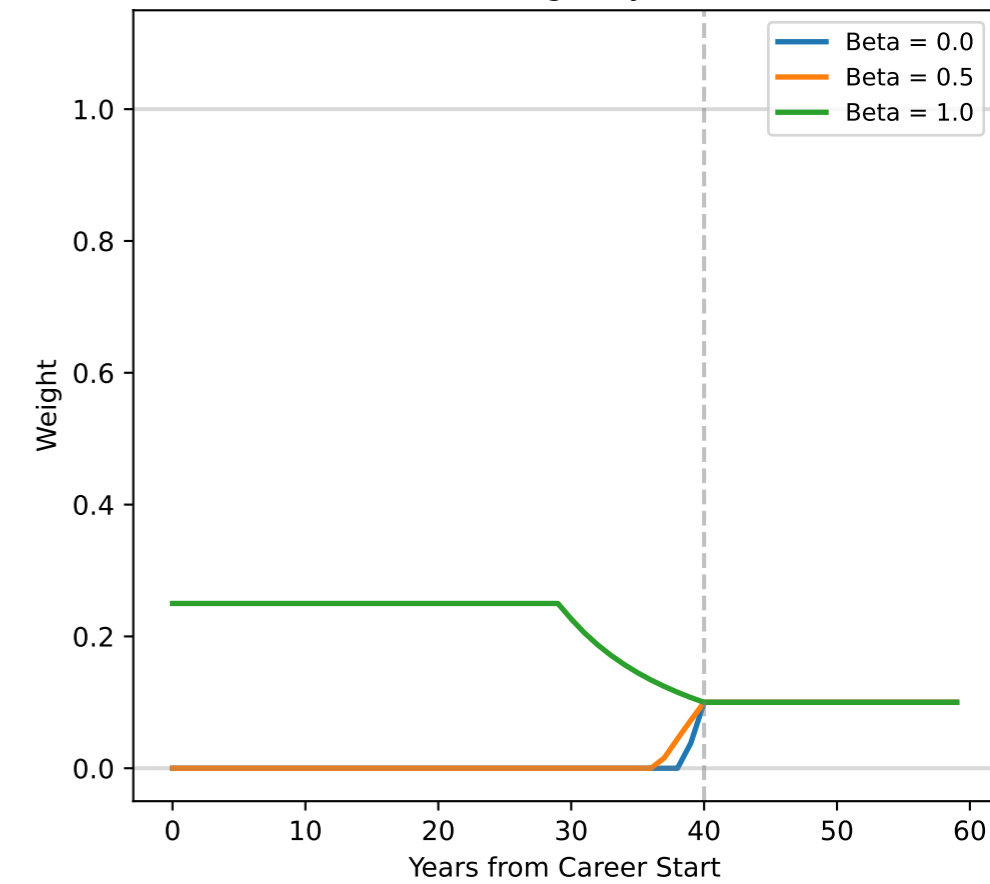
## Stock Weight by Beta



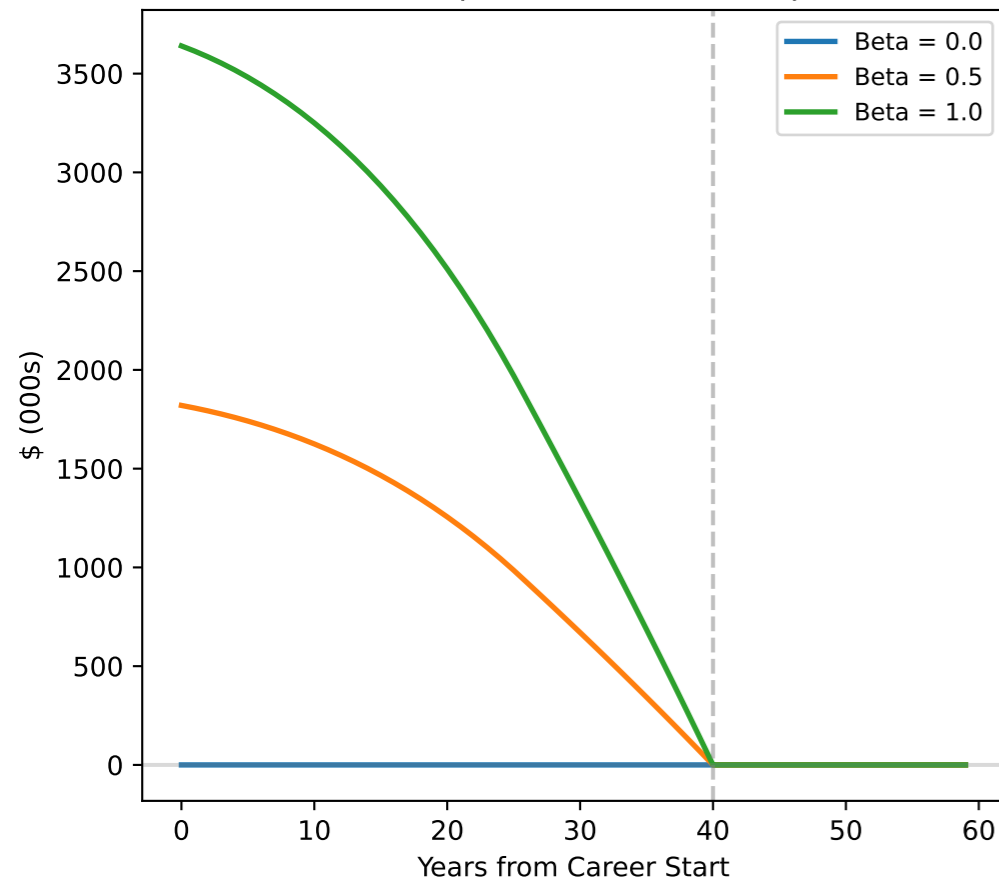
## Bond Weight by Beta



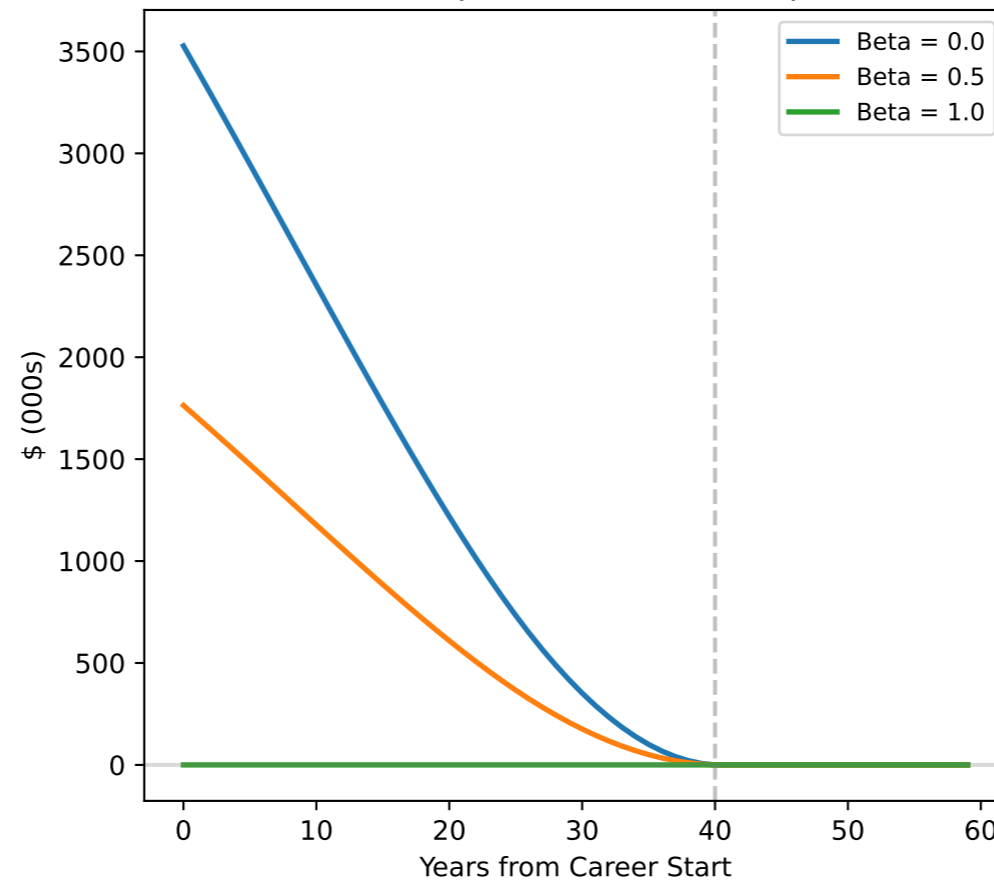
## Cash Weight by Beta



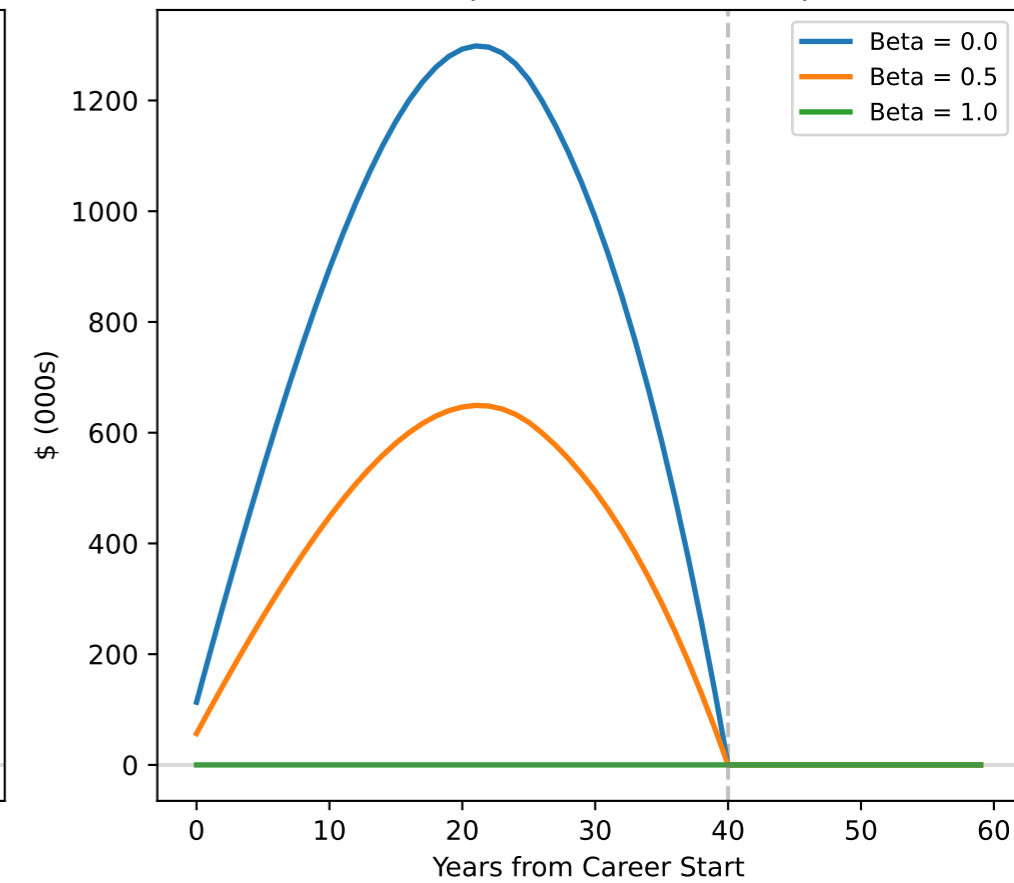
## Stock Component of Human Capital



## Bond Component of Human Capital

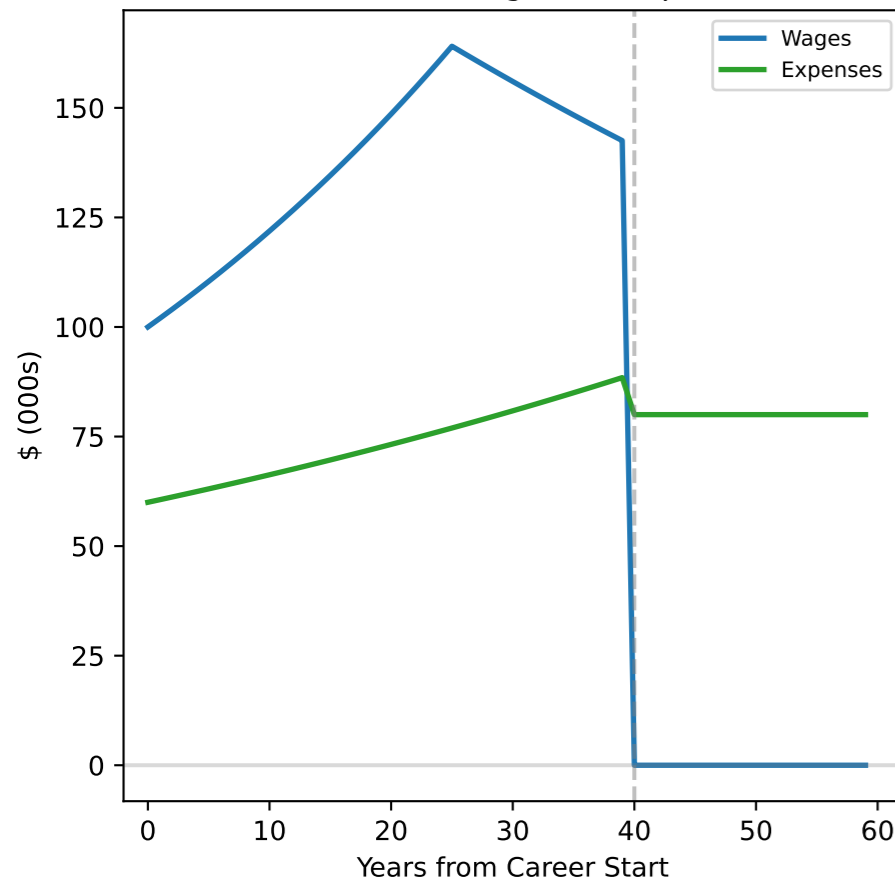


## Cash Component of Human Capital

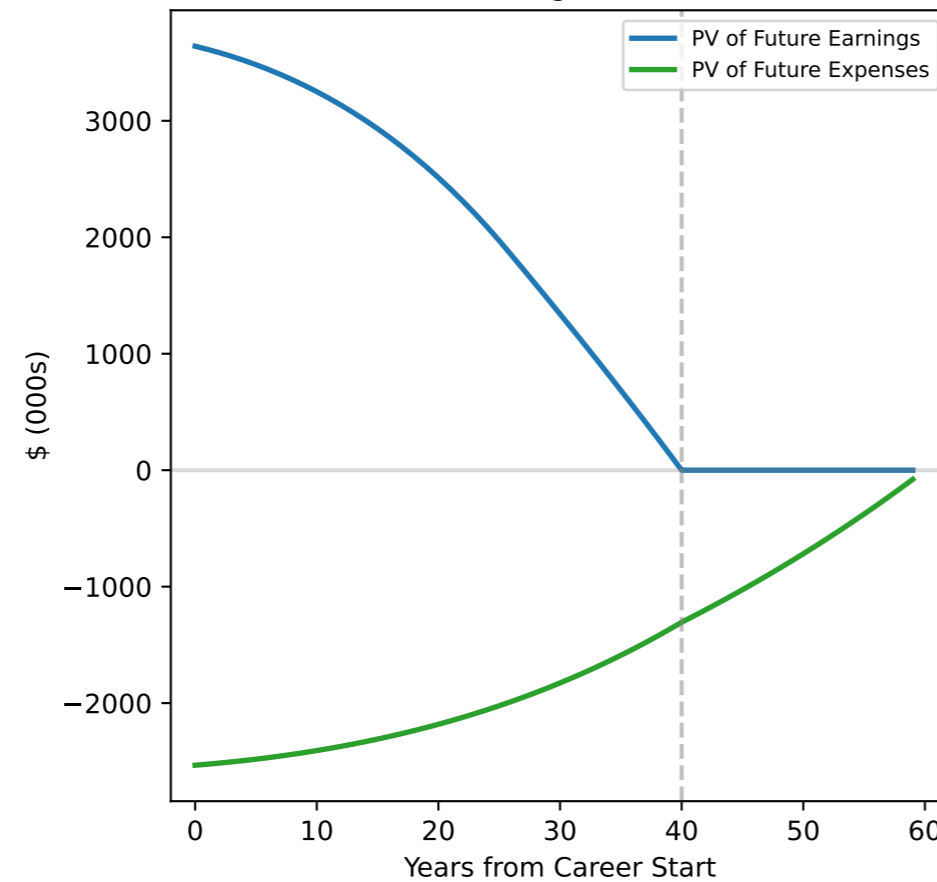


# Lifecycle Investment Strategy - Beta = 0.0

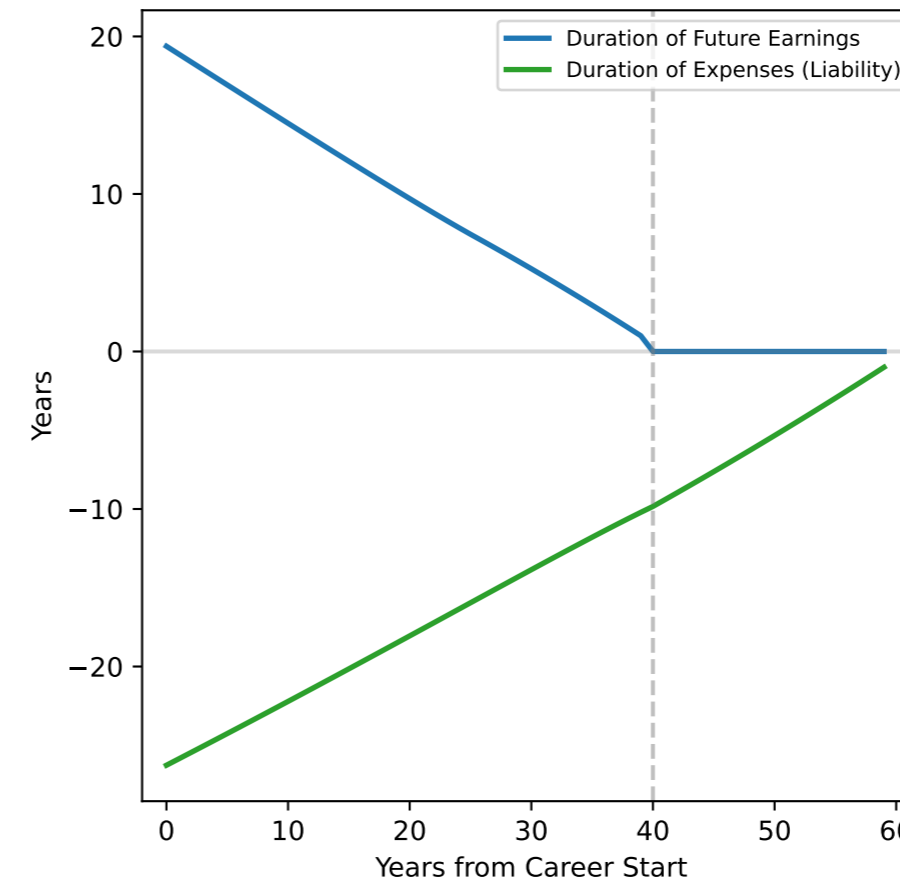
## Profile of Earnings and Expenses



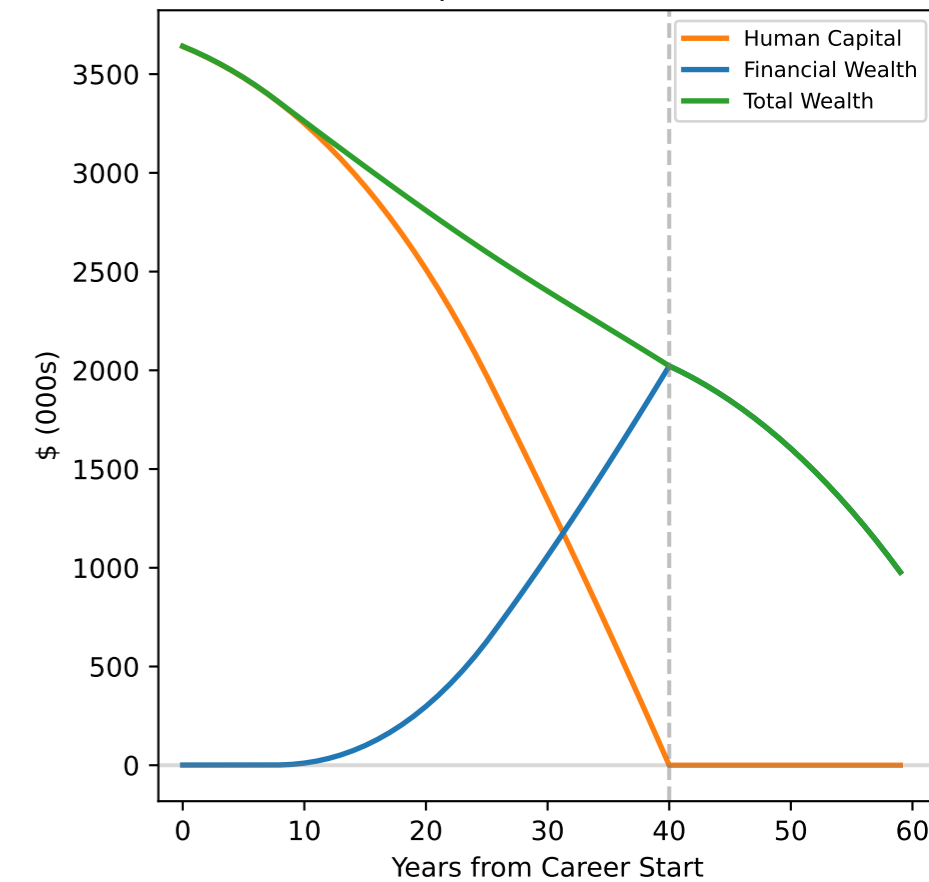
## Forward Looking Present Values



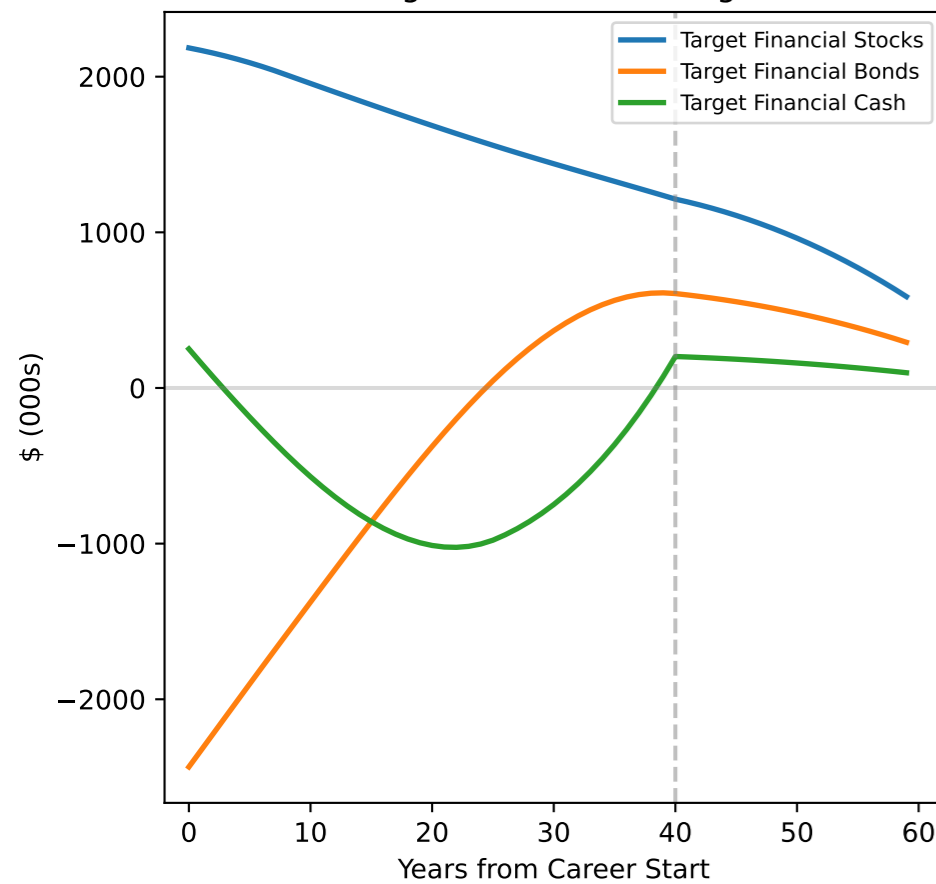
## Durations of Assets



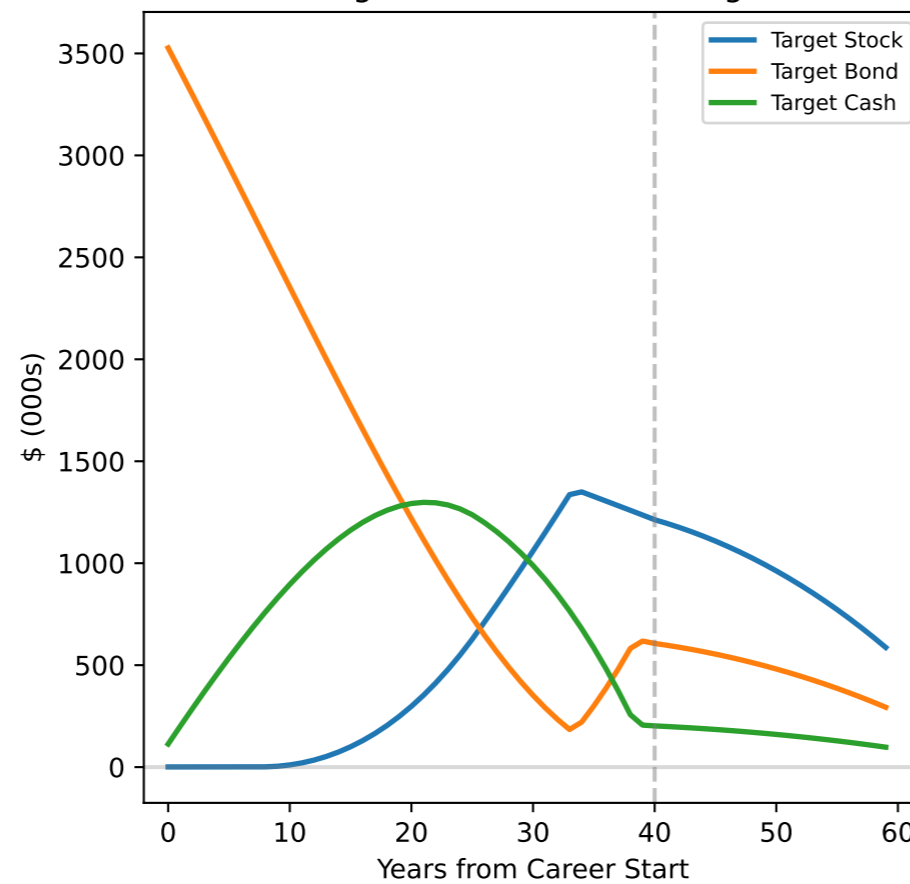
## Human Capital vs Financial Wealth



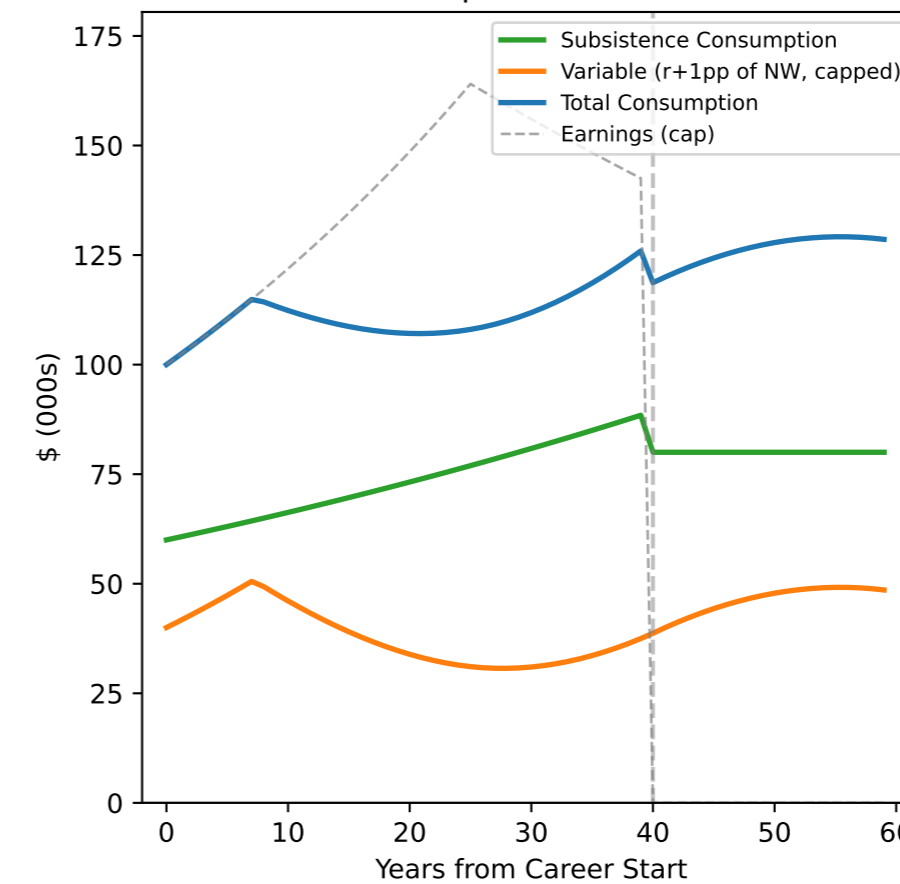
## Target Financial Holdings



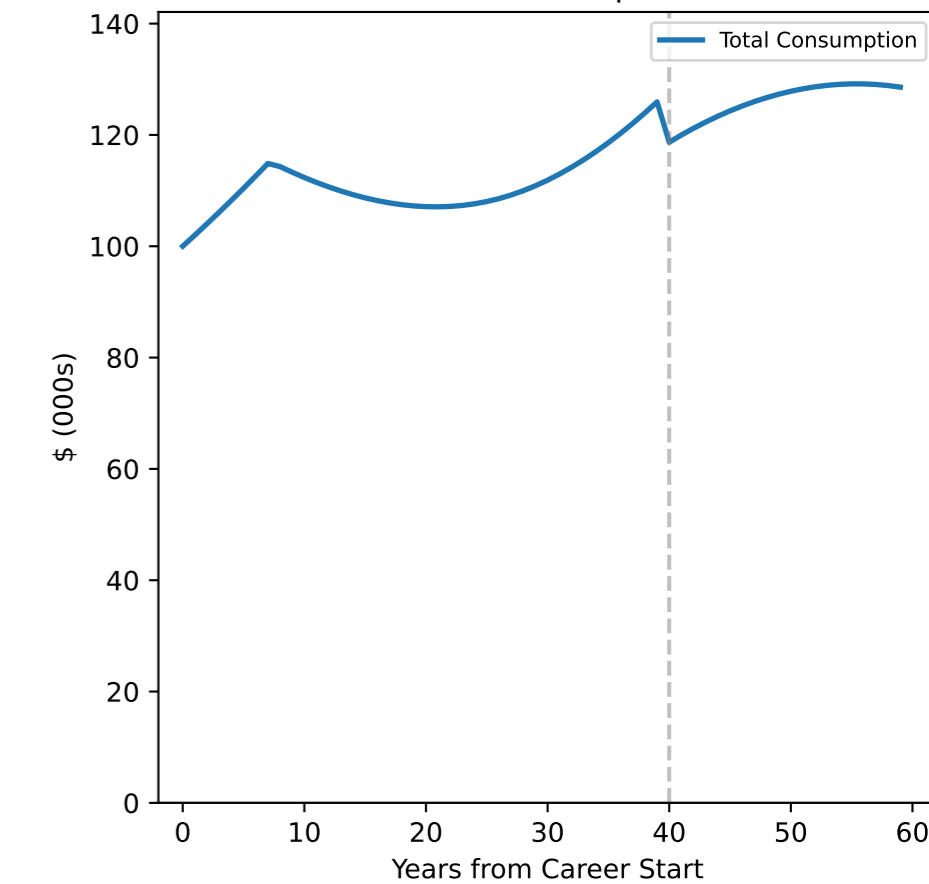
## Target Total Wealth Holdings



## Consumption Breakdown

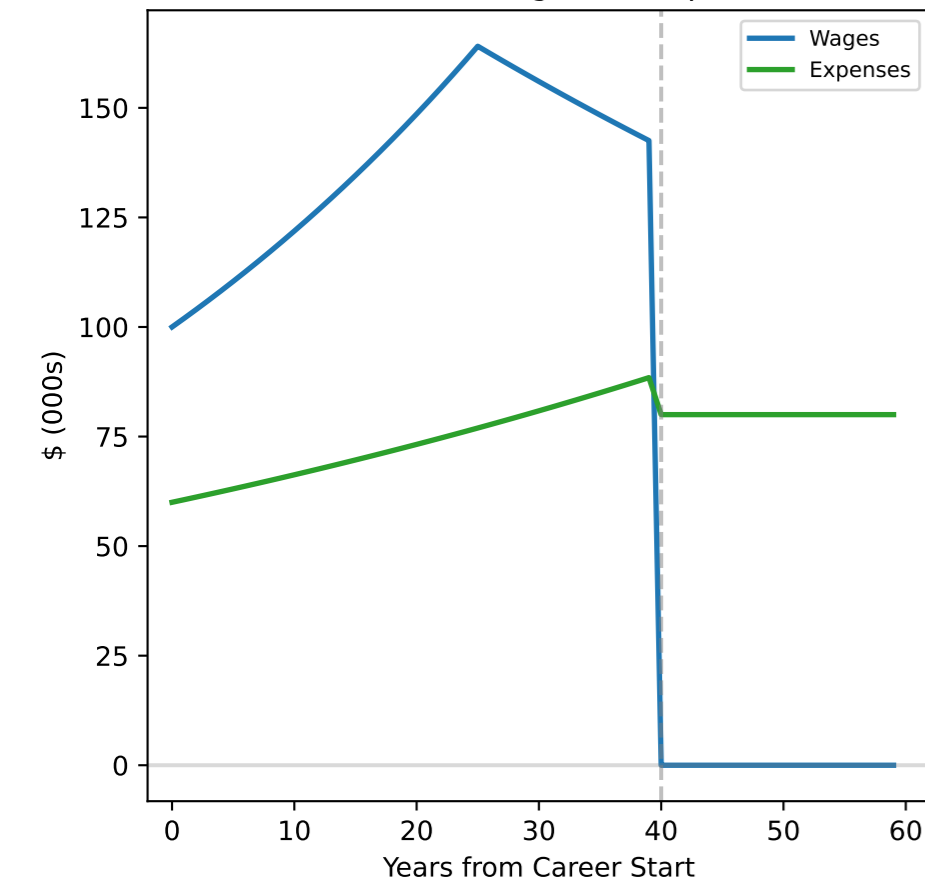


## Total Consumption

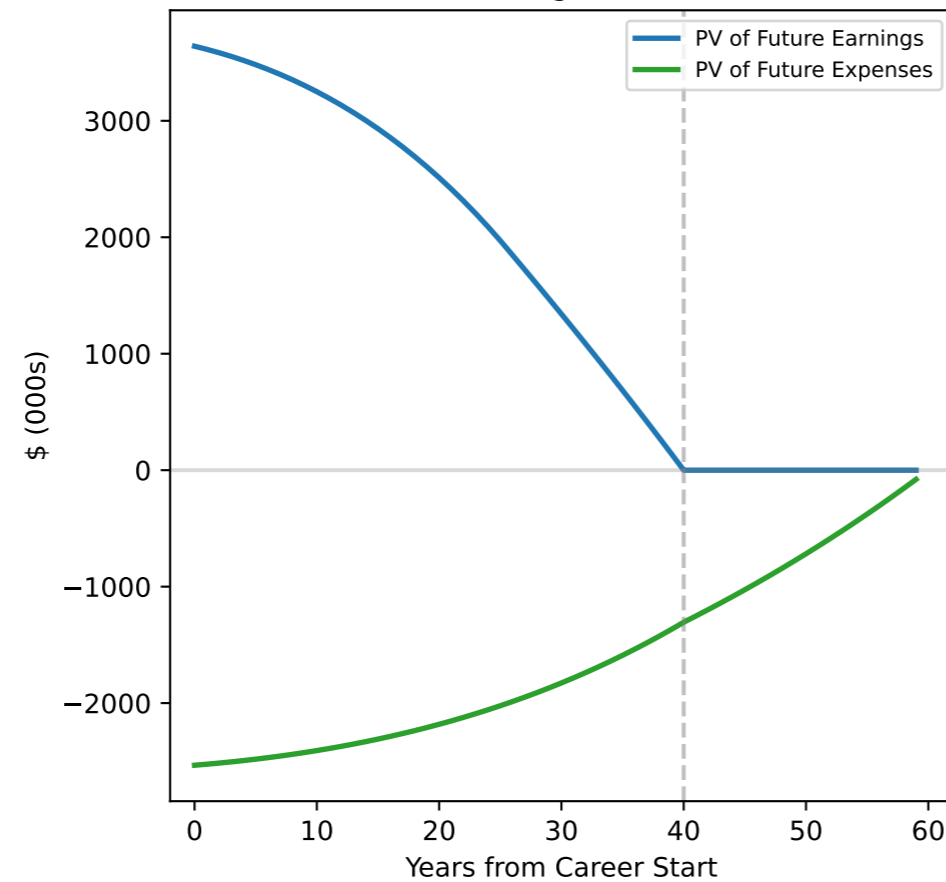


# Lifecycle Investment Strategy - Beta = 0.5

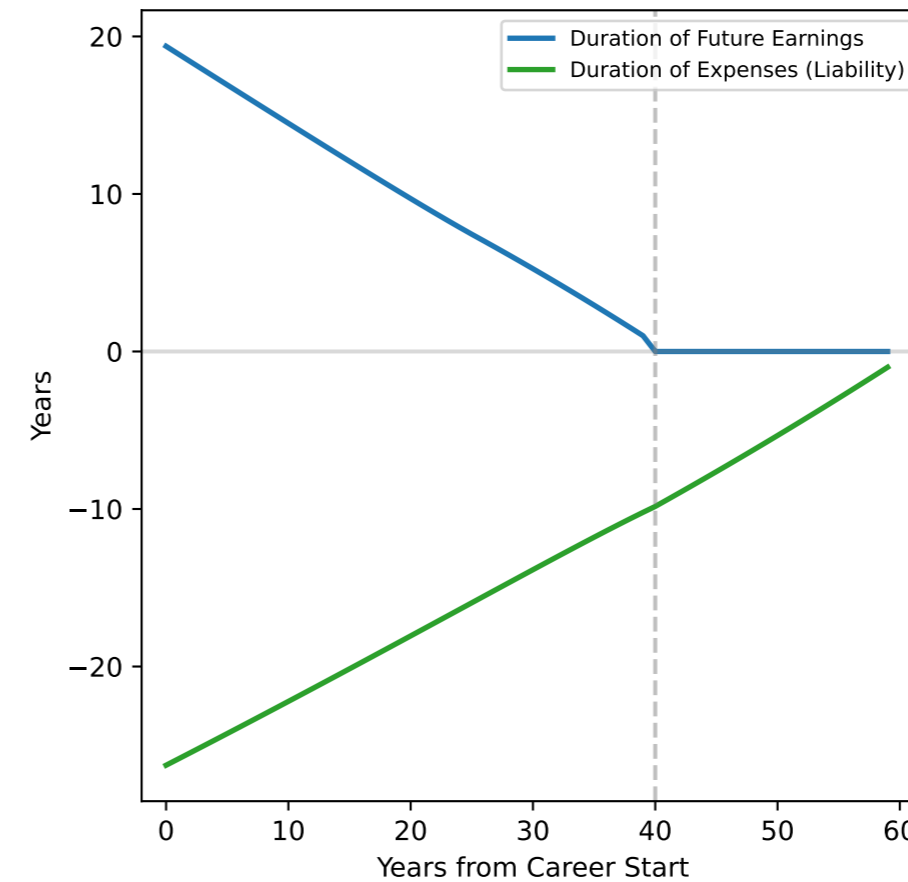
## Profile of Earnings and Expenses



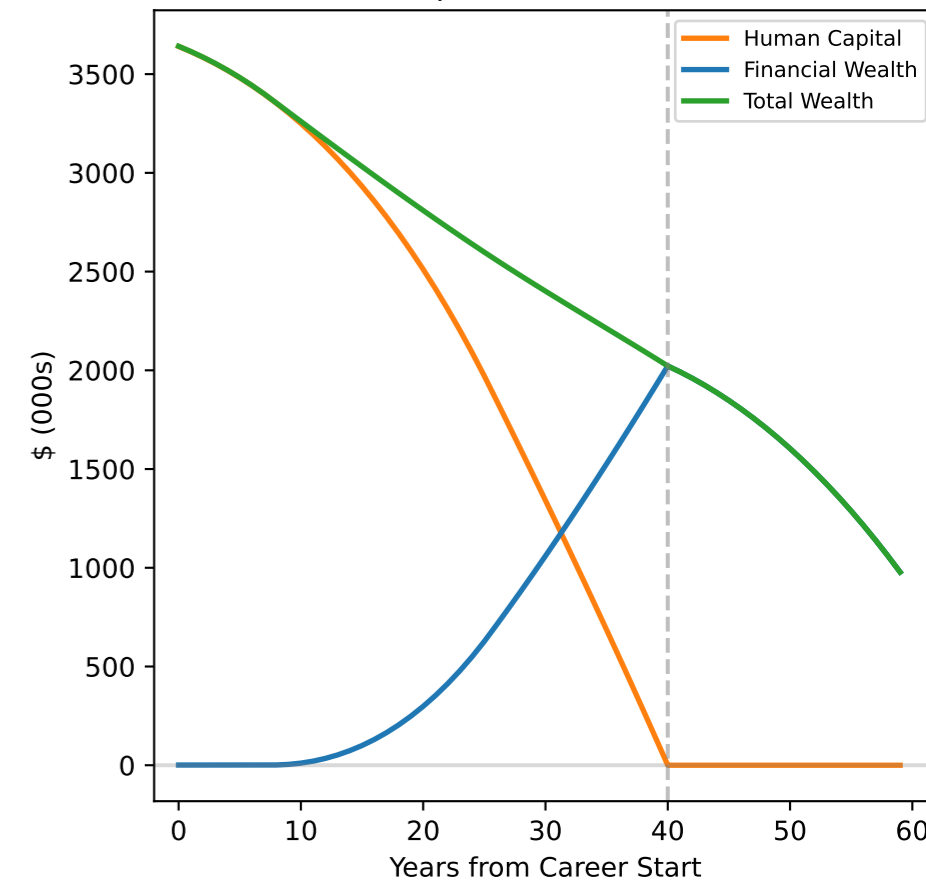
## Forward Looking Present Values



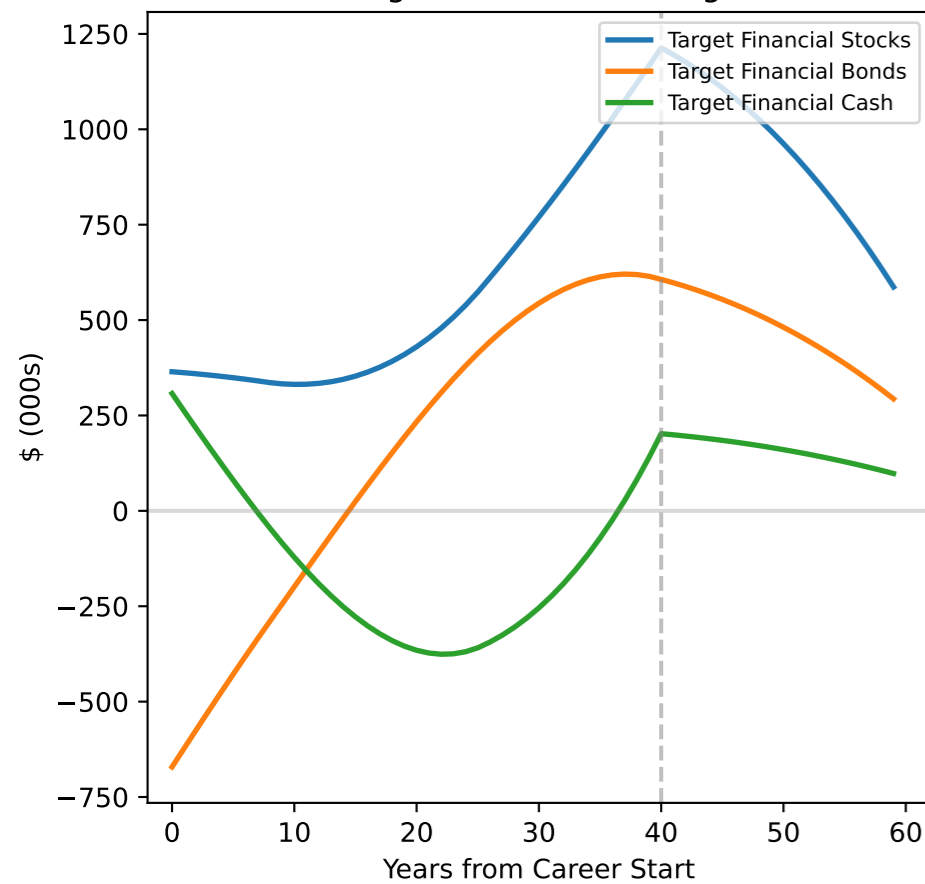
## Durations of Assets



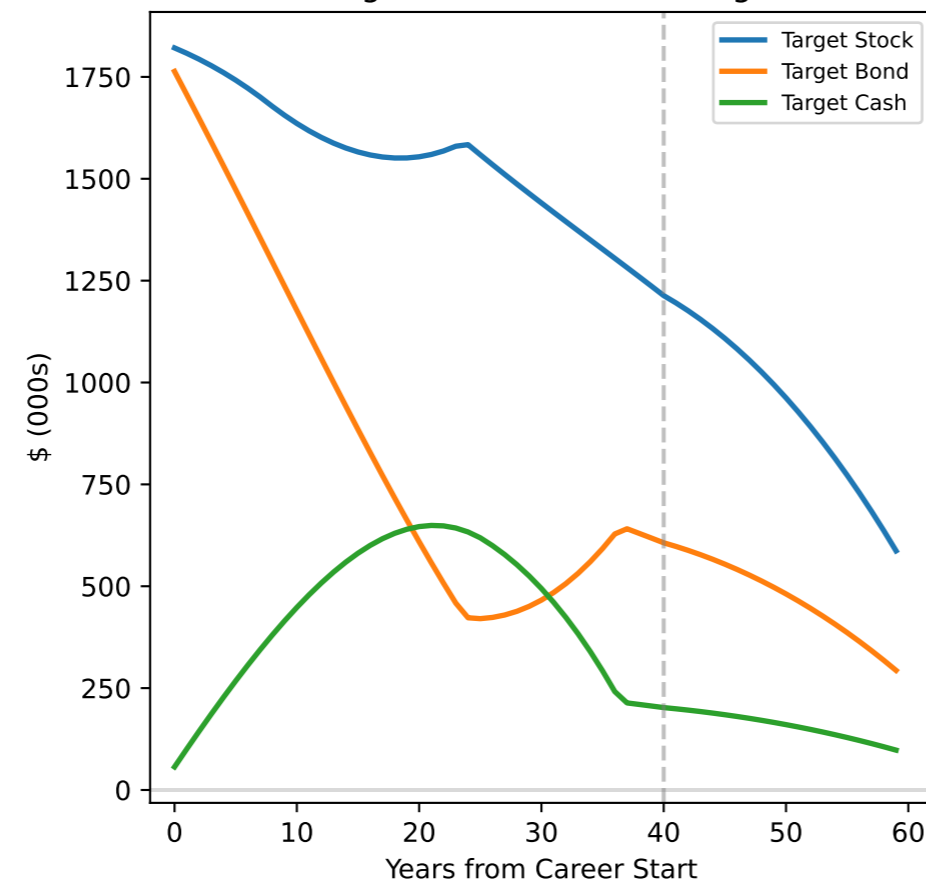
## Human Capital vs Financial Wealth



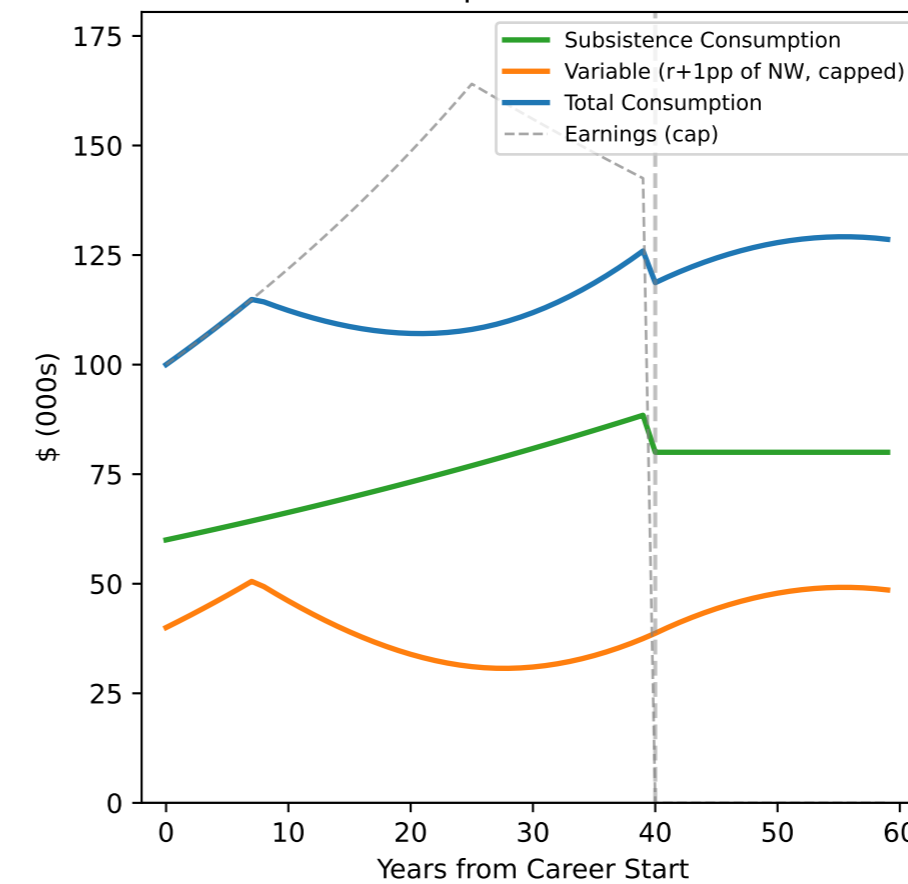
## Target Financial Holdings



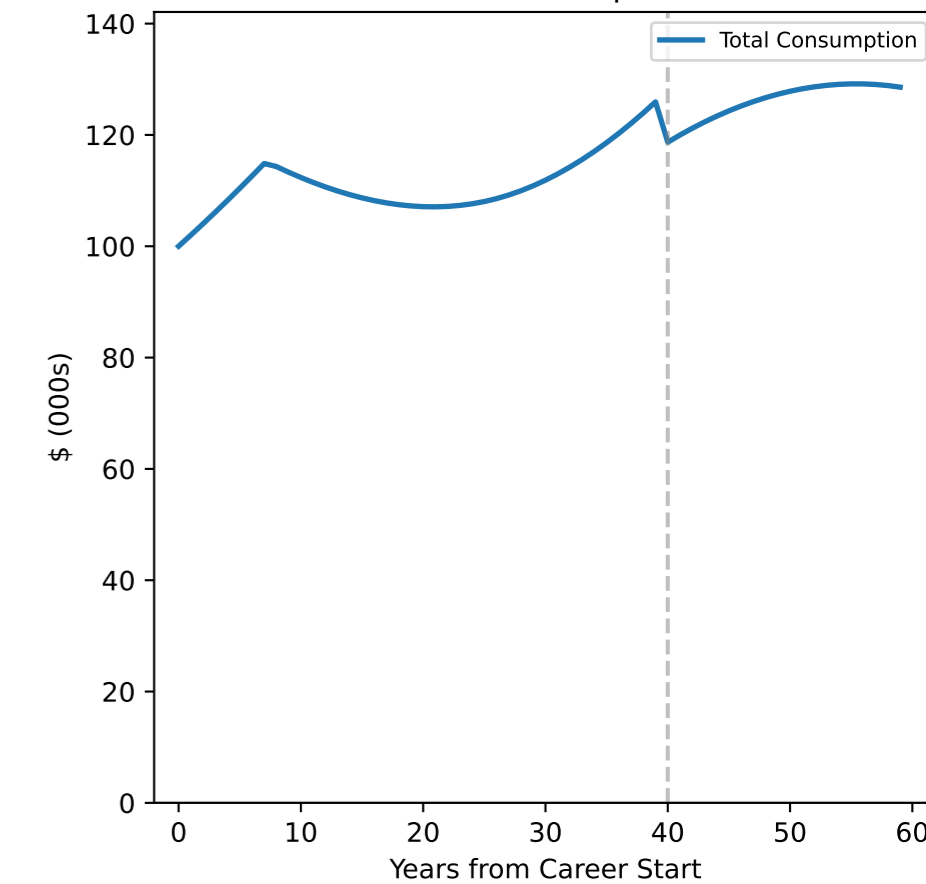
## Target Total Wealth Holdings



## Consumption Breakdown

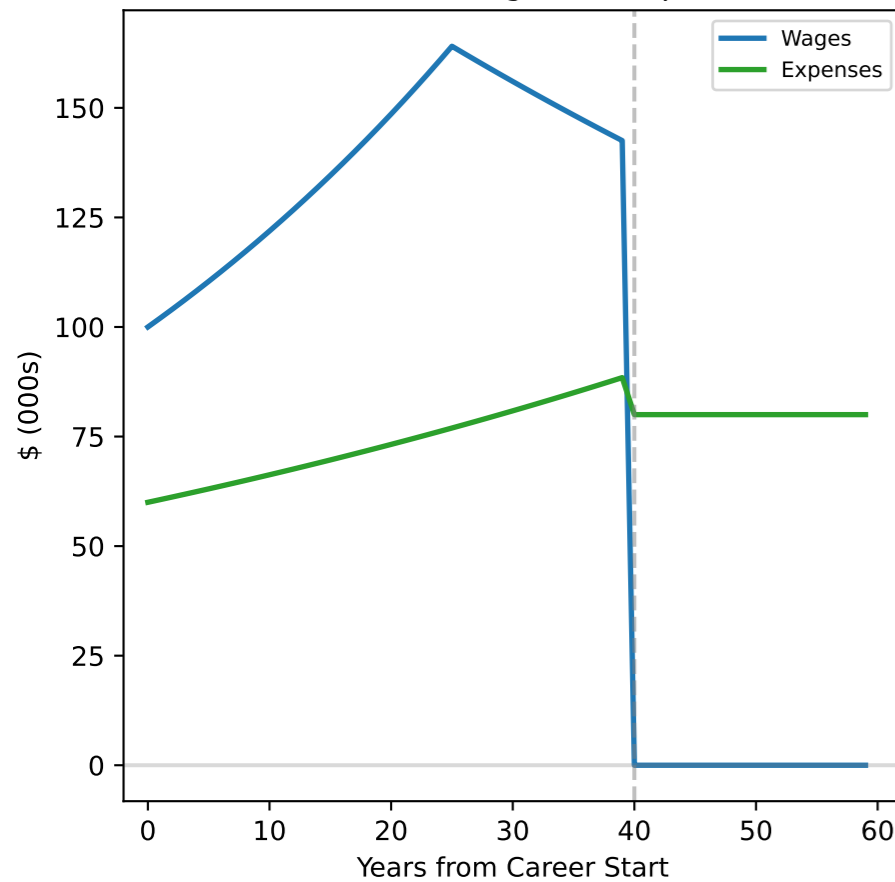


## Total Consumption

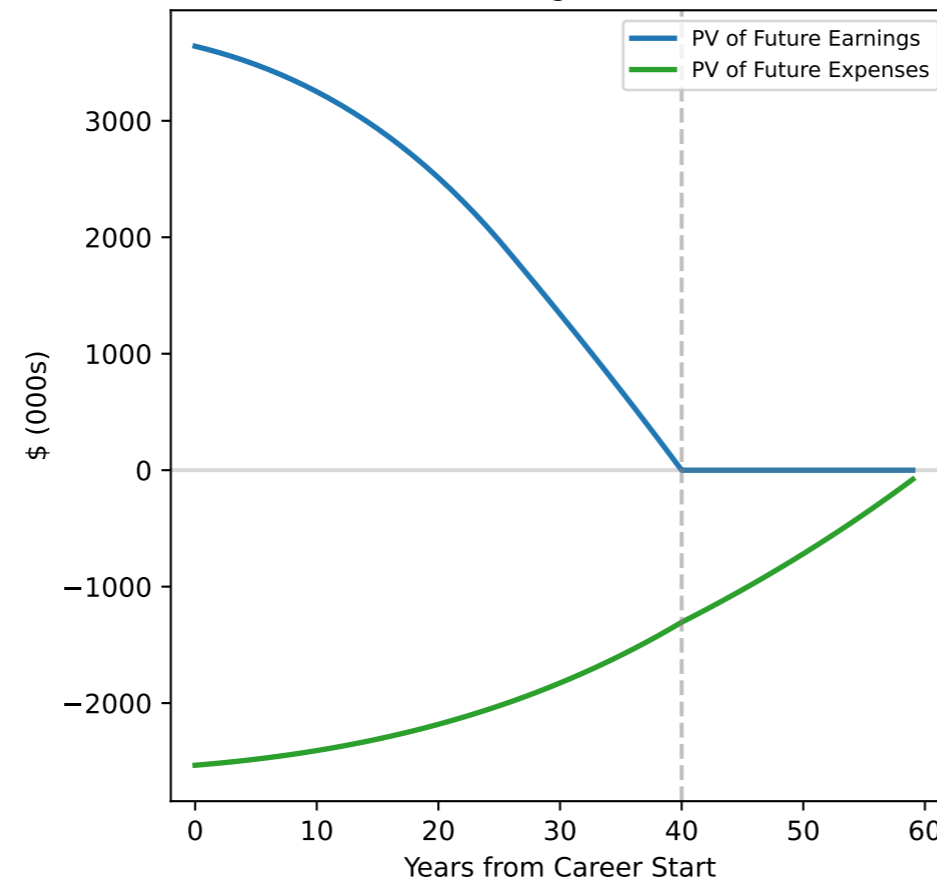


# Lifecycle Investment Strategy - Beta = 1.0

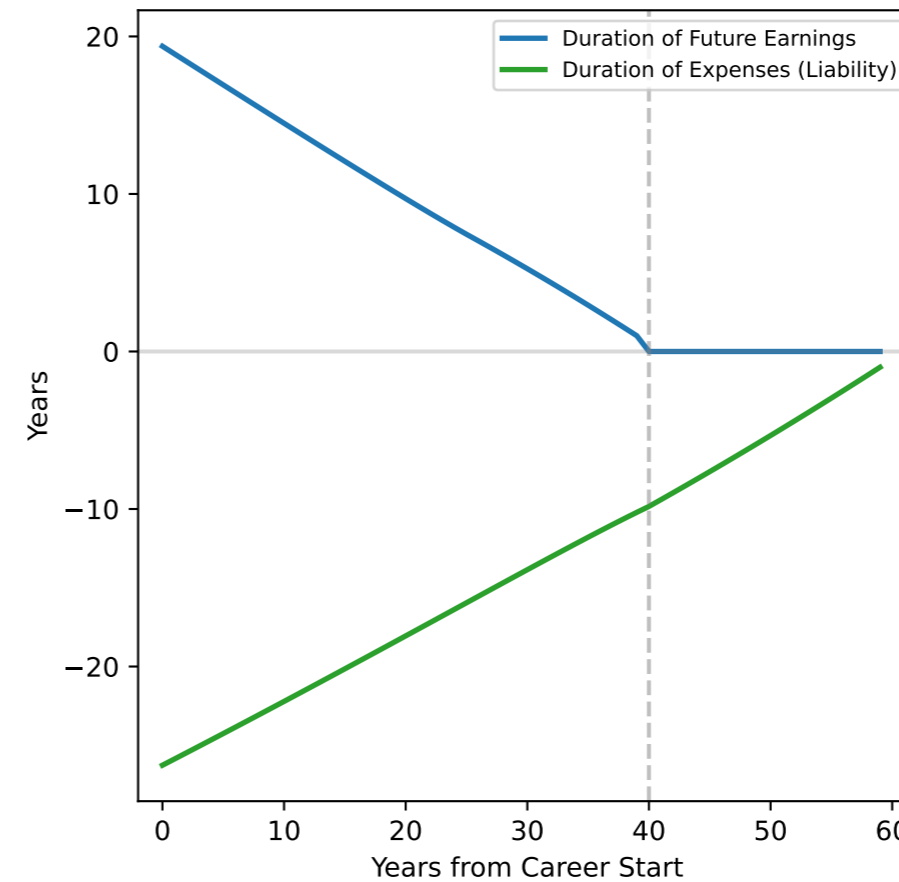
## Profile of Earnings and Expenses



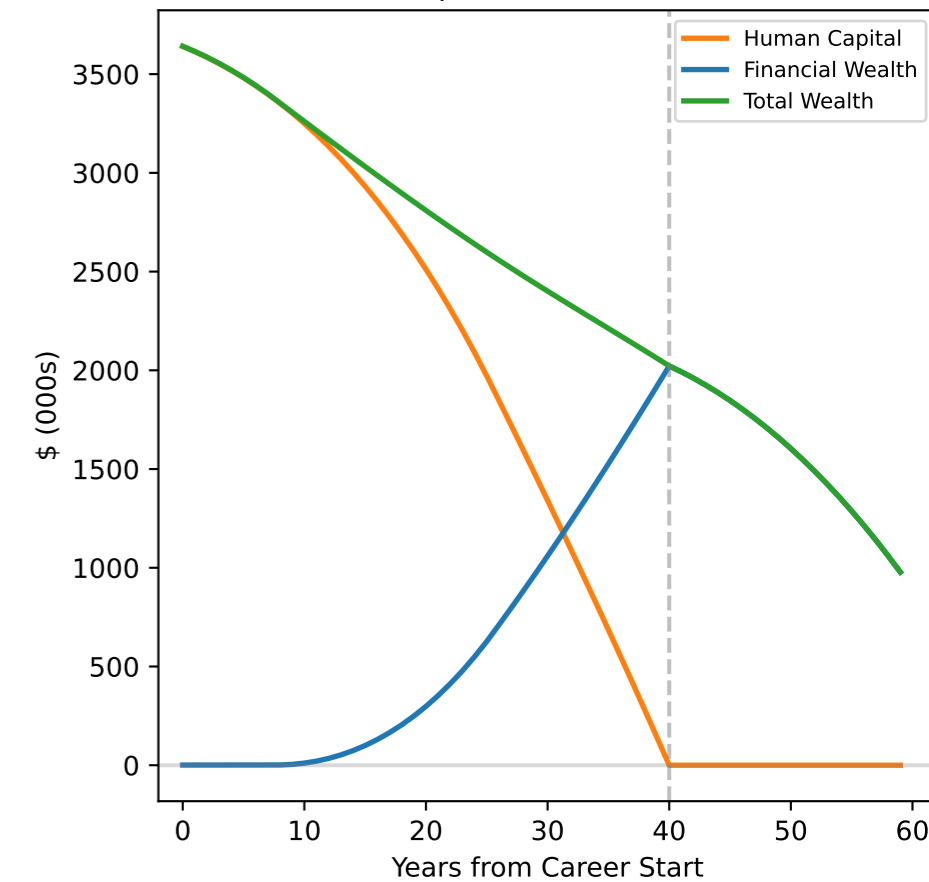
## Forward Looking Present Values



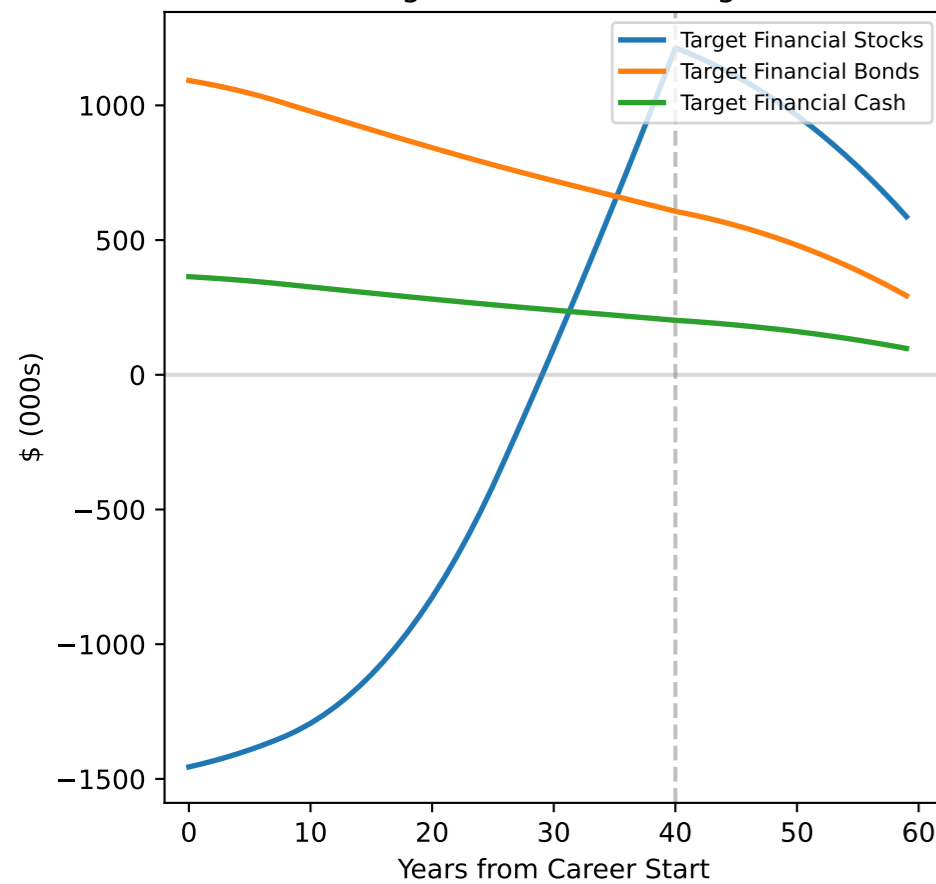
## Durations of Assets



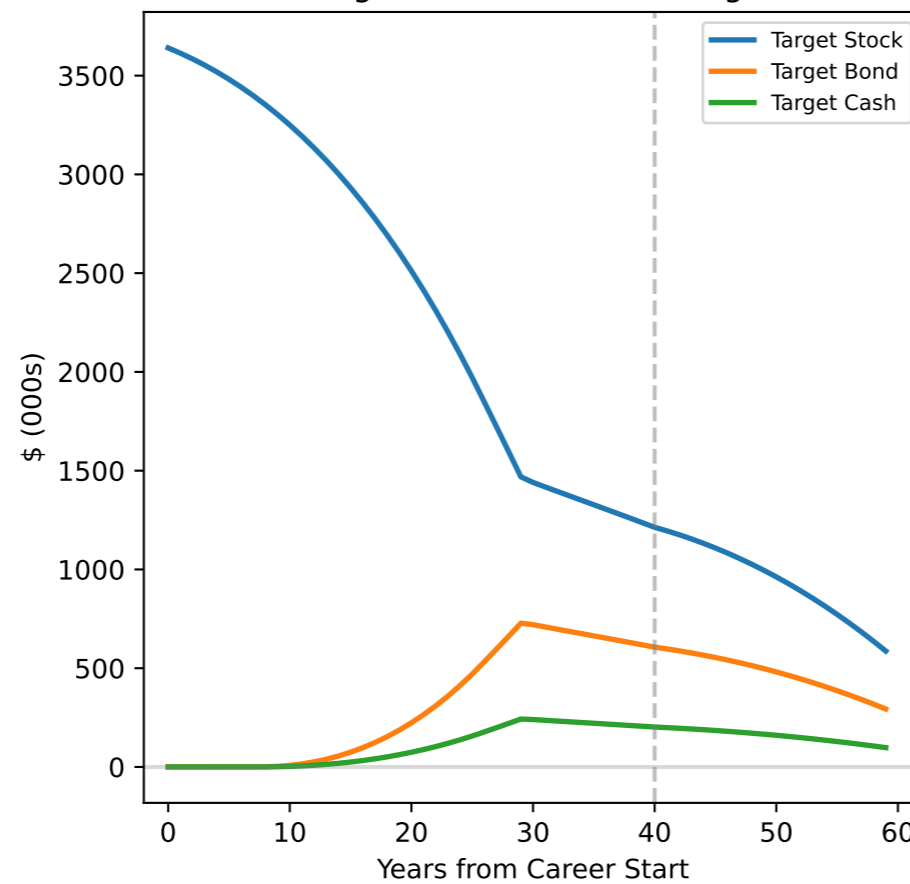
## Human Capital vs Financial Wealth



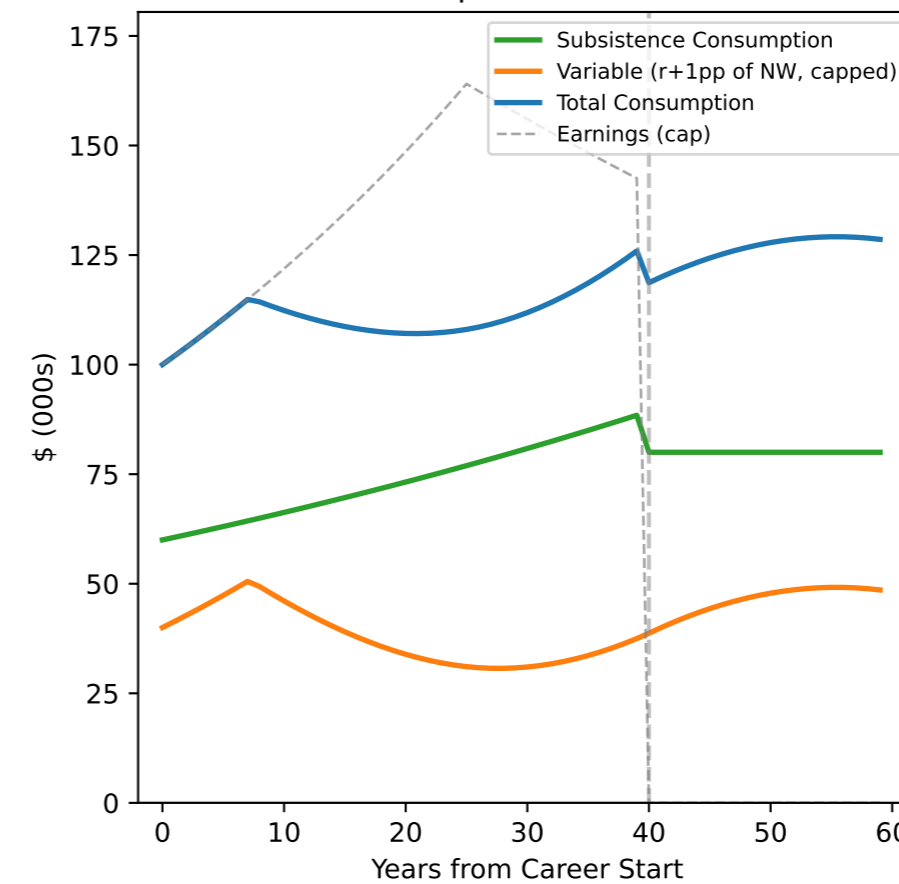
## Target Financial Holdings



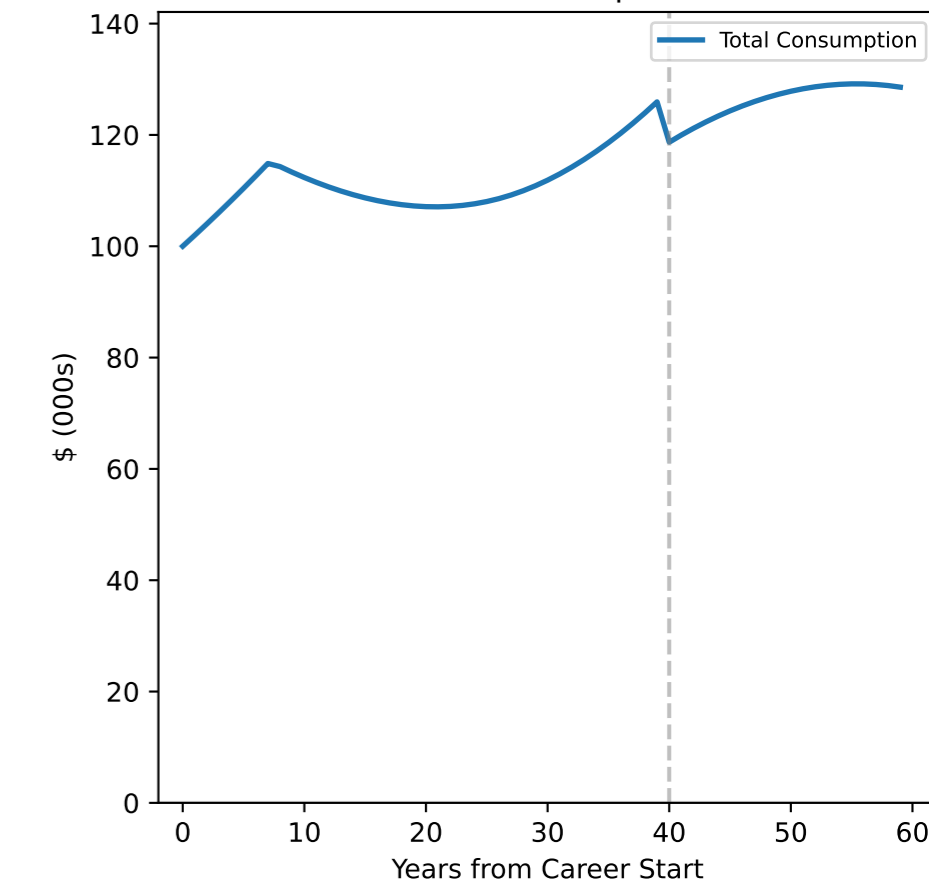
## Target Total Wealth Holdings



## Consumption Breakdown



## Total Consumption



## Lifecycle Investment Strategy Parameters

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### Age Parameters:

- Career Start: 25
- Retirement Age: 65
- Planning Horizon: 85

### Income Parameters:

- Initial Earnings: \$100k
- Earnings Growth: 2.0%
- Peak Earnings Age: 50

### Subsistence Expense Parameters:

- Base Expenses: \$60k
- Retirement Expenses: \$80k

### Consumption Model:

- Total Consumption = Subsistence + Rate x Net Worth
- Net Worth = Human Capital + Financial Wealth - PV(Future Expenses)
- Consumption Rate = Median Return + 1pp

### Human Capital Allocation:

- Stock Beta: 0.10
- Bond Duration Benchmark: 20.0 years

### Target Total Wealth Allocation:

- Stocks: 60%
- Bonds: 30%
- Cash: 10%

### Economic Parameters:

- Risk-Free Rate: 2.0%
- Equity Risk Premium: 4.0%
- Rate Persistence ( $\phi$ ): 1.00

### Key Insights:

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1. Consumption = Subsistence + (Median Return + 1pp) of Net Worth.
2. Net Worth accounts for human capital and future expense liabilities, not just financial wealth.
3. As net worth grows, variable consumption increases, allowing higher spending while preserving subsistence.
4. The "Consumption / FW" chart shows what share of financial wealth is spent each year.