Columbia Business School

# Capital Markets & Investments

# Session 7:
# Fixed Income (4) – Managing Rate Risk Part 2

**Spring 2025**

**Professor Simon Oh**

Columbia Business School

# Interest Rates and Wealth Inequality

## Financial and Total Wealth Inequality with Declining Interest Rates*

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**Abstract**

Financial wealth inequality and long-term real interest rates track each other closely over the post-war period. We investigate how much of the increase in measured inequality can be explained by the decline in rates, and what the implications are for inequality in total wealth (lifetime consumption). We estimate the exposure of financial portfolios to interest rates at the household level to show that there is enough heterogeneity in portfolio revaluations to explain 75% of the rise in financial wealth inequality since the 1980s. A standard incomplete markets model calibrated to these data implies that declining rates are not consumption neutral. Instead, the low-wealth young lose, while the high-wealth old gain.

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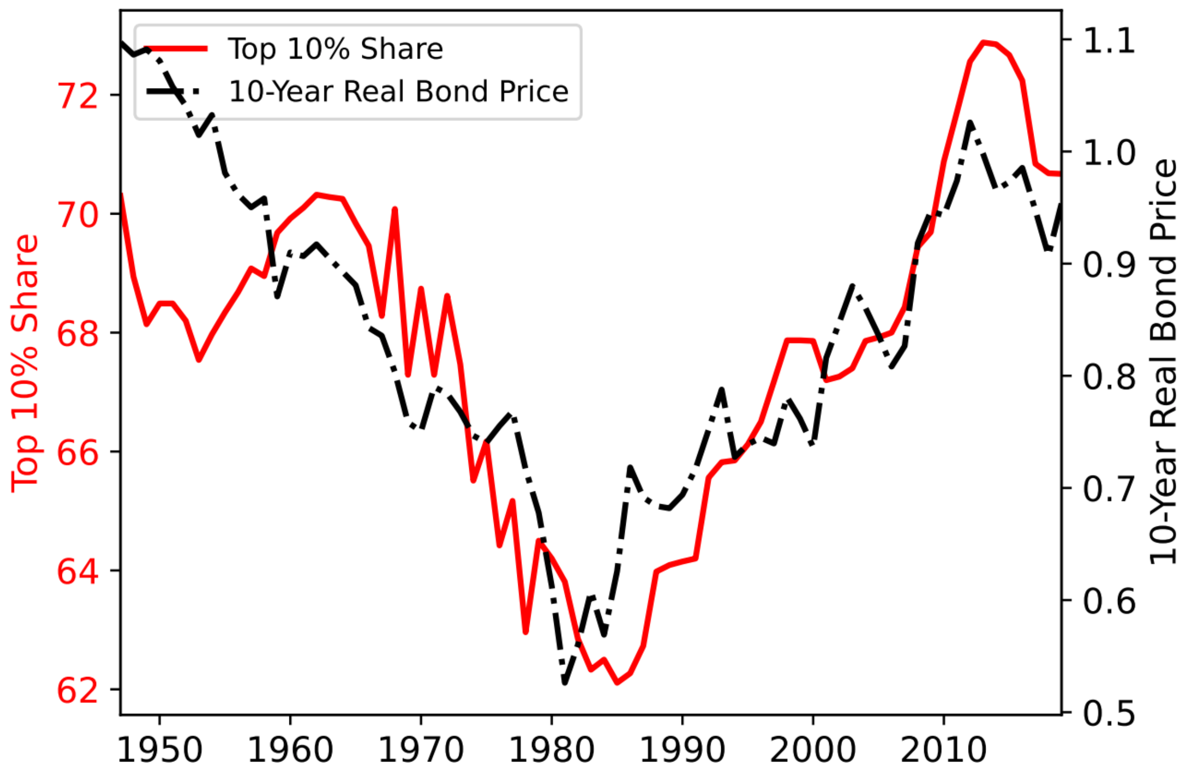
# Interest Rates and Wealth Inequality



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# Household Heterogeneity in Duration

- Financial wealth duration increases in the level of financial wealth.

| | Duration | Portfolio Shares | | | |
|---|---|---|---|---|---|
| | | All | Bottom 90 | P90-P99 | Top 1 |
| **Assets** | | | | | |
| Cash and Deposits | 0.25 | 0.10 | 0.14 | 0.11 | 0.06 |
| Equities | 28.78 | 0.11 | 0.07 | 0.12 | 0.13 |
| Real Estate | 14.89 | 0.54 | 0.84 | 0.43 | 0.29 |
| Private Business Wealth = PBW Short | 10 | 0.12 | 0.06 | 0.14 | 0.17 |
| PBW Long | 61.25 | 0.10 | 0.01 | 0.09 | 0.22 |
| Fixed Income | 4.0 | 0.16 | 0.15 | 0.18 | 0.15 |
| **Liabilities** | | | | | |
| Mortgage Debt | 5.2 | 0.11 | 0.24 | 0.06 | 0.01 |
| Student Debt | 4.5 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Debt | 1.0 | 0.02 | 0.03 | 0.01 | 0.01 |
| **Average (EW) Duration** | | **14.83** | **14.57** | **16.48** | **22.69** |
| **Aggregate (VW) Duration** | | **18.31** | **15.16** | **17.11** | **23.76** |

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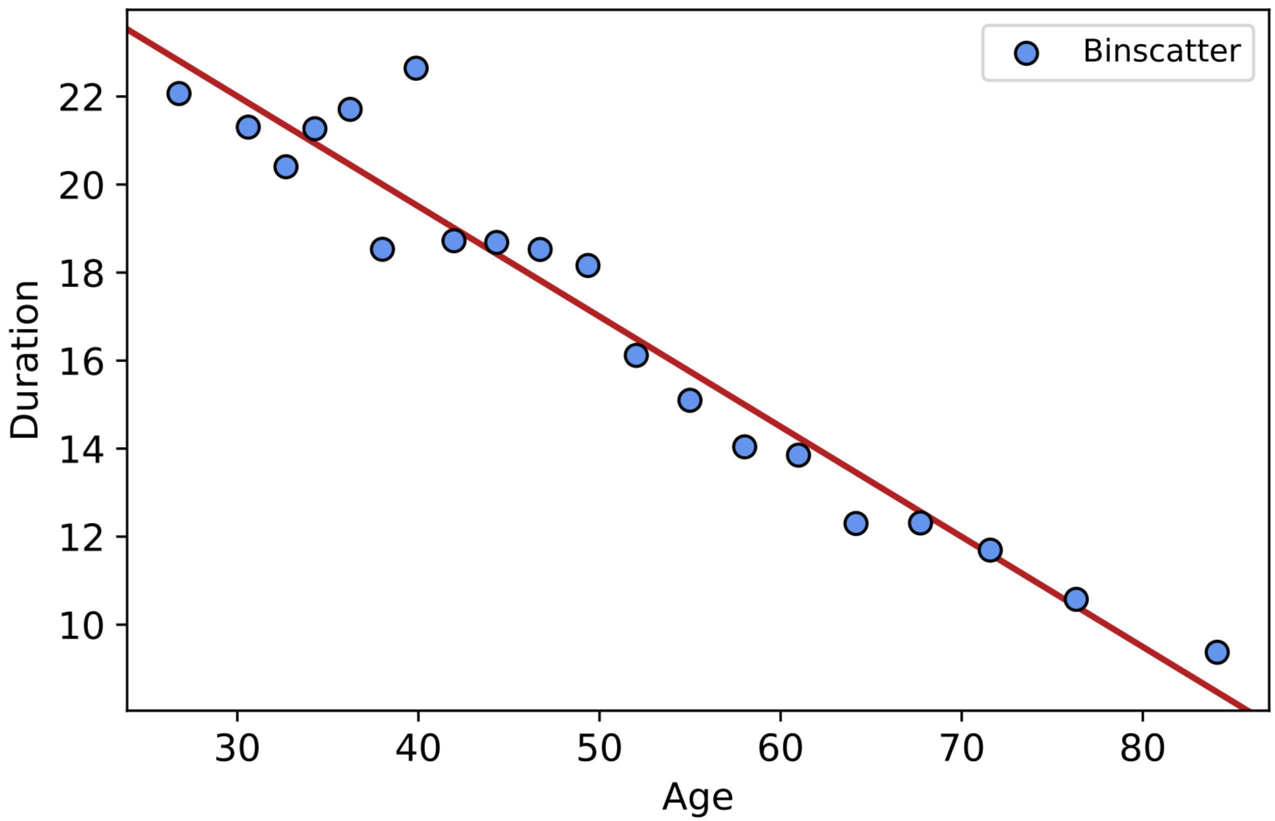
# Household Heterogeneity in Duration



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# Consumption Duration

- As before, the concept of duration can be applied in settings beyond bonds.
- How sensitive a household's future consumption to changes in interest rates
- If you plan to consume mostly in the distant future (e.g. a young worker saving for retirement), then you have **high** consumption duration
- If you are already retired and spending down your wealth, you have **low** consumption duration.

# Wealth vs. Consumption Inequality

| | **High**<br>Consumption Duration | **Low**<br>Consumption Duration |
|---|---|---|
| **High**<br>Financial Duration<br>(owns lots of assets) | **Tech Executive in their 40s**<br>• Lots of investments, and when rates fall, their assets rise in value<br>• But they were already planning to spend steadily, so their consumption doesn't change → **No Change** | **Retired Couple in their 70s**<br>• Owns a house, stocks, and bonds<br>• Wealth increases more than needed, so they could spend more, but others aren't getting the same boost → **Consumption ↑** |
| **Low**<br>Financial Duration<br>(mostly earns wages) | **Young Professional in late 20s**<br>• Saving for a house, but falling rates make home prices soar<br>• Now they need to save more to afford the same thing → **Consumption ↓** | **Low-income worker with little savings**<br>• Doesn't own assets that rise when rates fall<br>• Can't save much, and future savings won't grow fast. → **No Change** |