Financial and Total Wealth Inequality with Declining Interest Rates

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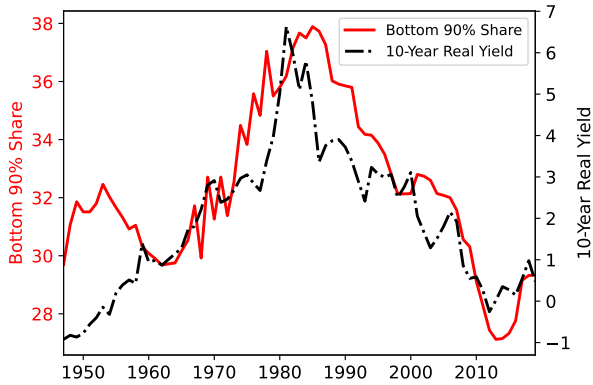
SED Annual Meeting 2023

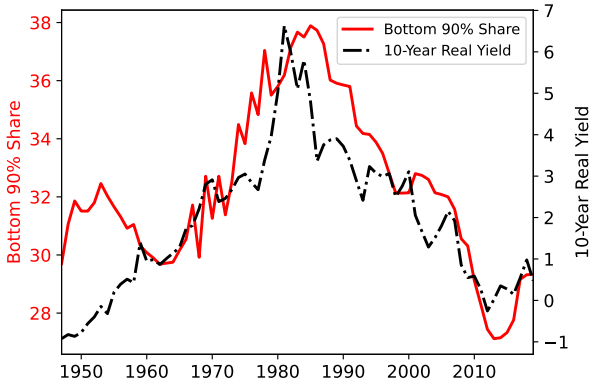
Motivation

- **Left Axis:** Bottom 90% US financial wealth share.
- **Right Axis:** 10-year real yield.
- Relation also holds for France and the UK.



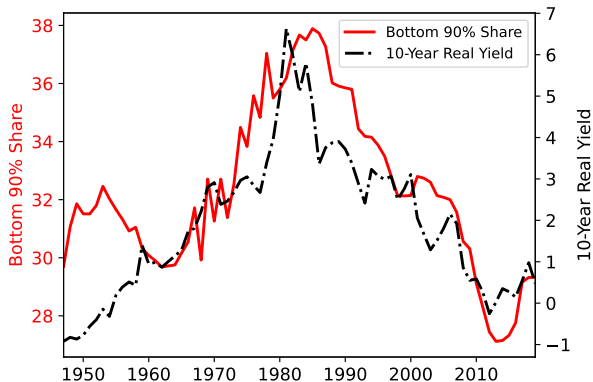
Motivation

- 10Y real bond yield: -4.5pp ↓ between 1980s and 2010s
- Top-10% share: +8.3pp ↑ between 1980s and 2010s



Motivation

- Challenges for interpretation:
  - Rates influence valuations, but inequality depends on portfolio *heterogeneity*.
  - Decomposition of “paper” gains vs. consumption unclear.



This Paper

- **Research Questions:**
  1. What share of rising **fin. wealth inequality** is explained by falling interest rates?
  2. What are the implications for **total wealth (consumption) inequality**?

- **Approach:** Combine new empirical estimates with structural model.
  - Cross-sectional estimates $\Longrightarrow$ exposure of portfolios (duration) over wealth distribution.
  - Realistic consumption-savings model $\Longrightarrow$ exposure of consumption plan.

- **Results:**
  - Observed decline in rates **explains 110% of 8.3pp rise** in top-10% share since 1980s.
  - But to afford prior consumption plans, top-10% share would need to **fall -3.1pp**.
  - Low-wealth young most harmed, high-wealth older agents gain.

Outline

1. Theoretical analysis (brief - see paper)
2. Calibrated life cycle model
3. Repriced distribution (actual wealth update using observed portfolios)
4. Compensated distribution (wealth changes needed to afford prior cons. plan)

Theoretical Analysis

Theory: Interest Rate Decline

- Develop theory in standard Bewley model environment (Krueger and Lustig, 2010).
- How does financial wealth inequality react to a change in interest rates?
- Key statistic is **duration** of household portfolio, equal to elasticity of value to permanent change in gross discount rates.
  - Aggregate level of duration determines overall wealth change in economy.
  - But change in financial wealth inequality driven by
    (i) **heterogeneity** in duration
    (ii) **correlation** with level of financial wealth
- **Proposition:** If covariance between financial wealth and duration is positive, then a **decline in rates increases financial wealth inequality**.
  - Sufficient cond: aggregate (wealth-weighted) duration $>$ average (equal-weighted) duration.

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Theory: Total Wealth Inequality

- At equilibrium, financial wealth is equal to present value of excess consumption.

$$\underbrace{\theta_0}_{\text{fin. wealth}} = \underbrace{E_0 \sum_{t=0}^{\infty} \hat{R}^{-t}(c_{i,t} - y_{i,t}^L)}_{\text{PV of excess consumption}}$$

- But while levels are equal, sensitivity with respect to interest rates may not be.
  - **Duration mismatch** $\Longrightarrow$ real consumption effects of interest rate decline.
  - No effect on consumption if portfolios are perfectly hedged.
- **Proposition:** Consumption allocation with high rates ($\hat{R}$) is still equilibrium under low rates ($\tilde{R}$), given compensating wealth transfers

$$\widetilde{\theta}_0 = \theta_0 + E_0 \sum_{t=0}^{\infty} (\tilde{R}^{-t} - \hat{R}^{-t})(c_{i,t} - y_{i,t}^L)$$

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Calibrated Model

Calibrated Life-Cycle Model

- **Life-cycle**: mortality risk, accidental bequests given to newborn agents.
- CRRA preferences with risk aversion $\gamma = 2$ and time discount factor $\beta = 1/R$
- Household income consists of regular and superstar component.
  - Comprehensive measure: wages + salaries, labor component of business income, transfer income (UI, SS), DB pension.
  - Estimate regular income process on PSID data with persistent and transitory risk, age profile, structural break at retirement.
  - Households have 0.02% annual chance to enter superstar state with stochastic length (average = 40 years). Superstar income 36x average, calibrated to target top-10% FW share in 1980s.
- Duration heterogeneity: **financial duration is increasing in financial wealth**

Financial Duration

- Compute durations for equities, housing wealth, private business wealth from **auxiliary asset pricing model** that matches term structure of interest rates, stock prices, house prices quarter-by-quarter for 1947 - 2019.

	Duration	Portfolio Shares
Assets		
Equities	28.78	10.24
Real Estate	14.89	54.47
Private Business Wealth	61.25	22.44
Cash and Deposits	0.25	10.08
Fixed Income	4.00	15.69
Liabilities		
Mortgage Debt	5.20	11.22
Student Debt	4.50	0.14
Other Debt	1.00	1.57
Aggregate Duration		**24.85**
Average Duration		**17.17**

Financial Duration

- Calibrate durations for cash/deposits, fixed income, student, mortgage, other debt.

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Financial Duration

- Compute portfolio shares using 1983, 1989 SCF/SCF+ waves.

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Financial Duration

- Aggregate duration $>>$ average duration.
- Implies falling rates increase financial wealth inequality.

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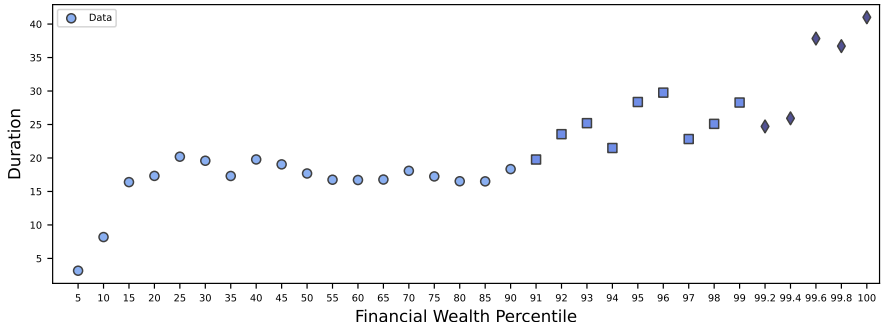
Financial Duration Heterogeneity

- To calibrate model, regress fin. duration on age and wealth percentile bin:

$$D_i^{fin} = \alpha + \beta Age_i + \sum_j \gamma_j FinancialWealthBin_{i,j} + \varepsilon_i$$

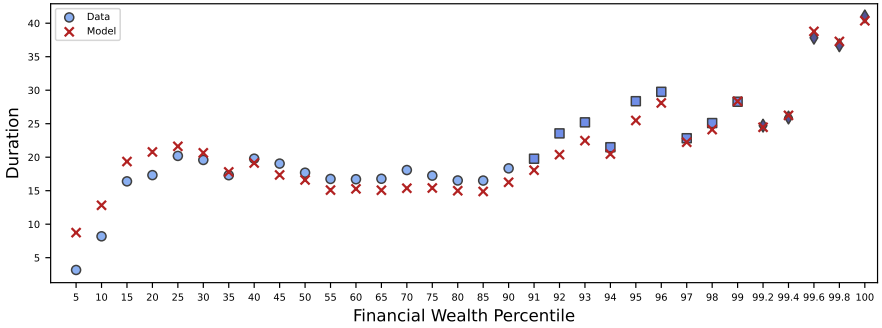


Financial Duration Heterogeneity

- Assign financial duration household by household as fitted value:

$$\widehat{D}_i^{fin} = \hat{\alpha} + \hat{\beta} Age_i + \sum_j \hat{\gamma}_j FinancialWealthBin_{i,j},$$

Assume households invest in zero coupon bonds with maturity = duration

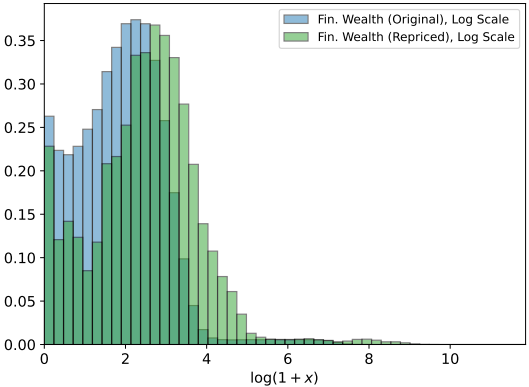


Repriced Distribution

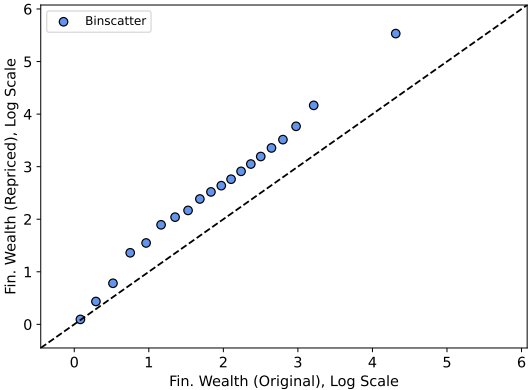
Repriced Financial Wealth Distribution – One Shot

- Aux. AP model: 10-year real rates ↓ from 4.8% in 1980s to 0.3% in 2010s.
- Similarly large declines in expected returns on stocks and housing expret

(a) Hist: Original vs. Repriced



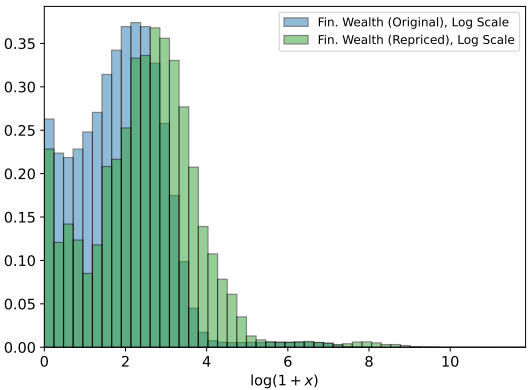
(b) Binscatter: Original vs. Repriced



Repriced Financial Wealth Distribution – One Shot

- Repriced wealth distribution: change in wealth given households' actual portfolios.
- Fall in interest rates shifts wealth distribution right as valuations rise.

(a) Hist: Original vs. Repriced



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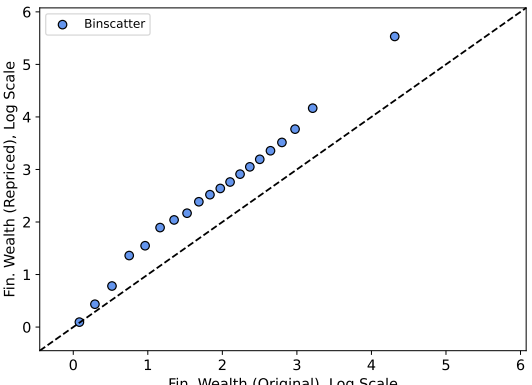
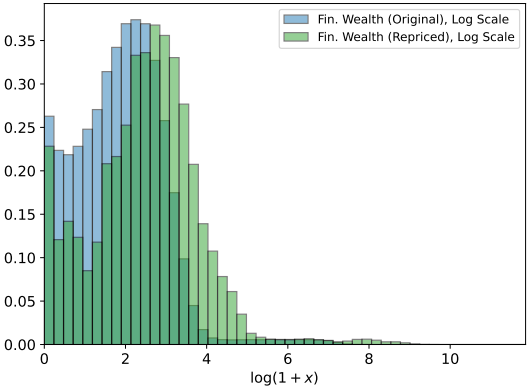


Repriced Financial Wealth Distribution – One Shot

- All but poorest agents see asset valuation gains.
- Proportional gains are increasing in wealth due to higher durations.

(a) Hist: Original vs. Repriced



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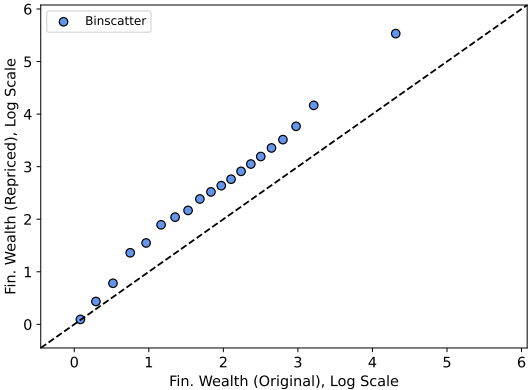


Repriced Financial Wealth Distribution – Gradual

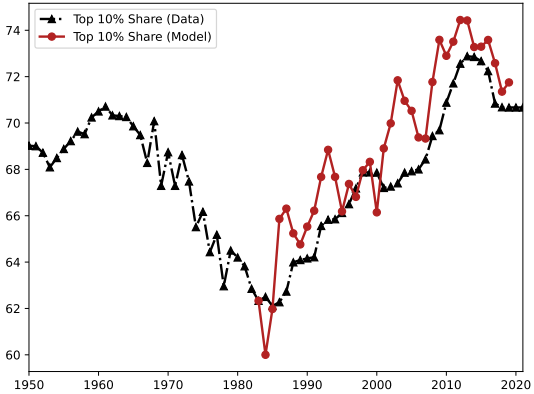
- Initialize model at steady state wealth distribution in 1983
- Measure annual innovations in the 10-year real bond yield $\{\widehat{R}_t\}$ from aux. AP model
  - Feed in these interest rate shocks sequentially as unexpected permanent changes
- Households choose pre-revaluation wealth (savings) $\theta_{i,t+1}$.
- Following surprise change in interest rates, revalue portfolio

$$\tilde{\theta}_{i,t+1}^{repriced} \simeq \theta_{i,t+1} \exp\left\{-\Delta\widehat{R}_{t+1} \times D_{i,t}^{fin}\right\}$$

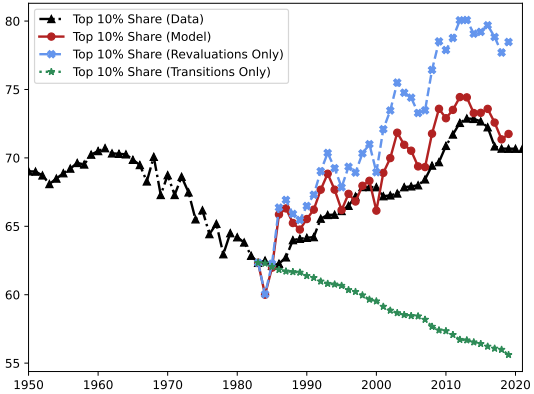
Repriced Financial Wealth Distribution – Gradual

- Transition path: top-10% fin. wealth share +9.4pp in model vs. +8.3pp in data.
- Model-free results when using SCF wealth distribution similar details

(a) Top-10% Share: Transition



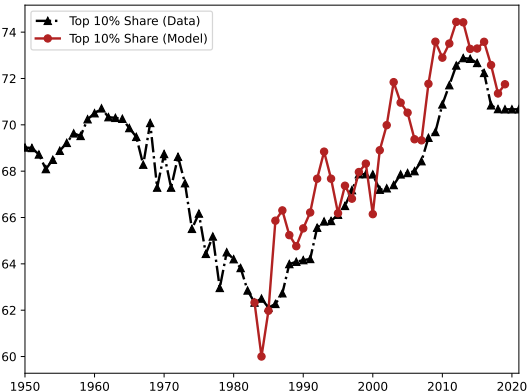
(b) Top-10% Share: Decomposition



Repriced Financial Wealth Distribution – Gradual

- **Chained repricing effect** offset by **mean-reversion effect**
- Steady-state inequality under low rates is lower (less compounding)

(a) Top-10% Share: Transition



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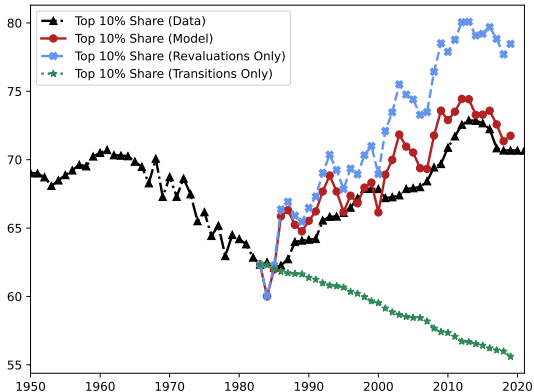


Rise in Financial Wealth Inequality: Repricing

- Repricing also explains essentially all of rise in Top-1% share and Gini.
- Quantitatively powerful force capable of fully explaining financial wealth inequality since the 1980s.

	Data (WID)	Data (SCF)	Repriced
Top-10% FW	+8.3pp	+8.5pp	+9.4pp
Top-1% FW	+11.2pp	+4.8pp	+11.7pp
Gini FW	+0.054	+0.063	+0.062

Robustness: Private Business Wealth Duration

Back

- Robustness to private business wealth duration (baseline = 61.25 years)
- $Dur^{PBW} = 52$: firm currently smallest quintile Details
- Dur_i^{PBW} SCF: use subcategories of PBW to separate growing, stagnant businesses.
- Results vary with calibration, but all indicate economically large effect.

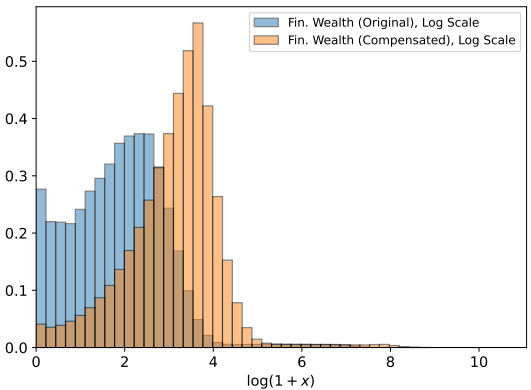
		Repriced, Alternative Duration Specifications		
Fin. Wealth	Data	Baseline	$D^{PBW} = 52$	D_i^{PBW} SCF
Gini	+0.063	+0.062	+0.043	+0.040
Top-10%	+8.5pp	+9.4pp	+6.6pp	+6.3pp
Top-1%	+4.8pp	+11.7pp	+8.0pp	+8.2pp

Compensated Distribution

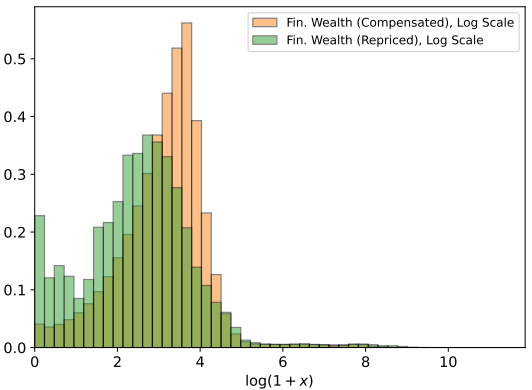
Compensated Financial Wealth Distribution – One Shot

- **Compensated distribution:** How much financial wealth does each household need to be able to afford the pre-shock consumption plan?

(a) Original vs. Compensated



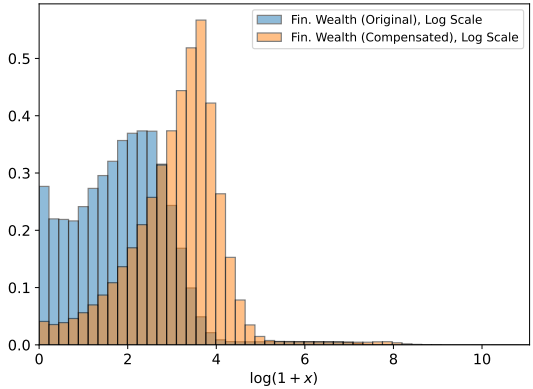
(b) Compensated vs. Repriced



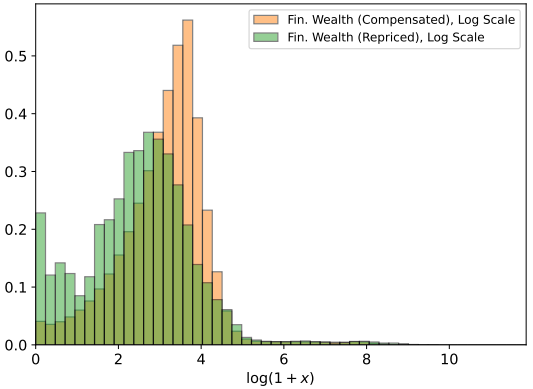
Compensated Financial Wealth Distribution – One Shot

- Compensation requires large increase in fin. wealth, 34.2% of it goes to top 1%.
- But compensated distribution is much less unequal than original or repriced.

(a) Original vs. Compensated



(b) Compensated vs. Repriced

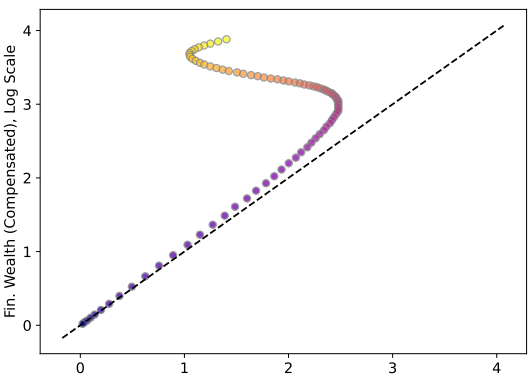


Compensated Financial Wealth Distribution: Heterogeneity

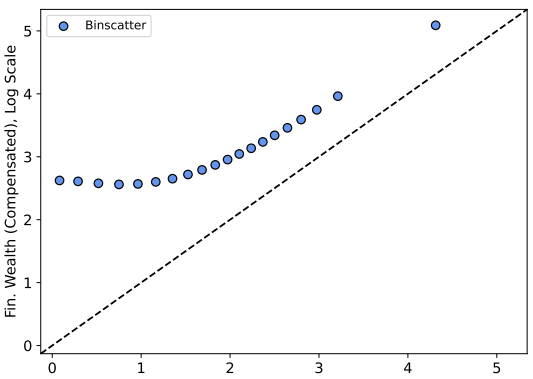
▸ Age FEs

- Below: compensated vs. original distribution, by age and wealth.
- Compensation depends on duration of excess consumption.

(a) By Age (Median)



(b) By Fin. Wealth

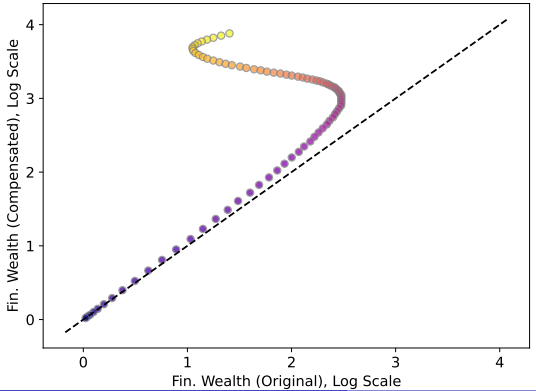


Compensated Financial Wealth Distribution: Heterogeneity

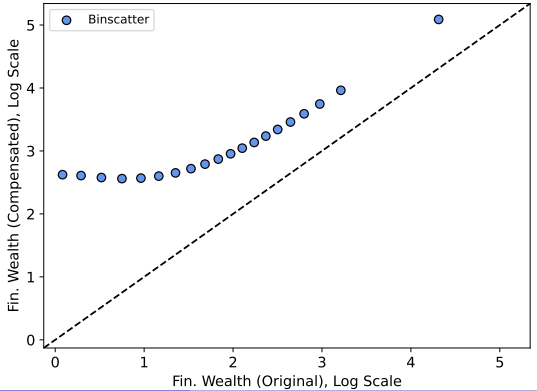
▸ Age FEs

- Young (yellow) have highest duration D^{c-y}: save, then consume
- Old (purple) need least compensation, depend least on asset returns.

(a) By Age (Median)



(b) By Fin. Wealth

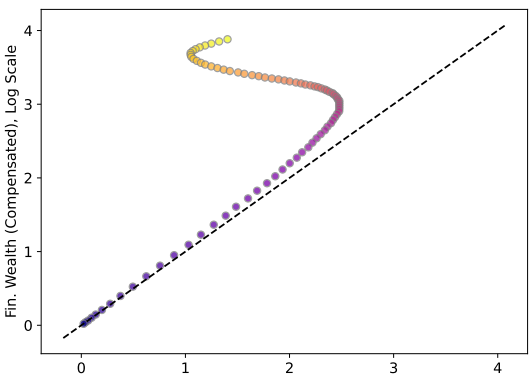


Compensated Financial Wealth Distribution: Heterogeneity

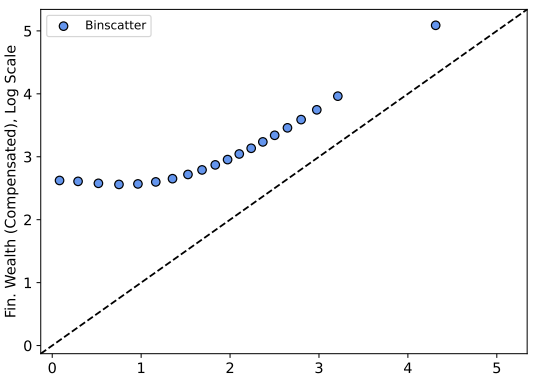
▸ Age FEs

- Least wealthy need most compensation; young (without bequests) dominate overall result

(a) By Age (Median)



(b) By Fin. Wealth

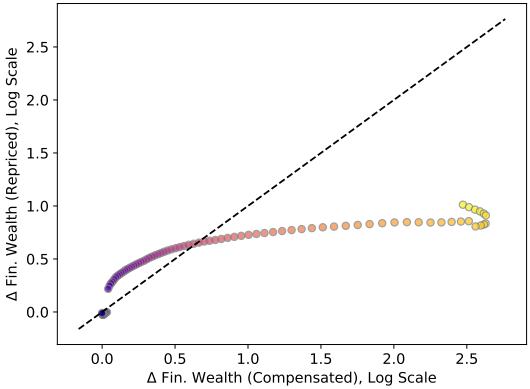


Repriced vs. Compensated Wealth Distributions

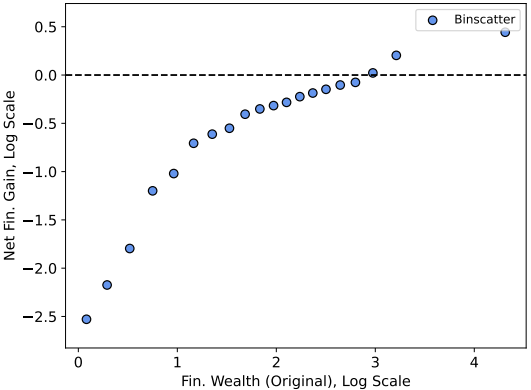
Age FEs

- Left: change under compensated (x-axis) vs. repriced (y-axis) distributions.
- Lower rates deliver too little financial gains to young, old are over-hedged.

(a) By Age (Medians)



(b) By Wealth

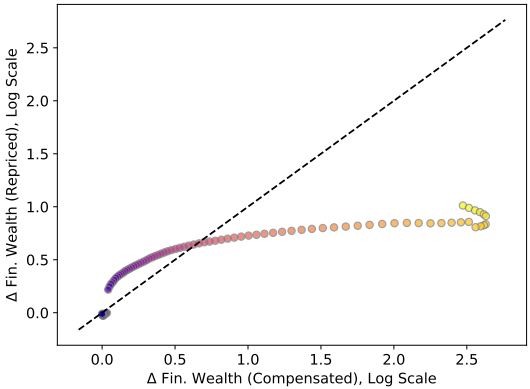


Repriced vs. Compensated Wealth Distributions

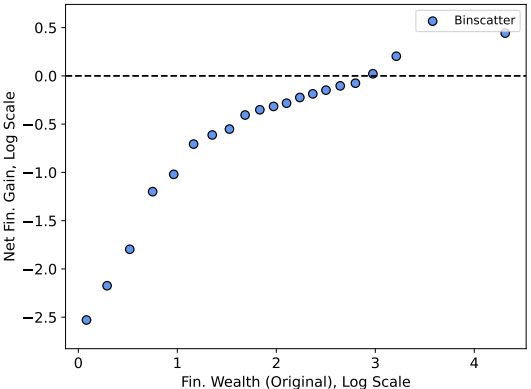
▸ Age FEs

- Right: net financial gain (change in repriced minus compensated).
- Least wealthy lose most, wealthiest gain from decline in rates.

(a) By Age (Medians)



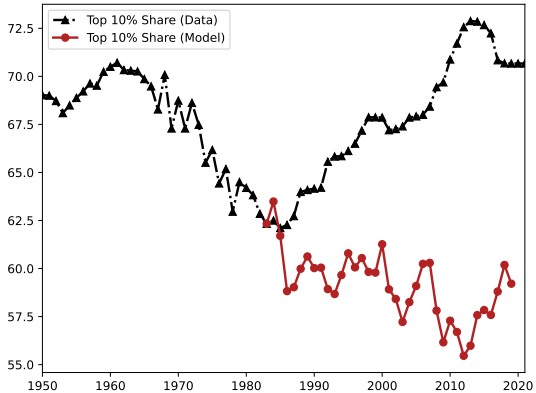
(b) By Wealth



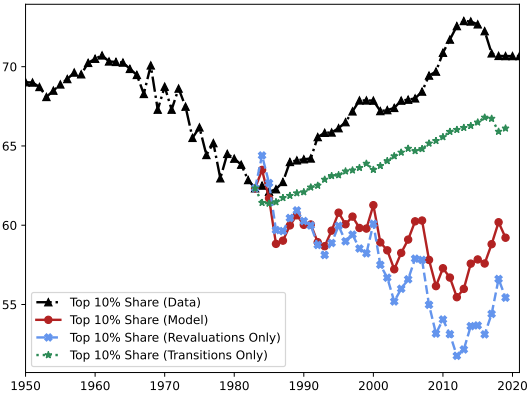
Repriced Financial Wealth Distribution – Gradual

- Transition path: top-10% fin. wealth share -3.1pp in model vs. +8.3 in data.
- **Chained revaluation effect** (instantaneous compensation) captures nearly full effect

(a) Top-10% Share: Transition



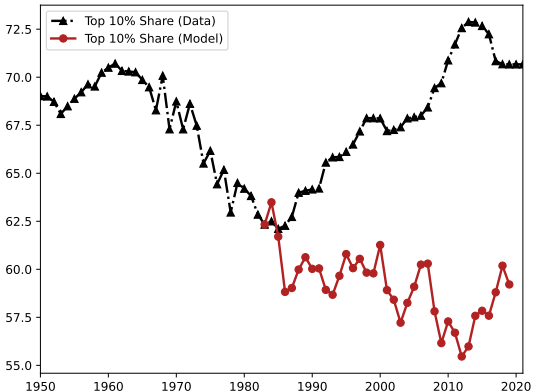
(b) Top-10% Share: Decomposition



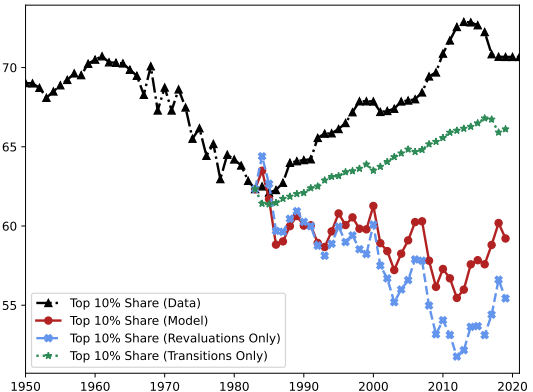
Repriced Financial Wealth Distribution – Gradual

- Interest rate changes imply large changes in consumption possibilities

(a) Top-10% Share: Transition



(b) Top-10% Share: Decomposition



Financial vs. Total Wealth Inequality

Human Wealth Plots

- Total wealth = financial wealth + human wealth (PDV of labor income)
- Total wealth inequality much lower than financial wealth inequality.

	Data WID	Data SCF	Repriced	Compensated
Top-10% FW	+8.3pp	+8.5pp	+9.4pp	-3.1pp
Top-1% FW	+11.2pp	+4.8pp	+11.7pp	-0.9pp
Gini FW	+0.054	+0.063	+0.062	-0.040
Top-10% TW	–	–	+2.0pp	-1.9pp
Top-1% TW	–	–	+0.3pp	-3.2pp
Gini TW	–	–	+0.067	+0.036

Financial vs. Total Wealth Inequality

Human Wealth Plots

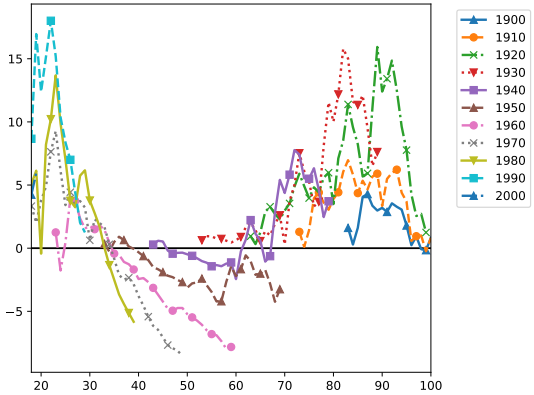
- Changes in total wealth inequality smaller than in financial wealth inequality
- But same pattern emerges, compensated inequality would need to fall.

	Data WID	Data SCF	Repriced	Compensated
Top-10% FW	+8.3pp	+8.5pp	+9.4pp	-3.1pp
Top-1% FW	+11.2pp	+4.8pp	+11.7pp	-0.9pp
Gini FW	+0.054	+0.063	+0.062	-0.040
Top-10% TW	–	–	+2.0pp	-1.9pp
Top-1% TW	–	–	+0.3pp	-3.2pp
Gini TW	–	–	+0.067	+0.036

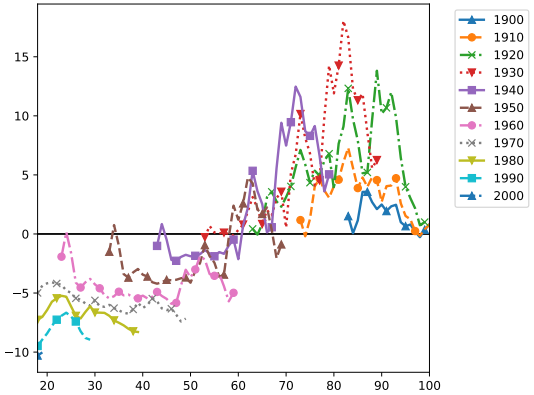
Cohort Analysis

- Which cohorts have gained and lost from declining interest rates?
- Below: percent deviation from 1983 steady state life cycle medians.

(a) Current Consumption (Medians)



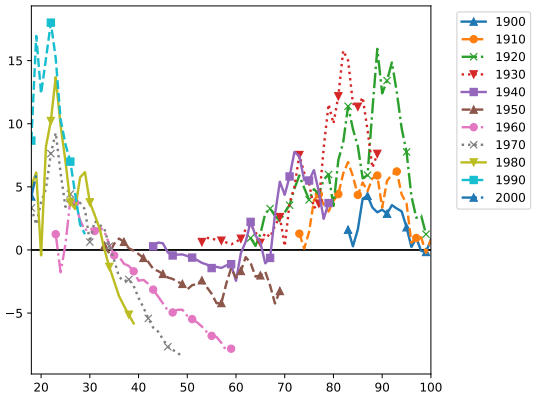
(b) Total Wealth (Medians)



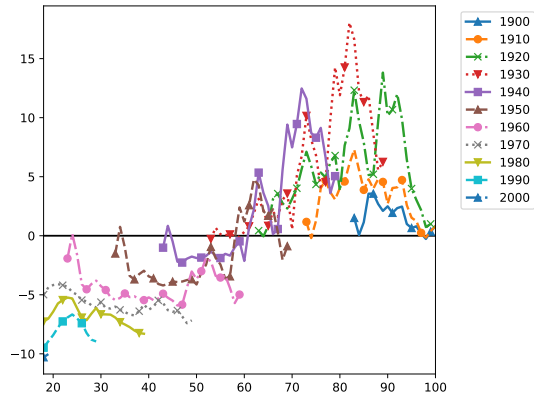
Cohort Analysis

- Older cohorts (born 1940 and earlier) gained since interest rate declines arrived when wealth was high, duration of excess consumption low.

(a) Current Consumption (Medians)



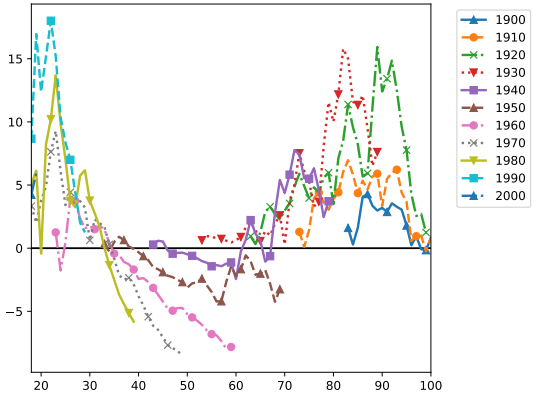
(b) Total Wealth (Medians)



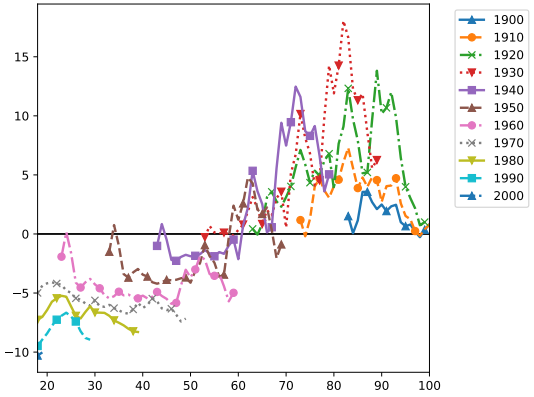
Cohort Analysis

- Younger cohorts did not see wealth gains, median Millennial/Gen Z household loses close to 10% of total wealth (PV of lifetime consumption) at birth.

(a) Current Consumption (Medians)



(b) Total Wealth (Medians)



Conclusions

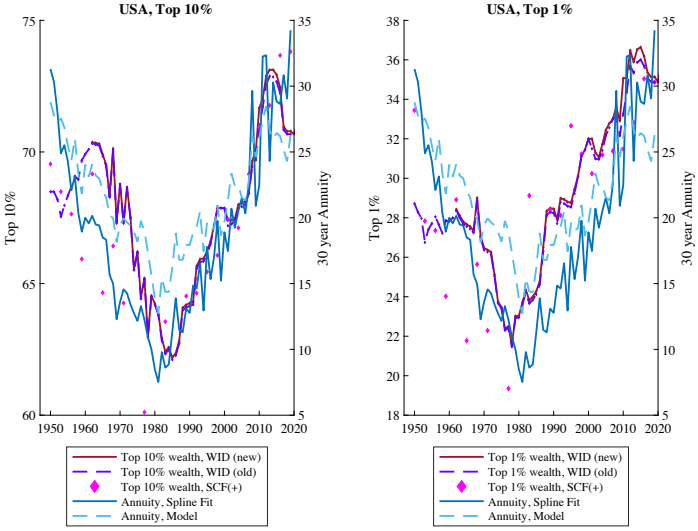
- How do declines in asset returns influence financial and total wealth inequality?
- Used household-level portfolio data + life-cycle model to compare repriced, compensated financial wealth distributions.
- Repricing using observed portfolio durations $\implies$ large rise in financial wealth inequality of order observed in the data.
- Real effects due to mismatch between repriced, compensated distributions.
  - Low-wealth young harmed most by low rates due to timing of excess consumption.
  - Older, wealthier households gain from large asset appreciations.

Appendix

Empirical Evidence: U.S.

back

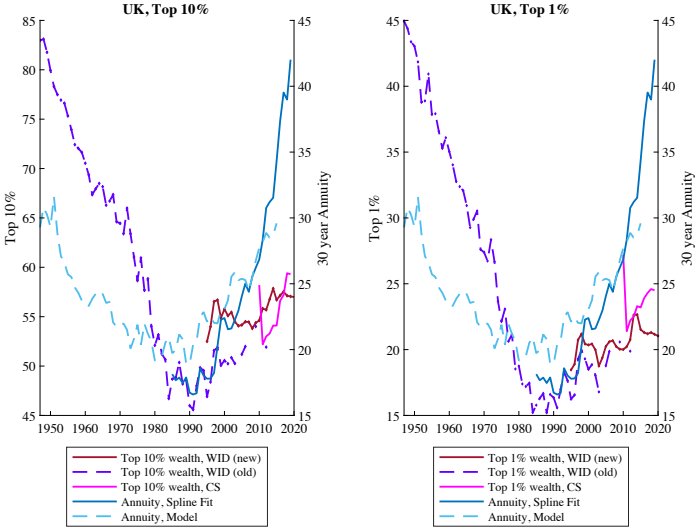
- Robust link between long-term real rates and asset prices.



Empirical Evidence: U.K.

back

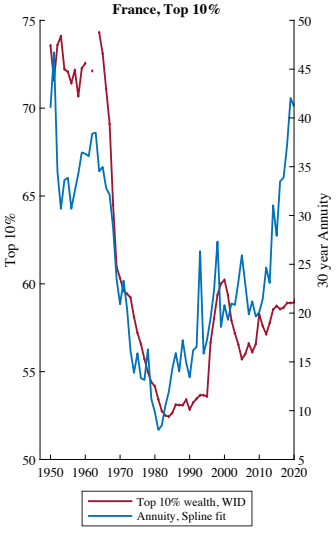
- Robust link between long-term real rates and asset prices.

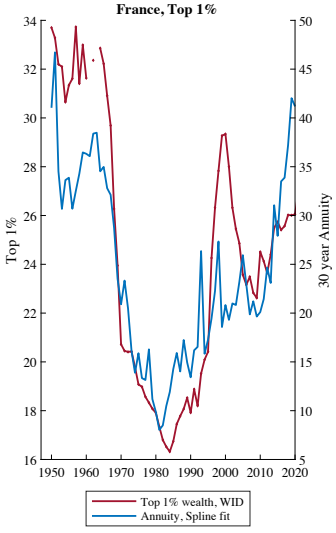


Empirical Evidence: France

back

- Robust link between long-term real rates and asset prices.



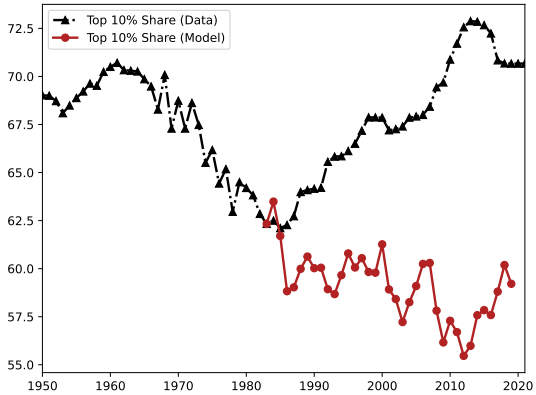


Compensated Financial Wealth Distribution – Gradual

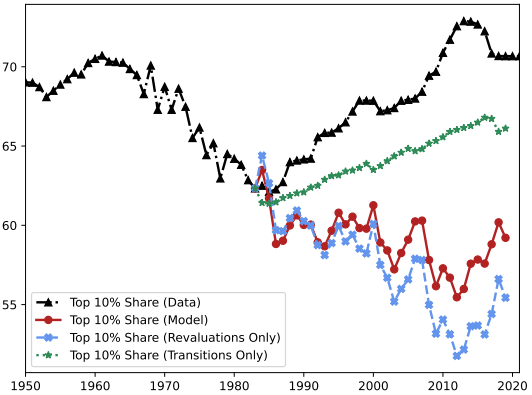
Back

- Feed in yearly innovations in 10-year real yield $\{\widehat{R}_t\}$

(a) Top-10% Share: Transition



(b) Top-10% Share: Decomposition



Change in Inequality: Gradual Transition

Back

	Data	Repriced	Compensated
Gini FW	+0.063	+0.062	+0.062
Top-10% FW	+8.5pp	+9.4pp	+9.4pp
Top-1% FW	+4.8pp	+11.7pp	+11.7pp
Gini HW	–	+0.070	+0.070
Top-10% HW	–	+1.4pp	+1.4pp
Top-1% HW	–	-1.9pp	-1.9pp
Gini TW	–	+0.067	+0.067
Top-10% TW	–	+2.0pp	+2.0pp
Top-1% TW	–	+0.3pp	+0.3pp

Bewley Model Setup

back

- Simple model with i.i.d. aggregate growth shocks to explain link between financial wealth inequality and interest rates
  - Households are infinitely-lived with CRRA preferences
  - Aggregate endowment $e_t(z_t)$, grows at i.i.d. rate $\lambda_t(z_t)$ w.p. $\phi(z_t)$
  - Share α is financial income, $1-\alpha$ labor income
  - Face idiosyncratic (persistent) labor income risk $\widehat{y}(\eta^t)$ w.p. $\varphi(\eta^t)$
  - Trade in Arrow securities whose payoffs depend on aggregate shock realization z_t, but not on η^t

Bewley Model Setup

back

- Simple model with i.i.d. aggregate growth shocks to explain link between financial wealth inequality and interest rates
- Study stationary economy with constant aggregate endowment; households have adjusted preferences over consumption shares (Alvarez and Jermann, 2001; Krueger and Lustig, 2010)

$$\widehat{\beta} = \beta \sum_{z_{t+1}} \phi(z_{t+1}) \lambda_{t+1}(z_{t+1})^{1-\gamma}$$

- Mapping between the stationary Bewley equilibrium and the equilibrium of the stochastically growing economy $\widehat{R} = \left(\sum_{z_{t+1}} \frac{\widehat{\phi}(z_{t+1})}{\lambda(z_{t+1})} \right) R$.
- In stationary equilibrium, $\widehat{R}$ is constant.

Calibration of Rate Change in Stationary Economy

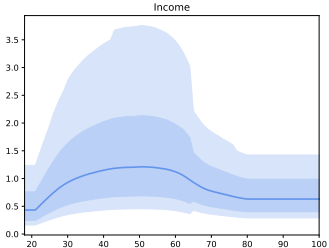
- Aggregate consumption growth $log(\lambda_t) \sim \mathcal{N}(g - 0.5\sigma_\lambda^2, \sigma_\lambda^2)$
- Interest rate in stationary economy in logs: $\hat{r}_t = r_t - g + \sigma_\lambda^2$
- Under constant uncertainty σ_λ^2, interest rate change in stationary economy is lower than interest rate change in growing economy by the change in the expected growth rate:

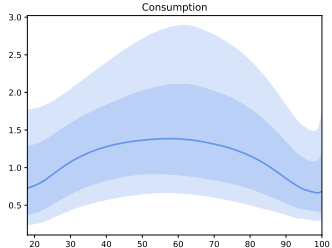
$$\hat{r}_T - \hat{r}_0 = (r_T - r_0) - (g_T - g_0)$$

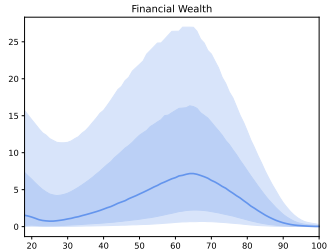
- Ex. 1: $r_T - r_0 = -4\%$, $g_T - g_0 = 0 \implies \hat{r}_T - \hat{r}_0 = -4\%$
- Ex. 2: $r_T - r_0 = -4\%$, $g_T - g_0 = -1\% \implies \hat{r}_T - \hat{r}_0 = -3\%$

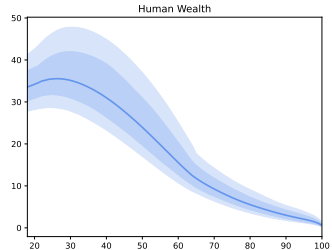
Life-Cycle Profiles

Back



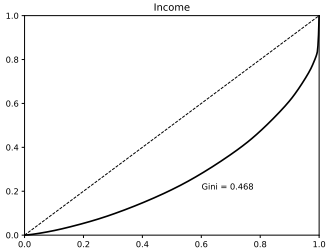


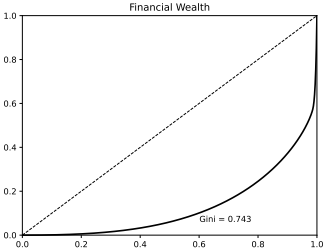


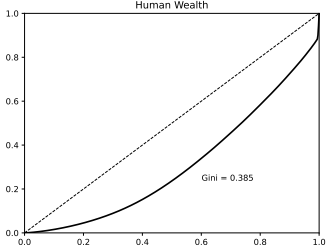


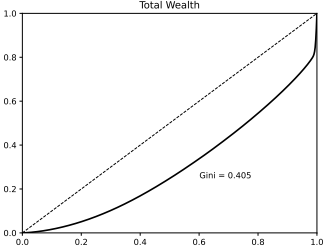
Lorenz Curves

Back









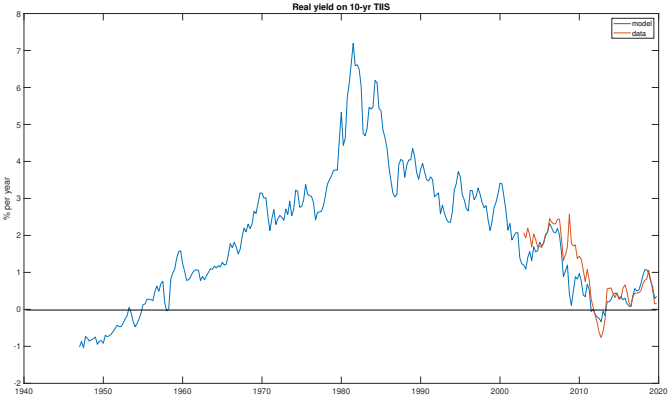
Expected Returns

Table: Expected Real Returns; Decade Averages

Asset	1980s	2010s	Difference
Ten-year real bond yield	4.8%	0.3%	4.5%
Aggregate stock market	8.0%	2.0%	6.0%
Housing wealth	8.2%	4.9%	3.6%
Small stocks	3.6%	3.2%	0.4%

back

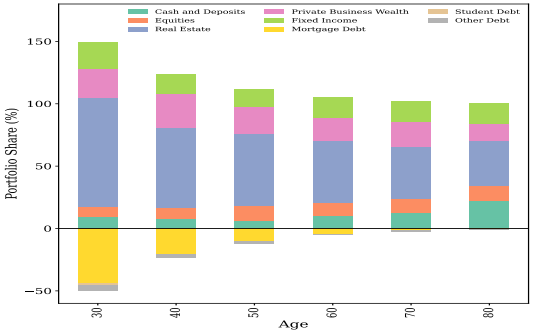
Long-term Real Bond Yields – AP Model



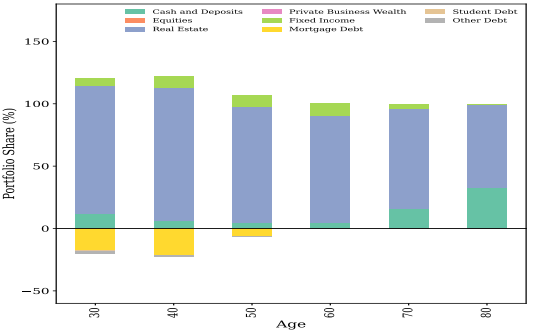
- 1980s average: 4.8%
- 2010s average: 0.3%
- Long-term decline: 4.5%

Portfolio Shares by Cohort (1989 SCF)

(a) Wealth-Weighted Portfolio Shares



(b) Median Portfolio Shares



Robustness: Private Business Wealth Duration (One-Shot)

Back

- Robustness to private business wealth duration (baseline = 61.25 years)
- $Dur^{PBW} = 52$: firm currently smallest quintile micro calib
- Dur_i^{PBW} SCF: vary duration by private business subcategory
- Results vary with calibration, but all indicate economically large effect.

		Repriced, Alternative PBW Duration Specifications		
Fin. Wealth	Data WID	Baseline	$D^{PBW} = 52$	D_i^{PBW} SCF
Top-10%	+8.3pp	+9.4pp	+6.6pp	+6.3pp
Top-1%	+11.2pp	+11.7pp	+8.0pp	+8.2pp
Gini	+0.054	+0.062	+0.043	+0.040

Small Business Duration: Firm-Level Calibration

- Baseline $Dur^{PBW} = 61.25$ matches expected return and pd ratio on small stock portfolio
- Misses growth leading up to IPO: understate Dur^{PBW}
- Misses growth from smallest decile to higher deciles: overstate Dur^{PBW}

Back

Small Business Duration: Firm-Level Calibration

- Baseline $Dur^{PBW} = 61.25$ matches expected return and pd ratio on small stock portfolio
- Misses growth leading up to IPO: understate Dur^{PBW}
- Misses growth from smallest decile to higher deciles: overstate Dur^{PBW}
- Compute Dur^{PBW} of firms *currently* in smallest decile
- CRSP-Compustat data to measure cash flow/assets and assets for each size decile, and size decile transition probability matrix
- Use either dividends or total payouts (incl. repurchases) as payout measure

Back

Small Business Duration: Firm-Level Calibration

- Baseline $Dur^{PBW} = 61.25$ matches expected return and pd ratio on small stock portfolio
- Misses growth leading up to IPO: understate Dur^{PBW}
- Misses growth from smallest decile to higher deciles: overstate Dur^{PBW}
- Compute Dur^{PBW} of firms *currently* in smallest decile
- CRSP-Compustat data to measure cash flow/assets and assets for each size decile, and size decile transition probability matrix
- Use either dividends or total payouts (incl. repurchases) as payout measure
- Obtain Dur^{PBW} 62.5 for decile 1 and 52.0 for quintile 1

Back

Small Business Wealth in SCF

- SCF splits PBW into
  - **A**ctive, **P**assive, Farm
  - (Limited) Partnership, Sole Partnership, Other Partnership S-Corp, Other Corp, Foreign
  - **L**arge and **S**mall

Back

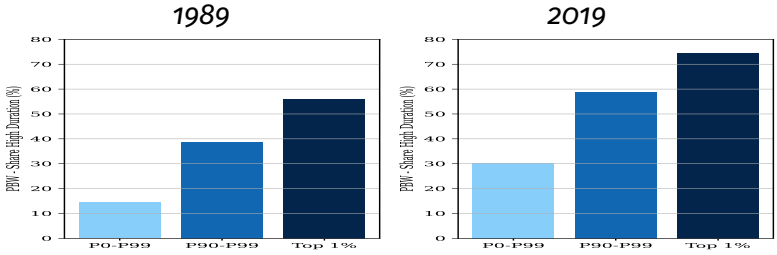
Small Business Wealth in SCF

- SCF splits PBW into
  - **A**ctive, **P**assive, Farm
  - (Limited) Partnership, Sole Partnership, Other Partnership S-Corp, Other Corp, Foreign
  - **L**arge and **S**mall
- Classify high-duration (VC/PE-style) PBW
  - **L**arge and **S**mall **P**assive, except Other Partnership and Sole Partnership
  - **L**arge **A**ctive Partnership, S-corp, Other Corp
  - **S**mall **A**ctive S-Corp, Other Corp

Back

Small Business Wealth in SCF

- SCF splits PBW into
  - **A**ctive, **P**assive, Farm
  - (Limited) Partnership, Sole Partnership, Other Partnership S-Corp, Other Corp, Foreign
  - **L**arge and **S**mall
- Classify high-duration (VC/PE-style) PBW

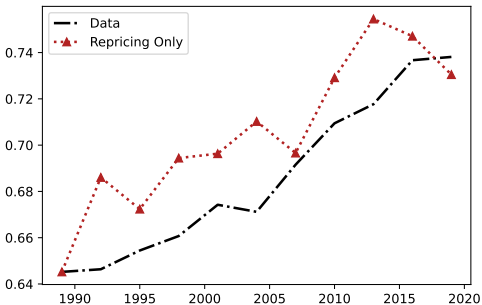


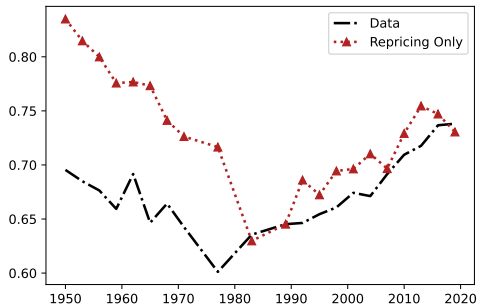
Back

Repriced Distribution – Gradual, Model-free

Back

- Feed in 3-year interest rate shock sequentially
- Mark-to-market financial wealth, each time starting from observed wealth distribution in 3-year SCF wave
- Chained repricing implies rise of 10.2pp in the top-10% financial wealth share from 1989 to the end of the sample, compared to 9.1pp observed in the data.



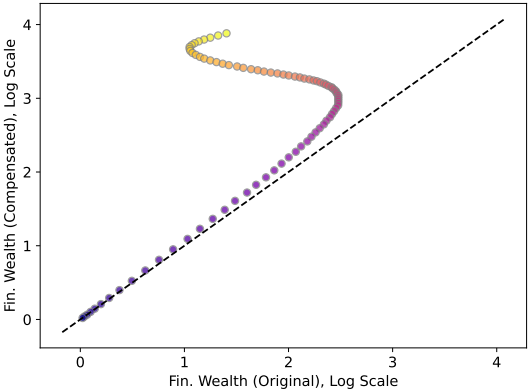


Repriced vs. Compensated Wealth Distributions

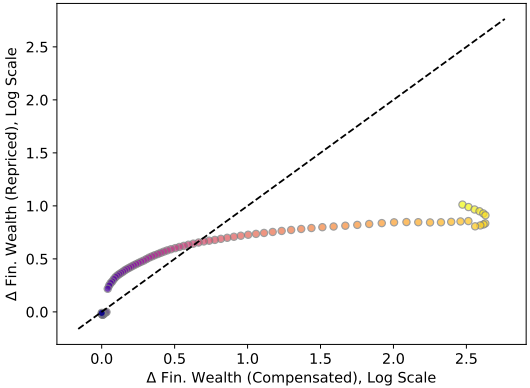
Back

- Median scatterplots (vs. means shown previously).

(a) Compensated vs. Original



(b) Compensated vs. Repriced



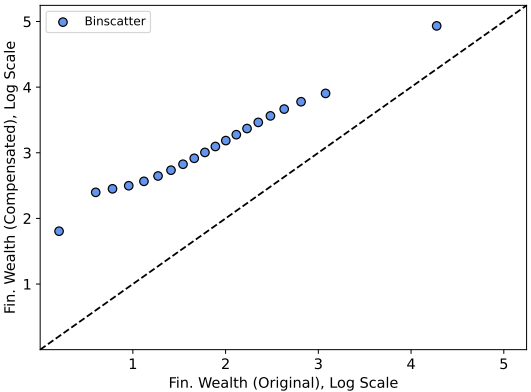
Note: yellow = youngest, purple = oldest.

Repriced vs. Compensated Wealth Distributions

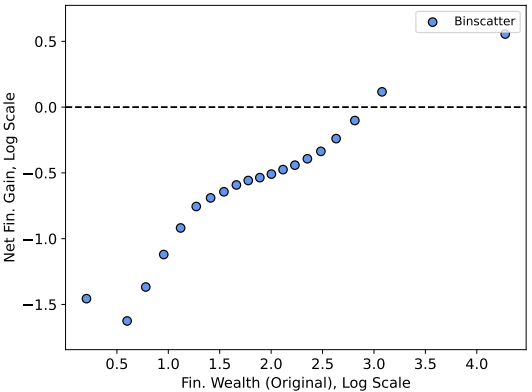
Back

- Mean scatterplots absorbing age effects.

(a) Compensated vs. Original



(b) Compensated vs. Repriced

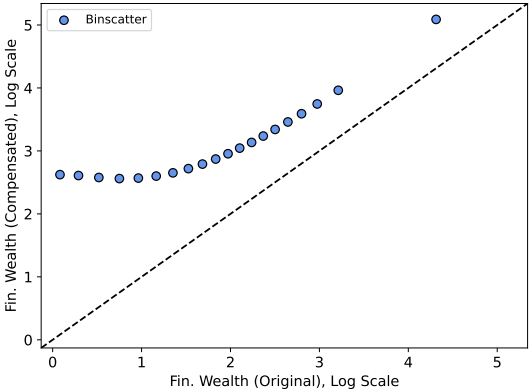


Repriced vs. Compensated Wealth Distributions

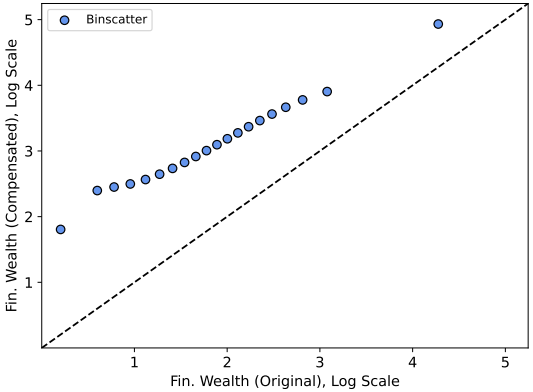
Back

- Mean scatterplots absorbing age effects.

(a) Compensated vs. Original



(b) Same Plot Removing Age Effect

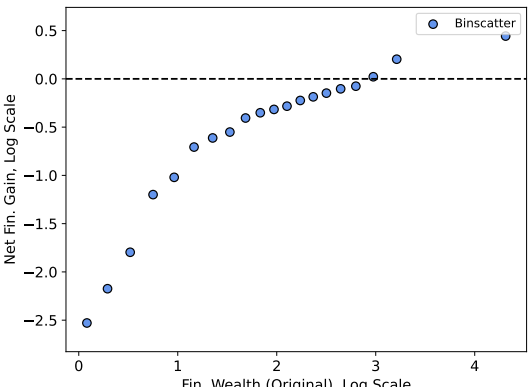


Repriced vs. Compensated Wealth Distributions

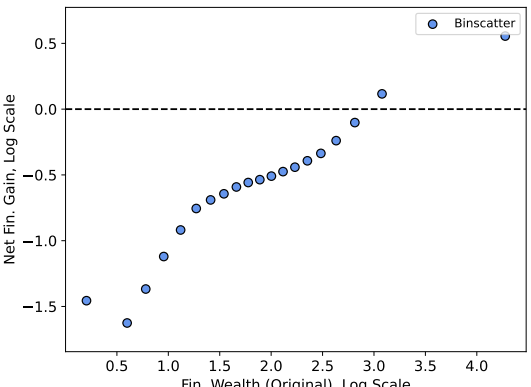
Back

- Mean scatterplots absorbing age effects.

(a) Compensated vs. Repriced



(b) Same Plot Removing Age Effect



Human and Total Wealth Inequality

Back

	Model		
Human Wealth	Initial	Repriced	Comp
Gini	0.385	0.506	0.506
Top-10%	27.4%	33.0%	33.0%
Top-1%	12.5%	14.3%	14.3%
Total Wealth			
Gini	0.405	0.580	0.538
Top-10%	33.2%	48.9%	40.9%
Top-1%	18.6%	32.9%	23.8%

Determinants of Household-level Financial Duration

Back

	(1)	(2)	(3)	(4)	(5)
Lorenz	0.21***		0.18***	0.22***	0.17***
MWC		10.3***	6.45***	4.20***	1.53**
MWN		7.37***	5.65***	4.59***	2.67**
MOC		6.64***	4.76**	2.58**	0.55
MON		5.16***	4.71***	3.34***	1.90**
FWC		2.20 **	0.14	-0.53	-2.26**
FWN		0.26	-0.53	0.59	-0.32
FOC		2.68*	1.85	0.85	-0.89
Age				0.020	-0.10
Age^2				-0.0019***	-0.00036
Log-Income					2.28***
Constant	13.9***	10.5***	10.2***	14.8***	-5.54**
Observations	13966	13966	13966	13966	13966
R^2	0.064	0.060	0.097	0.137	0.150
Adjusted R^2					

* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

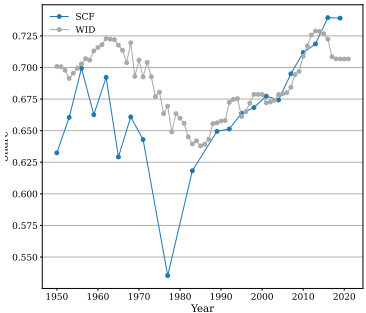
Rise in Wealth and Income Inequality

Fin. Wealth	SCF		WID	
	1980s	2010s	1980s	2010s
Gini (×100)	79.4	87.2	77.8	83.6
Top-10% Share	67.6	77.3	63.2	71.8
Top-1% Share	28.8	37.2	25.3	35.1

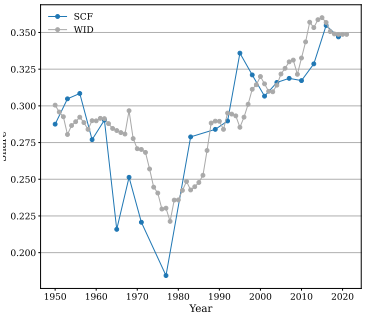
Income	SCF		WID		PSID		PSID (ex transf.)	
	1980s	2010s	1980s	2010s	1980s	2010s	1980s	2010s
Gini (×100)	48.2	56.1	48.7	57.9	42.8	47.8	56.9	62.7
Top-10% Share	36.3	45.5	36.3	45.1	29.2	34.3	35.4	41.7
Top-1% Share	11.5	18.3	12.2	18.6	6.4	9.5	8.1	11.8

Wealth Inequality

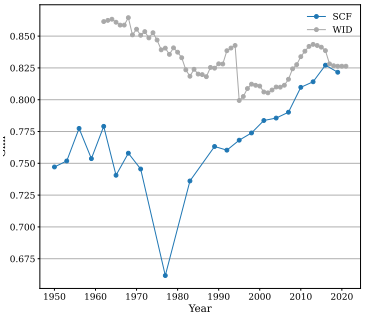
(a) Top 10% Share



(b) Top 1% Share

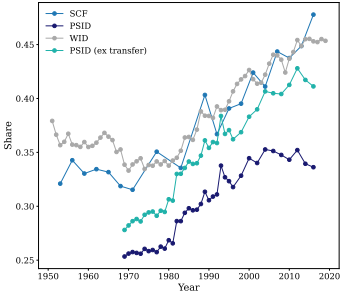


(c) gini

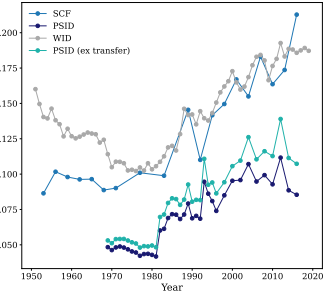


Income Inequality

(a) Top 10% Share



(b) Top 1% Share



(c) gini