

The Distributional Financial Accounts of the United States

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Acknowledgements and Disclaimer

This project reflects the combined efforts of the Flow of Funds and Microeconomic Survey sections at the Federal Reserve Board.

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The analysis and conclusions set forth here are those of the authors and do not indicate concurrence by other members of the research staff, the Board of Governors, or the Federal Reserve System.

Overview

Motivation: Produce quarterly, timely data on the distribution of wealth that are consistent with macro aggregates in the Financial Accounts of the United States.

- ▶ Construction of the Distributional Financial Accounts (DFA)
- ▶ Headline results
- ▶ Comparisons with other measures of the wealth distribution
- ▶ Application: Generational trends

DFA Construction Approach

Combine two existing FRB data products:

- ▶ Financial Accounts (FA): quarterly aggregate household wealth
- ▶ Survey of Consumer Finances (SCF): triennial survey of household balance sheets

Apply the distributional information contained in the SCF to aggregate wealth in the FA:

1. Match each component of FA wealth to an analogous SCF measure (Reconciliation)
2. For each part of the wealth distribution, interpolate and forecast the SCF analog in between SCF waves
3. In each quarter, apply the distribution of the SCF analog to the FA wealth component

Reconciliation

- ▶ For 30% of assets and liabilities (by amount), the SCF “Bulletin” measure aligns well with the FA (e.g. real estate, mortgages, DC pensions, checking accounts)
- ▶ 50% require significant adjustments to the SCF measure (e.g. assets in trusts and IRAs, valuation of non-publicly traded businesses)
- ▶ 20% are not directly measured in the SCF and instead are imputed using related SCF information (e.g. DB pensions, annuities, and insurance)
- ▶ The SCF is re-weighted to incorporate the wealth of the Forbes 400

Empirical Reconciliation Results

	<u>Average SCF/FA (%)</u>	<u>FA 2016Q3 (\$M)</u>	<u>SCF 2016 (\$M)</u>
Total Assets	100	104,972	112,693
Nonfinancial assets	104	29,651	32,603
Real estate	114	24,528	29,238
Consumer durable goods	61	5,123	3,365
Financial assets	99	75,320	80,090
Time deposits and short-term investments	56	8,725	4,128
U.S. government and municipal securities	78	3,339	3,343
Corporate equities and mutual fund shares	132	20,606	26,517
Pension entitlements	100	24,222	24,285
Equity in noncorporate business	101	11,220	13,994
Other	87	7,208	7,822
Total Liabilities	84	13,991	12,144
Home mortgages	90	9,710	9,174
Consumer credit	60	3,574	2,414
Other	114	707	556
Net worth	103	90,981	100,549

Interpolation and Forecasting

We employ the “temporal disaggregation” method of Chow and Lin (1971) to construct quarterly SCF estimates from the triennial observations:

- ▶ Estimates the relationship between the SCF and quarterly indicator series from the (currently 10) overlapping observations to predict the SCF target each quarter
- ▶ Indicator series: relevant FA series level, SP 500, Fed Funds rate, home prices and ownership, etc.
- ▶ Target series: level of SCF asset or liability for each wealth or demographic group (e.g. top 1%)
- ▶ Results are broadly similar if we use extensions of Chow-Lin or Kalman smoother

Interpolation and Forecasting Results

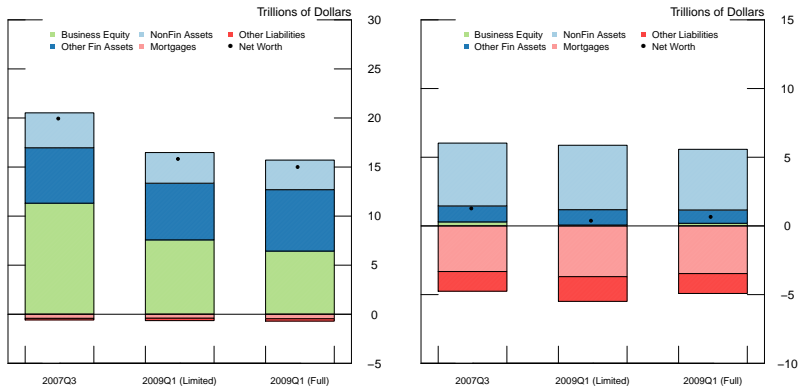


Figure 1: Top 1 (left), Bottom 50 (right)

Headline Results

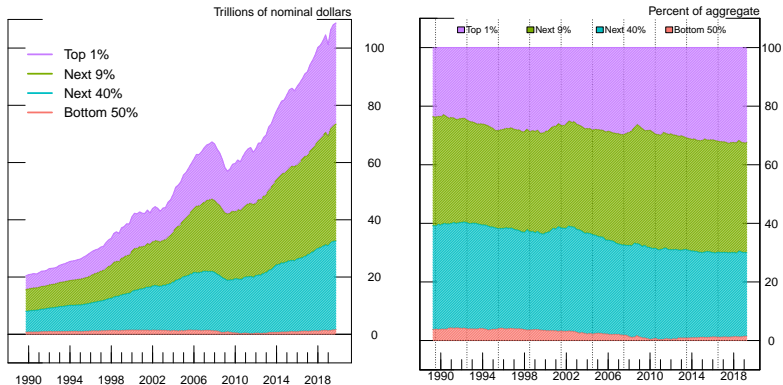


Figure 2: Net Worth by Wealth Percentile Group

Shares by Asset Category

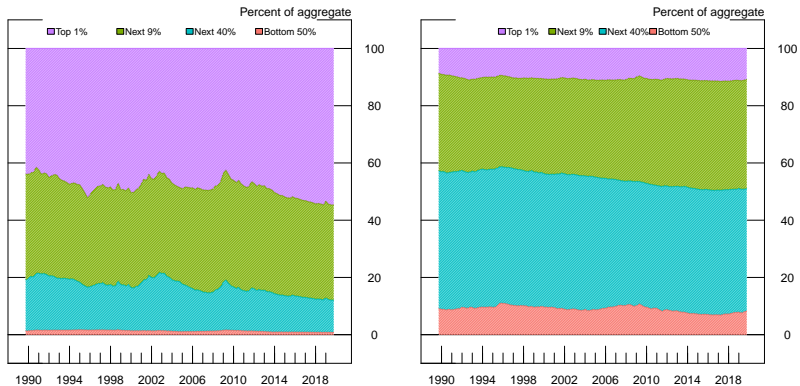


Figure 3: Business Equity (left), Pensions and Real Estate (right)

Comparison with SCF

Table 1: Average Wealth Shares by Decade

<u>Years</u>	<u>Wealth Group</u>	Baseline <u>(1)</u>	SCF Levels <u>(2)</u>	<u>SCF Wealth Breakdown</u>	
				Directly Measured <u>(3)</u>	Indirectly Measured <u>(4)</u>
1989-1999	Bottom 50	4.0	4.4	3.5	7.6
	Next 40	35.0	34.8	34.7	38.0
	Next 9	34.8	34.6	34.9	33.6
	Top 1	26.3	26.1	26.9	20.8
2000-2009	Bottom 50	2.4	3.5	1.8	7.3
	Next 40	33.2	32.8	32.0	42.6
	Next 9	36.7	36.2	36.5	35.6
	Top 1	27.7	27.4	30.0	14.6
2010-2019	Bottom 50	1.0	2.1	0.2	5.9
	Next 40	29.7	29.3	28.4	39.6
	Next 9	38.4	37.6	38.8	38.7
	Top 1	31.0	30.9	32.6	15.8

Indirectly Measured: DB pensions, annuities, life insurance, misc. assets, other loans and advances, unpaid life insurance premiums

Comparison with World Inequality Database (WID)

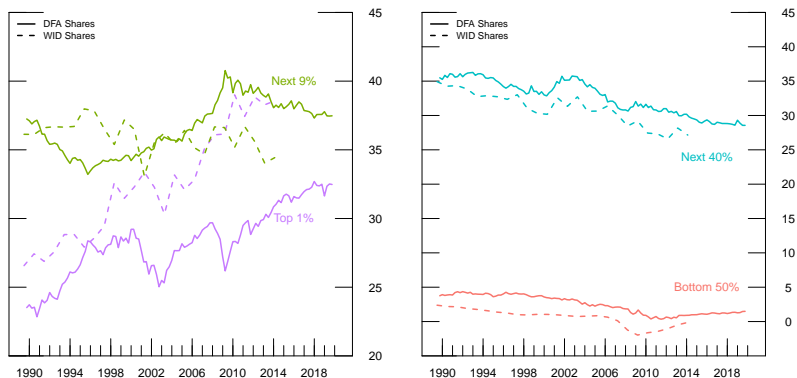


Figure 4: Wealth Shares from the DFA and WID

Comparison with Smith et al (2019)

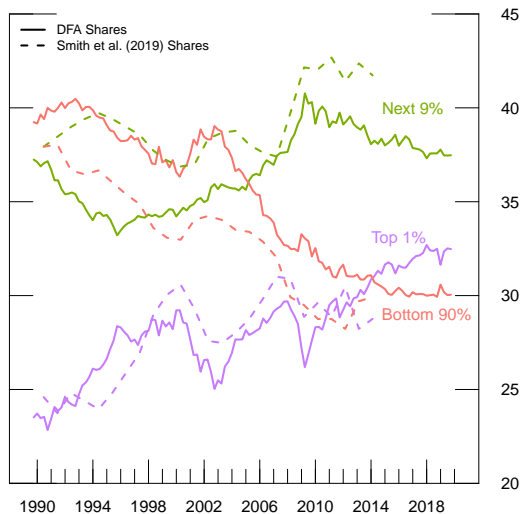


Figure 5: Wealth Shares from the DFA and Smith et al.

Wealth Levels by Generation

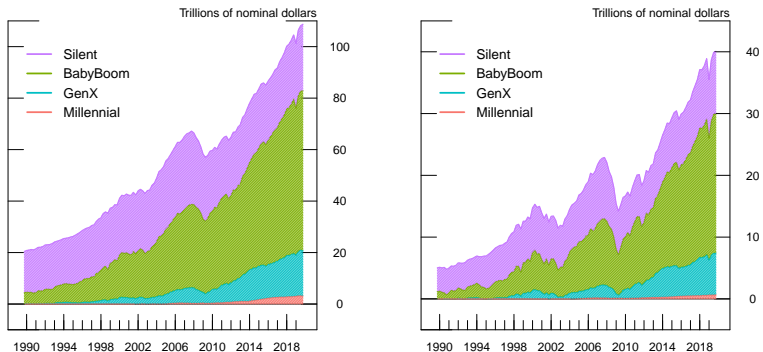


Figure 6: Net Worth (left), Business Equity (right)

Generational Trends by Age

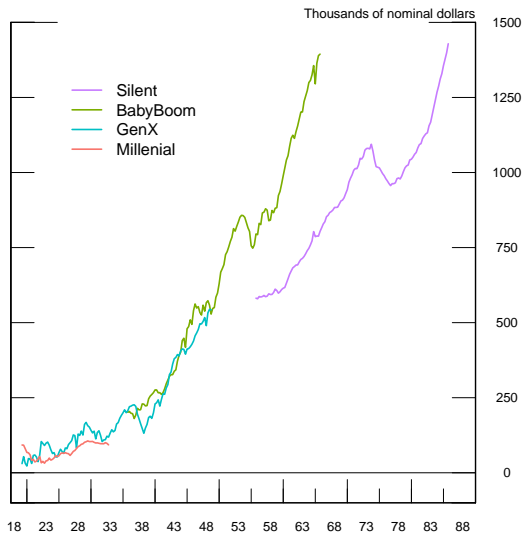
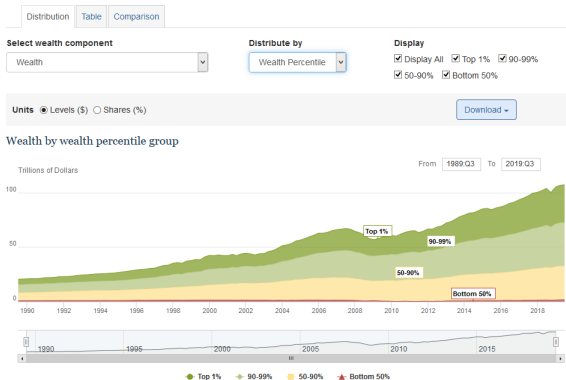


Figure 7: Per Household Real Net Worth by Age

Conclusion

- ▶ DFA released approximately 11 weeks after the quarter close:
<https://www.federalreserve.gov/releases/efa/efa-distributional-financial-accounts.htm>
- ▶ Distributions of wealth and its components from 1989 to present by: wealth, income, education, race, age, generation

Distribution of Household Wealth in the U.S. since 1989



Appendix

Interpolation and Forecasting Results

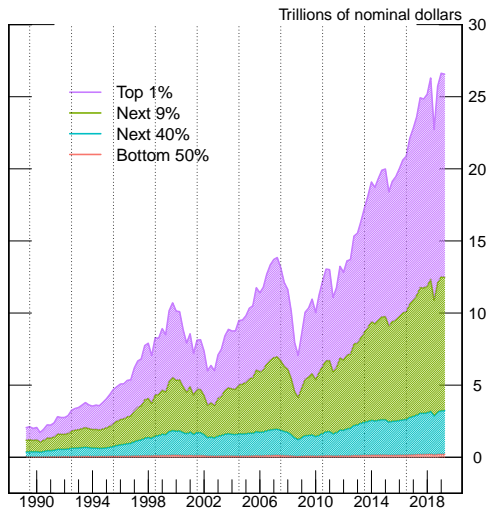


Figure 8: Corporate Equities and Mutual Funds, Levels

Interpolation and Forecasting Results

Table 2: Comparing Wealth Shares: DFA vs. Excluding One SCF

<u>SCF Year</u>	<u>Method</u>	<u>Top 1</u>	<u>Next 9</u>	<u>Next 40</u>	<u>Bottom 50</u>
2001	Excluding this SCF	27.45%	34.60%	34.76%	3.19%
	Baseline	25.95%	35.20%	35.71%	3.14%
2004	Excluding this SCF	27.01%	36.86%	33.52%	2.61%
	Baseline	27.67%	35.80%	34.08%	2.45%
2007	Excluding this SCF	30.67%	37.49%	30.81%	1.03%
	Baseline	29.68%	37.62%	30.80%	1.90%
2010	Excluding this SCF	27.27%	38.62%	33.05%	1.07%
	Baseline	28.79%	39.81%	30.84%	0.56%
2013	Excluding this SCF	31.11%	38.30%	29.97%	0.61%
	Baseline	30.43%	38.52%	30.17%	0.88%
2016	Excluding this SCF	30.65%	38.54%	29.29%	1.52%
	Baseline	31.74%	38.32%	28.70%	1.24%