



Changes in U.S. Family Finances 2013-2016: Results from the Survey of Consumer Finances

By Jesse Bricker, Lisa Dettling, Alice Henriques, Joanne Hsu, Lindsay Jacobs, Kevin Moore, Sarah Pack, John Sabelhaus, Jeffrey Thompson and Richard Windle

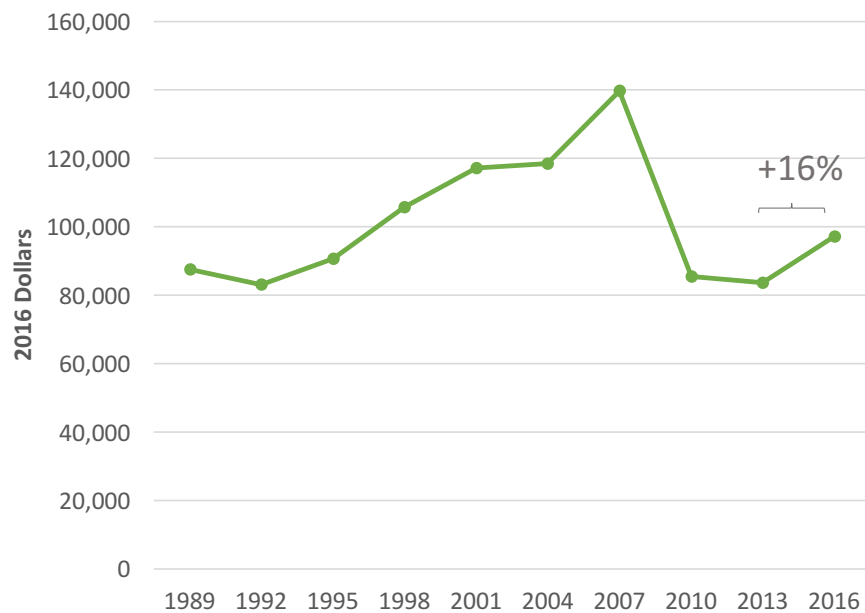
The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors of the Federal Reserve System.

Background

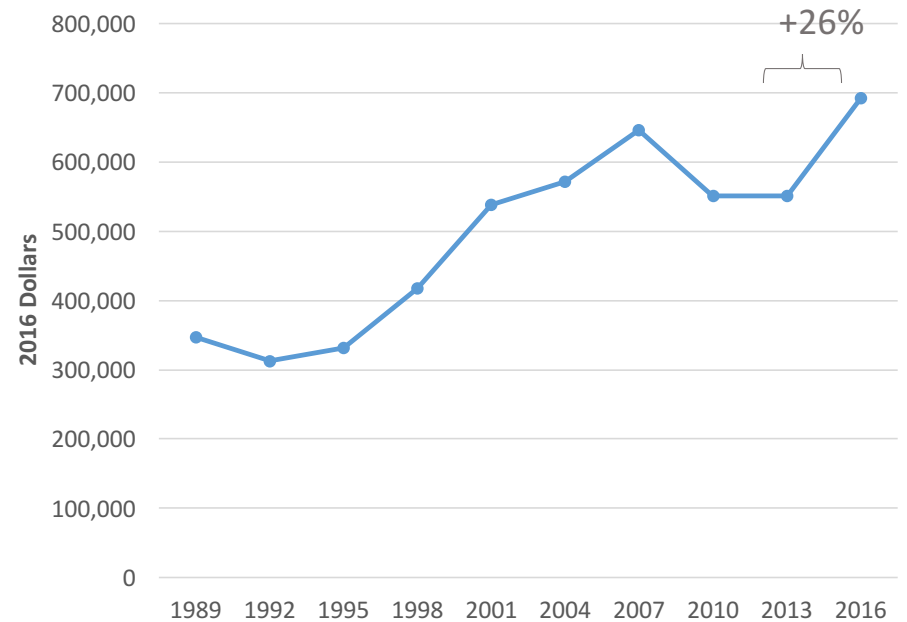
- Survey of households sponsored by the Federal Reserve Board
 - In cooperation with Department of Treasury
- SCF triennial cross-sectional surveys, 1989-2016
 - Sample sizes of 4,000 to 6,500 households
- Special sample design
 - Area probability sample – randomly selected households
 - List sample – specially selected wealthy households

Net worth and income trends

Real median and mean net worth increased between 2013 and 2016, after falling between the previous two waves



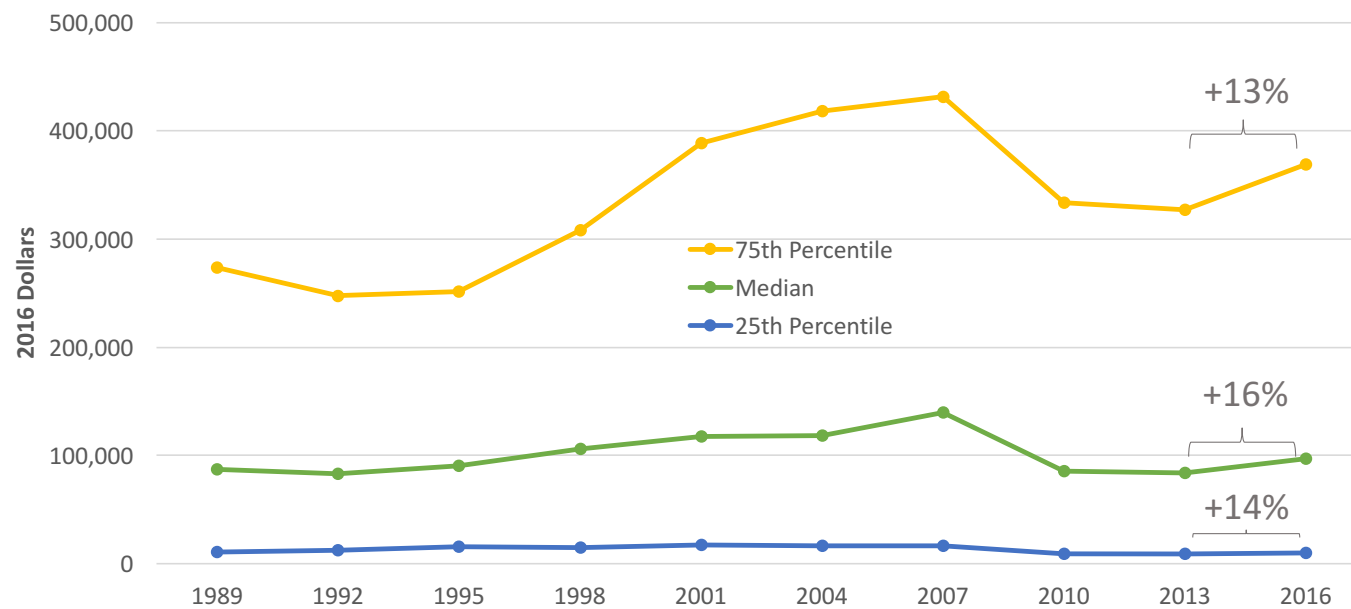
Median Net Worth, 1989-2016



Mean Net Worth, 1989-2016

Net worth increased throughout the distribution

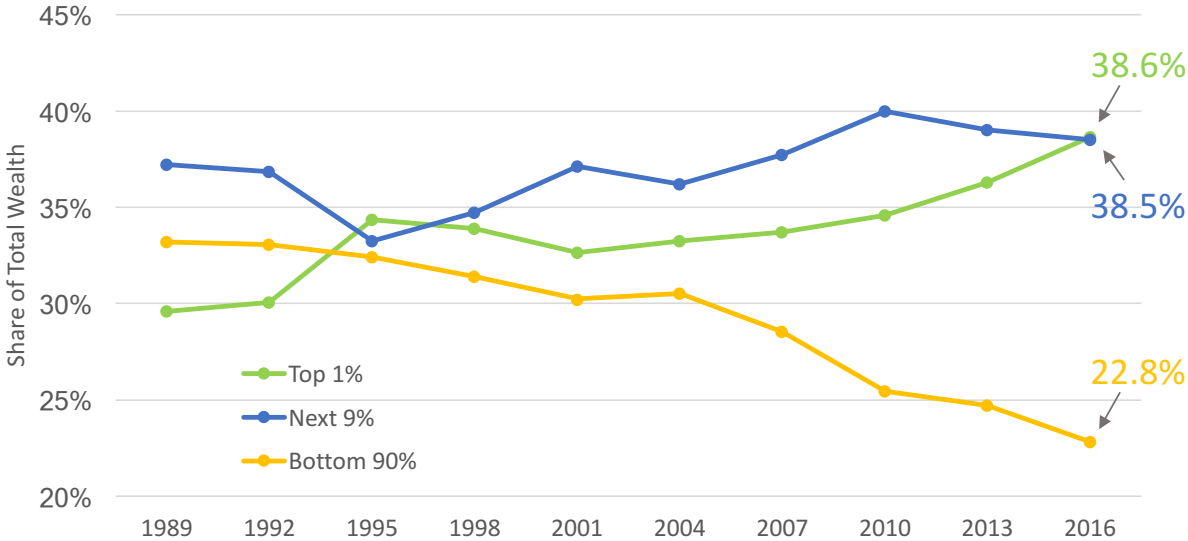
- 2016 values: \$10,300 at 25th, \$97,300 at median, \$369,100 at 75th



Distribution of Net Worth, 1989-2016

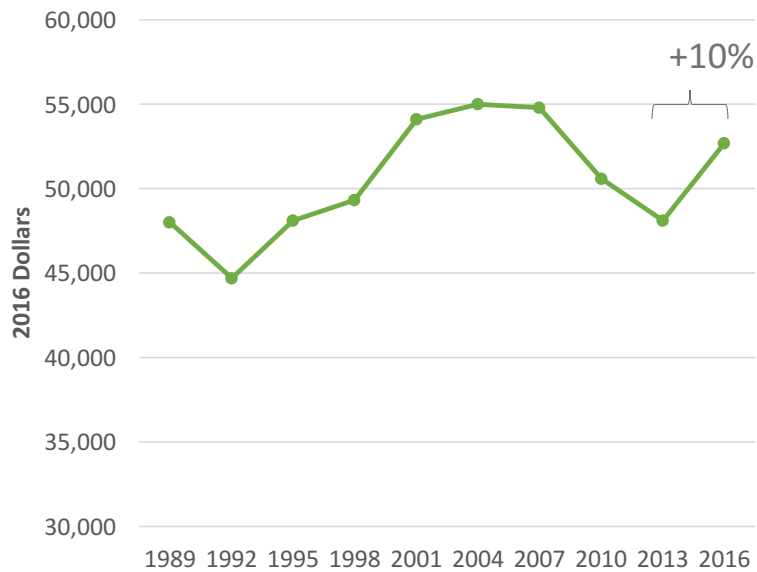
The fraction of total net worth held by the wealthiest households continued to climb between 2013 and 2016

- Primarily driven by the top 1% share increasing 2 percentage points from 2013 to 2016

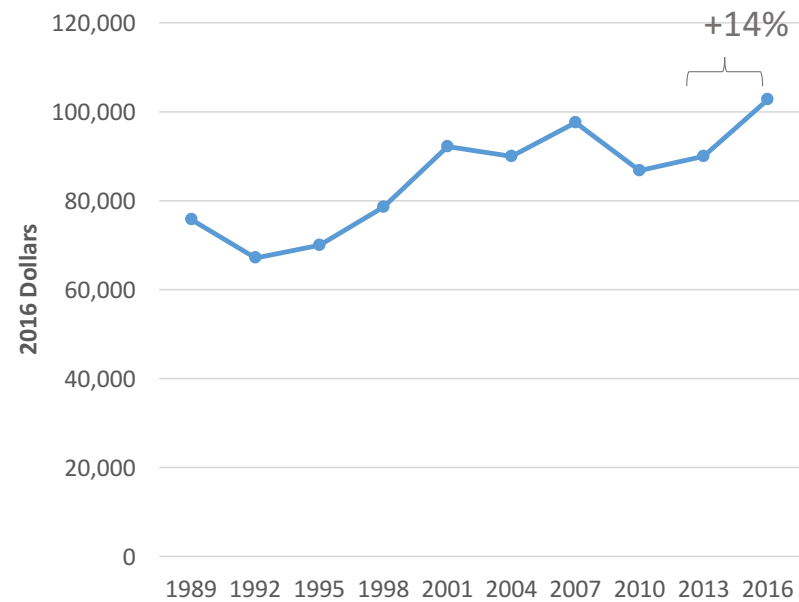


Net Worth Shares, by Net Worth Group

Real median and mean income increased between 2013 and 2016, after falling or slightly rising between the two previous waves



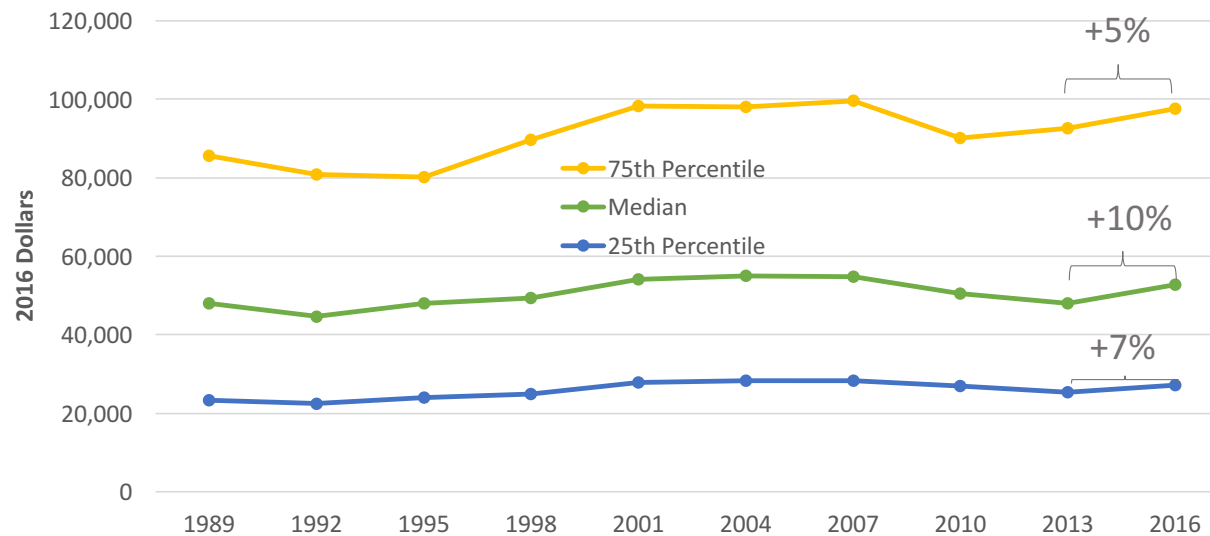
Median Income, 1989-2016



Mean Income, 1989-2016

Income rose throughout the income distribution

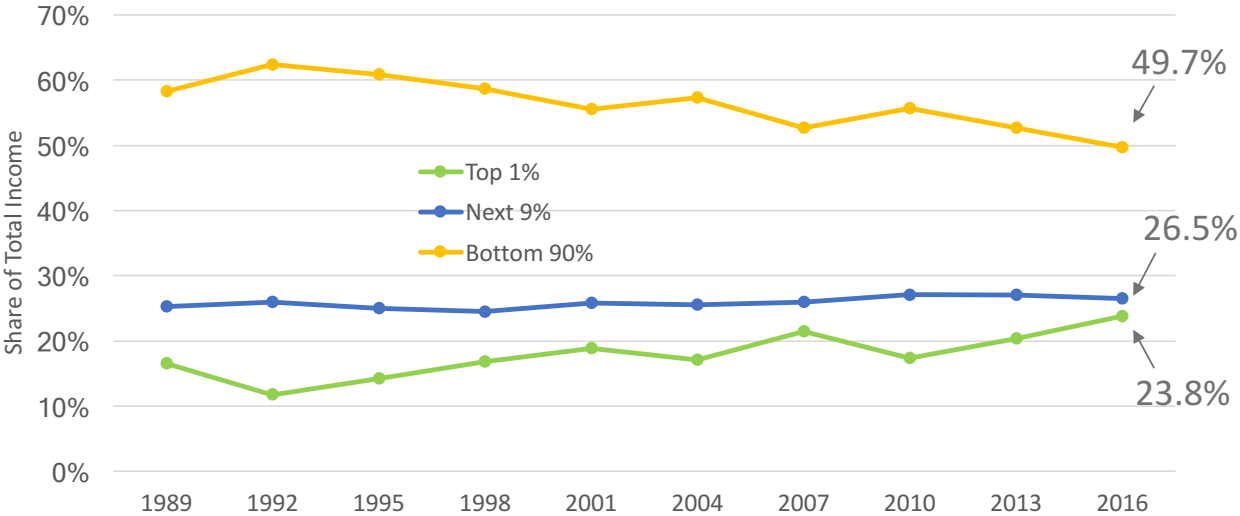
- 2016 values: \$27,100 at 25th, \$52,700 at median, \$97,600 at 75th



Distribution of Income, 1989-2016

The fraction of total income received by the highest income households continued to climb between 2013 and 2016

- Primarily driven by the top 1% share increasing 4 percentage points from 2013 to 2016

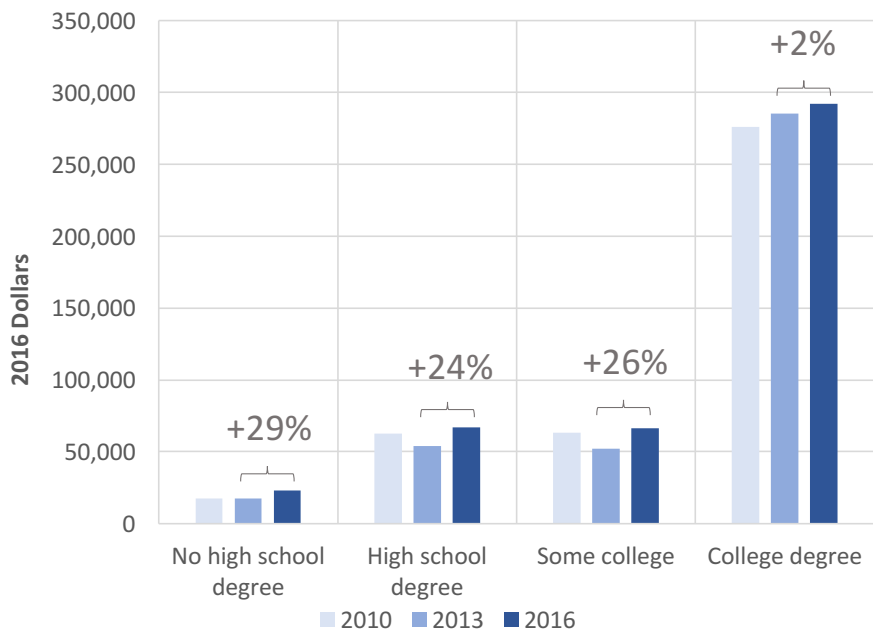


Income Shares, by Income Group

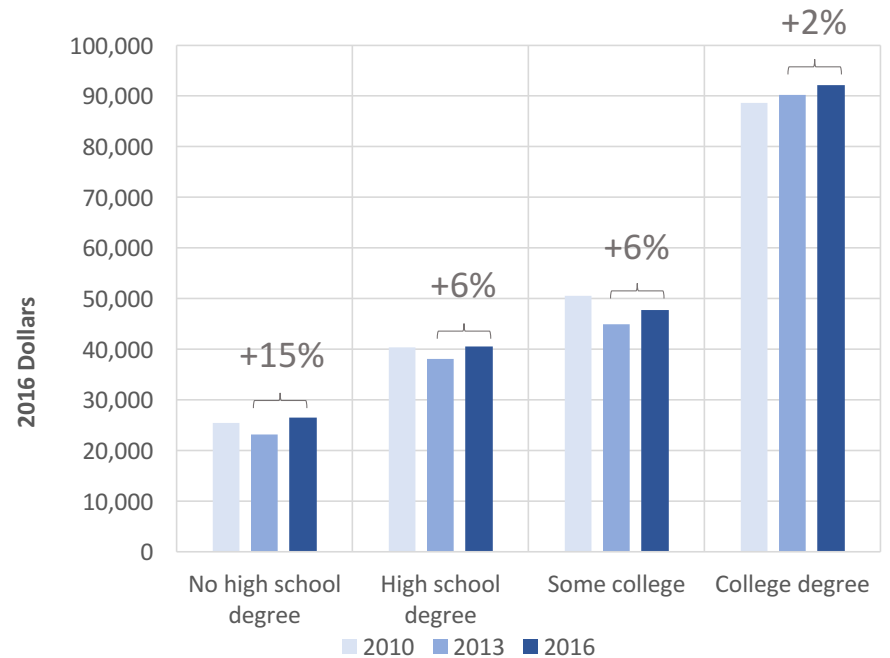
Changes by demographic groups

Net worth and income rose for all education levels

- Lower education groups rebounded from 2013 low point
- College-educated fell less during financial crisis and have climbed since



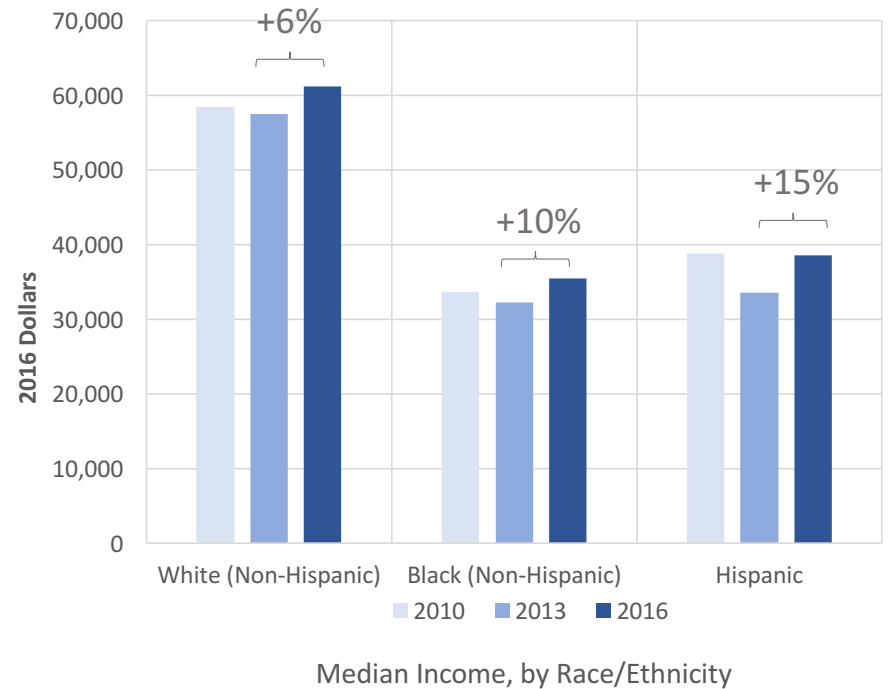
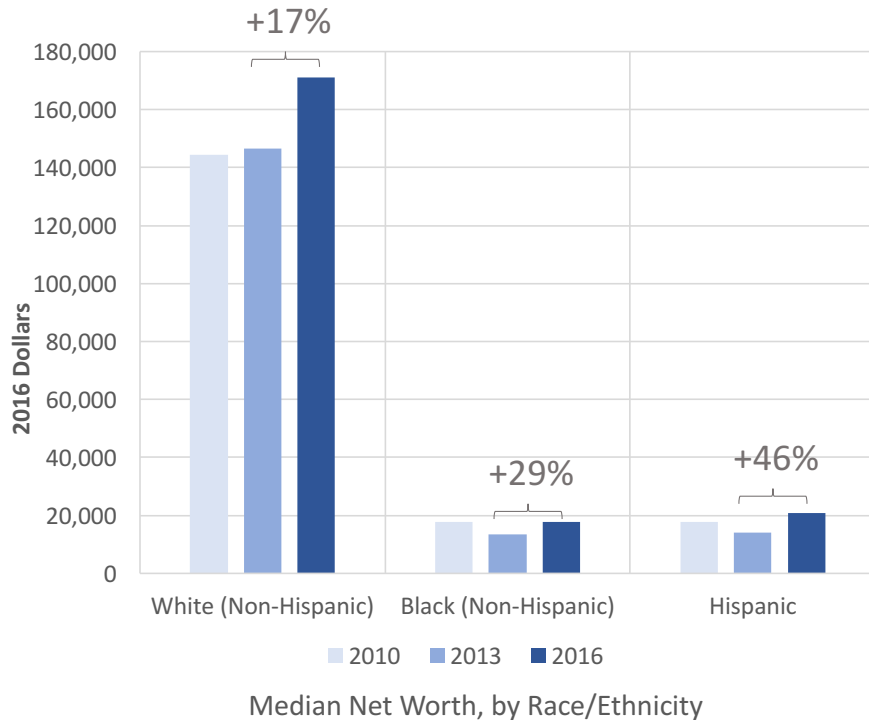
Median Net Worth, by Education



Median Income, by Education

Net worth and income rose for all race/ethnicity groups

- Net worth increased \$24,700 for White, \$4,000 for Black, and \$6,600 for Hispanic families from 2013 to 2016
- Income growth larger among non-white families

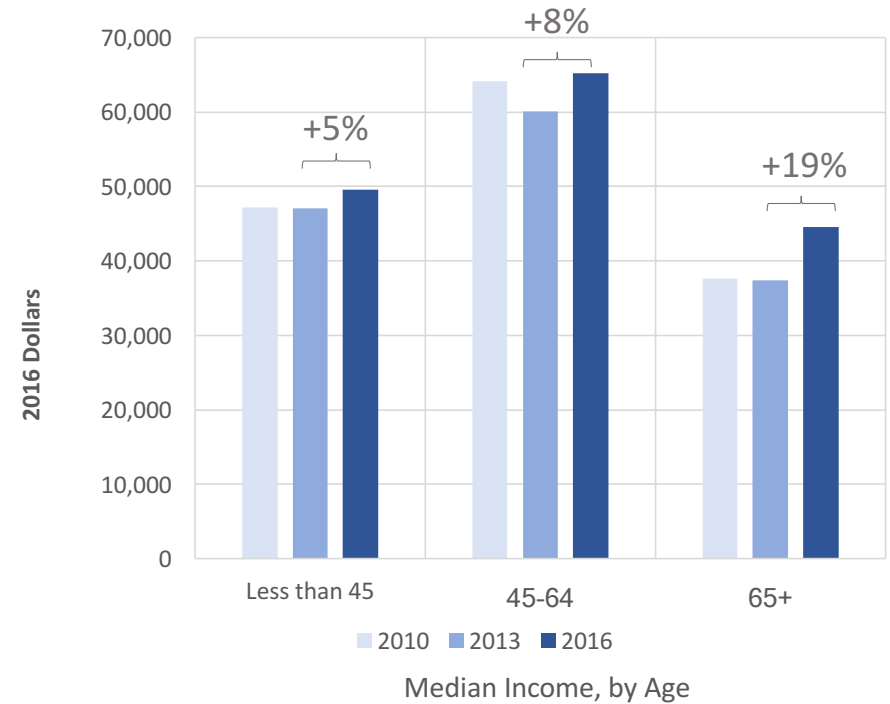
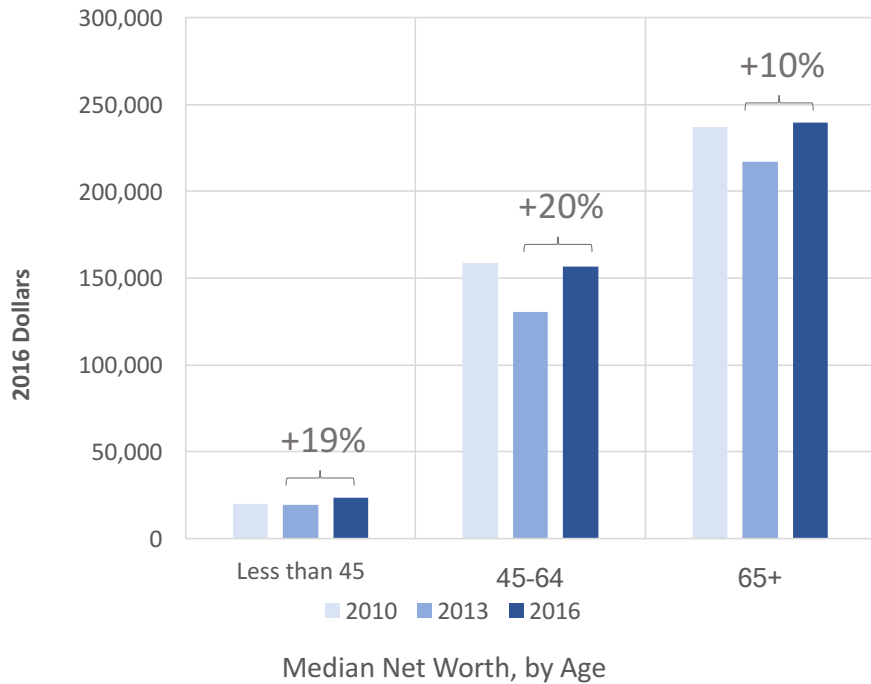


Net worth by race/ethnicity and education

	<u>Median net worth</u>		<u>Mean net worth</u>	
	2013	2016	2013	2016
<i><u>No bachelor's degree</u></i>				
White	87.1	98.1	323.1	367.8
Black	10.3	11.6	78.9	99.3
Hispanic	13.1	17.5	76.3	105.7
<i><u>Bachelor's degree or higher</u></i>				
White	375.5	397.1	1,440.1	1,821.3
Black	36.8	68.2	184.4	271.2
Hispanic	58.0	77.9	401.8	609.6

Net worth and income increased for all age groups

- Double-digit growth in net worth and income among 65+ families
- Despite substantial growth since 2013, net worth of 45-64 year olds remains below levels from 2010



Changes by usual income

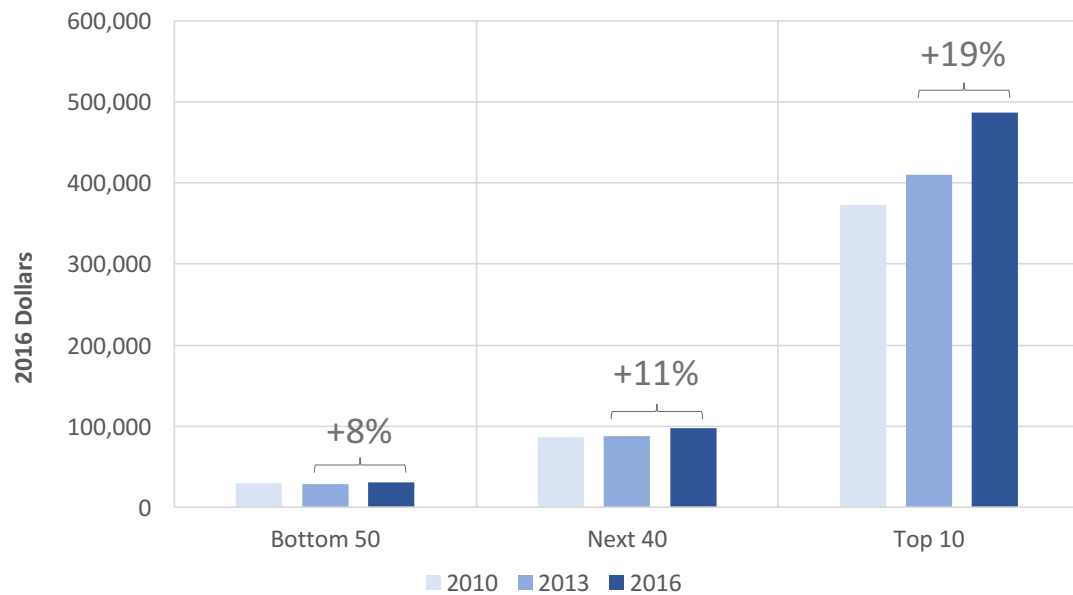
Income by “usual income”

- Usual income has transitory fluctuations smoothed away
- Approximates theoretical concept of “permanent” income in macro models

Comparison of actual and usual income

	2010	2013	2016
Income below usual	25%	18%	15%
Income same as usual	69%	74%	76%
Income above usual	6%	7%	9%

Note: Components may not sum to total due to rounding



Mean Income, by Usual Income Group

Wages are an important driver of income gains

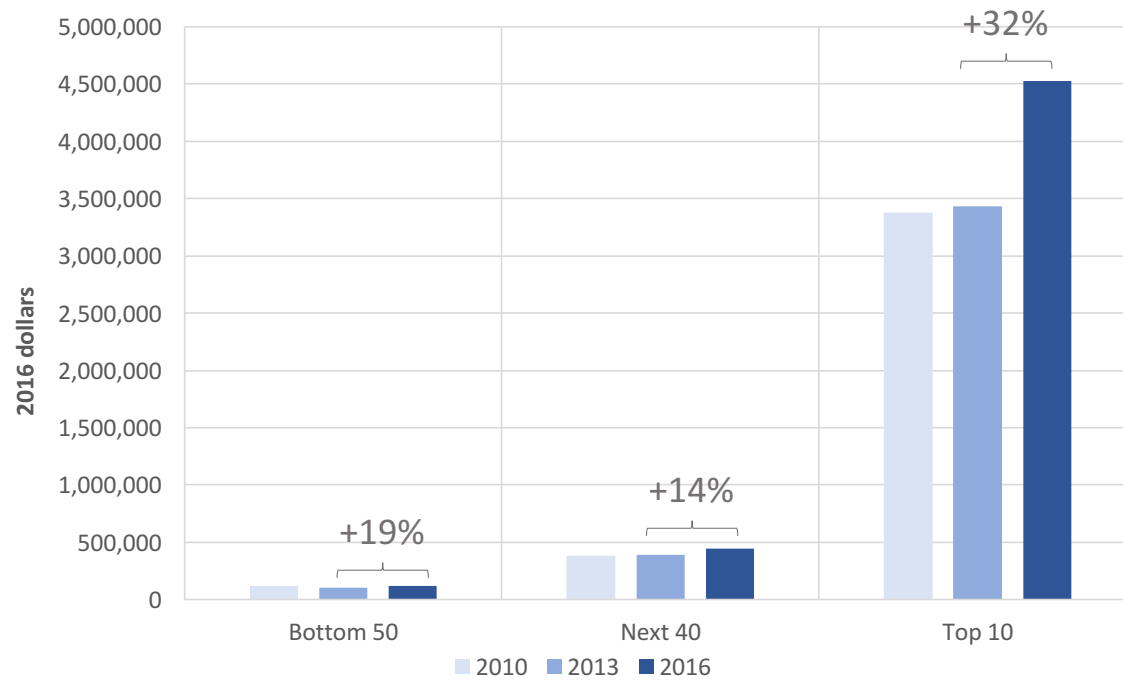
Contributions to overall percentage change in income 2013-2016, by usual income

	Bottom 50	Next 40	Top 10
Wages	4.4	3.2	10.8
Business	2.0	1.3	4.0
Interest and Capital Gains	0.5	0.4	2.9
Other Sources	1.4	6.4	1.3
Total	8.3	11.3	18.9
Total (2010-2013)	-4.9	0.4	10.0

Note: Components may not sum to total due to rounding

Net worth by usual income

- Double-digit gains in net worth for all usual income groups



Mean Net Worth, by Usual Income Group

Housing, business, corporate equity driving net worth gains

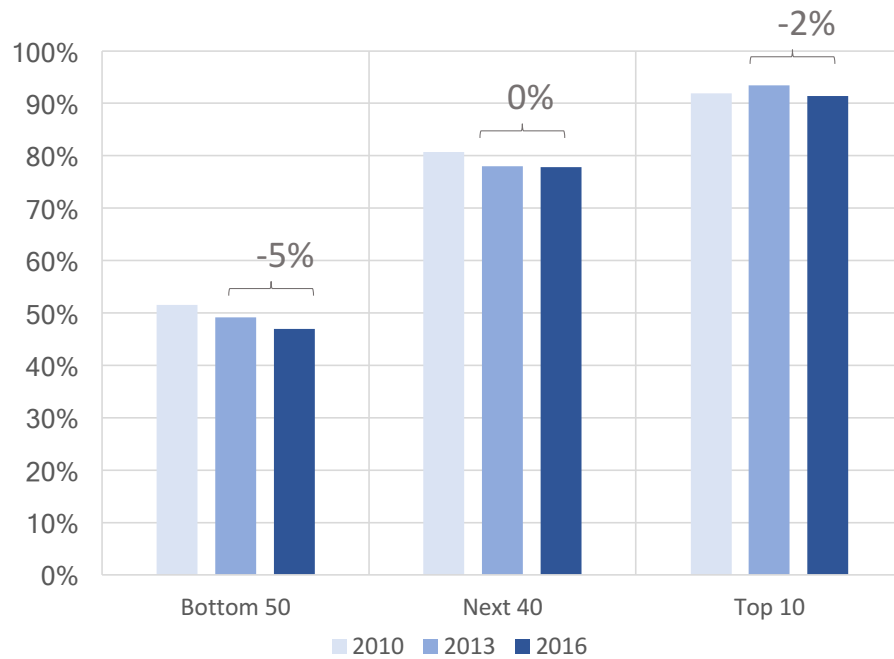
Contributions to overall percentage change in net worth 2013-2016, by usual income

	Bottom 50	Next 40	Top 10
Housing	6.9	1.5	4.7
(Less) Mortgages	0.7	2.0	-0.2
Business Plus Corporate Equity	7.8	7.4	21.7
Other Assets	5.2	4.0	6.2
(Less) Non-mortgage Debt	-1.3	-1.2	-0.4
Total	19.3	13.6	31.9
Total (2010-2013)	-15.1	2.4	1.6

Note: Components may not sum to total due to rounding

Decline in homeownership across usual income groups

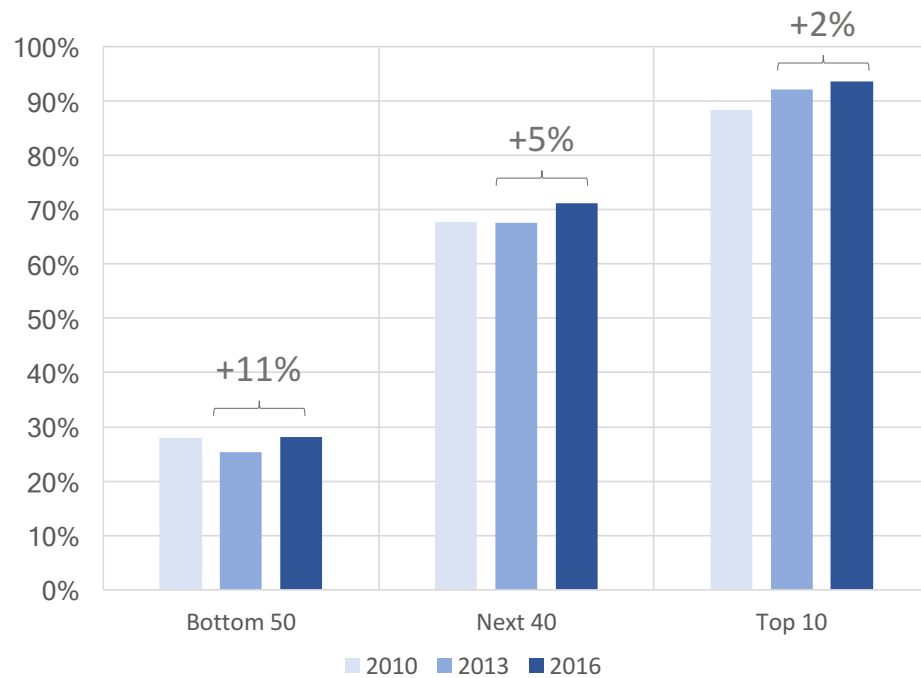
- House values increasing; fewer households sharing that gain



Homeownership Rates, by Usual Income Group

	Net Housing Wealth (Conditional Mean, Thousands)		
	2010	2013	2016
0-49.9	107.1	95.2	107.7
50-89.9	130.7	130	153.9
90-100	481.6	460.4	576.4

Increase in corporate equity 2013-16

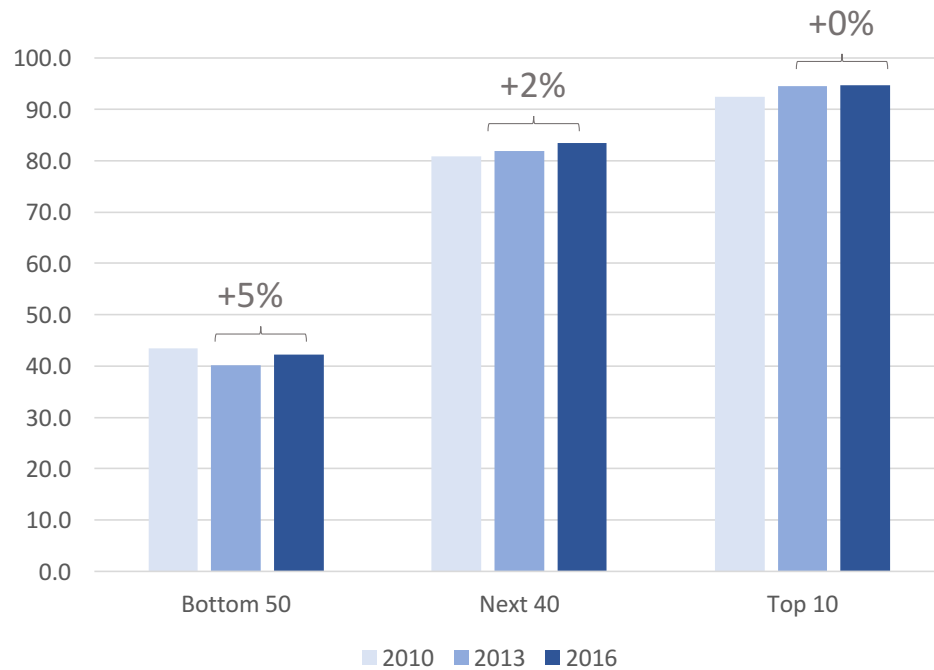


Equity Ownership, by Usual Income Group

	Corporate Equity Value (Conditional Mean, Thousands)		
	2010	2013	2016
0-49.9	37.2	55.3	52.3
50-89.9	116.5	136.4	153.0
90-100	913.7	999.4	1365.5

Retirement accounts and plan participation

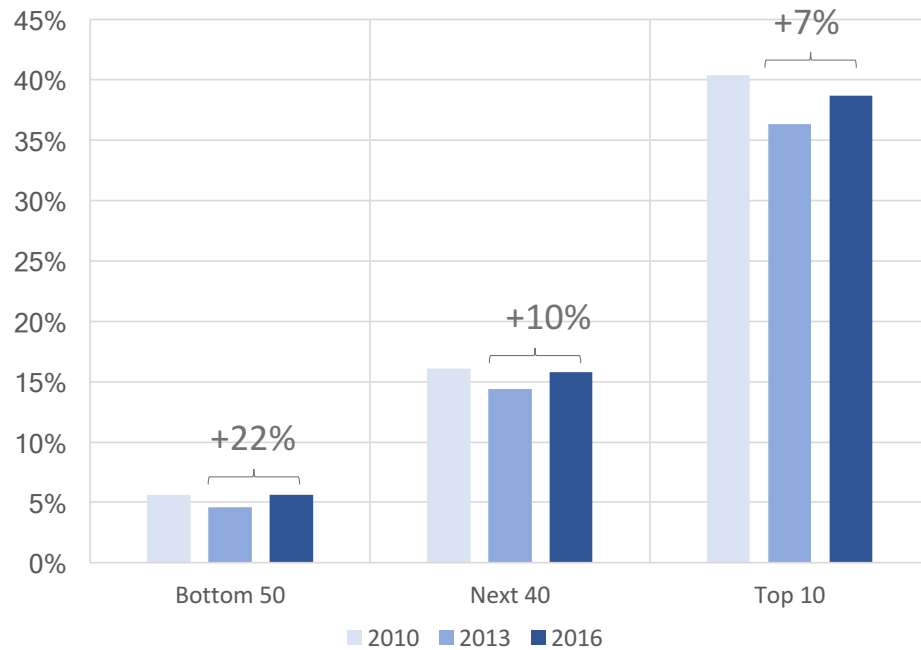
- Participation includes any of the following: IRA, Defined contribution (DC) plans, (e.g., 401k), or Defined benefit (DB) plans



Participation in any retirement plan, Ages 35-64, by usual income

	Retirement Account Value (Conditional Mean, Thousands)		
	2010	2013	2016
0-49.9	41.8	40.3	53.5
50-89.9	130.9	151.9	156.9
90-100	556.3	460.0	641.4

Business ownership rebounded for most groups



Business Ownership, by Usual Income Group

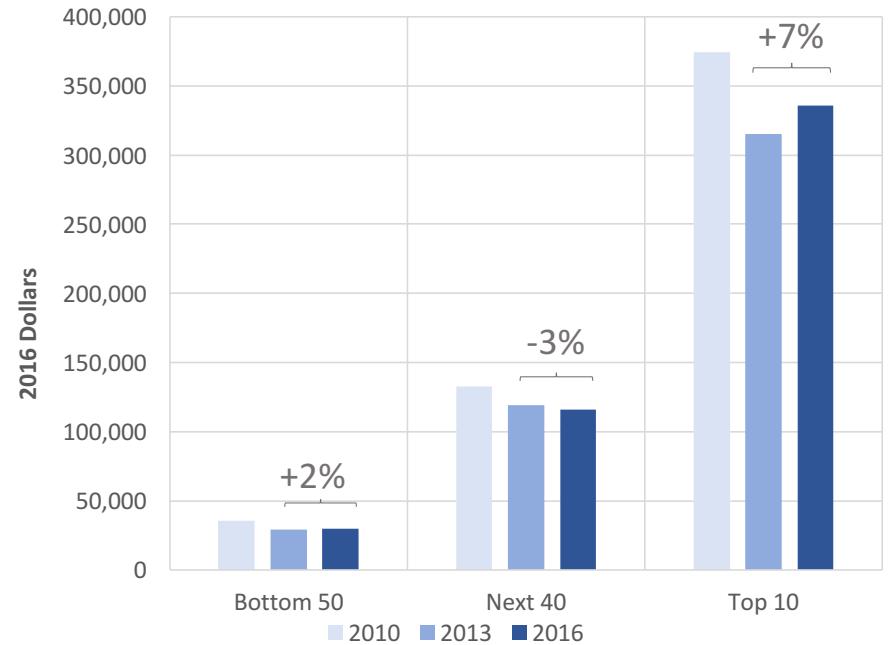
	Business Value (Conditional Mean, Thousands)		
	2010	2013	2016
0-49.9	204.2	157.5	208.0
50-89.9	285.5	283.2	330.2
90-100	2265.0	2685.0	3307.0

Debt by usual income

- Increase in fraction of bottom 50 and next 40 with debt, but mean debt value was flat or declining
- Fraction of top 10 with debt falling, but mean value increased between 2013 and 2016



% with Debt, by Usual Income Group

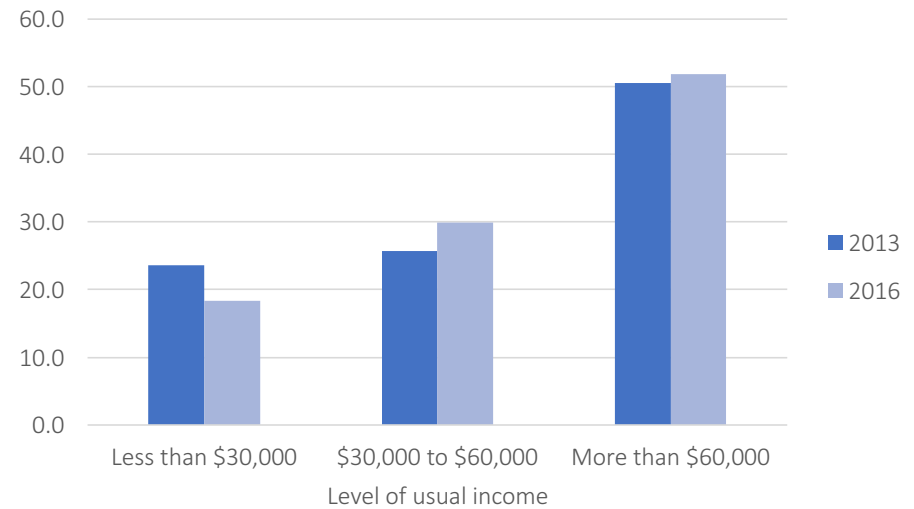


Mean Debt, by Usual Income Group

Education debt increased 2013-16, but increasing share held by higher income families

Education Debt Among Young Families (<40)

	2013	2016
Percent with education debt	38.8	43.3
Mean education debt	30.7	33.3
Median education debt	17.3	19



Share of Young Families Education Debt, by Income Group

Conclusions, part 1

- Results from the 2016 SCF show broad-based gains in net worth and income across the distribution and across demographic groups
- However, both net worth and income inequality continue to rise as disparities in economic resources among race and education groups persist

Building an expanded measure of wealth

Overview

- Evaluate retirement adequacy of a relatively young cohort of pre-retirement workers (age 40-59)
- Explore trends in the distribution of wealth using expanded wealth concepts (net worth + defined benefit pension wealth + Social Security)
 - Retirement wealth (DB, DC and Social Security) a huge component of household balance sheet
 - In 2016, \$15T for DB and \$15T for DC, household net worth \$102T
 - Current value of future SS benefits is \$62.5T
- To do this, we need to estimate lifetime earnings histories and implied Social Security Wealth in the Survey of Consumer Finances

Previous Literature: Wealth Inequality

- Research on the distribution of wealth has grown in recent years, nearly all of it showing rising inequality, but to varying degrees
 - Most do not include Social Security (Bricker, Henriques, Krimmel, and Sabelhaus (2016); Saez and Zucman, (2016))
 - Use data sources that do not successfully include high wealth households (Pfeffer, Danziger, and Schoeni, 2013)
- Efforts to incorporate a more complete range of retirement wealth into data that include high wealth households
 - Devlin-Foltz, Henriques, and Sabelhaus (2015) incorporate estimates of DB wealth
 - Kennickell and Sunden (1997) estimate DB and SS wealth in early SCF surveys
 - Wolff (various)

Approach

- Defined benefit estimation
 - Estimate 'retirees' PDV of benefits directly
 - Estimate accumulated assets of 'workers' as residual from Financial Accounts aggregate household DB assets.
 - Use wage, years in plan, and discount factor to allocate residual
- Social Security estimation
 - Expected future benefits net expected contributions
 - Need earnings histories

Constructing Lifetime Earnings: Current Population Survey (CPS) and SCF

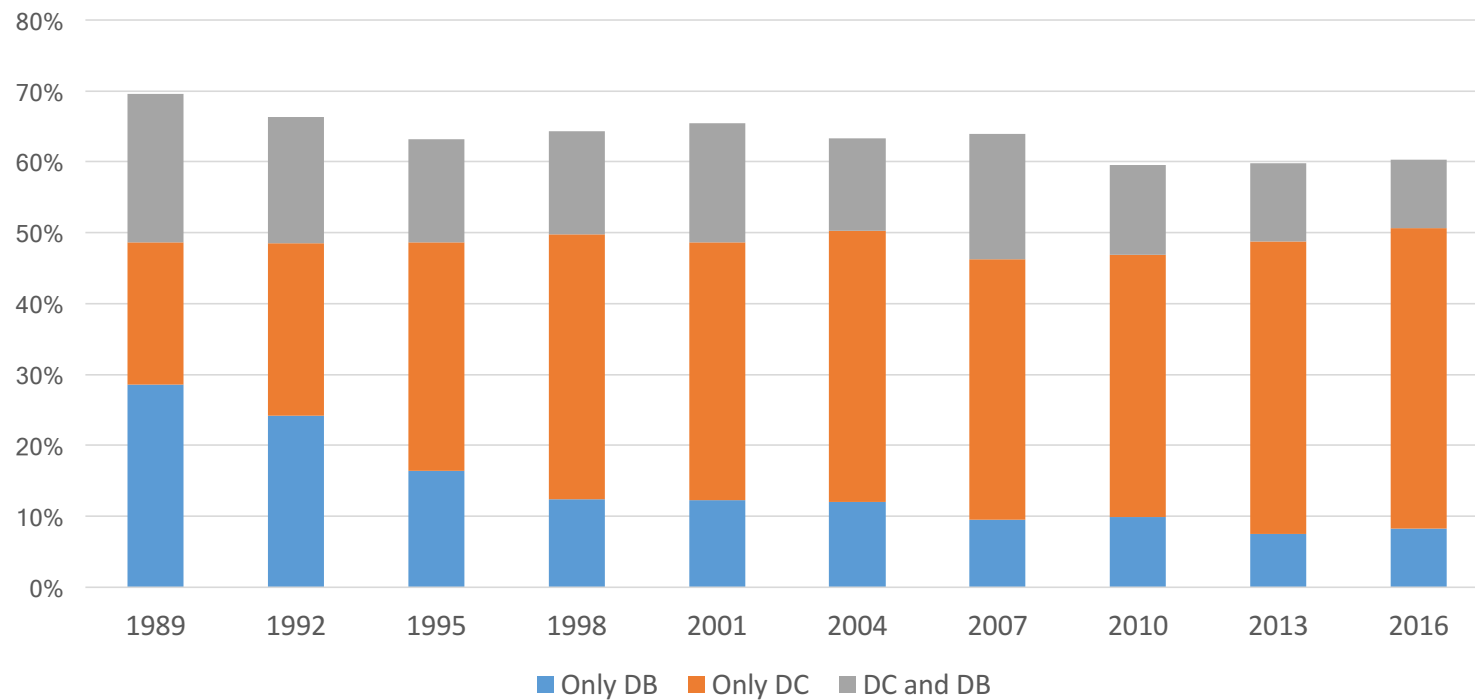
- Using the CPS data, we estimate earnings regressions over all ages for each cohort-education-occupation type by sex
 - 21 (3-year) birth cohorts, 3 education levels, 5 broad occupations giving 315 *types* for male and female respondents and spouses
- To construct a full lifecycle of earnings for SCF respondents use current job, past jobs and projections
- We then apply the *growth* in earnings over one's working life implied by the CPS earnings estimates for that individual's *type* as well as FT-PT-SE differentials

Social Security Estimation

- Households eligible for Social Security based on work history
- “Average lifetime earnings” transformed into monthly benefit (progressive calculation)
- Spouses eligible for a spouse and survivor benefit
- SS wealth is PV of expected future benefits net expected contributions (life expectancy currently only cohort-based)
- Everyone claims at 62 – lower bound for SSW overall
 - Larger penalty relative to NRA claiming for younger cohorts due to rule changes

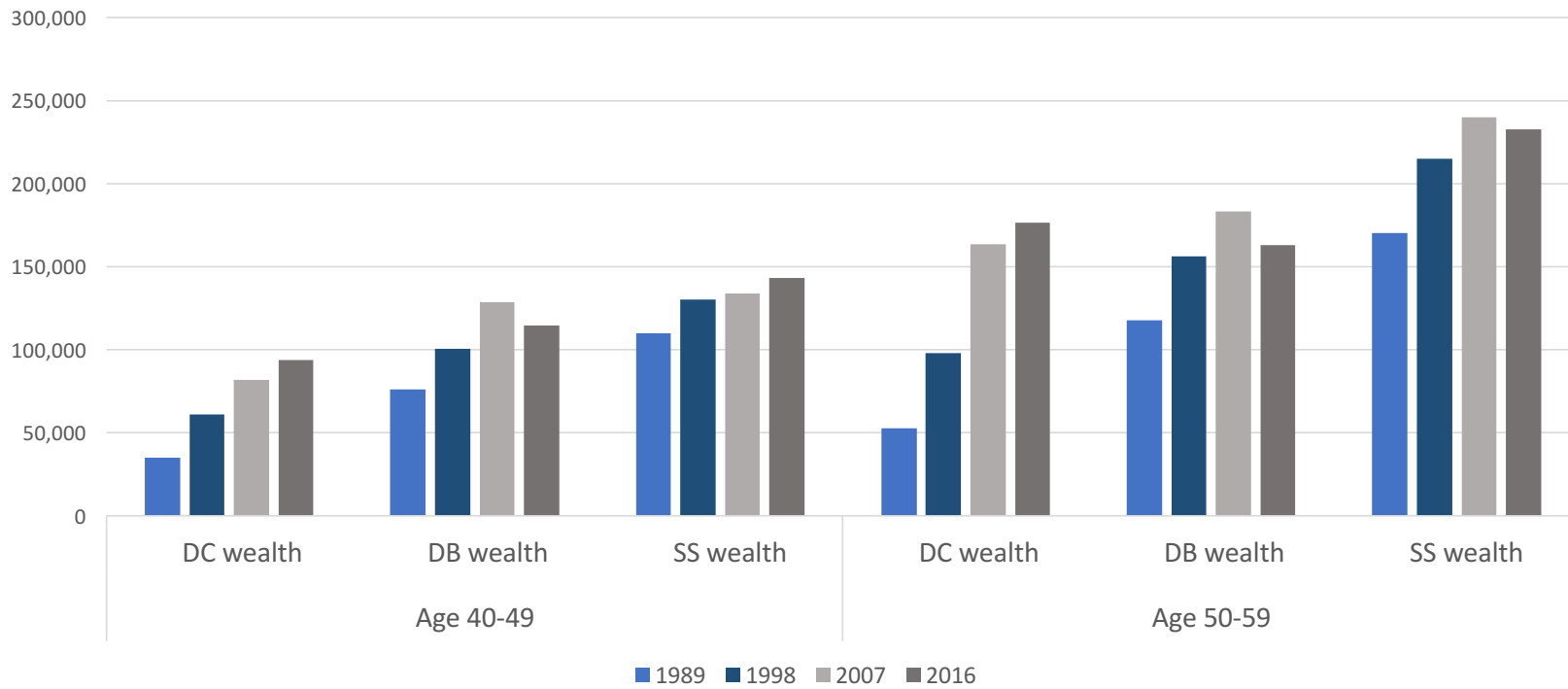
Trends in Pension Plan Participation

(working household heads, age 40-59)



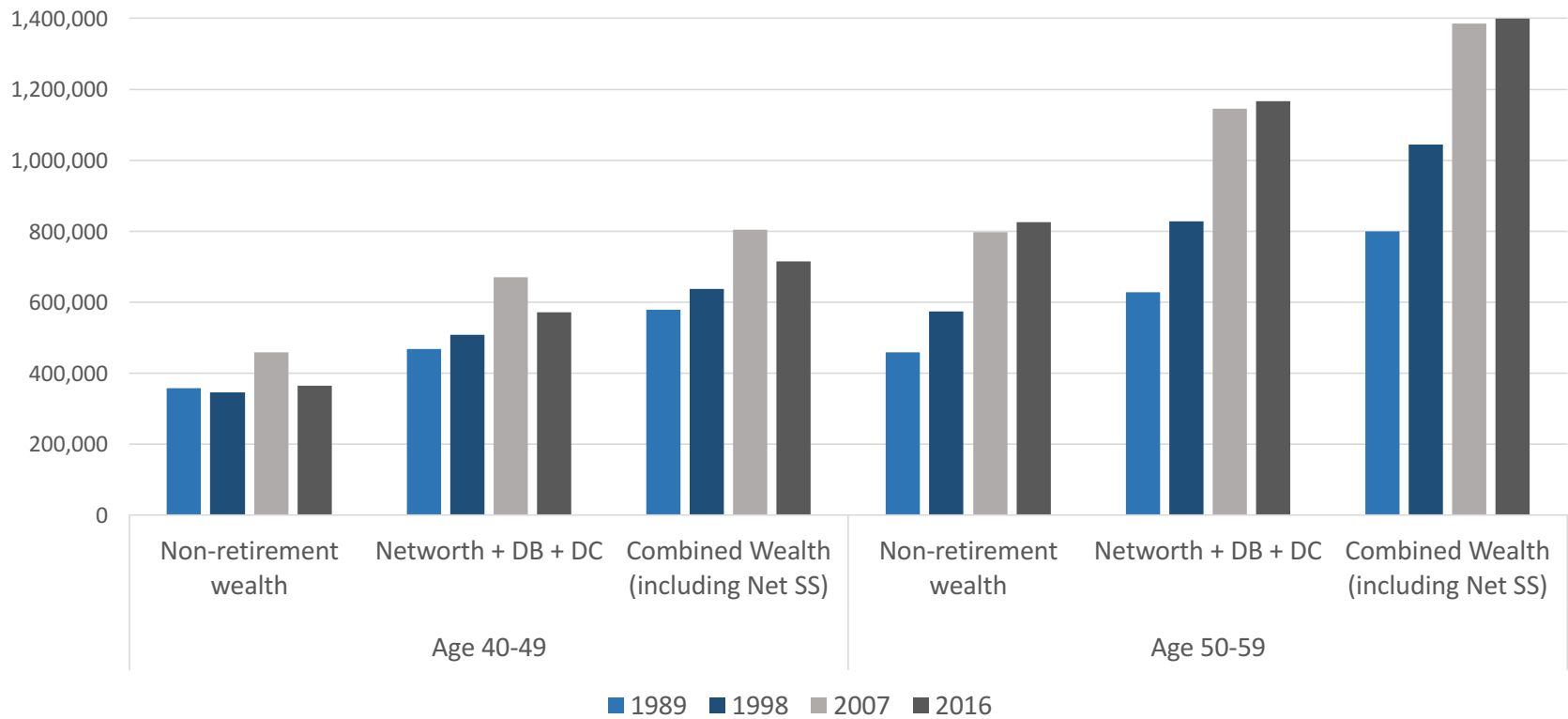
Results: Components of Retirement Wealth

(mean, 2016\$)



Results: Combined Wealth by Concept

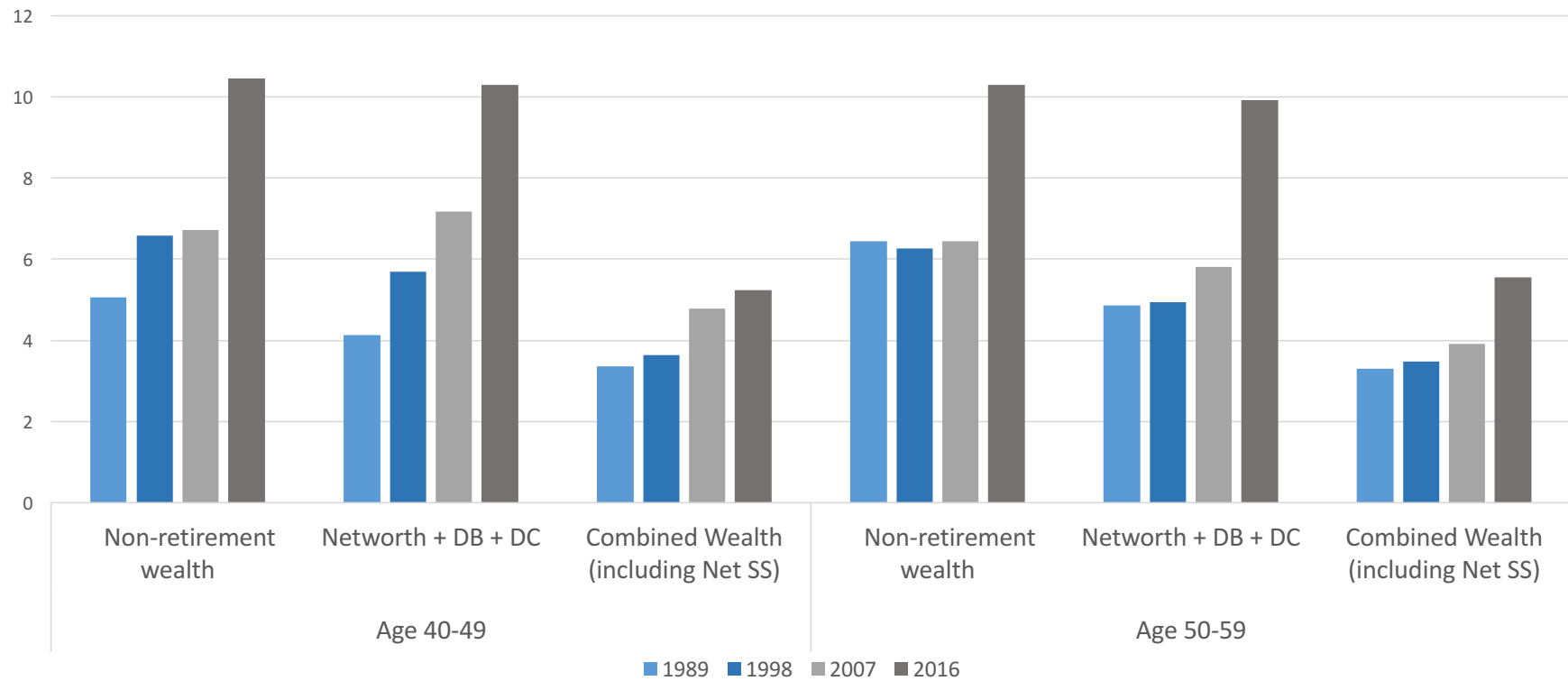
(mean 2016\$)



Wealth Concentration

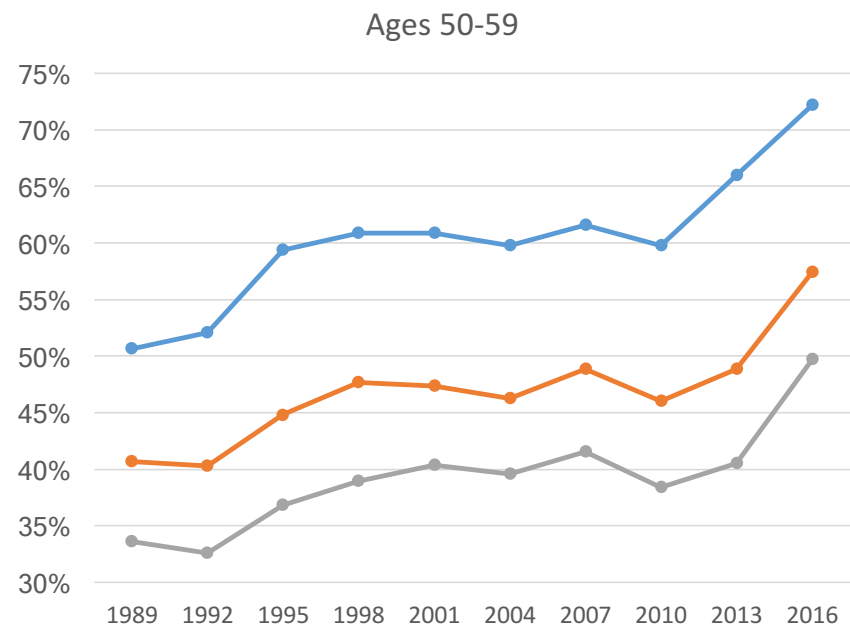
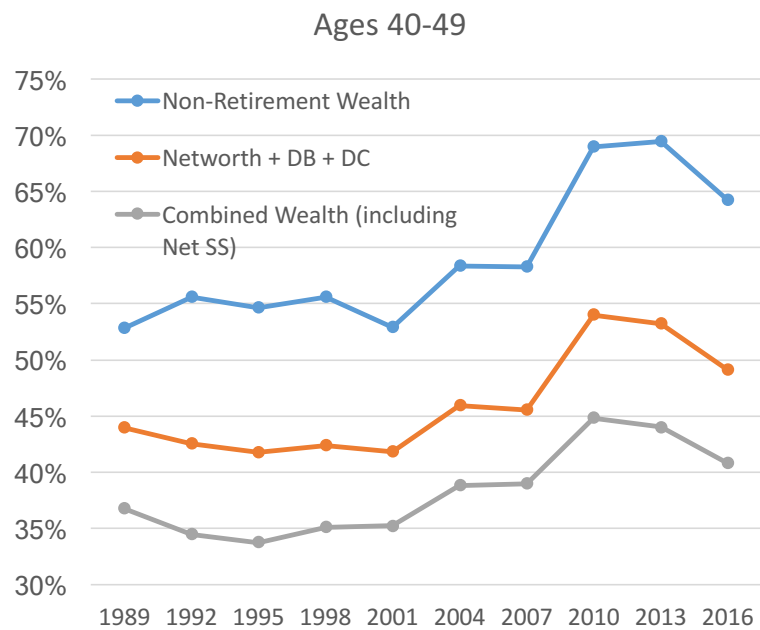
- How does the combined wealth concept effect wealth concentration?
 - 90/50 ratios
 - Wealth shares

90/50 Ratio of Wealth Concept Levels



Share of Wealth Held by Top 5%

(Ranked by wealth concept, within age group)



Conclusions, part 2

- Including DB pension and Social Security wealth results in markedly lower measures of wealth concentration
 - Trends toward higher concentration over time are also somewhat moderated but still increasing

Future Work

- Lifetime Earnings/Wealth Estimates:
 - More complex DB estimates
 - Extend to **growth in DB and non-retirement wealth** to say more about preparedness
 - More work on lifetime earnings profiles
- Distributional Analysis:
 - Explore levels/trends for groups using total wealth (NW + DB + SS)
 - Race, education, occupation
- Expand combined wealth to all households
 - Need earnings histories for younger households
- Include combined wealth measure in the public data

SCF website

<https://www.federalreserve.gov/econres/scfindex.htm>

Questions?

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APPENDIX SLIDES

A.1 Decomposition of changes in income, 2010-13 and 2013-16

Contributions to overall percentage change in income 2010-2013, by usual income

	Bottom 50	Next 40	Top 10
Wages	-6.5	-2.7	-2.0
Business	-0.1	-1.1	3.5
Interest and Capital Gains	0.3	1.5	8.5
Other Sources	1.3	2.7	-0.1
Total	-4.9	0.4	10.0

Contributions to overall percentage change in income 2013-2016, by usual income

	Bottom 50	Next 40	Top 10
Wages	4.4	3.2	10.8
Business	2.0	1.3	4.0
Interest and Capital Gains	0.5	0.4	2.9
Other Sources	1.4	6.4	1.3
Total	8.3	11.3	18.9

Note: Components may not sum to total due to rounding

A.2 Decomposition of change in net worth 2010-13 and 2013-16

Contributions to overall percentage change in net worth 2010-2013, by usual income

	Bottom 50	Next 40	Top 10
Housing	-14.6	-2.7	-2.3
(Less) Mortgages	5.0	3.2	1.5
Business Plus Corporate Equity	-4.8	2.3	3.6
Other Assets	-0.7	-0.7	-1.4
(Less) Non-mortgage Debt	-0.1	0.3	0.3
Total	-15.1	2.4	1.6

Contributions to overall percentage change in net worth 2013-2016, by usual income

	Bottom 50	Next 40	Top 10
Housing	6.9	1.5	4.7
(Less) Mortgages	0.7	2.0	-0.2
Business Plus Corporate Equity	7.8	7.4	21.7
Other Assets	5.2	4.0	6.2
(Less) Non-mortgage Debt	-1.3	-1.2	-0.4
Total	19.3	13.6	31.9

Note: Components may not sum to total due to rounding