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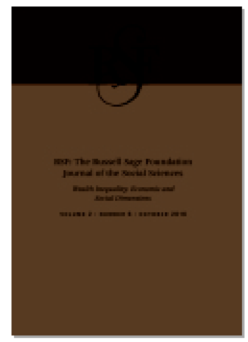

Edward N. Wolff

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Household Wealth Trends in the United States, 1962 to 2013: What Happened over the Great Recession?

EDWARD N. WOLFF

I look at wealth trends from 1962 to 2013, particularly for the middle class. Asset prices plunged between 2007 and 2010 but then rebounded from 2010 to 2013. The most telling finding is that median wealth plummeted by 44 percent between 2007 and 2010, almost double the drop in housing prices. Wealth inequality, after almost two decades of little movement, was up sharply from 2007 to 2010. This sharp fall in median net worth and rise in overall wealth inequality are traceable primarily to the high leverage of middle-class families, the high share of homes in their portfolio, and the plunge in house prices. Rather remarkably, median (and mean) wealth did not essentially change from 2010 to 2013 despite the rebound in asset prices. The proximate cause was the high dissavings of the middle class. Wealth inequality also remained largely unchanged.

Keywords: household wealth, inequality, portfolio composition

The paper considers household wealth trends over a half century, from 1962 to 2013. Particular attention is given to the years of the Great Recession, from 2007 to 2013, and to how the middle class fared in terms of wealth over these six years. The first three saw one of the sharpest contractions in stock and real estate prices, and the second three saw a recovery in asset prices. The debt of the middle class exploded from 1983 to 2007, making it quite fragile. Did its position deteriorate even more over years 2007 to 2013?

This paper addresses four issues: What happened to median household wealth over time, particularly from 2007 to 2013? Did the inequality of household wealth rise over time, particularly over the Great Recession? Did the debt of the middle class increase over time? What are the trends in home ownership and home equity and what happened, in particular, from 2007 to 2013? The full period covered is from 1962 to 2013. By 2013, we will be able to see the fallout from the financial crisis and associated recession.

A key focus of the paper is to highlight the role of leverage (the ratio of debt to net worth) in explaining movements in household wealth over the Great Recession. It will be seen that the collapse in median wealth between 2007 and 2010 was largely due to the high leverage of the middle class (as well as the steep drop in house prices). Moreover, the sharp jump in

Edward N. Wolff is professor of economics at New York University, research associate at the National Bureau of Economic Research, and editorial board member of the *Journal of Economic Inequality* and the *Review of Income and Wealth*.

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Direct correspondence to: Edward N. Wolff at ew1@nyu.edu, Department of Economics, New York University, 19 West 4th Street, New York, NY 10012.

wealth inequality over these years can be traced to differential leverage between the rich and the middle class.

Previous work, using the Survey of Consumer Finances (SCF), presented evidence of sharply increasing household wealth inequality between 1983 and 1989 followed by little change between 1989 and 2007 (see Wolff 1994, 1998, 2002, 2011). Both mean and median wealth holdings climbed briskly from 1983 to 2007. However, most of the wealth gains from 1983 to 2007 were concentrated among the richest 20 percent of households. Moreover, despite the buoyant economy over the 1990s and 2000s, overall indebtedness rose among American families, particularly those in the middle class.

In this study, I look at wealth trends from 1962 to 2013. Asset prices plunged between 2007 and 2010 but then rebounded from 2010 to 2013. The most telling finding is that median wealth plummeted by 44 percent between 2007 and 2010, almost double the drop in housing prices, and by 2010 was at its lowest since 1969. The inequality of net worth, after almost two decades of little movement, was up sharply from 2007 to 2010. Relative indebtedness expanded from 2007 to 2010, particularly for the middle class, though the proximate causes were declining net worth and income. In fact, the average debt of the middle class fell by 25 percent in real terms. The sharp fall in median net worth and the rise in overall wealth inequality from 2007 to 2010 are traceable primarily to the high leverage of middle-class families and the high share of homes in their portfolio. Rather remarkably, median wealth essentially did not change from 2010 to 2013 despite the rebound in asset prices. The proximate cause was the high dissavings of the middle class. Relative indebtedness fell for the middle class as outstanding debt continued to drop.

HISTORICAL BACKGROUND

The last two decades witnessed some remarkable events. Perhaps most notable is the housing value cycle, which first led to an explosion in home prices and then to a collapse, affecting net worth and helping to precipitate the Great Recession, followed by a modest recovery. The median house price was virtually the same in 2001 as in 1989 in real terms (U.S. Census Bureau 2008, table 935; National Association of Realtors 2012).[1] However, according to SCF data, the home ownership rate shot up from 62.8 to 67.7 percent. Then, 2001 saw a recession, albeit a short one. Despite this, house prices took off, the median sales price of existing single-family homes spurting by 17 percent. From 2004 to 2007, housing prices slowed, the median price advancing only 1.7 percent. Between 2001 and 2007, housing prices gained 19 percent. The home ownership rate continued to expand, though at a somewhat abbreviated rate, to 68.6 percent.

Then came the Great Recession and the associated financial crisis. The recession officially began in December 2007 and officially ended in June 2009 (NBER 2010). Over this period, real gross national product (GDP) fell by 4.3 percent. Between the second quarter of 2009 and the second quarter of 2013, it gained 9.2 percent. The unemployment rate shot up from 4.4 percent in May of 2007 to a peak of 10.0 percent in October 2009 but by February 2014 was down to 6.7 percent (BLS 2016).

One consequence was that asset prices plummeted. From 2007 to 2010, in particular, the median home price nosedived by 24 percent, and the share of households owning their own home fell off, from 68.6 to 67.2 percent. This was followed by a partial recovery, median house prices rising 7.8 percent through September 2013, though still considerably below their 2007 value. However, the homeownership rate continued to contract, falling to 65.1 percent.

In contrast to the housing market, the stock market boomed during the 1990s. On the basis of the Standard & Poor (S&P) 500 index, stock prices surged 159 percent between 1989 and 2001 (Council of Economic Advisers 2013, table B-96; Dow Jones 2013). Stock ownership spread

1. Figures are based on median prices of existing houses for metropolitan areas only. All figures are in constant dollars unless otherwise indicated.

and by 2001 more than half of U.S. households owned stock either directly or indirectly. However, between 2001 and 2007, the S&P 500 was up 6 percent, and the share of households who owned stock, whether directly or indirectly, fell to 49 percent. Then stock prices crashed by 26 percent from 2007 to 2010, and the stock ownership rate declined to 47 percent. The stock market rose after 2010, and by 2013 the S&P 500 index was up 39 percent over 2010 and above its previous high in 2007. However, the stock ownership rate continued to drop, to 46 percent.

What have all these major changes in asset prices wrought in terms of household wealth, particularly over the Great Recession? This is the subject of the remainder of the paper.

DATA SOURCES AND METHODS

My primary data source is the SCF, conducted by the Federal Reserve Board. Each survey consists of a core representative sample combined with a high-income supplement. The wealth (net worth) concept used here is marketable wealth, defined as the current value of all marketable or fungible assets less current debt. Assets are the sum of eight items: housing; other real estate; bank deposits, certificates of deposit, money market accounts, and the cash surrender value of life insurance plans (collectively, *liquid assets*); financial securities; defined contribution pension plans, including individual retirement accounts (IRAs), Keogh, and 401(k) plans; corporate stock and mutual funds; unincorporated businesses equity; and trust fund equity. Liabilities are the sum of three: mortgage debt, consumer debt (such as auto loans), and other debt (such as student loans).

This measure reflects wealth as a store of value and therefore a source of potential consumption. I believe that this is the concept that best reflects the level of well-being associated with a family's holdings. Thus, only assets that can be readily converted to cash (that is, fungible ones) are included. As a result, consumer durables such as automobiles are excluded here because such items are not easily marketed. Another justification for their exclusion is that this treatment is consistent with the national accounts, in which purchase of vehicles is counted as expenditures, not savings. Also excluded is the value of future Social Security benefits the family may receive on retirement (Social Security wealth), as well as the value of retirement benefits from defined benefit private pension plans (defined benefit pension wealth). Even though these funds are a source of future income to families, they are not in their direct control and cannot be marketed (for a discussion of retirement wealth, see Devlin-Foltz, this volume).

Two other data sources are used in the study. The first of these is the 1962 Survey of Financial Characteristics of Consumers (SFCC). This survey was also conducted by the Federal Reserve Board of Washington and is a precursor to the SCF. The second is the so-called 1969 MESP database, a synthetic dataset constructed from income tax returns and information provided in the 1970 Census. A statistical matching technique was employed to assign income tax returns for 1969 to households in the 1970 Census. Property income flows (such as dividends) in the tax data were then capitalized into corresponding asset values (such as stocks) to obtain estimates of household wealth (for detail, see Wolff 1980).[2]

MEDIAN WEALTH PLUMMETS OVER THE GREAT RECESSION

Table 1 documents a robust growth in wealth from 1983 to 2007, even back to 1962 (see also

2. The 1962 SFCC, the 1969 MESP, and the 1983 and 1989 SCF files are aligned to national balance sheet totals to provide consistency in the household wealth estimates for these years, because they each use somewhat different sampling frames and methodologies. (The methodology for the 1983 SCF differs to some extent from that for the 1989 SCF, while the same methodology is used for SCF files for 1989 and onward). My baseline estimates also exclude vehicles. Moreover, my calculations are based on the public-use samples provided by the Federal Reserve Board, which are to some degree different from the internal files it maintains. As a result, my figures on mean and median net worth, as well as on wealth inequality, will in general vary from the standard estimates provided by the Federal Reserve Board, which include the value of vehicles (see, for example, Kennickell and Woodburn 1999), and from those of Fabian Pfeffer and Robert Schoeni (this volume).

Table 1. Mean and Median Wealth and Income

	1962	1969	1983	1989	2001	2007	2010	2013
Variable								
Net worth								
1. Median	55.5	68.0	78.0	83.5	96.7	115.1	64.6	63.8
2. Mean	207.4	248.4	303.8	348.1	500.0	602.3	505.7	508.7
3. Percent with zero or negative net worth	18.2	15.6	15.5	17.9	17.6	18.6	21.8	21.8
Income (CPS)[a]								
1. Median	40.9	53.3	46.4	52.4	55.6	56.4	52.6	51.9
2. Mean	46.4	60.6	56.5	66.2	76.6	76.0	72.0	72.6
Addendum: net worth standardized by the 2001 age distribution								
1. Median	—	—	89.5	91.7	96.7	106.3	54.5	52.5
2. Mean	—	—	322.5	361.5	500.0	573.3	462.6	462.0

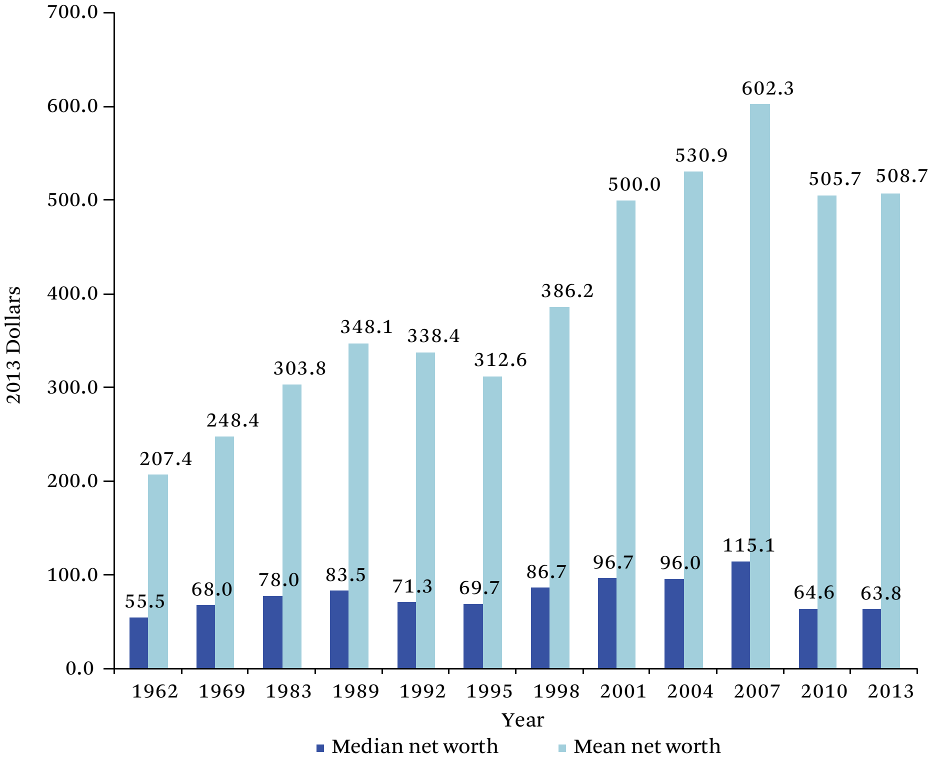
	Annual Growth Rates (Percent)							Percentage Change	
	1962–1983	1983–1989	1989–2001	2001–2007	2007–2010	2010–2013	1962–2013	2007–2010	2010–2013
Annual growth rates (percent)									
Net worth									
1. Median	1.63	1.13	1.22	2.91	−19.27	−0.39	0.28	−43.9	−1.2
2. Mean	1.82	2.27	3.02	3.10	−5.83	0.20	1.76	−16.0	0.6
Income (CPS)[a]									
1. Median	0.61	2.03	0.48	0.26	−2.32	−0.45	0.47	−6.7	−1.3
2. Mean	0.93	2.66	1.21	−0.14	−1.78	0.29	0.88	−5.2	0.9
Addendum: net worth standardized by the 2001 age distribution									
1. Median	—	0.41	0.44	1.59	−22.26	−1.30	—	−48.7	−3.8
2. Mean	—	1.91	2.70	2.28	−7.16	−0.04	—	−19.3	-0.1

Source: Authors' computations from the 1983, 1989, 2001, 2007, 2010, and 2013 SCF.
Note: Figures in thousands of 2013 dollars. Additional sources are the 1962 Survey of Financial Characteristics of Consumers (SFCC) and the 1969 MESP file (Wolff 1980). Wealth figures are deflated using the Consumer Price Index (CPI-U). The 1962 figures are based on family income and the rate of change of family income between 1962 and 1969.
[a]Source for household income data: U.S. Census of the Bureau, Current Populations Surveys, available at: http://www.census.gov/hhes/www/income/data/historical/household/.

figure 1). Median wealth increased at an annual rate of 1.6 percent from 1962 to 1983, then slower at 1.1 percent from 1983 to 1989, about the same at 1.2 percent from 1989 to 2001, and then much faster at 2.9 percent from 2001 to 2007.[3] Then, between 2007 and 2010, median wealth plunged by a staggering 44 percent. Indeed, median wealth was actually lower in 2010 than in 1969 (in real terms). The primary reasons, as we shall see, were the collapse in the

3. Unless otherwise indicated, all dollar figures are in 2013 dollars.

Figure 1. Mean and Median Net Worth (in Thousands, 2013 Dollars)



Source: Author's calculations based on the 1962 SFCC, the 1968 MESP (Wolff 1980), and the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, 2010, and 2013 SCF.

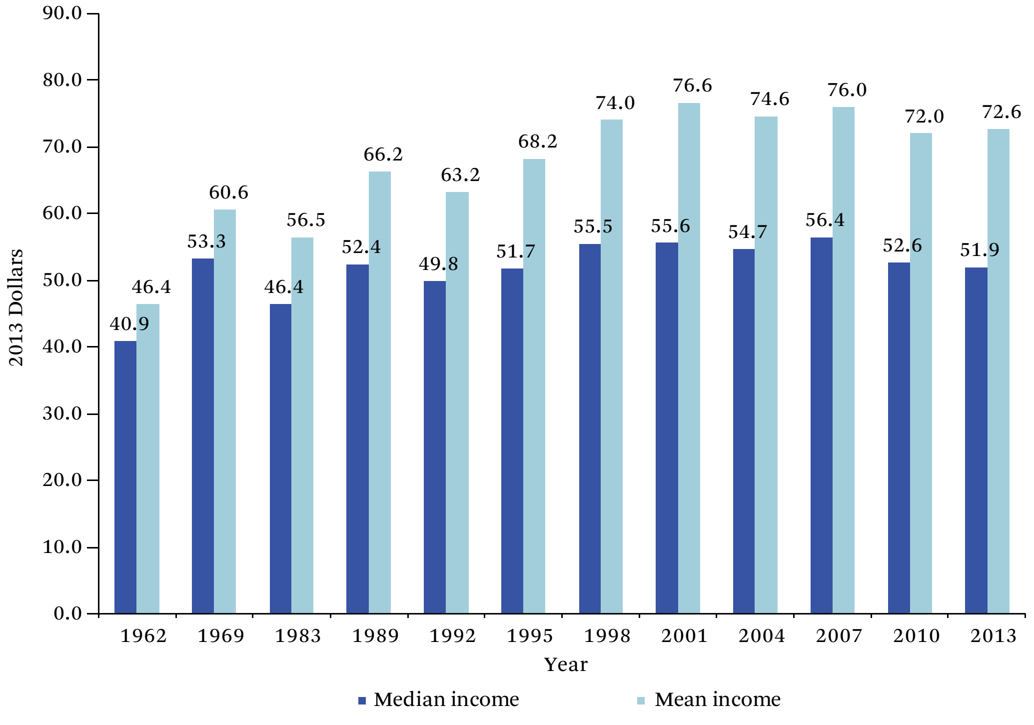
housing market and the high leverage of middle class families. There was virtually no change from 2010 to 2013.[4] The share of households with zero or negative net worth, after falling from 18.2 percent in 1962 to 15.5 percent in 1983, increased to 18.6 percent in 2007 and then even more sharply to 21.8 percent in 2010, where it remained in 2013 (see table 1, top panel).

Mean net worth also grew vigorously from 1962 to 1983, at an annual rate of 1.82 percent, a little higher than that of median wealth. Its growth accelerated to 2.27 percent per year from 1983 to 1989, about double the growth rate of median wealth. From 1989 to 2001, the growth rate of mean wealth was 3.02 percent per year, even higher than in the preceding periods. Its annual growth rate accelerated even more, reaching 3.10 percent between 2001 and 2007. This acceleration was due largely to the rapid (19 percent) increase in housing prices over the six years, counterbalanced by a reduced growth in stock prices in comparison with the 1989 to 2001 span, and to the fact that housing made up 28 percent and (total) stocks 25 percent of total assets in 2001. Overall, its 2007 value was almost double its value in 1983 and about three-quarters larger than in 1989. Mean wealth also grew about twice as fast as the median between 1983 and 2007, indicating widening inequality of wealth over these years.

The Great Recession saw an absolute decline in mean household wealth. However, whereas median wealth plunged by 44 percent between 2007 and 2010, mean wealth fell by

4. The percentage decline in median net worth from 2007 to 2010 is lower when vehicles are included in the measure of wealth—"only" 39 percent. The reason is that automobiles are a substantial share of middle-class assets. However, median net worth with vehicles remained virtually unchanged from 2010 to 2013.

Figure 2. Mean and Median Household Income (in Thousands, 2013 Dollars)



Source: Author's calculations based on the 1962 SFCC, the 1968 MESP (Wolff 1980), and the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, 2010, and 2013 SCF.

(only) 16 percent.[5] In this case, the main cause was both falling housing and stock prices. However, here, too, the relatively faster growth in mean wealth than median wealth (that is, the latter's more moderate decline) was coincident with rising wealth inequality. Again, mean wealth essentially did not change from 2010 to 2013.

Median household income (based on Current Population Survey data) advanced at a fairly solid pace from 1962 to 1983, at 0.61 percent per year (also see figure 2). Then, after gaining 2.03 percent per annum between 1983 and 1989, its annual growth dipped to only 0.48 percent from 1989 to 2001 and then to 0.26 percent from 2001 to 2007, for a net change of 22 percent (overall) from 1983 to 2007. However, from 2007 to 2010, it fell off in absolute terms by 6.7 percent. Although this change is not insignificant, the reduction was not nearly as great as that in median wealth. From 2010 to 2013, median income slipped by another 1.3 percent (overall). Mean income also dropped in real terms from 2007 to 2010, by 5.2 percent, slightly less than that of median income, but gained 0.9 percent from 2010 to 2013.

What role does the shift in age distribution play in accounting for trends in household wealth? One method to answer this question is to standardize the age distribution for a selected year—say, 2001, because it is near the midpoint of the period. I use five-year age intervals and reweight net worth in each year by the corresponding 2001 share of households in each age interval. Results are shown in the addenda to table 1. Not surprisingly, given that the population is aging between 1983 and 2013, reweighting will increase median and mean net worth before 2001 and decrease them after 2001 because older households have greater wealth. However, because the age distribution shifts only slowly over time, the effects should

5. The decline in mean net worth is 16 percent when vehicles are included in net worth.

Table 2. Distribution of Wealth and Income

Year	Gini Coefficient	Percentage Share of Wealth or Income: Top 1.0%	Next 4.0%	Next 5.0%	Next 10.0%	Top 20.0%	4th 20.0%	3rd 20.0%	Bottom 40.0%	All
Net worth										
1962	0.803	33.4	21.2	12.4	14.0	81.0	13.4	5.4	0.2	100.0
1969	0.828	35.6	20.7	12.5	13.8	82.5	12.2	5.0	0.3	100.0
1983	0.799	33.8	22.3	12.1	13.1	81.3	12.6	5.2	0.9	100.0
1989	0.828	35.2	22.8	11.9	13.2	83.0	12.0	4.7	0.2	100.0
2001	0.826	33.4	25.8	12.3	12.9	84.4	11.3	3.9	0.3	100.0
2007	0.834	34.6	27.3	11.2	12.0	85.0	10.9	4.0	0.2	100.0
2010	0.866	35.1	27.4	13.8	12.3	88.6	9.5	2.7	−0.8	100.0
2013	0.871	36.7	28.2	12.2	11.8	88.9	9.3	2.7	−0.9	100.0
Income										
1962	0.428	8.4	11.4	10.2	16.1	46.0	24.0	16.6	13.4	100.0
1969	0.469	10.4	12.4	10.3	15.9	48.9	23.4	16.4	11.2	100.0
1982	0.480	12.8	13.3	10.3	15.5	51.9	21.6	14.2	12.3	100.0
1988	0.521	16.6	13.3	10.4	15.2	55.6	20.6	13.2	10.7	100.0
2000	0.562	20.0	15.2	10.0	13.5	58.6	19.0	12.3	10.1	100.0
2006	0.574	21.3	15.9	9.9	14.3	61.4	17.8	11.1	9.6	100.0
2009	0.549	17.2	16.5	10.7	14.7	59.1	18.7	14.9	7.3	100.0
2013	0.574	19.8	16.5	10.8	14.7	61.8	17.8	11.1	9.4	100.0

Addendum: Gini coefficients for net worth standardized by the 2001 age distribution

	1983	1989	2001	2007	2010	2013
Gini	0.789	0.824	0.826	0.837	0.874	0.879

Source: Author's computations from the 1983, 1989, 2001, 2007, 2010, and 2013 SCF.
Note: Additional sources are the 1962 SFCC and the 1969 MESP (Wolff 1980) file. Income data are from these files. For the computation of percentile shares of net worth, households are ranked according to their net worth; and for percentile shares of income, households are ranked according to their income.

be relatively small. The results show precisely this. The reweighted results still indicate fairly robust growth in wealth from 1983 to 2007, a substantial collapse from 2007 to 2010, and little change from 2010 to 2013.

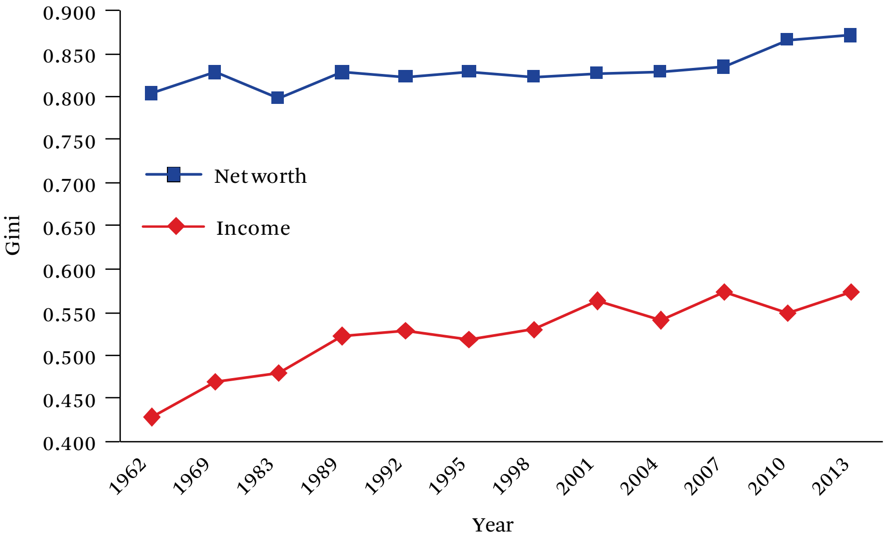
In sum, although household income virtually stagnated for the average American household from 1989 to 2007, median net worth grew strongly. The Great Recession, on the other hand, saw a massive reduction in median net worth but more modest declines in mean wealth and both median and mean income.

WEALTH INEQUALITY JUMPS IN THE LATE 2000S

Wealth is highly concentrated, the richest 1 percent owning 37 percent of total household wealth in 2013 and the top 20 percent owning 89 percent (see table 2). The figures in table 2 also show that wealth inequality in 1983 was quite close to its level in 1962 (also see figure 3).[6] It then climbed sharply between 1983 and 1989, the share of wealth held by the top 1 percent rising by 3.6 percentage points and the Gini coefficient increasing from 0.80 to 0.83.

6. This is not to say that wealth inequality did not change over these years. Indeed, on the basis of estate tax data, wealth inequality dropped sharply from about 1969 to 1976 and then rose just as sharply from 1976 to 1983 (Wolff 2002). Emmanuel Saez and Gabriel Zucman (2015) find a similar trajectory from 1963 to 1983 on the basis of their income capitalization method. They report that the wealth share of the top percentile declined

Figure 3. Wealth and Income Inequality (Gini Coefficients)



Source: Author's calculations based on the 1962 SFCC, the 1968 MESP (Wolff 1980), and the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, 2010, and 2013 SCP.

Between 1989 and 2007, the share of the top percentile actually declined, from 37.4 to 34.6 percent, though this was more than compensated by an increase in the share of the next four percentiles. As a result, the share of the top 5 percent increased from 58.9 percent in 1989 to 61.8 percent in 2007, and the share of the top quintile from 83.5 to 85.0 percent. The share of the fourth and middle quintiles each declined by about a percentage point from 1989 to 2007, while that of the bottom 40 percent increased by almost one percentage point. Overall, the Gini coefficient was virtually unchanged—0.832 in 1989 and 0.834 in 2007.

In contrast, the period from 2007 to 2010 saw a sharp elevation in wealth inequality, the Gini coefficient rising from 0.834 to 0.866. Interestingly, the share of the top percentile showed a smaller relative gain—less than 1 percentage point. Most of the rise in wealth share took place in the remainder of the top quintile, and overall the share of wealth held by the top quintile climbed by almost 4 percentage points. The shares of the other quintiles correspondingly dropped, that of the bottom 40 percent falling from 0.2 to −0.9 percent.

The period between 2010 and 2013 saw a very small rise in the Gini coefficient, from 0.866 to 0.871. The share of the top 1 percent did increase by 1.6 percentage points, but that of the top quintile did not. In constant dollar terms, the net worth of the top 1 percent grew by 5.9 percent over those years but that of the next 19 percent dropped by 1.8 percent. The wealth of the fourth quintile also lost 1.7 percent, that of the middle quintile lost 0.7 percent, and that of the bottom two quintiles 5.7 percent.

Standardizing the population weights on the basis of the 2001 age distribution makes only a minor difference in estimated Gini coefficients—one Gini point or less. Standardization does lower estimated Gini coefficients before 2001 because it gives lower weights to younger, poorer households and, conversely,

from 29 percent in 1983 to 23 percent in 1976 and then rebounded somewhat to 25 percent in 1983. However, although the Saez and Zucman data do show a net decline in wealth concentration from 1963 to 1983, my data show a similar level in the two years. It is likely that the discrepancy in results is attributable to a different trend in the concentration of capital income than in the concentration of nonfinancial assets, like business equity, over these years. However, the two series show similar time trends from 1983 onward.

raises them after 2001 because it gives greater weights to the younger households.

The two large spurts in wealth inequality, from 1983 to 1989 and from 2007 to 2010, were not limited to the increased gap between the top 1 percent and everyone else but occurred across the full wealth distribution. Between 1983 and 1989, 43 percent of the gain in mean wealth accrued to the top 1 percent of wealth holders, 25 percent went to percentiles 95 to 99, 10 percent to percentiles 90 to 95, and 13 percent to percentiles 80 to 90. Between 2007 and 2010, mean wealth declined. Of the total loss in wealth, one-third was lost by the top 1 percent, 26 percent by percentiles 95 to 99, none by percentiles 90 to 95, 10 percent by percentiles 80 to 90, 18 percent by the fourth quintiles, 10 percent by the middle quintiles, and 5 percent by the bottom two quintiles.

The top 1 percent of families (as ranked by income on the basis of SCF data) earned 20 percent of total household income in 2012 and the top 20 percent accounted for 62 percent—large figures but lower than the corresponding wealth shares.[7] The time trend for income inequality also contrasts with that for net worth (see also figure 3). Income inequality showed a sharp rise from 1961 to 1982, the Gini coefficient expanding from 0.43 to 0.48 and the share of the top 1 percent from 8.4 to 12.8 percent. Income inequality increased sharply again between 1982 and 1988, the Gini coefficient rising to 0.52 and the share of the top 1 percent to 16.6 percent. In both periods, capital gains played an important role in explaining the gains of the top 1 percent.

Inequality again surged from 1988 to 2000: the share of the top percentile rising by 3.4 percentage points, of the top quintile up by 3.0 percentage points, of the other quintiles falling again, and the Gini index advancing from 0.52 to 0.56. Once again, strong capital gains resulting from rising stock prices played a key role. As a result, the years from 1989 to 2001 saw almost the same increase in income inequality as the 1983 to 1989 period. Inequality once again rose from 2001 to 2007, though the pace slackened, as the stock market softened. The Gini coefficient increased from 0.562 to 0.574, the share of the top 1 percent was up by 1.3 percentage points, the share of the top quintile was up by 1.7 percentage points, and the shares of the other quintiles fell. All in all, the period from 2001 to 2007 witnessed a moderate increase in income inequality and a small rise in wealth inequality.

In contrast, the years 2007 to 2010 witnessed a rather sharp contraction in income inequality. The Gini coefficient fell from 0.574 to 0.549 and the share of the top 1 percent dropped sharply from 21.3 to 17.2 percent. Property income and realized capital gains (which is included in the SCF definition of income), as well as corporate bonuses and the value of stock options, plummeted over these years, a process that explains the steep decline in the share of the top percentile. Real wages actually rose over these years, though the unemployment rate also increased. As a result, the income of the middle class was down but not nearly as much in percentage terms as that of the high-income groups. In contrast, transfer income such as unemployment insurance rose, so that the bottom also did better in relative terms than the top. As a result, overall income inequality fell between 2006 and 2009.

The second half of the Great Recession saw a reversal in this trend, income inequality once again increasing sharply. The Gini coefficient increased by 0.025 points to 0.574, the same level as in 2007. The share of the top percentile rose to 19.8 percent, slightly below its level in 2007; the share of the top quintile was up to 61.8 percent, slightly above its 2007 level. The same set of factors, though in reverse, help explain this turnaround in income inequality. Property income, realized capital gains, and associated income rose sharply over these years as the stock market recovered, accounting for the sharp rise in the share of the top percentile. The unemployment rate fell over these years but, according to BLS figures, real wages were down. As a result, the income of the middle class rose but not as much in percentage terms as that of the high-income groups. Transfer income such as unemployment insurance fell, as the extensions of benefits enacted in the early days of the recession ended.

7. The income in each survey year (say, 2013) is for the preceding year (2012, in this case).

Table 3. Composition of Total Household Wealth

Wealth component	1983	1989	2001	2007	2010	2013
Principal residence	30.1	30.2	28.2	32.8	30.7	28.5
Other real estate	14.9	14.0	9.8	11.3	11.6	10.2
Unincorporated business equity	18.8	17.2	17.2	20.1	17.7	18.3
Liquid assets[a]	17.4	17.5	8.8	6.6	7.7	7.6
Pension accounts[b]	1.5	2.9	12.3	12.1	15.1	16.5
Financial securities[c]	4.2	3.4	2.3	1.5	1.8	1.5
Corporate stock and mutual funds	9.0	6.9	14.8	11.8	11.2	12.7
Net equity in personal trusts	2.6	3.1	4.8	2.3	2.4	3.2
Miscellaneous assets[d]	1.3	4.9	1.8	1.7	1.7	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Debt on principal residence	6.3	8.6	9.4	11.4	12.7	11.2
All other debt[e]	6.8	6.4	3.1	3.9	4.4	4.0
Total debt	13.1	15.0	12.5	15.3	17.1	15.2
Selected ratios in percent						
Debt to equity ratio	15.1	17.6	14.3	18.1	20.6	17.9
Debt to income ratio	68.4	87.6	81.1	118.7	127.0	107.1
Net home equity to total assets	23.8	21.6	18.8	21.4	18.1	17.3
Principal residence debt as ratio to house value	20.9	28.6	33.4	34.9	41.2	39.3
Stocks, directly or indirectly owned as a ratio to total assets[f]	11.3	10.2	24.5	16.8	17.5	20.7

Source: Author's computations from the 1983, 1989, 2001, 2007, 2010, and 2013 SCF.
Note: Percentage of gross assets.
[a]Checking accounts, savings accounts, time deposits, money market funds, certificates of deposits, and the cash surrender value of life insurance.
[b]IRAs, Keogh plans, 401(k) plans, the accumulated value of defined contribution pension plans, and other retirement accounts.
[c]Corporate bonds, government bonds (including savings bonds), open-market paper, and notes.
[d]Gold and other precious metals, royalties, jewelry, antiques, furs, loans to friends and relatives, future contracts, and miscellaneous assets.
[e]Mortgage debt on all real property except principal residence; credit card, installment, and other debt.
[f]Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts.

All in all, income inequality increased much more than either net worth or nonhome wealth inequality between 1983 and 2013. On the basis of the Gini coefficient, net worth inequality was up by 9 percent and income inequality by 20 percent.

As a result, one of the issues we have to contend with is that net worth inequality rose sharply from 2007 to 2010 and income inequality fell, at least according to the SCF. A second is the reverse, namely, that wealth inequality remained virtually unchanged from 2010 to 2013 and income inequality increased. I return to these questions in the following section.

HOUSEHOLD DEBT FINALLY RECEDES

In 2013, owner-occupied housing was the most important household asset in the average portfolio breakdown for all households shown in table 3, accounting for 29 percent of total assets. However, net home equity—the value of the house minus outstanding mortgages—amounted to only 17 percent of total assets. Real estate, other than owner-occupied housing, made up 10 percent, and business equity another 18 percent. Liquid assets made up 8 percent and pension accounts 17 percent. Bonds and other financial securities made up 2 percent; corporate stock, including mutual funds, 13 percent; and trust fund equity 3 percent. Debt as a proportion of gross assets was 15 percent, and the ratio of total household debt to net worth was 0.18.

Some changes in the composition of household wealth over time were notable. First, the share of housing wealth in total assets, after fluctuating between 28 and 30 percent from 1983 to 2001, jumped to 34 percent in 2004 and then declined to 29 percent in 2013. Two factors explain this movement. The first is that the homeownership rate rose from 63 percent in 1983 to 69 percent in 2004 and then fell off to 65 percent in 2013. The second is that the median price of existing single-family homes climbed 18 percent between 2001 and 2004 but plunged 17 percent from 2004 to 2013.[8] A second and related trend is that net home equity fell from 24 percent in 1983 to 17 percent in 2013. The difference between the two series (gross versus net home values) is attributable to the changing magnitude of mortgage debt on homeowner's property, which increased from 21 percent in 1983 to 39 percent in 2013.

Third, relative indebtedness first increased, the debt to net worth ratio climbing from 15 percent in 1983 to 21 percent in 2010, and falling off to 18 percent in 2013. Likewise, the debt to income ratio surged from 68 percent in 1983 to 127 percent in 2010 but then dropped to 107 percent in 2013. If mortgage debt on principal residence is excluded, then the ratio of other debt to total assets actually fell off over time from 6.8 percent in 1983 to 4.0 percent in 2013.

The large rise in relative indebtedness among all households between 2007 and 2010 could be due to a rise in the absolute level of debt or a fall off in net worth and income, or both. As shown in table 1, both mean net worth and mean income fell over the three years. Debt also contracted slightly in constant dollars by 4.4 percent. The steep rise in relative indebtedness over the three years was almost entirely due to reductions in wealth and income. In contrast, from 2010 to 2013, relative indebtedness declined. In this case, both net worth and incomes were relatively unchanged, so that the proximate cause was a sizable reduction in household debt by 13 percent.

A fourth change is that pension accounts rose from 1.5 to 16.5 percent of total assets from 1983 to 2013. This increase largely offset the decline in the share of liquid assets in total assets, from 17.4 to 7.6 percent, so that it is reasonable to infer that households to a large extent substituted tax-deferred pension accounts for taxable savings deposits. Fifth, if we include the value of stocks indirectly owned through mutual funds, trusts, IRAs, 401(k) plans, and other retirement accounts, then the value of total stocks owned as a share of total assets more than doubled from 11.3 percent in 1983 to 24.5 percent in 2001 but then fell to 20.7 percent in 2013. The rise during the 1990s reflected the robust stock market as well as increased stock ownership, and the decline in the 2000s was due to a sluggish stock market as well as a drop in stock ownership.

Portfolio Composition by Wealth Class

The tabulation in table 3 provides a picture of the average holdings of all families in the economy, but class differences in how middle-class families and the rich invest their wealth are marked. As shown in table 4, the richest percentile invested almost three-quarters of their savings in investment real estate, businesses, corporate stock, and financial securities in 2013. Corporate stocks directly or indirectly owned made up 25 percent. Housing, liquid assets, and pension accounts together made up 24 percent. Their ratio of debt to net worth was only 3 percent and their ratio of debt to income was 38 percent.

Among the next richest 19 percent, housing was 28 percent of total assets, liquid assets 8 percent, and pension assets another 22 percent. Investment assets—real estate, business equity, stocks, and bonds—made up 41 percent; 23 percent was in the form of stocks directly or indirectly owned. Debt amounted to

8. It may seem surprising that the share of housing in gross assets declined very little between 2007 and 2010, given the steep drop in housing prices, but the prices of other assets also fell, particularly those of stocks and business equity.

Table 4. Composition of Household Wealth by Wealth Class, 2013

Asset	All Households	Top 1 Percent	Next 19 Percent	Middle 3 Quintiles
Principal residence	28.5	8.7	28.0	62.5
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	7.6	6.1	8.4	8.1
Pension accounts	16.5	9.2	21.7	16.1
Corporate stock, financial securities, mutual funds, and personal trusts	17.4	27.3	16.3	3.4
Unincorporated business equity and other real estate	28.5	46.9	24.2	8.6
Miscellaneous assets	1.5	1.9	1.4	1.2
Total assets	100.0	100.0	100.0	100.0
Memo (selected ratios in percent)				
Debt to equity ratio	17.9	2.6	11.8	64.0
Debt to income ratio	107.1	38.2	96.6	125.0
Net home equity to total assets[a]	17.3	7.3	19.7	31.4
Principal residence debt to house value	39.3	16.5	29.5	49.8
All stocks to total assets[b]	20.7	24.6	22.7	9.5
Ownership rates (percent)				
Principal residence	65.1	96.9	95.1	66.7
Other real estate	17.4	75.5	44.0	12.4
Pension assets	49.2	88.7	84.0	44.4
Unincorporated business	10.4	76.6	25.6	6.6
Corporate stock, financial securities, mutual funds, and personal trusts	21.5	84.4	59.5	14.2
Stocks, directly or indirectly owned[b]	46.1	94.0	84.6	41.0
(1) $5,000 or more	36.4	92.9	81.7	30.3
(2) $10,000 or more	32.4	92.8	79.7	25.3

Source: Author's computations from the 2013 SCF.
Note: Percentage of gross assets. Households are classified into wealth class according to their net worth. Brackets for 2013 are as follows. Top 1 percent: Net worth of $7,766,500 or more. Next 19 percent: Net worth between $401,000 and $7,766,500. Quintiles 2 through 4: Net worth between $0 and $401,000. See also notes to table 3.
[a]Ratio of gross value of principal residence less mortgage debt on principal residence to total assets.
[b]Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts.

12 percent of net worth and 97 percent of income.

In contrast, more than three-fifths of the assets of the middle three quintiles of households was invested in their own home in 2013. However, home equity amounted to only 31 percent of total assets, a reflection of their large mortgage debt. Another quarter went into monetary savings of one form or another and pension accounts. Together housing, liquid assets, and pension assets accounted for 87 percent of the total assets of the middle class. The remainder was about evenly split among nonhome real estate, business equity, and various financial securities and corporate stock. Stocks directly or indirectly owned amounted to only

10 percent of their total assets. The ratio of debt to net worth was 64 percent, substantially higher than for the richest 20 percent, and the ratio of debt to income was 125 percent, also much higher than that of the top quintile. Finally, their mortgage debt amounted to about half the value of their principal residences.

Almost all households among the top 20 percent of wealth holders owned their own home, but only 67 percent of households in the middle three quintiles did. Three-quarters of very rich households (in the top percentile) owned some other form of real estate, versus 44 percent of rich households (those in the next 19 percent of the distribution) and only 12 percent of households in the middle 60 percent. Eighty-nine percent of the very rich owned some form of pension asset, versus 84 percent of the rich and 44 percent of the middle. A somewhat startling 77 percent of the very rich reported owning their own business. The comparable figures are 26 percent among the rich and 7 percent of the middle class.

Among the very rich, 84 percent held corporate stock, mutual funds, financial securities or a trust fund, in contrast to 60 percent of the rich and only 14 percent of the middle class. Ninety-four percent of the very rich reported owning stock either directly or indirectly, versus 85 percent of the rich and 41 percent of the middle. If we exclude small holdings of stock, then the ownership rates drop off sharply among the middle three quintiles, from 41 percent to 30 percent for stocks worth $5,000 or more and to 25 percent for stocks worth $10,000 or more.

Table 5 presents trends in the wealth composition of the middle three wealth quintiles as well as asset ownership rates. Perhaps the most striking development is in the homeownership rate, which, after rising almost continuously from 72 percent in 1983 to 78 percent in 2004, dropped to 67 percent in 2013. This trend was more pronounced than that among all households, for which it dropped from 69 percent in 2004 to 65 percent in 2013. A similar trend is evident for the share of homes in total assets. It remained virtually unchanged from 1983 to 2001 but rose sharply in 2004. This increase was largely a result of rising house prices and secondarily a consequence of continued gains in homeownership. The share then declined from 2004 through 2013 as housing prices fell and homeownership plummeted.

It might once again seem surprising that despite the steep drop in home prices from 2007 to 2010, housing as a share of total assets actually fell only slightly. The reason is that the other components of wealth fell even more than housing. Although the mean value of housing among households in the middle three quintiles fell by 31 percent in real terms, the mean value of other real estate was down by 39 percent and that of stocks and mutual funds by 47 percent.

Likewise, despite the modest recovery in housing prices from 2010 to 2013, the share of housing in total assets dropped by 2.3 percentage points. The mean value of housing fell by 7.3 percent. Of this, the decline in the homeownership rate accounted for only 19 percent of the overall decline; the main culprit was the drop in house prices, which explained 81 percent. This result seems contrary to the finding that the median value of existing homes rose by 8 percent, according to data from the National Association of Realtors (2012). The most likely reason for the difference in results is that the 8 percent figure is based on data for existing homes only, whereas the SCF data includes the value of homes that were owned by the household prior to the current year as well as newly bought homes. Another difference is that the former include all families, whereas my figure is based on households in the middle three wealth quintiles. In fact, according to the SCF data, the median value of homes among middle-class households was down by 14 percent in real terms from 2010 to 2013. This result, in turn, may reflect the possibility that new homes bought by families in the SCF sample were cheaper than existing ones.

The share of pension accounts in total assets rose by 15 percentage points from 1983 to 2013, and that of liquid assets declined by 13 percentage points. These trends were more or less continuous over time. This set of changes paralleled that of all households. In contrast, the share of middle-class households holding a pension account, after surging from 12 percent in 1983 to 53 percent in 2007, collapsed to

Table 5. Household Wealth of the Middle Three Wealth Quintiles

Asset	1983	1989	1998	2001	2004	2007	2010	2013
Principal residence	61.6	61.7	59.8	59.2	66.1	65.1	64.8	62.5
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	21.4	18.6	11.8	12.1	8.5	7.8	8.0	8.1
Pension accounts	1.2	3.8	12.3	12.7	12.0	12.9	13.9	16.1
Corporate stock, financial securities, mutual funds, and personal trusts	3.1	3.5	5.5	6.2	4.2	3.6	3.1	3.4
Unincorporated business equity and other real estate	11.4	9.4	8.8	8.5	7.9	9.3	8.9	8.6
Miscellaneous assets	1.3	2.9	1.8	1.2	1.4	1.3	1.3	1.2
Total assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memo (selected ratios in percent)								
Debt to equity ratio	37.4	41.7	51.3	46.4	61.6	61.1	69.2	64.0
Debt to income ratio	66.9	83.0	101.6	100.3	141.2	156.7	134.3	125.0
Net home equity to total assets[a]	43.8	39.2	33.3	33.8	34.7	34.8	31.4	31.4
Principal residence debt to house value	28.8	36.5	44.4	42.9	47.6	46.6	51.5	49.8
All stocks to total assets[b]	2.4	3.3	11.2	12.6	7.5	7.0	8.1	9.5
Ownership rates (percent)								
Principal residence	71.6	71.5	73.3	75.9	78.2	76.9	68.0	66.7
Other real estate	15.4	15.5	13.7	13.2	13.6	14.7	12.4	12.4
Pension assets	12.2	27.3	48.5	52.9	51.4	53.4	45.8	44.4
Unincorporated business	8.5	8.4	8.5	7.9	8.1	8.8	8.2	6.6
Corporate stock, financial securities, mutual funds, and personal trusts	21.6	24.2	26.7	27.5	27.1	23.1	15.3	14.2
All stocks[b]	16.5	29.4	46.6	51.1	49.7	47.8	41.4	41.0
Mean debt (thousands, 2013$)								
Debt on principal residence	23.5	34.2	33.2	49.7	71.4	76.1	58.5	52.4
All other debt	12.5	10.5	9.2	12.2	15.1	19.2	13.1	13.3
Total debt	36.0	44.7	42.4	61.9	86.5	95.2	71.6	65.7

Source: Author's computations from the 1983, 1989, 1998, 2001, 2004, 2007, 2010, and 2013 SCF.
Note: Percentage of gross assets. Households are classified into wealth class according to their net worth. See also notes to table 3.
[a]Ratio of gross value of principal residence less mortgage debt on principal residence to total assets.
[b]Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts.

44 percent in 2013. From 2007 to 2010, the mean value of pension accounts fell quite sharply, by 25 percent, though this was less than that of average overall assets, so that the share of pension accounts in total assets rose. From 2010 to 2013, in contrast, mean pension accounts were up by 12 percent, despite the slight decline in the ownership rate, so that the share of pension accounts in total assets strengthened considerably (by 2.2 percentage points).

The stock ownership rate among the middle class shot up from 17 percent in 1983 to 51 percent in 2001, when it peaked, and then dropped to 41 percent in 2013. The share of all stocks in total assets mushroomed from 2.4 percent in 1983 to 12.6 percent in 2001 and then fell off to 9.5 percent in 2013, reflecting trends in stock prices and the stock ownership rate. Likewise, the proportion of these households owning corporate stock, financial securities, mutual funds, or personal trusts rose from 22 percent in 1983 to 28 percent in 2001 and then collapsed almost by half to 14 percent in 2013. Much of the decline took place between 2007 and 2010 as middle-class households were scared off by the stock market collapse in that period.

Middle-Class Debt

The rather staggering debt level of the middle class in 2013 raises the question of whether this phenomenon is recent or has been going on for some time. The debt to income ratio peaked in 2010 and then receded in 2013; meanwhile, the debt to net worth ratio peaked in 2007 and then contracted substantially in 2010 and a bit more in 2013.

The debt to net worth ratio of the middle class rose sharply from 37 percent in 1983 to 61 percent in 2007. The debt to income ratio skyrocketed as well, more than doubling. In constant dollar terms, the mean debt of the middle class shot up by a factor of 2.6 between 1983 and 2007, the mean mortgage debt by a factor of 3.2, and the average value of other debt by a factor of 1.5. The rise in the debt to net worth ratio and the debt to income ratio was much steeper than those for all households. In 1983, for example, the debt to income ratio was about the same for the middle class as for all households but by 2007 was much larger.

Then the Great Recession hit. The debt to net worth ratio continued to rise, reaching 72 percent in 2010, but the debt to income ratio fell to 134 percent in 2010. The reason is that from 2007 to 2010, the mean debt of the middle class actually contracted by 25 percent in constant dollars. Average mortgage debt declined by 23 percent as families paid down their outstanding balances, and the mean value of other debt plummeted by 32 percent as families paid off credit card balances and other consumer debt. The significant rise in the debt to net worth ratio of the middle class between 2007 and 2010 was due to the steeper drop off in net worth than in debt, and the decline in the debt to income ratio almost exclusively to the sharp contraction of overall debt.

Both the debt to net worth and the debt to income ratios fell from 2010 to 2013. The proximate cause was a decline in overall mean debt, which fell by 8.2 percent in real terms over these years. This, in turn, was due to a decline in average mortgage debt, which dropped by 10.4 percent. The average balance on other debt actually increased slightly, by 1.6 percent.

As for all households, net home equity as a percentage of total assets fell for the middle class from 1983 to 2013 and mortgage debt as a proportion of house value rose. The decline in the former between 2007 and 2010 was relatively small despite the steep decrease in home prices, a reflection of the sharp reduction in mortgage debt. There was virtually no change from 2010 to 2013. On the other hand, the rise in the ratio of mortgage debt to house values was relatively large from 2007 to 2010 because of the falloff in home prices. This ratio actually contracted somewhat from 2010 to 2013 as outstanding mortgage debt fell.

THE ROLE OF LEVERAGE IN EXPLAINING WEALTH TRENDS

In 2002, regression analysis indicated that wealth inequality was positively and significantly related to income inequality and to the ratio of stock prices to housing prices, given that stocks are heavily concentrated among the rich and homes are the chief asset of the middle class (Wolff 2002). This presents six puzzles, two of which have been addressed. The first is why median wealth surged from 2001 to 2007 and median income was sluggish. The second is why wealth inequality was flat over these years when income inequality grew. The third is why median wealth plunged steeply, by 44 percent, between 2007 and 2010, despite a moderate drop in median income and smaller declines in housing and stock prices, of 24 and 26 percent in real terms, respectively.

The fourth is why wealth inequality increased so steeply, by 0.035 Gini points, from 2010 to 2013, given that income inequality actually fell and the ratio of stocks to housing

Table 6. Average Annual Real Rates of Return by Period and Wealth Class

	1983–1989	1989–2001	2001–2007	2007–2010	2010–2013	1983–2013
Gross assets (percentage)						
1. All households	2.33	3.33	3.10	–6.38	4.83	2.27
2. Top 1 percent	3.07	3.92	3.75	–6.37	5.91	2.88
3. Next 19 percent	2.33	3.44	2.88	–6.07	4.78	2.29
4. Middle three quintiles	1.35	2.32	2.71	–7.07	3.28	1.36
Net worth (percentage)						
1. All households	3.32	4.35	4.04	–7.28	6.20	3.10
2. Top 1 percent	3.45	4.19	3.92	–6.52	6.16	3.11
3. Next 19 percent	3.00	4.09	3.46	–6.63	5.66	2.83
4. Middle three quintiles	3.35	4.67	5.58	–10.55	6.94	3.30
Memo: difference between top 1% and middle quintiles						
	–0.10	0.48	1.67	–4.04	0.79	0.18

Source: Author's computations from the 1983, 1989, 2001, 2007, 2010, and 2013 SCF.
Note: Households are classified into wealth class according to their net worth. Calculations are based on household portfolios averaged over the period. Miscellaneous assets are excluded from the calculation.

prices remained virtually unchanged. The fifth and perhaps most perplexing question is why median (and mean) wealth failed to recover between 2010 and 2013, when asset prices surged. The sixth is why wealth inequality increased so moderately from 2010 to 2013 when income inequality shot up and the ratio of stock to house prices climbed by 29 percent.

Most of these puzzles can be largely explained by the high leverage (that is, debt to net worth ratio) of the middle class. This is particularly the case for the strong gains in median net worth from 2001 to 2007 and its steep fall from 2007 to 2010. Trends in wealth inequality are largely accountable by differential leverage between the rich and the middle class. This factor helps explain the constancy of wealth inequality over the 2001 to 2007 and the 2010 to 2013 periods and its spike between 2007 and 2010. In regard to median net worth's showing no improvement between 2010 and 2013, a different explanation is called for. It appears that substantial dissavings over this period accounts for the failure of wealth to grow.

Table 6 presents the average annual real rates of return for both gross assets and net worth from 1983 to 2013. Results are based on the average portfolio composition over the period and assume that all households receive the same rate of return by asset type. The average annual rate of return on gross assets among all households rose from 2.33 percent between 1983 and 1989 to 3.33 percent between 1989 and 2001 and then fell slightly to 3.10 percent between 2001 and 2007 before plummeting to –6.38 percent during the Great Recession. This was followed by a substantial recovery to 4.83 percent from 2010 to 2013.

The average annual return on net worth among all households also increased from 3.32 percent in the first period to 4.35 percent in the second, declined somewhat to 4.04 percent in the third, and then fell off sharply to –7.28 percent between 2007 and 2010. Once again, recovery was strong, to 6.20 percent, between 2010 and 2013. Annual rates of return on net worth are uniformly higher—by about 1 percentage point—than those on gross assets over the first three periods and the last period, when asset prices were generally rising. However, between 2007 and 2010, the annual return on net worth was about 1 percentage point lower than that on gross assets. These results illustrate the effect of leverage, raising the return when asset prices rise and lowering the return when asset prices fall. Over the full 1983 to 2013 period, the annual return on net worth was 0.83 percentage points higher than that on gross assets.

Rates of return by wealth class reveal some striking differences. The highest rates of return on gross assets were generally registered by the top 1 percent of wealth holders, followed by the next 19 percent and then the middle three wealth quintiles. Differences are substantial. Over the full period, the average return on gross assets for the top 1 percent was 0.59 percentage points greater than that of the next 19 percent and 1.52 percentage points greater than that of the middle quintiles. The differences reflect the greater share of high-yield investments, such as stocks, in the portfolios of the rich and the greater share of housing in the portfolio of the middle class (see table 4). Indeed, between 2010 and 2013, the difference in returns between the top 1 percent and the middle group was huge, 2.63 percentage points, reflecting the much higher gains on stocks and investment assets than on housing in those years.

This pattern is almost exactly reversed when we look at rates of return for net worth. In this case, in the first three periods and the last when asset prices were generally rising, the highest return was recorded by the middle three wealth quintiles. Meanwhile, between 2007 and 2010, when asset prices were declining, the middle three quintiles registered the lowest (that is, most negative) rate of return. The exception was the first period, when the top 1 percent had a slightly higher return than the middle class. The reason was the substantial spread in returns on gross assets between the top 1 percent and the middle group—1.72 percentage points.

Differences in returns between the top 1 percent and the middle three quintiles were substantial in some years. From 2001 to 2007, the average annual rate of return on net worth was 5.58 percent for the latter and 3.92 percent for the former—a difference of 1.67 percentage points. The spread was less from 2010 to 2013, only 0.79 points. The smaller difference was due to the much higher returns on gross assets held by the top percentile than by the middle group. On the other hand, from 2007 to 2010, when asset prices declined, the rate of return on net worth was −6.52 percent for the top 1 percent and −10.55 percent for the middle three quintiles—a differential of 4.04 percentage points in favor of the top 1 percent.

The spread in rates of return between the top 1 percent and the middle three quintiles reflects the much higher leverage of the middle class. In 2013, for example, the debt to net worth ratio of the middle three quintiles was 0.64 and that of the top 1 percent was 0.026.

The huge negative return on net worth of the middle group was largely responsible for the precipitous drop in median net worth between 2007 and 2010. This factor, in turn, was due to the steep drop in housing prices and their very high leverage. The very high return on net worth of the middle group between 2001 and 2007 played a significant role in explaining the robust advance of median net worth despite sluggish gains in median income. This in turn was a result of their high leverage coupled with the boom in housing prices. However, that the rate of return on net worth of the middle group was very high between 2010 and 2013—in fact, the highest of any period—and yet median wealth stagnated is puzzling. We return to this issue later.

The substantial differential in rates of return on net worth between the middle three wealth quintiles and the top helps explain why wealth inequality rose sharply between 2007 and 2010 despite the decline in income inequality. Likewise, this differential between 2001 and 2007 (a spread of 1.67 percentage points in favor of the middle quintiles) helps account for the stasis in wealth inequality despite the increase in income inequality. The higher rate of return of the middle than the top group from 2010 to 2013 also helps account for the relative constancy in wealth inequality despite the rise in income inequality

CONCLUDING REMARKS

The paper highlights the role of leverage in explaining trends in household wealth over the Great Recession. In particular, it shows that the collapse in median wealth between 2007 and 2010 was largely due to the high leverage of the middle class, as well as the steep drop in housing prices. Moreover, the sharp jump in wealth inequality over these years was traced to differential leverage between the rich and the middle class.

After a period of robust growth, median wealth continued to climb by 19 percent from 2001 to 2007, even faster than during the 1990s and 1980s. Then the Great Recession hit, and from 2007 to 2010 house prices fell by 24 percent in real terms, stock prices by 26 percent, and median wealth by a staggering 44 percent. From 2010 to 2013, asset prices recovered, stock prices up by 39 percent and house prices by 8 percent. Despite this, median wealth stagnated.

Wealth inequality, after remaining relatively stable from 1989 to 2007, showed a steep advance between 2007 and 2010, the Gini coefficient climbing from 0.834 to 0.866 and the share of the top 20 percent from 85 to 89 percent, even though house prices and stock prices collapsed at about the same rate. The Gini coefficient for net worth, on the other hand, remained relatively unchanged between 2010 and 2013 despite the fact that stock prices recovered much more than real estate.

Another notable development was the sharply rising debt to income ratio during the early and middle 2000s, reaching its highest level in almost twenty-five years—119 percent among all households in 2007. The debt to net worth ratio was also way up, from 14.3 percent in 2001 to 18.1 percent in 2007. Most of the rising debt was from increased mortgages on homes. From 2007 to 2010, both ratios continued to rise, the former moderately, from 119 to 127 percent, and the latter more steeply, from 18.1 to 20.6 percent. This was true despite a moderate retrenchment of overall average debt of 4.4 percent and reflected the drop in both mean wealth and income. Both ratios fell off sharply by 2013, to 107 percent and 17.9 percent, respectively, as outstanding debt continued to shrink, by 13 percent. Home values as a share of total assets among all households remained relatively unchanged from 1983 to 2013 (around 30 percent). However, net home equity fell from 24 to 17 percent of total assets, reflecting rising mortgage debt, which grew from 21 to 39 percent.

Among the middle three wealth quintiles, the increase in the debt to income ratio was huge, from 100 to 157 percent from 2001 to 2007, as was that in the debt to net worth ratio, from 46 to 61 percent. The debt to net worth ratio was also much higher among the middle group in 2007, at 0.61, than among the top 1 percent, at 0.028. From 2007 to 2010, although the debt to net worth ratio continued to advance, to 69 percent, the debt to income ratio actually fell off, to 134 percent. The reason is the substantial retrenchment of average debt among the middle class over these years: overall debt fell by 25 percent in real terms. That the debt to net worth ratio rose over these years reflected the steep drop in median net worth. Both ratios dropped from 2010 to 2013 as outstanding debt fell by 8 percent.

The key to understanding the plight of the middle class during the Great Recession was their high degree of leverage, the high concentration of assets in their home, and the plunge in housing prices. The steep decline in median net worth between 2007 and 2010 was primarily due to the very high negative rate of return on net worth of the middle three wealth quintiles (–10.6 percent per year). This, in turn, was tied to the precipitous fall in home prices and their very high degree of leverage. High leverage, moreover, helps explain why median wealth fell more than house (and stock) prices over these years and declined much more than median income.

This, however, is not the full story. On the basis of the rates of return computed for the middle three wealth quintiles, median wealth should have fallen by only 27 percent, instead of the actual 44 percent. If we ignore net flows of inheritances and gifts over the period, the discrepancy must be due to dissavings.[9] Indeed, the results imply a substantial dissaving rate over this period, of 5.6 percent per year relative to initial wealth.

That median net worth showed no improvement between 2010 and 2013 calls for a different explanation—namely, dissavings. Asset prices more than recovered from 2010 to 2013, except for housing, which was still up by 8 percent (in real terms). On the basis of rates of

9. Net inheritance flows for middle-class households are quite small on an annual basis (Wolff 2015).

return computed for the middle group, median net worth should have gained 36 percent. It appears that substantial dissavings over this period accounts for wealth stagnation. In particular, the middle class must have had an annual dissavings rate of 8.1 percent relative to initial wealth.

The stagnation of median wealth from 2010 to 2013 can be traced to the depletion of assets. This shows up, in particular, in reduced asset ownership rates—from 68.0 percent to 66.7 percent for homes, from 45.8 percent to 44.4 percent for pension accounts, from 8.2 percent to 6.6 percent for businesses, and from 15.3 percent to 14.2 percent for stocks and financial securities.

The likely reason for the high rate of dissavings of the middle class from both 2007 to 2010 and 2010 to 2013 is income stagnation (actually, a reduction in median income) over these years. It appears that the middle class was depleting its assets to maintain its previous level of consumption. The evidence, moreover, suggests that middle-class households, experiencing stagnating incomes, expanded their debt (at least until 2007) mainly to finance normal consumption expenditures rather than to increase their investment portfolio.

The large spread in rates of return on net worth between the middle and the top (more than 4 percentage points) also largely explains why wealth inequality advanced steeply from 2007 to 2010 despite the decline in income inequality and constancy in the ratio of stock to housing prices. (Both declined at about the same rate over these years.) Thus the middle class took a bigger relative hit on their net worth from the decline in home prices than the top 20 percent did from the stock market plunge. This factor is also reflected in the larger percentage drop in median wealth than in mean income. In contrast, change in wealth inequality from 2010 to 2013 was relatively scant. This is true despite a large increase in income inequality and a sharp rise of 29 percent in the ratio of stock to housing prices. The offsetting factor in this case was the higher rate of return on net worth of the middle class than the top 1 percent, a 0.79 percentage point difference.

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